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- Electric Infrastructure hardening with high speed fault detection

*** THIS DOCUMENT SUPERSEDES TN 227160 ***

Additional submitted attachment is included below.

Some benefits of the GridDefender system

The principle of GridDefender technology is to provide an alternative to traditional electrical transmission and distribution systems. GridDefender actually redefines overhead transmission and distribution by drastically increasing RESILIENCY and HARDENING. The Patented GridDefender system has many features and benefits incorporated into its design. To name a few:

1. Substantially eliminates pole and tower replacement as the pole or tower is protected from failure forces. It can also be retrofitted to existing poles and towers in some cases.
2. Dramatic reduction in construction and labor costs as the system is pre-assembled and needs only to be disbursed and set in place.
3. Enhanced safety for all persons conducting installation and maintenance, while preventing electrocution with downed conductors. 34,000 wildfires have been caused by down conductor on PUBLIC lands alone over the past 10 years.
4. Provides mechanical arm to “smart grid” technology and can instantly signal exact location of a fault. GPS Coordinates can be instantly and precisely programmed for Drone and Repair crew dispatch.
5. Is environmentally friendly, “green technology”, including Raptor protection, and reduction of toxic disposal, creosote and other preservatives.
6. Essentially eliminates the need for wreckage crews, and the associated costs following catastrophic destruction of conventional systems in catastrophic events.
7. Dramatically reduces the time of restoration and associated loss of revenue by returning the grid/sector to full power in hours vs. days/weeks/or months. Our technology senses wind, ice weight load, or other stress factors. Grid Defender then safely disconnects from a sector terminal, de-energizes conductors which are lowered safely to the ground. From that point, recovery crews can go to the effected site and raise the STILL INTACT apparatus back to the operating height and re-energize the sector. Service can be restored in minutes without the need to repair and replace whole sections of poles, lines and other equipment. This is done by a single operator without the need for a bucket truck in most cases.
8. Reduced operating expenses and carbon footprint with reductions in ground vehicles, their crews, fuel costs, equipment costs, repair equipment and parts, etc. The age of placing repairmen in bucket trucks at risk in many ways could be substantially eliminated. Those same crews could be used in the new methodology to install and maintain a much safer and more resilient system saving billions in restoration costs, collateral damage and priceless lives.
9. There is an excellent potential to develop collateral IP based on the basic GridDefender apparatus.
10. GridDefender is the CATALYST between conventional and underground systems and will largely negate “Micro Grids” because of the speed of recovery and restoration.

11. GridDefender has its own inherent power source and is not reliant on external power feeds.

12. Broken conductor and down lines are instantly deenergized, well before a broken conductor or line can contact the ground to prevent ignition and electrocution and the system can be tested at low voltage for integrity and continuity before recharging the sector.

Before now, the "ACT OF GOD" cushion has been accepted as good enough to suffice limited liability of the Utilities. Now, that all goes away as being substandard and unacceptable in light of the GridDefender option. By virtue of the many benefits, it will be adopted over current conventional systems.

For more information about GridDefender, please visit our website at:
www.griddefender.com

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