

In a recent case study, we captured Voltage events before and after **VSGR** (Voltage Stabilizing Ground Reference) was installed.

It is useful to see these events applied to a CBEMA chart (Computer and Business Equipment Manufacturers' Association, because of the concentration of electronic loads, today, that are sensitive to Voltage events. Examples: LED & Florescent lighting, VFDs, etc.

What are Voltage events?

- 1. Transients, spikes, or surges very brief High Voltage conditions < 50ms.
- 2. Sags are low voltage conditions, which can be Low on 1phase & high on the other 2phases.
- 3. Voltage swell is longer duration High Voltage condition.
- 4. Harmonics & Electrical Noise—Frequency related Voltage problems.
- 5. Outage is complete loss of power, which requires a generator or UPS.

**Phaseback VSGR & Harmonic Silencer** effectively correct & mitigate Voltage events, other than outages!

When the Voltage events don't happen, there are many system benefits., including efficiency, safety, & reliability. Call me to discuss your applications. Cy Cates 832 647 4606