TECHNICAL ENVIRONMENT SOLUTIONS

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Executive Summary for Power Conditioning using The Powerhouse.

All electrical energy coming into a facility is known as Apparent Power, and the power we use is defined as Real Power. Even though you pay for it, a portion of the power entering your electrical system is lost to ground and never consumed. This is referred to as Reactive Power. The goal is to bring these two factors, Apparent Power and Real Power, closer together. The POWERHOUSE can accomplish this by capturing this lost voltage, store it and feed it back into your electrical system as needed.

In order to accomplish this, The POWERHOUSE adds capacitance via a series of capacitors. This enables the unit to capture the Reactive Power, commonly lost to ground, store it, and put it back into the system, evenly across all phases, as it is needed. By capturing and balancing the energy, The POWERHOUSE ensures that the equipment is running at its optimum voltages, which results in less mechanical problems and lower maintenance costs, thus, increasing the life of your equipment.

Facility Issues:

- Voltage issues include Blips, Sags, Spikes, and Surges.
- Unnecessary maintenance, downtime, failures & shortened lifecycles caused by voltage and harmonic issues
- Excessive Demand Charges caused by voltage inefficiencies from 300% to 500%, and more.
- Improper voltage and heightened amperage for motors, pumps, and other loads.

The Powerhouse Impacts:

- KWH and Peak Demand Billing with Savings up to 10%+.
- Elevates voltage and maintains that voltage under the heaviest of loads for each switchgear installed.
- Prevents costly downtime associated with blips, sags, spikes, and spikes.
- Equipment lasts longer because through balanced voltage and protection from the Powerhouse.
- Lowers maintenance cost commonly associated with inefficiencies.
- 100% Green Product that enhances your corporate visibility regarding sustainability.
- The ROI is typically 12-24 months.

How does the system lower kilowatt hours and usage?

Power Factor alone never reduce kilowatts. That is why PFC equipment is just PFC equipment. Our unit uses a neutral that is a part of the overall design that captures lost voltage, transient voltage and kVAR to make it useful energy. By balancing voltage that impacts kw. By preventing spikes, surges, sags, and blip that impacts KW Demand and KWh. Our technology takes kVAR and makes it useful energy that would normally not be used. Thus, we reduce demand and kWh.
How do we measure these metrics? Kilowatt, reduction?

We have recording devices that show the immediate impact. Our clients that have power monitoring systems that show the reduced demand as does our equipment when we are recording the data. We directly impact kWh and demand, and it appears in our testing. We share that in case studies and spreadsheets.

I want to thank you for your consideration.

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