e-Hazard

POWER SYSTEMS MONITORING STUDY

Find the hidden cost in your electrical system — before it finds you.

Every facility's electrical system is quietly telling a story — **about wasted energy, equipment nearing the end of its life, and risk sitting on the shop floor.**

Most of the time, no one is listening until something trips, fails, or shows up as an unexplained charge on the utility bill.

A Power Systems Monitoring Study puts real, **measured data** behind that story. Instead of guessing where money and reliability are being lost, you get **a clear plan for fixing it.**

Why This Matters to Your Bottom Line

- Demand charges and power factor penalties can **quietly add thousands of dollars a year to utility bills** — often without anyone noticing until the study runs the numbers.
- Unplanned downtime from nuisance trips or overloaded **equipment costs far more than the fix would have — in lost production**, not just repair bills.
- Equipment operating outside its rated limits ages faster, raising **risk of an unplanned, expensive failure.**
- **Capacity planning** based on guesswork can lead to **over-building** (wasted capital) or **under-building** (bottlenecks and outages).
- Undocumented arc flash and NFPA 70E gaps are a **safety and liability exposure that's easy to miss** until an incident or audit forces the issue.

WHAT THE STUDY COVERS

Phase		What We Do	What You Gain
1	Scope & Objectives	We align on what matters most to your operation — cutting costs, improving reliability, planning for capacity growth, or closing compliance gaps.	A study built around your priorities, not a one-size-fits-all checklist.
2	Site Assessment	Our engineers walk your facility, inventory your distribution equipment, and pinpoint the highest-value places to monitor — main services, large motors/VFDs, and known problem circuits.	Monitoring effort focused where it will actually move the needle on cost and risk.
3	Instrumentation & Data Collection	Power quality meters are installed at key points and left in place for 1–4 weeks to capture full production cycles, shift changes, and startup/shutdown events, correlated with your production schedule.	Real operating data — not a snapshot — so recommendations hold up under actual load.
4	Data Analysis	We analyze load profiles, demand timing, power factor, and harmonics, and benchmark energy use against equipment ratings, utility tariffs, and production output.	A clear picture of where energy dollars and equipment life are being lost.
5	Findings & Root Cause	We trace inefficiencies, nuisance trips, and equipment stress back to specific causes, flag circuits or transformers nearing capacity.	A corrected power factor can save costs with your utilities.
6	Recommendations & Reporting	Corrective actions are prioritized by cost, impact, and payback (capacitor banks, load shifting, equipment upgrades). Safety and compliance gaps, including arc-flash and NFPA 70E findings, are called out.	A prioritized action plan so you know exactly where to prioritize.
7	Implementation Support	Optional: we help specify and prioritize corrective measures, and can return after implementation to verify the improvements held.	Confidence that the fixes actually deliver the promised savings — not just a report on a shelf.

What You Walk Away With

- A data-backed picture of exactly where energy, capacity, and reliability are being lost — not assumptions.
- A prioritized action plan ranked by cost, impact, and payback period, so you can focus on priorities first.
- Documentation of any safety and compliance gaps uncovered along the way.
- After implementation, we are happy to confirm the savings and improvements actually materialized.

The study typically identifies savings and risk-reduction opportunities well beyond its own cost — most customers use the findings to justify the very upgrades the report recommends.

It replaces guesswork with a clear, defensible business case for where to invest next in your electrical infrastructure.