

WESTCO Electrical & Equipment Corp. Case Study

Improving Energy Management and Power Quality Monitoring in Catanduanes Plants with Eetarp & WESTCO

✈ A Philippine renewable energy developer upgraded its Energy Management and Power Quality Monitoring by using Eetarp's GPQM96 digital universal measuring device.

In a power quality monitoring project within Catanduanes, the developer partnered with electrical solutions integrator WESTCO and its technology provider, Eetarp. The deployment utilized advanced power meters for High Resolution Failure Record and analysis of electrical parameters, supporting grid stability and compliance with Philippine power quality standards.



The Challenge: Addressing Limited Operational Data

The pre-existing energy infrastructure had limited advanced metering capability (AMC). This deficiency resulted in:

-  **Unidentified Energy Loss:** Difficulty in locating and quantifying non-technical and technical losses within the distribution network due to insufficient detail in consumption data.
-  **Sub-Optimal Power Quality Management:** Lack of diagnostics and logging of transient events (e.g., voltage sag, swell, and harmonics up to the 63rd order), which hindered timely correction of power quality issues that affect grid stability and equipment lifespan.
-  **Limited Operational Data:** Reliance on manual data collection and older systems provided delayed, low-detail insights into generation, consumption, and plant performance, restricting the ability to make rapid operational adjustments.

READY TO IMPROVE YOUR FACILITY'S ENERGY MANAGEMENT, SAFETY, AND EFFICIENCY?

Don't let outdated systems risk your operations and budget. Contact **WESTCO** today to see how Eetarp's advanced digital metering **SOLUTIONS** can deliver the benefits of **High Resolution Failure Record** for your organization.

Engineered for a Secure Future



The Solution: Deploying the GPQM96 Power Quality Meter

- ✓ The solution involved the precision deployment of GPQM96 digital universal measuring devices (branded under the Eetarp portfolio) across the four power generation plants.
- ✓  **Key Technical Functionality:** The GPQM96 units are employed as high-accuracy smart meters for continuous measurement and logging of electrical parameters, including RMS Voltage (Vrms), RMS Current (Irms), and various power metrics (active, reactive, apparent power).
- ✓  **Data Acquisition and Logging:** The devices inherently support Event waveform recording (8MB memory). This functionality replaces manual logging and provides an historical dataset crucial for trend analysis, fault diagnosis, and baseline determination.
- ✓  **Improved Safety and Accessibility:** Implementing remote metering via the Modbus RTU or Modbus TCP communications improves operational safety. It reduces the need for personnel to enter high-risk areas for routine data checks, thereby decreasing exposure to potential electrical hazards, aligning with the needs of Critical facilities.

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The Impact

Business Result:

-  **System Integration:** Successful deployment of the GPQM96 meters at designated points across all four generation facilities.
-  **Accurate Metering Data:** The new system provides reliable, Full Real-time Data Measurement on power generation output and auxiliary power consumption.
-  **Data Logging Capability:** The meters' ability to Support voltage sag, swell and SOE events recording ensures a complete and automated audit trail of grid conditions for subsequent analysis.

Technical Result:

-  **Improved Operational Efficiency:** The provision of real-time data streams enables plant operators to implement immediate corrective actions. This active system management is aimed at reducing energy waste and maximizing energy conversion efficiency.
-  **Resource Management:** Detailed, meter-derived data facilitates the precise allocation of maintenance and operational resources.
-  **Billing Verification (Check Metering):** The installed meters enable cross-verification of utility billing and provide accurate sub-metering data for internal cost allocation, supporting billing accuracy.

Conclusion

The successful implementation of the GPQM96 digital universal measuring devices signifies a critical upgrade in the Catanduanes power infrastructure's capability for Energy Management System (EMS) and Power Quality (PQ) monitoring. The system delivers a foundation for a more stable power supply by providing better data accessibility, improved operational safety, and comprehensive data logging for regulatory compliance and performance optimization.

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WESTCO Electrical & Equipment Corp. Case Study

*Asia's Leading Battery Manufacturer
Slashes Energy Costs and Boosts Safety
with WESTCO'S Digital Metering Solution*



How a Top Battery Gigafactory Achieved Electrical Safety and Metering Assurance with Advanced Power Meters.

In the high-stakes world of modern manufacturing, where every kilowatt and second of uptime is crucial, a leading **Asian battery manufacturer** sought to overhaul its energy monitoring system to achieve greater electrical safety compliance and superior operational efficiency.



The Challenge: Outdated Monitoring and Safety Risks

-  **Reliance on Analog Meters:** The manufacturer depended on traditional analog (electromechanical) meters for years.
-  **Inaccuracy and Risk:** Aging analog meters slowly lose accuracy, leading to significant financial losses from unidentified surges and making it difficult to track equipment malfunctions or electrical faults.
-  **Safety Hazard:** The absence of accurate data can lead to a risk of equipment damage, fire, and even full-plant shutdown.

READY TO TRANSFORM YOUR FACILITY'S ENERGY MANAGEMENT, SAFETY, AND EFFICIENCY LIKE ASIA'S TOP BATTERY MANUFACTURER?

Don't let outdated systems risk your operations and budget.

Book a demo today to see how WESTCO'S advanced digital metering solutions can deliver real-time precision, enhanced electrical safety, and measurable cost savings for your organization.



The Solution: WESTCO Integrated Digital Metering System

WestCo partnered with the client to install ElecNova digital power meters, replacing the outdated analog systems and providing comprehensive electrical asset management.



WESTCO partnered with the client to install **ElecNova digital power meters**, replacing the outdated analog systems and providing comprehensive electrical asset management..



Real-Time Data: ElecNova meters deliver accurate, real-time information about electrical use, power factor, current, voltage, and frequency.



Improved Safety and Remote Monitoring: A monitoring system was installed with the electrical meters, which enables the client to view electrical use remotely from within their building.



This eliminates the need for personnel to enter hazardous electrical rooms, significantly **enhancing safety**.

The Impact

Business Result:

-  **Minimized Downtime and Increased Uptime:**
 The services allow for maintenance (PPM) to be conducted while the equipment is in normal operation, meaning the client doesn't have to shut down the entire plant.
-  **Reduced Energy Costs (Utility Savings):**
 By identifying and repairing these leaks, the facility stops the cooling system (blower) from having to run constantly to fight the heat, which directly addresses the client's frustration with high electricity consumption.
-  **Regulatory Compliance and Safety:** The thermal scan is frequently a mandatory part of a Level 2 audit (Level 2 audit) and is often a required test for securing building insurance and building permits.

IS YOUR FACILITY SUFFERING FROM HIGH UTILITY BILLS BECAUSE OF UNSEEN THERMAL STRESS?

Stop paying for wasted energy and start protecting your assets!

Contact WESTCO now to see how our Continuous Thermal Monitoring service and expert analysis can deliver the technical results you need. Secure your operational uptime, slash unnecessary electricity consumption, and gain the strategic advantage of early detection for all your critical systems.

Technical Result:

-  **Infrared Image and Visual Evidence:**
 The primary output is a visual infrared image which allows the user to see the thermal distribution—specifically, where the temperature differs from the norm.
-  **Accurate Temperature Measurement:**
 The test specifically measured a breach where the room was supposed to be sealed at -20°C (negative 20 degree), but the camera detected a spot on the wall or joint measuring -8°C (negative 8 degrees). This 12°C differential at the surface indicates a severe insulation failure.



Conclusion

The utilization of Continuous Thermal Monitoring wasn't just a maintenance tool, but rather, it's a strategic investment—allowing the clients to shift from reactive repairs to proactive asset management. By unveiling the invisible thermal faults in critical infrastructures like cold storages, this service and solution directly addresses the dual threat of high energy costs and unplanned downtime..