Measurement & Verification: The Key to Smarter Data Center Operations

Unlock Hidden Capacity & Optimize Efficiency with Verdigris

With AI-driven energy intelligence, data centers can unlock stranded capacity, optimize cooling and power distribution, and ensure compliance with confidence.

Verdigris' **built-in M&V capabilities** provide the gold standard for validating energy savings, ensuring compliance, and optimizing infrastructure efficiency.

- **Real-time, high-resolution power tracking** – No more manual spreadsheets.
- **Audit-ready, standardized reporting** – IPMVP & ASHRAE-grade methodologies.
- **Automated baseline recalculations** – Ensures accurate savings estimates every time.
- **Seamless integration** – Works with existing metering & energy management systems.

Energy Equipment Performance Validation

Confirm efficiency improvements & validate ROI:

- **HVAC & Chiller Upgrades** – Prove savings & track long-term impact.
- **Lighting & IT Retrofits** – Establish baselines & compare real vs. expected performance.
- **Demand Response Programs** – Quantify load reductions & optimize participation.

Use Case

Scaling IT Infrastructure with Confidence

Scenario: A data center expands IT workload without visibility into power allocation.

M&V Solution: Establish a pre-deployment energy baseline and compare post-deployment usage to expected load growth.

Outcome: Confirms whether new capacity is effectively utilized, preventing over-provisioning & wasted power.

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Energy Operations Optimization

Drive continuous efficiency with real-time performance insights:

- **Optimize cooling & airflow management** – Reduce unnecessary overcooling.
- **Improve workload scheduling** – Measure the impact of off-peak shifts or GPU balancing.
- **Benchmark against industry standards** – Track & improve operational efficiency over time.

Use Case

Real-Time M&V for Workload Efficiency

Scenario: A data center tests workload shifts but lacks the data to validate results.

M&V Solution: Power tracking at the circuit and PDU level provides live insights on energy use under different scheduling strategies.

Outcome: Enables rapid adjustments, reducing energy costs while maintaining performance.

Regulatory Compliance & Sustainability Reporting

Simplify compliance & automate reporting with trusted, standardized data:

- **Support for LEED, ISO 50001, & ENERGY STAR** – Certify efficiency improvements.
- **Carbon & ESG Reporting** – Normalize emissions data for GHG Protocol, CDP, & TCFD compliance.
- **Avoid regulatory fines** – Maintain compliance with LL97 & emerging global energy mandates.

Use Case

Automating Compliance & Avoiding Penalties

Scenario: A data center must verify efficiency improvements to avoid regulatory penalties.

M&V Solution: Track & validate energy savings from AI-powered HVAC optimization.

Outcome: Ensures compliance while reducing operational costs.

Why Verdigris?

Circuit-Level Precision – High-frequency electrical data provides unmatched granularity.

AI-Powered Analytics – Automated insights for power optimization, energy savings, and operational resilience.

Fastest Time-to-Value – Deploy in weeks, integrate seamlessly, and see immediate impact.

M&V is just the beginning. Once real-time power data is in place, operators can predict failures before they occur and unlock stranded capacity. This progression from visibility to automation is how Verdigris enables true electrical intelligence.

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