

FEATURE STORY

EMSC ASIA PACIFIC UNVEILS ADVANCED ENERGY MODELLING SERVICE FOR C&I PROPERTY FLEETS

Precision analytics unlocking hidden value across commercial and industrial property portfolios

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In a significant step forward for commercial and industrial (C&I) property operators, EMSC Asia Pacific has launched a sophisticated Fleet Energy Benchmarking and Data Modelling Service designed to transform how property portfolios understand, forecast, and optimise energy performance.

The service applies advanced multivariable modelling across entire fleets of commercial and industrial assets, integrating operational, climate and electricity supply variables to produce highly accurate predictive models.

Recent pilot work in the retail food sector achieved R² values of 0.98, demonstrating near-perfect correlation between operating conditions and actual site energy consumption.

This level of precision represents a major advancement over traditional energy benchmarking methods such as kWh/m², which often fail to capture the real operational dynamics of modern buildings.

Full story on Pages 4–5



DATA DRIVEN. MODELLED WITH PRECISION. DELIVERING VALUE.



R² = 0.98

Model accuracy from operational study



5–10%

Typical energy savings potential identified



\$500k–\$5m

Annual value creation for mid sized fleets



ESG

Supports carbon reporting & decarbonisation

FROM SIMPLE BENCHMARKING TO OPERATIONAL INTELLIGENCE

EMSC's modelling framework establishes:

- ✓ Site-specific energy signatures
- ✓ Fleet-wide operational benchmarking
- ✓ Energy forecasting under changing business conditions
- ✓ Grid sensitivity analysis
- ✓ Voltage-performance relationships
- ✓ Portfolio anomaly detection


At the heart of the methodology is a multi-variable regression model:

$$\text{Energy} = f(\text{Operations, Voltage, HDD, CDD, Time})$$

This creates a dynamic operational model for every site.



STRATEGIC VALUE FOR PROPERTY FLEET OWNERS

1.  **CAPITAL ALLOCATION OPTIMISATION**
Identify underperforming sites and direct capex where returns are highest.
2.  **ASSET VALUE PROTECTION**
Energy inefficiency directly affects NOI and therefore asset valuation.
3.  **ESG & CARBON COMPLIANCE**
Supports mandatory reporting frameworks and decarbonisation pathways.
4.  **PROCUREMENT INTELLIGENCE**
Improves tariff negotiations and wholesale purchasing strategies.
5.  **TENANT RETENTION**
Lower and better-managed operating costs improve occupancy outcomes.

OPERATIONAL BENEFITS

-  Predictive maintenance insights
-  Improved energy budgeting and forecasting
-  Verification of efficiency projects
-  Identification of hidden wastage
-  Improved voltage and power quality visibility
-  Continuous performance dashboards

Industry analysts suggest advanced fleet modelling will increasingly become a core management discipline, particularly as electricity markets become more volatile and ESG requirements more stringent.

THE ECONOMIC CASE

For a fleet operator managing 50–100 sites, even a modest 5% energy improvement can translate into:

\$500,000 to \$5 MILLION PER ANNUM in avoided costs

- ✓ Improved EBITDA margins
- ✓ Reduced exposure to rising energy tariffs
- ✓ Better investment prioritisation

THE GRID™ DIFFERENCE



GUARANTEED ENERGY SAVINGS
 Backed by performance modelling and measurement verification.



ZERO CAPEX, ZERO RISK
 No upfront investment. No technical risk. You only pay for results we deliver.



FULLY MANAGED SERVICE
 We scope, model, execute and maintain the service, ensuring maximum outcomes.



REAL-TIME MONITORING & REPORTING
 Advanced dashboards deliver actionable insights and alerts.



IMPROVED POWER QUALITY & ASSET LIFE
 Optimised voltage reduces electrical stress, heat and wear on your equipment.



SUPPORTS SUSTAINABILITY GOALS
 Lower consumption. Lower emissions. Aligns with your sustainability and ESG targets.

TYPICAL RESULTS*



5–15% Energy Savings Typical Range



Up to 10% Reduction in Peak Demand



\$10 to \$3.0M/ann. Annual Economic Benefit



< 2 Years Typical Payback from Savings

*Results vary by site, load profile and operating conditions.

EMSC'S COMPETITIVE EDGE



- ✓ Advanced energy analytics
- ✓ Grid engineering expertise
- ✓ Voltage optimisation technologies
- ✓ Automated IPMVP verification systems
- ✓ Fleet dashboarding and performance analytics


Pilot deployment across 5–10 representative sites recommended before full fleet rollout.

PROVEN IMPLEMENTATION APPROACH




NEXT STEPS
 Pilot program across 5–10 representative sites recommended prior to fleet-wide rollout.

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