Tower Operators Deserve Better Data: PowerX Research Reveals the Scale of the Telemetry Challenge - and the Tools to Tackle It

Tuesday 2 June, 2026

PowerX Technology Ltd, the leading provider of AI optimisation software for the telco tower industry, today published a new white paper revealing the true scale of telemetry data integrity challenges across tower networks - and, critically, what operators can do about it right now.

The paper, *Data Crisis in the Tower Industry: Why Operational AI and Data Integrity Now Define Competitive Advantage in Tower Networks*, is based on an AI-readiness telemetry assessment across hundreds of live tower sites in Africa, processing nearly 20 million time-series records over a six-month period.

Skilled Teams. Imperfect Instruments. Fixable Problems.

Tower operations teams around the world are experienced, technically capable, and working hard to optimise performance across complex, distributed infrastructure. They know their networks better than anyone else. PowerX highlights that the tools and data they rely on are frequently not giving them an accurate picture - and that the gap between what is reported and what is actually happening on site is larger than most organisations would like.

Key findings from the analysis include:

- Eight in ten sites recorded telemetry readings above expected operating ranges
- Seven in ten sites showed erratic or inconsistent fuel sensor profiles
- Over a third of sites with grid connection rely on generator as power cannot be drawn from grid
- Two in ten sites showed unaccounted-for fuel of an average of over 140 litres per site per month

These are the inevitable consequence of telemetry systems that drift, sensors that behave erratically, and data pipelines that were never designed to support the level of precision that modern tower operations demand. The result is that even the best teams are often working with incomplete or misleading information - and making decisions they cannot fully validate.

You Don't Have to Wait for AI to Fix It

A central finding of the white paper is that meaningful operational and financial gains are achievable immediately - before any AI strategy is deployed - simply by restoring integrity to the telemetry layer. Even basic data correction unlocks measurable OpEx recovery: identifying unaccounted fuel, flagging misconfigured hybrid systems, and quantifying avoidable solar losses.

The PowerX platform addresses this directly – standardising telemetry across all RMS hardware on an agnostic way, applying deep discipline to data handling at the edge with strong hardware and firmware partnerships, validating and reconciling the data layer, applying continuous quality scoring at signal, asset, and site level, and distinguishing genuine operational issues from sensor faults or configuration errors. Where telemetry gaps exist, synthetic data techniques maintain analytical continuity. Where the data is reliable, machine learning detects patterns - early battery degradation, hybrid system drift, solar underperformance - that are impossible to identify through manual review at scale.

“This is not a competence problem – it’s a visibility problem,” said Justin Head, PowerX co-founder and executive vice chairman. “The data is broken, not the teams. Our job is to fix the data and give operators the clarity they've been missing.”

AI Advantage Starts Now

As the industry accelerates AI investment, data integrity becomes increasingly critical - AI systems do not fail gracefully on poor data, they amplify errors at scale. But poor data quality is not a reason to delay AI adoption. It is a reason to address the data layer without delays - and PowerX is built to do exactly that.

Operators who establish reliable data environments today position themselves to capture compounding AI advantages - through predictive maintenance, hybrid energy optimisation, and automated anomaly detection. Those who delay risk competing against networks that have already spent years improving

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The white paper is available to download at www.powerx.ai.

Notes to Editors

About PowerX

PowerX, a global Software-as-a-Service company, provides the market-leading data intelligence platform for managing and optimising energy assets at scale. The PowerX platform is a single, end-to-end solution that embeds intelligence directly into core operational systems, in markets such as telecoms infrastructure, portfolio maintenance, power solutions, and mini-grids. PowerX AI learns baseline behaviour across assets and networks, predicts risk and performance outcomes, and coordinates optimised action from upstream monitoring to downstream execution in the field. Built on modern, best-practice IT architecture with a contemporary UI/UX and accessibility-first design, adoption is incremental and low-risk, delivering immediate operational ROI - revenue, OpEx, CapEx and sustainability benefits - while compounding long-term strategic advantage across cost, uptime, asset life and organisational resilience.

Company Contact:

PowerX Technology Ltd

T. 07935131714
E. rtopping@powerx.ai
W. www.powerx.ai

Additional Contact(s):
Richard Topping
Ani Chiuzan

View Online

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