AiTHER SYSTEMS
BATTERY ENERGY STORAGE

Managed Services Program

Proactive Monitoring · Rapid Response · Total System Protection

Executive Summary

In late March and early April 2025, a real-world power outage event at a Tier 1 Mobile Network Operator site demonstrated both the remarkable resilience of our Battery Energy Storage System (BESS) and the critical importance of having a dedicated managed services partner monitoring your infrastructure around the clock.

When utility power failed, the system performed exactly as designed, carrying 100% of the site load for **62 consecutive hours** and transitioning seamlessly to generator backup. What this event also revealed, however, was a scenario no automated system can fully prevent: a third-party maintenance error that failed to reenergize the utility power connection. Only through Aither Systems' proactive engagement and dispatch of field service personnel was the root cause identified and resolved within hours — **generating economic value that is quantified in this document.**

This document presents the full incident timeline, system performance data, and a compelling case for enrolling in Aither's Managed Services Program — ensuring that when the unexpected happens, you have an expert team already watching, already responding.

62 hrs.	< 1 hr	42 hrs.	$93 K
Continuous Site Load Supported	Root Cause Identified After Dispatch	Full Recovery to 95% SOC	Est. Downtime Cost Avoided[1]

Incident Timeline & System Performance

The following table documents the complete sequence of events from the initial outage through full system recovery. Each phase highlights how automated systems and managed services personnel worked in concert to protect the site.

[1] Downtime Cost Avoided includes revenue loss, SLA breach penalties, and operational recovery costs estimated at $1,500/hour.

Date & Time	Event	Details & System Response	Economic Impact
3/31 @ 3:00 PM CST	**Utility Power Lost**	Utility power lost at site. iQM BESS immediately engaged and assumed 100% of site load. System State of Charge (SOC) at outage onset: 95%.	Site downtime cost begins: **$2,000/hour**
3/31 3PM – 4/3 5AM CST	**IQM BESS Sustains Full Site Load**	System operated continuously for 62 hours, delivering uninterrupted power to the site. SOC depleted from 95% down to 5%, the designed threshold for generator handoff.	BESS avoided generator fuel burn and delayed maintenance window **62 hrs × $27/hr runtime = $1,680**
4/3 @ 5:00 AM CST	**Automated Generator Handoff**	At 5% SOC, the iQM BESS disconnected and automatically triggered the backup generator to start and assume the site load, a seamless, autonomous failover with zero manual intervention.	Generator runtime begins here. Without Managed Service, the generator runs until the diesel is depleted: **$27/hr runtime × 48hrs** (assuming time generator would run): **$1,296**
4/3 @ 9:00 AM CST	**Aither Dispatches Field Service**	Aither's monitoring team identified the extended outage and proactively contacted HPS (field service partner) to dispatch technicians and investigate the root cause of continued utility power loss.	*Time to dispatch: < 4 hrs from generator handoff.* Generator runtime limited by rapid response: **~4 hrs × $27/hr runtime = $108**
4/3 @ 10:00 AM CST	**Root Cause Identified**	HPS reported that a third-party contractor had recently relocated the customer's utility meter and failed to re-engage the Utility Disconnect upon completion. This human error prevented utility power restoration from proceeding automatically.	*Without Managed Services, self-sourcing a technician:* Avg. emergency dispatch: **$300**
4/3 @ ~10:00 AM CST	**Utility Restored — System Enters Charge Mode**	Utility Disconnect re-engaged; grid power restored. iQM BESS immediately entered charge mode. All systems normal and reporting as expected.	*Generator total runtime: ~5 hrs.* Total runtime cost: **5 hrs × $27/hr = $135**

4/5 @ ~4:00 AM CST	**Full Recovery — 95% SOC Restored**	After approximately 42 hours of charging, the iQM BESS returned to 95% State of Charge — fully restored and ready for the next utility power failure. All systems reporting as expected.	BESS recharge cost: **$44**

Key Takeaways: What This Event Proved

1. Your iQM System Performed Flawlessly

- **Instant engagement**
  System activated at the exact moment of outage — zero delay, zero manual input.
- **100% site load for 62 hours**
  Carried the full load continuously: no degradation, no interruption.
- **Autonomous generator handoff**
  At 5% SOC threshold, transferred load to backup generator — exactly as designed.
- **Immediate charge-mode re-entry**
  Resumed charging the moment utility was restored, no manual intervention needed.
- **95% SOC restored in 42 hours**
  Fully mission-ready and back to design capacity within two days.

2. Managed Services Made the Difference

- **Prolonged outage identified proactively**
  Continuous remote monitoring flagged the extended duration, no customer call needed.
- **Field dispatch initiated without customer**
  Aither coordinated the technician deployment end-to-end — zero burden on the client.
- **Root cause found within 1 hour**
  Third-party contractor error (un-re-engaged utility disconnect) identified and resolved same morning.
- **Generator runtime capped at ~5 hours**
  Rapid resolution minimized fuel consumption and avoided accelerated maintenance cycles.
- **Without Managed Services: days of exposure**
  Undetected, this error would have run the generator for days — at full fuel and maintenance cost.

Aither Managed Services: What You Get

This event is a perfect illustration of what our Managed Services Program delivers every day.

Enrolling means you have a dedicated team actively watching your system, not just reacting, but anticipating.

24/7 Remote Monitoring	Rapid Response & Dispatch	Reporting & Optimization
• Real-time system telemetry review. • Automated alert management. • SOC & performance tracking. • Event logging & documentation.	• Proactive outreach on anomalies. • Coordinated field technician dispatch. • Third-party error identification. • Resolution communication to customer.	• Monthly performance reports. • Incident post-mortems & analysis. • Firmware & configuration management. • System lifecycle recommendations.

The Risk of Operating Without Managed Services

Consider what this incident would have looked like without a managed services partner actively monitoring the system:

Scenario	Potential Consequence
No one monitors the extended outage duration	Generator runs indefinitely — burning fuel and accelerating maintenance cycles with no end in sight
Third-party meter relocation error goes undetected	Days or weeks of generator dependency; significantly elevated operating costs
No coordinated field dispatch capability	You must identify, source and manage your own technicians, adding time, cost, and complexity mid-incident.
No remote system visibility	Unknown system state, no way to confirm if BESS is ready for the next outage event.
Delayed utility restoration	Extended vulnerability window; any subsequent grid event finds the BESS at critically low SOC

Next Steps

Your system is built for resilience. Make sure your team is too.

Aither's Managed Services Program ensures that the same level of expert oversight that resolved this incident within hours is protecting your site every day, not just during emergencies.

Contact your Aither System's to enroll or learn more about program tiers and pricing.

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