



Lincolnshire Partnership NHS Foundation Trust x EMMA AI

AI-enabled energy monitoring across a complex healthcare estate



“Emma has greatly improved the viability of energy use across the trust and as a result we are now investing in further metering to make additional savings”

Nick Evans - Energy Environment Sustainability Manager, Lincolnshire Partnerships NHS Foundation Trust



OVERVIEW

Healthcare estates are among the most complex environments in which to manage energy effectively. Hospitals and clinical facilities operate continuously, with specialist equipment, ventilation systems and strict environmental requirements creating significant and often unpredictable energy demand. Lincolnshire NHS Trust partnered with Optimal Monitoring to deploy the Emma AI energy management platform across multiple sites, supporting cost reduction and carbon goals.



WHY EMMA AI?

Emma AI provides real-time insight and identifies energy-saving opportunities with no capex, making it a strong fit for NHS Trusts.



1 Initial data analysis

Emma AI analysed billing and BMS data, revealing avoidable spend from overnight cooling, late lighting, and misconfigured timer settings.



2 Implementation pilot

The phased UK rollout at Grantham, Boston and Lincoln, integrated existing fiscal energy meters, proving strong financial and carbon savings.



3 Roll-out to full estate

Lincoln are currently investing in additional meters and integration of water, solar and heat data to obtain full visibility of the estate.

What this delivered



Rapid ROI - achieved in under three months, proving immediate value.



ESOS compliance - automated data collection to support reporting and planning.



Actionable insights - clear, real-time recommendations driving cost and carbon savings.



100% automated - fully automated energy analysis across the monitored scope.



90+

meters analysed by emma



Under 3 months

rapid ROI achieved



100%

fully automated

RESULTS & NEXT STEPS



Target annual electricity savings: **1,100,000 kWh**

What the pilot proved

- ✓ AI-enabled energy monitoring has demonstrated value across a complex healthcare estate.
- ✓ Emma AI highlights inefficiencies and unusual consumption patterns that would previously have been difficult to detect.
- ✓ The Trust is moving from reactive energy management to a more proactive, data-driven approach.

Summary

With Emma AI now deployed across the initial Lincolnshire NHS Trust sites, the estates team has already demonstrated the value of AI-enabled energy monitoring across a complex healthcare estate. Early findings support an initial savings target of around £30,000 per year, with a clear opportunity to scale this to £200,000 per year as further metering and monitoring is added across the estate.

Looking ahead

Lincolnshire NHS Trust plans to extend Emma AI monitoring to additional facilities. Future developments include integrating water and heat consumption data, incorporating on-site generation such as solar, and automating energy reporting.

Key outcomes

- Rapid ROI**
Achieved in under 3 months
- £30k to £200k savings**
Target saving opportunity scales with further metering.
- Proactive insights**
Clearer insights into how buildings are operating.
- Future integration**
Water, gas and solar data to support reporting.

