SMART FUTURE TECH

Commercial Energy Audits

A Complete Guide for UK Organisations





SMART FUTURE TECH

Knowing where your power goes protects your margins

Volatile wholesale markets and shifting regulation raise the stakes.

Using energy is an unavoidable part of doing business, but how it is managed has never been more critical to an organisation's financial health. A simple, well-planned commercial energy audit is one of the most accessible ways to gain complete visibility over utility usage. It provides a structured framework to uncover inefficiencies, reduce unnecessary spend, and root out wasteful operational practices that develop over time.

— An audit gives full visibility of usage, waste and avoidable spend.

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An audit improves daily operations; due diligence manages deal risk

Commercial energy audit

A practical, action-orientated process focused on understanding day-to-day operations. It identifies immediate inefficiencies and performance improvements within existing systems to support informed, ongoing decision-making.

Energy due diligence

A risk-management process typically deployed during corporate transactions, such as mergers, acquisitions or major property ownership transfers. Its primary purpose is to assess contractual exposure, liabilities and energy-related risks rather than optimising daily performance.



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Match audit depth to your estate and goals

Walk-through

A high-level, desktop-backed overview of the site. It spots obvious inefficiencies, flags bad habits and identifies immediate quick wins with little to no capital expenditure (CapEx).

Targeted

A focused evaluation zeroing in on specific high-consuming infrastructure or complex utility systems, such as heating plants, lighting arrays, heavy refrigeration or compressed air networks.

Investment-grade

A comprehensive, advanced audit involving extensive data interrogation, physical logging and on-site measurements. Typically used to build robust business cases for large-scale capital investments, decarbonisation initiatives or regulatory frameworks such as ESOS.

SMART FUTURE TECH · COMPLIANCE

TM44 air conditioning inspections are a legal requirement

A TM44 air conditioning inspection is a statutory energy efficiency assessment required for commercial and non-domestic buildings in the UK.

Who needs it

Any building with air conditioning or combined cooling systems with an effective rated output of more than 12kW, including split systems, multi-splits, VRV/VRF systems and central chillers.

Frequency

At least every 5 years, by an accredited energy assessor.

Not routine servicing

It focuses on energy efficiency, sizing, controls and carbon reduction. It does not replace standard F-gas checks or mechanical maintenance.

Report lodgement

Completed reports must be lodged on the official Energy Performance of Buildings Register and carry a unique reference number.

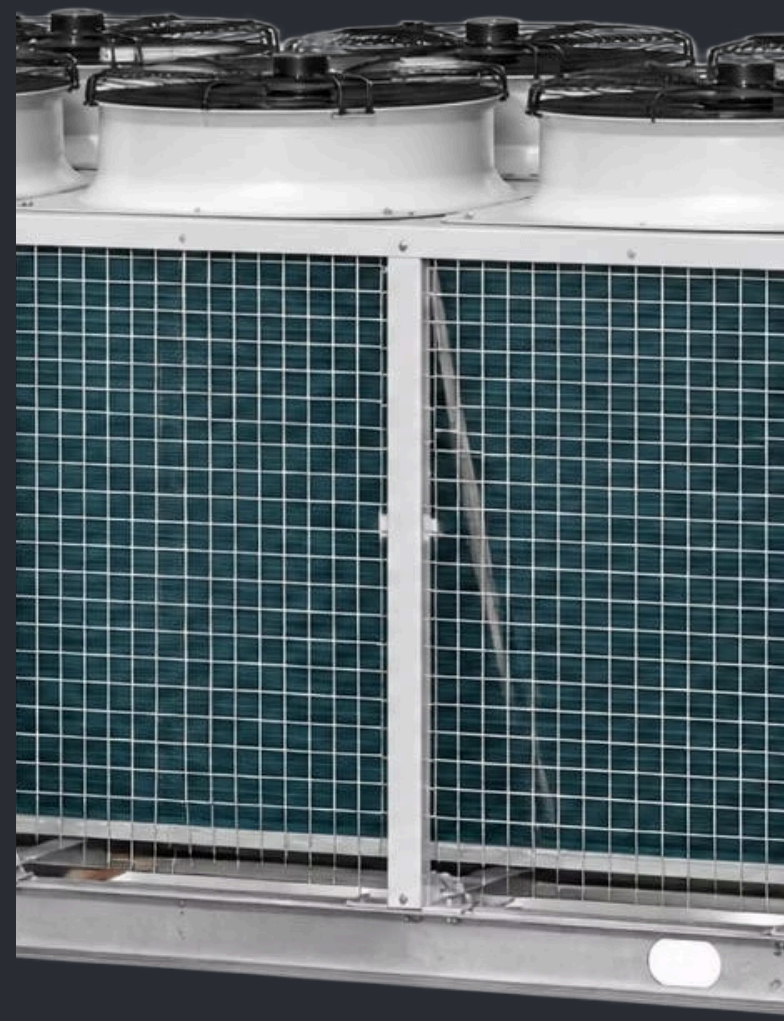
£300

Fine issued by Trading Standards for failing to have a valid inspection report.

£200

Fine for failing to provide the report within 7 days of an official request.

GOV.UK Air Conditioning Inspections Guide · CIBSE TM44 Guidance



PHASE 1

Prepare scope and data

SMART FUTURE TECH · PHASE 1

Define the scope before the auditor arrives

Buildings and processes

List all commercial buildings, multi-site estates or specific zones to be audited. Identify core industrial or operational production processes to include.

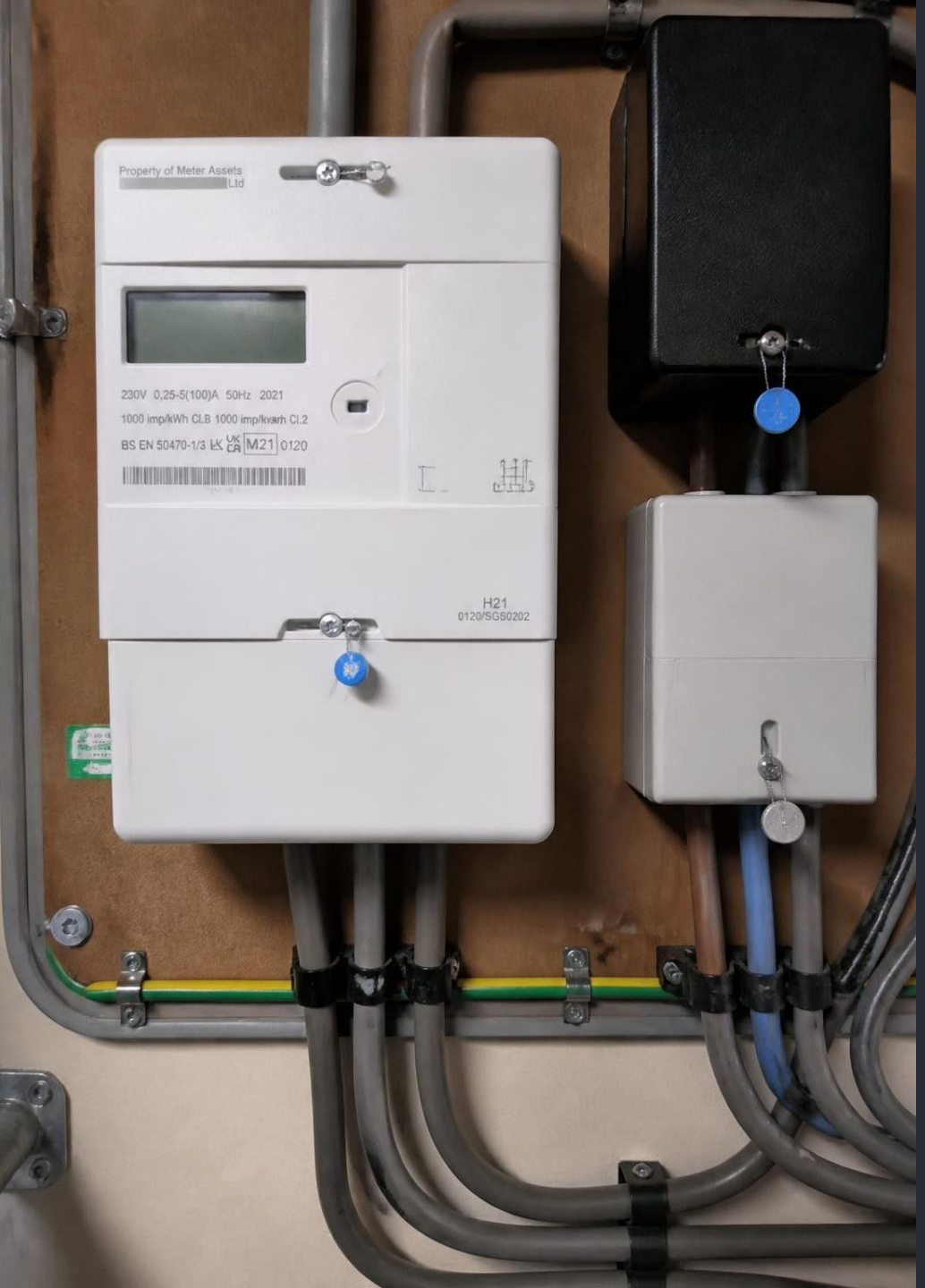
Transport

Determine whether a transport audit is required, which is essential for heavy transport users or logistics firms.

Operating context

Note clear operational hours, shift patterns and occupancy behaviours. Outline clear boundaries, including property ownership or rental status and explicit exclusions.





SMART FUTURE TECH · PHASE 1

Gather baseline data

12 to 24

months of baseline data

- Compile at least 12 to 24 months of electricity, gas and alternative fuel consumption data.
- Gather historic utility invoices, standing charge details and meter readings.
- Secure up-to-date floor areas, building layouts and architectural schematics.
- Log asset registers, machinery schedules and equipment operating parameters.
- Pull half-hourly (HH) data if available through smart or advanced metering, crucial as the UK grid transitions to Market-wide Half Hourly Settlement (MHHS).

SMART FUTURE TECH · PHASE 2

Choose an independent, certified specialist

The technical validity and corporate credibility of your audit report rest heavily on the credentials of the specialist you appoint. When vetting an energy consultant, prioritize these criteria over baseline cost.

Credentials

Ensure your consultant holds certified qualifications aligned with recognised frameworks, such as ESOS Lead Assessor, CIBSE Low Carbon Consultant, or Energy Performance of Buildings Regulations certifications.

Rigour

Look for structured audit processes backed up by internationally recognised quality frameworks such as ISO 9001 or ISO 50001 (Energy Management Systems).

Independence

Ensure the specialist provides unbiased, evidence-based data. Avoid product-led auditors who use the survey as a Trojan horse to upsell proprietary equipment, hardware, or sponsored third-party installations.



SMART FUTURE TECH · PHASE 3

Ten rules for a smooth site visit

On-site surveys provide the most accurate look at how your building functions under Business-As-Usual (BAU) conditions. To minimise operational disruption and guarantee accuracy, follow these ten practical rules.

01 **Assign a chaperone:** ensure an internal contact with comprehensive building knowledge is available to answer the auditor's operational questions.

02 **Provide workspace:** allocate a secure on-site space for the auditor to organise testing equipment and compile interim technical notes.

03 **Approve photography:** confirm in advance that photography is permitted, as visual evidence is vital for a robust final report.

04 **Review the toolset:** let teams know the auditor will use thermal imaging cameras, lux meters and temperature guns.

05 **Map access boundaries:** explicitly define where the auditor is and is not permitted to go before the walkthrough begins.

06 **Locate keys and passes:** ensure seamless physical access to plant rooms, distribution boards, server rooms and roof voids.

07 **Alert security and CCTV:** if the auditor is evaluating external building envelopes, notify security teams to prevent false alarms about photography.

08 **Reserve on-site parking:** facilitate easy unloading of heavy diagnostic equipment by securing a bay close to the main entrance.

09 **Complete health and safety induction:** communicate site-specific safety rules, PPE mandates or privacy constraints before arrival.

10 **Pre-deliver data:** submit baseline data files to the auditor before the visit so they can arrive with existing trend insights.

SMART FUTURE TECH · PHASE 4

A good report turns data into business decisions

A high-quality commercial energy audit report shouldn't read like a dry academic text; it must translate technical observations into prioritised business logic. Every standard-compliant report must explicitly feature:

01

Consumption analysis

Deep-dive analysis of smart meter and half-hourly data.

02

Opportunities

Categorised by behavioural, low-cost and infrastructure opportunities.

03

Capital costs

Clear capital costs versus projected payback periods.

04

Carbon reductions

Quantified carbon reductions for MEES and net-zero goals.

SMART FUTURE TECH · CLIENT ENGAGEMENT

An audit only pays off when stakeholders talk it through

£127,392

Identified a year · 9 ideas

£95,665

Approved a year · first 8 ideas

£6,500+

Immediate no-regret savings



A hotel's Duty Manager, Finance Manager and Facilities Manager approved the first 8 ideas once each was explained.

We walk stakeholders through each idea and test it, checking it on the visit with the site contact. Immediate savings more than repay our fee; the rest needs budgeting. We can connect clients with installers for capital measures.

— Get a clear explanation and justification to the right stakeholders, because that is where results come from.

SMART FUTURE TECH · PHASE 5

Act in three tiers, cheapest first

An energy audit only drives financial value when its recommendations are actively deployed across the business.

Tier 1 · No or low cost

Many businesses cut utility bills by eliminating bad habits: moving thermostats away from drafts or windows, scheduling lighting timers to mirror occupancy, and programming BMS to avoid overlapping heating and cooling.

Tier 2 · Rapid ROI

Replacing legacy components offers a short payback: swap outdated fluorescent lighting for LED arrays with integrated sensors, or replace ten-year-old refrigeration with modern, eco-rated models.

Tier 3 · Long-term resilience

Use audited data to justify heat pumps, on-site solar generation or battery energy storage systems (BESS), and to satisfy procurement boards, green asset financing or UK government grants.

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Treat auditing as a cycle

Treat energy auditing as an ongoing management cycle rather than a one-off task.

3 to 4 years

Repeat the audit

Repeating an audit every 3 to 4 years ensures your business adapts to changing technology and evolves alongside grid transformations such as MHHS.

— Keeps your operational margins permanently protected.



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Ready to turn your energy data into savings?

www.smartfuturetech.co.uk

chris@smartfuturetech.co.uk