

Terms of Reference

This document sets out what the Audit measures, the standards it holds itself to, and how its independence is guaranteed.

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1. Purpose and standing

The National Energy Audit is an independent annual assessment of the United Kingdom's energy system in physical units, published to a fixed calendar aligned with the national Budget and the OBR forecast cycle.

It exists because the United Kingdom independently audits its public finances – through the Office for Budget Responsibility – but has no equivalent independent audit of the physical energy system on which those finances ultimately rest. The Audit supplies that missing account.

What it is: a measurement exercise. It reports what the energy system physically delivers, what it costs on a whole-system basis, and how stated policy is performing against its own targets and against physical reality.

What it is not: it is not a campaign, a lobby or a policy programme. It does not recommend technologies, advocate for or against any policy, or prescribe what government ought to do. It states what is. Readers draw their own conclusions. This restraint is the source of its authority and is binding on every contributor.

The governing principle, which every editorial decision is tested against: *be confident enough in the arithmetic that the conclusions need no help*. If a finding requires a loaded metric, a favourable boundary or a managed panel to stand up, it does not belong in the Audit.

2. The question

Each edition answers one question, in physical units rather than press releases:

Is the UK energy system delivering what policy claims for it – measured against physics, and against its own stated targets?

3. Scope

IN SCOPE – THE ACCOUNTS

The Audit is anchored to **total final energy consumption (TFEC)**, not electricity alone.

Electricity is reported as a sub-account. The standing accounts are:

1. **Physical energy balance** – primary-to-final energy in physical units (TWh/PJ), by source and by end-use vector (electricity, gaseous, liquid, solid, heat).
2. **Whole-system cost by technology** – built up from generation cost plus firming/backup, storage, transmission and distribution reinforcement, curtailment and constraint/balancing payments. System boundaries are applied symmetrically to every technology – gas, nuclear, wind, solar, geothermal alike. Not headline LCOE.
3. **Domestic depletion** – production and remaining reserves of North Sea oil and gas against prior official projections, with reserve categories (proven/probable) stated.
4. **Import dependence** – net import ratios for gas, oil products and electricity (interconnectors), and dependence on imported energy hardware (turbines, cells, transformers, cables) and the critical minerals behind them.
5. **Capacity-vs-energy and resilience** – firm de-rated capacity against peak demand; grid inertia and frequency-response headroom; coverage of the worst observed low-wind, low-solar period against firm supply plus storage duration.
6. **Promise-vs-physics-vs-delivery ledger** – for each tracked, dated official target or claim: what was promised, what the physics permits, and what was delivered (required vs achieved build rates – GW/yr, grid km/yr, heat pumps/yr, charge points/yr).
7. **Carbon column** – tonnes CO₂ per unit of energy delivered, reported alongside each technology as a clearly labelled physical measure. Included so the accounts are complete and cannot be dismissed as ignoring it; reported, not editorialised.

Flagged indicators (not accounts): the money–energy relationship (growth in monetary claims on the economy against net physical energy available) is published as a clearly captioned indicator with explicit caveats, not as an audited account.

Net energy / EROI is reported as a single account with a *pre-registered, fixed system boundary*, current-vintage input data, and stated ranges – never a single headline figure.

PHASING

First edition (the pre-launch retrospective pilot): accounts 1, 2 (2–3 technologies), 3, 6, and the live claims ledger. Mature edition: add 4, 5, 7, EROI, the money–energy indicator, heat and transport sub-accounts, and international benchmarking.

OUT OF SCOPE

Climate science and attribution; the merits of net zero as an objective; party politics; technology advocacy of any kind; any figure that cannot be sourced to at least two independent, citable datasets.

4. Accounting standards

These standards are fixed in advance and apply to every number. They are the Audit's equivalent of an accounting framework, and adherence is what entitles the project to the word *audit*.

- **Pre-registration.** The methodology – boundaries, assumptions, data sources, formulae – is published and frozen *before* the figures are run, and peer-reviewed by the panel including its dissenting members. It cannot be changed mid-edition to suit a result.
- **Two independent sources per figure.** Every number traces to at least two citable public datasets (e.g. DUKES/Energy Trends, NESO, NSTA, Ofgem, OBR, Bank of England, ONS, IEA). Single-source figures are flagged as such.
- **Symmetric boundaries.** Whatever system cost is charged to one technology is charged to all. No asymmetric treatment of incumbents or challengers.
- **Ranges and provenance, not false precision.** Contestable figures are published as ranges with sensitivities and a dated source. Current-vintage data only; stale reference values are not used.
- **Reproducible workings.** The full workbook and, where code is used, the code, ship open alongside each edition. Anyone may re-run the numbers.
- **Consistency across years.** Boundaries are held constant year to year; any change is documented and applied retrospectively so comparatives remain honest.

5. Independence and governance

Independence is guaranteed structurally, not asserted. The following are binding:

- **A plural panel.** The panel deliberately includes members who support the energy transition as well as those sceptical of current policy, and at least one professionally independent figure of recognised standing. Findings must be defensible to all of them.
- **Technical breadth.** The panel includes practitioners with hands-on expertise across the technologies the accounts assess – fossil, nuclear, wind, solar, geothermal, storage and networks – so that each is judged by someone who has built or operated it, not only by its critics.
- **Genuine, published dissent.** Any panel member may record a dissent on any finding, printed in the report alongside it. Dissent is not managed or filtered. The strength of the Audit is that disagreement is visible, not absent.
- **Funding bar and disclosure.** No funding is accepted from parties with a financial interest in the outcome; in particular, no hydrocarbon-industry money. All funding sources are disclosed proactively in every edition.
- **Conflict declarations.** Every contributor publishes their relevant interests, affiliations and prior public positions.
- **Institutional firewall.** The Audit is governed and branded separately from any individual contributor's books, commercial products or other ventures. Cross-reference is permitted; shared branding and shared editorial control are not. No single contributor is the proprietor of the Audit.

6. Review

- **Pre-publication peer review** of both methodology and findings by named, credentialled reviewers, including at least one who is unsympathetic to the expected conclusions.
- **Adversarial read.** Each edition is stress-tested before release as if a hostile official body will attempt to break it.

- **Right of reply.** Government bodies and any named party whose claim is assessed are offered sight of the relevant finding and a right of reply, published alongside.

7. Outputs and cadence

- **Summary for Leaders** – short, public-facing, every statement back-referenced to the Technical Report.
- **Technical Report** – the full accounts, methodology and notes.
- **Live claims ledger** – a permanent web scorecard of tracked official claims against outturn, each entry quoted verbatim, dated and sourced; assessing claims and policies, never imputing intent to a named individual.
- **Open dataset** – the workbook and sources for every figure.
- **Cadence** – a full edition with the autumn Budget; an optional lighter update at the spring OBR forecast.

8. Corrections

A public errata log. Errors are corrected openly and promptly. Correcting our own mistakes in the open strengthens the Audit and removes the easiest line of attack. Where a correction changes a finding, the change is dated and explained.

9. Amendment of these terms

These terms are versioned. Any amendment is published with its date and rationale and agreed by the panel. The scope and accounting standards may not be altered within an edition once the methodology is frozen.

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