

Net Zero Roadmaps and Transition Planning

Canonical: <https://northmoregordon.com/services/net-zero/>

Details:

Baseline · Four levers · Roadmap · Prioritisation · Start

A useful net zero roadmap connects an emissions inventory with engineering opportunities, procurement choices, investment decisions and a delivery timetable. Northmore Gordon helps organisations define the baseline, test reduction pathways, rank projects, model scenarios and assign actions to owners.

The roadmap should show what will change physically, what will be addressed through electricity procurement or carbon credits, what depends on future technology, and what evidence will demonstrate progress. A target without this implementation structure is difficult to govern.

Start with the right emissions baseline

Define the legal entities, facilities, reporting period and consolidation approach before calculating emissions. Scope 1, 2 and 3 emissions describe different sources:

Scope 1: direct emissions from sources the organisation owns or controls, such as fuel combustion or refrigerant losses;

Scope 2: indirect emissions from purchased electricity, steam, heat or cooling; and

Scope 3: other indirect value-chain emissions upstream and downstream.

Record source data, methods, factors, estimates, exclusions and uncertainty. Scope 3 work is often staged, but the screening method and material categories should be explicit.

Four connected reduction levers

| Lever | Examples | Evidence needed | | --- | --- | --- | | Demand and efficiency | Controls, process improvement, heat recovery, refrigeration, compressed air and energy management | Audit, feasibility, baseline and operating result | | On-site supply and electrification | Solar, storage, heat pumps, renewable heat and fuel switching | Load profile, constraints, design, approvals and commissioning | | Energy procurement | Power purchase agreements and renewable electricity certificates | Contract, market, vintage, ownership and retirement records | | Residual emissions | Eligible carbon credits for a clearly defined residual boundary | Credit due diligence, registry and retirement evidence |

These levers have different accounting effects. Renewable electricity certificates and carbon credits should remain separate from physical reductions so decision-makers can see the underlying operating pathway.

Build the roadmap as an operating plan

Set the decision boundary: identify the organisation, inventory scopes, base year and target horizon.

Create the opportunity register: record each measure, affected source, maturity, dependencies and evidence quality.

Develop costs and scenarios: model capital, operating cost, savings, abatement, technology readiness and timing.

Select the pathway: test the sequence against production, reliability, network, procurement and financing constraints.

Assign delivery: give every action an owner, milestone, approval gate and measurement plan.

Review progress: update the inventory and roadmap without rewriting forecasts as achieved results.

Energy audits can identify operating and capital opportunities. Measurement and verification then tests whether implemented projects delivered the expected result.

Prioritise with a marginal abatement cost curve

A marginal abatement cost curve ranks opportunities by estimated cost per tonne of emissions reduced. It can reveal measures that save money, measures that require moderate investment, and strategic projects whose value depends on future conditions. The curve is a decision aid, not a promise: capital cost, energy prices, utilisation, certificate value and implementation timing should be shown as assumptions and sensitivity cases.

Use consistent boundaries and avoid adding overlapping savings from measures that affect the same load. Keep forecast, approved, implemented and verified status separate in the opportunity register.

Start with a defined brief

Provide the organisation structure, facilities, existing inventory, energy and production data, current targets, major equipment, capital planning cycle, customer or disclosure deadlines and known projects. If the baseline is incomplete, Northmore Gordon can begin with a carbon health check or inventory-readiness review before developing a full roadmap.

Related guidance includes carbon advisory services , creating a carbon reduction strategy and the DON Smallgoods strategy case study .

Contact Northmore Gordon with the decision your roadmap must support and the date it is needed.

What is the difference between Scope 1, 2, and 3 emissions, and why does this matter for a Net Zero plan?

Scope 1 emissions are direct emissions from owned or controlled sources; Scope 2 covers indirect emissions from purchased electricity and energy; Scope 3 includes upstream and downstream emissions from suppliers, customers, and other value-chain activities. This distinction matters because calculating Scope 3 is more challenging than Scopes 1 and 2, requiring data from external parties. A complete Net Zero roadmap must address all three scopes, though the available interventions and feasibility differ. We help organizations document boundaries, collect activity data and emissions factors, and develop transition pathways across all scopes.

What are the four main levers Northmore Gordon identifies for achieving Net Zero?

The four main levers are: direct investment in demand-side initiatives to reduce energy consumption; on-site renewable energy generation such as solar PV, batteries, and thermal storage; market-based procurement options including Power Purchase Agreements and renewable electricity contracts; and carbon offsets and unbundled renewable energy certificates such as I-RECs, GOs, TIGRs, LGCs, and similar instruments. These levers can be combined in different proportions depending on site constraints, capital availability, and the organization's risk tolerance. We assess the technical and commercial feasibility of each lever for specific operations.

How does a Marginal Abatement Cost Curve help prioritize carbon reduction investments?

A Marginal Abatement Cost (MAC) Curve ranks carbon reduction opportunities by their cost per tonne of CO₂-equivalent abated. This visual framework helps businesses identify which interventions deliver the lowest-cost emissions reductions first, informing capital allocation and project sequencing. The curve separates technical opportunities from those that are economically attractive at current prices and financing rates. We develop MAC curves as part of detailed transition planning for organizations further along their Net Zero journey, supporting 5, 10, or longer-year plans with explicit costings and dependencies.

What is a Carbon Health Check, and how does it fit into a Net Zero journey?

A Carbon Health Check is a diagnostic assessment designed for organizations beginning their Net Zero journey. It involves a short quiz (approximately 5–10 minutes) to evaluate how well the business is managing carbon emissions across governance, measurement, strategy, and implementation. The assessment clarifies strengths and gaps without requiring a full inventory or consulting engagement. It is positioned as a starting-point tool to help businesses understand their readiness level and identify next steps. We offer this service to new prospects and those uncertain about the scope of work needed to begin serious carbon management.

What key challenges must organizations address after calculating their carbon footprint?

Once a carbon footprint is understood, four critical challenges emerge: setting a realistic carbon target that balances ambition with feasibility; engaging stakeholders to build organizational support and drive behavior change; creating a realistic implementation plan that accounts for available capital, people, and time resources; and executing the plan through clear communication and delivery governance. These challenges are as important as the technical carbon accounting because emissions reductions require sustained organizational commitment. We provide workshops, transition planning, and governance support to help organizations navigate these challenges systematically.

How does Northmore Gordon help assess whether on-site renewable energy is viable for a specific site?

We evaluate on-site renewable options such as solar PV, battery storage, biogas, and thermal storage by examining site constraints, available resources, operational requirements, and financial viability. Assessment includes roof or land area, weather patterns, equipment costs, grid connection rules, and how renewable output aligns with site demand profiles. We also consider interactions with other efficiency measures and identify dependencies such as electrical infrastructure upgrades. This feasibility analysis is part of broader transition pathway development and helps organizations understand whether renewable energy should be prioritized relative to demand reduction or market-based procurement.

What distinguishes a realistic Net Zero plan from an aspirational one, according to Northmore Gordon?

A realistic Net Zero plan explicitly defines costed projects with assigned ownership and timelines, accounts for implementation risks and technology readiness, identifies resource requirements (capital, people, time), engages executive and management teams in scenario decision-making, and includes monitoring and governance mechanisms. It separates physical emissions reductions from contractual instruments such as renewable electricity certificates and offsets. An aspirational plan typically lacks these details or assumes unrealistic funding and technology availability. We develop transition pathways that are grounded in technical feasibility, commercial viability, and organizational capacity, moving beyond headline targets to actionable steps.

Why is setting a carbon target difficult, and what framework does Northmore Gordon use?

Setting a carbon target is challenging because it requires balancing science-based benchmarks, competitive positioning, cost and capital constraints, technology maturity, and organizational capability.

A target that is too ambitious may be unachievable without transformational investment or breakthrough technologies; one that is too modest may lack credibility with stakeholders. Our approach involves developing multiple scenarios that show total cost, co-benefits, risk, and technology-readiness implications. This allows management to see the financial and operational trade-offs associated with different target levels before committing to a public commitment. The framework also clarifies assumptions and dependencies so progress can be tracked transparently.

How do environmental certificates contribute to a Net Zero strategy, and what risks should organizations consider?

Environmental certificates—such as renewable energy certificates, carbon credits, and energy-efficiency certificates—can provide funding for projects or fulfill contractual commitments to renewable energy use or emissions reduction. They allow organizations to access market-based abatement where on-site or demand-side opportunities are limited. However, certificate eligibility, quantity, price, and accounting treatment vary by scheme and timing. Organizations should not assume certificate revenue until schemes and project eligibility are confirmed. We assess certificate potential separately from physical reductions, provide due diligence on instrument quality and ownership, and ensures that certificate-based claims are aligned with the applicable reporting framework and the organization's public statements.

What role does stakeholder engagement play in delivering a Net Zero transition, according to Northmore Gordon?

Stakeholder engagement is critical because Net Zero transitions require sustained changes in procurement, operations, capital allocation, and sometimes product design—none of which succeed without organizational buy-in. Effective engagement involves communicating the business case, addressing concerns, clarifying roles and accountabilities, and demonstrating progress. Our approach includes diagnostic workshops to understand current position and priorities, transition planning that identifies dependencies and ownership, and governance support to track implementation. Without stakeholder alignment, even technically sound plans fail due to competing priorities, resource constraints, or resistance to operational change.