

IEFE - Northmore Gordon

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IEFE

IEFE stands for Industrial Electricity and Fuel Efficiency, as defined on our glossary page. This term encompasses energy efficiency improvements across both electrical and fuel-based systems in industrial facilities. Understanding this distinction is important because industrial operations often rely on multiple energy sources—electricity for motors and controls, and fuel for process heat, steam generation, or backup power. A comprehensive IEFE approach ensures that efficiency gains are pursued across all energy streams rather than focusing on one to the exclusion of another, supporting integrated energy strategy and cost reduction.

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What does IEFE stand for?

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How does IEFE relate to Northmore Gordon's energy optimisation services?

IEFE directly aligns with our energy optimisation capability, which aims to improve how energy is used and purchased while protecting operational outcomes at industrial sites. Our stated scope includes engineering assessment, implementation support, and ongoing performance verification across industrial facilities. An IEFE focus recognises that industrial energy costs typically span electricity consumption, demand charges, and fuel purchases. We can help identify efficiency opportunities across both streams, assess their technical and financial viability through investment cases, and verify savings through measurement and verification methodologies.

What types of industrial facilities might benefit from an IEFE assessment?

Industrial facilities that consume significant electricity and fuel—such as food and beverage manufacturing, animal processing, compressed-air systems, refrigeration operations, and process-heat

applications—are candidates for IEFE assessment. We serve industrial businesses across manufacturing, utilities, and commercial operations. An energy audit identifying efficiency opportunities across both electricity and fuel streams can reveal interactive effects; for example, insulation improvements may reduce heating fuel demand while also affecting electricity use in ventilation or cooling systems. A Type 1, 2, or 3 audit can establish where investigation should focus first.

How does understanding IEFE help with energy cost management in manufacturing?

Manufacturing businesses face energy bills composed of multiple components: electricity consumption measured in kWh, demand charges based on peak power in kW, and fuel purchases measured by volume or joules. IEFE recognises these as interconnected rather than separate decisions. Understanding the difference between energy (kWh or MWh) and power (kW or MW) is critical—demand charges can exceed energy charges, making peak reduction valuable even if total consumption remains stable. Our investment-case methodology helps manufacturing businesses compare the financial benefit of addressing electricity efficiency, fuel efficiency, and demand management options against the same tariff and operational assumptions.

What role does measurement and verification play in confirming IEFE improvements?

Measurement and verification (M&V) is essential for establishing credible IEFE savings because both electricity and fuel consumption must be tracked before and after improvements under comparable operating conditions. A practical M&V brief establishes the boundary (which equipment and energy streams are included), baseline (pre-project conditions), measurement instruments and intervals, implementation records (what was actually installed and when), and reporting methodology. This approach separates engineering estimates from verified results and is particularly important for industrial projects where production levels, weather, or operating hours can significantly affect energy consumption independently of efficiency improvements.

How can businesses prepare evidence for an IEFE assessment?

We recommend starting with at least one year of available electricity and fuel history, then adding interval data, production volumes, operating schedules, and equipment information. Flag missing data, major shutdowns, and changes in output. This foundational evidence supports an energy audit that investigates both electricity consumption patterns and fuel use. A project brief should identify the business problem, site location, existing equipment, current project stage, and available data. This structured approach allows Northmore Gordon to establish an appropriate starting scope—whether a Type 1 overview, detailed Type 2 assessment, or precision Type 3 examination of a major subsystem.

What funding or certificate pathways might apply to IEFE projects?

Industrial energy efficiency projects may be eligible for support through multiple schemes depending on location and activity type. Victorian Energy Upgrades (VEU) and NSW Energy Savings Scheme (ESS) are jurisdiction-specific; eligibility depends on the specific activity, premises, and equipment meeting scheme conditions. Environmental certificates, grants, or financing may each apply to different project components. We provide funding-pathway assessment to identify which schemes suit a particular facility's circumstances. However, funding should be confirmed early and kept separate from the core investment case; a project remains worthwhile without unconfirmed incentives, and eligibility must be verified before relying on a contribution.

How does IEFE connect to mandatory industrial energy-management obligations?

Covered industrial facilities subject to mandatory energy-management requirements—such as those exceeding the 54 TJ threshold in Singapore or other jurisdictional requirements—must develop energy-efficiency improvement plans and appoint an energy manager. IEFE assessment supports these obligations by systematically identifying efficiency opportunities across both electricity and fuel consumption. Our energy audits, feasibility assessments, and energy-management system guidance

help covered businesses meet their obligations and turn assessments into documented, ongoing improvement. Understanding both electricity and fuel streams is particularly important when demonstrating progress toward regulatory requirements or corporate sustainability targets.

Why is it important to distinguish IEFE improvements from other operational changes?

Industrial facilities often experience changes in production levels, shifts in operating hours, maintenance activities, or weather variations that affect total energy consumption independently of efficiency improvements. IEFE improvement claims require comparison of electricity and fuel consumption before and after interventions under comparable operating conditions. This is why measurement and verification establishes baselines and adjustments for relevant differences. A lower electricity bill or reduced fuel consumption does not by itself prove an IEFE improvement; the analysis must account for production, weather, and other operational variables to establish what changed as a result of the specific efficiency measures implemented.

How can Northmore Gordon support an industrial business with IEFE strategy?

Our delivery approach spans six stages: assessing opportunities through energy audits and utility benchmarking; building the business case with feasibility studies and investment cases; capturing value through funding-pathway assessment; delivering projects with measurement and verification; procuring energy and environmental attributes strategically; and sustaining performance through energy management and multi-site expansion. An IEFE focus recognises that industrial energy strategy must address electricity consumption, demand charges, and fuel costs as an integrated system rather than isolated decisions. Our knowledge library, project-brief template, and case studies provide frameworks for structuring investigations and investment decisions tailored to manufacturing and industrial operations.