

Unlocking Energy and Emissions Opportunities for Australia's Mining Sector

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Mining operations face substantial energy costs from baseline consumption across on-site power generation, comminution (ore grinding), refrigeration, pumps, compressors, and fans - often reaching millions of dollars annually. This exposure leaves mines vulnerable to energy price volatility. We conduct energy audits, benchmarking, and utility analysis to identify where consumption is highest, establish baseline energy use patterns, and prioritize efficiency improvements. By turning energy data into investment decisions, mining companies can reduce operating costs while building the measurement records needed for emissions compliance and certificate creation.

Publication context: This article reflects its publication date. Market prices, program rules, reporting duties and deadlines may have changed. Confirm current official guidance before making a decision.

Australia's mining industry is under increasing pressure to manage rising energy costs and meet tightening emissions regulations, while maintaining productivity and profitability. At Northmore Gordon, we help mining companies navigate this evolving landscape - turning energy and emissions challenges into opportunities for savings, compliance, revenue and leadership in sustainability.

Challenges Facing Mining Operations

Mining is among the most energy-intensive industries in Australia. From on-site power generation to heavy processing equipment, diesel in mining fleet, and FIFO workers, every operational aspect contributes to significant energy usage and emissions.

Some of the top challenges mining companies face include:

Rising Energy Costs : Baseline energy use across on-site power, comminution, refrigeration, pumps, compressors, and fans can cost millions, exposing mines to even the most modest of price volatility.

Emissions Compliance under Safeguard Mechanism : Sites emitting more than 100,000 tonnes CO₂-e annually are needing to either reduce emissions by 4.9% per year or offset them with ACCUs or SMCs at an uncertain future price .

Data Complexity : Having the right data to make informed decisions and demonstrating verified savings from energy or carbon reduction projects requires robust measurement and compliance.

Accessing Incentives and Credits : Many mining operations are not aware that they can unlock funding for energy and carbon projects using tradeable Environmental Certificates. These markets are growing rapidly, and they can contribute significant amounts to project financing.

What Northmore Gordon Offers the Mining Sector

Based on our work with multiple mining sites - including operations in Western Australia, NSW, QLD and Victoria - we deliver an end-to-end service suite that includes:

Energy Efficiency

Comprehensive assessments of whole-of-site operations, energy intensity, benchmarking, and opportunities for improvement.

Identified and validated savings from energy and carbon projects

Feasibility and Options studies to support your energy transition and net zero pathway

Grant funding via the Powering the Regions Fund , ARENA and other federal/state initiatives.

Environmental Certificates and Carbon Offsets

Registration of your Energy and Carbon projects for Environmental Certificates

Trading of certificates for revenue - sometimes millions in financial returns

Management of all aspects of compliance and reporting for certificate projects.

Safeguard Mechanism and ACCU Strategy High emitting facilities are required to reduce their emissions in line with the Safeguard Mechanism, which usually precludes them from generating ACCUs to subsidise their emission saving.

However, using the methodologies that Northmore Gordon lead in, we can produce ACCUs on site - even for Safeguard facilities. We help you with:

Emissions reporting and facility baselines under the Safeguard Mechanism.

Advisory on compliance pathways, including ACCU procurement and carbon market navigation.

Strategic planning to minimise exposure to future emissions reduction obligations.

Carbon and Energy Reporting

Full carbon accounting, emissions profiling, and reporting to align with NGER Scheme and ASRS

Advisory on integrating renewables and low-carbon technologies into the mining energy mix.

Generation, management, and sale of LGCs

Options Open to Australian Mining Companies

Mining companies can partner with Northmore Gordon to explore:

ACCU and energy efficiency certificate creation from efficiency and carbon reduction projects.

Safeguard Mechanism compliance via emissions reductions and ACCU strategy.

Grant funding via the Powering the Regions Fund, ARENA and other federal/state initiatives.

Carbon neutrality pathways and development of internal carbon pricing frameworks.

Your Energy. Smarter. Cleaner. More Valuable.

By working with Northmore Gordon, mining companies gain more than compliance - they unlock strategic energy and carbon opportunities that drive real business value.

Want to reduce costs and emissions without compromising output?

Talk to Jack Warren - Technical Decarbonisation Methods Lead

Reporting and compliance context

Confirm the reporting entity and period, current thresholds, regulator guidance, evidence boundary and assurance obligations before applying the dated discussion to a live report.

Related guidance

Carbon advisory

Scope 1, 2 and 3 emissions

Contact us

Read the original article for the source publication and its full context.

What are the main energy cost drivers in mining operations that Northmore Gordon addresses?

Mining operations face substantial energy costs from baseline consumption across on-site power generation, comminution (ore grinding), refrigeration, pumps, compressors, and fans—often reaching millions of dollars annually. This exposure leaves mines vulnerable to energy price volatility. We conduct energy audits, benchmarking, and utility analysis to identify where consumption is highest, establish baseline energy use patterns, and prioritize efficiency improvements. By turning energy data into investment decisions, mining companies can reduce operating costs while building the measurement records needed for emissions compliance and certificate creation.

How does the Safeguard Mechanism affect mining facilities, and what are the compliance options?

Mining facilities emitting more than 100,000 tonnes CO₂-e annually must reduce covered emissions by 4.9% per year or offset the shortfall using ACCUs (Australian Carbon Credit Units) or SMCs (Safeguard Mechanism Credits) purchased at uncertain future market prices. This creates both a compliance obligation and a financial exposure. We help mining sites navigate this requirement by establishing emissions reporting and facility baselines under the Safeguard Mechanism, advising on compliance pathways including ACCU procurement and carbon market strategy, and supporting emissions reduction projects that lower the compliance burden. Strategic planning can help minimize exposure to rising offset prices.

Can mining facilities under the Safeguard Mechanism generate their own ACCUs on site?

Yes. Although high-emitting facilities covered by the Safeguard Mechanism typically cannot generate ACCUs to subsidize their emissions compliance, using methodologies we lead in, ACCUs can be produced on site even for Safeguard facilities. This approach allows mining companies to create carbon credits from eligible projects—such as energy efficiency upgrades, renewable energy installations, or process improvements—and manage those credits as part of their emissions strategy. This capability provides both an operational improvement and a potential revenue stream if credits are sold.

What role do Environmental Certificates play in mining project economics?

Environmental Certificates—including ACCUs, Large-scale Generation Certificates (LGCs), and energy efficiency certificates—represent tradeable instruments that create financial value from emissions reductions or renewable energy projects. For mining operations, certificates can yield substantial revenue; We note that certificate projects sometimes deliver returns in the millions. The financial benefit depends on project eligibility, certificate quantity and timing, and market price. We register projects, manage certificate creation and trading, and handles compliance reporting. Mining companies should assess certificate potential alongside energy and operational benefits when evaluating capital investments.

What data and measurement requirements must mining sites meet for emissions compliance and certificates?

Mining sites must establish robust measurement systems to demonstrate verified energy savings and emissions reductions credibly. This requirement applies to Safeguard Mechanism reporting under the National Greenhouse and Energy Reporting (NGER) Scheme, to environmental certificate creation under relevant schemes, and to sustainability reporting under ASRS. We provide measurement and verification services including project-boundary selection, baseline modelling, and savings calculation. Early measurement planning is critical; establishing the baseline while meaningful data can be collected makes later verification more reliable. Poor data quality can undermine both certificate eligibility and compliance reporting.

How can mining companies access government funding for energy and emissions projects?

Mining operations can explore multiple government funding pathways including the Powering the Regions Fund, ARENA (Australian Renewable Energy Agency), and other federal and state initiatives. Funding availability, eligibility criteria, and application deadlines vary by programme and funding round. We assist by investigating applicable grants, confirming project and applicant eligibility, and supporting investment-case preparation. A practical approach distinguishes funding scenarios from the core project merits: mining companies should prepare the investment case with and without conditional support so management understands the decision independently of unconfirmed grants. Assigning one coordinator to track funding status and evidence requirements reduces the risk that a technically sound project loses an opportunity because information was collected too late.

What does Northmore Gordon's carbon reporting service cover for mining companies?

Our Carbon and Energy Reporting service for mining includes full carbon accounting and emissions profiling aligned with NGER (National Greenhouse and Energy Reporting) Scheme and ASRS (Australian Sustainability Reporting Standards) requirements. The service also encompasses advisory on integrating renewable energy and low-carbon technologies into the mining energy mix, and generation, management, and sale of Large-scale Generation Certificates (LGCs). This integrated approach connects emissions data with reporting obligations, strategic energy decisions, and renewable procurement. Mining companies should clarify which reporting frameworks apply to their operations and consolidated group before commissioning reporting work.

What transition pathways can mining operations develop to move toward carbon neutrality?

Mining operations can explore carbon neutrality pathways that include internal carbon pricing frameworks to drive investment decisions, emissions reduction targets across on-site energy, process heat, and fugitive sources, renewable energy procurement and on-site generation, ACCU and offset strategies to address residual emissions, and staged implementation coordinated with capital cycles and technology readiness. We support this planning through diagnostic workshops, opportunity assessment, transition pathway development, and financial-implications analysis. A credible transition pathway distinguishes physical emissions reductions from purchased offsets, documents dependencies and ownership, and connects each step to concrete projects with defined capital, operating, and evidence requirements.

How does Northmore Gordon help mining companies turn energy data into investment decisions?

We apply our six-stage delivery approach: Assess (energy audits, benchmarking, forecasting), Build the Case (feasibility and investment case development), Capture Value (identifying funding and certificate opportunities), Deliver (project management and measurement and verification), Procure (energy and attribute purchasing strategy), and Perform (ongoing monitoring and reporting). This framework connects technical assessment with commercial decisions. For mining, the approach starts with robust energy data collection and analysis, moves through opportunity prioritization, identifies applicable funding and certificate value, oversees implementation with verified results, and establishes ongoing performance tracking. This systematic process reduces the chance that technically sound improvements are delayed by incomplete data or uncoordinated evidence collection.

