Visy Gibson Island Biomass Waste-to-Energy Project

Canonical: https://northmoregordon.com/case-studies/visy-gibson-island-industrial-biomass-waste-to-energy-innovation-at-scale/

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Visy converted its Gibson Island paper mill into an industrial biomass and waste-to-energy facility through a reported $48 million self-funded investment. Northmore Gordon supported a carbon-credit strategy spanning waste treatment and industrial emissions-reduction evidence streams.

Evidence note: The source case study was published on 8 October 2025 and reports commissioning in April 2023 with carbon-project registration commencing in 2024. Annual and year-seven figures include project-reported performance and projections. Current ACCU Scheme method status, crediting periods and eligibility must be confirmed from official rules.

Project context

The project prepares mixed commercial waste as a consistent on-site fuel, recovers recyclable materials and uses a retrofitted multi-fuel boiler to reduce coal demand. The commercial case combines fuel, landfill, material-recovery and potential carbon-credit value.

Northmore Gordon's role

Designed the stacked carbon-credit strategy across the Alternative Waste Treatment and Industrial and Commercial Emissions Reduction methods named in the source.

Supported project registration, emissions reporting and ongoing verification.

Structured separate evidence for waste diversion, recovered materials, fuel preparation, boiler performance and emissions reduction.

Helped translate regulatory compliance into a long-term project evidence system.

The fuel-preparation plant described in the case study uses shredding, magnets, eddy-current separation and optical sorting. Real-time analytics support fuel, emissions and performance monitoring while the mill operates continuously.

Reported project results

Investment: $48 million, self-funded

Waste diverted: more than 33,000 tonnes per year

Coal displaced: 17,000 tonnes per year

Reported annual emissions reduction: 34,000 tCO2-e

Reported year-seven reduction: more than 60,000 tCO2-e

Reported annual fuel-cost saving: about $2 million

Reduced landfill disposal and coal use while recovering metals and PVC.

Added fuel flexibility through the multi-fuel boiler retrofit.

Created local construction, operations and supply-chain activity described in the case study.

Demonstrated a model for integrating circular-economy operations with a carbon-project evidence framework.

What this project shows

Stacked methods require clear boundaries and no double counting. Each tonne of waste, unit of recovered material, fuel input, energy output and emissions factor needs a traceable role in the relevant calculation.

Before relying on future credit revenue, confirm method availability, additionality, monitoring, audit timing and crediting-period assumptions. The investment case should also remain transparent about which values are measured, forecast, avoided-cost or contingent revenue.

Related guidance

Carbon advisory

M&V for carbon projects

Carbon credits and certificates

Government schemes

Scope 1, 2 and 3 emissions

More case studies

Discuss a comparable energy, carbon or certificate project with Northmore Gordon .

What is the Visy Gibson Island waste-to-energy project and why is it significant?

The Visy Gibson Island project is a $48 million self-funded sustainability investment that transformed Visy Paper Pty Ltd's pulp and paper mill in Brisbane into a leading industrial biomass facility. It converts over 33,000 tonnes of mixed commercial waste annually—diverted from landfill—into renewable fuel that displaces 17,000 tonnes of coal per year in steam generation. The project is significant as the first Australian pulp and paper site with dual-method Emissions Reduction Fund (ERF) registration under both Alternative Waste Treatment (AWT) and Industrial & Commercial Emissions Reduction (ICER) methods, with source-reported annual emissions reductions of about 34,000 tonnes CO2-e and a projection of over 60,000 tonnes CO2-e in year 7. The year-seven figure is a forecast, not a verified result.

How did Northmore Gordon structure the carbon credit strategy for Visy Gibson Island?

We designed a stacked carbon credit strategy across both AWT and ICER ERF methods, enabling the project to achieve dual-method registration—a first for Australian pulp and paper operations. The firm handled full project registration under Federal Emissions Reduction Fund methods, ensured compliance with legislation and annual reporting requirements, and provided ongoing emissions reporting and ACCU verification. This approach maximises the carbon credit value by recognising emissions reductions from both waste diversion and industrial fuel substitution within a single integrated facility operation.

What are the economic benefits of the Visy Gibson Island project and how do they support investment resilience?

Visy achieves approximately $2 million in annual fuel cost savings from coal displacement, supplemented by revenue from carbon credits and materials recovery (steel, aluminium, PVC). The project delivers substantial savings in landfill levies—33,000 tonnes of waste annually avoided—and operational flexibility from the upgraded multi-fuel boiler. These diversified revenue streams and cost reductions strengthen project economics: fuel savings provide predictable operational benefits independent of carbon prices, while carbon credits add incentive value. This multi-benefit structure demonstrates commercial viability without reliance on any single revenue source, supporting long-term investment confidence.

What waste processing technology is used at Gibson Island and what quality outcomes does it achieve?

The Fuel Preparation Plant employs advanced equipment including a Lindner primary shredder, Steinert magnets and eddy-current separators, and TOMRA optical sorters. This integrated system recovers metals and PVC recyclable materials while producing consistent-quality, process-engineered fuel from contaminated mixed commercial waste. The technology's ability to separate and upgrade diverse waste streams into specification fuel is critical to reliable boiler operation and carbon credit eligibility. Equipment performance directly affects both operational safety and the measured emissions reductions submitted for verification under ERF methods.

How does the dual-method ERF registration at Gibson Island demonstrate industrial decarbonisation at scale?

The dual AWT and ICER registration recognises both waste diversion (Alternative Waste Treatment) and fuel substitution (Industrial & Commercial Emissions Reduction) within one facility. This approach illustrates a staged industrial decarbonisation pathway: existing infrastructure (the boiler) is repurposed to use renewable fuel instead of coal, while waste-management capability is upgraded to supply consistent feedstock. The case reports about 34,000 tonnes CO2-e in annual reductions and projects more than 60,000 tonnes CO2-e in year seven; the later figure is a forecast. Our role in structuring the strategy and managing registration supports organisations seeking to combine operational efficiency with regulatory recognition of multiple emissions-reduction mechanisms.

What role did project timing and evidence management play in achieving ACCU registration for Visy Gibson Island?

The project was commissioned in April 2023, with ACCU registration commencing in 2024. Securing registration required documented evidence of fuel use, emissions factors, waste diversion volumes, and baseline coal displacement—all coordinated across the dual-method structure. Our ongoing emissions reporting and ACCU verification ensured that annual monitoring data met ERF requirements and supported continued credit issuance. Proper evidence collection and timing coordination were essential to establish project eligibility and sustain the crediting period, demonstrating how systematic measurement and regulatory compliance enable large-scale decarbonisation projects to deliver auditable carbon benefits.

How does Visy Gibson Island's waste diversion contribute to both environmental and operational objectives?

The facility diverts 33,000 tonnes of mixed commercial waste annually from landfill, converting it into on-site renewable fuel. This achieves three integrated objectives: reduces landfill-dependent disposal costs and levies; displaces 17,000 tonnes of coal consumption annually; and generates recognised carbon credits under the ERF scheme. The waste diversion also reduced truck movements to landfill, lowering local traffic congestion and emissions impacts. By converting a waste liability into a productive energy input, the project aligns environmental stewardship with operational and financial benefits, demonstrating how industrial facilities can embed sustainability into core business processes rather than treating it as a separate function.

What employment and supply-chain benefits resulted from the Visy Gibson Island investment?

The $48 million project created significant local jobs during construction and in ongoing operations, and engaged local suppliers and service providers. By strengthening Australian waste-to-energy capability, the project supported skills development and industrial capacity in Queensland. These community and employment outcomes extend the project's value beyond immediate emissions reductions and cost savings, creating distributed economic benefits across the region. The local engagement model demonstrates how large-scale industrial decarbonisation can be structured to support broader economic development alongside carbon reduction.

What does the Visy Gibson Island project demonstrate about self-funded sustainability investment in heavy industry?

The $48 million fully self-funded investment—with no external grants or subsidies—demonstrates that major industrial decarbonisation can achieve commercial viability without government support. The combination of fuel cost savings ($2 million annually), carbon credit revenue, materials recovery, and landfill levy savings creates a self-sustaining business case. This model is relevant to other heavy-industry operators evaluating decarbonisation pathways: by identifying multiple value streams (operational savings, environmental credits, material recovery) and structuring them within a coherent investment case, organisations can fund substantial emissions reductions using their own capital. Our carbon credit strategy and investment-case support enables similar projects to quantify and realise these multi-benefit economics.