



AI Emissions and AASB S2

A practical guide for Australian boards

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CUSTOMER RESOURCE

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Executive Summary

The mandatory climate disclosure regime under the Australian Accounting Standards Board (AASB) S2 *Climate-related Disclosures* is now in force for large Australian entities. This standard requires the disclosure of material climate-related financial risks and opportunities, including Scope 1, Scope 2, and Scope 3 greenhouse gas (GHG) emissions [1]. As artificial intelligence (AI) adoption accelerates across the enterprise, AI-related energy consumption and its associated emissions—primarily falling under Scope 3 Category 1 (Purchased Goods and Services)—have become a material compliance and governance issue for Australian boards.

This white paper examines the intersection of AI emissions and AASB S2 requirements. It outlines the obligations for measuring and reporting Scope 3 AI emissions, the implications for director liability under the *Corporations Act 2001*, and the practical challenges of capturing accurate emissions data across a distributed AI estate. Finally, it explains how the Cetus AI platform, through its Evidence Fabric and Value Control module, can support an organisation's measurement, review, and disclosure preparation within configured source coverage.

The Customer Problem: AI Emissions in the Enterprise

Artificial intelligence workloads, particularly generative AI and large language models (LLMs), are highly compute-intensive. As organisations deploy AI across cloud platforms, APIs, copilots, and internally developed models, the energy required for inference and training scales exponentially. For most Australian enterprises, this compute occurs in third-party data centres, classifying the resulting emissions as Scope 3.

AASB S2 requires entities to disclose their absolute gross GHG emissions generated during the reporting period [1]. While Scope 3 reporting obligations are phased in, they present a significant data-gathering challenge. Organisations must measure emissions across their value chain, including the services provided by cloud and AI vendors. The operational governance gap arises because the telemetry required to calculate AI emissions is often fragmented. Cloud logs record execution, API gateways manage routing, and business applications hold the context of the workload. However, these systems do not inherently calculate the token-level or query-level energy consumption and translate it into a CO2 equivalent (CO2e) figure that can be attributed to a specific business unit or AI initiative. Without this attribution, boards cannot accurately assess the materiality of their AI emissions or make informed decisions about climate-related risks and opportunities as required by AASB S2 and the *Corporations Act 2001* [2].

A Practical Framework for AI Emissions Governance

To meet AASB S2 requirements and manage AI-related climate risks, organisations need a practical framework that connects technical execution with sustainability reporting. This framework must move beyond broad estimates and provide defensible, reviewable evidence of AI emissions.

The framework requires the following capabilities:

Capability	Purpose	AASB S2 Alignment
Visibility and Discovery	Identify all AI models, tools, and services operating across the enterprise, including sanctioned and unsanctioned (Shadow AI) usage.	Ensures completeness of the emissions boundary for Scope 3 reporting.
Token-Level Attribution	Measure the compute resources (e.g., tokens, queries, compute time) consumed by specific AI workloads and attribute them to the responsible business unit.	Provides the granular data required to calculate accurate Scope 3 emissions.
Emissions Calculation	Translate compute consumption into CO2e emissions using recognised methodologies and vendor-provided carbon intensity factors.	Supports the disclosure of absolute gross GHG emissions.
Evidence Correlation	Link emissions data with identity, policy, and business context to create a reviewable audit trail.	Enables directors to declare that reasonable steps have been taken to ensure compliance with the <i>Corporations Act</i> and AASB S2 [2].
Governance and Control	Apply policies to manage AI consumption, such as routing workloads to more energy-efficient models or enforcing budget and emissions caps.	Demonstrates active management of climate-related risks and opportunities.

Application to the Cetus AI Platform

Cetus AI is the core enterprise AI governance platform designed to connect policy intent with technical execution and reviewable evidence. The platform is built and available for controlled enterprise deployment. It does not replace existing enterprise systems; rather, it adds the missing AI-specific governance and evidence layer. For organisations navigating AASB S2, Cetus AI provides critical support through its **Evidence Fabric** and **Value Control** module.

Evidence Fabric: Creating a Reviewable Record

The Evidence Fabric correlates approved telemetry from across the enterprise stack—including identity providers, API gateways, and cloud monitors—using shared identifiers. This creates a coherent record of AI decisions and resource consumption.

In the context of AASB S2, the Evidence Fabric can capture the metadata associated with AI workloads, such as the model used, the number of tokens processed, and the executing identity. This data forms the foundation for calculating Scope 3 emissions. By correlating this information, Cetus AI produces structured outputs, including a tamper-evident audit chain, which can support the assurance processes required for sustainability reporting.

Value Control: Attributing Cost and Emissions

Value Control is an integrated module within the Cetus AI platform. It is designed to distinguish forecast, observed, attributed, finance-validated, and risk-adjusted value.

Value Control extends its attribution capabilities to sustainability metrics. By analysing the token consumption and workload data captured by the Evidence Fabric, Value Control can estimate the associated AI emissions. This allows organisations to attribute Scope 3 AI emissions to specific teams, projects, or applications. This granular attribution is essential for assessing the materiality of AI emissions and preparing accurate AASB S2 disclosures.

Deployment and Integration

Cetus AI supports a controlled deployment model. The **Teams** component provides enterprise visibility and governance-intake, while **Control** manages policy, identity, runtime guardrails, exception, and human-oversight.

The platform can integrate with existing systems, such as MuleSoft, which serves as an implementation pattern for orchestrating governed services.

Limitations and Customer Responsibilities

While Cetus AI provides robust capabilities for AI governance and evidence correlation, it is important to understand the boundaries of the platform.

- **Compliance is a Customer Responsibility:** Cetus AI capabilities can support a customer process within configured coverage; they do not make the customer compliant with AASB S2, prove causation, replace an auditor, or guarantee completeness. The legal interpretation of AASB S2 requirements and the final disclosure remain the responsibility of the customer and their board.
- **Data Accuracy:** The accuracy of emissions estimates depends on the quality of the telemetry ingested from source systems and the carbon intensity factors provided by AI and cloud vendors. Evidence Fabric correlates approved source records and makes gaps visible; correlation does not establish causation.
- **Validation:** Customer-specific integrations and deployment patterns still require validation against the customer's architecture, sources, identity, security, performance, failure behaviour, and operating model.

Recommended Next Steps

For Australian boards and executive teams preparing for AASB S2 disclosures, the following steps are recommended:

1. **Assess AI Visibility:** Determine if the organisation has a complete inventory of AI models and services in use, including unsanctioned Shadow AI.
2. **Evaluate Attribution Capabilities:** Assess whether current systems can attribute AI compute consumption and associated emissions to specific business units or workloads.
3. **Review Governance Architecture:** Consider how an additive governance layer, such as Cetus AI, can connect existing enterprise systems to provide reviewable evidence for sustainability reporting.
4. **Engage Stakeholders:** Ensure alignment between technology, finance, risk, and sustainability teams on the methodology for measuring and reporting Scope 3 AI emissions.

References

- [1] Australian Accounting Standards Board. (2024). *AASB S2 Climate-related Disclosures*. <https://standards.aasb.gov.au/aasb-s2-sep-2024>
- [2] Australian Securities & Investments Commission. (n.d.). *What should your sustainability report contain?* <https://www.asic.gov.au/regulatory-resources/sustainability-reporting/for-preparers-of-sustainability-reports/what-should-your-sustainability-report-contain>

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