

1.0 PURPOSE

On 31 May 2022, the South Australian Parliament declared a climate emergency and committed to working with business, industry and community to transform the economy to net zero emissions by 2050.

To achieve this ambition, the Department for Infrastructure and Transport (DIT) devised a Sustainable Procurement Policy, with a commitment to ‘ensuring sustainability risks and opportunities are identified as part of procurement planning, and appropriate requirements are included in tender and contract documents, in line with the net zero emissions target’.

This Emissions Sustainability Management procedure addresses the requirements of the DIT Sustainable Procurement Policy and SA Government Sustainability Procurement Initiative.

2.0 APPLICATION

This procedure applies to all Bardavcol business operations.

3.0 REFERENCES

System References:

This integrated management systems procedure has been developed in compliance to the following International / Australasian Standards:

ISO 45001:2018	Occupational Health & Safety Mgt. Systems
ISO 9001:2015	Quality Management Systems
ISO 14001:2015	Environmental Management Systems

Guides and Legislation:

United Nations Framework Convention on Climate Change (UNFCCC)¹
Climate Change and Greenhouse Emissions Reduction Act 2007 (South Australia)
Greenhouse Gas Protocol

4.0 DEFINITIONS, SCOPE & ACRONYMS

4.1 Definitions

gCO₂-e/kg: Carbon Dioxide Equivalent (CO₂e) is the unit of measurement for the warming effect of greenhouse gases. CO₂e is the exchange rate of other greenhouse gases to carbon. The exchange rate expresses how many kg of carbon dioxide emissions warm the climate equally as 1 kg of another greenhouse gas, over a certain period of time (most often 100 years). CO₂e translates the potency, how much infrared radiation a ton of each gas absorbs, and longevity, how long a ton of each gas radiates the heat back to the atmosphere, in

¹ The SA Government report emissions to the UNFCCC

relation to the emissions of a ton of carbon dioxide. CO₂e allows us to compare and equate the effect of different greenhouse gases into a singular climate footprint.

Greenhouse gas² emissions are emissions of —

- (a) carbon dioxide; or
- (b) methane; or
- (c) nitrous oxide; or
- (d) hydro fluorocarbons; or
- (e) perfluorocarbons; or
- (f) sulphur hexafluoride; or
- (g) any other gas brought within the ambit of this definition by the regulations;

Greenhouse Gas Protocol: is a multi-stakeholder partnership of businesses, non-governmental organizations (NGOs), governments, and others convened by the World Resources Institute (WRI), a U.S.-based environmental NGO, and the World Business Council for Sustainable Development (WBCSD), a Geneva-based coalition of 170 international companies. Launched in 1998, the Initiative's mission is to develop internationally accepted greenhouse gas (GHG) accounting and reporting standards for business and to promote their broad adoption. ³

Procurement: the process of obtaining goods and services from preparation, assessment and processing of a requisition through to receipt of goods and services and approval of payment via the system prescribed in the Bardavcol management system.

Contract: an agreement between Bardavcol and an external entity supplier to provide goods, services or perform work.

Contractor: the entity providing the goods, services or work that is the subject of a contract.

Contractor Manager: the Bardavcol employee representative responsible for administration of a contract, unless identified otherwise, this is the Project Manager.

Emission Factor: a representative value that attempts to relate the quantity of a pollutant released to the atmosphere with an activity associated with the release of that pollutant. It is a ratio corresponding to the amount of GHG emitted as a result of a given unit of activity. For example, grams of CO₂ per kWh of electricity, or grams of Nitrous Oxide per L of propane.

Responsible Manager: Manager or supervisor directly in control of the relevant area, worker/s or operations. Where a worker has been given the responsibility over one or more workers, he/she is the designated Responsible Manager for that worker or group of workers in accordance with the company organisational chart.

Project: An activity or series of related activities to achieve defined objectives of a specific contract.

Top Management: the person or group of people who directs and controls an organisation at the highest level (ISO).

² As per Climate Change and Greenhouse Emissions Reduction Act 2007 (South Australia)

³ www.dit.sa.gov.au

4.2 Scope

Bardavcol will comply with the SA government and DIT Emissions Sustainability Management requirements. In line with the current DIT requirements, the focus of emissions management will be on Scope 1 emissions that directly result from operations owned or controlled by a reporting organization and Scope 2 emissions, emissions associated with the generation of purchased energy, such as electricity. DIT currently requires only one scope 3 embodied emission source.

The emissions sustainability management requirements as applied by Bardavcol will, at this point, exclude the following until they are mandated:

- emissions from employee commutes between their workplace and home.
- expected lifetime emissions for all relevant products across an organization’s product portfolio for all products sold during the reporting year.
- emissions from the production of purchased or acquired capital goods.
- emissions generated to transport supplies between warehouses and from the storage of goods in warehouses or distribution centers (by third parties).
- Emissions incurred by leased plant or waste generated by third parties.

Bardavcol will also present greenhouse gas emissions that are reported in units of carbon dioxide equivalent (CO₂e) using Greenhouse Gas Equivalencies Calculator, rather than adopting more complex emission unit by emissions factor conversion calculations. The only exception to this may be project-specific initiatives, such as those related to Asphalt mixture production and pavement construction.

4.3 Acronyms

RM: Responsible Manager

CM: Construction Manager

CEM: Certification Manager

OM: Operations Manager

SM: Safety Manager

GMPD: General Manager – Project Delivery

IMS: Integrated Management System

SS: Safety Supervisor

PMP: Project Management Plan

GMCS: General Manager – Corporate Services

EM: Estimating Manager

EC: Executive Chairman

COM: Commercial Manager

CAL: Commercial Authority Limits

5.0 ROLES AND RESPONSIBILITIES

Top Management Shall:

- Identify and appoint Contractor Managers and ensure they receive training in the Contractor Management Procedure.
- Develop, maintain and communicate position descriptions to employees, including the definition of roles, responsibilities and authority levels within the organisation.

The CEM shall:

- Develop, implement and maintain this procedure.

- Audit compliance to the procedure.

Responsible Managers shall:

- Implement this procedure over their allocated area of responsibility.
- Ensure persons under their supervision adhere to this procedure.
- Identify Contractor Managers and ensure they receive training in the Contractor Management Procedure.

6.0 PLANNING

The principal purpose of the Emissions Sustainability Management procedure is to:

1. Identify GHG emissions sources
2. Measure GHG emissions by way of a GHG Emissions Inventory
3. Set an emissions reduction target
4. Develop and implement GHG emissions reduction programs
5. Report to DIT as required.

7.0 IMPLEMENTATION

7.1 Sustainability returnable schedules

DIT may ask tenderers to nominate specific commitments relevant to the key sustainability risks or opportunities associated with a procurement.

For example:

the percentage of recycled content in pavement material

the number of diesel-fuelled technologies that will be replaced with solar, hybrid or electric.

These commitments are usually made via a returnable schedule. We will use them to compare offers. We may use them as the basis for contractual requirements or key performance indicators.

Sustainability returnable schedules are generally used for construction procurements more than \$50 million.

7.2 Sustainability Framework for Asphalt

New and existing suppliers who wish to apply for prequalification for bituminous work will:

- be requested to undertake an assessment of their plant
- need to use the Australian Flexible Pavements Association's Sustainability Framework for Asphalt (SF4A) for the assessment.

Bituminous work is sometimes procured indirectly, such as through a head contractor. In such cases, we encourage head contractors to:

- request their suppliers' asphalt plant sustainability score
- take this into account in their supplier selection.

7.3 Participation in Fleet Pledge Program

DIT will ask the supplier to sign up to the South Australian Government's Fleet Pledge Program for contracts that involve significant passenger vehicle travel. For example, where the supplier is likely to need a fleet of more than five passenger vehicles to carry out the service.

Driving South Australia's fleets towards plug-in electric vehicles is a key action in South Australia's Electric Vehicle Action Plan. Suppliers that take part in the program can access tools and resources to help them transition to electric fleet vehicles.

7.4 Providing emissions information (GHG Inventory)

The government has a goal to achieve net-zero emissions in its government operations. This includes scope 1, 2 and some scope 3 emissions.

We need to be able to measure and report progress against our emission reduction goals. To do this, we may request emissions data from suppliers, particularly for procurements more than \$50 million. Emissions data can also help procurers compare and select products with lower lifecycle impacts.

Understanding scope 1, 2 and 3 emissions ⁴

Scope 1 emissions are the direct emissions from sources owned or controlled by an organisation. For the South Australian Government, this includes fuel used in our public transport fleet. (Example: fuel used by construction plant).

Scope 2 emissions are indirect emissions from the electricity we purchase.

Scope 3 emissions are all other emissions associated with our activities. This includes emissions generated from the goods and services we procure. Scope 3 emissions are indirect greenhouse gas (GHG) emissions that occur as a result of an organization's activities but are outside of its direct operational control. These emissions represent the entire life cycle of a product, project or service, including emissions from suppliers and other stakeholders in the value chain.

Quantifying carbon emissions can be straightforward or very complex. This depends on the nature of the product or service. Many suppliers now provide Environment Product Declarations for their products. These estimate the carbon emissions generated per unit of that product, from raw material extraction through to sale of the product.

The carbon intensity of many types of services can also be quantified and compared. For example, we may ask cloud services providers to provide their carbon emissions per CPU-hour, which reflects:

- how energy efficient their data centres are
- the proportion of renewables used.

We may request suppliers to provide emissions data:

- upfront during the tender stage to help us make comparisons
- during delivery to enable tracking and reporting of emissions.

Procurements with multiple activities over extended periods

⁴ These standards are taken from the GHG Protocol

For procurements that involve multiple activities over extended periods, such as facilities management, it is not practicable to provide an emissions estimate upfront. In such cases, we may ask tenderers to provide:

- information on their proposed approach to reduce emissions associated with the contract
- examples of the steps they have taken to reduce emissions in their value chain.

The contract may also include requirements for the supplier to:

- establish an emission baseline for the goods or services being delivered
- develop emission reduction plan, including key performance indicators and reporting.

7.5 Bardavcol Emissions Sustainability Management Tab

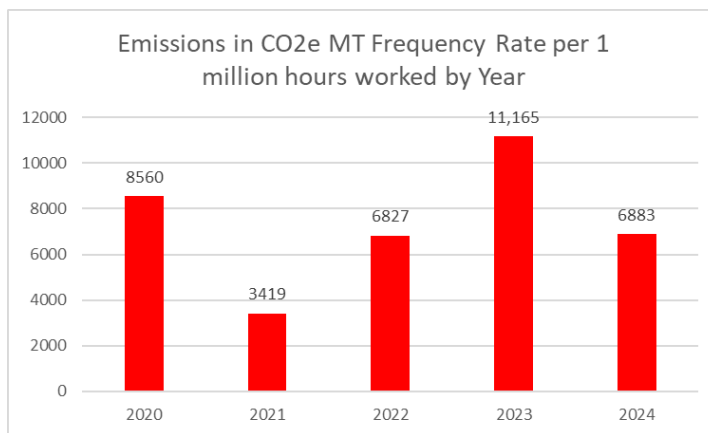
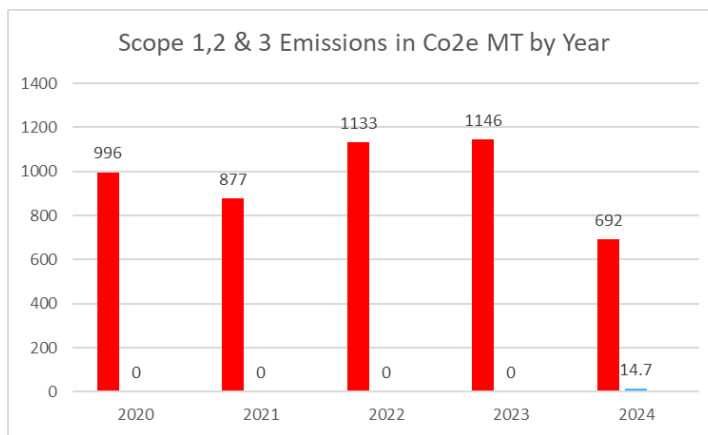
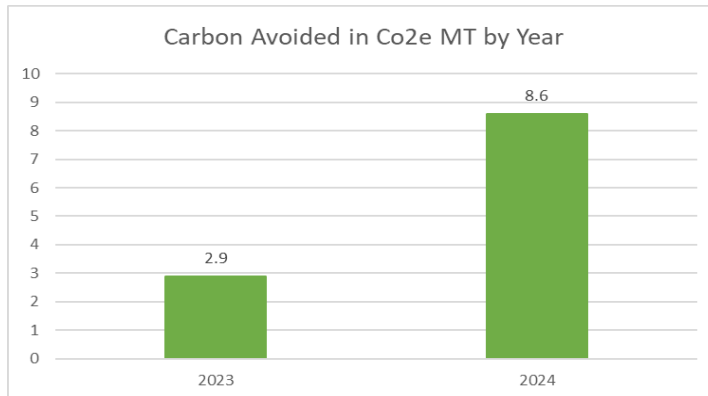
All Emissions Sustainability Management inventories, reduction programs and kpi's shall be maintained within the Emissions Sustainability Management tab of FO 36 Risk Management Register. An example of this is provided below. The Safety Manager in consultation with the Certification Manager and others, will maintain this register.

A performance tab will be maintained (see example next page) which will capture and align data into comprehensive graphs to allow for the discernment of information using a visual medium.

Graphs will include:

- CO2e Emissions by type and year (MT)
- Carbon Avoidance by year (MT)
- CO2e Emissions Frequency Rate by year per 1,000,000 hours worked.

As innovators in the governance space, Bardavcol will include the CO2 emissions frequency rate by million hours worked to allow companies of different sizes to compare emissions data in the same way frequency rates are utilised for work health and safety. We are the first in sector in Australia to provide frequency rates for Co2 emissions.





Year	Emissions Inventory						Emissions Reduction Plan							
	Emission Scope (1,2,3)	Emission Source	Value (L)	Data Source	Amount Co2e in Kg	Amount in CO2eMT Metric Ton	Hours worked Bardavcoll only	FR (Co2ekg/hours workedx 1mil)	Frequency Rate of Co2e by 1mill hours worked in Metric Tons	Target	Actions	Carbon avoided	KPI	
2024	Scope 1	carbon footprint of office paper from cradle-to-costumer is 4.64 g CO2eq per A4 sheet according to, respectively, the ISO 14040/14044 standards, the PAS 2050 and the CEPI framework		Safety Inspections 678 x 11 pages), Haz Ops (1665x5), Env. Insp (242x9), safety walks (102x4) and audits (3)	18201 pages or 84.5kg						100% of Safety and Environmental Inspections, Site Walks, ISO Audits and Hazards Observations to be done digitally.	Use digital software to undertake site inspections and audits for safety.	0.0845	100% achieved.
2025	Scope 1	Unleaded fuel used.												
2025	Scope 1	Diesel fuel used.												
2025	Scope 1	Project based emissions (asphalt)												
2025	Total Scope 1 CO2e													
2025	Scope 2	Electricity used HO												
2025	Scope 2	Electricity Project 1												
2025	Scope 2	Electricity Project 2												
2025	Total Scope 2 CO2e													
2025	Scope 3	procure												
2025	Total Scope 2 CO2e													
2025	Total Scope 1,2,3, CO2e													
2025	Scope 1	Fuel used in the delivery of training in 2024 was xxx sessions by xx kms is xxx kms, 15l/100km which is 0.15l/k is xxx L									Double the training related carbon avoidance of 2023. Achieve 7.24 or more.		Metric Ton Co2e	% reduction achieved
2025	Scope 1	2024, 18201 pages of paper were saved using digital operations, a carbon avoidance of 84.5 kg.									Double the paper saved via use of digital technologies, achieve a carbon avoidance of 169 kg or more.			

7.6 Requirement for certain suppliers to have organisational emission reduction targets

From mid-2024, suppliers tendering for work valued at more than \$50 million must provide evidence that they have an organisational emission reduction target(s) addressing:

- scope 1 and 2 emissions (from their own fuel and electricity use)
- at least one scope 3 embodied emission source in their supply chain.
 - The emission reduction targets must be:
- SMART (Specific, Measurable, Attainable, Realistic and Timebound)

Note that DIT currently do not permit emission offsetting.

Bardavcol shall document the applicable SMART reduction target on FO 36 Risk Register, within the Corporate QSE Plan.

7.7 Organisational emission reduction targets website portal

From mid-2024, suppliers tendering for work valued at more than \$50 million must ensure the organisational emission reduction target(s) are:

- SMART (Specific, Measurable, Attainable, Realistic and Timebound)
- Publicly available on the supplier's website.

The Safety Manager with assistance from the Certification Manager and General Manager, Corporate Services shall, at least annually, or as deemed necessary, update the Bardavcol website with current emission reduction target data.

7.8 Translation standards

CO2 emission conversion standards will be utilised as follows:

The approximate CO2 per litre of diesel fuel is 2.68kg, and for petrol it is approximately 2.31kg. LPG produces around 1.51kg per litre.

Office paper from cradle-to-costumer is 4.64 g CO2eq per A4 sheet according to, respectively, the ISO 14040/14044 standards, the PAS 2050 and the CEPI framework.

8.0 MONITOR and Review

8.1 Monitoring

Oversight over all compliance requirements within this procedure shall be gained via the fortnightly management meeting. The Safety Manager shall, at least quarterly, share key data concerning the ssustainability returnable schedules, emission reduction plan, status and latest data.

8.2 Review

Appropriate control mechanisms, consultation and corrective actions shall be implemented by the management team, guided by the Safety Manager and Certification Manager.

10.0 COMPETENCY REQUIREMENTS

Those managers and workers regularly participating in the fortnightly management meeting shall undertake the Bardavcol training package on this procedure.

11.0 WORK INSTRUCTIONS

N/A

12.0 SYSTEM TOOLS

FO 36 Risk Management Register - **Emissions Sustainability Management Tab**

13.0 RECORDS

An electronic copy of the system tools shall be retained on the M: drive under Management Systems or iAuditor.