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| Public environmental reporting guidelines |
| Guidance for Victorian public hospitals, health services and other Department of Health portfolio entities |
| OFFICIAL |

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Contents

[1. Introduction 5](#_Toc138239097)

[1.1. About public environmental reporting 5](#_Toc138239098)

[1.2. Purpose of these guidelines 5](#_Toc138239099)

[1.3. Scope of emissions 5](#_Toc138239100)

[1.4. Glossary 6](#_Toc138239101)

[2. Reporting under FRD 24 7](#_Toc138239102)

[2.1. Background 7](#_Toc138239103)

[2.2. Reporting tiers 7](#_Toc138239104)

[2.3. Organisational boundary 8](#_Toc138239105)

[2.4. Materiality 8](#_Toc138239106)

[2.5. Accounting year 8](#_Toc138239107)

[2.6. Qualitative disclosures 9](#_Toc138239108)

[2.7. Normalising factors 9](#_Toc138239109)

[2.8. How to meet reporting requirements for unavailable data 10](#_Toc138239110)

[2.9. Simple disclosure (Tier 4 entities) 11](#_Toc138239111)

[3. Department of Health’s EDMS 12](#_Toc138239112)

[3.1. About the EDMS 12](#_Toc138239113)

[3.2. Environmental indicators included in the EDMS 12](#_Toc138239114)

[3.3. Environmental indicators not included in the EDMS 14](#_Toc138239115)

[3.4. Data sources for the EDMS 15](#_Toc138239116)

[3.5. Data assurance 16](#_Toc138239117)

[3.6. Data management tips 16](#_Toc138239118)

[4. Detailed guidance on indicators 18](#_Toc138239119)

[4.1. Electricity production and consumption 18](#_Toc138239120)

[4.2. Stationary fuel use 20](#_Toc138239121)

[4.3. Transportation 21](#_Toc138239122)

[4.4. Total energy 23](#_Toc138239123)

[4.5. Sustainable buildings and infrastructure 24](#_Toc138239124)

[4.6. Water consumption 27](#_Toc138239125)

[4.7. Waste and recycling 28](#_Toc138239126)

[4.8. Greenhouse gas emissions 30](#_Toc138239127)

[5. Support 32](#_Toc138239128)

[5.1. Useful resources 32](#_Toc138239129)

[5.2. Contacts 33](#_Toc138239130)

[Appendix A: Scope of emissions 34](#_Toc138239131)

[Appendix B: Reporting tiers for Victorian public hospitals, health services and Department of Health portfolio entities 35](#_Toc138239132)

[Appendix C: Organisational boundary 38](#_Toc138239133)

[Appendix D: Normalising factors and benchmarks 40](#_Toc138239134)

[Appendix E: Medical gases and refrigerants 42](#_Toc138239135)

[Appendix F: Other environmental reporting frameworks 43](#_Toc138239136)

# Introduction

## About public environmental reporting

Public environmental reporting is the public disclosure of an organisation’s performance around its environmental impacts, such as energy and water consumption, and generation of waste and carbon emissions.

Public hospitals, health services and other health portfolio entities must report on mandatory environmental indicators under *Financial Reporting Direction 24: Reporting of environmental data by government entities* (FRD 24). Transparency about environmental impacts and performance encourages organisations to improve their environmental management practices.

Environmental reporting typically involves:

* determining ‘reporting boundaries’ and ‘materiality’ around environmental impacts
* collecting data about impacts, reporting metrics and normalising factors
* commenting on factors that may have affected changes in performance
* reporting on performance, actions and future plans to improve performance.

## Purpose of these guidelines

These guidelines aim to help Victorian public hospitals, health services and other health portfolio entities meet legislative and policy requirements for environmental reporting.

This document covers FRD 24’s mandatory reporting requirements and provides important details on the Department of Health’s system-wide environmental data management system (EDMS). The EDMS is also known as Eden Suite. The EDMS provides a standardised, web-based platform to manage the public health system’s environmental and utility data. The EDMS can be used to easily produce environmental reports that meet FRD 24 requirements.[[1]](#footnote-2)

These guidelines have been updated for the new environmental reporting requirements stemming from FRD 24, which was released in 2022. The guidelines will be progressively reviewed and updated to ensure consistency with the latest FRD 24 reporting requirements.

The guidelines are not a substitute for the FRD 24 reporting requirements themselves and must not be relied upon for meeting FRD 24 requirements. For more information on FRD 24, see **5.1 Useful resources**.

## Scope of emissions

The Greenhouse Gas (GHG) Protocol categorises an organisation’s emissions under Scope 1, Scope 2 and Scope 3. A summary of the three different scopes is in [**Appendix A: Scope of emissions**](#_Appendix_A:_Scope). For detailed explanations, see the [GHG Protocol website's Corporate standard page](https://ghgprotocol.org/corporate-standard) <https://ghgprotocol.org/corporate-standard>.

## Glossary

| Term | Definition |
| --- | --- |
| ATF | Aviation turbine fuel |
| Avgas | Aviation gasoline |
| DEECA | Department of Energy, Environment and Climate Action |
| Department | Department of Health |
| DTF | Department of Treasury and Finance |
| EDMS | Environmental data management system |
| FRD 24 | *Financial Reporting Direction 24: Reporting of environmental data by government entities* |
| FTE | Full-time equivalent |
| GHG Protocol | Greenhouse Gas Protocol |
| HSV | HealthShare Victoria |
| LGC | Large-scale generation certificate |
| LPG | Liquid petroleum gas |
| NABERS | National Australian Built Environment Rating System |
| NGA | National Greenhouse Accounts |
| SSP | Shared service provider |

# Reporting under FRD 24

## Background

Victoria was one of the first jurisdictions in the world to put a net-zero emissions target into law. The government brought forward its commitment to achieve net-zero from 2050 to 2045. It is aiming to cut emissions by 45 to 50 per cent by 2030.

To meet these goals, the Victorian Government reporting requirements were updated to:

* measure the effect of actions to reduce emissions and improve government entities’ environmental performance and management
* provide transparency on public sector year-on-year performance on environmental indicators in organisations
* support implementation of the whole-of-Victorian-Government emissions reduction pledge
* support the government’s commitment of 100 per cent renewable electricity by 2025
* identify and manage government exposure to climate-related risks
* respond to public expectations and align with private sector leaders
* move environmental reporting requirements to the whole-of-government financial management framework and bring all government entities into alignment.

From 1 July 2022, the updated *Financial Reporting Direction 24: Reporting of environmental data by government entities* (FRD 24) substantially increased environmental reporting requirements. All entities defined as either a public body or a department under section 3 of the *Financial Management Act 1994* must meet FRD 24’s environmental data reporting requirements.

FRD 24 specifies the environmental performance indicators that entities must measure and report in their annual report of operations (12 months of data), including aspects of energy and resource consumption and environmental performance.

Under the *Health Services Act 1988*, denominational health services must meet FRD 24 reporting requirements from the 2023-2024 reporting year.

## Reporting tiers

Public entities have been classified into reporting ‘tiers’ for the purposes of FRD 24. This is to recognise the large variety in size, environmental impact and capability of public entities to report on environmental data.

Each tier has different disclosure requirements.

Most public health services are in Tiers 2 and 3a. Lists of entities and services in each tier are in **Appendix B: Reporting tiers of for Victorian public hospitals, health services and other Department of Health portfolio entities**.

Tier 4 entities should review the [**Simple disclosure (Tier 4 entities)**](#_2.10._Simple_disclosure) section of these guidelines. Health services are encouraged to report on more indicators than the mandatory indicators. **Note**: once an additional metric is reported, entities may be expected to report it on an ongoing basis.

The Department of Energy, Environment and Climate Action (DEECA) has more information, including a whole-of-government list of FRD 24 tiers. See [DEECA's Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

## Organisational boundary

Reporting entities must assess the operations, activities and facilities in their organisational boundary.

Organisational boundary must include:

* all of the entity’s operations
* the operations of any other public sector entity hosted entirely within the entity’s facilities (where the entities agree to report these operations)
* operations of any public asset by a private organisation if the environmental impacts of those assets are in the operational control of the entity. Only consider activities associated with asset operations. Do not include activities from office or other corporate facilities that are not part of a service concession or lease.

In some instances, public hospitals will have private concessions operating in their facilities, such as post offices, cafes or shops. These may be considered to be outside the public entity’s organisational boundary. However, it may not always be possible or efficient to exclude their resource use due to the data available. In these circumstances, the reporting entity should note (for example, in footnotes of relevant tables) that some activities outside the organisational boundary have been included in the data.

Reporting entities should disclose their organisational boundary when reporting.

More information on operational control, machinery of government changes and general tips are in **Appendix C: Organisational boundary**. Comprehensive advice is available in the ‘Organisational boundary’ section of FRD 24.

FRD 24 is available on [DEECA’s Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

## Materiality

Some facilities and activities will be very small in size. Collecting data for these may be too resource intensive.

For this reason, FRD 24 includes a materiality clause that allows activities to be excluded when:

* their emissions are **less than 1%** of an organisation’s total, and
* the amount of excluded activities is **less than 5%** of the organisation’s total activities.

For example:

* An organisation has 6 LPG barbecues that are used 10 to 20 times each year. They produce much less than 1 tonne CO2-e each year. This is much less than one per cent of the organisation’s emissions.
* An organisation has a small organic food waste bin in their kitchen that is emptied weekly. It produces much less than one per cent of the organisation’s total volume of waste.

More information is in the ‘Materiality and completeness’ section of FRD 24.

## Accounting year

Environmental data included in a reporting entity’s public annual report should be for the financial year of 1 July to 30 June the next year.

## Qualitative disclosures

In addition to quantitative data, reporting entities should include qualitative disclosures that give essential context or information on underlying issues. Contextual information could include:

* description of environmental performance in the reported year
* factors that may have contributed to increases or decreases in environmental indicators (such as growth in service delivery, more equipment or more floor space)
* any data quality issues, including changes in previously reported information
* any data excluded due to materiality or operational control
* commentary on accounting or reporting boundaries.

The ‘Environmental reporting’ section of the *2022-23 Model Report for Victorian Government Departments* include examples of qualitative disclosures. The Model Report can be downloaded from the Department of Treasury and Finance’s (DTF) website. See [DTF’s Model Report web page](https://www.dtf.vic.gov.au/financial-reporting-policy/model-report) <https://www.dtf.vic.gov.au/financial-reporting-policy/model-report>.

More guidance can found under ‘4.6 Context’ in FRD 24.

FRD 24 is available on [DEECA's Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

## Normalising factors

Normalising factors are indicators used to compare (or benchmark) environmental performance over time and allow for any changes in service delivery.

There are a number of normalising factors that can be used for measuring environmental performance in:

* health services – such as health activity metrics or floor area
* office-based health portfolio entities – such as full-time equivalent (FTE) or floor area.

For office-based entities, FTE will typically be the most appropriate normalisation factor.

Some mandatory FRD 24 indicators are normalised:

* total energy use (E4)
* water consumption (W2)
* waste disposal (WR3).

The EDMS normalises data against the most relevant factors.

A table on normalising factors for reporting environmental impacts in health services is in **Appendix D: Normalising factors and benchmarks**.

More information is in the ‘Normalisation’ section of *Guidance on environmental disclosures under FRD 24*. See [DEECA's Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

## How to meet reporting requirements for unavailable data

Reporting entities should always aim to report the actual data for all activities and all indicators. Where it is not practical to do so, consider the following:

* check the wording of the indicator in FRD 24 – some indicators only require reporting on certain activities where data is available
* materiality – if the activity is very small, it may be possible to exclude it (see **Materiality**)
* report an estimate – include the assumptions and methods used to determine the estimate
* where an estimate is not feasible, provide an explanatory note on planned activities to improve data collection for future annual reports.

### Guidance on reporting estimates

Estimates may be needed for individual activities when it is not practical to collect data or data is not yet available.

Missing data can be estimated using data from the same period of the previous year or actual data from the current year. Only use this approach if the data of a few indicators are affected.

Estimates and omissions should be clearly documented. Make sure it is clear:

* what is being reported
* what the reported data is based on
* what is missing.

The FRD 24 guidance documents include many methods for estimating indicators.

The EDMS can produce estimated data for time periods where actual data is not yet available through multiple methods:

* **seasonal adjustment** (default and preferred method): data is used from the same period in the previous year to calculate estimates, this allows for seasonal variances
* **simple average** (useful if there is only one ‘good’ record to use): select the date range to be used for calculating estimates
* **three-month window**: the last 3 months of data are used to calculate estimates
* **six-month window**: the last 6 months of data are used to calculate estimates.

Estimations are calculated automatically based on usage from previous consumption data. The system replaces estimated data as actual data comes in.

### Guidance on providing explanatory notes on future activities

When it is not feasible to report either data or an estimate, you can include an explanatory note on planned activities to improve data collection for future annual reports. For example:

* ‘Data on medical PVC recycling is currently not collected. The organisation is planning to use the Department of Health’s EDMS, which uploads this data. The data gap will be addressed and we will be able to report on this indicator in the next financial year.’
* ‘Some of the organisation’s older small-scale solar systems do not have data monitoring installed. These will be progressively retrofitted when these systems are upgraded.’
* ‘Some specialist recycling waste streams are collected by charities that do not have the capacity to provide data. The organisation will investigate viable opportunities to collect this data.’

## Simple disclosure (Tier 4 entities)

Tier 4 entities have minimal FRD 24 reporting requirements.

They only need to report on:

* electricity consumption (EL1)
* electricity offsets (EL4)
* fleet (T2)
* office accommodation (B3).

If all material consumption across these areas is sourced through central purchasing arrangements, Tier 4 entities can meet FRD 24 with a simple disclosure in their annual report.

No data is required to be provided in a simple disclosure. A single paragraph with qualitative information is sufficient. An example includes:

* ‘The Office of the Science and Technology Regulator has a Service Level Agreement in place with the Department of Technology for the provision of office accommodation and fleet services. Data on environmental impacts is included in the Department of Technology’s annual report.’

Tier 4 organisations are likely already part of state purchase contracts or HealthShare Victoria (HSV) supply agreements.

If your entity is not, and you are using the EDMS, send a letter of authority to your entity’s supplier to formally request for the EDMS to collect and report on your usage data.

If you have a local agreement in place and receive bills, you will need to enter the relevant data manually into the EDMS.

The ‘Tier 4 entity alternative simple disclosure approach’ section of *Guidance on environmental disclosures under FRD 24* has more information on and examples of simple disclosures.

# Department of Health’s EDMS

## About the EDMS

The Department of Health has an environmental data management system (EDMS) that standardises data collection, management and reporting across the health system.

The EDMS generates a standard public environment report that meets most (but **not all**) of the mandatory FRD 24 reporting requirements for hospitals and health services. The generated report records the last three years of data against **most** of the FRD 24 indicators.

The EDMS populates data on FRD 24 indicators through a combination of:

* automatic upload
* manual upload
* system calculation or generation.

Some public hospitals and health services use statewide HSV contracts or state purchase contracts for electricity, gas and waste. In these cases, the department uploads this data centrally.

You should note that the report the EDMS generates is specifically configured for Tier 2 entities. Tier 3a and 4 entities can choose to report on the extra Tier 2 indicators or exclude them in their annual report. Because the EDMS was designed for the highest tier health service (Tier 2), some entities may over report.

While the EDMS is a tool that supports health services with FRD 24 reporting, each entity is still responsible for understanding and meeting their FRD 24 reporting requirements, independent of the system.

From 1 July 2023 until 30 June 2028, the EDMS will be provided by Eden Suite. Throughout this time, the department will work with Eden Suite to continually improve the system, including identifying and implementing more opportunities to centrally upload data.

The EDMS always uses the most up-to-date National Greenhouse Accounts (NGA) factors. These are used to convert usage data (for example kWh of electricity used) to tonnes of carbon dioxide equivalent.

## Environmental indicators included in the EDMS

### Automatic upload

* Retail energy data where the supplier is known (including co-generation).
* Energy data from contracted utility suppliers under HSV contract (health services only) or state purchasing contract.
* Leading retailers where a letter of authority has been sent for the EDMS to request and load data (health services only). Check with your EDMS tenancy to confirm you are receiving data.
* Liquified petroleum gas supplied by Elgas.
* Potable water.
* Solar generation with an automatic feed.
* National Australian Built Environment Rating System (NABERS) rating (only for hospitals).
* Health activity data: occupied bed days (OBDs), separations and aged care bed days.
* Staff (FTE) data as of 30 June of every reporting year.
* Fleet fuel usage (for statewide VicFleet contract).
* HSV waste contracts:
  + Certain waste data usually appears automatically in the EDMS due to bulk data upload from HSV. These include **landfill** (general waste), **clinical waste treated offsite** (incinerated, treated and sharps) and **recycling** (cardboard and commingled recycling collections).
  + HSV can only report on your behalf to the EDMS if waste contract holders report and provide data on their services to HSV. This reporting usually occurs four times yearly and one to two months after the end of the quarter. Data that contractors do not report on or give to HSV cannot be automatically uploaded. Health services must manually add this data to the EDMS.
  + PVC data is automatically uploaded into the EDMS but is sourced separately by the department from the Vinyl Council.

**Note**: If data from HSV waste contractors (services you have purchased) are not uploaded into the EDMS, you can lodge a ticket with HSV’s helpdesk:

* **Email**: helpdesk@healthsharevic.org.au
* **CC**: edms@health.vic.gov.au
* **Subject**: HPV Waste Contract – missing reporting in EDMS (<Business name of contractor>)
* Include details of the HSV waste contractor and service types you use them for.

For automatically generated data, not all data will be in the EDMS by 30 June. It takes time for retailers to provide data. Estimates will be automatically generated by the EDMS based on usage from previous consumption data. Estimates will be replaced by actual consumption data as it is received from utility companies.

### Manual upload (data that entities must add themselves)

Some data will need to be entered manually into the EDMS depending on the source and supplier. This may include:

* Energy data not on statewide contracts (state purchase contracts or HSV supply agreements)
* Liquified petroleum gas not supplied by Elgas.
* Stationary diesel used in backup generators.
* GreenPower not on an electricity bill.
* Solar generation with no automatic feed.
* Large-scale generation certificates (LGCs) (retired or sold).
* Other energy (such as biomass).
* Recycled or Class A water.
* Road and air ambulance fuel use, aviation gasoline (avgas) and aviation turbine fuel (ATF) (Ambulance Victory only).
* Electricity used to charge electric vehicles.
* Commercial air travel (check the guidance for indicator T4 under **Transportation**)
* Medical and refrigeration gases (see **Appendix E: Medical gases and refrigerants**). Two projects are currently underway with HSV support to:
  + validate if accurate data on nitrous oxide quantities can be obtained from supplier reporting, and uploaded in bulk into EDMS
  + get and upload into EDMS bulk data from pharmacy management systems about desflurane, isoflurane and sevoflurane purchases.
* Fleet fuel usage (if not using the statewide VicFleet contract or if buying vehicles outside of VicFleet).
* Waste data not on the HSV contract or services not managed through an HSV contract holder.

**Note**: hospitals and health services need to manually enter some waste data into the EDMS, whether they have a HSV waste contract or not. This data includes:

* **Specialist recycling streams** (since these are managed locally)
* **Recycling**:
  + paper (including confidential)
  + batteries
  + e-waste
  + mobile phones
  + toner and print cartridges
  + mattresses
  + metals
  + organics (food or garden)
  + packaging plastic or films
  + polystyrene foam
  + sterilisation wraps
  + wood
  + grease traps
  + ‘other’ material.

#### Bulk uploads to EDMS

To make the manual data upload process easier, you can email your ‘direct data’ to Eden Suite. They will then bulk upload your data into the EDMS.

To do this:

* request a copy of the **bulk upload template** from the department by emailing **edms@health.vic.gov.au**
* complete the template, including the data to be uploaded
* email the completed form to Eden Suite: **edms@intelligentpathways.com.au**.

## Environmental indicators not included in the EDMS

A small number of FRD 24 indicators are not included in the EDMS:

* **WR2**: Percentage of office sites covered by dedicated collection services for each waste stream.
  + Only relevant for sites that are primarily used as an office.
  + Government entities only need to report on the presence of dedicated collection services for specific waste streams and **not** the amount of waste collected.
* **T2**: Number and proportion of vehicles in the organisational boundary, segmented by engine or fuel type and vehicle category (VicFleet data). To get this data, email **vfcontracts@dtf.vic.gov.au**.
* **B3**: NABERS energy ratings of newly completed or occupied entity-owned office buildings and substantial tenancy fit-outs.
  + This is for any entity that builds a standalone office building. Hospitals and health services that do not build a standalone office building do **not** need to report against this indicator.

There are also qualitative indicators that entities must manually add to their reports:

* **B1**: Discuss how environmentally sustainable design is incorporated into newly completed entity‑owned buildings
* **B2**: Discuss how new entity leases meet the requirements to preference higher rated office buildings (only mandatory where a government entity leases an independent office space).

## Data sources for the EDMS

**Table 1** outlines the sources of bulk data that is uploaded and data that is not linked to the EDMS.

Table 1: Bulk data sources

| Activity group | Sources uploaded centrally to EDMS | Sources not uploaded to EDMS |
| --- | --- | --- |
| Electricity | * **HSV supply agreement**: Electricity greater than 160 MWh per year (for large sites) * **DTF**: State purchasing contract * **Eden Suite**: select major retailers (Alinta, AGL, Shell Energy, RED Energy, Origin and Energy Australia)[[2]](#footnote-3) **Note**: A letter of authority needs to be given to Eden Suite to forward to the relevant supplier to show permission to receive data | Locally arranged supply agreements |
| Natural gas | * **HSV supply agreement**: Natural gas greater than 5 TJ per year (for large sites) * **DTF**: State purchasing contract * **Eden Suite**: select major retailers (Alinta, AGL, Origin, Energy Australia)[[3]](#footnote-4) **Note**: A letter of authority needs to be given to Eden Suite to forward to the relevant supplier to show permission to receive data | Locally arranged supply agreements |
| Waste and recycling | * **HSV**: Waste management services * **Department**: Medical PVC recycling collections organised through the Vinyls Council | * Other waste service providers used, including ‘off-contract’ services by HSV. * Contractors and local council (like ‘speciality’ recycling streams and council rate notices) |
| Medical gases and refrigerants | * To be confirmed   Projects are underway with HSV support to:   * validate if accurate data on nitrous oxide quantities can be obtained from supplier reporting and uploaded in bulk * get and upload into EDMS bulk data from pharmacy management systems about desflurane, isoflurane and sevoflurane purchases | * **Optional**: use own purchasing data to calculate kgs of nitrous oxide and manually add to EDMS * **Optional**: use own pharmacy data to calculate kgs of desflurane, sevoflurane, isoflurane and manually add to EDMS * **Optional**: use local records to calculate kgs of refrigerants and manually add to EDMS   More detail is in **Appendix E: Medical gases and refrigerants** |
| Water | * Data from Victorian water authorities: all water comes through the EDMS | Locally arranged Class A recycled water. |
| Transport | * Data on corporate fleet energy usage is uploaded for government entities that use the statewide VicFleet contract | * Transport services and vehicles purchased outside of VicFleet. * Fleet data for road and air ambulance and other emergency transport (Ambulance Victoria only). |

## Data assurance

The EDMS collates data from contracted utility companies to validate directly uploaded performance data. The EDMS marks this as ‘pending data’ if:

* the uploaded data differs materially from data already in the EDMS
* the data is exactly the same as data already in the EDMS.

The organisation must review and either accept or reject the pending data before it can be formally entered into the EDMS.

External assurance and verification of reported data provides additional rigour but is not mandatory. To ensure appropriate assurance of data quality and publicly reported information, EDMS users should check the system’s data against billing data to confirm data accuracy.

The department does some end-of-year data checks to confirm whether data is accurate. However, this is generally restricted to where there are significant data variations, such as incorrect manual data entry (like entering LPG usage in litres rather than kilolitres).

## Data management tips

Sourcing data is only one part of environmental reporting. Health services are responsible for reviewing their data to ensure it is accurate, complete and that their asset hierarchy is up to date.

Planning is essential for data collection and reporting. The following are some tips for what you should do every month, quarter and annual year.

**Monthly**:

* Manage pending data (see **Data assurance**).
* Add monthly manual data.

**Quarterly**:

* Identify data gaps and find missing data.
* Manage asset hierarchy (new assets, accounts and suppliers).
* Run the data variance report.
* Add quarterly manual data.

**Annually**:

* Add annual data (such as kilometres driven, fuel use, medical gases).
* Identify data gaps and find missing data.
* Estimate usage for any missing data.
* Run the public environment report.
* Compare trends and follow up any unusual trends.

# Detailed guidance on indicators

This section provides guidance on the indicators relevant for entities in Tiers 2, 3a and 4. The optional indicators under FRD 24 are not covered.

Tier 2 organisations need to report on two more indicators than Tier 3a entities:

* **B5**: Environmental performance ratings achieved for entity-owned assets portfolio, segmented by rating scheme and building, facility or infrastructure type – where these ratings have been conducted.
* **WR2**: Dedicated collection services provided in offices for printer cartridges, batteries and soft plastics.

More information on FRD 24 indicators is in *Guidance on environmental disclosures under FRD 24*. This is available from [DEECA's Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

## Electricity production and consumption

**Note**: many of the segmentation types listed will not apply to your organisation.

Table 2: Electricity production and consumption indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **EL1**: Total electricity consumption (MWh)   * Reported through the EDMS | **Consumption data**, segmented by source:   * Purchased directly through an electricity retailer (including state purchasing contracts, HSV contracts or other retail contracts) * Not directly purchased but sourced from outside the organisation (such as premises leased within a larger commercial office building that are not individually metered) * Self-generated (if data is available) – should be same as EL2: consumption behind-the-meter | * EDMS can upload this data (depending on your accounts) * Electricity retailer billing or invoices * Distribution network online data portals * Smart meters | Tiers 2, 3a and 4 |
| **EL2**:Onsite electricity generation, segmented by source and usage (MWh)   * Reported through the EDMS | **Production data**, segmented by generation technology and usage:   * Consumption behind-the-meter * Exports * If relevant, for use outside the facility other than for supply to the grid.   **Also**:   * Solar PV * Bioenergy * Co-generation * Other non-renewable | * EDMS can upload this data (once the department collates and adds it to the system) * Monitoring systems or meters connected to onsite electricity generation (such as solar tracking portals).   **For exports only**:   * Electricity retailer billing or invoices * Distribution network online data portals | Tiers 2 and 3a |
| **EL3:** Onsite installed generation capacity (MW)   * Reported through the EDMS | Report on total capacity at the end of the reporting period, segmented by technology:   * Solar PV * Bioenergy * Energy storage systems – report power capacity (MW) and total storage capacity (MWh)[[4]](#footnote-5) * Co-generation * Other non-renewable (including standby power systems if relevant) | * EDMS can provide metadata (contextual data) * Asset register * Monitoring systems or meters connected to onsite electricity generation (such as solar tracking portals) * Installation paperwork, invoices from installers or EPC contractors | Tiers 2 and 3a |
| **EL4:** Total electricity offsets (MWh)   * Reported through the EDMS | Segmented by type, as applicable:   * GreenPower or certified carbon neutral electricity purchased (such as through a retailer’s contract option) * LGCs entity voluntarily retired * LGCs voluntarily retired on entity’s behalf * LGCs mandatorily retired – for RET liable entities only * LGCs conveyed to an entity’s retailer for mandatory retirement (where relevant) | **GreenPower**:   * Electricity retailer billing or invoices * Manual calculation based on percentage of GreenPower purchased   **LGCs**:   * Contract managers or finance team * Contractor managing power purchase agreement on entity’s behalf * REC Registry | Tiers 2, 3a and 4 |

## Stationary fuel use

Table 3: Stationary fuel use indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **F1**: Total fuels used in buildings and machinery (MJ)   * Reported through the EDMS | Segmented by asset (buildings and machinery) and fuel type. Use the following fuel types as applicable:   * Natural gas * LPG * Diesel * Petrol * Hydrogen * Fuel oil | * EDMS can upload this data for natural gas and LPG (depending on your accounts) * Natural gas or LPG retailer billing or invoices * Bulk fuel supplier billing or invoices * Solid fuel supplier billing or invoices * Bulk fuel tank gauge readings or manual dipstick readings | Tiers 2 and 3a |
| **F2**: Greenhouse gas emissions from stationary fuel consumption (tonnes CO2-e)   * Reported through the EDMS | Segmented by fuel type – use the same segmentation as **F1**.  Use the following fuel types as applicable:   * Natural gas * LPG * Diesel * Petrol * Hydrogen * Solid fuel * Fuel oil | * EDMS can calculate this data * Use the latest NGA factors. Use the Scope 1 combined gases figure | Tiers 2 and 3a |

## Transportation

Table 4: Transportation indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **T1**: Total energy used in transportation within the entity (in MJ or MWh)   * Reported through the EDMS | **Vehicle category segmentation**:   * Road vehicles * Non-road vehicles   This is the minimum required segmentation. If data is available, you should segment using the categories in **T2**.  **Fuel type segmentation**:   * Petrol (divide further if data is available) * Diesel * Biodiesel * LPG * Aviation fuels (including avgas and ATF) * Solid fuel * Hydrogen * Electricity | * EDMS can upload this data (once the department collates and adds it to the system) * Fuel card providers, including online data portals * Bulk fuel purchase invoices * Vehicle logbooks or odometer readings and average fuel consumption from ADR 80/01. | Tiers 2 and 3a |
| **T2**: Number and proportion of vehicles in organisational boundary   * **Not** reported through the EDMS * Must be reported independently by entities | **Vehicle category segmentation:**   * Road vehicles:   + Two wheeled vehicles   + Passenger vehicles   + Buses   + Goods vehicles * Non-road vehicles:   + Marine vessels   + Rotary wing aircraft   + Fixed wing aircraft   + Other   **Engine or fuel type segmentation**:   * Internal combustion engine engines:   + Petrol (divide further if data is available)   + Diesel or biodiesel   + LPG   + Aviation fuels   + Solid fuel   + Fuel oil   + Hydrogen * Hybrid (only if it can be independently charged):   + Plug-in hybrid electric vehicle (PHEV)   + Range-extended electric vehicle * Electric propulsion:   + Battery electric vehicle (BEV)   + Fuel cell electric vehicle (FCEV) | * VicFleet – government entities can email vfcontracts@dtf.vic.gov.au to request this data. * Fleet or asset register * Shared service provider (SSP) * Invoices for leases | Tiers 2, 3a and 4 |
| **T3**: Greenhouse gas emissions from vehicle fleet (tonnes CO2-e)   * Reported through the EDMS | Use same segmentation as **T1** | Use data from **T1**   * EDMS can calculate this data | Tiers 2 and 3a |
| **T4**: Total distance travelled by commercial air travel (km)   * Reported through the EDMS | None required | * Most Victorian government entities can get a detailed carbon report from CTM (corporate travel provider). To request the report:   + email CTM: connie.ivanoski@travelctm.com   + provide your organisation name and reporting year. * Other travel service providers * Airlines and individual tickets * Otherwise, collate data from other travel supplier or supplier billing | Tiers 2 and 3a |

**Note**: Key information and reminders:

* **Vehicle segmentation**:fuel consumption data only needs to be segmented into road and non-road vehicles. If you have more detailed data, aim to follow the segmentation for indicator **T2**.
* **Electric vehicle charging**:ensure that electricity used to charge vehicles at entity facilities is **not** added to greenhouse gas (**T3**) or total energy figures (**E1**).

## Total energy

Table 5: Total energy indicators

| Indicator | Segmentation | Data sources | Tier | |
| --- | --- | --- | --- | --- |
| **E1**: Total energy usage from fuels (MJ)   * Reported through the EDMS | No segmentation | Sum data from **F1** and **T1**   * EDMS can calculate this data | | Tiers 2 and 3a |
| **E2**: Total energy usage from electricity (MJ)   * Reported through the EDMS | No segmentation | Convert data from EL1 from MWh to MJ   * EDMS can calculate this data. | | Tiers 2 and 3a |
| **E3**: Total energy usage (MJ)   * Reported through the EDMS | Segmented into renewable and non-renewable sources | Sum data from E1 and E2   * EDMS can calculate this data * Calculate renewable electricity consumption using the same Climate Active rules for Scope 2 emissions accounting, including:   + self-generated renewables   + GreenPower   + LGCs   + renewable power percentage * Calculate renewable fuel use by including any use of biodiesel, renewable biomass and renewable hydrogen – if any of these are known | | Tiers 2 and 3a |
| **E4**: Units of energy used, normalised by FTE, headcount, floor area or other entity- or sector‑specific quantity (MJ/normalisation)   * Reported through the EDMS | No segmentation.  **Note**: If floor space is used for normalisation, include footnotes explaining steps for using an appropriate all energy normalisation (or at least normalised transport fuels) in the future. | Divide the total for **E3** by your chosen normalisation (see [**Appendix D: Normalising factors and benchmarks**](#_Appendix_D:_Normalising))   * EDMS can calculate this data (only for stationary energy) | | Tiers 2 and 3a |

## Sustainable buildings and infrastructure

Table 6: Sustainable buildings and infrastructure indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **B1**: Discuss how environmentally sustainable design (ESD) is incorporated into newly completed entity-owned buildings   * **Not** reported through the EDMS * Needs to be reported independently by entities | **Qualitative indicator**: explore how ESD is incorporated into your building policy, handbooks, construction requirements and so on.  While you may use individual projects to show this, the focus should be on how you ensure all projects meet ESD objectives. | * Where your agency has projects developed for it by the Victorian Health Building Authority (VHBA), some suggested wording that you can use includes (where applicable):*[[5]](#footnote-6)*   + ‘2.5 per cent of the total construction cost was allocated to implement enhanced sustainability features such as…’   + ‘minimum of 60 per cent of the total roof area has been dedicated to solar panels’   + ‘local/indigenous vegetation and biodiversity has been increased’   + ‘recycled and natural materials have been used’   + ‘electric charging stations for vehicles has been installed’   + ‘universal design strategies were used to ensure ease of access to all’   + ‘water sensitive urban design strategies were used to reduce storm water runoff and decrease pollutants’   + ‘timber was used for construction’ (if the building is under 25 metres in height). * Where your agency has funded its own infrastructure, indicate any sustainability initiatives you have implemented. Reference agency construction, capital works, procurement or a policy related to environmentally sustainability design. | Tiers 2 and 3a |
| **B2**: Discuss how new entity leases meet the requirement to favour higher-rated office buildings and those with a green lease schedule   * **Not** reported through the EDMS * Needs to be reported independently by entities | Qualitative indicator: explore how your leasing favours higher rated office buildings, including through using green lease schedules. | * Refer to agency accommodation or procurement policy or practices around leasing. | Tiers 2 and 3a |
| **B3:** NABERS energy ratings of newly completed or occupied entity‑owned office buildings and substantial tenancy fitouts   * **Not** reported through the EDMS * Needs to be reported independently by entities | Itemised list of the NABERS ratings.  This is only for new offices that you own or substantial tenancy fitouts. | * NABERS program | Tiers 2, 3a and 4 |
| **B4**: Environmental performance ratings of newly completed entity‑owned non‑office building, or  infrastructure projects or upgrades over $1 million, where these ratings have been conducted (ratings like NABERS, Green Star or Infrastructure Sustainability Council of Australia Infrastructure Sustainability rating scheme)   * Reported through the EDMS | Report rating of newly built facility or infrastructure project or a major upgrade that you own – if you had it rated. This should be an itemised list.  **Note**: entities do not have to get ratings. Report ratings if you have them. | * EDMS can upload this data (once the department collates and adds it to the system) * NABERS program   **Note**: NABERS only rates new builds when they are a new, standalone public hospital. Ratings are carried out for the first full financial year of operation. | Tiers 2 and 3a |
| **B5**: Environmental performance ratings for entity‑owned assets portfolio, segmented by rating scheme and building, facility or infrastructure type, where these ratings have been conducted   * Reported through the EDMS | Report all ratings for all assets that have been assessed. This can be an itemised list or the number of assets for each rating scheme and value.  **Note**: entities do not have to get ratings. Report ratings if you have them. | * EDMS can upload this data (once the department collates and adds it to the system) * NABERS program   **Note**: The 2022-2023 NABERS public hospitals ratings will be available in late 2023 and will need to be reported in the 2023-2024 annual report | Tier 2 |

## Water consumption

Table 7: Water consumption indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **W1**: Total units of metered water consumed (kL)   * Reported through the EDMS | Segmented by source. These may include:   * potable water (from water supply) * metered rainwater * metered alternative supply (river, stream, bore, fire supply, third pipe) * metered reused water (grey or black water) | * EDMS can only upload this data for potable water (depending on your accounts) * Invoices or billing from water suppliers * Water meters | Tiers 2 and 3a |
| **W2**: Units of metered water consumed, normalised by FTE, headcount, floor area or other entity- or sector‑specific quantity (kL/normalisation)   * Reported through the EDMS |  | Divide the total for **W1** by your chosen normalisation   * EDMS can calculate this data | Tiers 2 and 3a |

## Waste and recycling

Table 8: Waste and recycling indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **WR1**: Total units of waste disposed of, by disposal method (kg and %)   * Reported through the EDMS   **Note**: reporting is only necessary if separate collection services are used **and** data is available (for example, only report batteries and toner cartridges if the waste management provider has waste weight information) | Segment by both disposal method and material type or stream.  Disposal method must include**:**   * landfill * recycling or recovery * other   Material type or stream must include:   * landfill * food and garden organics (where applicable) * recyclables (separated into relevant streams or co-mingled) * any other large sector-specific waste stream | * EDMS: combination of HSV and department automatic upload and manual entry from hospitals and health services * Waste management providers * Waste audits * Jones Lang LaSalle (JLL) – only for SSP-managed sites * Estimate based on number of bins (for example, for sites with municipal waste collection) | Tiers 2 and 3a |
| **WR2**: Dedicated collection services provided in offices (as percentage of total office locations)   * **Not** reported through the EDMS * Needs to be reported independently by entities   **Note**: this indicator is only applicable for buildings where the primary purpose is an office space, and is not intended to capture office spaces within public hospitals. | Provide data for the following collection services:   * e-waste * printer cartridges * batteries * soft plastics | * Annual audit   **Note**: this indicator reports the presence of these services only, **not** the amount of waste collected | Tier 2 |
| **WR3**: Total units of waste disposed, normalised by FTE, headcount, floor area or other entity- or sector-specific quantity by disposal method   * Reported through the EDMS | Segment using the same disposal method as **WR1** | Divide the total for **WR1** by your chosen normalisation   * EDMS can calculate this data | Tiers 2 and 3a |
| **WR4**: Recycling rate   * Reported through the EDMS | No segmentation | Based on data disclosed in **WR1**: (kg of recyclable materials + kg of organic material)/(kg of total waste)   * EDMS can calculate this data | Tiers 2 and 3a |
| **WR5**: Greenhouse gas emissions associated with waste disposal   * Reported through the EDMS | No segmentation | * EDMS can calculate this data * Use the current NGA factors | Tiers 2 and 3a |

**Note**: Key information and reminders:

* **Operational waste only**: exclude waste from ‘one-off’ clean outs, office relocations, construction and demolition and so on.
* **Waste audits**:no longer the preferred method of data collection. Get weight or volume data from waste management providers.
* **Estimation**:use data from similar sites to estimate waste generation for sites where data is not provided or difficult to collect. *Guidance on environmental disclosures under FRD 24* outlines several methods for estimating waste.

## Greenhouse gas emissions

Table 9: Greenhouse gas emissions indicators

| Indicator | Segmentation | Data sources | Tier |
| --- | --- | --- | --- |
| **G1**: Total Scope 1 (direct) greenhouse gas emissions (tonnes CO2‑e)   * Reported through the EDMS | Reportable gases include:   * CO2 * CH4 * N2O * other   Total as tonnes of CO2-e. Use units of tonnes CO2-e for all gases. | EDMS may calculate some of this data for carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), and emissions from stationary fuel (F2) and vehicle fleet (T3).  Otherwise combine the sum of F2, T3 and data for any other material emission sources, including:   * use of medical gases (see [**Appendix E: Medical Gases and refrigerants**](#_Appendix_E:_Medical))   + use own purchasing data to calculate kgs of nitrous oxide   + use own pharmacy data to calculate kgs of desflurane, sevoflurane and isoflurane   + inspect purchasing records (like number of cylinders and quantity per cylinder) for each gas type to calculate kgs of refrigerants (see **Note**). * fugitive emissions from refrigeration and air conditioning, electrical equipment and suppression equipment – two primary methods:   + asset or equipment registers or surveys (for refrigeration, electrical, fire suppression and air conditioning equipment) to identify total stock and then use standard leakage rates – available in NGA factors   + where equipment needs to be recharged: the volume of gas used to recharge equipment   Then use NGA factors to convert to tonnes CO2-e. | Tiers 2 and 3a |
| **G2**: Total Scope 2 (indirect electricity) greenhouse gas emissions (tonnes CO2‑e)   * Reported through the EDMS | No segmentation | Calculate from data disclosed in **EL1** and **EL4**. Use the market-based method of Climate Active’s electricity accounting rules   * EDMS can calculate this data for market-based electricity emissions, co-generation steam and co-generation electricity | Tiers 2 and 3a |
| **G3**: Total Scope 3 (other indirect) greenhouse gas emissions associated with commercial air travel and waste disposal   * Reported through the EDMS | No segmentation | * EDMS can calculate this data. * Sum of **WR5** and greenhouse gas emissions data from travel service provider * Most Victorian government entities can get a detailed carbon report from CTM (corporate travel provider). To request the report:   + email CTM: connie.ivanoski@travelctm.com   + provide your organisation name and reporting year. * If an entity does not use CTM for corporate travel, use data provided by:   + airlines   + the International Civil Aviation Organisation’s carbon emissions calculator and route data   + the average emissions factor in the guidance manual. | Tiers 2 and 3a |

**Note**: two projects are currently underway with HSV support to:

* validate if accurate data on nitrous oxide quantities can be obtained from supplier reporting and uploaded in bulk into EDMS
* get and upload into EDMS bulk data from pharmacy management systems about desflurane, isoflurane and sevoflurane purchases.

# Support

## Useful resources

### FRD 24

Information and resources on FRD 24 are available on [DEECA's Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

The page includes links to four key documents that explain FRD 24 requirements:

* *FRD 24: Reporting of environmental data by government entities* – what departments and public sector entities must disclose in their annual report
* *Guidance on environmental disclosures under FRD 24* – how to collect, collate and disclose environmental data to meet FRD 24 requirements
* *Guidance on the application of reporting tiers under FRD 24* – what tier organisations are in
* *2022-23 model report for Victorian Government departments* – guidance on FRD 24 reporting, including example disclosures.

### EDMS

The department’s environmental data management tools:

* Available on [department's Environmental data management tools web page](https://www.health.vic.gov.au/planning-infrastructure/environmental-data-management-tools) <https://www.health.vic.gov.au/planning-infrastructure/environmental-data-management-tools>.

EDMS:

* [EDMS login page](https://dse.edensuite.com.au/cas/login?service=https%3A%2F%2Fdse.edensuite.com.au%2FCarbonInsight%2Fj_spring_cas_security_check) <https://dse.edensuite.com.au/cas/login?service=https://dse.edensuite.com.au/CarbonInsight/j\_spring\_cas\_security\_check>.

Eden Suite training [homepage](http://training.edensuite.com.au/) <http://training.edensuite.com.au>, includes:

* Eden Suite guide – extensive guidance covering most of what can be done on the EDMS.
* Navigation video – a quick overview of how to get around Eden Suite and the key menu options.
* Key concepts and terms Video – covers measurement devices, assets, organisations and hierarchies.
* Searching, asset profile, edit asset video – covers the global search function, asset profile and editing an asset.
* Find and add data video – shows how to find and add data.
* Add new measurement device video – how to add a new measurement device to an asset.

Solar performance report:

* [Eden Suite’s Solar report web page](http://training.edensuite.com.au/?page_id=2162) <http://training.edensuite.com.au/?page\_id=2162>
* Includes instructions on how to run a solar performance report.
* Only for health services with Eden Suite connected solar.

## Contacts

### Department contacts

The department’s Climate Change and Environment team:

* For specific FRD 24 reporting‑related questions
* Email **sustainability@health.vic.gov.au**.

### Other government contacts

DEECA’s Government Emissions Reduction team:

* For general questions about FRD 24 requirements for government entities
* Email **environmental.reporting@delwp.vic.gov.au**.

### EDMS contacts

The department:

* If you are not currently an EDMS user and want access
* EDMS-related questions
* Email **edms@health.vic.gov.au**.

Eden Suite:

* EDMS technical support
* Email **support@edensuite.com.au**.

# Appendix A: Scope of emissions

See the [GHG Protocol website](https://ghgprotocol.org) <www.ghgprotocol.org> for detailed explanations of each scope.

Scope 1: direct emissions

Emissions related to sources owned or controlled by an organisation.

Examples include:

* emissions as a result of combustion in natural gas fired boilers
* emissions due to combustion from vehicles owned or leased by the health services
* fugitive emissions related to refrigerants and medical gases (such as nitrous oxide).

Scope 2: energy indirect emissions

Emissions related to consumed energy supplied by a third party, for example:

* electricity
* steam
* heating hot water or chilled water.

For most health services, electricity purchased from electricity retailers is the only scope 2 emission. Some health services will need to include other energy purchased from a third party, such as electricity and steam purchased from a co-generation plant operator.

Scope 3: other indirect emissions

Emissions related to activities not owned or controlled by the health service. For example:

* waste
* air travel
* purchased equipment or services.

# Appendix B: Reporting tiers for Victorian public hospitals, health services and Department of Health portfolio entities

Tier 1

* Department of Health

Tier 2

**Metropolitan health services:**

* Alfred Health
* Austin Health
* Eastern Health
* Melbourne Health
* Mercy Health
* Monash Health
* Northern Health
* Peninsula Health
* Peter MacCallum Cancer Centre
* Royal Children's Hospital
* Royal Victorian Eye and Ear Hospital
* Royal Women’s Hospital
* St Vincent's Health
* Western Health

Tier 3a

### Other public health services and hospitals

Includes Ambulance Victoria and regional, sub-regional, local, small rural, multipurpose and statewide health services.

* Albury Wodonga Health
* Alexandra District Hospital
* Alpine Health
* Ambulance Victoria
* Bairnsdale Regional Health Service
* Barwon Health
* Bass Coast Health
* Beaufort and Skipton Health Service
* Beechworth Health Service
* Benalla Health
* Bendigo Health Care Group
* Boort District Health
* Calvary Bethlehem Melbourne
* Casterton Memorial Hospital
* Castlemaine Health
* Central Gippsland Health Service
* Central Highlands Rural Health
* Cohuna District Hospital
* Colac Area Health
* Corryong Health
* Dental Health Services Victoria
* Dhelkaya Health
* East Grampians Health Service
* East Wimmera Health Service
* Echuca Regional Health
* Gippsland Southern Health Service
* Goulburn Valley Health
* Grampians Health
* Great Ocean Road Health
* Heathcote Health
* Hesse Rural Health Service
* Heywood Rural Health
* Inglewood and District Health Service
* Kerang District Health
* Kilmore District Health
* Kooweerup Regional Health Service
* Kyabram and District Health Service
* Latrobe Regional Hospital
* Maldon Hospital
* Mallee Track Health and Community Service
* Mansfield District Hospital
* Maryborough District Health Service
* Mildura Base Public Hospital
* Moyne Health Services
* NCN Health
* Northeast Health Wangaratta
* Omeo District Health
* Orbost Regional Health
* Portland District Health
* Robinvale District Health Services
* Rochester and Elmore District Health Service
* Rural Northwest Health
* Seymour Health
* South Gippsland Hospital
* South West Healthcare
* Swan Hill District Health
* Tallangatta Health Service
* Terang and Mortlake Health Service
* Timboon and District Healthcare Service
* West Gippsland Healthcare Group
* West Wimmera Health Service
* Western District Health Service
* Yarram and District Health Service
* Yarrawonga Health
* Yea and District Memorial Hospital

### Category A cemetery trusts

* Ballarat General Cemeteries Trust
* Geelong Cemetery Trust
* Greater Metropolitan Cemeteries Trust
* Remembrance Parks Central Victoria (formerly Bendigo Cemeteries Trust)
* Southern Metropolitan Cemeteries Trust

### Early Parenting Centres

* The Queen Elizabeth Centre
* Tweddle Child and Family Health Services

Tier 3b

* HealthShare Victoria (Health Purchasing Victoria)

Tier 4

**All other entities (agencies and offices):**

* Mental Health Tribunal
* VicHealth (Victorian Health Promotion Foundation)
* Victorian Assisted Reproductive Treatment Authority
* Victorian Collaborative Centre for Mental Health and Wellbeing
* Victorian Pharmacy Authority

# Appendix C: Organisational boundary

Operational control

Operational control refers to an organisation’s authority to introduce and put in place operational policies.

Entities should use the *GHG Protocol corporate standard*’s operational control approach to determine their reporting boundary. This is available on [GHG Protocol’s Corporate standard web page](https://www.ghgprotocol.org/corporate-standard) <https://www.ghgprotocol.org/corporate-standard>

Facilities, networks or other assets that the Victorian Government owns but a private organisation manages under franchise, lease or other public-private partnership are considered part of Victorian Government operations if the environmental impacts of those assets are within the operational control of the entity.

Standard commercial leases do not generally meet the criteria for operational control. Health services that lease space to commercial businesses (such as retail or food businesses) should not include these in their organisational boundary.

Standard contracts for services (such as grounds maintenance) do not meet the criteria for operational control.

Include the operations of a car park if they are in operational control. If a car park is a simple lease to a private operator, then it would not fall within operational control.

Examples of circumstances that may meet the criteria for operational control:

* a facility operator must use state purchase contracts to purchase energy or has energy procurement arrangements specified contractually
* a facility operator must purchase offsets or renewable energy certificates for a portion or all of their energy use
* emissions reduction targets or other environmental policies are specified contractually
* the operations of the facility are largely determined by the entity – for example, an entity or other Victorian Government body specifies timetables, routes and other operational policies.

In some circumstances, the organisational boundary should be expanded beyond a strict interpretation of operational control.

Health services should provide appropriate contextual information on inclusions and exclusions to make clear what the environmental data covers.

Machinery of government changes

When an entity loses or gains staff or facilities because of machinery of government changes, the entity responsible for the staff or facilities on June 30 of the reporting year:

* reports all data about the staff and facilities
* includes an appropriate note in the context section of the relevant indicators.

The entity that lost staff or facilities shares any relevant data available to the reporting entity.

The corporate services areas of both entities should work together to prepare and provide the relevant data.

Tips

**Review your entity’s organisational structure**:

* Do I fully understand how my entity is structured and what facilities and assets it operates?
* Have I identified all relevant facilities and potential emission sources?
* Have I considered assets or facilities that I lease and included base building services as appropriate?

**Consider consolidated entities**:

* Has my entity agreed to report environmental data of another public entity?

**Consider public-private partnerships (PPPs)**:

* Does my entity manage any PPP agreements?
* Do the assets operated under these agreements fall within the definition of operational control?
* Annual review of your organisation’s boundary is good practice.

# Appendix D: Normalising factors and benchmarks

Normalising factors are indicators used to compare (or benchmark) environmental performance over time and allow for any changes in service delivery.

Table 10: Normalising factors

| Indicator | Inclusion | Relevant environmental impacts |
| --- | --- | --- |
| FTE | The number of full-time hours worked by all employees for a period of 38 hours each week reported through each entity’s human resources area for the final pay period of the reporting period.  Part-time employees are counted based on their proportion of full-time hours worked. For example, an employee working 50% of full‑time hours is 0.5 FTE.  If multiple entities occupy a location, resource usage (such as electricity, natural gas or metered water) can be apportioned based on the proportion of the building occupied or headcount (FTE). | For office-based entities (not applicable to hospitals):   * energy * water * waste |
| Floor area | Square metres (m2) of floor space | * Energy * Water * Greenhouse gas emissions |
| In-patient bed days or occupied bed days (OBD) | The number of in-patient bed days for the reporting period reported through the Victorian Admitted Episodes Dataset (VAED). | * Energy * Water * Greenhouse gas emissions * Waste |
| Separations | The number separations for the reporting period reported through VAED. | * Energy * Water * Greenhouse gas emissions |
| Per patient treated | The number of in-patient bed days for the reporting period reported through VAED.  The number of emergency presentations over the reporting period reported through the Victorian Emergency Minimum Dataset (VEMD). | * Waste |

Energy normaliser

* Energy used per separation (gigajoules/separation)
* Energy used per bed day (gigajoules/bed day)
* Energy used per unit of floor space (gigajoules/m2)
* Greenhouse gas emissions per separation (tonnes CO2-e/separation)
* Greenhouse gas emissions per bed day (tonnes CO2-e/bed day)
* Greenhouse gas emissions per unit of floor space (tonnes CO2-e/m2)

Water use

* Water used per separation (kilolitres/separation)
* Water used per bed day (kilolitres/bed day)
* Water used per unit of floor space (kilolitres/m2)

Waste and recycling

* Waste generated per patient treated (kilograms/PPT)
* Recycling rate: recycling/(recycling+landfill)[[6]](#footnote-7)

Benchmarks

### Carbon emissions

* CO2e(t) per m2
* CO2e(t) per OBD
* CO2e(t) per Seps

### Water use

* kL per m2
* kL per OBD
* kL per Seps

# Appendix E: Medical gases and refrigerants

Hospitals and health services can report Scope 1 fugitive emissions related to medical and refrigerant gases with a global warming potential (GWP). GWP is an index used to convert relevant non-carbon dioxide gases to a carbon-dioxide equivalent.

The following gases (**Table 11**) are commonly used across the public health sector. In line with the National Greenhouse and Energy Reporting Scheme, health services should use GWP100 from the Intergovernmental Panel on Climate Change’s *Fifth assessment report* (AR5).

Table 11: GWP factors for reporting environmental impacts in health services – medical and refrigerant gases

| Common name | Chemical Formula | GWP |
| --- | --- | --- |
| Nitrous oxide | N2O | 265 |
| Desflurane (HFE-236ea2) | C3H2F6O | 1790 |
| Isoflurane (HCFE-235da2) | C3H2ClF5O | 491 |
| Sevoflurane (HFE-347mmz1) | C4H3F7O | 216 |
| Refrigerant – R134A (HFC-134a) | C2H2F4 (CH2FCF3) | 1300 |
| Refrigerant – R22 (HCFC-22) | CHClF2 | 1760 |
| Refrigerant – R227EA (HFC-227ea) | C3HF7 | 3350 |

Refrigerant blends can have different compositions. If systems use blends, use the GWP quoted by the manufacturer.

Direct emission from gases is calculated by multiplying the weight of consumed gas (or in some instances the amount of refrigerant leakage) in kilograms by its GWP.

Refrigerant leakage from a new chiller is around 3% each year. Leakage from older chillers varies and could be up to 8% each year.

Information on consumption may be in invoices. Typically, consumption is reported in volume. This can be converted to weight by multiplying the volume in cubic metres by the gas density.

# Appendix F: Other environmental reporting frameworks

Global Reporting Initiative

The Global Reporting Initiative (GRI) provides guidance to organisations on disclosing their sustainability performance.

GRI also offers stakeholders a universally applicable, comparable framework for understanding disclosed information. The *GRI sustainability reporting framework* is widely used around the world. The framework enables organisations to measure and report their economic, environmental, social and governance performance.

For more information, visit the [GRI website](https://www.globalreporting.org/) <https://www.globalreporting.org>.

**Note**: *Guidance on environmental disclosures under FRD 24* maps FRD 24 indicators to relevant indicators from the GRI and lists relevant targets for the sustainable development goals (SDGs). Overall, FRD 24 supports the achievement of SDG Target 12.6:

Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.

More information is on [DEECA’s Government environmental reporting web page](https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting) <https://www.climatechange.vic.gov.au/victorian-government-action-on-climate-change/government-environmental-reporting>.

Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol)

The GHG Protocol is a widely-used international accounting tool to understand, quantify and manage greenhouse gas emissions.

For more information, visit the [GHG Protocol website](https://www.ghgprotocol.org/) <https://www.ghgprotocol.org>.

National Greenhouse and Energy Reporting Scheme

The National Greenhouse and Energy Reporting Scheme provides a single national legislated reporting framework in Australia for reporting and sharing information about corporations’ greenhouse gas emissions, energy use and energy production.

Many large health services report annually to the Australian Government under the *National Greenhouse and Energy Reporting Act 2007* (Cth).

For more information, see the [Clean Energy Regulator website](https://www.cleanenergyregulator.gov.au/) <https://www.cleanenergyregulator.gov.au>.

1. Not all FRD 24 indicators are captured in the EDMS, particularly non-quantitative indicators. For more information, see ‘3.3. [Environmental indicators not included in the EDMS](#_Environmental_indicators_not)’. [↑](#footnote-ref-2)
2. This list of major retailers is subject to change. [↑](#footnote-ref-3)
3. This list of major retailers is subject to change. [↑](#footnote-ref-4)
4. Energy storage systems exclude uninterruptible power systems (UPS). [↑](#footnote-ref-5)
5. For additional wording suggestions see [VHBA’s Guidelines for sustainability in capital works webpage](https://www.vhba.vic.gov.au/guidelines-sustainability-capital-works) <https://www.vhba.vic.gov.au/guidelines-sustainability-capital-works>. [↑](#footnote-ref-6)
6. The department previously excluded clinical waste when calculating the recycling rate. To meet FRD 24, clinical waste is now included in the recycling rate, regardless of whether it is incinerated or chemically treated before landfill. This change is likely to reduce previously reported recycling rates. [↑](#footnote-ref-7)