Public environmental reporting guidelines

Guidance for Victorian public healthcare services

VICTORIA State Government | Health and Human Services

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1. Introduction

1.1. About public environmental reporting

Public environmental reporting refers to the public disclosure of an organisation's performance relating to its environmental impacts, for example the consumption of energy and water and generation of waste and carbon emissions. Transparency about environmental impacts and performance encourages organisations to improve their environmental management practices.

Environmental reporting typically involves:

- determining the environmental impacts to be reported
- determining 'reporting boundaries' and 'materiality' relating to environmental impacts
- determining reporting metrics and 'normalising factors' to assess performance over time
- collecting data related to 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.

Environmental reporting is typically supported by an environmental management plan, such as that required by the Department of Health and Human Services *Policy and funding guidelines*.

1.2. Purpose of these guidelines

The *Environmental reporting guidelines* (the guidelines) assist Victorian public health services to publish environmental data, and to promote regular, accurate and consistent reporting of environmental data across the Victorian public healthcare system. Consistency in reporting will allow comparison of environmental performance over time.

The guidelines set out both mandatory and voluntary reporting requirements, as well as providing principles and standards that should be used when collecting and reporting environmental performance data.

The guidelines have been prepared specifically for Victorian public health services, and align with the public environment report prepared through the department' system-wide environmental data management system. The guidelines may also be of interest to interstate and private healthcare providers.

While the purpose of public reporting is to encourage improvement in environmental performance, the guidelines do not cover advice on setting performance measures, commitments or targets. These guidelines must not be relied upon for meeting legislated reporting requirements.

Measuring environmental performance is an evolving process and the guidelines will be reviewed and adapted over time to ensure they remain relevant and continue to meet best practice.

1.3. Overview of environmental reporting frameworks

A number of frameworks have been developed to guide reporting of environmental performance. Some of the frameworks used by the public and corporate sector include:

- Global Reporting Initiative (GRI)
- Carbon Disclosure Project
- Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol)
- *National Greenhouse and Energy Reporting Act 2007*

- National Pollutant Inventory
- Victorian Government Financial Reporting Directive 24C.

Further information on these frameworks is in ‘Appendix A: Other environmental reporting frameworks’.

The guidelines set out the minimum reporting requirements for Victorian public health services. If health services choose to report beyond the minimum requirements, the other environmental reporting frameworks may help identify additional reporting measures and metrics.

1.4. Principles of public environmental reporting

Public environment reporting is a disclosure of environmental performance and it should follow the following principles:

- materiality – all material environmental impacts should be included
- accuracy – information should be obtained from credible sources and data quality should be verifiable
- transparency – all assumptions, methodologies and estimates should be disclosed or readily available.

The guidelines have been written to follow these principles and Section 2 provides guidance related to these principles.

Figures 1 and 2 show examples of how two Victorian health services use standalone environmental sustainability reports to report environmental data. This approach is best practice, but not mandatory – see also the environment section in the Department of Health and Human Services annual report <www.dhhs.vic.gov.au/annualreport> for an example of reporting environmental data within an annual report.

Figure 1: Goulburn Valley Health environmental sustainability report

Available on the Goulburn Valley Health website <www.gvh.org.au>.

Figure 2: Page from Eastern Health environmental sustainability report

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SUSTAINABILITY CHAMPIONS

Over the past six years, more staff across Eastern Health have taken up the challenge to implement significant sustainable change within their departments, which have streamlined processes, led to cost-savings and had a positive impact on our environmental footprint.

As part of Eastern Health's annual employee awards program, a Sustainability Award is presented to an individual staff member or team to acknowledge these significant achievements.

For the first time this year, the Sustainability Award was proudly sponsored by the LSI Collection, which is the uniform supplier for Eastern Health.

The award acknowledges and recognises those staff who do their best to deliver Eastern Health's services through the sustainable use of resources, targeted environmental initiatives and working above and beyond what is expected to make a difference.

The following stories feature some of their great work.

MAROONDAH HOSPITAL STAFF ACKNOWLEDGED FOR THEIR EFFORTS

BRENDAN MOON – CLINICAL NURSE SPECIALIST

Brendan is a staff member on Ward 2 East who is assisting patients in need, as well as utilising an environmentally-friendly resource. During his nursing career, Brendan has seen many patients inconvenienced when they are admitted to hospital due to an unexpected illness or injury, and therefore do not have toiletries.

Brendan organised for a charity called Pinchapoo, which receives donated unused shower product from hotels, to provide toiletry packs for people in hospital.

Eastern Health awarded Brendan the 2016 Sustainability Award for this cost-effective and environmentally-sustainable initiative. "It is amazing how these small gifts make a huge impact," Brendan said. "Being able to have clean teeth, be well groomed and smell nice, can maintain and even restore someone's dignity during difficult times."

MAROONDAH HOSPITAL NURSE POOL TEAM

If there is a nurse shortage, the Maroondah Hospital Nurse Pool Team comes to the rescue.

The team, predominantly based at Maroondah Hospital, is a dynamic and flexible group of staff who are called upon, often at short notice, to fill shifts when staff are sick, on leave or during busy periods. They will also work at other sites to ensure agency use across Eastern Health is minimised. *(see story, page 17)*

This year, the team was awarded the Maroondah Hospital Sustainability Award for its contribution to a significant reduction in the employment of high-cost agency staff at the hospital.

TOP: Clinical Nurse Specialist Brendan Moon recipient of the 2016 Eastern Health Sustainability Award, is pictured with award sponsor, the LSI Collection National Sales Manager Shaun O'Reilly.

BOTTOM: Registered nurses Karena Watson and Eva Vandenberg, are just two of the nurses from the Maroondah Hospital Nurse Pool Team providing support across Eastern Health.

Available on the Eastern Health website <www.easternhealth.org.au>.

2. Reporting requirements

2.1. Public environment reporting

In accordance with the Department of Health and Human Services *Policy and funding guidelines* all Victorian public hospitals and health services are required to publicly report on their environmental performance by 31 December for the previous financial year.

2.2. Reporting process and format

Health services can report in one of three ways:

- in the unaudited report of operations in their annual report
- as a standalone section or downloadable document on the website
- as a standalone sustainability report or environmental report.

The health service has discretion as to which reporting process it adopts, which may depend on issues such as level of available data and the level of environmental activities underway.

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

The EDMS generates a standard public environment report that meets the mandatory and voluntary reporting requirements within these guidelines (see Appendix B).

Health services are only required, as a minimum, to report on the mandatory elements. Where the standard public environment report includes voluntary reporting metrics but no data, these rows should be deleted prior to publication.

2.3. Environmental impacts

The report must, as a minimum report on the following environmental impacts:

- scope 1 and 2 greenhouse gas (GHG) emissions related to energy consumption
- energy consumption (electricity, gas, cogeneration steam and LPG)
- water consumption
- waste generation and disposal.

Environmental data is to be reported in absolute terms and through the use of normalising factors. A ‘normalising factor’ is a measure, such as energy use per square metre that normalises the impact against a common metric (see Section 2.6 for more information). Further guidance on the minimum reporting requirements for each environmental impact is contained in Section 3. The reporting of other environmental impacts is voluntary and further guidance on possible additional reporting requirements is contained in Section 4.

2.4. Contextual information

Reporting contextual information is important to show the issues that underlie the data. Contextual information is usually qualitative and could include:

- commentary around accounting, or reporting boundaries
- exclusion of certain data due to materiality, or operational control
- performance in the reported year

- factors that may have contributed to increases or decreases in environmental impacts, such as growth in service delivery, additional equipment and/or additional floor space, installation of new and more efficient plant
- any data quality issues including changes in previously reported information.

Reporting on actions or activities undertaken to improve performance is encouraged, but not mandatory, as the disclosure provides the reader with information on how the organisation is managing its environmental performance.

2.5. The accounting year

All information included in the public report should conform to the public sector financial year of 1 July to 30 June.

2.6. Normalising factors

Normalising factors refer to indicators that are used to compare (or benchmark) environmental performance over time and to 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. In broad terms, they can be split into two categories: floor area and service activity.

The environmental impact you are reporting will determine the normalising factors you use. Health services can choose which indicators to use but should consider the guidance provided in Table 1.

Table 1: Normalising factors for reporting environmental impacts in health services

Indicator	Inclusions	Relevant environmental impacts
Floor area	Square metres of floor space See 'Car parks' section	Energy Water Greenhouse gas emissions
Bed days	The number of in-patient bed days for the reporting period reported through the Victorian Admitted Episodes Dataset (VAED) The number of public sector residential aged care bed days for the reporting period reported to the Aged Care Branch, Department of Health and Human Services	Energy Water Greenhouse gas emissions Waste
Separations	The number separations for the reporting period reported through the Victorian Admitted Episodes Dataset (VAED)	Energy Water Greenhouse gas emissions
Per patient treated	The number of in-patient bed days for the reporting period reported through the Victorian Admitted Episodes Dataset (VAED) The number of public sector residential aged care bed days for the reporting period reported to the Aged Care Branch, Department of Health and Human Services The number of emergency presentations over the reporting period reported through the Victorian Emergency Minimum Dataset (VEMD)	Waste

Floor area

Floor area relates to the total floor area, in square metres, of the facility that relates to the type of data collected. When using floor area, the operational control of the space (see Section 2.7) needs to be taken into consideration.

Floor area is the most common normalising factor as it is widely understood and allows easy comparison between organisations. Energy use and greenhouse gas emissions also strongly correlate with floor space, given that the majority of energy use in a hospital is linked to floor space (for example air conditioning systems, ventilation and lighting). However, floor area does not differentiate between uses, which in the health sector can significantly affect environmental impacts (for example a consulting room uses considerably less energy than a cancer bunker). Due to the variation in types of services provided by health services, caution needs to be applied when using floor area to compare performance.

Car parks

At-grade car parks are not to be included in the floor area, but associated external lighting is to be included in the overall energy consumption figures. If sub-metred data is available, it can be reported separately.

Energy use associated with hospital car parks is included except where it can be demonstrated that the car park is not for hospital use, or it is owned and operated by a third party.

If parking is provided to the hospital by a third party (for example, a public car park operator) that controls the operation of the car park, then the car park energy is not included. The car park energy is included if the hospital leases the car park to a third-party provider to operate.

Service activity

The level of service delivery within a health service is useful for measuring environmental performance relative to growth in service delivery. There are a number of normalising factors that can be used to measure against service delivery; which one you choose will depend on the types of services delivered.

The two main normalising factors used in relation to service delivery are separations and occupied bed days (including public sector residential aged care bed days and in-patient bed days) and it is recommended that at least occupied bed days is used.

The indicator ‘per patient treated’ is useful for reporting against waste, as the level of waste generated is closely linked to the number of patients treated. This indicator includes in-patient bed days, public sector residential aged care beds, separations and emergency department presentations.

When making comparisons between health services using activity measures, consider that health services may have on-site support services (for example kitchens or laundries) and research facilities that use considerable amounts of energy but do not contribute directly to the level of service activity.

2.7. Reporting boundary

Setting a reporting boundary refers to the decision whether to include or exclude particular activities that have environmental impacts. Typically, all activities for which the health service has direct operational control should be included in the environmental report. Operational control refers to the authority of an organisation to introduce and implement operational policies. For most health services this means reporting on environmental impacts related to facilities predominantly occupied and operated by the health service.

If a health service shares a service or a facility with another organisation, consider how data for the shared service or facility will be split between the organisations. Document the method used to split data to ensure consistency over time, and so that data is not counted twice within the broader health system.

Environmental impacts related to parts of facilities occupied by other organisations can be included or excluded in the reporting boundary. The decision to exclude or include depends on the following:

- which organisation has direct operational control over the facility
- availability of information, for example a metering system that allows segregation of impacts
- the cost of including or excluding the data relative to the impact
- materiality of the impacts under consideration (see Section 2.8).

If the operation and maintenance of a facility are contracted to a specialist facility management company, for example in a public–private partnership, the environmental impacts of the facility are to be included in the health service's reporting boundary. This is because the health service sets operational and related policies and thus has operational control of the facility.

In all instances, the health service should provide appropriate contextual information on inclusions and exclusions to ensure the reader is aware of what the environmental data covers.

2.8. Materiality

Generally, the assessment of materiality is a matter of judgement rather than policy. The principle of materiality is to include significant components that contribute to a particular environmental impact.

As an example, transport fuels contribute to health services' greenhouse gas emissions, but the majority of direct emissions in Victorian public health services relate to purchased electricity. For example, in a metropolitan health service emissions from transport fuel generally represent less than one per cent of their total emissions and could therefore be considered immaterial.

However, in a rural health service where energy consumption within the hospital is lower and travel distances are greater, the contribution of transport fuel consumption to overall emissions may be closer to five per cent and therefore could be considered material.

2.9. Missing or unavailable data

If information is not available, make an estimate based on historical data. For example, if electricity data is missing for one month, use the value for the same month in the previous year to make the estimate.

The 'Find no data' report within the EDMS can automatically generate seasonally adjusted estimated data to upload to the system.

Estimates and omissions should be clearly documented in the report, in particular the estimation methodology. It is important to ensure that the reader understands what is being reported, what the reported data is based on, and what is missing.

The 'Actual vs estimates' report within the EDMS can identify the extent of estimated data within a reporting period.

2.10. Changes to reporting policies and organisational boundaries, and prior-period figures

Any changes to reporting policies or boundaries that have a material impact on the way environmental impacts are reported are to be presented clearly so that changes over time can be interpreted correctly. Example of a boundary change include merging two health services, excluding an on-site research facility due to improved metering, or adding a recently built facility.

Over time it is likely that data quality will improve as any unintentional errors reported in prior-year figures become apparent. This is a common occurrence, and if the errors are material you should adjust the prior-year figures and clearly state the nature of the adjustment.

2.11. Data assurance

The EDMS collates data from contracted utility companies to validate directly uploaded performance data. Occasionally check supplied data from utility providers for quality and assurance purposes. Spot checks of randomly selected data should be referenced against receipted bills and billing data.

External assurance and verification of reported data provides additional rigour but it is not mandatory. To ensure appropriate assurance of data quality and publicly reported information, health services should, as a minimum, record internal arrangements to occasionally check and validate the data management process.

3. Mandatory reporting

3.1. Introduction

This section details the mandatory environmental reporting requirements for Victorian public health services in accordance with the Department of Health and Human Services *Policy and funding guidelines*.

The four environmental impacts that are required to be reported are:

- scope 1 and scope 2 greenhouse gas emissions from energy consumption from energy
- energy use
- water use
- waste generation.

If a health service has a complete data set for energy, water and waste for the reporting year and generates a public environment report through the EDMS, it will meet the department's mandatory public environment reporting requirements.

Mandatory reporting requirements are further detailed in the tables below.

Table 2: Greenhouse Gas (GHG) emissions

Category	Description
Reporting metrics	• Scope 1 and 2 GHG total emissions (tonnes CO_2e) • Scope 1 and 2 GHG emissions (tonnes CO_2e) per square metre • Scope 1 and 2 GHG emissions (tonnes CO_2e) per level of service activity
Reporting	**Scope 1** • LPG consumption for material sites (where used) • Gas consumption for material sites (where used) • Diesel consumption for generators (where material) • Transport fuel (where material) **Scope 2** • Peak and off-peak electricity consumption for material sites • Cogeneration steam for material sites (if used) • Cogeneration electricity for material sites (if used)
Data sources	• Energy retailers/suppliers • Cogeneration operators • Fuel card (for transport fuel where material)
Methodology	Convert fuel types to GHG emissions by using the listed emissions factors from the current *National Greenhouse Accounts (NGA) factors* publication. The EDMS automatically calculates carbon emissions using the most up-to-date NGA factors.
Contextual information	• Reporting boundary and any material boundary changes • Historical data (minimum of three years data if available) • Significant GHG emission reduction activities undertaken in reporting year

Category	Description
	• Any footnotes required to qualify specific information

Table 3: Energy

Category	Description
Reporting metrics	• Total energy used (gigajoules) • Energy used (gigajoules) per square metre • Energy used (gigajoules) per level of service activity
Reporting scope	• Peak and off-peak electricity consumption for material sites • Gas consumption for material sites • Cogeneration steam for material sites (if used) • Cogeneration electricity for material sites (if used) • Diesel consumption for generators for material sites (if used) • LPG consumption for material sites (if used)
Data sources	• Energy retailers/suppliers • Cogeneration operators
Methodology	The EDMS automatically calculates gigajoules of energy from each energy source. 1 gigajoule = 1,000 megajoules 1 megawatt hour = 1,000 kilowatt hours 1 megawatt hour = 3.6 gigajoules 1 kilowatt hour = 3.6 megajoules / 0.0036 gigajoules 1 litre of LPG = 25.7 gigajoules 1 litre of diesel used for stationary energy purposes = 38.6 megajoules Cogeneration conversion figures should be sourced from the operator
Contextual information	• Reporting boundary and any material boundary changes • Historical data (minimum of three years data if available) • Significant energy efficiency activities undertaken in reporting year • Any footnotes required to qualify specific information

Table 4: Water

Category	Description
Reporting metrics	• Total water used (kilolitres) • Water used (kilolitres) per square metre • Water used (kilolitres) per level of service activity • Percentage non-potable water (where available)
Reporting scope	• Potable water • Mains water • Non-potable water (optional) – Reclaimed rainwater – Reclaimed process water – Reclaimed reverse osmosis water

Category	Description
	– Bore water
Data sources	• Water retailers/suppliers • Water meters on potable water reticulation system • Water meters on non-potable water reticulation system (optional)
Methodology	1 kilolitre = 1,000 litres 1 megalitre = 1,000 kilolitres
Contextual information	• Reporting boundary and any material boundary changes • Historical data (minimum of three years data if available) • Significant water efficiency activities undertaken in reporting year • Any footnotes required to qualify specific information

Table 5: Waste

Category	Description
Reporting metrics	• Total waste generated (kilograms) • Waste generated (kilograms) per level of service activity • Recycling rate
Reporting scope	• General waste • Clinical waste • Recycling
Data sources	• Waste contractors • Waste audits
Methodology	Convert waste types to kilograms using the *Victorian public healthcare waste reporting tool* <www.health.vic.gov.au/sustainability>
Contextual information	• Reporting boundary and any material boundary changes • Historical data (minimum of three years data if available) • Significant waste reduction activities undertaken in reporting year • Any footnotes required to qualify specific information

4. Voluntary reporting

4.1. Introduction

This section provides guidance on additional metrics that could be reported. Once an additional metric is reported, there is often the expectation it will continue to be reported on an ongoing basis.

Health services choosing to report beyond the mandatory requirements are encouraged to review the other reporting frameworks outlined in Appendix A, as well as examples from other health services.

4.2. Cost

Health services can choose to report the cost of energy, water, waste and any other measures reported. Any costs reported should be the invoice cost exclusive of GST.

4.3. Targets

Health services can choose to report on any targets adopted for energy, carbon, water, waste and any other measures reported. Targets could be either outcome or process targets.

An example of an outcome target for energy could be to reduce absolute energy use by five per cent for the 2016–17 reporting year from the level of energy used in 2009–10.

An example of a process target could be to report on energy, water, waste and greenhouse gas emissions (scope 1 and 2) for all sites which the health service has operational control of for the 2017–18 reporting year.

4.4. GreenPower

Some health services purchase GreenPower. This could be reported in both the energy and greenhouse gas reporting metrics. Only accredited GreenPower is to be reported, and should be reported in kilowatt (or megawatt) hours. Accredited GreenPower does not generate any greenhouse gas emissions.

See the GreenPower website <www.greenpower.gov.au> for more information.

4.5. Procurement

Reporting on environmental impacts related to procurement tends to be difficult as the impact relates to activities under the control of other organisations (for example, suppliers and product manufacturers). However, these environmental impacts can be considerable, and in some instances health services may have a high degree of influence because they have financial control of procurement.

Specific reporting metrics that could be reported relatively easily in relation to procurement include:

- number of reams of paper per full-time equivalent
- percentage of recycled paper purchased
- percentage of fleet vehicles by type (six cylinder, four cylinder, hybrid, gas, diesel)
- percentage of procurement contracts with environmental requirements.

4.6. Transport

Due to the nature of services provided, health services can use a lot of transport fuel. As mentioned in Section 2.8, transport may be a material environmental impact for some health services. If this is the case, the total amount of fuel used is to be reported in scope 1 greenhouse gas emissions.

Other voluntary transport reporting metrics include:

- carbon emissions from non-emergency transport vehicle
- carbon emissions from air and/or taxi travel
- percentage of staff who travel to work by active transport (public transport, cycling, walking)
- percentage of vehicle fleet by type (six cylinder, four cylinder, gas, diesel, hybrid, electric).

Where vehicle kilometres are available vehicle carbon emissions can be normalised by tonnes of carbon per 1,000 reported kilometres.

4.7. Medical gases and refrigerants

Health services can report scope 1 fugitive emissions related to medical and refrigerant gases with a global warming potential (GWP). The following gases are commonly used across the public health sector.

Table 6: GWP factors for reporting environmental impacts in health services – medical and refrigerant gases

Gas/refrigerant	GWP
Nitrous oxide	310
Desflurane	2540
Isoflurane	510
Sevoflurane	130
Refrigerant – R134A	1300
Refrigerant – R22	1810
Refrigerant – R227EA	2900
Refrigerant – R401A (MP39)	18
Refrigerant – R402A (HP80)	1680
Refrigerant – R404A	3260
Refrigerant – R407C	1526
Refrigerant – R410A	1725

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. GWP is an index used to convert relevant non-carbon dioxide gases to a carbon-dioxide equivalent.

Refrigerant leakage from a new chiller is around 3 per cent per annum. Leakage from older chillers varies and could be up to 8 per cent per annum. Information on consumption could be obtained from invoices. Typically, consumption is reported in volume, which can be converted to weight by multiplying the volume in cubic metres with the gas density. The calculation can therefore be summarised as:

Volume of nitrous oxide (m^3) x 1.9 (density of nitrous oxide) = kilograms of nitrous oxide

Weight of nitrous oxide (kg) x 310 / 1,000 = tonnes of CO_2e

The department is working with industry to develop further guidance on the reporting of medical gases and refrigerants. For further information please contact sustainability@dhhs.vic.gov.au.

Appendix A: Other environmental reporting frameworks

Global Reporting Initiative

The Global Reporting Initiative (GRI) provides guidance to organisations about disclosure of their sustainability performance, and also provides stakeholders a universally applicable, comparable framework in which to understand 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.

See the GRI website <www.globalreporting.org> for more information.

Carbon Disclosure Project

The Carbon Disclosure Project is an independent not-for-profit global organisation supported by a Climate Disclosure Standards Board (CDSB). The CDSB is a consortium of business and environmental organisations that jointly advocates a generally-accepted framework for corporations to report climate change-related risks and opportunities, carbon footprints, carbon reduction strategies and their implications for shareholder value in mainstream reports.

See the Carbon Disclosure Project website <www.cdproject.net> for more information.

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

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

See the GHG Protocol website <www.ghgprotocol.org> for more information.

National Greenhouse and Energy Reporting Scheme

The National Greenhouse and Energy Reporting Scheme (the NGER Act) provides a single national legislated reporting framework in Australia for the reporting and dissemination of information about greenhouse gas emissions, energy use and energy production of corporations. Many large health services report annually to the Commonwealth government under the NGER Act.

See the Clean Energy Regulator website <www.cleanenergyregulator.gov.au> for more information.

National Pollutant Inventory

The Commonwealth Government's National Pollutant Inventory (NPI) tracks the emission of pollution across Australia, providing a source of information to the community about the emission and transfer of toxic substances which may affect them locally. The NPI program is implemented in Victoria by the Environment Protection Authority.

See the NPI website <www.npi.gov.au> for more information.

Financial Reporting Directive (FRD) 24

The FRD 24 requires Victorian government entities (departments and relevant agencies) to collect, analyse and report on their environmental impacts in a consistent and accurate manner. A guidance manual provides instructions for entities to collect analyse and report data against specific indicators of environmental performance. The FRD24 does not apply to public health services.

See the Department of Treasury and Finance website <www.dtf.vic.gov.au> for more information.

Appendix B: Public environment report template

Greenhouse gas emissions

Total greenhouse gas emissions (tonnes CO_2e)	Year 1	Year 2	Year 3
Scope 1			
Scope 2			
Total			

Normalised greenhouse gas emissions (tonnes CO_2e)	Year 1	Year 2	Year 3
Emissions per unit of floor space ($kgCO_2e/m^2$)			
Emissions per unit of separations ($kgCO_2e$/separations)			
Emissions per unit of bed day (LOS+aged care OBD) ($kgCO_2e$/OBD)			

Normalised greenhouse gas emissions (tonnes CO_2e)	Year 1	Year 2	Year 3
Emissions per unit of floor space ($kgCO_2e/m^2$)			
Emissions per unit of separations ($kgCO_2e$/separations)			
Emissions per unit of bed day (LOS+aged care OBD) ($kgCO_2e$/OBD)			

Stationary energy

Total greenhouse gas emissions (tonnes CO_2e)	Year 1	Year 2	Year 3
Cogen electricity			
Electricity			
Liquefied petroleum gas			
Natural gas			
Steam			
Total			

Normalised stationary energy consumption	Year 1	Year 2	Year 3
Energy per unit of floor space (GJ/m^2)			
Emissions per unit of separations (kgCO2e/separations)			
Energy per unit of bed day (LOS + aged care OBD) (GJ/OBD)			

Water consumption

Total water consumption by type (kL)	Year 1	Year 2	Year 3
Class A recycled water			
Potable water			
Reclaimed water			

Normalised water consumption (potable + class A)	Year 1	Year 2	Year 3
Water per unit of floor space (kL/m^2)			
Water per unit of separations (kL/separations)			
Water per unit of bed day (LOS + aged care OBD) (kL/OBD)			

Water re-use and recycling	Year 1	Year 2	Year 3
Re-use or recycling rate % (class A + reclaimed / class A + reclaimed)			

Waste and recycling

Waste	Year 1	Year 2	Year 3
Total waste generated (kg clinical waste + kg general waste + kg recycling waste)			
Total waste to landfill generated (kg clinical waste + kg general waste)			
Total waste to landfill per patient treated ([kg clinical waste + kg general waste]/PPT)			
Recycling rate % (kg recycling / [kg general waste + kg recycling])			

Paper

Paper	Year 1	Year 2	Year 3
Total reams of paper			
Reams of paper per FTE			
Rate recycled paper % (0–49%)			
Rate recycled paper % (50–74%)			
Rate recycled paper % (75–100%)			

Transport

Corporate transport	Year 1	Year 2	Year 3
Reported vehicle kilometres			
Tonnes CO_2e per 1,000 reported kilometres			

Non-emergency transport	Year 1	Year 2	Year 3
Reported vehicle kilometres			
Tonnes CO_2e per 1,000 reported kilometres			

Other transport (tonnes CO_2)	Year 1	Year 2	Year 3
Short-haul air travel			
Medium-haul air travel			
Long-haul air travel			
Taxi travel			

Other emissions

Medical gases	Year 1	Year 2	Year 3
Kilograms CO_2e per patient treated			

Refrigerants	Year 1	Year 2	Year 3
Kilograms CO_2e per patient treated			

Appendix C: Accounting for greenhouse gas emissions

Metrics and standards

Accounting for greenhouse gas (GHG) emissions involves converting information on processes that contribute to GHG emissions into carbon dioxide equivalents (CO_2-e) through using conversion factors. Use of this metric allows for the capture of information related to the six greenhouse gases covered by the Kyoto Protocol (CO_2, CH_4, N_2O, HFCs, PFCs, SF_6).

Conversion factors are often called emission factors. For the purposes of accounting for GHG emissions it is recommended to use emissions factors from the *National Greenhouse Accounts (NGA) factors* publication. This publication is prepared by the Commonwealth's Department of Climate Change and Energy Efficiency for organisations to calculate GHG emissions.[1]

The *National Greenhouse Accounts (NGA) factors* publication is updated regularly to account for changes in the energy generation mix. As emissions factors change, the emission factors used to calculate a health service's GHG emissions change.

The carbon accounting being recommended in this guidance is based on the *National Greenhouse and Energy Reporting (NGER) Act 2007* as many large health services already account for GHG emissions to meet the NGER Act legislative requirements. Health services currently reporting under the NGER Act should use the values from the NGER reports in their public environmental reports.

The department's environmental data management system always uses the most up-to-date NGA factors.

Scope of emissions

Emissions are defined under three different scopes by the Greenhouse Gas (GHG) Protocol. See the GHG Protocol website <www.ghgprotocol.org> for detailed explanations. A summary is provided below.

Accounting for scope 1: direct emissions

Scope 1 emissions are emissions related to sources owned or controlled by an organisation. Examples include emissions as a result of combustion in natural gas fired boilers, combustion from vehicles owned by the health services, or fugitive emissions related to medical gases such as nitrous oxide, refrigerants and waste management.

Under the NGER Act, health services do not report emissions associated with refrigerants and waste management as these activities are managed by external contractors and as such are not considered to fall under the operational control of the health service.

Accounting for scope 2: energy indirect emissions

Scope 2 emissions are emissions related to consumed energy supplied by a third party, for example electricity, steam, heating hot water or chilled water.

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

[1] Available on the Commonwealth Government's Climate Change website <www.climatechange.gov.au>.

Accounting for scope 3: other indirect emissions

Scope 3 emissions are emission related to activities which are not owned or controlled by the health service for example waste, air travel or procured equipment or services.

Guidance on reporting scope 3 emissions are available on the GHG Protocol website.