



Australian Government

Department of Climate Change

National Greenhouse and Energy Reporting System

Regulations Policy Paper

February 2008

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Introduction

This policy paper is designed to inform stakeholders, and seek feedback, on proposed approaches for all areas to be covered by regulations under the *National Greenhouse and Energy Reporting Act 2007*.

Background

The Australian Government is developing the National Greenhouse and Energy Reporting System (NGERS) as a single, streamlined framework for the mandatory reporting of greenhouse gas emissions and energy consumption and production by Australian corporations, to meet the current and prospective needs of government, business and the public. NGERS is being developed to meet a variety of objectives, including to:

- (a) underpin a future Australian emissions trading scheme (AETS);
- (b) inform the Australian public;
- (c) meet Australia's international reporting obligations; and
- (d) assist policy formulation, and inform programs and activities of all Australian governments, while avoiding duplication of similar reporting requirements across jurisdictions.

The National Greenhouse and Energy Reporting Act 2007

The legislative framework for NGERS is established by the *National Greenhouse and Energy Reporting Act 2007* ('the Act'), which was passed by the Australian Parliament and came into effect in September 2007.

The Act makes it mandatory for Australian corporations to report annually on greenhouse gas emissions, energy production and energy consumption at certain thresholds (see Appendix A). The Act also enables corporations to voluntarily report projects to remove or reduce greenhouse gases. The Act establishes the Greenhouse and Energy Data Officer (GEDO) as the regulatory and administrative decision-maker under the Act.

The Act refers details of the reporting system to be established by regulations and other legislative instruments, which are the focus of this policy paper.

A copy of the Act and supporting documentation are available at:

www.climatechange.gov.au/reporting/legislation

The Act is currently administered by the Department of Climate Change (DCC)¹.

¹ The Department of Climate Change was established by the Administrative Arrangements Order of 3 December 2007. The *National Greenhouse and Energy Reporting Act 2007* was previously administered by the former Australian Greenhouse Office, Department of the Environment and Water Resources.

Previous consultation

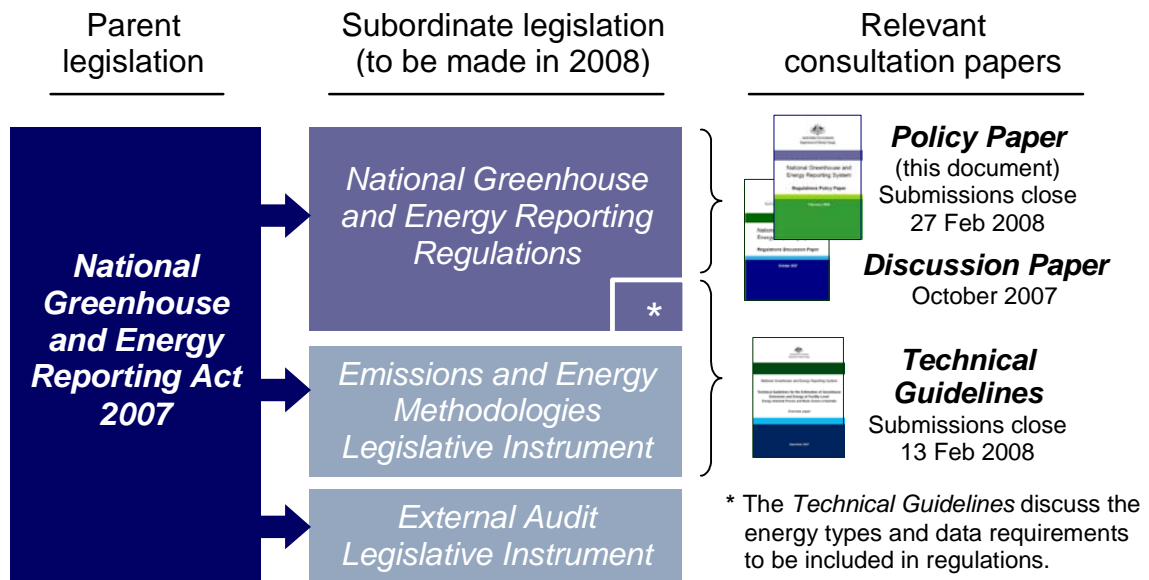
NGERS builds on an agreement between all levels of Australian government in relation to greenhouse and energy reporting, that: “a single streamlined reporting system which imposes the least cost and red tape burden is the preferable course of action” (Council of Australian Governments, 14 July 2006).

The Act is consistent with the design elements of the proposal developed under the Council of Australian Governments in April 2007, based on broad consultation with all levels of government and industry.

Public information sessions on emissions trading and NGERS legislation were held in Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney in August 2007.

Figure 1 depicts the relationship between the Act, subordinate legislation and the various consultation papers.

Figure 1: The legislative framework and its relationship to consultation papers



Discussion Paper

Following enactment of the legislation, the *National Greenhouse and Energy Reporting System Regulations Discussion Paper* (the ‘*Discussion Paper*’) was released in October 2007, outlining issues and proposals for content to be included in the regulations. Public information sessions on the *Discussion Paper* were held in Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney during October 2007, and over 80 formal submissions were received. The *Discussion Paper* and public submissions are available at:

www.climatechange.gov.au/reporting/regulations/index.html

Technical Guidelines

On 11 January 2008, the *National Greenhouse and Energy Reporting System – Technical Guidelines for the Estimation of Greenhouse Emissions and Energy at Facility Level: the Energy, Industrial Process and Waste Sectors in Australia* (‘the *Technical Guidelines*’) were released for public comment.

The *Technical Guidelines* provide a framework to support the production of greenhouse gas emission inventories and energy data by organisations required to report under the Act. They are designed to support the Act by providing guidance for corporations to estimate levels of greenhouse gas emissions, energy production and energy consumption. The *Technical Guidelines* will update and replace the *National Greenhouse Accounts Factors published in January 2007*². Once finalised, the calculation methods and processes outlined in the *Technical Guidelines* will be converted into a legislative instrument to sit under the Act.

Submissions on the *Technical Guidelines* are sought by 13 February 2008.

The *Technical Guidelines*, and instructions for submissions on these, are available at:

www.climatechange.gov.au/reporting/guidelines.html

Emissions trading scheme

Although NGERS is linked to the development of an AETS, this paper in no way precludes possible AETS design elements. Detailed design of the AETS is due to be finalised by the end of 2008. Further information about emissions trading is available at:

www.climatechange.gov.au/emissionstrading

This policy paper

This policy paper details approaches for all areas to be covered by regulations under the Act. This paper provides a basis for final drafting of the regulations in early 2008.

The paper does not commit the Australian Government to particular reporting system design features beyond the provisions of the Act. Wording in this document should not be taken as legally definitive, as the regulations are subject to formal drafting processes.

A focus group on public disclosure will be established in early 2008 (see section 4.1.4 of this paper for further details).

Submissions invited

Organisations and individuals are invited to submit their views on the proposals presented in this policy paper.

Submissions on this policy paper are sought by 27 February 2008.

DCC reserves the right not to consider late submissions.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text based formats, via the email address below. Submissions may alternatively be sent to the postal address below.

² The *National Greenhouse Accounts Factors* is available at www.climatechange.gov.au/workbook

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Important: Submitters should clearly indicate if all or part of a submission, or the name of the submitter, is to be treated as confidential.

It is intended that all submissions, including the names of the submitters, will be made publicly available online after the close of submissions, and may be used by DCC in subsequent publications, unless marked as confidential.

Where only part of a submission is confidential, it would be helpful if the submitting party could provide a different version of the submission, with confidential material deleted, to be published online.

It is requested that submitters provide contact details with their submission. As these personal details (apart from the submitter's name) will be treated confidentially, please provide them on a separate page to the submission. If submitters require that their name remain confidential as well, they will need to make a specific request at the time of lodging their submission that their name not be made public.

Submissions will be acknowledged with a receipt via email (or post if email is not available). Please contact DCC as above with any queries.

References in this paper to the Act

The paper is structured as much as possible to reflect the structure of the Act. Regulations are generally discussed sequentially, matching the order of the relevant sections of the Act, as outlined in Table 1.

Table 1: References in this policy paper to sections of the *National Greenhouse and Energy Reporting Act 2007*

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1. Interpreting the Act

Part 1, Division 2 (*‘Interpretation’*) of the Act defines key terms and explains important concepts used throughout. This chapter of the policy paper identifies areas where the Act refers details of interpretation to regulations and provides approaches to these. Terms are discussed in alphabetical order to reflect their occurrence in the Act.

1.1 Definitions

Reference: s7 of the Act

1.1.1 Carbon dioxide equivalence

The Act specifies that greenhouse gases will be measured in carbon dioxide equivalents and outlines that this equivalence would be determined by multiplying the amount of gas by a value specified in regulations. This value is commonly known as the global warming potential (GWP)³ of a greenhouse gas.

Table 2 outlines GWPs for the six Kyoto gases including the hydrofluorocarbon (HFC) and perfluorocarbon (PFC) groups.

The GWPs provided are based on figures from the 1995 Intergovernmental Panel on Climate Change Second Assessment Report (SAR)⁴, in line with international requirements for national greenhouse gas inventories. These GWPs have been agreed internationally for use in national inventories under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol. The values from the SAR will continue to be used in Australian Government programs to align domestic reporting with our international inventory reporting obligations. The list of gases may be updated to reflect future changes in international agreements. It is suggested that a review of GWP values would take place prior to the 2012-2013 reporting year, which would be the first reporting year following the end of the Kyoto reporting period.

Table 2: Global warming potential (GWP) of greenhouse gases

Gas	Chemical formula	Global warming potential (IPCC 1995)
Carbon dioxide	CO ₂	1
Methane	CH ₄	21
Nitrous oxide	N ₂ O	310
Sulphur hexafluoride	SF ₆	23,900

³ GWP is an index representing the combined effect of the differing times greenhouse gases remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation. (*UNFCCC Glossary*)

⁴ The SAR consists of reports from three working groups focusing on: the Science of Climate Change; the Impacts, Adaptations and Mitigation of Climate Change and the Economic and Social dimension of Climate Changes. The SAR was followed by the Third Assessment Report in 2001. Further information can be found at: www.ipcc.ch/ipccreports

Gas	Chemical formula	Global warming potential (IPCC 1995)
HFC-23	CHF ₃	11,700
HFC-32	CH ₂ F ₂	650
HFC-41	CH ₃ F	150
HFC-43-10mee	C ₅ H ₂ F ₁₀	1,300
HFC-125	C ₂ HF ₅	2,800
HFC-134	C ₂ H ₂ F ₄ (CHF ₂ CHF ₂)	1,000
HFC-134a	C ₂ H ₂ F ₄ (CH ₂ FCF ₃)	1,300
HFC-143	C ₂ H ₃ F ₃ (CHF ₂ CH ₂ F)	300
HFC-143a	C ₂ H ₃ F ₃ (CF ₃ CH ₃)	3,800
HFC-152a	C ₂ H ₄ F ₂ (CH ₃ CHF ₂)	140
HFC-227ea	C ₃ HF ₇	2,900
HFC-236fa	C ₃ H ₂ F ₆	6,300
HFC-245ca	C ₃ H ₃ F ₅	560
Perfluoromethane (tetrafluoromethane)	CF ₄	6,500
Perfluoroethane (hexafluoroethane)	C ₂ F ₆	9,200
Perfluoropropane	C ₃ F ₈	7,000
Perfluorobutane	C ₄ F ₁₀	7,000
Perfluorocyclobutane	c-C ₄ F ₈	8,700
Perfluoropentane	C ₅ F ₁₂	7,500
Perfluorohexane	C ₆ F ₁₄	7,400

1.1.2 Energy

Energy is defined in the Act as including fuel, or any other energy commodity, of a kind specified in regulations.

Appendix B provides a detailed list of fuel types and commodities to be listed as energy in regulations. This list is consistent with the list provided in the *Technical Guidelines*. Any comments on the fuel types list should be provided in submissions made on the *Technical Guidelines* (refer to Introduction for further details). The list has been reproduced in this paper as it will form part of the regulations under the Act.

1.1.3 External auditor

The Act specifies that an external auditor is an individual who:

- (a) is not an officer, employee or agent of the corporation or of one of the members of the corporation's group; and
- (b) has professional expertise and qualifications which meet the requirements specified in regulations.

This section of the paper focuses on the regulations to be made under paragraph (b) above to specify requirements for external auditors' expertise and qualifications.

The external audit system under the Act will draw on financial auditing expertise and other expertise developed through auditing and verification processes under existing greenhouse and energy programs.

An external audit under the Act will be undertaken by an external auditor who may use the assistance of an audit team. No individuals who represent the registered corporation can be members of the audit team.

Some stakeholders have indicated that defining an external auditor as an individual may be problematic and have suggested that it should be defined as a body or person. Legal advice on this point is being sought. Should legal advice indicate the current definition does not allow for the requirements outlined in this paper, the Government will consider how best to proceed with this issue.

Requirements for external auditors

The expertise and qualifications of external auditors as specified by the regulations will include both technical and management requirements for the external auditor, and requirements in relation to the capacity to establish an audit team and quality assurance processes. The regulations would identify an individual who is accountable for the conduct of the audit and, where utilised, the management of an audit team. Regulations will specify requirements as below.

a. Knowledge of the legislative framework

An external auditor must possess sound knowledge of the Act, regulations and legislative instruments. They must be able to apply the legislative framework, in particular the reporting guidelines & external audit legislative instrument, including guidance on handling conflict of interest.

b. Audit expertise

An external auditor must be able to demonstrate auditing expertise including understanding audit concepts and methodologies and applying relevant auditing assurance standards and systems.

An external auditor must have a clear understanding of, and demonstrated capacity in, planning and conducting audit activities and reporting audit findings. Competence may be demonstrated by:

- experience in applying a robust audit methodology; or
- prior experience with audit programs such as those conducted in accordance with International Standards Organisation (ISO) standards, or Australian Auditing or Assurance Standards.

c. Demonstrated knowledge of greenhouse or energy inventory preparation or auditing or verification processes

An external auditor must have a demonstrated knowledge of greenhouse or energy inventory preparation, or the application of existing auditing or verification processes under Commonwealth, State or Territory greenhouse or energy programs.

d. Management skills

An external auditor needs to demonstrate management skills that would enable them

to draw on the necessary technical skills and knowledge to manage an audit team and meet the audit objectives.

e. Educational or professional qualifications

An external auditor must possess educational or professional qualifications in a relevant discipline.

f. Must be a fit and proper person

An external auditor must be a fit and proper person, having regard to the external auditor's honesty, integrity and good reputation.

g. Capacity to undertake audit activity

An external auditor must be able to demonstrate the capacity to undertake audit activity required under NGERs including, to complete a detailed audit work plan, determine resource availability and assemble an audit team.

Where specialist knowledge or experience is needed that the external auditor does not possess (for example, understanding the processes leading to the use or production of energy or emission of greenhouse gases at a particular facility, and the way in which these processes affect the development of a greenhouse and energy report), evidence must be provided of the organisational structure to demonstrate how the auditor will use independent technical expertise to assist with audits.

h. Quality assurance process

Appropriate quality management systems and processes must be in place and documented. An external auditor must also provide evidence of audit report sign-off protocols that include quality checking by an appropriately qualified and independent individual or team. The individual or team cannot be part of the audit team or a representative of the registered corporation.

Meeting the requirements for external auditors

A legislative instrument will be made under s75 to guide external auditors in conducting audits and preparing reports, discussed under section 6.4 of this paper.

1.1.4 Greenhouse gas

The Act defines a greenhouse gas as:

- | | |
|------------------------------|--|
| (a) carbon dioxide; or | (e) a hydrofluorocarbon of a kind specified in regulations; or |
| (b) methane; or | (f) a perfluorocarbon of a kind specified in regulations. |
| (c) nitrous oxide; or | |
| (d) sulphur hexafluoride; or | |

Companies can voluntarily report other greenhouse gases, but only those listed above, and in the regulations, will be mandatory to report.

As outlined in the *Discussion Paper*, hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) can have a variety of chemical compositions. Table 3 lists the types of HFCs and PFCs that will be covered by the definition of greenhouse gases under the Act, consistent with SAR listings.

Table 3: Hydrofluorocarbons and perfluorocarbons to be included in regulations

Gas	Chemical formula
HFC-23	CHF ₃
HFC-32	CH ₂ F ₂
HFC-41	CH ₃ F
HFC-43-10mee	C ₅ H ₂ F ₁₀
HFC-125	C ₂ HF ₅
HFC-134	C ₂ H ₂ F ₄ (CHF ₂ CHF ₂)
HFC-134a	C ₂ H ₂ F ₄ (CH ₂ FCF ₃)
HFC-143	C ₂ H ₃ F ₃ (CHF ₂ CH ₂ F)
HFC-143a	C ₂ H ₃ F ₃ (CF ₃ CH ₃)
HFC-152a	C ₂ H ₄ F ₂ (CH ₃ CHF ₂)
HFC-227ea	C ₃ HF ₇
HFC-236fa	C ₃ H ₂ F ₆
HFC-245ca	C ₃ H ₃ F ₅

Gas	Chemical formula
Perfluoromethane (tetrafluoromethane)	CF ₄
Perfluoroethane (hexafluoroethane)	C ₂ F ₆
Perfluoropropane	C ₃ F ₈
Perfluorobutane	C ₄ F ₁₀
Perfluorocyclobutane	c-C ₄ F ₈
Perfluoropentane	C ₅ F ₁₂
Perfluorohexane	C ₆ F ₁₄

1.1.5 Industry sector

The term industry sector will be defined in regulations. It is proposed that for the purposes of the Act, industry sector would refer to production activities, classified at the level specified in Appendix C to this paper. Appendix C is based on industry classifications under the *Australian and New Zealand Standard Industrial Classification* (ANZSIC) 2006.

ANZSIC has been chosen for this purpose as it is used by the Australian Bureau of Statistics (ABS) and is a widely accepted method of classifying industry into similar production groupings within Australia.

The ANZSIC levels specified in Appendix C are based on discussions with stakeholders, noting the need to balance requirements for detailed data (that can be compared to existing statistics, such as those collected by the ABS) with the aim of reducing the regulatory burden.

1.1.6 Oil or gas extraction activity

Coverage of the Act extends to Australia's exclusive economic zone (EEZ) such that a facility only includes activities in the EEZ that are oil or gas extraction activities or a series of oil or gas extraction activities. Section 7 of the Act specifies that an oil or gas extraction activity means:

- (a) any activity involving extraction of, or exploration for, oil and gas; and
- (b) any activity, of a kind specified in the regulations, that is connected with such extraction or exploration.

Regulations under paragraph (b) will specify that an activity connected with extraction of, or exploration for, oil and gas would cover:

- (i) carbon capture and storage activities; and
- (ii) liquefied natural gas floating platforms.

1.2 Corporate groups

Reference: s8 of the Act

Section 8 of the Act defines the members of a corporate group. This definition is important because registration and reporting requirements under the Act are applied to the corporate group. The Act allows a responsible entity to be nominated for joint ventures and partnerships (which are part of a corporate group). Regulations under s8 will specify the process for nominating and revoking nominations for responsible entities.

1.2.1 Joint ventures and partnerships

Any facilities under the operational control of a joint venture or partnership are reported on by the entity nominated as the *responsible entity* for the joint venture or partnership under subsection 8(4) of the Act. If a responsible entity does not nominate, all partners and joint venture participants will be considered to be responsible entities and will therefore have to report, or be subject to penalties for not reporting.

Due to the risk of duplicate data reporting, corporations will be encouraged to nominate a responsible entity. One consideration is that if conflicting data is provided on the one facility, it will almost certainly trigger auditing (refer section 6.4). Liability under emissions trading in this scenario is yet to be determined.

On applying to register, the responsible entity for the joint venture or partnership will identify in its corporate structure each facility under the operational control of the joint venture or partnership. These facilities will not appear in the corporate structure of members of the joint venture or partnership, other than the responsible entity.

Facilities which are owned by a joint venture or partnership, but where a third party has operational control, would be included in the registration application of the corporation with operational control over those facilities (as discussed in section 1.5 of this paper).

Nominations

Paragraphs 8(6)(a) and (b) of the Act provide for regulations on nominating a responsible entity for a joint venture or partnership. Regulations under 8(6)(a) and (b) would specify that a nomination:

- (a) be in writing; and
- (b) be signed by the Chief Executive Officer (CEO) (or equivalent officer) or authorised representative for the member of the group (the nominee) that is being nominated as the responsible entity for the joint venture or partnership; and
- (c) include a statement to the effect that the nominee is being nominated as the responsible entity for the joint venture or partnership for the purposes of the Act; and

- (d) include a statement to the effect that all of the other participants or partners have agreed to the nomination; and
- (e) state:
 - (i) the nominee's full name, address and Australian Business Number (ABN); and
 - (ii) the name and either the address or ABN of each participant or partner; and
 - (iii) the full name, address and ABN of the joint venture or partnership, where relevant; and
- (f) include a declaration by an employee signing for the nominee that the information included in the nomination is, to the best of the officer's knowledge, correct and in accordance with the requirements of the Act and regulations; and
- (g) for each facility under the operational control of the joint venture or partnership:
 - (i) its name, or any other relevant identification;
 - (ii) its street address, addresses⁵, or other relevant description of its physical location as applicable;
 - (iii) if the facility is expected to meet one or more facility level thresholds — its latitude and longitude or equivalent map grid reference⁵; and
 - (iv) its industry sector according to the regulations provided by paragraph 9(1)(a) of the Act.

Revoking nominations

Paragraphs 8(6)(a) and (b) of the Act provide for regulations on revoking the nomination of a responsible entity for a joint venture or partnership. A regulation under 8(6)(a) and (b) will specify that an application:

- (a) be in writing;
- (b) be signed by the CEO (or equivalent officer) or authorised representative for the member of the group (the *nominee*) that is revoking their nomination as the responsible entity for the joint venture or partnership;
- (c) include a statement to the effect that the nominee is revoking their nomination as the responsible entity for the joint venture or partnership for the purposes of the Act; and

⁵ This is not required for facilities comprising diffuse emissions or energy sources, as per section 2.1.1

- (d) include a statement and evidence to the effect that either:
 - (i) all of the other participants or partners have agreed to the nomination being revoked; or
 - (ii) a 28 day notice period has been given to other participants that the nomination is being revoked; and
- (e) state:
 - (i) the nominee's full name, address and ABN; and
 - (ii) the name and either the address or ABN of each participant or partner; and
 - (iii) the full name, address and ABN of the joint venture or partnership; and
- (f) include a declaration by an employee signing for the nominee that the information included in the revocation is, to the best of the officer's knowledge, correct and in accordance with the requirements of the Act and regulations.

In relation to the requirements under item (d) the two options would be based on the nominations being either:

- (i) with the agreement of other joint venture or partnership participants. In this case all participants in a joint venture or partnership will collectively withdraw a responsible entity's nomination by written notification to the GEDO. The notification will need to include evidence of agreement by all parties as identified above; or
- (ii) without the agreement of other joint venture or partnership participants. For the responsible entity to revoke its nomination without agreement from other participants, the responsible entity would need to provide a written notice to all other participants. The responsible entity would then wait at least 28 calendar days before providing a written notice to the GEDO withdrawing its nomination. A notice of intention and 28 calendar day period before a notice of revocation, allows participants time to resolve any issues between them and time to organise a replacement responsible entity. If no replacement entity is nominated, all members of the joint venture or partnership would be considered responsible for the reporting obligations of the joint venture or partnership.

1.3 Facilities

Reference: s9 of the Act

Subsection 9(4) of the Act outlines that regulations on facilities may specify:

- (a) the circumstances in which an activity or activities (including ancillary activities) will form part of a single undertaking or enterprise; and
- (b) what activities are attributable to particular industry sectors.

This section of the paper outlines a proposed approach to regulations with regards to the above considerations. A definition of industry sector is discussed in section 1.1.5 of this paper. The process for attributing activities to an industry sector is discussed in this section.

1.3.1 *Defining a single undertaking or enterprise*

As outlined in the *Discussion Paper*, analysis of facility or equivalent definitions in existing greenhouse and energy reporting schemes identified two key themes:

- the concept of a productive unit or output; and
- the delineation of a single location or area.

Based on submissions on the *Discussion Paper* and further analysis, the regulations will specify the circumstances in which an activity or series of activities (including ancillary activities) will form part of a single undertaking or enterprise, as being where the:

- activity or activities consist of one principal productive activity and any additional activities occurring at the facility are able to be assessed as secondary or ancillary; and
- activity or activities are situated in, or attributable to, a single physical location.

Note that there will be some additional reporting obligations for facilities that cross State and Territory borders (see section 3.1.2).

Definitions for principal, secondary and ancillary activities will be required in the regulations. The following definitions are proposed for the regulations and are based on the *United Nations International Standard Industrial Classification of all Economic Activities* (ISIC).

Principal activity

The principal activity of a facility would be the activity where value added exceeds that of any other activity carried out at the facility⁶. Value added would be defined as the additional value created by an activity at a particular stage of production.

The output of the principal activity (its principal product and by-products) would consist of goods and services that are delivered for purposes outside that of the facility, even though they may also be consumed or used for capital formation within the facility.

Secondary activity

A secondary activity would be an activity carried out at, or attributable to a facility, which is in addition to the principal activity of the facility. Its output, like that of the principal activity, would be suitable for delivery outside the facility. The value added by a secondary activity would necessarily be less than that of the principal activity. The output of the secondary activity can be termed a secondary product.

⁶ Further guidance on value added is provided in the *Australian System of National Accounts: Concepts, Sources and Methods* (cat no. 5216.0).

Ancillary activity

An ancillary activity would be a supporting activity undertaken to create the conditions in which the principal or secondary activities of a facility can be carried out. The output of an ancillary activity is not intended for use outside the facility.

In addition to this defining characteristic of providing support, ancillary activities would have other common output characteristics as follows.

- The outputs of ancillary activities could commonly be found as inputs into almost any kind of productive activity or industry sector.
- The outputs produced would generally be services (except in some cases, the outputs could be goods that do not become a physical part of the output of the principal or secondary activities).
- The value of an individual ancillary activity is likely to be small compared to that of the principal and secondary activities of a facility.

In addition to the regulations, reporting guidelines will indicate the types of activities that would be classified as ancillary. These guidelines are likely to align ancillary activity examples with ancillary activities identified in the United Nations *1993 System of National Accounts*⁷. A list of activities that could be considered ancillary may include:

- (a) keeping records, files or accounts in written form or on computers;
- (b) communicating in written form or by telephone, telex, telefax, direct computer links, etc., or by messengers, couriers, etc.;
- (c) purchasing of materials and equipment;
- (d) hiring, training, managing and paying employees;
- (e) storing materials or equipment: warehousing;
- (f) transporting goods or persons inside or outside the producer unit⁸;
- (g) promoting sales;
- (h) cleaning and maintenance of buildings and other structures;
- (i) repairing and servicing machinery and equipment; and
- (j) providing security and surveillance.

Vertical integration

Vertical integration is used to describe the specific instance where different stages of production are carried out in succession under the operational control of one company. The output of one stage becomes the input of the next stage and generally only the output of the final stage is sold on the market.

⁷ Published jointly by the United Nations, the Commission of the European Communities, the International Monetary Fund, the Organisation for Economic Co-operation and Development, and the World Bank.

⁸ See discussion under section 1.3.2 on onsite and offsite transport.

Vertical integration may occur at one physical location. For example, a wine manufacturer, Company A, may have operational control over both grape growing and onsite wine manufacturing at one vineyard. Alternatively, vertical integration may occur across multiple locations. For example, another wine manufacturer, Company B, may have operational control over grape growing across multiple locations and manufacture these grapes into wine at a separate physical location.

Where vertical integration occurs at a single physical location, it is proposed that this is a facility for the purposes of the Act. However, corporations would be required to separately report data where the facility's activities cross more than one ANZSIC division.

Where vertical integration occurs across multiple locations, as long as the components of the vertically integrated facility occur solely within one State or Territory, it is proposed that this can be considered a facility for the purpose of reporting under the Act. However, corporations would be required to separately report data where the facility's activities cross more than one ANZSIC division. Where the components are physically located in more than one State or Territory, a separate facility must be reported by each State or Territory in which they are located.

In summary, regulations will specify that in the case of vertically integrated facilities, where:

- all products and services are under the operational control of one company; and
- all products and services form part of a single production process; and
- only the output of the final stage is sold to market;

activities will be classed as a facility if they occur at a single physical location; or the operator can choose whether or not the activities are classed as a facility, if they occur at disparate physical locations within the one State or Territory. The GEDO can make a ruling on a facility and will need to consider whether corporations are attempting to minimise their reporting obligations or avoid meeting facility-level thresholds in any cases put forward. In either case corporations would be required to separately report data where the facility's activities cross more than one ANZSIC division.

In some instances a company may sell products or services from an integrated process to the market. For example, Company A or B could sell a percentage of its grapes directly to the market. In this instance the company should refer to the definitions in the regulations of principal, secondary and ancillary activities. This means that where the additional product or service that is sold to the market has an equivalent or close to equivalent value added as the principal activity in the facility, that product or service will be also defined as a principal activity and will necessarily be reported as a separate facility under the Act. Again, as identified above, the GEDO can make a ruling on a facility and will need to consider whether corporations are attempting to minimise their reporting obligations or avoid meeting facility-level thresholds in any cases put forward.

Reporting guidelines and case studies will be developed to provide industry with examples for how to report on facilities, including vertically integrated facilities.

Note that in addition to regulations for determining a facility, the GEDO will have the capacity to declare a facility under the Act. For example, the GEDO can make a ruling

in situations where vertically integrated units could be considered a single facility. The GEDO will need to consider whether corporations are attempting to minimise their reporting obligations or avoid meeting facility-level thresholds in any cases put forward.

1.3.2 *A single physical area or location*

As stated previously, it is proposed that activities comprising a single undertaking or enterprise would occur at, or be attributable to, a single location or physical area.

A single location would be assessed as the ability to determine a physical boundary, which would in most cases correlate to a specific address. There are some circumstances at the industry sector level where this may not be possible. These are addressed below.

Transport

The following list of transport industry sectors (by ANZSIC code) would be included in regulations as subject to a specific approach to defining a facility by location:

- Road Freight Transport (461);
- Road Passenger Transport (462);
- Rail Freight Transport (471);
- Rail Passenger Transport (472);
- Water Freight Transport (481);
- Water Passenger Transport (482);
- Air and Space Transport (490)⁹;
- Scenic and Sightseeing Transport (501);
- Postal and Courier Pick-Up and Delivery Services (510).

In the transport sector a facility would still consist of a principal activity that would be assigned to one of the industry sectors listed above. However, due to the non stationary nature of transport, it is proposed that a transport activity or series of transport activities need not be situated in a single location in the same way a stationary activity or series of stationary activities are. Instead, it is proposed that the transport activity or series of transport activities are *attributed* to a single physical location.

It is proposed that this attribution to a single physical location should be at the national level. As outlined in section 3.1.2, activities in these industry sectors are also likely to cross State and Territory borders and will therefore be subject to sub-facility level reporting. To do this it is proposed that for a principal transport activity, a company can attribute this activity, as well as secondary and ancillary activities to a facility, as determined by:

⁹ Further requirements under air and space are outlined separately.

- (a) the industry sector under which that principal transport activity falls; and
- (b) the State or Territory in which the fuel used for that transport activity was purchased.

For example, emissions from a trucking company facility that operates solely in New South Wales (NSW) and Victoria would report its fuel consumption as attributed to two sub-facilities under the industry sector of road freight transport (461), sub-facility A (fuel purchased in NSW) and sub-facility B (fuel purchased in Victoria).

Any secondary or ancillary activities for this company would also be attributed to sub-facility A or B depending on where these activities were located. For example, an office located in NSW would be attributed to sub-facility A. Depots would be attributed to sub-facility A or sub-facility B based on the State in which they are located.

Note that where a transport company is also engaged in another activity that is a principal activity, based on value added, this activity would also need to be reported as a separate facility.

All fuels used in transport activities will need to be reported. There are several ways this information can be obtained. It is proposed that where a company claims fuel tax credits (FTCs) under the *Fuel Tax Act 2006* administered by the Australian Taxation Office (ATO) (and reported on in that company's Business Activity Statement), a company can use this data to help identify the amount of fuel that it has consumed. At present, this will cover only diesel and petroleum fuels (refer to advice on eligible fuels in the fuel tax credits guide for business on the ATO's website¹⁰). Although this fuel consumption data is already being reported to the ATO, companies will be required to report this data directly to the GEDO, as existing legislation prevents the GEDO from directly sourcing this data from the ATO.

Note that with regards to the NGERs only a subsection of an FTC claim, fuel claimed that is used for transport purposes, is reportable as fuel consumption data for transport activities. As stated above, eligible fuels under FTCs that may apply under NGERs include diesel and petrol¹¹.

Fuels that are not eligible for, and companies that cannot, or do not, claim FTCs will also be required to report fuel consumed for transport purposes by industry sector and by State or Territory. Companies will be able to do this based on fuel consumption data collected or invoicing for the purchase of fuels. This includes any diesel and petrol for which FTCs are not claimed such as for use in a vehicle with a gross vehicle mass (GVM) less than 4.5 tonne travelling on a public road.

Onsite and offsite transport

Where transport is an ancillary activity for a facility under a non-transport industry sector, all onsite transport should be attributed to that facility.

¹⁰ <http://www.ato.gov.au/businesses/content.asp?doc=/content/76594.htm&page=15&H15>

¹¹ For use in a vehicle with a gross vehicle mass (GVM) greater than 4.5 tonne travelling on a public road (diesel vehicles acquired before 1 July 2006 can equal 4.5 tonne GVM); and rail or marine transport.

Offsite transport in the case of small vehicle fleets operated by the facility operator will be reported as part of the facility.

In the instance of a vertically integrated facility with components at multiple locations, where a company has operational control of transport operations between sites, that company may choose to report the transport operations either under the industry sector to which the vertically integrated facility is classified, or to a separate transport facility with sub-facilities under each State or Territory.

International flights and voyages

This section covers industrial sectors:

- Water Freight Transport (481);
- Water Passenger Transport (482); and
- Air and Space Transport (490).

It is proposed that transport activities under the above industry sectors should apply the same method for reporting as other transport industry sectors. However, corporations would also separately report international fuel in the above industry sectors as a line item in the corporation's inventory. This is because international voyage data is required as a separate line item for the purposes of Australia's reporting obligations under UNFCCC.

As with other modes of transport, on ground activities under the operational control of companies in these industry sectors should be allocated to a facility depending on their classification as a principal, secondary or ancillary activity.

Pipelines

A pipeline, together with affiliated compressor stations, would be considered a single facility. However, where gas transmission pipelines cross State or Territory borders, a pro rata approach should be applied so that the pipes and compressor stations are reported as sub-facilities under each State or Territory in which they operate. Guidelines on a pro rata approach may be developed in consultation with industry. Reporting in relation to sewage operations and other pipelines should align with the treatment of gas pipelines.

Transmission and distribution

This section covers industrial sectors:

- Electricity Transmission (262); and
- Electricity Distribution (263).

A portion of the electricity transmitted or distributed is lost (transmission and distribution loss). The emissions and amount of electricity associated with the electricity lost (scope 2) from transmission and distribution (T&D) will be reported in line with the GHG Protocol (refer to discussion of scope 1 and 2 in section 1.4.1 in this paper). Using this approach, the company deemed to have operational control (as per section 1.5 of this paper) of a T&D network will report its T&D losses as scope 2. If transmission and distribution crosses State or Territory borders, the T&D company will report these scope 2 emissions pro rata at the sub-facility level. Guidelines for a

pro rata approach to measuring T&D losses may be developed in consultation with industry.

1.3.3 Assigning activities to an industry sector

It is proposed that the principal activity of a facility will be used to classify the facility by industry sector as specified in section 1.1.5 of this paper.

Vertical integration

In the case of a vertically integrated activity, industry sector classification would be based on the production stage which provides the greatest value added.

Changes to the principal activity that affect industry sector classification

A facility may go through changes in activity from time to time. To avoid a facility changing its industry sector classification on a frequent basis, it is proposed that the regulations follow ANZSIC 2006 rules. A variation in principal activity that could change a facility's industry sector classification would not change the ANZSIC code of the facility for the purposes of reporting unless the change has been in place for a minimum of two years¹².

Treatment of construction activities

Stakeholder feedback has indicated a need for clarity with respect to the treatment of construction and development.

Own account construction

Start up operations may need to undertake significant capital formation. Other facilities will require significant ongoing expansion and development work. In many instances, facility operators may undertake capital formation (e.g. construction of a furnace, a railway line, a factory or a mine) themselves.

ANZSIC 2006 classifies own account capital formation to the industry sector which the facility's intended future operations are attributed to, rather than to construction. The regulations will follow this guidance.

Developments and expansions will also be considered as secondary or ancillary activities to the industry sector of the principal activity on the facility at which they occur.

Other construction

In general construction activities undertaken on behalf of a corporation by a separate corporation will be classifiable into an industry sector under the construction division of ANZSIC. This approach is consistent with ANZSIC 2006.

A construction activity would need to be classified as a facility in a similar way to other activities. Reporting thresholds would apply to the facility on an annual basis as with any other facility. From the initiation of a construction project, the energy and

¹² ANZSIC 2006, p 24

emissions data from that project would be collected and reported each year as part of the inventory of the corporation with operational control, if thresholds are met.

Mining sector developments and expansions

ANZSIC 2006 treats developments and expansions in the mining sector as though they were own account construction services, classifying construction activity into the facility's intended future operations, rather than to construction. Regulations or guidelines will also be consistent with this approach, with all mining sector developments and expansions to be classified to the industry sector covering its intended future operations. This will be the case regardless of whether the expansion or development work is undertaken by a facility operator itself or by a separate corporation.

With respect to when in the construction/expansion process data becomes reportable, under the Act a facility becomes reportable when its total emissions for a financial year meet or exceed the reporting thresholds in the Act. For a corporation undertaking a facility development or expansion, the energy and emissions data from that project would be included in the data set for that facility, as defined above.

1.4 Emissions, energy production and energy consumption etc.

Reference: s10 of the Act

1.4.1 Greenhouse gas emissions

The Act refers the definition of *emissions of greenhouse gas* to regulations. The definition of *greenhouse gas* under the Act is outlined in section 1.1 of this paper.

In relation to greenhouse gases, the term *emissions* is commonly defined as the release of greenhouse gases into the atmosphere. This definition provides a useful starting point, but has been further developed for the purposes of the Act to include both direct greenhouse gas emissions and indirect emissions from the consumption of purchased electricity, heat or steam.

This is consistent with the Regulation Impact Statement (RIS) for the Act, titled *A National System for Streamlined Greenhouse and Energy Reporting by Business*, which identifies that both greenhouse gas emissions thresholds and reporting under the Act would relate to scope 1 (direct) and scope 2 (indirect from the consumption of purchased electricity, heat or steam) emissions.

On this basis a proposed definition of *emissions* is:

Emissions are the release of greenhouse gases into the atmosphere, covering direct releases of greenhouse gases (scope 1 emissions) and indirect releases of greenhouse gases from the consumption of purchased electricity, heat or steam (scope 2 emissions).

The terms scope 1, scope 2 and scope 3 are well known and utilised in a number of Australian and international programs and standards. They are defined in the World Resource Institute and World Business Council for Sustainable Development *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard* (the

‘GHG Protocol’¹³ and the International Organisation for Standardisation (ISO) *Standard for Greenhouse gases – Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals* (ISO 14064-1)¹⁴. Previous consultation has shown widespread stakeholder support for the use of definitions based on these standards. Definitions of scopes will also be included in regulations and the approach is outlined below.

- **Scope 1 (direct emissions):** greenhouse gases emitted from sources¹⁵ within the boundary of a facility and as a result of that facility’s activities.
- **Scope 2 (indirect emissions from consumption of purchased electricity, heat or steam):** greenhouse gases emitted from the production of electricity, heat or steam that a facility consumes, but that are physically produced by another facility.

Scope 2 emissions are included in the definition of emissions and companies will be required to report these emissions under the Act. Scope 2 emissions are included, consistent with international reporting standards and previous commitments relating to the Act. Stakeholders should note that this does not equate to liability to hold permits for scope 2 emissions under a future AETS.

Under the Act, reporting of scope 3 (other indirect emissions) is not required. It may be possible (refer section 4.1.3) for corporations to voluntarily report some information on scope 3 emissions through the online reporting system. The definition applied to scope 3 emissions would be:

- **Scope 3 (other indirect emissions):** greenhouse gas emissions generated in the wider economy as a consequence of a facility’s activities, which are physically produced by another facility.¹⁶

1.4.2 *Production and consumption of energy*

The Act outlines that definitions of energy consumption and energy production will be included in regulations. The definitions to be included in the regulations are as follows:

- **Production of energy** commodities includes the extraction of primary fuels from fossil reserves and biofuel sources and the capture of renewable energy from water, wind, sunlight, etc. as well as the manufacture of secondary fuel products. This includes fuels and energy commodities listed under the energy definition as per Appendix B.

¹³ World Resource Institute and World Business Council for Sustainable Development, *Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard*, 2004. www.ghgprotocol.org/files/ghg-protocol-revised.pdf

¹⁴ ISO 14064-1 was developed based on the GHG Protocol and the two standards should be consistent.

¹⁵ ‘Source’ means any process or activity which releases a greenhouse gas, an aerosol or a precursor of a greenhouse gas into the atmosphere.

¹⁶ This definition would not be included in regulations but would be provided in guidance material for reference.

- **Consumption of energy** is the use of any substance or resource as a source of heat or power (including own-use and losses in extraction, production and transmission). This covers consumption of fuels and energy commodities listed under the energy definition as per Appendix B. It also includes the consumption of energy commodities for non-energy purposes covering consumption of fuels, or any other energy commodity, for non-energy purposes, such as feedstocks for carbon-containing products or carbon reductants used in, for example, steel making or used directly as solvents.

1.4.3 Methods and criteria for calculating greenhouse gas emissions, reductions, removals, offsets and energy production and consumption

Calculation methodologies are being progressed through a separate consultation process on the *Technical Guidelines* (see Introduction for details).

Once finalised, the calculation methodologies and processes outlined in the *Technical Guidelines* will be converted into a legislative instrument to sit under the Act. Section 3.1 of this paper addresses methods for agriculture and land use, land use change and forestry emissions reporting.

1.5 Operational control

Reference: s11 of the Act

Under paragraph 11(1)(a) of the Act, a corporation is considered to have operational control over a facility if it has the authority to introduce and implement operating, health and safety and environmental policies. In some circumstances the corporation with operational control over a facility will be clear. An owner of a facility, for instance, may operate or manage that facility and so has sole authority to introduce and implement policies at that facility. In other circumstances, however, a third party may be contracted to operate or manage a facility on behalf of the facility owner. Examples arise in the mining sector in cases of contract mining and in the commercial property sector where property managers manage buildings on behalf of an owner or an occupant.

Subsection 11(4) of the Act specifies that in circumstances where more than one controlling corporation could satisfy the requirements of paragraph 11(1)(a), then the corporation with the *greatest* authority to introduce and implement operating and environmental policies is taken to have operational control over that facility. Stakeholders should note that the decision rule established by paragraph 11(4) is comprised of two elements: introduction and implementation.

Legal advice indicates that in circumstances where a third party is responsible for managing or operating a facility, the greatest authority to *introduce* operating and environmental policies is arguable and may ultimately be determined by the conditions of the contract between the facility owner and operator. In some circumstances contract conditions may be prescriptive and require an operator to introduce policies determined by the owner. In other circumstances contract conditions may be non-prescriptive and allow the operator to introduce policies as considered necessary. However, even where contract conditions are prescriptive, operators may be able to introduce some policies while the owner would be responsible for others.

Legal advice further indicates that the greatest authority to *implement* policies will, in the majority of circumstances, be with the facility operator.

Therefore, on balance, in circumstances where more than one corporation could be considered to have some ability to satisfy the requirements of paragraph 11(1)(a), a facility operator will generally be taken to have operational control over that facility in preference to the facility owner.

It is recognised that a corporation taken to have operational control over a facility for the purposes of NGERs may not be able to make decisions as to large-scale capital investments related to that facility. In other words, large-scale capital investments may remain a decision of the facility owner but this does not always equate to operational control. This approach is consistent with the GHG Protocol and the *Petroleum Industry Guidelines for Reporting Greenhouse Gas Emissions*¹⁷.

It is also recognised that a facility for which a corporation, other than the facility owner, is deemed to have operational control may be subject to shut-down by the facility owner. The ability to shut-down operations at a facility is also not necessarily equated to operational control.

1.5.1 Further regulations on determining operational control

It is possible to make a regulation under paragraph 11(1)(a) to establish further requirements a corporation must meet to be taken to have operational control over a facility. At this time it is not intended to make regulations under paragraph (11)(1)(a). It is considered that the existing provisions under s11 provide sufficient clarity to enable corporations to determine operational control in most or all circumstances. This will, however, be monitored and if a need for further detail is identified a regulation may be made in future.

Guidelines to be developed will provide further assistance for stakeholders in determining operational control in difficult circumstances. Case studies will also be developed in consultation with industry. Approaches to specific sectors are addressed in the following sections.

1.5.2 Sector specific issues

Pipelines

In the pipelines sector, operational control will be taken to be with the operator of the pipeline or network. That demand for the pipeline or network is determined by end-users does not abrogate operational control by the operator of the network. Nor does a regulated pricing framework for pipeline or network access remove operational control from the operator.

Electricity network transmission and distribution sectors

In the transmission and distribution sector, operational control will be taken to be with the operator of the network. That demand is determined by end-users, prices for

¹⁷ Published by the International Petroleum Industry Environmental Conservation Association, International Association of Oil and Gas Producers and American Petroleum Institute. Available at: www.ipecca.org/activities/climate_change/downloads/publications/ghg_guidelines.pdf

network access are regulated, or losses are managed through the National Electricity Market Management Company (NEMMCO) or other State regulators, does not mean that T&D can be exempted from reporting. It is anticipated that the party reporting T&D losses through NEMMCO or other equivalent bodies would be the party responsible for reporting under the Act.

Commercial property facilities

A variety of tenancing arrangements exist in commercial buildings. In cases where it is not obvious which party has operational control over a commercial building (as specified in the Act), guidelines will be provided to assist in determining control. The guidelines will outline an approach where ‘control over energy billing’ can be considered a proxy for operational control.

Guidelines would outline that where uncertainty exists based on the definition in the Act, the corporation with operational control would be considered to be the corporation which directly pays energy bills at a tenanted building. In some cases this might be the tenant and in other cases it would be the owner.

The basic principles to be set out in the guidelines as to whether the building owner or tenant is deemed in operational control and therefore responsible for reporting energy use are as follows.¹⁸

- (1) Subject to principles (2) and (3), the party that receives and pays the energy bill (‘Party A’) will be deemed to have operational control.
- (2) Where separate meters have been installed and Party A on-sells energy to another party (‘Party B’) based on the actual consumption of Party B as shown on the meter, then Party B will be the energy user of that on-sold energy and deemed to have operational control.
- (3) Where energy is not separately measured and Party A requires Party B to pay the cost of energy on another basis (e.g. as a flat fee or on a basis that is not directly related to actual energy use of Party B, i.e. per square metre, or as flat percentage of the total energy bill), Party A will be the energy user of all of the energy and deemed to have operational control.

Practical examples of operational control are outlined in Table 4.

¹⁸ This approach is in line with the Energy Efficiency Opportunities program. Examples and principles have been taken from the paper ‘*Who is Responsible for Energy Use in Commercial Leasing Arrangement*’ developed to support the Energy Efficiency Opportunities Industry Guidelines. www.energyefficiencyopportunities.gov.au

Table 4: Examples of operational control for commercial leasing arrangements

Description of energy billing arrangements	Owner assumes operational control	Tenant assumes operational control
Building owned and occupied by the same entity, which receives and pays energy bill.	All energy use reported by owner.	N/A
Building owner and tenant receive separate energy bills. Neither party on-sells energy to, or recovers the cost of energy from the other.	Building owner reports their metered energy use.	Tenant reports their metered energy use.
Building owner and tenant receive separate energy bills. Building owner recovers the cost of any other energy used by the tenant (e.g. central services) on a basis other than sub-metering.	Building owner reports their metered energy use.	Tenant reports their metered energy use.
Tenant receives bill for all energy used in the building. Tenant may or may not recover all or part of the cost of the energy bill from the building owner on a basis other than sub-metering.	No energy use reporting required.	All energy use reported by the tenant.
Building owner receives bill for all energy used in the building. Building owner on-sells sub-metered energy to tenant.	Reports all energy less sub-metered energy on-sold to the tenant apart from other 'building owner energy' that is on-sold. ¹⁹	Reports on-sold energy.
Building owner receives bill for all energy used in the building and on-sells sub-metered 'tenant energy' ²⁰ . Building owner may or may not recover all or part of the remainder of the energy bill from the tenant on a basis other than sub-metering.	Reports all energy less on-sold tenant energy.	Reports on-sold energy.
Building owner receives a bill for all energy used in the building. There are no sub-meters in the building and the building owner recovers the cost of the entire bill from tenants by means other than sub-metering.	Reports all energy use.	No energy use reporting required.

¹⁹ 'Building owner energy' is energy used in the operation of equipment operated by the building owner (e.g. air-conditioning plant not attached to a particular tenancy or common area lighting that is not measured through a sub-meter).

²⁰ 'Tenant energy' is energy used in the operation of equipment operated by the tenant (e.g. tenancy lighting or air-conditioning or other equipment that services that tenancy specifically and is attached to the tenant's meter).

Description of energy billing arrangements	Owner assumes operational control	Tenant assumes operational control
Building owner receives a bill for all energy used in the building, and has a single sub-meter in place to measure multiple tenants' energy. The building owner recovers the cost of the energy from tenants in proportion to floor area or another non-metered basis.	Reports all energy use.	No energy use reporting required.
Tenant receives bill for all energy used in building. Tenant on-sells sub-metered energy to the building owner.	Reports tenant energy that is on-sold.	Reports all energy less on-sold energy.

Mining sector – contract mining

In circumstances where a mining facility is operated by a third party under contract to the facility owner, known as *contract mining*, determining operational control may be difficult. Both the facility owner and the contract miner, may reasonably be considered to have authority to introduce policies relating to facility operation, health and safety and the environment.

Paragraph 11(1)(a) and s11(4) of the Act in combination specify that if more than one corporation has authority to introduce and implement policies related to facility operations and the environment, then the corporation with the *greatest* authority to introduce and implement those policies is taken to have operational control.

Some mining sector stakeholders have indicated they consider a mining facility owner to have the greatest authority to introduce policies because owners may specify contract conditions an operator must abide by, including which policies are to be introduced, and they may shut-down operations at the facility. However, authority to introduce policies is only one half of the decision rule established by s11 of the Act.

With respect to the other half of the decision rule under s11, legal advice suggests that the greatest authority to implement policies will generally be with the corporation with day-to-day managerial responsibility for the facility.

A regulation to be made under s55 of the Act will require corporations applying to the GEDO for a declaration on operational control to provide a copy of any contracts between parties that could be considered to have authority to introduce policies. Analysis of contract conditions will allow the GEDO to identify the scope for a facility operator to introduce policies and so assist in making a determination. In general, however, the operator of a facility will be taken to have operational control in preference to a facility owner. Where the owner and contractor agree that the owner has the greatest control for the purposes of this Act a joint application for the determination could be made (refer section 6.2 of this paper).

Transport

Given the non-stationary nature of the transport sector's activities and the potentially extensive use of contractors on both an ongoing and adhoc basis, it may be difficult in some circumstances to determine which entity should have responsibility for reporting the fuel consumed by those transport activities.

In the case of a facility under a transport industry sector, it is proposed that for fuels where a company claims fuel tax credits (FTCs) (refer section 1.3.2) a company can use this data to help identify the amount of fuel it has consumed. Fuels not eligible for FTCs will need to be identified through other methods, such as fuel consumption data or purchase invoices.

It is proposed that where a company claims FTCs, on behalf of other entities under the provisions of the *Fuel Tax Act 2006*, this may also be used as a proxy for operational control over the transport activities in which that fuel is used. A company would thus have operational control over all activities that consume fuel for transport purposes for which it claims FTCs. It should be noted however that a company that does not claim FTCs on behalf of other entities under the provisions of the *Fuel Tax Act 2006*, in relation to those entities transport activities or activity, the company will still be considered to have operational control when requirements under *s11* of the Act are met.

For all fuels used in a transport industry sector facility for which FTCs are not claimed, reporting obligations will be based on determining operational control over the transport activities. Further guidance on this could be provided in guidelines if necessary.

Car fleets

Where a company has operational control over a car fleet, this fleet will need to be reported if that company is liable for reporting under the Act. Note that salary packaged cars are not expected to fall under the operational control definition under the Act. Further guidance on this could be provided in guidelines if necessary.

2. Registration

The Act sets a framework for registering reporting entities, with a number of details to be covered in regulations. These are outlined below.

2.1 Applying to register

Reference: ss12-15 of the Act

Section 12 of the Act specifies that a controlling corporation must apply to register if the corporation's group meets one or more of the given thresholds in a financial year ending on or after 30 June 2009. A controlling corporation will meet a threshold in a financial year if, in that year, facilities under the operational control of members of the corporate group:

- emit greenhouse gases; or
- produce energy; or
- consume energy,

at, or above, the levels specified by s13 of the Act. Refer to Appendix A for details.

Where a controlling corporation does not meet one or more of these thresholds, they may still apply to be registered under s14 of the Act if they are undertaking or propose to undertake a greenhouse gas project. Applications for registration must be made to the GEDO and identify the controlling corporation.

For the purposes of determining permit allocation and/or liability under an AETS, it is anticipated that corporations or facilities below the thresholds may also need to register and report to the GEDO. For example, this may include trade exposed, emissions intensive industries. Further requirements to register and report may follow in light of development of the AETS.

2.1.1 Content of application to register

Paragraph 15(1)(c) of the Act allows regulations to specify the information required in an application to register. Regulations made under paragraph 15(1)(c) will require a controlling corporation's registration application to include the following:

- (1) For the controlling corporation:
 - (a) its registered business name;
 - (b) its trading name (if any);
 - (c) its ABN;
 - (d) its Australian Company Number (ACN), if applicable;
 - (e) the street and postal address of its head office;
 - (f) the full name, position, telephone number, email address and postal address for primary and secondary contact persons for the controlling corporation; and

- (g) if an ANZSIC is applicable to the controlling corporation as a whole—the classification.²¹
- (2) A statement that the application is under either:
 - (a) section 12 of the Act (Obligation to apply to register); or
 - (b) section 14 of the Act (Applying to register in relation to greenhouse gas project).
 - (3) For each member of the group²² other than the controlling corporation:
 - (a) its name;
 - (b) its trading name (if any);
 - (c) its ABN, if applicable;
 - (d) its ACN, if applicable; and
 - (e) the address of its head office.
 - (4) A representation of the group's corporate structure showing the relationship between:
 - (a) the controlling corporation;
 - (b) each subsidiary corporation;
 - (c) any joint venture or partnership for which a member of the controlling corporation's group is the responsible entity; and
 - (d) any facility under the operational control of a member of the group.
 - (5) For each facility²³ under the operational control of a member of the group:
 - (a) its name, or any other relevant identification²⁴;
 - (b) its street address, addresses, or other relevant description of its physical location as applicable;
 - (c) for a facility expected to meet one or more facility level thresholds, its latitude and longitude or the equivalent map grid reference²⁵;
 - (d) its industry sector in accordance with regulations provided by s7 of the Act;
 - (e) the name of the member of the group that has operational control of the facility;
 - (f) if the facility is under the operational control of a joint venture or partnership²⁶—:

²¹ If a Global Industry Classification Standard is applicable to the controlling corporation, the controlling corporation could voluntarily provide that classification as well.

²² Subsidiaries which are not expected to contribute to a corporate group's energy or emissions profile may simply be listed by name and ABN/ACN. They need not be included in the corporate group's structure chart.

²³ Identification details for facilities not expected to meet the facility thresholds, will be limited to facility name, address, industry sector and operator. Latitude and longitude will not be required.

²⁴ Corporations are encouraged to include any ABNs associated with the facility.

²⁵ Guidance for specifying latitude and longitude will be issued in guidelines for reporting.

²⁶ An application to register would not cover facilities under the operational control of a joint venture or partnership unless a member of the corporate group is the responsible entity for the joint venture or partnership.

- (i) the names of the participants of the joint venture or the partners of the partnership (other than the member of the group); and
 - (ii) a statement to the effect that either:
 - (1) no responsible entity has been nominated; or
 - (2) the member has been nominated as the responsible entity.
- (6) A declaration by the CEO (or equivalent officer) or authorised representative, signing for the controlling corporation, that the information included in the application is, to the best of the officer's knowledge, correct and in accordance with the Act and the Regulations (the CEO's name and contact details will also need to be provided).

Corporations should note that in relation to joint ventures and partnerships, under s8 of the Act, if a responsible entity has not been nominated, all participants or partners of a joint venture or partnership are liable to report on facilities under the joint venture or partnership's operational control (see section 1.2.1).

Regulations under paragraph 19(6)(c) of the Act (refer Chapter 3) will require that information supplied in the application to register is updated by the controlling corporation at the time of reporting, as necessary.

Facility details in application to register – diffuse sources

An exception to the registration criteria in items 5(b)&(c) above would apply to any industry sector that has a facility whose emissions or energy consumption cannot be attributed to a single location.

For such facilities, a corporation will not be required to report a facility's street address or addresses, or latitude and longitude, except for the State or Territory in which the facility is located. Where possible a company should give location based information such as industry specific locaters, addresses of depots or a head office address.

2.1.2 Form of application to register

Paragraph 15(1)(d) of the Act provides for a regulation to be made specifying the form of an application to be registered. It is expected that an application to be registered will be online. Details will be addressed in the final regulations.

2.2 Disclosure of register information

Reference: s16 of the Act

Section 16 of the Act requires a National Greenhouse and Energy Register ('the Register') to be kept. The Act allows the GEDO to make the contents of part or all of the Register available to the public. Under the Act, only the name of each registered corporation and any other matters required by the regulations may be entered on the Register. Other matters that can be required by the regulations relate to:

- the identity of the controlling corporation and members of the corporation's group;
- whether the corporation is required to apply for registration under s12 or has applied for registration under s14;
- whether the corporation has complied with provisions of the Act; or

- information that is published under s24.

The *Discussion Paper* proposed that regulations be made under subsection 16(4) enabling the GEDO to enter the following details on the Register and that the GEDO would disclose all of the contents of the Register alongside the corresponding corporation's emissions and energy information to be published under s24 (refer 2.2 of this paper):

- (1) Identity information for the controlling corporation and members of the corporate group, listed as:
 - (a) registered business name of each company;
 - (b) trading name (if different to the registered business name).
- (2) Whether the controlling corporation is required to apply for registration (under s12), which would identify if the corporation had triggered thresholds during a specific trigger year.
- (3) Whether the controlling corporation, member of the corporation's group or any other corporation had applied for registration (under s14 of the Act). It would identify that corporations had sought to be registered as they are undertaking or proposing to undertake a greenhouse gas project. The corporations' details would be listed as:
 - (a) registered business name of each company; and
 - (b) trading name (if different to the registered business name).
- (4) Whether the corporation has complied with the Act during the specific trigger year, listed as the status of compliance and enforcement actions, if any.

Stakeholders who commented were supportive of the above proposal. It is therefore proposed that regulations be made under subsection 16(4) to this effect. Mixed views were expressed in relation to the type of compliance information to be publicly disclosed. Consistent with the approach taken by corporations in annual reports and sustainability reports, it is proposed that non-compliance with the Act will be publicly disclosed where a corporation has been found guilty of non-compliance through court proceedings.

2.3 Deregistration

Reference: s18 of the Act

Subsection 18(1) of the Act enables a registered corporation to apply to the GEDO to be deregistered. Subsection 18(3) restricts deregistration to corporations that are unlikely to meet any of the reporting thresholds in the current financial year and the two subsequent financial years. If the GEDO is satisfied that this is the case, the corporation must be deregistered. The onus will be on the corporation applying for deregistration to show cause for the GEDO to approve the application.

Paragraph 18(2)(a) enables regulations to specify information required in a deregistration application. A regulation under paragraph 18(2)(a) will specify that an application for deregistration contain the following:

- (1) Contact information for the controlling corporation, covering:
 - (a) its registered business name;

- (b) its trading name (if any);
 - (c) ABN;
 - (d) ACN, if applicable;
 - (e) the street and postal address of its head office;
 - (f) the full name, position, telephone number, email address and postal address for the primary contact person for the controlling corporation;
and
 - (g) any identifying code or number allocated to the corporation by the GEDO under a registration system.
- (2) A statement to the effect that the corporation considers it is not likely to meet any of the reporting thresholds in the current financial year and at least two subsequent financial years.
- (3) An explanation as to why the corporation is unlikely to meet reporting thresholds in the relevant financial years, along with any necessary relevant supporting documentation, observed data and/or forward estimates of energy use, greenhouse gas emissions and emissions-producing activities.

Paragraph 18(2)(b) enables regulations to specify the form of an application to deregister. A deregistration application will need to be provided in hard copy and signed by the CEO of the corporation (the CEO's name and contact details will need to be provided).

3. Reporting obligations

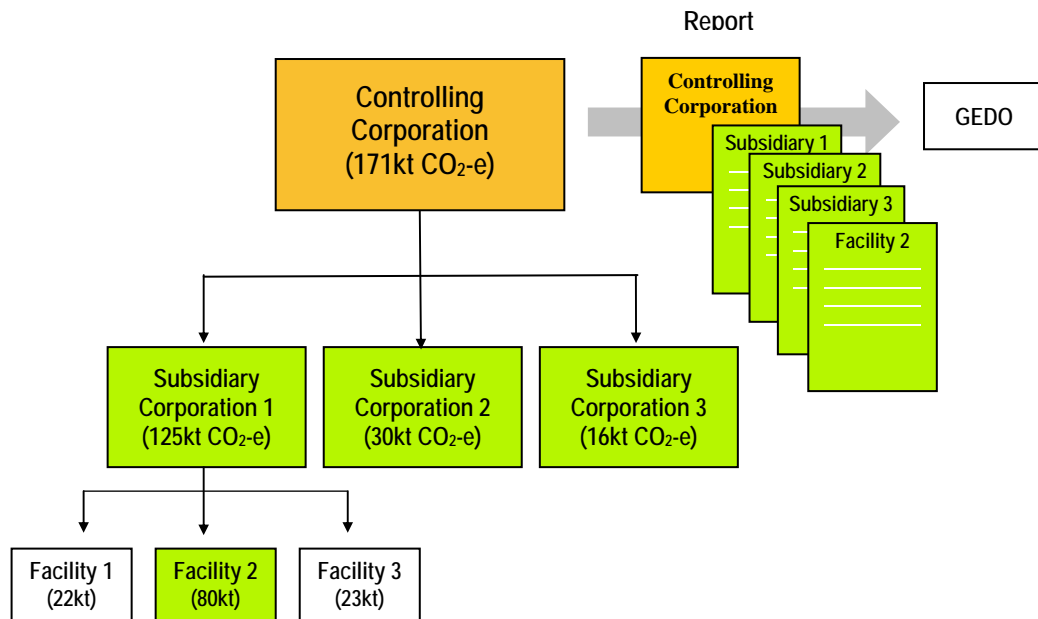
Reference: Part 3 of the Act

A corporation registered under the Act must provide a report to the GEDO relating to:

- greenhouse gas emissions; and
- energy production; and
- energy consumption,

from facilities under the operational control of the controlling corporation, and facilities under the operational control of entities that are members of the corporation’s group. Figure 2 illustrates a controlling corporation’s obligations with regard to reporting separately on facilities operated by members of their corporate group. This diagram does not imply that data from facility 1 & 3 would not be reported, rather that it could be reported in an aggregated form as part of subsidiary 1’s report, rather than a separate item under that subsidiary (refer to 3.1.1).

Figure 2: Example of a corporate group’s obligations to report²⁷



The Act allows for regulations to be made specifying the information that must be included in a corporation’s report. The section below outlines information to be reported to the GEDO.

²⁷ This figure assumes that the controlling corporation has no emissions from facilities it directly operates

3.1 Reporting on energy production and consumption and greenhouse gas emissions

Reporting of energy production and consumption would cover all energy production and consumption, including fuel, by corporate groups and facilities that meet the thresholds set out in the Act.

Energy production and consumption will be reported by fuel type. A list of equipment types for reporting energy data has been proposed in the *Technical Guidelines* and feedback is sought through that consultation process (refer to Introduction). Greenhouse gas emissions will be reported by fuel type and greenhouse gas as outlined in the *Technical Guidelines*.

A list of data reporting requirements for production and consumption of energy, energy emissions, industrial process emissions, fugitive emissions and waste are included in the *Technical Guidelines*. The lists are reproduced at Appendix D, as they will be included in the regulations under the Act. The tables in Appendix D outline differing reporting requirements for differing circumstances. Organisations and individuals have been invited to submit views on the *Technical Guidelines*, and feedback on these lists should be directed through that submission process as outlined in the Introduction.

Agriculture, forestry and fishing

Energy related scope 1 and 2 greenhouse gas emissions and energy production and consumption data will be reportable by agriculture, forestry and fishing operations that meet the reporting thresholds, consistent with the reporting obligations of other corporations. Decisions have not yet been made regarding inclusion of non-energy related greenhouse gas emissions for agriculture, forestry and fishing in the national reporting system and an AETS. Reporting methodologies are not yet sufficiently developed for wide-scale measurement of agriculture and land use, land use change and forestry emissions at the facility and corporate levels. To accommodate this under the legislative framework until development of improved methodologies, the legislative instrument for methodologies will specify that emissions from agriculture and land use, land use change and forestry will be considered zero for the purposes of thresholds and reporting under the Act. Following development of improved methodologies for estimating emissions in these areas, further consideration will be given to reporting and threshold issues.

3.1.1 Aggregating data from small facilities

As outlined in the *Discussion Paper*, regulations will specify that where the corporate threshold is triggered, data from small facilities can be aggregated. This will apply to facilities that emit less than 25 kilotonnes of greenhouse gases, measured in carbon dioxide equivalent (kt CO₂-e), and which produce or consume less than 100 terajoules of energy per year. This would mean that a corporation with several small facilities could report in aggregate the energy and emissions data from those facilities, rather than separately identifying each small facility under the corporation.

The regulations will require such data to be aggregated only to State or Territory level and to the appropriate industry sector (refer Appendix C).

3.1.2 Mandatory reporting at the sub-facility level

Facilities which cross State or Territory borders

This section applies to a corporation that has operational control over a facility that operates across State or Territory borders such as transport operations, pipelines and electricity transmission and distribution.

Where a corporation's facilities cross State and Territory borders the facility level threshold will still be applied at the national level, however the corporation will be required to report at the sub-facility level for each State and Territory in which that facility operates. The purpose of this is to meet State and Territory reporting and inventory requirements. Guidelines to assist in reporting by State or Territory may be developed if required.

Facilities which cross ANZSIC divisions

This section applies to a company that has operational control over a vertically integrated facility that crosses ANZSIC divisions.

Where a corporation's facilities cross ANZSIC divisions the corporation will be required to report at the sub-facility level for each ANZSIC division within that facility's operations. The purpose of this is to meet Australian Bureau of Agriculture and Resource Economics (ABARE) and ABS data needs in relation to energy statistics. Guidelines or case studies to assist in identifying activities in different ANZSIC divisions may be developed if required.

Facilities with onsite electricity generation

This section applies to a company that has operational control over a facility which includes onsite electricity generation.

Where a corporation's facility inventory includes data from a electricity generator, the corporation will be required to separately identify fuel used in the generator and the quantity of generator outputs consumed on-site and exported off-site²⁸. The purpose of this is to meet State and Territory, ABARE and ABS data needs in relation to energy statistics and grid electricity emissions.

Facilities with on-site contractors

This section applies to a company that has operational control over a facility, which uses contractors that cross ANZSIC divisions.

Where a corporation's facility inventory includes data from major contractors that are not in the same ANZSIC division as the facility, the company will be required to separate facility data into own data and contractor data at the sub-facility level. The purpose of this is to meet ABARE and ABS data needs in relation to energy statistics. Guidelines or case studies to assist in identifying activities in different ANZSIC divisions may be developed if required.

²⁸ As flagged in the *Technical Guidelines*

3.1.3 *Voluntary reporting at the sub-facility level*

A corporation will be able to report activities at a lower level than the facility level as long as these activities can be aggregated to the facility level as specified in section 1.3 of this paper.

For example, Facility A is a facility in the industry sector of wine manufacturing, where wine manufacturing has been determined as the principal activity using value added. When reporting on Facility A, a company could choose to divide the facility for reporting purposes into Sub-Facility 1 (wine manufacturing plant), Sub-Facility 2 (grape growing in Hunter Valley NSW), and Sub-Facility 3 (grape growing in Mudgee NSW). The facility level threshold in this instance would still apply to Facility A including all of its sub-facilities.

This approach may be required to assess trade exposed, emissions intensive industries under an AETS. For example, where only one portion of a facility's activities is considered to be trade exposed and emissions intensive, data for the facility may need to be disaggregated into separate activities. Further advice on this matter will be provided to affected industry sectors as AETS requirements are developed.

3.1.4 *Materiality*

Materiality is a concept or convention drawn from auditing and accounting, relating to the importance of an amount, transaction, or discrepancy. The Australian Accounting Standards Board, *Accounting Standard AASB 1031 Materiality*²⁹, specifies that:

'materiality means, in relation to information, that information which if omitted, misstated or not disclosed has the potential to adversely affect decisions about the allocation of scarce resources made by users of the [financial] report or the discharge of accountability by the management or governing body of the entity'.

In the context of greenhouse gas emissions reporting, materiality refers to the material impact of emissions measurements on the overall emissions profile of a facility and/or corporation. Materiality can be applied to:

- coverage of facilities within a corporate group;
- coverage of emissions and energy sources within a facility;
- accuracy of measuring emissions and energy from those sources; and
- discrepancies in emissions and energy measurements.

Industry feedback has indicated a need for detailed guidance on how materiality will be applied under the regulatory framework to be administered by the GEDO. Stakeholders are aware that penalties will be applied for inadequate or inaccurate reporting and therefore require guidance on what will constitute adequate and inadequate reporting.

²⁹ Available at: www.aasb.com.au

Determining appropriate levels of materiality will need to balance the driver of minimising the regulatory burden on industry with achieving a comprehensive and accurate emissions data set from registered corporations.

Coverage of facilities

It is proposed that reporting under the Act apply a materiality threshold to reporting on small facilities. This threshold would be directed to ensuring that corporations don't have to collect small amounts of information that are not collected and collated for other purposes. Different types of thresholds for materiality could be applied to small facilities. Applying a proportional (percentage) minimum requirement for reporting on a facility could theoretically exclude large facilities if they are within a very large corporate group. This would undermine the coverage of NERS. Similarly, applying only an absolute minimum could be problematic in applying the intent of materiality, as it is assumed that an absolute value threshold would have greater impact on a smaller company than a large. A minimum size for facility reporting, established in percentage and absolute terms could alleviate these concerns.

It is proposed that for corporate groups reporting on multiple facilities, the following materiality thresholds be applied to facilities.

- (1) A corporation is not required to report on a facility that, for a given reporting year:
 - (a) comprises less than 2% of the corporate group's inventory; and
 - (b) emits less than 3 kt CO₂-e greenhouse gases; and
 - (c) produces less than 12 TJ energy; and
 - (d) consumes less than 12 TJ energy;

and

- (2) The aggregated total of all facilities excluded on the basis of materiality could not be estimated to make up more than a 5% of the corporation's total emissions or energy production/consumption.

Corporations would also still be required to report the number of facilities excluded on this basis. If corporations are already collecting and collating data at this level for other purposes (e.g. FTC claims), this data should still be reported.

Issues relating to materiality will be considered in further development of the AETS design.

Coverage of sources

Setting a materiality threshold for coverage of sources within a facility could have a direct impact on a corporation's liabilities under an AETS. Non-coverage of many small emissions sources may, in sum, reduce a corporation's permit liability by a non-insignificant quantity.

At this point no threshold for materiality of sources will be applied. This issue will need to be further considered in light of AETS requirements.

Accuracy

Accuracy of emissions and energy reporting will be addressed through the *Technical Guidelines* (refer to Introduction).

Discrepancies

Discrepancies in emissions and energy reporting will be addressed through the development of the external audit legislative instrument (refer Chapter 5).

3.1.5 Update of registration information

It is proposed that regulations under paragraph 19(6)(c) of the Act will require that, where the content of application to register (see section 2.1.1) has changed, these details must be updated by the controlling corporation at the time of reporting.

3.2 Different reporting requirements for different thresholds

Subsections 19(6), (7) and (8) of the Act enable regulations to be made specifying differing reporting requirements for corporations that do not meet some or all of the thresholds specified in s13.

3.2.1 Corporations that meet no threshold

Under paragraph 19(8)(a) of the Act, a regulation can specify particular requirements for a registered corporation that does not meet any thresholds in a given year.

A regulation will be made under paragraph 19(8)(a) to enable these corporations to provide a report to the GEDO simply stating that no thresholds have been met in the reporting year. This would be the case whether or not thresholds were met in previous years.

Note that registered corporations must still provide a report as per s19(1) and (2), but data would not need to be provided in the report if no threshold was met. Registered corporations may choose to voluntarily provide data despite not triggering a threshold.

3.2.2 Corporations that meet one or more thresholds

Paragraph 19(8)(b) of the Act facilitates differentiated reporting by corporations that trigger at least one but not all thresholds (corporate group greenhouse gas emissions, or energy consumption, or energy production, or facility thresholds) in a given year. Reporting requirements for corporations that do not meet all the corporate group thresholds are discussed below, followed by a discussion of facility thresholds.

Corporate group thresholds

No regulations will be made under subsection 19(8)(b) of the Act in relation to different requirements if different corporate group thresholds are triggered. Corporations will be required to report data relating to *all* thresholds when at least one corporate group threshold is met by a corporation in a reporting year.

Table 5 below provides examples of data that could be expected to be included in a report if some, but not all, corporate group thresholds are met in a given reporting year.

In Table 5, Corporation A has met the thresholds for greenhouse emissions and energy consumed in 2008-09, so would report data related to all thresholds, including greenhouse emissions, energy consumed and energy produced.

Corporation B has met the greenhouse gas emissions threshold, so would need to report greenhouse gas emissions data as well as energy consumed data and energy produced data for its corporate group for that year. However, Corporation C has not met a threshold in the reporting year, so would not need to report data for that year. Corporation D has met the energy produced threshold, so would need to report energy produced data as well as energy consumed data and greenhouse gas emissions data.

Table 5: Examples of mandatory reporting, only where thresholds are met

		Thresholds (2008-09 financial year)			Reporting (2008-09 financial year)		
		125 kt CO ₂ -e emitted (multiple facilities) ⁱ	500 TJ energy produced ⁱⁱ	500 TJ energy consumed ⁱⁱⁱ	125 kt CO ₂ -e emitted (multiple facilities) ⁱ	500 TJ energy produced ⁱⁱ	500 TJ energy consumed ⁱⁱⁱ
Corporation	A	Met	Not met	Met	Mandatory	Mandatory	Mandatory
	B	Met	Not met	Not met	Mandatory	Mandatory	Mandatory
	C	Not met	Not met	Not met	Voluntary	Voluntary	Voluntary
	D	Not met	Met	Not met	Mandatory	Mandatory	Mandatory

ⁱ Paragraph 12(1)(a)(i). ⁱⁱ Paragraph 12(1)(b)(i). ⁱⁱⁱ Paragraph 12(1)(c)(i).

Facility thresholds

A corporation may control a facility that meets the facility-level threshold of 25 kilotonnes carbon dioxide equivalent (kt CO₂-e) or 100 terajoules (TJ), but the corporate group may not meet the corporate group thresholds. In these circumstances, minimising the regulatory burden faced by industry is an important consideration. Based on feedback from the *Discussion Paper*, a regulation will be made under paragraph 9(8)(b) clarifying that a corporation that does not meet the corporate threshold, but has operational control over a facility that meets the facility threshold is required to report only on that facility.

It is recognised that by mandating only the reporting of data related to facilities which have met a facility threshold, an opportunity to gather additional data will be lost. It should also be noted that as the data reported will be facility level only, there may be no other data from the corporation with operational control over the facility, and data will not be publicly disclosed in relationship to corporations that meet only the facility threshold. It is recognised that this approach *could* be considered inconsistent with the reporting principle of completeness espoused in international reporting guidelines. These negatives are outweighed, however, by the need to minimise the compliance burden faced by Australian industry.

3.3 State and Territory data

The object of the Act is to introduce a single national framework for reporting and dissemination of information on greenhouse gas emissions, greenhouse gas projects, energy consumption and energy production. The national reporting system will collect

data to assist Australian, State and Territory government programs and avoid duplication of similar reporting requirements.

Regulations may be made under s19(9) of the Act to collect information requested by a State or Territory. This provision is designed to assist in the process of streamlining reporting requirements nationally. The Australian Government will work cooperatively with States and Territories to identify any information needs that may be met under s19(9). This is planned to occur during 2008 to facilitate streamlined reporting from the second reporting year (2009-10). This process will need to balance the goals of reducing regulatory burden across the economy with ensuring that demonstrated data needs for policy and programmes are met. Any regulations under this subsection of the Act would be developed based on further consultation.

3.4 Contractor reporting

Section 20 of the Act enables the GEDO to exempt a registered corporation from reporting some information if it deems that the information is to be provided by someone else. This is intended to allow commercially sensitive information held by a contracted corporation or person to be reported to the GEDO directly rather than being reported via a registered corporation.

Section 20 has been included in the Act because in some cases a registered corporation contracts certain operations to another corporation. Information necessary to fulfil the registered corporation's reporting requirements may be considered to be commercially sensitive by the contracted corporation. The contracted corporation may refuse to provide the necessary information to the registered corporation.

Section 20 enables a registered corporation to avoid breaching the reporting provisions of the Act by facilitating separate reporting of withheld information by a contracted corporation. Under s20, a contracted corporation may provide information directly to the GEDO, thereby avoiding disclosure of commercially sensitive information to the registered corporation.

Under s20, the registered corporation or the other person may apply, in a manner and form specified by regulations, to the GEDO for information to be provided by another person. The GEDO may, if satisfied, determine in writing that the information is to be provided by another person. The other person must, in accordance with any requirements specified in the regulations, provide that information to the GEDO on or before the day specified in the written determination.

A regulation will be made under subsection 20(2) of the Act, detailing the process for an application to the GEDO to enable another person to provide information. Until the requirements of the regulation are met, the GEDO will be unable to make a determination. A regulation made under subsection 20(2) of the Act will require that written applications include the following information:

- (a) a signature from an authorised officer for the entity making the application, either the registered corporation or the other person who would provide the information;
- (b) evidence that the other entity, either the registered corporation or the other person, agrees to the proposed separate reporting arrangement;

- (c) a statement to the effect that the other person agrees to become a responsible entity for the provision of certain information that would otherwise be required of the original responsible entity;
- (d) a statement specifying the information that would be provided by the other person;
- (e) a statement to the effect that the other person has refused to provide the information to the registered corporation;
- (f) the business name, address and ABN of the registered corporation and the other person;
- (g) the name and contact details of an authorised officer of the registered corporation to be the contact person; and
- (h) the name and contact details of a contact officer for the other person.

Subsection 20(4) of the Act obliges the other person to report to the GEDO as specified by the regulations on or before a day specified by the GEDO in its written determination. A regulation made under subsection 20(4) will:

- (a) oblige the other person to report any information that would otherwise be supplied by the registered corporation but which the other person has withheld from the registered corporation; and
- (b) oblige the other person to report before the end of four months after the end of the financial year.

Where a single contractor wished to provide data relating to more than one facility, and the requirements under s20 were met for each facility, the contractor may be able to submit a single application covering those facilities.

3.5 Record keeping

Section 22 of the Act specifies that a registered corporation must keep valid records of the activities of the members of its group for seven years, and allows regulations to be made specifying the kind and form of such records.

At this stage, prescriptive regulations are not intended to specify what records should be kept. It will instead be at the discretion of the corporation to decide what records adequately demonstrate compliance with the requirements of the Act. This will be supported by guidance on record keeping provided by the GEDO as needed. The Government may introduce regulations at a later date, if external audits indicate a need for prescriptive regulations.

Guidelines for record keeping are yet to be developed, but the type of guidance provided is likely to cover items such as the following:

- Records may be kept on paper or on electronic or other media, but they must be stored in a format which will be valid and accessible for seven years beyond the reporting year and able to be audited if required by the GEDO.
- Records are required to cover information corporations use to report accurately. Records will enable the GEDO to determine if they have complied with their legislated obligations. Corporations must be prepared to provide to the GEDO or auditors adequate evidence of their compliance with the NGRS regulatory framework in records of activities.

- Records should relate to calculation methods used for greenhouse gas emissions, reductions, removals, offsets, energy production and consumption. This includes the origin of reporting factors and methods as well as any documentation relating to evidence of calculations such as receipts, invoices and payment methods.
- All records supporting business decisions and relating to high risk areas in relation to NGERs reporting coverage and accuracy must be kept to provide evidence to support actions and ensure accountability.

In designing record keeping processes, stakeholders should consider the *Technical Guidelines* (refer to the Introduction).

For further guidance on Australian and international standards for record management, AS ISO 15489 provides information on creating record policies, procedures, systems and processes to support the management of records in all formats.

4. Disclosure of information

An object of the Act is to disseminate information related to greenhouse gas emissions, greenhouse gas projects, energy consumption and energy production of corporations to inform Australian, State and Territory governments and the public.

4.1 Publishing information

Reference: ss24-25 of the Act

Section 24 of the Act requires the GEDO to publish on a website totals of greenhouse gas emissions and energy produced and consumed, for each corporate group that meets the corporate-level greenhouse gas emissions threshold. Section 24 also allows the GEDO to publish information on greenhouse gas projects undertaken by a corporation, if the information satisfies the requirements of the regulations (see Chapter 7).

4.1.1 Type of greenhouse gas information to be published

Scope 1 and scope 2 greenhouse gas emissions data

The *Discussion Paper* proposed that scope 1 (direct) and scope 2 (indirect) greenhouse gas emissions data be publicly disclosed separately under NGERs.

Although some stakeholders expressed opposition to the collection of scope 2 data in response to the *Discussion Paper*, the majority of stakeholders supported separate disclosure of scope 1 and scope 2 emissions data. The provision of separate scope 1 and 2 greenhouse gas emissions data to the public is seen as necessary to provide appropriate levels of clarity on the emissions footprint of Australian corporations.

Subsequent legal advice on whether subsection 24(1) of the Act is sufficient to allow scope 1 and scope 2 data to be disclosed separately has indicated that an amendment to the Act would be required. Therefore, it is proposed an amendment to the Act be introduced that allows the GEDO to separately disclose on a website the gross scope 1 and scope 2 greenhouse gas emissions data reported by corporations under the Act.

4.1.2 Level of company information published

Under subsection 24(3) of the Act, the GEDO may publish totals of greenhouse gas emissions, energy consumption and energy production in either or both of the following ways:

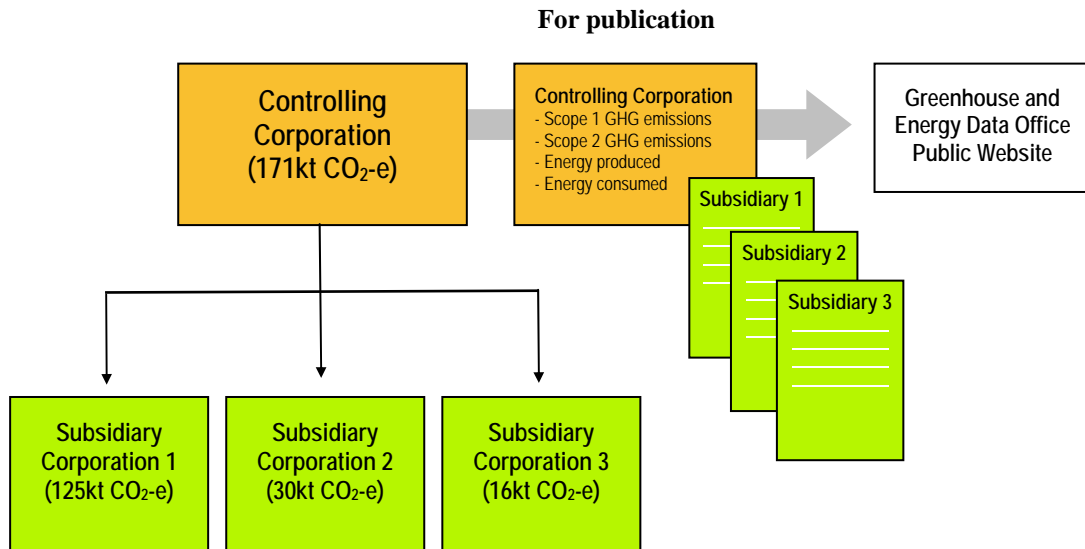
- (a) disaggregated by each member of the corporation's group; and/or
- (b) as falling within a particular range of values.

This provision means that the GEDO can publish data for each corporation within the corporate group. Publishing separate data for each corporation that is a member of a corporate group would provide the public and investors with useful greenhouse and energy information, which is one of the objects of the Act.

Stakeholders broadly supported the proposal put forward in the *Discussion Paper* for the public disclosure, on a website, of greenhouse gas emissions, energy consumption and energy production totals for both the controlling corporation and members of the

controlling corporation’s group. This approach to public disclosure is illustrated in Figure 3.

Figure 3: Corporate data to be publicly disclosed by the GEDO³⁰



Some stakeholders commented that this approach may cause the reporting burden to increase for large corporations with multiple subsidiaries. However, corporations are already required to report information to the GEDO on their controlling corporation, subsidiaries and facilities, so disclosing this information is not expected to increase the reporting burden.

Others expressed concern that commercial in confidence information may be revealed through disclosure of subsidiary level data. Commercial confidentiality will be maintained through s25 of the Act. Any corporation will be able to apply for information not to be published if it is commercially sensitive. If an application is approved under s25, then the GEDO can publish information within a range of values, provided it maintains the commercial confidentiality of the information.

Therefore the GEDO will publish greenhouse gas emissions, energy consumption and energy production totals for both the controlling corporation and the members of the controlling corporation’s group.

Specific detail on protocols and processes for corporations to apply for and be granted exemption from public disclosure due to commercial confidentiality issues will be progressed through a public disclosure focus group. Further details on the public disclosure focus group are included at the end of this chapter.

4.1.3 Public disclosure of contextual data

Feedback provided on the disclosure proposals in the *Discussion Paper*, indicated some concern that if data were publicly disclosed without relevant contextual information, the public, particularly data users, would not receive an accurate picture of a corporation’s management of greenhouse gas emission and energy. For example,

³⁰ This figure assumes that the controlling corporation has no emissions from facilities it directly operates.

the corporation may have undertaken a number of energy efficiency measures to reduce their energy use. The majority of stakeholders who provided comment on this issue suggested reporting of contextual information should be voluntary.

Therefore it is proposed that corporations will have the ability to report and disclose contextual data on a voluntary basis. This data will be published on a website by the GEDO alongside corporations' greenhouse gas emissions, energy consumption and energy production data. It should be noted however, that as the contextual data will be reported and disclosed voluntarily, it may be published with disclaimers outlining that the data may not be consistent across corporations and has not been subject to external audit or quality assurance standards.

The form and content of contextual data to be published will be progressed through the public disclosure focus group, where it is expected a number of mocked up options will be presented and discussed.

4.1.4 Public disclosure focus group

A public disclosure focus group will be established in early 2008. It is proposed that the group's key function will be to provide input on developing the public data interface in preparation for data publication in February 2010. DCC will be seeking a variety of stakeholders to participate in the focus group, including data users, corporations liable to report under the Act, and other Commonwealth, State and Territory greenhouse and energy program managers.

Stakeholders who have not already registered interest in the public disclosure focus groups should register their interest in their submission, or directly by email to: reporting@climatechange.gov.au.

4.2 Commonwealth Government disclosure

Reference: s26 of the Act

Subsection 26(1) of the Act allows the GEDO, or a person authorised by the GEDO, to disclose information to Commonwealth Ministers, Departmental heads and Commonwealth Government employees, subject to two conditions:

- (a) firstly, that they be responsible for a program or collection of statistics related to greenhouse emissions or energy; and
- (b) secondly, that they be specified in regulations made under subsection 26(1).

A regulation under subsection 26(1) will specify that the GEDO may disclose greenhouse gas emission and energy information to the following people and entities:

- (a) the Minister, the Secretary, or officials of the Departments responsible for administering greenhouse gas emissions and energy policy and programs; or
- (b) the Minister, the Secretary, or officials of the Department³¹ responsible for providing secretariat support to the GEDO; or

³¹ Currently DCC.

- (c) the Secretary or officials of Departments involved in establishment or administration of an AETS; or
- (d) an officer of the ABARE for the purposes of the performance of any of its functions or the exercise of any of ABARE's powers; or
- (e) the Australian Statistician, or an officer of the ABS, for purposes, limited to statistics, under the *Census and Statistics Act 1905*; or
- (f) the Secretary or officials of the Department³² responsible for administering the *Energy Efficiency Opportunities Act 2006*, for the purposes of the performance of any of that Department's functions or powers.

4.3 Disclosure to States and Territories

Section 27 of the Act specifies that data can be disclosed to States and Territories under conditions set out in the Act. The Act does not require any further provisions for data disclosure to States and Territories to be included in regulations.

³² Currently the Department of Resources, Energy and Tourism.

5. Enforcement

Reference: Part 5 of the Act

The Act establishes a compliance assurance framework covering monitoring and enforcement measures available to the GEDO to ensure consistent reporting of robust data and to provide confidence in the reporting system. An overview of the full compliance assurance framework was provided in chapter 7 of the *Discussion Paper*.

The full suite of compliance and enforcement measures will be available to the GEDO from the beginning of the first reporting year (1 July 2008) although the enforcement approach will initially encourage compliance with the reporting framework through non-punitive measures. However, punitive measures are much more likely to be applied during NGERs establishment in the case of corporations whose data would determine permit allocation or liability for permit acquittal under an AETS.

Section 40 of the Act provides for regulations to specify any additional matters which must be set out in an infringement notice. It is not intended to make regulations under s40 at this time. Similarly, s45 of the Act provides for regulations to be made to specify additional provisions which can be addressed in written undertakings to the GEDO. It is not intended to make regulations under s45 of the Act at this time.

Proposed regulations under s7, relating to the expertise and qualifications required of an external auditor are outlined in section 1.1.3 of this paper. A proposed legislative instrument to guide external auditors in conducting audits and preparing reports is discussed in section 6.4 of this paper.

6. Administration

Reference: Part 6 of the Act

6.1 Applications to determine a facility

Reference: s54 of the Act.

Under s54 of the Act the GEDO may declare a facility, either in response to an application by a corporation or on his or her own initiative. Subsection 55(3) specifies that in considering making a declaration the GEDO must give consideration to matters raised in relation to regulations made under paragraph 9(1)(a) of the Act, and must have regard to the need to define activities into one facility or another without overlapping.

Paragraph 54(2)(c) enables regulations to be made specifying additional information to be provided to the GEDO in an application for a declaration. A regulation under paragraph 54(2)(c) will require a corporation to provide:

- (a) a description of the proposed principal, secondary and ancillary activities for the proposed facility;
- (b) a statement as to whether the proposed facility is a single-site or multiple-site facility and, if multiple, how the disparate sites are related to form a proposed single facility;
- (c) a statement as to whether there is intended to be any other facility declared at the same location and if so the details of that proposed facility and how the proposed co-located facilities relate to each other; and
- (d) the industry sector categorisation of the proposed facility.

6.2 Applications to determine operational control

Reference: s55 of the Act

Under s55 of the Act the GEDO may declare operational control of a facility, either in response to an application by a corporation or on his or her own initiative. Subsection 55(3) specifies that in considering making a declaration the GEDO must give consideration to paragraph 11(1)(a) of the Act.

Paragraph 55(2)(c) enables regulations to be made specifying additional information to be provided to the GEDO in an application for a declaration. A regulation under paragraph 55(2)(c) will require a corporation to provide:

- (a) identification and contact details for any other corporation which could be considered to have operational control; and
- (b) a copy of any relevant contracts between the parties to enable the GEDO to consider which corporation has the greatest authority to introduce and implement policies in the specific circumstances.

If all parties who could be considered to have operational control jointly make an application to the GEDO for a declaration and all agree who the responsible entity should be, this would be considered by the GEDO in making a declaration.

6.3 Form of an identity card

Reference: s58 of the Act.

Section 58 provides for regulations to specify the form of identity cards to be issued by the GEDO to authorised officers. The form of identity cards will be specified in final regulations.

6.4 External auditing

Reference: s75 of the Act.

Under s75, a legislative instrument is to be made by the GEDO to guide external auditors in conducting audits and preparing reports. The legislative instrument on external audits will be based on the Auditing and Assurance Standards Board's ASAE 3000 *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*. This will be developed by the GEDO in co-operation with the Auditing and Assurance Standards Board and in consultation with stakeholders.

This instrument will require evidence demonstrating that external auditors meet the requirements specified in section 1.1.3, to be provided to the GEDO on request, as part of the report. The instrument will also provide guidance on how to demonstrate compliance with the requirements.

The instrument will not establish obligations for registered corporations. Instead, it will establish guidelines that will need to be followed by external auditors when conducting audits and preparing reports. Public consultation will be conducted during the development of the legislative instrument during the first half of 2008, separate from consultations on other parts of the legislative framework. Details will be made publicly available through the NGERs website and NGERs distribution list and stakeholders who have declared an interest in participating in that consultation will receive email updates.

7. Greenhouse gas projects

Reference: s7 of the Act

Greenhouse gas projects are designed to remove or reduce emissions of greenhouse gases. Section 7 of the Act provides a definition of a greenhouse gas project and specifies that greenhouse gas projects can be further defined in regulations.

The s7 definition of a greenhouse gas project is quite specific and is considered adequate. It provides that greenhouse gas projects must be project-based; examples of greenhouse gas reductions and removals that will not meet the s7 definition of a greenhouse gas project may include a corporation's divestments or acquisitions, a corporation's closure or a corporation's changes in production levels. The GEDO will advise a corporation if a report submitted by a corporation under the greenhouse gas project provisions of the Act does not meet the s7 definition of a greenhouse gas project.

Section 10 of the Act allows more detailed definitions, relating to different types of greenhouse gas projects, to be provided in the regulations. Subsections 10(1)(b-d) provides for specific definitions for reportable greenhouse gas projects may be made in relation to reductions of greenhouse gas emissions, removals of greenhouse gas and offsets of greenhouse gas emissions, to be included in regulations.

7.1 Greenhouse gas project definitions

Reference: s10 of the Act

Note, the following discussion of greenhouse gas reductions, removals and offsets does not pre-empt or reflect possible definitions or accounting rules under an AETS.

7.1.1 Greenhouse gas reductions and removals

Greenhouse gas reductions and removals are broadly described in Part 2 of ISO 14064 (*Greenhouse Gases – Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements*). For the purposes of the Act, both greenhouse gas reductions and greenhouse gas removals need to occur within a firm's reporting boundary. Greenhouse gas reductions and removals should only be reportable where they are measured in accordance with subsection 10(3) of the Act and are conducted in accordance with any other applicable Commonwealth, State or Territory regulations. Proposed approaches to defining reductions and removals under s10 of the Act are as follows.

- **Greenhouse gas reductions** (paragraph 10(1)(b) of the Act) are decreases in greenhouse gases, measured as a quantity.
- **Greenhouse gas removals** (paragraph 10(1)(c) of the Act) are removals or removal enhancements of greenhouse gases, measured as a quantity.

7.1.2 Offsets of greenhouse gas emissions

The definition provided for greenhouse gas projects that relate to offsets of greenhouse gas emissions will be very important. In current common usage the term

'offset' is highly ambiguous and is used in a variety of ways to mean a wide range of different things.

In relation to paragraph 10(1)(c) of the Act, an offset must be clearly defined as the product of a greenhouse gas project involving the retirement of carbon credits by a corporation to effectively reduce the corporation's emissions. Offsets³³ reported by a corporation must be effected by retiring carbon credits generated outside of that corporation's reporting boundary.

Provided that the carbon credits retired by a corporation to offset its emissions are robust and credible the greenhouse gas emissions reductions or removals that they represent could be considered notionally to cancel out the equivalent volume of the offsetting corporation's greenhouse gas emissions. However, all reductions, removals or offsets must be reported separately to the gross emissions of a facility or corporation.

The term 'carbon credits' will require a clear definition as this term is also used ambiguously in common language. It should also be defined conservatively to ensure that offsets reported by a firm do, in fact, represent an effective reduction in a corporation's emissions profile.

No Australian standards for carbon credits currently exist. The Australian Government does, however, currently approve Greenhouse Friendly carbon credits under the Greenhouse Friendly initiative. The Australian Government has also committed to the development of Australian standards for offsets by the end of 2008.

In this context, the term 'carbon credits' for the purposes of the Act should be defined as carbon credits approved by the Australian Government. At this time, only Greenhouse Friendly carbon credits would meet this definition, however, it is anticipated that as development of the Australian offset standard is progressed other types of carbon credits that meet the standard could be approved by the Australian Government thereby expanding the list of eligible types of carbon credits recognised under the Act.

The regulations will include a list of any types of carbon credits currently approved by the Australian Government, which can be added over time.

Where a registered corporation retires carbon credits of a type not approved by the Australian Government, these will not meet the definition of reportable offsets under the Act. It is proposed that any such information could be voluntarily reported (not subject to these regulations), provided that the corporation is already registered under the Act.

³³ Definitional issues around 'offsets' are also complex because a greenhouse gas project involving the offsetting of a corporation's emissions is achieved through a number of administrative steps rather than an 'on-the-ground' project controlled by the reporting corporation. The regulations will define the process of effecting emissions offsets, which may include a range of activities including the purchase, retirement and documentation of carbon credits as a specific type of greenhouse gas project. In many cases such greenhouse gas projects are undertaken by corporations over a number of years under a specific offset programme or public commitment.

7.2 Greenhouse gas project measurement requirements

Reference: s10 of the Act

Subsection 10(3) of the Act provides that the Minister may determine criteria for methods by which the amounts of reductions, removals and offsets are to be measured for the purposes of the Act.

It is proposed that requirements for the measurement and reporting of reductions and removals of greenhouse gases under the Act reference Part 2 of ISO 14064). ISO 14064 provides the international standard for reporting of project-based emissions reductions and removals.

In relation to criteria for the measurement of reductions and removals reportable under the Act, reportable reductions and removals will be defined as follows:

Reportable greenhouse gas projects relating to greenhouse gas reductions are projects that decrease a corporation's greenhouse gas emissions between a baseline scenario and the greenhouse gas project undertaken within a corporation's reporting boundary.

Reportable greenhouse gas projects relating to greenhouse gas removals are projects that result in a removal or removal enhancement of greenhouse gases between a baseline scenario and the greenhouse gas project undertaken within a corporation's reporting boundary.

Ss10(3) may also relate to the measurement of offsets, however, detailed requirements are not necessary in relation to offsets because the narrow definition of carbon credits under the Act includes only those carbon credits already subject to detailed and specific calculation rules.

7.3 Greenhouse gas project reporting requirements

Reference: s21 of the Act

Paragraph 21(4)(b) and subsection 21(5) of the Act state that a report on a greenhouse gas project would include any information specified by the regulations.

7.3.1 Requirements for greenhouse gas reductions and removals

Where a corporation provides a greenhouse gas project report relating to either greenhouse gas reductions or removals to the GEDO, that report must include sufficient information to accurately describe the project, including:

- (a) the project title, purpose and objectives;
- (b) the volume of greenhouse gas reductions or removals (in tonnes CO₂-e) achieved by the greenhouse gas project in the reporting period – subject to subsection 10(3) requirements;
- (c) the type of greenhouse gas project undertaken and/or a description of how the project has/will achieve greenhouse gas reductions or removals;
- (d) the project location;
- (e) the conditions prior to project initiation (project baseline);
- (f) the commencement date for the project (meaning the date on which practical implementation of the project began);
- (g) the anticipated project closure date if known/relevant;

- (h) where the project is undertaken under an Australian, State or Territory government program, the name and jurisdiction of that program;
- (i) where the project is undertaken in order to comply with any Australian, State or Territory government regulation, the name and jurisdiction of that regulation; and
- (j) any other relevant information as identified by the corporation.

7.3.2 Requirements for offsets of greenhouse gas emissions

Where a corporation provides a greenhouse gas project report relating to offset of greenhouse gas emissions to the GEDO, that report must include sufficient information to accurately describe the project and the carbon credits retired to effect the offset, including:

- (a) the type of Australian Government approved carbon credits retired;
- (b) the volume of carbon credits retired (in tonnes CO₂-e);
- (c) a description of the project that generated the carbon credits;
- (d) the location of the project that generated the carbon credits;
- (e) the vintage of the carbon credits (the year in which the carbon credits were approved);
- (f) where the offset is undertaken as part of an Australian, State or Territory government program, the name and jurisdiction of that program (eg. where offsets are undertaken as part of the Greenhouse Friendly carbon-neutral certification program);
- (g) where the offset is undertaken in order to comply with any relevant Australian, State or Territory government regulation, the name and jurisdiction of that regulation;
- (h) any relevant offset identification number; and
- (i) any other relevant information as identified by the corporation.

7.3.3 Further information to be reported in relation to greenhouse gas projects

Reference: s21 of the Act

Paragraph 21(4)(b) provides for a report to the GEDO to include any information specified by the regulations.

To ensure that greenhouse gas project data collected by the GEDO accurately represents greenhouse gas emissions reductions, removals and offsets in the context of overall emissions data for reporting corporations, the regulations will specify that where a corporation seeks to register in relation to a greenhouse gas project under s14 of the Act, and has not met reporting thresholds under s13 of the Act, the corporation would be required under paragraph 21(4)(b) to provide a corporate greenhouse gas emissions inventory in line with s19 of the Act.

7.3.4 Greenhouse gas project reporting timeframes

Reference: s21 of the Act

Paragraph 21(6)(b) of the Act states that a greenhouse gas project report provided to the GEDO must be given to the GEDO within a period specified by the regulations.

A regulation made under paragraph 21(6)(b) will specify that a report on a greenhouse gas project must be provided to the GEDO before the end of four months after the end of the financial year. This matches the requirement for other reports provided to the GEDO under the Act.

7.4 Greenhouse gas project disclosure requirements

Reference: s24 of the Act

Section 24(2) of the Act states that the GEDO may publish on a website information relating to the greenhouse gas projects undertaken by a registered corporation if the information satisfies the requirements of regulations.

It is proposed that the public disclosure of information on greenhouse gas projects will be voluntary. If the corporation chooses to have their greenhouse gas project information disclosed to the public on a website the full set of information reported to the GEDO will be published. See section 7.3 of this paper for information relating to greenhouse gas project reporting requirements.

Appendix A: Thresholds

Section 13 of the Act specifies thresholds at which corporations are required to report.

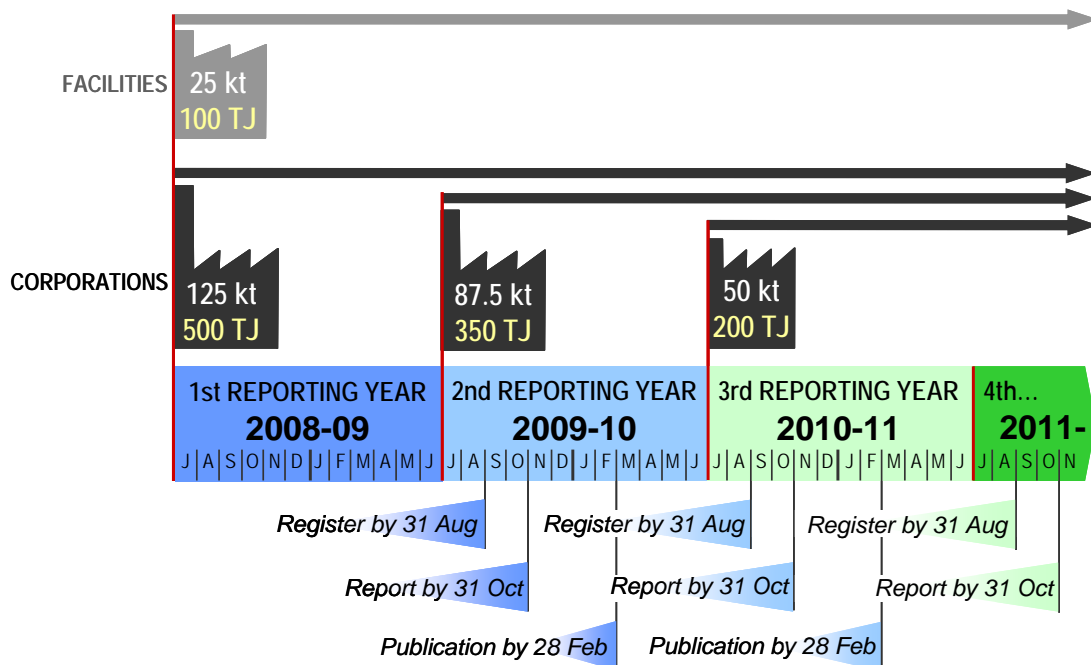
Thresholds at corporation-level are to be phased in progressively during the first three years of the reporting system, beginning 1 July 2008. A controlling corporation will meet a threshold in a financial year if, in that year, facilities under the operational control of members of the corporate group emit greenhouse gases, produce energy, or consume energy, at or above the following levels (or pro rata for part of a year):

- (a) 125 kilotonnes carbon-dioxide equivalent (kt CO₂-e), or 500 terajoules (TJ) of energy, for the 2008-09 financial year;
- (b) 87.5 kt CO₂-e or 350 TJ of energy for the 2009-10 financial year; and
- (c) 50 kt CO₂-e or 200 TJ of energy for the 2010-11 financial year.

At the facility level, the threshold of 25 kt CO₂-e or 100 TJ of energy per financial year will apply from commencement of the reporting system on 1 July 2008.

These thresholds are depicted in Figure 4 below, along with the deadlines by which corporations must register and report (under paragraphs 12(1)(b) and 19(6)(d) of the Act respectively), and the deadline by which the GEDO must publish information (s24).

Figure 4: Thresholds and timeline for the National Greenhouse and Energy Reporting System. A corporation or facility must report when it emits greenhouse gases, or produces or consumes energy, at or above the specified quantity per financial year.



kt = kilotonnes (10⁶ kilograms) carbon dioxide equivalent of greenhouse gases emitted
TJ = terajoules (10¹² joules) of energy consumed or produced

Appendix B: Fuel Types and other commodities to be reported as energy

The following data is extracted from Table 23 of the *Technical Guidelines*.

Fossil fuel and biofuels			
Liquid (crude oil and petroleum products)		Solid (coal and coal products)	
Crude oil (crude and condensates)		Black coal – for electricity	
Natural gas liquids (NGLs)		Black coal – uses other than for electricity and coking	
Gasoline	Motor gasoline (petrol)	Coking coal (metallurgical coal)	
	Aviation gasoline	Lignite	
Aviation turbine fuel (jet kerosene)		Brown coal briquettes	
Other kerosene		Coke	
Heating oil			Coke oven coke and lignite coke
Diesel oil (Australian diesel oil)		Gas coke	
Liquid Fuels		Coal tar	
Lubricants and greases			
Liquid aromatic hydrocarbons		Derived gases	
Solvents		Coke oven gas	
Other petroleum products		Blast furnace gas	
Liquefied petroleum gases		Other fossil fuels and peat	
Ethane		Municipal materials recycled for energy (non-biomass fraction)	
Naphtha		Industrial wastes	
Petroleum coke		Waste oils	
Refinery Feedstocks		Biomass	
Refinery gas			Solid biofuels
Refinery fuel – coke			Wood and wood waste
Bitumen			Sulphite lyes (black liquor)
Waxes (paraffin waxes)			Bagasse (other primary solid biomass)
Petrochemical feedstocks		Other primary solid biomass (other than bagasse)	
Gas (natural gas)		Charcoal	
Natural gas		Liquid biofuels	
Natural gas—coal seam methane			Ethanol fuel
Natural gas—coal mine waste gas			Biodiesels
		Other liquid biofuels	
		Gas biomass	
			Landfill gas
			Sludge (Sewage) Gas
		Other Biogas	

Natural gas—town gas	Other non-fossil fuels	Municipal materials recycled for energy (biomass fraction)
Compressed natural gas		
Liquefied natural gas (LNG):		
Other sources of primary energy		
Solar energy		
Wind energy		
Water energy		
Other		
Electricity		
Electricity—thermal generation		
Electricity—solar generation		
Electricity—wind generation		
Electricity—water generation		
Electricity—sent out		
Electricity—consumption, self generation		
Electricity—consumption, purchased from the electricity grid		
Electricity—own use		

Appendix C: Industry classifications

The table below outlines a proposed approach to industry sectors for reporting under the Act, using ANZSIC classification headings and codes at either the Group (3 digit) or Subdivision (2 digit) level, as outlined in section 2.5 of the *Discussion Paper*.

Proposed industry classification levels (ANZSIC codes) for regulations	
<i>Use?</i>	<i>ANZSIC classification heading & code</i>
	A Agriculture, forestry and fishing
✓	01 Agriculture
✓	02 Aquaculture
✓	03 Forestry and logging
✓	04 Fishing, hunting and trapping
✓	05 Agriculture, forestry and fishing support services
	B Mining
	06 Coal mining
✓	060 Coal mining
	07 Oil and gas extraction
✓	070 Oil and gas extraction
	08 Metal ore mining
✓	080 Metal ore mining
	09 Non-metallic mineral mining and quarrying
✓	091 Construction material mining
✓	092 Other non-metallic mineral mining and quarrying
	10 Exploration and other mining support services
✓	101 Exploration
✓	109 Other mining support services
	C Manufacturing
	11 Food product manufacturing
✓	111 Meat and meat product manufacturing
✓	112 Seafood processing
✓	113 Dairy product manufacturing
✓	114 Fruit and vegetable processing
✓	115 Oil and fat manufacturing
✓	116 Grain mill and cereal product manufacturing
✓	117 Bakery product manufacturing
✓	118 Sugar confectionary manufacturing
✓	119 Other food product manufacturing
	12 Beverage and tobacco product manufacturing
✓	121 Beverage manufacturing
✓	122 Cigarette and tobacco product manufacturing
	13 Textile, leather, clothing and footwear manufacturing
✓	131 Textile manufacturing
✓	132 Leather tanning, fur dressing, and leather product manufacturing
✓	133 Textile product manufacturing
✓	134 Knitted product manufacturing
✓	135 Clothing and footwear manufacturing
	14 Wood product manufacturing
✓	141 Log sawmilling and timber dressing
✓	149 Other wood product manufacturing
	15 Pulp, paper and converted paper product manufacturing
✓	151 Pulp, paper and paperboard manufacturing
✓	152 Converted paper product manufacturing
	16 Printing (including the reproduction of recorded media)

Proposed industry classification levels (ANZSIC codes) for regulations	
<i>Use?</i>	<i>ANZSIC classification heading & code</i>
✓	161 Printing and printing support services
✓	162 Reproduction of recorded media
	17 Petroleum and coal product manufacturing
✓	170 Petroleum and coal product manufacturing
	18 Basic chemical and chemical product manufacturing
✓	181 Basic chemical manufacturing
✓	182 Basic polymer manufacturing
✓	183 Fertiliser and pesticide manufacturing
✓	184 Pharmaceutical and medicinal product manufacturing
✓	185 Cleaning compound and toiletry preparation manufacturing
✓	189 Other basic chemical product manufacturing
	19 Polymer product and rubber product manufacturing
✓	191 Polymer product manufacturing
✓	192 Natural rubber product manufacturing
	20 Non-metallic mineral product manufacturing
✓	201 Glass and glass product manufacturing
✓	202 Ceramic product manufacturing
✓	203 Cement, lime, plaster and concrete product manufacturing
✓	209 Other non-metallic mineral product manufacturing
	21 Primary metal and metal product manufacturing
✓	211 Basic ferrous metal manufacturing
✓	212 Basic ferrous product manufacturing
✓	213 Basic non-ferrous metal manufacturing
✓	214 Basic non-ferrous metal product manufacturing
	22 Fabricated metal product manufacturing
✓	221 Iron and steel forging
✓	222 Structural product manufacturing
✓	223 Metal container manufacturing
✓	224 Sheet metal product manufacturing (except metal structural & container products)
✓	229 Other fabricated metal product manufacturing
	23 Transport equipment manufacturing
✓	231 motor vehicle and motor vehicle part manufacturing
✓	232 Other transport equipment manufacturing
	24 Machinery and equipment manufacturing
✓	241 Professional and scientific equipment manufacturing
✓	242 Computer and electronic equipment manufacturing
✓	243 Electrical equipment manufacturing
✓	244 Domestic appliance manufacturing
✓	245 Pump, compressor, heating and ventilation equipment manufacturing
✓	246 Specialised machinery and equipment manufacturing
✓	249 Other machinery and equipment manufacturing
	25 Furniture and other manufacturing
✓	251 Furniture manufacturing
✓	259 Other manufacturing
	D Electricity, gas, water and waste services
	26 Electricity supply
✓	261 Electricity generation
✓	262 Electricity transmission
✓	263 Electricity distribution
✓	264 On selling electricity and electricity market operation
	27 Gas supply
✓	270 Gas supply
	28 Water supply, sewerage and drainage services
✓	281 Water supply, sewerage and drainage services

Proposed industry classification levels (ANZSIC codes) for regulations	
<i>Use?</i>	<i>ANZSIC classification heading & code</i>
	29 Waste collection, treatment, disposal and remediation services
✓	291 Waste collection services
✓	292 Waste treatment, disposal and remediation services
	E Construction
	30 Building construction
✓	301 Residential building construction
✓	302 Non-residential building construction
	31 Heavy and civil engineering construction
✓	310 Heavy and civil engineering construction
✓	32 Construction services
	F Wholesale trade
	33 Basic material wholesaling
✓	331 Agricultural product wholesaling
✓	332 Mineral, metal and chemical wholesaling
✓	333 Timber and hardware goods wholesaling
	34 Machinery and equipment wholesaling
✓	341 Specialised industrial machinery and equipment wholesaling
✓	349 Other machinery and equipment wholesaling
	35 Motor vehicle and motor vehicle parts wholesaling
✓	350 Motor vehicle and motor vehicle parts wholesaling
	36 Grocery, liquor and tobacco product wholesaling
✓	360 Grocery, liquor and tobacco product wholesaling
	37 Other goods wholesaling
✓	371 Textile, clothing and footwear wholesaling
✓	372 Pharmaceutical and toiletry goods wholesaling
✓	373 Furniture, floor covering and other goods wholesaling
	38 Commission-based wholesaling
✓	380 Commission-based wholesaling
	G Retail trade
	39 Motor vehicle and motor vehicle parts retailing
✓	391 Motor vehicle retailing
✓	392 Motor vehicle parts and tyre retailing
	40 Fuel retailing
✓	400 Fuel retailing
	41 Food retailing
✓	411 Supermarket and grocery stores
✓	412 Specialised food retailing
	42 Other store-based retailing
✓	421 Furniture, floor coverings, houseware and textile goods retailing
✓	422 Electrical and electronic goods retailing
✓	423 Hardware, building and garden supplies retailing
✓	424 Recreational goods retailing
✓	425 Clothing, footwear and personal accessory retailing
✓	426 Department stores
✓	427 Pharmaceutical and other store-based retailing
	43 Non-store retailing and retail commission-based buying and/or selling
✓	431 Non-store retailing
✓	432 Retail commission-based buying and/or selling
	H Accommodation and food services
	44 Accommodation
✓	440 Accommodation
	45 Food and beverage services
✓	451 Cafes, restaurants and takeaway food services
✓	452 Pubs, taverns and bars
✓	453 Clubs (hospitality)

Proposed industry classification levels (ANZSIC codes) for regulations	
<i>Use?</i>	<i>ANZSIC classification heading & code</i>
	I Transport, postal and warehousing
	46 Road transport
✓	461 Road freight transport
✓	462 Road passenger transport
	47 Rail transport
✓	471 Rail freight transport
✓	472 Rail passenger transport
	48 Water transport
✓	481 Water freight transport
✓	482 Water passenger transport
	49 Air and space transport
✓	490 Air and space transport
	50 Other transport
✓	501 Scenic and sightseeing transport
✓	502 Pipeline and other transport
	51 Postal and courier pick-up and delivery services
✓	510 Postal and courier pick-up and delivery services
	52 Transport support services
✓	521 Water transport support services
✓	522 Airport operations and other air transport support services
✓	529 Other transport support services
	53 Warehousing and storage services
✓	530 Warehousing and storage services
	J Information media and telecommunications
	54 Publishing (except internet and music publishing)
✓	541 Newspaper, periodical, book and directory publishing
✓	542 Software publishing
✓	55 Motion picture and sound recording activities
	56 Broadcasting (except internet)
✓	561 Radio broadcasting
✓	562 Television broadcasting
	57 Internet publishing and broadcasting
✓	570 Internet publishing and broadcasting
	58 Telecommunications services
✓	580 Telecommunications services
	59 Internet service providers, web search portals and data processing services
✓	591 Internet service providers and web search portals
✓	592 Data processing, web hosting & electronic information storage services
	60 Library and other information services
✓	601 Libraries and archives
✓	602 Other information services
	K Financial and insurance services
	62 Finance
✓	621 Central banking
✓	622 Depository financial intermediary
✓	623 Non-depository financing
✓	624 Financial asset investing
✓	63 Insurance and superannuation funds
	64 Auxiliary finance and insurance services
✓	641 Auxiliary finance and investment services
✓	642 Auxiliary insurance services
	L Rental, hiring and real estate services
	66 Rental and hiring services (except real estate)
✓	661 Motor vehicle and transport equipment rental and hiring
✓	662 Farm animal and bloodstock leasing

Proposed industry classification levels (ANZSIC codes) for regulations	
<i>Use?</i>	<i>ANZSIC classification heading & code</i>
✓	663 Other goods and equipment rental and hiring
✓	664 Non-financial intangible assets (except copyrights) leasing
	67 Property operators and real estate services
✓	671 Property operators
✓	672 Real estate services
	M Professional, scientific and technical services
	69 Professional, scientific & technical services (except computer system design & related services)
✓	691 Scientific research services
✓	692 Architectural, engineering and technical services
✓	693 Legal and accounting services
✓	694 Advertising services
✓	695 Market research and statistical services
✓	696 Management and related consulting services
✓	697 Veterinary services
✓	699 Other professional, scientific and technical services
	70 Computer system design and related services
✓	700 Computer system design and related services
	N Administrative and support services
	72 Administrative services
✓	721 Employment services
✓	722 Travel agency and tour arrangement services
✓	729 Other administrative services
	73 Building control, pest control and other support services
✓	731 Building cleaning, pest control and gardening services
✓	732 Packaging services
	O Public administration and safety
	75 Public administration
✓	751 Central government administration
✓	752 State government administration
✓	753 Local government administration
✓	754 Justice
✓	755 Government representation
	76 Defence
✓	760 Defence
	77 Public order, safety and regulatory services
✓	771 Public order and safety services
✓	772 Regulatory services
	P Education and training
✓	80 Preschool and school education
	81 Tertiary education
✓	810 Tertiary education
	82 Adult, community and other education
✓	821 Adult, community and other education
✓	822 Educational support services
	Q Health care and social assistance
	84 Hospitals
✓	840 Hospitals
✓	85 Medical and other health care services
	86 Residential care services
✓	860 Residential care services
	87 Social assistance services
✓	871 Child care services
✓	879 Other social assistance services

Proposed industry classification levels (ANZSIC codes) for regulations	
<i>Use?</i>	<i>ANZSIC classification heading & code</i>
	R Arts and recreation services
	89 Heritage activities
✓	891 Museum operation
✓	892 Parks and gardens operations
	90 Creative and performing arts activities
✓	900 Creative and performing arts activities
	91 Sports and recreation activities
✓	911 Sports and physical recreation activities
✓	912 Horse and dog racing activities
✓	913 Amusement and other recreation activities
	92 Gambling activities
✓	920 Gambling activities
	S Other services
	94 Repair and maintenance
✓	941 Automotive repair and maintenance
✓	942 Machinery and equipment repair
✓	949 Other repair and maintenance
	95 Personal and other services
✓	951 Personal care services
✓	952 Funeral, crematorium and cemetery services
✓	953 Other personal services
✓	954 Religious services
✓	955 Civic, professional and other interest group services
✓	96 Private households employing staff and undifferentiated goods-and-service-producing activities of households for own use

Appendix D: Data reporting requirements

The following data requirements for reporting are extracted from the *National Greenhouse and Energy Reporting System – Technical Guidelines for the Estimation of Greenhouse Emissions and Energy at Facility Level: the Energy, Industrial Process and Waste Sectors in Australia* (‘the *Technical Guidelines*’), which were released for public comment on 11 January 2008, with submissions sought by 13 February 2008.

As discussed in the Introduction, the calculation methods and processes outlined in the *Technical Guidelines*, once finalised, will be converted into a legislative instrument under the Act. It is for this reason that relevant extracts are included here.

Abbreviated units used throughout this Appendix are detailed on page 84 of this paper. Reference to sections and page numbers throughout this Appendix and its footnotes are in relation to the complete *Technical Guidelines*, which are available at:

www.climatechange.gov.au/reporting/guidelines.html

Readers should refer to the full version of the *Technical Guidelines* for details.

Reporting requirements for energy production, consumption and greenhouse emissions from combustion of fuels for energy

The following tables detail the data corporations will be obliged to submit in order to report energy production, consumption and greenhouse gases from energy under NGERs.

Table D.1: Consumption of fuels and estimation of greenhouse emissions – checklist of items to be reported³⁴

<i>Fuel type</i>	<i>Unit</i>
Domestic consumption³⁵ of fossil fuels³⁶ and biofuels for energy and feedstock purposes	
Solid fuels	
Black coal for electricity	t
Lignite—brown coal	t
Coking coal (metallurgical coal)	t
Black coal—uses other than for electricity and coking	t
Brown coal briquettes	t
Coke oven coke	t
Coal tar	t

³⁴ *Technical Guidelines*, page 50, Table 18.

³⁵ Fuels consumed for Stationary Energy and Transport Energy purposes should be reported separately as they attract differing emissions estimation methods. Estimates of consumption of any fuels for the purpose of international transport should also be reported separately from the consumption of all other fuels.

³⁶ Fuels used as carbon reductants for industrial processes are reported under Section 5.7. Fuels consumed as fugitive losses are reported under Chapter 4.

Table D.1: Consumption of fuels and estimation of greenhouse emissions – checklist of items to be reported³⁴

<i>Fuel type</i>	<i>Unit</i>
Industrial waste (tyres)	t
Municipal materials recycled for energy (non biomass)	t
Wood/wood waste (dry)—non-residential uses	t
Wood/wood waste (dry)—residential uses	t
Sulphite lyes (black liquor)	t
Bagasse (other primary solid biomass)	t
Other primary solid biomass (other than bagasse)	t
Municipal materials recycled for energy (biomass)	t
Charcoal	t
Other ³⁷	t
Gaseous fuels	
Natural gas	m ³
Natural gas—coal seam methane	m ³
Natural gas—coal mine waste gas—captured for combustion	m ³
Compressed Natural Gas	m ³
Ethane	m ³
Coke oven gas	m ³
Blast furnace gas	m ³
Natural gas—town gas	m ³
Landfill gas—captured for combustion for energy	m ³
Sludge gas (sewage gas)—captured for combustion for energy	m ³
Liquefied natural gas	m ³
Other	m ³
Liquid fuels	
Crude oil (crude and condensates)	kL
Other natural gas liquids	t
Motor gasoline (petrol)	kL
Aviation gasoline	kL
Aviation turbine fuel (jet kerosene)	kL
Kerosene	kL

³⁷ Electricity generators may report the energy content of sulphur combusted here (default energy content of 4.9 GJ / t).

Table D.1: Consumption of fuels and estimation of greenhouse emissions – checklist of items to be reported³⁴

<i>Fuel type</i>	<i>Unit</i>
Heating oil	kL
Diesel (automotive diesel oil)	kL
Fuel oil	kL
Lubricants and greases	kL
Liquefied aromatic hydrocarbons (benzene, toluene and xylene)	kL
Solvents (used for combustion)	kL
Other petroleum products not elsewhere classified (including waste oils)	kL
Liquefied petroleum gas	kL
Naphtha	kL
Refinery feedstock	kL
Petroleum coke	t
Refinery gas (and liquids)	t
Refinery fuel - coke	t
Biodiesel	kL
Ethanol	kL
Other	kL
Consumption of fuels for the purpose of international transport	
Consumption of fuel for international marine transport, by fuel type, as listed above	GJ / t (or) GJ / kL (or) GJ / m ³
Consumption of fuel for international aviation transport, by fuel type, as listed above	
Consumption of fossil fuels for non-energy product purposes	
Bitumen	t
Waxes	t
Solvents used for non-combustion purposes	kL
Other petrochemical feedstocks—carbon black	t
Other petrochemical feedstocks—ethylene (ethene)	t
Other petrochemical feedstocks—other	t
Consumption of renewable energy	
Solar	GW·h
Wind	GW·h
Water	GW·h
Other	GW·h
Consumption of electricity	
Electricity, purchased from the electricity grid	GW·h

Table D.1: Consumption of fuels and estimation of greenhouse emissions – checklist of items to be reported³⁴

<i>Fuel type</i>	<i>Unit</i>
Electricity, self generation	GW·h
Electricity, own use (electricity generators)	GW·h
Greenhouse emissions estimation	
Emission factor method chosen	–
Activity data method chosen	–
NGA default Methodology	
Sections 3.4-3.6	
No additional data required	–
Section 3.9	
Fuel combusted for individual fuel type <i>i</i>	t (or) m ³ (or) kL
Emissions, by individual fuel type <i>i</i>	t CO ₂ -e
Section 3.9.3 Additional data	
Polyethylene production	t
Polypropylene production	t
Butadiene rubber or styrene-butadiene rubber production	t
Styrene production	t
Carbon black production	t
Other long life chemical products containing carbon	t
Emissions	t CO ₂ -e
Higher-order methods (including section 3.8)	
Facility-specific CO ₂ emission factors (incorporating oxidation factor) for individual fuel type <i>i</i> expressed in emissions per unit of energy (EF CO _{2,ec})	kg / GJ
Facility-specific methane emission factors for gaseous fuels	kg CO ₂ -e / GJ
Facility-specific energy-content factors for individual fuel type <i>i</i> (EC _{<i>i</i>})	GJ / t
Emissions from combustion of fuel type <i>i</i> of greenhouse gas <i>j</i> (E _{<i>ij</i>})	t CO ₂ -e

Table D.2: Production of energy – checklist of items to be reported³⁸	
<i>Fuel type</i>	<i>Unit</i>
Production of fossil fuels and biofuels	
Solid fuels	
Black coal	t
Lignite—brown coal	t
Coking coal (metallurgical coal)	t
Other	t
Brown coal briquettes	t
Coke oven coke	t
Coal by-products (coal tar and benzene, toluene and xylene)	t
Municipal materials recycled for energy (non biomass)	t
Wood/wood waste (dry)	t
Sulphite lyes (black liquor)	t
Bagasse (other primary solid biomass)	t
Other primary solid biomass (other than bagasse)	t
Municipal materials recycled for energy (biomass)	t
Charcoal	t
Other	t
Gaseous fuels	
Natural gas	m ³
Natural gas—coal seam methane	m ³
Natural gas—coal mine waste gas—captured for combustion	m ³
Landfill gas—captured for combustion for energy	m ³
Sludge gas (sewage gas) —captured for combustion for energy	m ³
Compressed natural gas	m ³
Other (non-commercial)	m ³
Ethane	m ³
Coke oven gas	m ³
Blast furnace gas	m ³
Natural gas—town gas	m ³
Liquefied natural gas	m ³
Other	m ³

³⁸ *Technical Guidelines*, page 53, Table 19.

Table D.2: Production of energy – checklist of items to be reported³⁸	
<i>Fuel type</i>	<i>Unit</i>
Liquid fuels	
Crude oil (crude and condensates)	kL
Other natural gas liquids	t
Motor gasoline (petrol)	kL
Aviation gasoline	kL
Aviation turbine fuel (jet kerosene)	kL
Kerosene	kL
Heating oil	kL
Diesel (Automotive Diesel Oil)	kL
Fuel oil	kL
Lubricants and greases	kL
Liquefied aromatic hydrocarbons (benzene, toluene, and xylene)	kL
Solvents	kL
Other petroleum products not elsewhere classified (including waste oils)	kL
Liquefied Petroleum Gas	kL
Naphtha	kL
Refinery feedstock	kL
Petroleum coke	t
Refinery gas (or liquids)	t
Refinery fuel - coke	t
Biodiesel	kL
Ethanol	kL
Other	t (or) kL
Production of fossil fuels for non-energy product purposes	
Bitumen	t
Waxes	t
Solvents used for non-combustion purposes	kL
Other petrochemical feedstocks—carbon black	t
Other petrochemical feedstocks—ethylene (ethene)	t
Production of renewable energy	
Solar	GW·h
Wind	GW·h
Water	GW·h
Other	GW·h

Table D.2: Production of energy – checklist of items to be reported³⁸	
<i>Fuel type</i>	<i>Unit</i>
Facility specific energy content factors	
Facility-specific energy-content factors for individual fuel type <i>i</i> listed below (if known) (EC _{<i>i</i>})	GJ / t (or) GJ / kL (or) GJ / m ³
Production of electricity	
Electricity—thermal generation	GW·h
Electricity—geothermal	GW·h
Electricity—solar generation	GW·h
Electricity—wind generation	GW·h
Electricity—water generation (hydro, tidal)	GW·h
Electricity—own use (electricity generators)	GW·h
Electricity—sent out	GW·h

Reporting requirements for fugitive emissions

The following tables detail the data corporations will be obliged to submit in order to report fugitive emissions under NGERs. For details of UNFCCC Categories³⁹ referred to in the following tables, see section 2.2 of the *Technical Guidelines*.

Table D.3: Coal mine fugitive emissions – checklist of items to be reported⁴⁰	
<i>Emission category and data type required</i>	<i>Unit</i>
Emission factor method chosen	–
Activity data method chosen	–
NGA default Methodology	
Section 4.2.1 Underground mines (UNFCCC Category 1.B.1a)	
Location of mine	State or Territory
Class of underground mine	A or B
Amount of raw coal production	t raw coal
Amount of methane recovered for energy production or flared	t CO ₂ -e
Section 4.2.1 Open cut mines (UNFCCC Category 1.B.1a)	
Location of mine	State or Territory
Amount of raw coal production	t raw coal

³⁹ See also http://unfccc.int/national_reports/annex_i_ghg_inventories/reporting_requirements/items/2759.php

⁴⁰ *Technical Guidelines*, page 78, Table 27.

Table D.3: Coal mine fugitive emissions – checklist of items to be reported⁴⁰

<i>Emission category and data type required</i>	<i>Unit</i>
Section 4.2.2 Post-mining activities (UNFCCC Category 1.B.1b)	
Amount of coal from underground class A mines produced	t raw coal
Section 4.2.3 Decommissioned underground mines (UNFCCC Category 1.B.1c)	
Location of mine	State or Territory
Class of underground mine	A or B
Amount of methane emissions at time of closure	t CO ₂ -e
Amount of years since mine closure	years
Fraction of mine flooded	fraction
Amount of methane recovered for energy production or flared	t CO ₂ -e
Higher-order methods	
Section 4.2.1 Underground mines (UNFCCC Category 1.B.1a)	
Amount of raw coal production	t raw coal
Amount of methane emitted as measured by direct emissions monitoring	t CO ₂ -e
Amount of methane recovered for energy production or flared	t CO ₂ -e
Section 4.2.1 Open cut mines (UNFCCC Category 1.B.1a)	
Amount of raw coal production	t raw coal
Facility-specific emission factor	t CO ₂ -e / t raw coal
Amount of methane recovered for energy production or flared	t CO ₂ -e
Section 4.2.3 Decommissioned underground mines (UNFCCC Category 1.B.1c)	
Location of mine	State or Territory
Class of underground mine	A or B
Amount of methane emissions at time of closure	t CO ₂ -e
Amount of years since mine closure	years
Fraction of mine flooded	fraction
Amount of methane emitted as measured by direct emissions monitoring	t CO ₂ -e
Amount of methane recovered for energy production or flared	t CO ₂ -e

Reporting requirements for Oil and Gas Production

Table D.4: Oil and gas fugitive emissions – checklist of items to be reported⁴¹	
<i>Emission category and activity data required</i>	<i>Unit</i>
Emission factor method chosen	–
Activity data method chosen	–
NGA default methodology	
Section 4.3.1 Oil and Gas Exploration (UNFCCC Category 1.B.2a.i)	
Gas flared	t throughput
Liquids flared	t throughput
Section 4.3.2 Crude oil production (other than venting and flaring) (UNFCCC Category 1.B.2a.ii)	
Quantity of crude oil throughput	t throughput
Section 4.3.3 Crude oil transport (UNFCCC Category 1.B.2a.iii)	
Transport of indigenous crude oil to Australian refineries	PJ oil tankered
Section 4.3.4 Crude oil refining and storage (UNFCCC Category 1.B.2a.iv)	
Crude oil refined	PJ oil refined
Crude oil stored	PJ oil stored
Refinery gas flared	t flared
Section 4.3.5 Natural gas production and processing (other than venting and flaring) (UNFCCC Category 1.B.2.b.ii)	
Quantity of natural gas throughput	t throughput
Section 4.3.6 Natural gas transmission (UNFCCC Category 1.B.2.b.iii)	
Gas transmission throughput	TJ
Pipeline length	km
Section 4.3.7 Natural gas distribution (UNFCCC Category 1.B.2.b.iv)	
Utility sales	TJ
Location	–
Section 4.3.8 Venting and flaring (UNFCCC Category 1.B.2c)	
Emissions, by gas	t CO ₂ -e
Quantity vented, by gas	t
Quantity flared	t flared
Higher-order methods	
Section 4.3.1 Oil and Gas Exploration (UNFCCC Category 1.B.2a.i)	
Gas flared—quantity of flared throughput	t throughput
Liquids flared—quantity of flared throughput	t throughput

⁴¹ *Technical Guidelines*, page 85, Table 37.

Table D.4: Oil and gas fugitive emissions – checklist of items to be reported⁴¹

<i>Emission category and activity data required</i>	<i>Unit</i>
Gas flared—composition of flared throughput	t CO ₂ -e / t throughput
Liquids flared—composition of flared throughput	t CO ₂ -e / t throughput
Gas flared—emissions	t CO ₂ -e
Liquids flared—emissions	t CO ₂ -e
Section 4.3.2 Crude oil production (other than venting and flaring) (UNFCCC Category 1.B.2a.ii)	
Facility-specific emission factor	emissions / t throughput
Quantity of crude oil throughput	t
Emissions	t CO ₂ -e
Section 4.3.3 Crude oil transport (UNFCCC Category 1.B.2a.iii)	
Facility-specific emission factor	t CO ₂ -e / PJ throughput
Quantity of crude oil transported	PJ
Emissions	t CO ₂ -e
Section 4.3.4 Crude oil refining and storage (UNFCCC Category 1.B.2a.iv)	
Crude oil refined	PJ oil refined
Crude oil stored	PJ oil stored
Refinery gas flared	t flared
Facility-specific emission factor, crude oil refined	t CO ₂ -e / PJ throughput
Facility-specific emission factor, crude oil stored	t CO ₂ -e / PJ throughput
Facility-specific emission factor, refinery gas, composition of throughput	t CO ₂ -e / PJ throughput
Section 4.3.5 Natural gas production and processing (other than venting and flaring) (UNFCCC Category 1.B.2.b.ii)	
Facility-specific emission factor	emissions / PJ throughput
Quantity of throughput	PJ
Emissions, by gas	t CO ₂ -e
Section 4.3.6 Natural gas transmission (UNFCCC Category 1.B.2.b.iii)	
Throughput	TJ
Gas leakage (volume)	TJ
Natural gas composition factor	t / TJ
Emissions, by gas	t CO ₂ -e
Section 4.3.7 Natural gas distribution (UNFCCC Category 1.B.2.b.iv)	
Utility sales	TJ
Gas leakage (volume)	TJ
Natural gas composition factor	t / TJ
Emissions, by gas	t CO ₂ -e
Section 4.3.8 Venting (UNFCCC Category 1.B.2c)	

Table D.4: Oil and gas fugitive emissions – checklist of items to be reported⁴¹	
<i>Emission category and activity data required</i>	<i>Unit</i>
Emissions, by gas	t CO ₂ -e
Section 4.3.8 Flaring (UNFCCC Category 1.B2c)	
Quantity flared	t
Flaring—composition of flared throughput	t CO ₂ -e / t throughput
Emissions, by gas	t CO ₂ -e

Reporting requirements for carbon capture and storage

Corporations are required to report the total amount of CO₂ captured and injected at storage sites, and the fugitive emissions arising from leakage during transport, injection and storage.

Table D.5: Carbon capture and storage – checklist of items to be reported⁴²	
<i>Emission category and activity data required</i>	<i>Unit</i>
Opening stock of stored CO ₂	t CO ₂
Amount of CO ₂ captured for storage	
Amount of CO ₂ imported for storage	
Amount of CO ₂ injected at storage sites	
Fugitive emissions	
– leakage during transport	
– leakage during injection	
– leakage from storage sites	
Closing stock of stored CO ₂	

⁴² *Technical Guidelines*, Table 38, page 88.

Reporting requirements for industrial processes, solvents and product use emissions – UNFCCC Categories 2 and 3

This section details the data that corporations will be asked to submit in order to estimate emissions using default methodology or, in case of higher-order methods, the data required to be submitted to support the corporation's emission estimate.

Table D.6: Mineral products emissions – checklist of reporting requirements⁴³	
<i>Category</i>	<i>Unit</i>
Section 5.2.1 Cement clinker production: NGA default methodology (UNFCCC Category 2.A.1)	
Clinker produced	t
Cement kiln dust	t
Section 5.2.1 Cement: Higher-order method (i) (2.A.1)	
Emission factor for clinker production (EF_{cl})	t CO ₂ -e / t clinker
Clinker produced	t
Cement kiln dust	t
Emissions	t CO ₂ -e
Section 5.2.1 Cement: Higher-order method (ii) (2.A.1)	
Calcium carbonate (pure) calcined	t
Magnesium carbonate (pure) calcined	t
Dolomite (pure) calcined	t
Cement kiln dust not recycled or lost	t
Total organic or other carbon in specific non-fuel raw material Atoc	t
Emission factor for kerogen or other carbon-bearing non-fuel raw material (EF_{toc})	t CO ₂ / t C
Emissions	t CO ₂ -e
Section 5.2.2 Lime production: NGA default methodology (UNFCCC Category 2.A.2)	
Commercial lime produced	t
In-house lime produced	t
Section 5.2.2 Lime production: Higher-order method (i) (2.A.2)	
Emission factor for lime production (EF_q)	t CO ₂ -e / t lime
Lime produced	t
Emissions	t CO ₂ -e
Section 5.2.2 Lime production: Higher-order method (ii) (2.A.2)	
Calcium carbonate (pure) calcined	t
Magnesium carbonate (pure) calcined	t

⁴³ *Technical Guidelines*, Table 53, page 107.

Table D.6: Mineral products emissions – checklist of reporting requirements⁴³

<i>Category</i>	<i>Unit</i>
Dolomite (pure) calcined	t
Lime kiln dust	t
Emissions	t CO ₂ -e
Section 5.2.3 Other uses of carbonate: NGA default methodology (UNFCCC Category 2.A.3)	
Limestone consumed	t
Dolomite consumed	t
Magnesium carbonate consumed	t
Section 5.2.3 Other uses of carbonate: higher-order method (2.A.3)	
Calcium carbonate (pure) calcined	t
Dolomite (pure) calcined	t
Magnesium carbonate (pure) calcined	t
Emissions	t CO ₂ -e
Section 5.2.4 Soda ash use: NGA default methodology (UNFCCC Category 2.A.4)	
Soda ash consumed	t
Section 5.2.4 Soda ash production: default methodology (2.A.4)	
Fuel consumption for the purpose of soda ash production, by fuel type (refer to lists, Section 3.10)	t
Section 5.2.4 Soda ash production: higher-order method (2.A.4)	
Fuel consumption for the purpose of soda ash production, by fuel type (refer to lists, Section 3.10)	t
Facility-specific emission factor	kg / GJ
Emissions	t CO ₂ -e

Table D.7: Chemical products emissions– checklist of reporting requirements⁴⁴

<i>Category</i>	<i>Unit</i>
Section 5.3.1 Ammonia production: NGA default methodology	
Ammonia production	t
Carbon feedstock or reductant consumed for the purpose of ammonia production, by type (refer to lists, Section 3.10)	t (or) m ³ (or) kL
CO ₂ recovered and transferred from facility	t CO ₂ -e
Section 5.3.1 Ammonia production: higher-order method	
Ammonia production	t
Carbon feedstock or reductant consumed for the purpose of ammonia production, by type (refer to lists, Section 3.10)	t (or) m ³ (or) kL
Facility specific emission factor	kg CO ₂ -e / GJ
Emissions	t CO ₂ -e
CO ₂ recovered and transferred from facility	t CO ₂ -e
Section 5.3.2 Nitric acid production: NGA default methodology	
Nitric acid production	t
Emission Factor (i.e. plant type)	t CO ₂ -e / t production
Abatement system utilisation factor	fraction
Section 5.3.2 Nitric acid production: higher-order method	
Nitric acid production	t
Facility-specific emission factor	t CO ₂ -e / t production
Abatement system utilisation factor	fraction
Emissions	t CO ₂ -e
Section 5.3.5 Titanium dioxide and synthetic rutile production: NGA default methodology	
Carbon reductant consumed for the purpose of titanium dioxide or synthetic rutile production, by type (refer to lists, Section 3.10)	t (or) m ³ (or) kL
Synthetic rutile production	t
Rutile titanium dioxide production	t
Section 5.3.5 Titanium dioxide and synthetic rutile production: higher-order method	
Carbon reductant consumed for the purpose of titanium dioxide or synthetic rutile production, by type (refer to lists, Section 3.10)	t (or) m ³ (or) kL
Facility specific emission factors	kg CO ₂ -e / GJ
Emissions	t CO ₂ -e

⁴⁴ *Technical Guidelines* Table 54, page 109

Table D.8: Metal products emissions– checklist of reporting requirements⁴⁵	
<i>Category</i>	<i>Unit</i>
Section 5.4.1 Iron and steel – NGA default methodology - (UNFCCC Category 2.C.1)	
Steel production	t
Carbon reductant consumed for the purpose of iron and steel production, by fuel type (refer to lists, Section 3.10)	t
Section 5.4.1 Iron and steel – higher-order method	
Steel production	t
Carbon reductant consumed for the purpose of iron and steel production, by fuel type (refer to lists, Section 3.10)	t
Facility specific emission factors	kg CO ₂ -e / GJ
Emissions from consumption of reductants	t CO ₂ -e
Facility specific emission factors	t CO ₂ -e / t steel
Emissions from fugitive sources	t CO ₂ -e
Section 5.4.2 Ferroalloys production	
Metal production	t
Carbon reductant consumed for the purpose of ferroalloys production, by fuel type (refer to lists, Section 3.10)	t
Section 5.4.2 Ferroalloys production – higher-order methods	
Metal production	t
Carbon reductant consumed, by fuel	t
Facility specific emission factors	kg CO ₂ -e / GJ
Emissions	t CO ₂ -e
Section 5.4.3 Aluminium production – NGA default methodology - (UNFCCC Category 2.C.3)	
Aluminium production	t
Carbon reductant consumed	t
Section 5.4.3 Aluminium production – higher-order method	
Aluminium production	t
Carbon reductant consumed	t
Facility specific CO ₂ emission factor	kg CO ₂ -e / GJ
Facility specific emission factor, greenhouse gas (CF ₄ , C ₂ F ₆)	t CO ₂ -e / t production
Emissions, by gas	t CO ₂ -e

⁴⁵ Technical Guidelines Table 55, page 109

Table D.8: Metal products emissions– checklist of reporting requirements⁴⁵	
<i>Category</i>	<i>Unit</i>
Section 5.4.4 Other metal production	
Metal production	t
Carbon reductant consumed	t
Section 5.4.4 Other metal production – higher-order methods	
Metal production	t
Carbon reductant consumed	t
Facility specific emission factor	kg CO ₂ -e / GJ
Emissions	t CO ₂ -e

Table D.9: Synthetic gases emissions – checklist of reporting requirements⁴⁶	
<i>Category</i>	<i>Unit</i>
NGA default methodology	
Commercial air conditioning—chillers	t CO ₂ e
Commercial refrigeration—supermarket systems	
Industrial refrigeration including food processing and cold storage	
Gas insulated switchgear and circuit breaker applications	

⁴⁶ *Technical Guidelines* Table 56, page 110

Reporting requirements for waste to landfill and wastewater treatment – UNFCCC Category 6

This section details the data that corporations will be obliged to submit in order to estimate emissions using the default methodology or, in case of higher-order methods, the data required to be submitted to support the corporation's emission estimate.

Table D.10: Solid waste – checklist of data requirements⁴⁷	
<i>Emissions from waste</i>	<i>Unit</i>
Solid Waste	
Emission factor method chosen	–
Activity data method chosen	–
NGA default methodology	
Location of site	State or Territory
Years in operation	years
Average annual amount of disposal over the lifetime of the facility prior to the first year of reporting	t
Estimated amount of waste disposed in the reporting year	t
Methane recovered	t CO ₂ -e
Higher-order methods (i)	
Location of site	State or Territory
Years in operation	years
Time profile of total amount and type of disposal over the lifetime of the facility prior to the first year of reporting	t
Estimated amount of waste from municipal sources in the reporting year	t
Estimated amount of waste from commercial and industrial sources in the reporting year	t
Estimated amount of waste from construction sources in the reporting year	t
Methane recovered	t CO ₂ -e
Higher-order methods (ii)	
Location of site	State or Territory
Years in operation	years
Time profile of total amount and type of disposal over the lifetime of the facility prior to the first year of reporting	t
Estimated amount of paper and paperboard in the reporting year	t
Estimated amount of wood and wood waste in the reporting year	t
Estimated amount of garden and park in the reporting year	t

⁴⁷ Technical Guidelines Table 65, page 121

Table D.10: Solid waste – checklist of data requirements⁴⁷

<i>Emissions from waste</i>	<i>Unit</i>
Estimated amount of food and sludge in the reporting year	t
Estimated amount of concrete, metal and plastics in the reporting year	t
Methane recovered	t CO ₂ -e
Commercial wastewater	
Emission factor method chosen	–
Activity data method chosen	–
NGA default Methodology	
Population served by wastewater treatment plant	persons
Fraction of BOD in wastewater anaerobically treated	fraction
Fraction of BOD removed as sludge	fraction
Fraction of BOD in sludge anaerobically treated	fraction
Methane recovered	t CO ₂ -e
Higher-order methods (i)—measurement of BOD	
Population served by wastewater treatment plant	persons
BOD measured (BOD entering treatment facility)	t
Fraction of BOD in wastewater anaerobically treated	fraction
Fraction of BOD removed as sludge	fraction
Fraction of BOD in sludge anaerobically treated	fraction
Facility-specific methane emission factor, EF _w	t CO ₂ -e/ t BOD
Facility- specific methane emission factor, EF _{sl}	t CO ₂ -e/ t BOD
Methane recovered	t CO ₂ -e
Higher-order methods (ii)—measurement of methane	
Population serviced by wastewater treatment plant	persons
Methane emissions measured	t CO ₂ -e
BOD measured (BOD entering treatment facility)	t BOD
Fraction of BOD anaerobically treated	fraction
Fraction of BOD removed as sludge	fraction
Fraction of BOD in sludge anaerobically treated	fraction
Facility-specific methane emission factor, EF _w	t CO ₂ -e / t BOD
Facility- specific methane emission factor, EF _{sl}	t CO ₂ -e / t BOD
Methane recovered	t CO ₂ -e
Industrial wastewater	
NGA default Methodology	
Annual production	t
Fraction of COD anaerobically treated	fraction

Table D.10: Solid waste – checklist of data requirements⁴⁷

<i>Emissions from waste</i>	<i>Unit</i>
Fraction of COD removed as sludge	fraction
Fraction of COD in sludge anaerobically treated	fraction
Facility-specific methane emission factor, EF_w	t CO ₂ -e/ t COD
Facility-specific methane emission factor, EF_{sl}	t CO ₂ -e/ t COD
Methane recovered	t CO ₂ -e
Higher-order methods (i)—measurement of COD	
Annual production	t
COD measured (COD entering treatment facility)	t
Fraction of COD anaerobically treated	fraction
Fraction of COD removed as sludge	fraction
Fraction of COD in sludge anaerobically treated	fraction
Facility-specific methane emission factor, EF_w	t CO ₂ -e/ t COD
Facility-specific methane emission factor, EF_{sl}	t CO ₂ -e/ t COD
Methane recovered	t CO ₂ -e
Higher-order methods (ii)—measurement of methane	
Annual production	t
Methane emissions measured	t CO ₂ -e
COD measured	t
Fraction of COD anaerobically treated	fraction
Fraction of COD removed as sludge	fraction
Facility-specific methane emission factor (EF_w)	t CO ₂ -e/ t COD
Facility-specific methane emission factor (EF_{sl})	t CO ₂ -e/ t COD
Fraction of COD in sludge anaerobically treated	fraction
Methane recovered	t CO ₂ -e
Waste Incineration	
NGA default Methodology	
Quantity of waste incinerated	t

Acronyms and abbreviations

ABARE	Australian Bureau of Agriculture and Resource Economics	ISIC	United Nations International Standard Industrial Classification of All Economic Activities
ABN	Australian Business Number		
ABS	Australian Bureau of Statistics	ISO	International Organization for Standardization
ACN	Australian Company Number		
ANZSIC	Australian and New Zealand Standard Industrial Classification	J	joule/s
BOD	biological oxygen demand	k	kilo-
CEO	Chief Executive Officer	L	litre/s
CO ₂ -e	carbon dioxide equivalent	M	mega- (10 ⁶)
COAG	Council of Australian Governments	m	metre/s
COD	chemical oxygen demand	LNG	liquefied natural gas
DCC	Department of Climate Change	NEMMCO	National Electricity Market Management Company
EEO	Energy Efficiencies Opportunities program	NGA	National Greenhouse Account
EEZ	Exclusive economic zone	NGERS	National Greenhouse and Energy Reporting System
EF	emissions factor (see <i>Technical Guidelines</i> for further details)	NGLs	natural gas liquids
AETS	Australian emissions trading scheme	OSCAR	Online System for Comprehensive Activity Reporting
FES	Fuel and Electricity Survey	PFCs	Perfluorocarbons
FTC	Fuel Tax Credit	RIS	Regulation Impact Statement
G	giga- (10 ⁹)	SAR	1995 IPCC Second Assessment Report
g	gram/s		
GEDO	Greenhouse and Energy Data Officer	s1, ss1–2	section(s) of the Act
GHG	greenhouse gas	T&D	transmission and distribution
GICS	Global Industry Classification Standard	T	tera- (10 ¹²)
GWP	global warming potential	t	tonne/s (10 ³ kilograms)
h	hour/s	UNFCCC	United Nations Framework Convention on Climate Change
HFC	hydrofluorocarbon	W	watt/s
IPCC	Intergovernmental Panel on Climate Change		