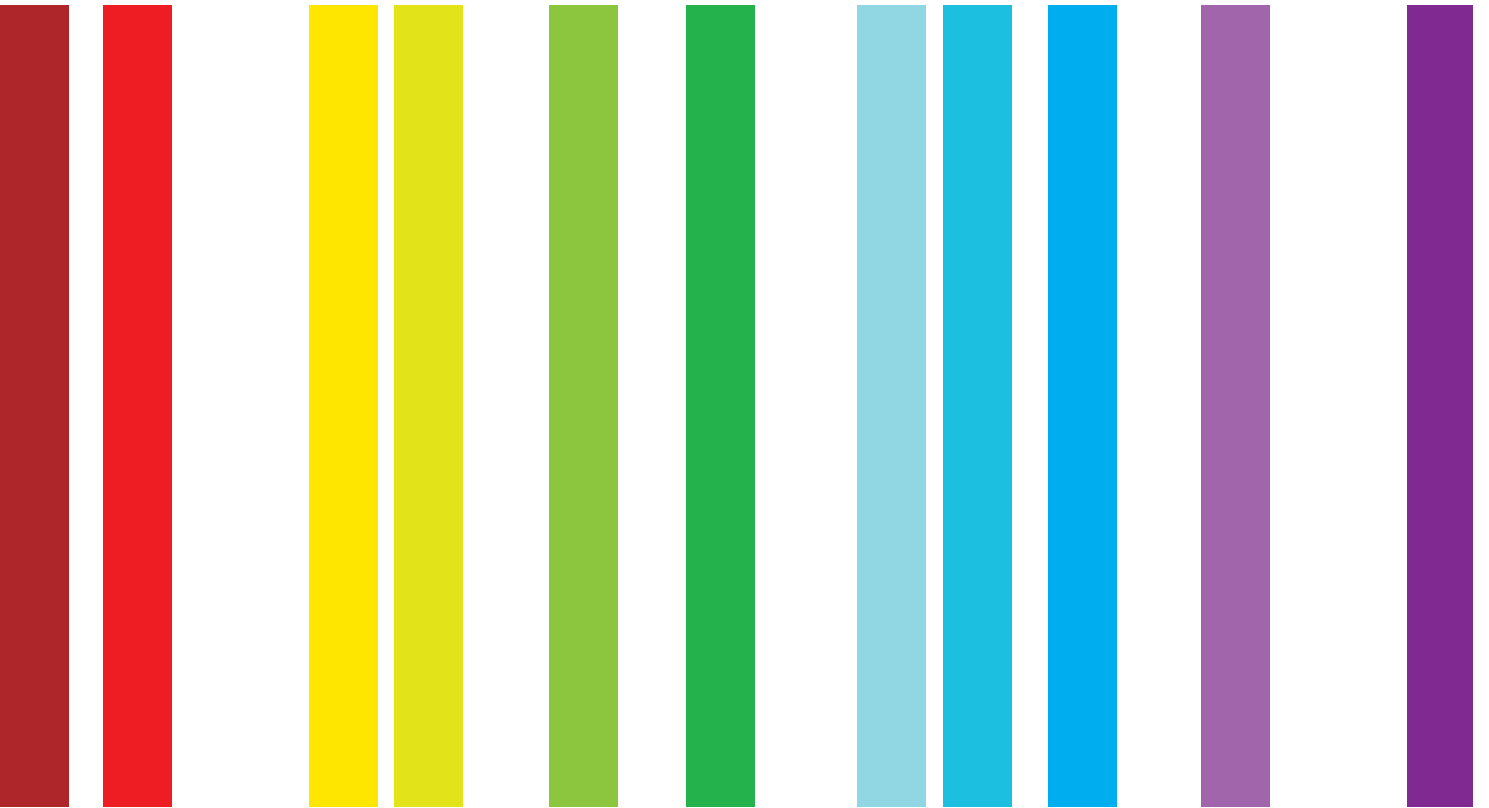




# GREENHOUSE GAS EMISSIONS ASSESSMENT for MBITS FY 2008/09



Carbon  
Planet





## Author(s)

Dr. Sandra O' Sullivan  
Tuesday, 9 June 2009

## Account Manager

Iain Smale

This GHG assessment report has been prepared for MBITS

## Address

MBITS (Managed Business IT Solutions)  
P.O Box 4410  
Manuka ACT 2603  
Australia

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## Executive Summary



Carbon Planet conducted a comprehensive assessment of the greenhouse gas (GHG) emissions accountable to the Australian operations of MBITS (Managed Business IT Solutions) for financial year 2008/09.

MBITS produced an overall total of 69.1 tonnes of GHG emissions, also known as CO<sub>2</sub>e equivalents (CO<sub>2</sub>e). This total includes indirect contributions along the supply chain (Scope 3 emissions).

The minimum mandatory reportable emissions for MBITS was 12.7 tonnes of CO<sub>2</sub>e, as defined by Scopes 1 and 2 emissions covered under the NGER Act 2007.

The Company's assessment results are summarised in Table 1 and shown in Figure 1.

A comparison of the individual sector contributions to CO<sub>2</sub>e emissions revealed that Equipment was the largest contributor, at 29.7 tonnes of CO<sub>2</sub>e (43.0% of gross GHG Protocol emissions). The principal activity contributing to GHG emissions in this sector was IT Equipment, from a total of \$ 59,927 per annum (32.3% of gross GHG Protocol emissions).

### Reporting Obligations

Under Section 13 of the *National Greenhouse and Energy Reporting Act 2007* (NGER), MBITS is below the lowest reportable corporation threshold for FY 2010/11 of 50 kilotonnes of CO<sub>2</sub>e per year (or 200 terajoules (TJ) of energy consumption), and below the facility threshold of 25 kilotonnes of CO<sub>2</sub>e per year (or 100 TJ of energy consumption), for the initial three years of the reporting period, commencing FY 2008/09.

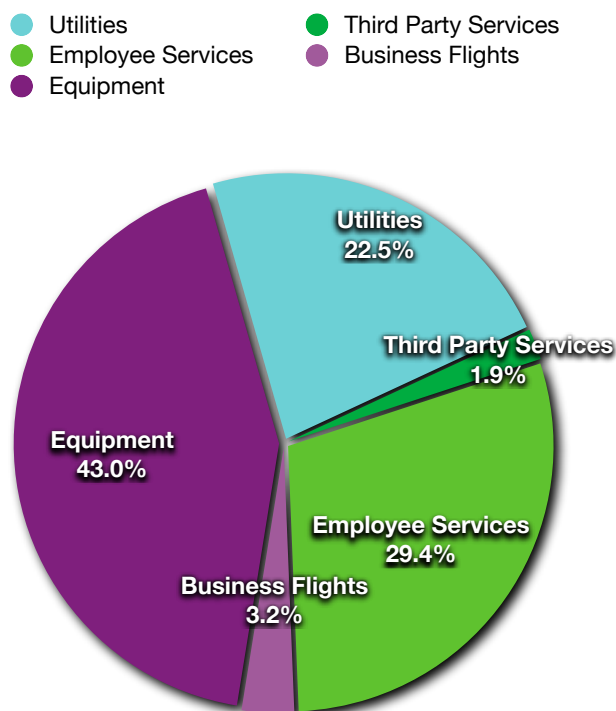
MBITS has no mandatory reporting obligations in the foreseeable future.

**TABLE 1 Assessment results for MBITS**

|                         |                         |                         |
|-------------------------|-------------------------|-------------------------|
| Assessment Period       | 2008/09                 |                         |
| No. of FTE employees    | 7                       |                         |
| Assessment Type:        | GHG Protocol            | NGER                    |
| Sources:                | Scope 1, 2 & 3          | Scope 1 & 2             |
| Activity Sector:        | (tCO <sub>2</sub> e/yr) | (tCO <sub>2</sub> e/yr) |
| Utilities               | 15.6                    | 12.7                    |
| Equipment               | 29.7                    |                         |
| Employees               | 20.3                    |                         |
| Business Flights        | 2.2                     |                         |
| Third Party Services    | 1.3                     |                         |
| <b>SUBTOTAL</b>         | <b>69.1</b>             | <b>12.7</b>             |
| <b>GHG/FTE employee</b> | <b>9.9</b>              | <b>1.8</b>              |

For GreenPower™, please see Appendix B for accounting description.

**FIGURE 1 A summary<sup>1</sup> of GHG emissions for MBITS**



<sup>1</sup> Includes numerical rounding to one decimal point. Table columns and pie chart percentages may not sum due to rounding.



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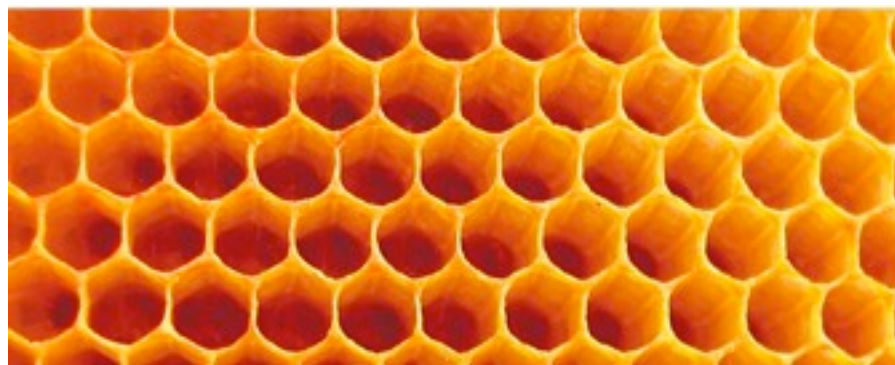


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# Introduction



## 1.1 Carbon Dioxide Equivalence

This assessment specifies that greenhouse gases will be measured in carbon dioxide equivalents (CO<sub>2</sub>e) by multiplying the amount of gas by the Global Warming Potential (GWP).<sup>2</sup> The GWP is an index used to convert the Kyoto Protocol non-carbon dioxide gases to a carbon dioxide equivalent.

## 1.2 What Standards Apply?

Audits and assessments conducted by Carbon Planet are subject to Carbon Planet's Terms and Conditions of Audit and Education Services ("Terms") and the Guidelines in the Terms. The Guidelines used for the audits and assessments are in accordance with The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)<sup>3</sup> published by the World Resource Institute (WRI) and World Business Council for Sustainable Development (WBCSD), and with International Standards Organisation ISO 14064-1:2006 Greenhouse gases - Part 1: Specification with guidance at the organisation level for quantification and reporting of greenhouse gas emissions and removals.

## 1.3 How is the Assessment Defined?

A GHG assessment separates emissions into three levels: Scope 1, Scope 2, and Scope 3; and all are covered in the present assessment. The separation of scopes ensures that no double accounting occurs. Further details are provided in Carbon Planet's Methodology & References and only a brief summary is included within this document.

- **Scope 1** emissions are those over which a company has direct control via ownership of activities.
- **Scope 2** is purchased electricity, heat or steam.
- **Scope 3** indirect emissions are from activities or services purchased from other third party companies and include indirect emissions associated with Scope 1 and 2 sources.

Scope 1 and Scope 2 emissions are mandatory under regulations covered by reporting schemes such as the *National Greenhouse and Energy Reporting (NGER) Act 2007*. Typically, Scope 1 and Scope 2 are the emissions that are covered when companies calculate a carbon footprint and develop plans to minimise their GHG impact. A holistic GHG assessment, however, will also account for Scope 3 sources. This includes upstream emissions for the extraction, production and transport associated with the use of fuel, and transmission and distribution losses associated with electricity consumption.

By taking this approach, on-site, first- and second-order process data on environmental impacts are collected for the product or service system under review, while higher-order requirements (i.e. Scope 3 emissions) are typically covered by input-output analysis.

Unless otherwise stated, the calculation methodologies and emission factors used in this assessment are in accordance with the National Greenhouse Accounts (NGA) Factors taken from the *Technical Guidelines for the Estimation of Greenhouse Emissions and Energy at Facility-Level*.<sup>4</sup>

<sup>2</sup> IPCC (2006). 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Prepared by the National Greenhouse Gas Inventories Programme, Eggleston, H.S., Buendia, L., Miwa, K., Nagara, T. and Tanabe, K. (eds). Published: IGES, Japan. Carbon Dioxide (CO<sub>2</sub>); Methane (CH<sub>4</sub>); Nitrous oxide (N<sub>2</sub>O); Hydrofluorocarbons (HFCs) Perfluorocarbons (PFCs); Sulphur hexafluoride (SF<sub>6</sub>).

<sup>3</sup> The Greenhouse Gas Protocol (2005). A Corporate Accounting and Reporting Standard, World Resource Institute, World Business Council for Sustainable Development.

<sup>4</sup> DCC (2007). National Greenhouse and Energy Reporting System: Technical Guidelines for the Estimation of Greenhouse Emissions and Energy at Facility-Level - Energy, Industrial Process and Waste Sectors in Australia. December 2007, Department of Climate Change, Commonwealth of Australia, available from <http://climatechange.gov.au/reporting/guidelines/>





The purpose of this assessment was to identify the types and amounts of GHG emissions attributable to The Company's operations. The assessment may permit The Company to:

- partially or fully offset the effect of its emissions through the purchase of certified carbon credits
- establish operational GHG benchmarks
- identify business risks in dealing with climate change and the introduction of a Carbon Pollution Reduction Scheme
- identify potential compliance/reporting obligations.

The assessment itself does not reduce or offset The Company's GHG emissions.

The assessment identified the key areas of The Company's operations that were responsible for significant contributions to its total GHG emissions. This assessment report solely reflects GHG emissions related to The Company's activities in the period of review and does not indicate The Company's future emissions levels.

#### 1.4 Further Details

Carbon Planet's calculation methodology ("Methodology & References") document is available upon request — however it is protected with a Non-Disclosure Agreement under Contract Law.

If you wish to certify specific products or services as Greenhouse Friendly™, a comprehensive GHG Life Cycle Analysis (LCA) should be conducted, and the measured emissions fully offset by approved Greenhouse Friendly™ abatements.

Under the present limitations to the scope boundary of this assessment, the assessment results should not be misconstrued to represent a comprehensive LCA of The Company's product(s) or service(s). Any statement of claims to carbon offsets contrary to the limitations presented in this report needs to be assessed against the Trade Practices Act (TPA) 1974.

The marketing of claims about the environmental benefits of products and services, resulting in misleading and deceptive conduct to consumers, may lead to court action for breaches of the TPA.

As part of Carbon Planet's commitment to providing transparency and the highest possible level of service to its customers, Carbon Planet welcomes and supports any investigation by the Australian Competition and Consumer Commission (ACCC) into deceptive marketing claims.



## Detailed Results



### 2.1 Company Boundary

The GHG assessment for MBITS (Managed Business IT Solutions) included the following location: Manuka, ACT.

MBITS (Managed Business IT Solutions) is a new business that offers other small professional businesses with services centred around managed, flexible and secure corporate IT systems. The use of virtualisation allows MBITS to respond rapidly to clients demands. The client controls the direction of their IT and MBITS provides the expertise and environment to implement and manage it.

### 2.2 Summary of Emissions

Utilising industry standard methodology to calculate the carbon footprint, Carbon Planet concluded that MBITS produced a total of 69.1 tonnes of CO<sub>2</sub>e.

This is presented in Table 2.1 and Figure 2.1, which displays all the sectors reviewed in this assessment boundary.

**TABLE 2.1 Summary of CO<sub>2</sub>e emissions for MBITS**

| Activity Sector             | Activity/Service    | Activity Data | Units              | Emissions (tCO <sub>2</sub> e/yr) |
|-----------------------------|---------------------|---------------|--------------------|-----------------------------------|
| <b>Utilities</b>            | Electricity         | 14,177        | kWh                | 15.1                              |
|                             | Telecommunications  | 1,609         | \$                 | 0.3                               |
|                             | Internet            | 526           | \$                 | 0.1                               |
|                             | Waste               | 0.03          | t                  | 0.1                               |
| <b>Equipment</b>            | IT Equipment        | 59,927        | \$                 | 22.3                              |
|                             | Paper               | 25            | reams              | 0.1                               |
|                             | Stationery          | 3,135         | \$                 | 1.5                               |
|                             | Merchandising       | 2,409         | \$                 | 1.1                               |
|                             | Office furniture    | 7,277         | \$                 | 4.7                               |
| <b>Employees</b>            | Employee Services   | 12,880        | staff hours per yr | 20.3                              |
| <b>Business Flights</b>     | Flights             | 8,680         | passenger.km       | 2.2                               |
| <b>Third Party Services</b> | Postage             | 185           | \$                 | 0.1                               |
|                             | Couriers            | 4,119         | \$                 | 0.8                               |
|                             | Printing            | 748           | \$                 | 0.3                               |
|                             | Hotel Accommodation | 1             | occupancy.night    | 0.1                               |
| <b>TOTAL<sup>1</sup></b>    |                     |               |                    | <b>69.1</b>                       |



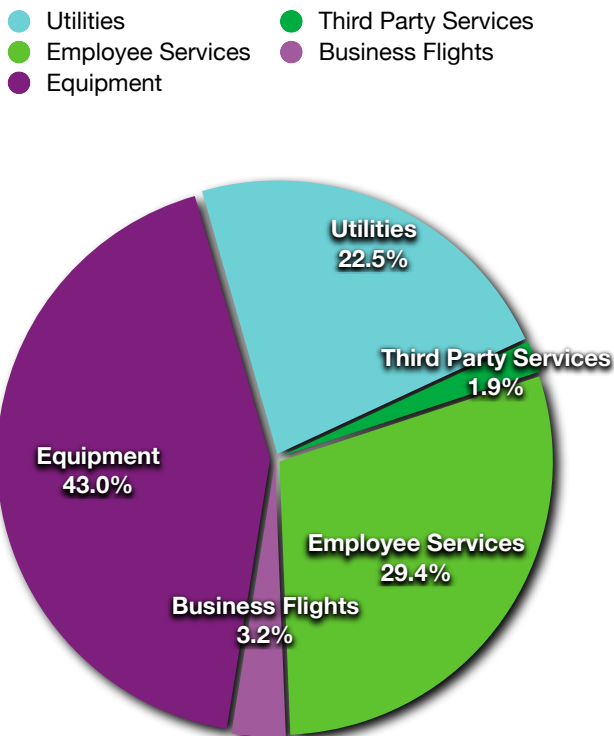


Carbon Planet concluded that MBITS produced a total of 69.1 tonnes of CO<sub>2</sub>e.

A comparison of the individual sector contributors to CO<sub>2</sub>e emissions revealed that Equipment was the largest contributor at 29.7 tonnes of CO<sub>2</sub>e (43.0% of gross GHG emissions) (see Figure 2.1). The principal activity contributor to GHG emissions in this sector was IT Equipment, from a total of \$59,927 per annum (32.3% of gross GHG emissions) (see Table 2.1).

Figure 2.2 shows a percentage breakdown of the Equipment emissions for MBITS.

**FIGURE 2.1 Summary of CO<sub>2</sub>e emissions for MBITS**



**FIGURE 2.2 Summary of Equipment emissions for MBITS**

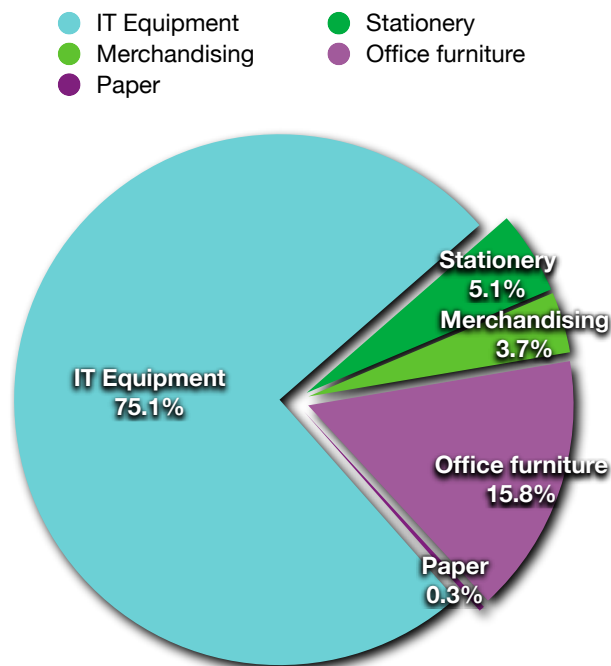
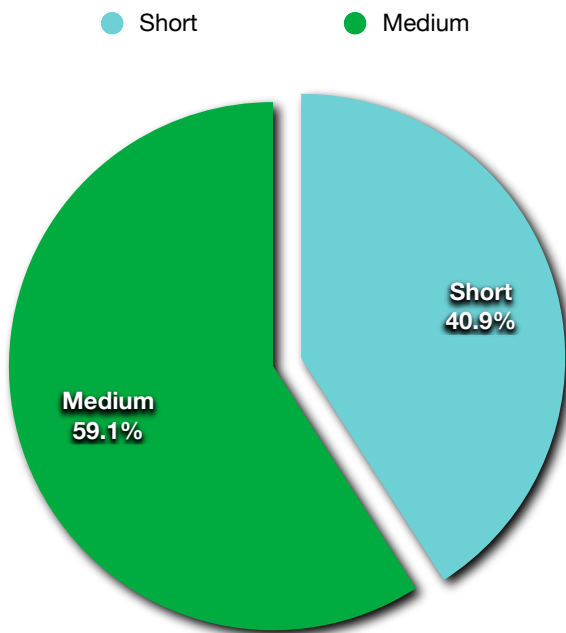




Table 2.2 presents a breakdown of the type of business flights flown during the assessment period. The majority of emissions from business flights come from medium haul flights. This is graphically illustrated in Figures 2.4 and 2.5 below.

**FIGURE 2.4 A summary of CO<sub>2</sub>e emissions by flight type**



**TABLE 2.2 A breakdown of business air travel for MBITS**

| Type of Flight           | Range (km)     | Total km     | % km       | Emissions (tCO <sub>2</sub> e/yr) | % Emissions |
|--------------------------|----------------|--------------|------------|-----------------------------------|-------------|
| Short Haul               | 401 to 1,000   | 2,400        | 27.6%      | 0.9                               | 40.9%       |
| Medium Haul              | 1,001 to 3,700 | 6,280        | 72.4%      | 1.3                               | 59.1%       |
| <b>Total<sup>1</sup></b> |                | <b>8,680</b> | <b>100</b> | <b>2.2</b>                        | <b>100</b>  |



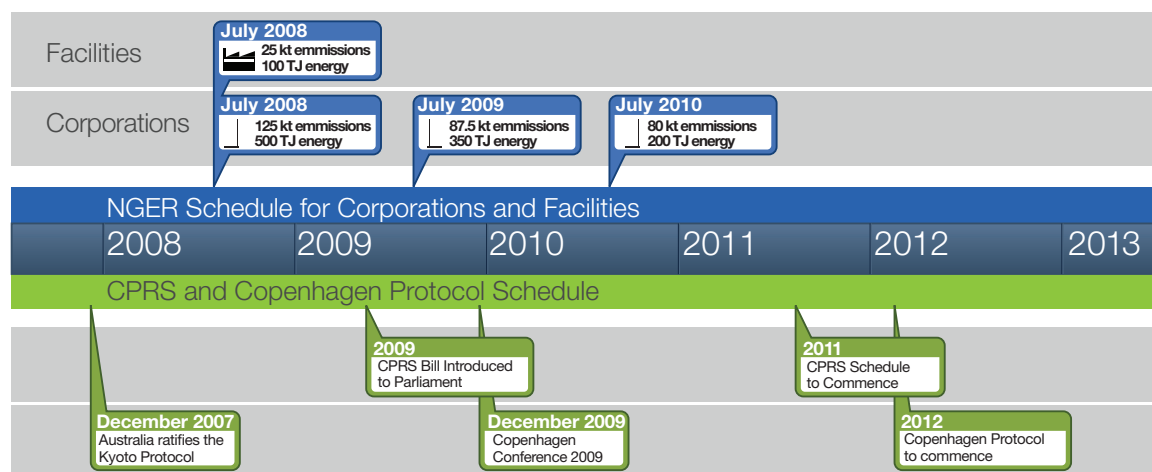
## 2.3 National Greenhouse and Energy Reporting System

The Australian Government has introduced the *National Greenhouse and Energy Reporting (NGER) Act 2007* ('Act'), which came into effect in September 2007. The Act provides a legislative framework for the mandatory reporting of GHG emissions and energy consumption/production by Australian corporations as shown below.

Table 2.3 shows a breakdown of total emissions in terms of emission sources. Under section 10 of the Act's terms of reference, only emissions arising from scopes 1 and 2 sources are mandatory for reporting.

Section 13 of the Act specifies thresholds at which corporations are required to report. Thresholds at the corporation-level are to be phased in progressively during the first three years of the reporting system, beginning 1<sup>st</sup> July 2008. The Act is linked to the development of a Carbon Pollution Reduction Scheme (CPRS), which is now scheduled for launch in 2011 by the Australian Government. The Act is currently administered by the Department of Climate Change (DCC). The NGER total for MBITS amounted to 12.7 tonnes of CO<sub>2</sub>e, with the majority contribution attributed to Scope 2 emissions arising from Utilities. MBITS emissions fall below the corporate threshold and below the facility threshold, and therefore has no mandatory reporting requirements.

**FIGURE 2.5 Timeline of NGERs, CPRS and Copenhagen Protocol Schedule**



**TABLE 2.3 A summary of scope type and emission sources for MBITS**

| Emission Source          | NGER (tCO <sub>2</sub> e/yr) | GHG Protocol (tCO <sub>2</sub> e/yr) | Percentage of Total (%) | Associated Inventory/Service                                   |
|--------------------------|------------------------------|--------------------------------------|-------------------------|--|
| Scope 1                  | 0.0                          | 0.0                                  | 0.0                     | Transport/Stationary Fuels, Refrigerant leakage                |
| Scope 2                  | 12.7                         | 12.7                                 | 18.4                    | Purchased Electricity  |
| Scope 3                  | -                            | 56.3                                 | 81.6                    | Third Party & Employee Services, Flights, Equipment, Utilities |
| Energy Use (TJ)          | 0.1                          | -                                    | -                       | Energy Consumption   |
| <b>TOTAL<sup>1</sup></b> | <b>12.7</b>                  | <b>69.1</b>                          | <b>100</b>              |  |



# Uncertainty



## 3.1 NGER Determination

The NGER (Measurement) Determination 2008 ('Determination') describes four methods that can be used to estimate GHG emissions. More information on each of the four methods can be found in the Determination document published by the DCC. Often, method 1 is used because it is derived directly from the NGA Factors.

Calculation of GHG emissions using method 1 - where an activity is multiplied by the emission factor, means that a quality assurance of data is the most appropriate way of managing uncertainty. This differs from the approach that would be taken if one was using data based on direct measurement of emissions, where the major sources of error are human error and statistical uncertainty.

Uncertainty must be reported at the corporate group level; reporting of uncertainty at the facility level is not required. The Determination provides guidance for the aggregation of uncertainty across emissions sources and facilities.

Under part 8.3 of the Determination, uncertainty levels have been specified for estimates of carbon dioxide, methane and nitrous oxide (NO<sub>x</sub>) from combustion of certain fossil fuels, fugitive emissions (for coal mines, gas flaring, and oil and gas exploration), and for some industrial processes. This applies to emission estimates made using the current methodology.

The uncertainty levels provide an upper and lower emission estimate range, so that the actual emissions amount is between these values with 95% confidence.

Table 3.1 shows uncertainty levels of emission estimates contained in this report, and where uncertainty levels have been specified in the NGER Determination.

Carbon Planet has estimated that the overall uncertainty for NGER and GHG Protocol GHG emissions were 5.2% and 31.3%, respectively. In general, the uncertainty estimate will increase with the inclusion of scope 3 activities.

**TABLE 3.1 Uncertainty of Scope 1 and 2 emissions activities for MBITS**

| Emission Activity | Scope 1 or 2 tCO <sub>2</sub> e | GJ/unit | Unit | CO <sub>2</sub>       | CH <sub>4</sub> | N <sub>2</sub> O | CO <sub>2</sub> uncertainty | CH <sub>4</sub> & N <sub>2</sub> O uncertainty | tCO <sub>2</sub> e lower limit | tCO <sub>2</sub> e upper limit |
|-------------------|---------------------------------|---------|------|-----------------------|-----------------|------------------|-----------------------------|--|--------------------------------|--------------------------------|
|                   |                                 |         |      |                       |                 |                  |                             |  |                                |                                |
|                   |                                 |         |      | kgCO <sub>2</sub> /GJ |                 |                  |                             |  |                                |                                |
| Electricity*      | 12.7                            | 26.8    | t    | 88.3                  | 0.0             | 0.2              | 5.1%                        | 50.0%  | 12.1                           | 13.4                           |

\*The share of electricity generation in Australia is approximately 57% black coal, 21% brown coal, 14% natural gas, 9% hydroelectric and other renewable sources. This value differs from total in Table 2.1 as Scope 3 contributions from transmission and distribution losses are absent.



## 3.2 Air Travel

Uncertainty analysis of the calculated values for air travel for the two main factors used to assess overall aircraft emissions - radiative forcing index (RFI) and emission factor (FCO<sub>2</sub>; kgCO<sub>2</sub>e per passenger.km) - are reviewed.

The RFI accounts for the full impact of flying upon the atmosphere and includes NO<sub>x</sub> compounds, ozone, methane, water, contrails and other particles, in addition to CO<sub>2</sub>. Previous IPCC estimates for RFI stood at approximately 2.7, with an uncertainty of at least  $\pm 1.5$ .

The UK Department for Environment, Food and Rural Affairs (DEFRA) together with the European Union (EU) FP5 TRADEOFF project have consented to the use of an RFI value of 1.9. The present assessment includes the contribution of the RFI.

While changes in the stage length emission factors and the RFI may occur, it is unlikely they will change rapidly. It is expected that the stage length emissions factors will steadily improve with time, as newer and more efficient aircraft come into service to displace the existing air fleet. This includes the Boeing 787 Dreamliner and Airbus Industries A380 Super Jumbo. Table 3.2 presents aircraft and total CO<sub>2</sub>e (tonnes) calculated for RFI values at 1.0 and 2.7, as well as at 1.9. A change in RFI from 1.9 to 2.7 would result in an increase of 0.9 tonnes of CO<sub>2</sub>e to the total.

The stage length emission factor (FCO<sub>2</sub>) was also considered for uncertainty. Table 3.3 presents the emissions for aircraft and total CO<sub>2</sub>e, applying the standard deviation to the medium haul emission factor (FCO<sub>2</sub>). Increasing the emission factor from the assessment value to the standard deviation limit increases the total CO<sub>2</sub>e emissions by 0.2 tonnes.

**TABLE 3.2 A comparison of GHG emissions resulting from changes to the RFI**

| RFI | Aircraft CO <sub>2</sub> e (tonne) | % Variation | Total CO <sub>2</sub> e (tonne) | % Variation |
|-----|------------------------------------|-------------|---------------------------------|-------------|
| 1.0 | 1.2                                | -47.4       | 68.0                            | -1.5        |
| 1.9 | 2.2                                | -           | 69.1                            | -           |
| 2.7 | 3.1                                | 42.1        | 70.0                            | 1.3         |

**TABLE 3.3 A comparison of GHG emissions resulting from changes in the FCO<sub>2</sub>**

| Emission Factor | Aircraft CO <sub>2</sub> e (tonne) | % Variation | Total CO <sub>2</sub> e (tonne) | % Variation |
|-----------------|------------------------------------|-------------|---------------------------------|-------------|
| 0.17            | 1.1                                | -14.0       | 68.9                            | -0.3        |
| 0.20            | 1.3                                | -           | 69.1                            | -           |
| 0.23            | 1.5                                | 14.0        | 69.2                            | 0.3         |





# Environmental Performance

## 4.1 Benchmarking Indicators

As an Early Adopter, your organisation is spearheading Environmental Performance Evaluation (EPE) for its specific business sector. Consequently, benchmarking to a similar business segment is not available at this stage. With GHG reporting an emerging standard, only a small proportion of organisations publish their total emissions, making direct comparisons all the more difficult.

Stakeholders of organisations, governments and the general public are increasingly calling for greater corporate disclosure of GHG information. A growing number of organisations are preparing stakeholder reports containing information on GHG emissions, usually disclosed through corporate sustainability reports and annual reports. However, in a 2007 survey conducted by the Carbon Disclosure Project (CDP), only 17% of ASX100 companies have a detailed understanding and systems in place to monitor emissions.<sup>5</sup>

The CDP is an independent not-for-profit organisation formed in response to the growing recognition of the need for quality public dialogue between shareholder value and commercial operations in the context of global climate change.

Table 4.1 lists other major organisations in various business sectors which have been audited or assessed by Carbon Planet and summarises their emissions relative to total staff numbers.

Similarly, alternative ways of benchmarking may be to compare an activity from The Company against another organisation's published value. For example, The Company may benchmark electricity consumption against a major corporate consumer such as Westpac Banking Corporation at 5.4 MWh/per FTE employee.<sup>6</sup>

**TABLE 4.1 GHG benchmarks across industry sectors**

| Business Sector                | ANZSIC# Division | NGER (t CO <sub>2</sub> e) | Total (t CO <sub>2</sub> e) | Highest Contributor % | FTE   | NGER/ FTE | Total/ FTE |
|--------------------------------|------------------|----------------------------|-----------------------------|-----------------------|-------|-----------|------------|
| MBITS                          | M                | 12.7                       | 69.1                        | Equipment 43%         | 7     | 1.8       | 9.9        |
| Legal & Accounting             | M                | 13,862.4                   | 60,920.7                    | Utilities 41%         | 4,760 | 2.9       | 12.8       |
| Rental Hiring & Real Estate    | L                | 3,751.4                    | 5,700.6                     | Utilities 35%         | 482   | 7.8       | 11.8       |
| Financial & Insurance Services | K                | 1,039.8                    | 2,011.2                     | Utilities 68%         | 155   | 6.7       | 13.0       |
| Internet Service Providers     | J                | 2,217.2                    | 5,157.3                     | Utilities 55%         | 278   | 8.0       | 18.6       |
| Advertising                    | M                | 3,843.0                    | 11,172.5                    | Utilities 40%         | 588   | 6.5       | 19.0       |
| Accommodation                  | H                | 59,919.4                   | 91,340.2                    | Utilities 77%         | 2299  | 26.1      | 39.7       |
| Retail Trade                   | G                | 12,642.0                   | 44,587.9                    | Freight 32%           | 1,105 | 11.4      | 40.4       |
| Telecommunications Services    | J                | 16,301.8                   | 40,242.5                    | Utilities 41%         | 942   | 17.3      | 42.7       |
| Public Administration & Safety | O                | 26,193.8                   | 38,302.3                    | Utilities 66%         | 837   | 31.3      | 45.8       |
| Road Transport                 | I                | 102,254.3                  | 119,041.7                   | Transport 81%         | 1,007 | 101.5     | 118.2      |

# Australian and New Zealand Standard Industrial Classification

5 CDP5 (2007). Australia and NZ Report, available from [www.cdproject.net](http://www.cdproject.net)

6 Westpac (2007). Stakeholder Impact Report, Environment, Westpac Banking Corporation, p.69. (Note: The organisational boundary for Westpac's electricity consumption data is unknown.)





## 4.2 Eco-efficiency Indicators

The WBCSD has also developed a set of eco-efficiency indicators that helps businesses measure progress toward economic and environmental sustainability.<sup>7</sup> The principal objective of eco-efficiency indicators is to evaluate and monitor MBITS's environmental performance with tangible and transparent measures, resulting in further data analyses that can be meaningful to business managers, the board of The Company and also to external shareholders. Further benefits include:<sup>8</sup>

- increasing awareness and communications about MBIT's environmental performance criteria and relevant achievements
- demonstrating MBIT's commitment and efforts to improving environmental performance
- providing the mechanism to respond to concerns and questions about MBIT's environmental aspects.

Eco-efficiency indicators combine economy and ecology, enabling a relationship between product or service value to environmental influence. The indicators can be described by:

$$\text{eco-efficiency} = \frac{\text{product or service value}}{\text{environmental influence}}$$

The environmental profile for MBITS- is presented in Table 4.2.

**TABLE 4.2 Eco-efficiency profile for MBITS**

### Company profile

|                          |  |
|--------------------------|--|
| Business sector (ANZSIC) | M700 - Computer System Design and Related Services |
| Duration of report       | FY 2008/09   |

### Value profile

|                          |      |
|--------------------------|------|
| Number of FTE employees  | 7    |
| Revenue (million \$ AUD) | N.M. |

### Environmental profile

|                              |      |                    |
|------------------------------|------|--------------------|
| Electricity consumed         | 51.0 | GJ                 |
| Landfill waste generated     | 0.03 | t                  |
| Total energy use             | 51.0 | GJ                 |
| GHG emissions (GHG Protocol) | 69.1 | tCO <sub>2</sub> e |

### Methodological information

The guidelines provided in AS/NZS ISO 14031:2000 should be used to select company-specific eco-efficiency indicators. N.M. Not measured

7 Verfaillie, H.A., Bidwell, R. (2000). Measuring eco-efficiency - a guide to reporting company performance. World Business Council for Sustainable Development, 38 pp.

8 AS/NZS (2000). Australian / New Zealand Standard 14031:2000: Environmental management-environmental performance evaluation-guidelines. Standards Australia International Ltd.

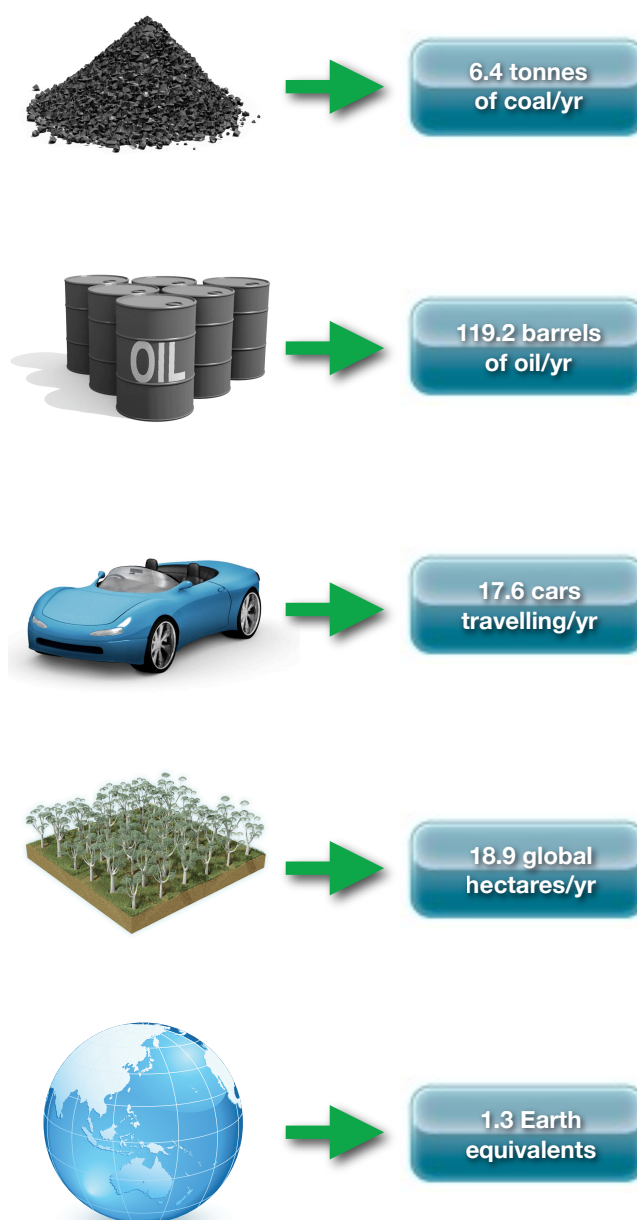


## 4.3 What Does This All Mean?

Conceptualisation of what GHG emissions represent can be difficult. After all, a tonne of “invisible” CO<sub>2</sub> gas dispersed in the atmosphere is a very foreign concept to grasp. So how do your organisation’s GHG emissions translate to more tangible forms of carbon? Carbon Planet has illustrated in Figure 4.1 your GHG emissions in equivalent measurement units for the following items:

- your electricity use in MWh expressed in terms of the number of tonnes of coal combusted each year
- your GHG emission sources, excluding electricity, correlated to the number of equivalent barrels of oil extracted and consumed each year to produce the same emissions when combusted
- your total GHG emissions generated by the equivalent number of passenger vehicles that travelled the Australian national average distance<sup>9</sup>
- the estimated total number of global hectares needed to produce the resources consumed and to absorb the waste generated by your organisation in a year <sup>10,11</sup>
- the estimated number of earth equivalents required to sustain your organisation’s ecological footprint per FTE employee.

The ecological footprint is an indicator of environmental sustainability.<sup>12,13</sup> At the outset, it should be noted that a carbon footprint assessment is not an ecological footprint. The Company is directed to visit one of the calculators available at the EPA Victoria web site ([www.epa.vic.gov.au/](http://www.epa.vic.gov.au/)) to obtain a comprehensive assessment of your ecological footprint.



**FIGURE 4.1 GHG emissions in equivalent measurement units for MBITS**

<sup>9</sup> ABS (2007). 9208.0 - Survey of Motor Vehicle Use, Australia, 12 months ended 31 October 2006, Australian Bureau of Statistics.

<sup>10</sup> World-Wide Fund for Nature International (WWF) (2004). Living Planet Report 2004, Global Footprint Network, Gland, Switzerland.

<sup>11</sup> The number represents an indicator only and not the actual ecological footprint of your organisation. It is a heuristic/pedagogical value only.

<sup>12</sup> Wackernagel, M., Rees, W.E., Testemale, P. (1995). Our Ecological Footprint: Reducing Human Impact on the Earth, New Society Publishers, British Columbia, Canada.

<sup>13</sup> Global Footprint Network and University of Sydney (2005). The ecological footprint of Victoria - Assessing Victoria's demand on nature. Prepared for EPA Victoria, Global Footprint Network and the University of Sydney, 91 pp.





## Where to Start?



Carbon Planet suggests that MBITS considers a three phase approach to carbon management - as presented on the following page - for reducing its future emissions and progressively transitioning towards carbon neutrality. The organisation now needs to set reduction targets, embed carbon and energy management systems in the workplace, and report on progress.

Implementation of a three phase approach to carbon reduction strategies ensures a transparent, thorough process which filters through all levels of the organisation. These steps are subject to constant review and improvement. It is not a static process whereby a specific end is met and the process completed, but a dynamic system which builds on itself and evolves.

In getting into the nitty gritty of energy consumption, staff participation and engagement will be particularly important. The 'guiding coalition' may wish to use some of the following examples when developing policy recommendations and staff incentive programmes.

### 5.1 Energy

Prevention of GHG emissions is always the first step to reducing impact on the environment. If not already using 100% GreenPower™, MBITS should look at sourcing its electricity from accredited GreenPower™ suppliers, which is electricity generated from renewable sources. This would also serve to eliminate the need to purchase carbon credit offsets. Keeping an eye on competitive rates for GreenPower™ may provide the ability to move to better sources of supply in the future, a relatively simple option for a company with one site to maintain.

Two useful websites for keeping updated with progress in GreenPower™ are [greenpowerpricewatch.com.au](http://greenpowerpricewatch.com.au), and [www.tec.org.au/gew](http://www.tec.org.au/gew) for Green Electricity Watch.

The Company could determine whether standard T8 fluorescent lighting can be exchanged for alternative luminaries within your office space. Many options do not require changing fixtures, provide an equivalent or better

standard of lighting but result in much less heat loss and produce energy reductions of 20-30%. The reduction in heat loss flows on positively to the HVAC component of energy consumption, as air conditioning units do not need to work as hard to regulate room temperature.

### 5.2 Transportation

Air travel is a carbon intensive process, contributing significantly to GHG emissions. A reduction in flights could be possible using the right technology for video-conferencing, however many companies are reluctant to engage with video-conferencing technology because of historically high price points, poor quality and the small scale of image for desktop options that makes it hard to workshop effectively.

Advances in video-conferencing now make it possible to have a conference with participants viewing each other in life-size High Definition (HD), which eliminates the challenges associated with using desktop equipment. One of the most recent entrants to the Australian market is Lifesize - a company that has broken the back of high price points for sophisticated video-conferencing systems. For more information, see [www.lifesize.com](http://www.lifesize.com).

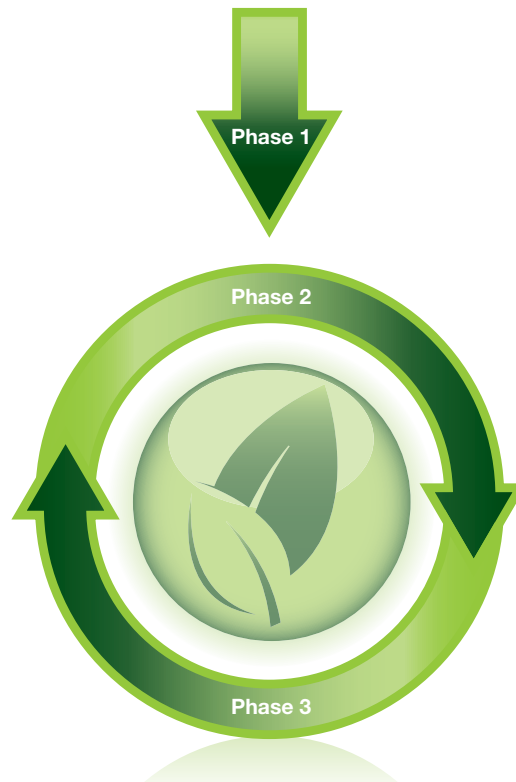
### 5.3 IT and Office Equipment

Policy should ensure all equipment procured carries the ENERGY STAR rating as developed by the Environmental Protection Agency (EPA).

Power Supply Units (PSUs) inside desktop computers and servers are typically very inefficient and can be replaced with 80 PLUS specified PSUs to cut energy consumption by 15-25%.

Gaining 80 Plus certification means manufacturers have to ensure the PSUs efficiently convert AC to DC voltage and that the PSU is capable of at least 80% efficiency with 20%, 50% and 100% power loads.





| PHASE 1                        |  |
|--------------------------------|--|
| Steps                          | Deliverables   |
| Determine carbon footprint     | Clear definitions of boundaries, frameworks and protocols              |
| Plan CO <sub>2</sub> inventory | Inventory of carbon emissions as per defined scope                     |
| Gather data                    | Current log of all data sources and assumptions                        |
| Calculate emissions            | Logical calculation process that can be embedded throughout operations |
| Establish benchmarks           | Utilise baseline data to measure comparative indicators                |
| PHASE 2                        |  |
| Steps                          | Deliverables   |
| Schedule review process        | Outline a timetable for re-calculation                                 |
| Set emission reduction targets | Overarching emission reduction targets                                 |
| Create GHG treatment options   | Roadmap to carbon minimisation   |
| Prevent emissions              | Restrict unnecessary, GHG intensive activities                         |
| Reduce emissions               | Energy efficiency projects, renewables, carbon credits                 |
| PHASE 3                        |  |
| Steps                          | Deliverables   |
| Embed carbon management        | Robust carbon and energy management systems                            |
| Report carbon emissions        | Incorporated into internal and external communications                 |
| Verification                   | Accreditation by national and international organisations              |



Existing equipment can be upgraded with an inexpensive 'drop-in' component so there is little expense involved and for computing equipment that must be left on continuously, payback is typically achieved within a year. Reduced heat output and improvements in power quality not only mean a better functioning computer but also mean less strain on the HVAC component of energy consumption.

There may also be some benefits associated with outsourcing IT infrastructure entirely, selecting a Managed Service Provider with a well rated data centre, using technology sourced from members of the GreenGrid and providing options that allow you to offset emissions as part of the service to you.

**Table 5.1 Emission reduction, waste reduction and energy efficiency toolkits**

| Toolkit Name                              | Description   | Link   |
|---|---|--|
| Green Lease Guide                         | The Green Lease Guide has been developed to assist commercial office tenants with building selection, office fit out and current tenancies. Implementation of the guide will save money, improve the workplace and reduce environmental impact.   | <a href="http://www.environment.nsw.gov.au/">www.environment.nsw.gov.au/</a>   |
| Energy and Greenhouse Management Toolkit  | This 7 module toolkit is designed to assist businesses reduce energy consumption and GHG emissions. The toolkit provides tools, case studies and guidance to improve productivity, compliance and GHG benefits.   | <a href="http://www.sustainability.vic.gov.au/">www.sustainability.vic.gov.au/</a>   |
| Carbon Management Principles              | The EPA has released the Carbon Management Principles to provide a step-by-step framework that organisations can use to drive good environmental and business outcomes.   | <a href="http://www.epa.vic.gov.au/">www.epa.vic.gov.au/</a>   |
| Environment and Resource Efficiency (ERE) | The 5 Module EREP program requires the largest commercial users of energy and water to identify and implement actions that reduce energy and water use and minimise waste.  | <a href="http://www.epa.vic.gov.au/">www.epa.vic.gov.au/</a>   |
| Grow Me The Money                         | Grow Me The Money is a free program for Victorian businesses to help them to reduce their impact on the environment and save money doing it. The program involves a six step process, which includes toolkits, targets and assessments.   | <a href="http://www.growmethemoney.com.au/">www.growmethemoney.com.au/</a>   |
| Waste Wise                                | Waste Wise is a practical, step-by-step program to help Victorians to minimise waste and maximise the efficient use of valuable resources. Waste Wise involves a 5 step process to reduce waste. Each step has templates and guidelines.  | <a href="http://www.resourcesmart.vic.gov.au/">www.resourcesmart.vic.gov.au/</a>   |
| Energy Efficiency Opportunities (EEO)     | The EEO program encourages very large energy-using businesses to improve their energy efficiency. Businesses identify, evaluate and report publicly on energy savings via a 7 stage process.  | <a href="http://www.ret.gov.au/energy/efficiency/eao/pages/default.aspx">www.ret.gov.au/energy/efficiency/eao/pages/default.aspx</a> |
| Level 1 Energy Audit                      | AS/NZS 3598:2000 Energy audits. This standard sets out minimum requirements for commissioning and conducting energy audits, which identify opportunities for cost effective investments to improve efficiency and effectiveness in the use of energy. Carbon Planet conducts energy audits to this standard. Contact your Carbon Planet account manager for more details. | <a href="http://www.saiglobal.com/">www.saiglobal.com/</a>   |
| Greenhouse Challenge Plus                 | Greenhouse Challenge Plus enables Australian companies to improve energy efficiency and reduce greenhouse gas emissions. This program through partnership, is designed to reduce GHG emissions and increase uptake of energy efficiency and consistency of emission reporting.  | <a href="http://www.environment.gov.au/">www.environment.gov.au/</a>   |
| NABERS                                    | NABERS is a performance-based rating system for existing buildings.   | <a href="http://www.nabers.com.au">www.nabers.com.au</a>   |





## 5.4 Company Administration

A significant amount of paper and other resources, such as electricity, transport fuel and freight services, can be eliminated, or at least minimised, by opting to conduct company customer communications for billing/invoicing and bill payments online.

This also applies to managing office administration on the computer instead of filing various paper documents into folders. Currently, many banks can send account information via the internet, and so printed statements are not necessary. In addition, many companies use the internet and hence sending invoices electronically can also be encouraged.

For companies completely versed in computer technology, employing software packages like those offered by Atlassian can provide an alternate means of staff management that can drastically reduce other resource consumption.

The following criteria are suggested for the selection of paper.

- Purchase fully certified carbon neutral offset paper (e.g. ENVI), including best practice principles listed below.
- The higher the recycled fibre content, the better.
- The higher the post-consumer fibre content, the better.
- Preference goes to “processed-chlorine-free” (PCF) paper.
- If there is a need for virgin fibre content, it should be Forest Stewardship Certified (FSC).
- Preference is given to paper from paper mills with ISO 14001/EMAS or comparable Environmental Management System (EMS) certification.
- Look for use of renewable energy in the paper production process.

## 5.5 Staff Transportation

Transportation of staff to and from work is an indirect external contributor to GHG emissions. Your organisation is not directly responsible for these emissions, as evident by the fact that it is not claimable as a work expense for taxation purposes. Nonetheless, being an environmentally concerned organisation, your organisation should still aim to reduce staff travel emissions by encouraging staff to opt to travel in the following ways.

- Select public transport. Introduce a discounted travel pass program for staff to encourage use of public transport.
- Walk or ride to work - while at work if short distance travel is necessary, consider contacting Bikes4Work for fleet bikes ([www.bikes4work.com.au](http://www.bikes4work.com.au)).
- Car pool if the above options are not possible.
- Pre-plan and group activities according to location to save overall travel distances.
- Adopt a vehicle policy for executives, which provide financial incentive to select fuel-efficient vehicles.

A log of the distances travelled by public transport or self-sufficient means, to determine the distances saved from using personal vehicles, can be a great incentive for staff to plan “greener” travel.

## 5.6 Consumer Selection

When seeking to purchase products with minimal environmental impact, the consumer needs to consider various factors such as the initial resources the product is made from, the production process, type of packaging, the resulting waste that is generated, and the distance which the product travels to reach the consumer. Below are some specific aspects to consider.

- Select energy efficient appliances and products
- Buy local products, particularly fresh foods





- Opt for green friendly products
- Avoid excess packaging
- Avoid the purchase of disposable products such as paper plates and paper cups, e.g. for the latter you can bring your own coffee mug
- Carry your own bag and avoid using plastic bags as much as possible
- Dispose of rubbish properly, i.e. use available recycling bins.

## 5.7 Applying a Green Office Policy

The best way to influence the behaviour of others is to set an example. A good policy is to encourage all staff members to think green by applying greener and more energy efficient methods in the workplace. Furthermore, development of a company green office policy by creating environmental milestones and taking records or logs of energy savings, can be a great way to build incentive within MBITS.

The Organisation for Economic Co-operation and Development (OECD, [www.oecd.org](http://www.oecd.org)) has quantified that Australia is among the highest producers of waste in the world. Paper typically represents more than 70% of the waste produced by offices. Aim to reduce the amount of office paper used and recycle waste paper. The quantity of paper used can also be reduced by using e-mail, filing documents within your computer and making electronic backups instead of printing and filing paper copies. Other alternatives to reduce paper use and waste are by ensuring that printing estimates are correct, avoiding over-ordering printed materials and setting your printer to do double-sided printing. To further reduce emissions, investigate using recycled paper over virgin paper.

Your organisation may also like to investigate the opportunity to join the “Project Paper-less” Alliance. Project Paper-less is an initiative by Planet Ark that

challenges Australians to reduce paper use in the office and at home. Further information is available online from [www.projectpaperless.com.au](http://www.projectpaperless.com.au).

## 5.8 Get Started

Monitor consumption. Check bills for anomalies. If you have sub-meters, record and monitor their consumption monthly. Educate and involve staff, for example:

- Have an annual BBQ — paid for by the energy savings that year!
- Include an energy update in your staff newsletter
- Encourage staff to put forward initiatives
- Have a budget (say 5% of your annual energy expenditure) for ongoing improvements
- Include energy efficiency as part of equipment purchasing policy
- Provide logical labelling of light switches to encourage staff to switch ON only the areas they require.

Having a preventative maintenance program in place with a good service provider is essential to achieving ongoing energy savings, minimising risk of wastage and reducing overall costs.

Your service provider should be made aware of the organisation’s commitment to energy reduction and encouraged to contribute initiatives where possible. This includes informing cleaning staff and involving them in the rewards of all staff.

Office equipment, such as personal computers, printers and faxes, accounts for around 10 - 20% of an office building’s total energy consumption.

Refrigerators and freezers consume relatively large amounts of energy, particularly as they are usually required to operate continuously throughout the year.





Some “common sense” approaches to the use of fridges and freezers in the workplace follow.

- Do not oversize. A 400-litre fridge used to store a carton of milk is wasteful and expensive.
- Excess fridges and freezers should be switched OFF or removed.
- Temperature set points should not be excessively low.
- De-frosting should be carried out regularly.
- Replace eroded seals so that doors close properly.

When purchasing new white goods, energy star ratings should be considered as part of the purchasing criteria.

Taking control of HVAC systems can keep energy use due to this factor down.

- Check thermostat settings and ensure winter warming and summer cooling temperatures are suitable.
- Use a zoning system to ensure only work areas are heated or cooled.
- Set or install timers for HVAC systems to prevent them from running when areas are unoccupied.
- Use economy cycles and night purges to make the best use of outside air when appropriate.

## 5.9 Did You Know?

- A computer and monitor left ON for a year generate the same amount of GHG as a car travelling from Sydney to Perth.
- Printers spend approximately 95% of their time sitting idle, though are usually left ON continuously.
- Fax machines are often left ON continuously, but their actual use time is less than 1 hour per day.
- Monitors account for around 30% of the energy consumption of a typical computer and monitor combination. Screen savers actually waste energy and money.
- Many office and household devices consume energy even when they are switched OFF. Switching OFF devices at the power point when not in use will typically save some 2 to 5% of energy consumption.







## Appendix A



### A.1 Climate Change

Climate change is a generic term used to define any alteration in the global atmosphere that is in addition to the natural climate variability that already exists. The global atmosphere provides temperature stability near the earth's surface by balancing incoming solar energy with outgoing terrestrial infrared radiation. This is achieved primarily by the Greenhouse Effect, a natural phenomenon mediated by water vapour and particular trace gases in the atmosphere known as greenhouse gases (GHGs).

Global Warming (GW) relates to the enhanced Greenhouse Effect caused by increased concentrations of GHGs in the atmosphere because of human activities.

The largest contributor to GW is from fossil fuel combustion. Annual fossil CO<sub>2</sub> emissions increased from an average of 6.4 billion tonnes carbon (23.5 billion tonnes CO<sub>2</sub>) per year in the 1990s to 7.2 billion tonnes carbon (26.4 billion tonnes CO<sub>2</sub>) per year in 2000–2005.

### A.2 What are Carbon Credits?

A carbon credit, as defined by the Kyoto Protocol, certifies one metric tonne of carbon dioxide (CO<sub>2</sub>) either removed from the atmosphere or saved from being emitted. To compensate for the other greenhouse gases, a carbon credit can be expressed in terms of tonnes of

carbon dioxide equivalents (CO<sub>2</sub>e), which relates the effect of other greenhouse gases to an equivalent warming capacity of CO<sub>2</sub>.

Carbon Planet currently offers 4 different kinds of certified carbon credits as standard stock:

- Greenhouse Friendly™
- Gold Standard Wind VERs
- Methane Flaring NGACs
- Forestry Sequestration NGACs.

### A.3 What is Carbon Planet?

Carbon Planet Limited is a global carbon management and origination consultancy whose mission is to enable every individual and organisation on the planet to eliminate their impact on global warming.

Carbon Planet seeks to reduce global warming by educating the public on the impacts of global warming and empowering citizens to take personal responsibility for their GHG emissions by applying Carbon Planet's "Measure, Manage and Minimise" three-step strategy.

Carbon Planet's operations and services have been certified Greenhouse Friendly™ by the Australian Government's Department of Climate Change.

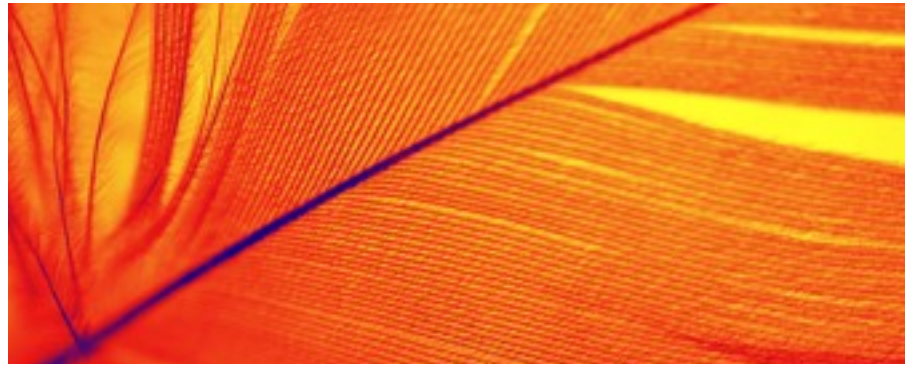
#### COMMON GREENHOUSE TERMS

|                        |  |
|------------------------|--|
| <b>Carbon Credit</b>   | Carbon credits certify the removal of greenhouse gas from the air or the prevention of future greenhouse gas emissions. Each carbon credit is associated with a single tonne of carbon dioxide. There are many different kinds of carbon credits (see Volume II for details).  |
| <b>CO<sub>2</sub></b>  | Carbon dioxide. Released from burning fossil fuels and is the greatest contributor to global warming.  |
| <b>CO<sub>2</sub>e</b> | Carbon Dioxide equivalent. There are several different greenhouse gases (e.g. methane) as well as carbon dioxide, and each has a different strength of effect on global warming. However, the world needs a single dimension on which to measure greenhouse gas emissions, so emissions are expressed as CO <sub>2</sub> equivalent emissions to provide a single unit of measurement for comparison purposes.   |
| <b>GHGs</b>            | Greenhouse gases are components of the atmosphere that contribute to the greenhouse effect. Without the greenhouse effect the Earth would be uninhabitable; in its absence, the mean temperature of the earth would be about -19 °C (-2 °F, 254 K) rather than the present mean temperature of about 15 °C (59 °F, 288 K). Greenhouse gases include, in order of relative abundance, water vapour, carbon dioxide, methane, nitrous oxide, and ozone. The majority of greenhouse gases come mostly from natural sources but are also contributed to by human activity. |





## Appendix B



### B.1 Refrigerants

Refrigerants are used in HVAC systems as the system working fluid. They have a significant Global Warming Potential (GWP) and therefore contribute to climate change.

For refrigerants to be included and counted into NGERs, the sources must be one of the listed items shown below:<sup>14</sup>

- (i) commercial air conditioning
- (ii) commercial refrigeration
- (iii) industrial refrigeration.

In addition, the NGER Determination specifies that reporting of these types of equipment must occur when:

- (i) the refrigerant charge is greater than 100 kg per unit and the global warming potential of the refrigerant is greater than 1000, and;
- (ii) the ANSZIC industry classifications meet Subdivisions 11 or 12, Divisions G, F or L, Number 530.

### B.2 Tenant Electricity

The current approach to NGER accounting applies a “control over energy billing” rationale as a proxy for operational control. The basic principles set out in the guidelines to determine whether the building owner or tenant is deemed in operational control (and therefore responsible for reporting energy use), are as follows:<sup>15</sup>

- (i) Subject to principles (2) and (3), the party that receives and pays the energy bill (‘Party A’) will be deemed to have operational control.
- (ii) 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.
- (iii) 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 a 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.

<sup>14</sup> National Greenhouse and Energy Reporting Regulations 2008, Section 4.16 (1) (a), Federal Register of Legislative Instruments F2008L02230, Australian Government.

<sup>15</sup> 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](http://www.energyefficiencyopportunities.gov.au). Supplement to NGERs, Regulations Policy Paper, Department of Climate Change, 2008 p.25.



## B.3 GreenPower™

GreenPower™ is electricity produced from renewable sources. At present, the purchase of GreenPower™ can result in difficulties in terms of accounting for related GHG emissions. The NGERS does not have legal provisions which allow for individual organisations to reduce their electricity related emissions through the purchase of certified GreenPower™ products.

The GreenPower™ Accreditation Scheme does not legally include critical aspects of its product. Specifically, reduced emissions and use of renewable energy are not assigned to the end customer. These aspects are assigned to the grid and to all other customers by the DCC.<sup>16</sup>

Currently, GreenPower™ customers are paying for renewable energy investments through the purchase of Renewable Energy Certificates (RECs) to cover some or all of their electricity needs. However, in being assigned to the grid, their benefits actually count towards reducing the GHG emissions of everyone. At the same time, GreenPower™ customers “see” reduced or zero emissions on their electricity bills.

In reality, organisations are not being credited their reduced emissions. Should the end user actually ascribe zero emissions from their electricity to their GHG footprint, this results in double accounting under the present system and presents a conundrum to the reporting of GHG emissions for electricity consumption.

Carbon Planet has accounted for businesses that use GreenPower™ in the following ways:

- (i) *GHG Protocol Assessment*: Reduced Scope 2 & 3 emissions in direct proportion to the number of purchased RECs against the respective state emission factors for electricity

- (ii) *NGERS Assessment*: Full Scope 2 emissions for electricity.

The present approach of method (i) by Carbon Planet reflects the intent of current benefits of purchasing GreenPower™ whereby, GreenPower™ offers your business an easy way to “reduce its greenhouse gas emissions”, with the benefit of “direct reductions in your greenhouse gas emissions”.<sup>17</sup> Carbon Planet has made a concession to the end user with a methodology that ought to be granted to the rightful purchaser of GreenPower™. This is an accounting problem and is not the fault of those buying and selling GreenPower™. To resolve the accounting problem, the DCC is required to make adjustments to state emission factors for standard electricity customers to exclude renewables sold voluntarily.

An organisation promoting its carbon neutrality based on method (i) is at risk of 'greenwashing' when marketing tactics lead customers to believe that the organisation is reducing their greenhouse gas emissions.

## B.4 Waste and Water

For any company facility where individual waste and/or water data were not provided, Carbon Planet may use at its discretion, market averaged data for leased commercial tenancy space.<sup>18</sup> The factors applied are shown in Table B.4.1.

**Table B.4.1 Factors applied for leased commercial tenancy**

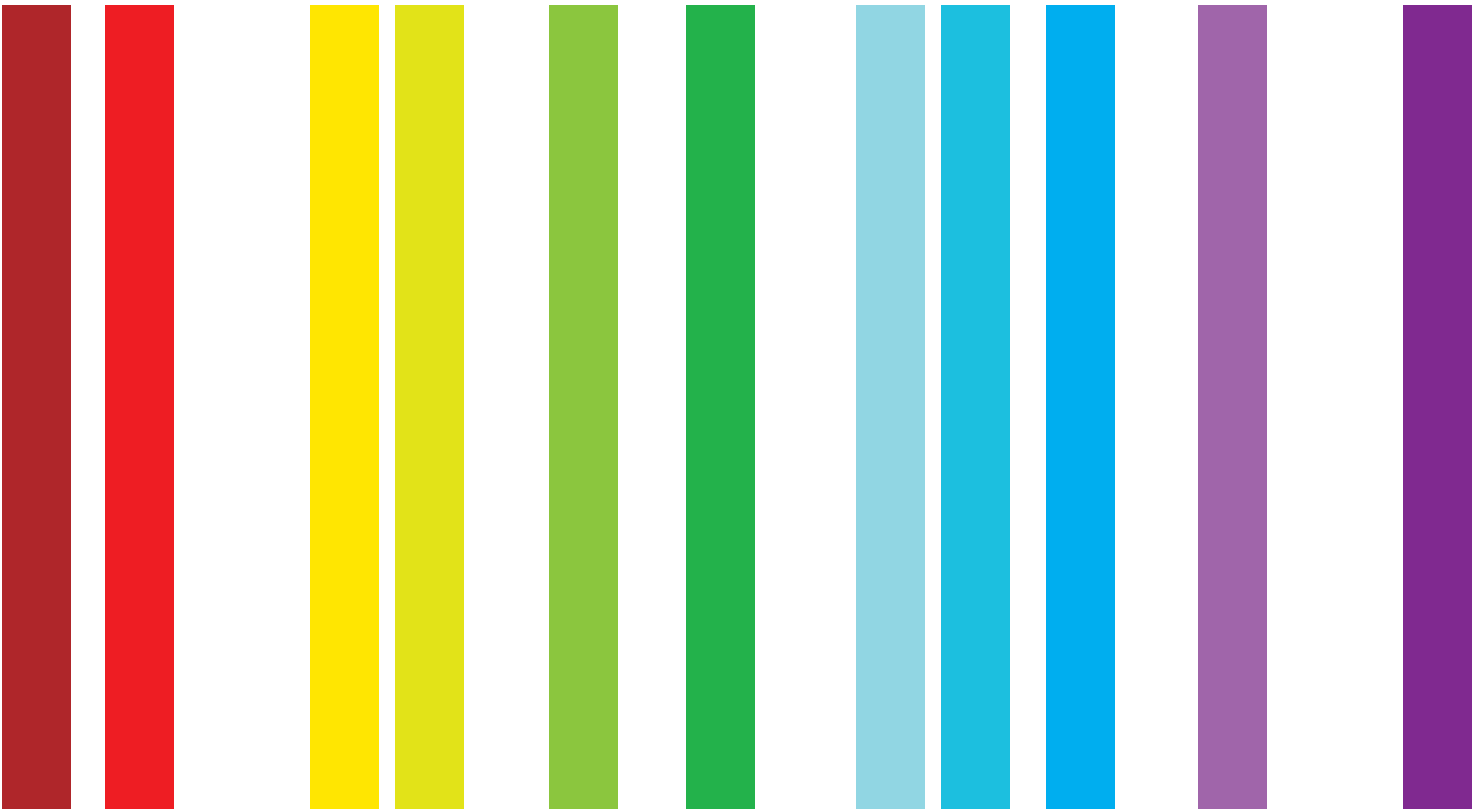
| Activity          | 2007                  | 2008                  |
|-------------------|-----------------------|-----------------------|
| Waste to landfill | 4.6 kg/m <sup>2</sup> | 3.7 kg/m <sup>2</sup> |
| Water use         | 1.2 kL/m <sup>2</sup> | 0.9 kL/m <sup>2</sup> |

<sup>16</sup> Brook, B. Prof. (2008). Make the switch to GreenPower™ and make (virtually) no difference to your carbon emissions, BraveNewClimate.com, August 2008.

<sup>17</sup> Sustainability Victoria (2009). GreenPower™ Accredited Renewable Energy, GreenPower™ Accreditation Steering Group, <http://www.greenpower.gov.au/your-business.aspx>.

<sup>18</sup> Precious, B. and Brown, M. (2008). Building Sustainable Solutions with NABERS, Jones Lang LaSalle and The GPT Group.





### **SYDNEY**

Level 11  
68 York Street  
Sydney NSW 2000

t: +61 2 9249 5900  
f: +61 2 9262 4414

### **MELBOURNE**

Level 3  
52 Albert Road  
South Melbourne VIC 3205

t: +61 3 9024 9100  
f: +61 3 8080 6412

### **ADELAIDE**

Level 4  
170 North Terrace  
Adelaide SA 5000

t: +61 8 8237 9000  
f: +61 8 8232 9115

### **PERTH**

Level 2  
22 Railway Road  
Subiaco WA 6008

t +61 8 9380 4088  
f +61 8 9381 1788

### **BRISBANE**

Level 2  
147 Coronation Drive  
Milton QLD 4064

t: +61 7 3025 3258  
f: +61 7 3025 3300