

Emission Inventory Report

Emissions Inventory Report

Ministry of Transport

Prepared by

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(7.3.1 p)

In accordance with Part 7.3.1 of ISO 14064

Date

11 October 2007

For the period

1 July 2006 to 30 June 2007 (7.3.1 c)

User notes.

References which are shown in brackets e.g. (7.3.1 c) refer to the relevant section of the ISO Standard 14064. This is for reference only and no further action is required by the agency.

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Emissions Inventory Summary (7.3.1 e)

Type of emission	Tonnes CO ₂ -e*
Direct (Scope 1) emissions	
Petrol use	0
Diesel use	0
LPG use	0
Natural gas in owned buildings and leased buildings where the agency is the sole tenant	0
Coal use	0
Total Direct (Scope 1) Emissions	0
Indirect (Scope 2) Emissions	
Purchased electricity for lighting and utility/appliance power in leased space where the agency is not the sole tenant	83.9385948
Total Indirect (Scope 2) Emissions	83.9385948
Indirect (Scope 3) Emissions	
Transmission and distribution line losses for all purchased electricity	7.9081316
Air travel	189.38146
Business travel in rental cars / taxis	9.1638141
Waste to landfill	1.971213
Total Indirect (Scope 3) Emissions	208.4246187
Total Emissions	292.3632135

Direct (Scope 1) emissions

(7.3.1 e)

Area	*CO ₂	*CH ₄	*N ₂ O	*HFCs	*PFC's	*SF ₆	Total CO ₂ e
Scope 1							
Not applicable							
Total							

The Ministry of Transport (the Ministry) does not have any Scope 1 emissions as the fuel used for business purposes in the Ministry's one car is immaterial to the emissions total of the Ministry.

1. Introduction (7.3.1 p)

This emissions inventory report has been prepared and written in accordance with Part 7.3.1 of ISO 14064-1 and is designed to be used in the process of being on the path to carbon neutrality by 2012.

2. Statement of intent

The Ministry of Transport is one of the 28 stage two core public service agencies that will be on the path to carbon neutrality by the year 2012. This programme will be broken down into three key stages which are set out below;

- Measure emissions
- Reduce emissions
- Offset unavoidable emissions¹

3. Organisation description (7.3.1 a)

The Ministry of Transport is the Government's principal transport policy adviser. The Ministry's role is to provide strategic transport leadership, including overall direction and leadership for transport Crown entities and other relevant agencies. The Ministry develops and provides transport policy advice and legislation for the government, it works collaboratively with Crown entities to develop and deliver an integrated programme of action that will fulfil the vision and objectives of the *New Zealand Transport Strategy* and represents New Zealand's transport interests internationally. The Ministry acts as the agent for the Transport Ministers in the government's relationship with the transport Crown entities.

The Ministry is based in Wellington where approximately 175 FTEs and contractors are employed on site. It also has a regional office in Christchurch, comprising six staff, which it shares with Ministry for the Environment and has five staff based in the Government Urban and Economic Development Office in Auckland.

4. Persons responsible (7.3.1 b)

The Ministry of Transport's Chief Executive, Alan Thompson has overall responsibility for the emissions inventory. Fiona Macmaster, Director of Finance Audit and Resources approved the documents for the carbon neutral programme and Susan Chapman, Senior Adviser Govt3, prepared this report.

5. Organisational boundaries included for this report period (7.3.1 d)

The Agency uses the financial control based approach to defining organisational boundaries. Due to the legally prescribed nature of the core public service, the application of either the control or equity approach is likely to have the same effect,

¹ The term "unavoidable emissions" should be understood to include a cost-benefit analysis of the reduction measures.

as government agencies do not have subsidiaries, associate companies in the same manner that private sector companies have group structures, or complex lease arrangements.

The organisational boundaries of an agency are defined by statute and for the purposes of the GHG inventory include core agency activities only.

6. Emissions sources inclusions (7.3.1 e)

Emission sources were identified with reference to the methodology described in the GHG Protocol and the ISO 14064-1 (2006) standard. Identification of emissions sources was achieved using the specific guidance on Scope 3 factors included in the Cabinet Paper POL (07) 131: Towards a Sustainable New Zealand: Carbon Neutral Public Service. Further guidance was obtained from the Ministry for the Environment.

These emissions have then been classified into three categories. The definition of each has been adapted from the GHG Protocol; the three types of emissions are;

- Direct emissions (Scope 1): emissions from sources that are owned or controlled by the agency.
- Indirect emissions (Scope 2): emissions from the generation of purchased electricity consumed by the agency.
- Indirect emissions (Scope 3): emissions that occur as a consequence of the activities of the agency, but occur from sources not owned or controlled by the agency. Inclusions of these are determined on case by case basis, and relate to the agency's aims of the programme.

Actual emissions

Emission source	Scope of Emission
Purchased electricity for lighting and utility/appliance power in leased space where the agency is not the sole tenant	Scope 2
Transmission and distribution line losses for all purchased electricity	Scope 3
Domestic air travel	Scope 3
International air travel	Scope 3
Taxi travel	Scope 3
Business travel in rental cars	Scope 3
Business travel in employee owned cars	Scope 3
Waste to landfill	Scope 3
Natural gas for base building heating in leased buildings which are multi-tenanted	Scope 3
Purchased electricity for base building power in leased buildings where the agency is not the sole tenant	Scope 3

No biomass is used in Ministry of Transport operations and therefore no emissions from the combustion of biomass are included. (7.3.1 f)

7. Emission sources exclusions (7.3.1 h)

The following emissions sources have been excluded from this year's report.

Emission Source	Emission Level Scope	Justification
Petrol for vehicles	Direct (Scope 1)	The Ministry only owns one vehicle, which is part of the Chief Executive's package. The fuel used for business purposes is immaterial to the Ministry's overall carbon footprint. It is, therefore, excluded from the emissions inventory.
Electricity purchased for base building power in leased buildings where the agency is not the sole tenant: Wellington & Christchurch offices	Indirect (Scope 2)	The Ministry shares Novell House, Wellington with a number of other tenants including retail and food outlets in the Lambton Square shopping centre. The building has recently been sold and the new owner does not have any data for 2006/07. The original owner advised that electricity used in common areas includes the lifts, which consume a huge amount of energy and that it was not possible to estimate the volume of traffic that MoT had. This information was not available for the Christchurch office either. Systems will be put in place to collect and report this emission source in 2007/08.
Natural gas for base building heating in leased buildings which are multi-tenanted	Indirect (Scope 3)	The Ministry shares Novell House with a number of other tenants including retail and food outlets in the Lambton Square shopping centre. The building has recently been sold and the new owner does not have any data for 2006/07. The original owner advised there is only one gas meter. The meter reads energy used for the entire building including the whole of Lambton Square as well as an apartment on level 12 that has gas appliances in its kitchen. Therefore, it was not possible to estimate the Ministry's share of gas used. Systems will be put in place to collect and report this emission source in 2007/08.
Business travel in employee owned cars	Indirect (Scope 3)	VKT in employee owned cars has not been reported for 2006/07 as the data gathered for financial reporting was not detailed enough to readily extract it. This data is most like immaterial to the Ministry's overall emissions, however systems will be put in place to collect it in 2007/08 in order to establish materiality.
Staff commuting to work in personal cars	Indirect (Scope 3)	This is considered to fall under the personal carbon foot print of the employee as the agency has little control over where people choose to live; therefore this is outside the Scope. Work will be undertaken to produce travel plans to help reduce this effect under a further scheme.
Corporate Waste, e.g. computer equipment and office furniture	Indirect (Scope 3)	These are items whose disposal is over and above the normal daily waste that is sent to landfill. As with other goods and services the new procurement rules will help to reduce this effect

		by looking at the full life cycle of a product when the tendering process is being undertaken. This could increase the number of suppliers who will rent or take back goods when they are surplus to future requirements of the agencies and ensure these are appropriately recycled.
Carbon embodied within buildings	Indirect (Scope 3)	The production of cement and other building materials make up the Scope 1 emissions of suppliers and would be included in their carbon footprint. The government procurement strategy will ensure that sustainability considerations are taken into account when procuring office accommodation.
IT services	Indirect (Scope 3)	From time to time the Ministry procures IT support from external suppliers. It also procures helpdesk services from Revera. Some staff are located in the Ministry offices in Wellington, the remainder of these services are excluded from this inventory as their emissions are deemed immaterial.
Refrigerant emissions	Indirect (Scope 3)	Emissions from refrigerant leakage are Scope 1 emissions and, where possible, should be included in an emissions inventory. They have been considered for inclusion as part of the Carbon Neutral Public Service programme. However, due to difficulties in measuring this type of emission, combined with their potentially low materiality, it has been decided that these will not be included within the scope of the initial inventories.
Purchased goods and services including cleaning, archiving, design services and printing	Indirect (Scope 3)	The emissions associated with purchased goods and services make up the Scope 1 emissions of suppliers and would be included in their carbon footprint. The initiative for procurement of sustainable goods and services will help to change the ways in which the agencies undertake procurement programmes to ensure that they take into account the longer term sustainability implications of the procurement decisions and to encourage suppliers to adopt sustainable business practices. Therefore these areas will not be included within the scope of this report.

For further information see the document 'Carbon Neutral Public Service Emission Inventory Preparation Guidance'

8. Base year selected (7.3.1 j)

This is the Ministry of Transport's first emissions inventory report. The chosen base year calculated for this report is the year from 1 July 2006 to 30 June 2007.

9. Data collection quantification of methodologies (7.3.1 l and n)

The table below details the sources of the relevant data and the emission factors which have been used. All the factors have been approved by the Ministry for the Environment. The amount of CO₂e has been calculated by multiplying the activity data sourced by the agency by the relevant emission factor. As this is the first year that the agency has produced these figures there have not been any changes in methodology to report. (7.3.1 k)

Emission or Removal Source	Data Collection Unit	Emission or Removal Factor	Factor Source
Purchased electricity for lighting and utility/appliance power in leased space where the agency is not the sole tenant	kWh	0.0002091	New Zealand Energy Greenhouse Gas Emissions 1990-2006 (Ministry of Economic Development, 2007).
Transmission and distribution line losses for all purchased electricity	kWh	0.0000197	New Zealand Energy Greenhouse Gas Emissions 1990-2006 (Ministry of Economic Development, 2007)
Domestic air travel	Km	0.00018	Mobile Combustion CO ₂ Emissions Calculation Tool, Emissions based on distance Worksheet (WBCSD/WRI GHG Protocol Initiative - available from the GHG Protocol website)
International air travel	Km	0.00011	Mobile Combustion CO ₂ Emissions Calculation Tool, Emissions based on distance Worksheet (WBCSD/WRI GHG Protocol Initiative - available from the GHG Protocol website)
Taxi travel	Km	0.0002373	Zealand Energy Greenhouse Gas Emissions 1990-2006 (Ministry of Economic Development, 2007). Fuel economy rate sourced from Ministry of Transport (2007)
Business travel in rental cars	Km	0.0002373	Zealand Energy Greenhouse Gas Emissions 1990-2006 (Ministry of Economic Development, 2007). Fuel economy rate sourced from Ministry of Transport (2007)
Waste to landfill	Tonne	0.9	Emission factor methodology from Ministry for the Environment. Based on data from: New Zealand's Greenhouse Gas Inventory 1990-2005 (Ministry for the Environment, 2007)
Purchased electricity for base building power in leased	kWh	0.0002091	New Zealand Energy Greenhouse Gas Emissions

buildings where the agency is not the sole tenant			1990-2006 (Ministry of Economic Development, 2007)
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10. Emission reductions and removals (7.3.1 g)

The Ministry of Transport has achieved no significant emissions reductions for this reporting period as this is the first reporting period and establishment of Ministry of Transport baseline year emissions.

The Ministry of Transport will have a management plan in place for managing and reducing emissions by early 2008. This report is designed to be used in the process of being on the path to carbon neutrality by 2012.

11. Uncertainties (7.3.1 o)

The follow uncertainties have an unidentifiable impact on the accuracy of the GHG emissions and removals data provided in this inventory.

Emission Source	Emission Scope	Uncertainties
Electricity	Scope 2	Data supplied by Genesis Energy and MfE is complete and accurate.
Travel	Scope 3	<ul style="list-style-type: none"> Records supplied by Atlantic and Pacific Travel, Taxicharge and Budget Rental Cars are complete and accurate. TransTasman flight data are included in the international flight calculations. Any short haul flights made overseas are recorded as international flights as this data was not reported separately.
Waste to landfill	Scope 3	<ul style="list-style-type: none"> Figures provided by OCS Waste and MfE are complete and accurate. The waste audit figures for the Wellington office only include kitchens' waste to landfill. The Ministry rolled out its kitchen recycling system half way through 2006/07 but did not roll out the desk recycling until October 2007 (2007/08), thus the reason full waste audits were not undertaken.

12. Verification of the GHG Inventory (7.3.1 q)

This inventory has not been verified.