



Energy Efficiency Opportunities Act

Australia Post Public Report, 1 July 2006 – 30 June 2010

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1. Managing Director's endorsement

This is a time of significant challenge for Australia Post as it faces a number of key business issues, most notably a decline in letter volumes, with the next few years critical to our long term sustainability. Despite these challenges we have not ignored our responsibilities, as a major Australian corporation, to meet our legislative obligation to the EEO program, rather we have embraced it as one of the keys to improving our efficiency and reducing our financial cost and environmental impact.

In May 2010 Australia Post endorsed a Carbon Reduction Strategy and committed to reducing its greenhouse gas emissions by 25 per cent by 2020 (based on year 2000 levels).

To support this commitment we have further committed to an \$11.2 million investment in energy efficiency based around the opportunities identified at our facilities in our first year of EEO audits. This program, when completed, aims to reduce our scope 1 and 2 greenhouse gas emissions by 30,000 tonnes of carbon emissions, 10 per cent of our total emissions.

I am pleased to present Australia Post's third annual Energy Efficiency Opportunities Public Report, which details our commitment to energy efficiency and the EEO program.

Ahmed Fahour

Managing Director & CEO

Date: 2 Dec 2010

Declaration of accuracy and compliance
The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the <i>Energy Efficiency Opportunities Act 2006</i> and <i>Energy Efficiency Opportunities Regulations 2006</i> .

2. Executive summary

2009–10 EEO Report

This report covers all aspects of Australia Post's operational activities and includes the subsidiaries that operate in Australia and are under our operational control as per the requirements of the *EEO Amendment Regulations 2008 (No. 1)*. As the subsidiaries predominantly operate within facilities that are owned and / or occupied by Australia Post, their data is incorporated into Australia Post's results. The report covers the period 1 July 2006 to 30 June 2010.

Leadership

Australia Post undertook a review of its current emissions profile and its likely profile in 2020. This was followed by an assessment of all opportunities to reduce our emissions which culminated in the development of a Carbon Reduction Strategy and an emissions reduction target of 25 per cent by 2020 based on our 2000 emission levels. This was endorsed by the Board in May 2010.

One of the key elements of the strategy was the development of a business case to implement a large number of energy efficiency opportunities at our facilities that had been identified in Year one of the EEO Program. The business case was approved and work has now commenced on the four years \$11.2 million National Energy Management Plan (NEMP). This initiative implements all of the opportunities identified with a four year pay-back, however there is now scope to cost effectively implement additional opportunities with a 4 – 7 year pay-back through a partnership with the Carbon Trust.

To oversee the implementation of our Carbon Reduction Strategy a senior management steering committee has been created to monitor our progress and to review new opportunities for possible inclusion and implementation.

Assessments

During the reporting period, we undertook assessments in line with the Assessment and Reporting Schedule (ARS) and extended our program. The assessments and key results were as follows:

Assessment	Description	Key results
2009–10 site assessments	43 sites were audited during the 2009–10 financial year.	33 energy reducing ideas were identified that provided 225 opportunities across the 43 sites.
2009–10 vehicle fleet assessments	A comprehensive set of 138 tests of articulated and rigid trucks was conducted at AARC Anglesea, allowing rigorous assessment of existing and future opportunities.	20 opportunities were identified and investigated or commenced investigation. All but four opportunities focused on trucks. Five opportunities were completely implemented and two more begun.
Technology alternative research	A review was undertaken to determine the applicability of new and developing technologies to Australia Post's property portfolio.	Opportunities for inclusion in new buildings were identified but there were no cost effective opportunities available for upgrading our existing portfolio.

The trial of electric bicycles and tricycles reported on last year has been successfully completed. While not every one of our 7,000 delivery round is able to be completed using electronically assisted bicycles and tricycles as a replacement for a motor bike we are planning to purchase and deploy approximately 1,000 over the next two years.

Significant opportunities

As a result of the development of the Carbon Reduction Strategy and the assessments under the Energy Efficiency Opportunities (EEO) program, a range of initiatives are being implemented or developed to help reduce carbon emissions by 25 per cent. These initiatives will also ensure our business operates more efficiently while minimising our reliance on fossil fuels, reducing our emissions and reducing our operating costs. Initiatives include:

- A NEMP to implement energy efficiency initiatives identified through the first year of our participation in the EEO program.
- Progressively replacing our vehicle fleet with more fuel efficient vehicles eg hybrids, electrically assisted bicycles, electric vehicles, higher Euro engine standard vehicles, etc.
- An Environmental Driver Training program to improve driving practices by addressing issues such as harsh braking, engine over-revving, idling and economical driving.
- Adopting IT systems and practices that use less energy.
- A range of vehicle initiatives such as adjusting tyre pressures, optimising the aerodynamic air deflectors on all trucks, etc.
- Implement a behaviour change program.

Key Performance Indicators

We report against three Key Performance Indicators (KPIs) (refer Page 18):

1. Energy consumption for the reporting period
2. Energy use per square metre of floor space
3. Energy use per kilometre travelled.

As the major energy reduction initiatives are to commence implementation in 2010–11 there were few major initiatives in place during the 2009–10 reporting year. Pleasingly our overall energy consumption still decreased in both stationary and non-stationary energy.

At the same time we have been improving the quality of our data, specifically the square metres of floor space in some of our building and we now have the kilometres travelled by our Post Logistics subsidiary where previously we only had the fuel consumption. This has resulted in a slight increase in the remaining two KPIs

With the implementation of our energy management program and our carbon reduction strategy we can expect to see a real change in our KPIs in future years.

3. Introduction

Australia Post provides essential postal and retail services to communities and businesses across Australia. To achieve this we:

- employ more than 34,000 full-time and part-time staff, and 5,000 contractors
- operate more than 4,400 retail outlets and licensed post offices, and 1,200 facilities
- manage a fleet of more than 10,000 vehicles.

Our greenhouse gas emissions in 2009–10 were 309,999 tonnes of carbon emissions of which stationary energy comprised 73 per cent and transport 27 per cent.

As previously stated Australia Post has made a commitment to reduce greenhouse gas emissions by 25 per cent by 2020 and the EEO program will play a major role towards meeting that target. The formal assessment process provides a structured approach to reviewing our energy practices and assisted in identifying opportunities to become more energy efficiency.

This annual public report has been prepared to provide meaningful information to our stakeholders and the public about our electricity, gas and fuel consumption; the assessments we have undertaken to identify efficiency savings opportunities; and the actions we are taking or planning to take to reduce energy consumption.

Specifically, this report includes the following information:

- details of Australia Post and the entities covered by this report
- the period covered by the report
- key strategies that demonstrate organisational leadership by senior management
- assessments conducted to find opportunities at facilities, and the results of those assessments
- assessments conducted to find opportunities in our fleet, and the results of those assessments
- significant opportunities to reduce our greenhouse gas emissions
- Key Performance Indicators.

3.1 Controlling corporation profile

Legal name of entity	Australian Postal Corporation
Trading name	Australia Post
ABN	28864970579
Trigger year	1 July 2005 – 30 June 2006
First public report	1 July 2006 – 30 September 2008
Period to which this report relates	1 July 2006 – 30 June 2010
Head office address	GPO Box 1777, Melbourne VIC 3001
Total annual energy use in PJ in 2009–10 financial year	2.1 PJ
Australian and New Zealand Standard Industrial Classification (ANZSIC)	5101
Global Industry Classification Standard (GICS)	220301010
Contact person	Andy Trott
Position	Manager Environment
Address (postal)	111 Bourke Street, Melbourne VIC 3000
Phone	03 9106 7484
Email address	andy.trott@auspost.com.au

Table 1 Controlling corporation profile

3.2 Corporate group

As the Controlling Corporation, Australia Post is responsible for determining which subsidiaries and related corporations are members of its corporate group, and complying with EEO requirements for the group. The EEO Industry Guidelines specify that a corporate group includes the controlling corporation, its subsidiaries and, in some cases, joint ventures or partnerships in which the controlling corporation has an interest.

The subsidiaries included in this report, are the same as those included in the 2008–09 Report. Specifically, Australia Post's subsidiaries predominantly operate within facilities that are owned and / or occupied by Australia Post; and their consumption data and opportunities are reported within Australia Post's results. The subsidiaries include:

- Decipha Pty Ltd
- First Direct Solutions Pty Ltd
- iPrint Corporate Pty Ltd
- Lakewood Logistics Pty Ltd
- Post Logistics Australasia Pty Ltd
- Printsoft Products Pty Ltd (Cheltenham operations only).

Australian air Express (AaE) and Startrack Express are joint ventures, 50 per cent owned, between Australia Post and Qantas. In accordance with the legislation, as Australia Post does not have operational control, each organisation will report in its own right.

Other subsidiaries and joint ventures have been excluded as they either operate overseas or are not under our operational control. It should be noted that the corporate structure covered in this EEO Report, is the same as that reported on under the *National Greenhouse and Energy Reporting (NGER) Act*.

3.3 Period covered by the report

Energy Efficiency Opportunities Amendment Regulations 2008 (No. 1) is designed to align EEO reporting with National Greenhouse and Energy Reporting (NGER) legislation. The National Greenhouse and Energy Reporting is by financial year hence the assessment period covered by this report is 1 July 2006 to 30 June 2010.

4. Leadership

Leadership from senior management is essential in demonstrating a company's commitment to reducing its environmental impacts to staff, government, industry and the public. Acts of leadership provide the impetus for an organisation to reach its sustainability goals and influence staff, customers and associated companies to act sustainably. The following are the key strategies and programs implemented in 2009–10 that demonstrate leadership from Australia Post's board and senior management as a means of improving the environmental performance of Australia Post and its subsidiaries.

4.1 Carbon Reduction Strategy

A key priority of Australia Post's Corporate Responsibility Strategy has been a reduction in our levels of greenhouse gas emissions. As such a major review of our current carbon position was undertaken including our likely position in the year 2020. This exercise clearly identified the need for the corporation to focus on reducing our emissions well in advance of 2020. In determining a reduction strategy we identified the key emissions areas and the activities that generate those emissions and then every opportunity that could be implemented to reduce or eliminate that emission. The opportunities considered ranged from stopping the activity completely to minimising the emission levels.

Ultimately a Carbon Reduction Strategy was developed. It also included a 25 per cent reduction target by 2020 based around a number of key initiatives, some of which were able to be cost effectively implemented in the first few years while others are reliant on significant change to our current business processes. The Australia Post board approved the Carbon Reduction Strategy in May 2010.

4.2 National Energy Management Plan

The board has approved an \$11.2 million investment in energy management over the next four years to significantly reduce our energy consumption and our greenhouse gas emissions. The NEMPs major focus will be on improvements to our major mail and delivery centres through the introduction of items such as new more energy efficient lighting, motion sensors, improvements to air conditioning systems, sky lights, etc. Once fully implemented, the initiative will save approximately 30,000 tonnes of carbon emissions, equivalent to approximately 10 per cent of our annual scope 1 and 2 greenhouse gas emissions.

4.3 Energy and Carbon Steering Committees

Management has established a steering committee to oversee the implementation of our NEMP, the project that is implementing the \$11.2m in energy efficiency. At the same time an Environmental Carbon Stakeholder Committee has been established to oversee the implementation of the Carbon Reduction Strategy. Both committees provide a clear indication that the Corporation is taking its commitment to energy and carbon reduction extremely serious. To further support this commitment all medial and major business cases must provide an indication as to the impact their business initiative will have on energy consumption and carbon emissions so that decision makers can fully understand the impacts of any new business proposal.

4.4 Carbon Trust Partnership

The Carbon Trust is a not for profit independent company established and funded by the Australia Government to help businesses and the wider community become energy efficient. Australia Post has developed a partnership with the Carbon Trust to:

- increase the energy efficiency in at least 25 facilities by retrofitting the buildings with more energy efficient lighting, ventilation systems, etc where the payback period exceeds four years
- undertake demonstration projects e.g. cool roof technology and power saving applications in major Australia Post facilities for Australian business
- use Australia Post's nationwide reach to assist the Carbon Trust in communicating to the wider community about energy efficiency and carbon emissions reduction.

5. Assessments – facilities

Australia Post's operations comprise over 1,200 owned and leased facilities across Australia. The majority are retail outlets, followed by delivery centres, administration offices and mail centres.

Due to our large number of facilities, Australia Post's Assessment and Reporting Schedule was developed to assess:

- all sites with high energy consumption such as mail centres and energy-intensive business centres
- a representative sample of retail outlets and delivery centres to determine opportunities to reduce energy use and the associated savings; and then extrapolating the savings to the remaining sites to determine the viability of the opportunities.

The key principles that underpin the assessment methodology include:

- employing people with appropriate skills and expertise in the analysis of energy and process data
- using source data of ± 5 per cent accuracy
- assessing influences on data and energy
- applying performance indicators to assist in the identification of opportunities
- classifying opportunities with a four year payback as "opportunities for implementation" or "further investigation"
- involving a cross-section of people in the business in the identification and evaluation of opportunities
- ensuring that management responsible for investment and resource allocation have key background information and the outcomes of the assessments to assist decision making.

5.1 2009–10 assessments

During the reporting period from 1 July 2009 to 30 June 2010, we undertook assessments in line with the ARS and extended our program as follows:

- Assessed 38 facilities across Australia, including:
 - ACT – 2
 - NSW – 10
 - QLD – 7
 - TAS – 1
 - VIC – 16
 - WA – 2.
- Assessed 306,000 gigajoules (GJ) of energy, which is approximately of 32 per cent of our stationary energy. (Equivalent to 85 million kilowatt hours, or 81,000 tonnes of carbon emissions).
- We have assessed 60 per cent of our total stationary energy as a total of all the facilities assessed during the EEO program to date.

Facility name	Period over which assessment was undertaken.	Energy use per annum in GJ in the current reporting year (Financial year 2009-10).
Alexandria Delivery Facility	October – December 2009	9,096
Braeside Delivery Centre	March – June 2010	928
Bundal Mail Centre	March – June 2010	44,581
Canberra South Delivery Centre	March – June 2010	12,919
Capalaba Delivery Centre	March – June 2010	758
Carlton South Post Office	October – December 2009	123
Collins St West Retail Outlet	October – December 2009	194
Dubbo Delivery Centre / Post Office	March – June 2010	1,012
Ferntree Gully Delivery Centre	March – June 2010	10,450
GPO Canberra Delivery Centre	March – June 2010	3,724
Hawthorn Delivery Centre	March – June 2010	1,561
Heathwood Delivery Facility	October – December 2009	6,686
Hoppers Crossing Delivery Centre	March – June 2010	912
Launceston Delivery Centre	March – June 2010	801

Facility name	Period over which assessment was undertaken.	Energy use per annum in GJ in the current reporting year (Financial year 2009-10).
Melbourne City Street Delivery Centre	March – June 2010	2,236
Melbourne Gateway Facility	March – June 2010	10,807
Melbourne GPO Post Shop	October – December 2009	640
Mid North Coast Mail Centre	March – June 2010	1,016
Moonee Ponds Post Office	October – December 2009	119
Moorabbin Delivery Centre	March – June 2010	2,034
Narre Warren Delivery Centre	March – June 2010	1,625
North Ryde Delivery Centre	March – June 2010	1,397
Northgate Mail Centre	October – December 2009	16,132
Nunawading Delivery Centre	March – June 2010	873
Perth Parcel Centre	March – June 2010	7,623
Post Logistics Brisbane Airport	August – September 2010	1,196
Post Logistics Wetherill Park Warehouse 4	April – May 2010	5,845
Post Logistics Wetherill Park Warehouse 8	April – May 2010	5,234
Prince Alfred Park (PAP)	October – December 2009	40,524
Seaford Delivery Centre	March – June 2010	1,374
Somerton Delivery Centre	March – June 2010	943
St Leonards Delivery Facility	March – June 2010	52,959
St Leonards Hub	March – June 2010	1,335
Stafford Delivery Centre	March – June 2010	2,098
Underwood Mail Centre	October – December 2009	52,927
Wagga Wagga Delivery Centre	March – June 2010	2,409
Welshpool Delivery Centre	March – June 2010	636
William St Law Courts Retail Post	October – December 2009	263
Total energy assessed		305,992
Total energy use of the group in the current reporting year		948,880
Total energy assessed expressed as a percentage of total current energy use		32%
Cumulative total of energy assessed during the EEO program, expressed as a percentage, based on current data		60%

Table 2 Facilities - opportunities identified from assessments completed during the reporting period.

The aim of the assessments undertaken in this reporting period was to:

1. Assess the facilities included the NEMP program, including;
 - a) Any remaining large sites to include in the first implementation stage of the NEMP program
 - b) Begin to assess the facilities that were put into the business case using representative sampling, to determine the savings and applicability for the secondary implementation stage of the NEMP program.
2. Assess some of the Post Logistics Australia warehouse sites as outlined in the ARS.
3. Undertake further research into new and upcoming technologies.

5.1.1 NEMP program assessments

The \$11.2 million dollar National Energy Management Plant (NEMP) used representative sampling to identify the potential savings from a range of facilities, with a common building and energy use profile, to secure the national funding for the energy efficiency program. In determining what energy efficiency initiatives should be implemented at each facility the project team used the EEO assessment process to determine which of the already identified opportunities, arising from the representative sampling in year one of the program, can be implemented within the NEMP project.

As a consequence a significant number of assessments were completed as part of the NEMP project so as to fast track the implementation of the efficiency initiatives. Therefore while representative sampling was used to identify opportunities for all our retail and delivery facilities most of the larger delivery facilities will still be audited so as to support the NEMP project.

The major facilities are scheduled to be implemented in 2010–11. The induction lamps and a number of other initiatives such as occupancy sensor, PE lights, etc were implemented in June 2009–10 at the Perth Parcel Centre as the first of the NEMP project implementations. Early indications are that estimated savings of 2,887 GJ per annum are on track.

5.1.2 Retail lighting

As most of our retail outlets are located in shopping centres where the centre provides the HVAC, the primary opportunity for reducing energy consumptions is through the choice of lighting and light controls.

As such a trial has commenced, in four facilities in Victoria, to assess a new lighting design aimed at increasing the effectiveness of the lighting and more specifically the efficiency. The trial will run over a six month period to ensure seasonal impacts are measured. If the trials are successful the lighting will be installed as part of our ongoing facility upgrade program, it is not cost effective to simply upgrade the lighting in its own right.

We have engaged electrical engineers to undertake the trials and the results will be reported in the 2010–11 EEO Public Report.

5.1.3 Post Logistics Australasia assessments

Three of our Post Logistics facilities were audited during the last twelve months. There are some opportunities, included in the tables below, for energy reduction but far less than Australia Post facilities as very little air conditioning is used and the operating hours are significantly less.

5.1.4 High bay lamps

In the 2008–09 EEO report, we reported on the induction high bay lighting trials at the Dandenong Letters Centre. As a result of this success they have been included in the NEMP project as one of the major energy savings initiatives and are being implemented in all of our major facilities across Australia.

5.1.5 Researched new technologies

As part of EEO program and the development of our Carbon Reduction Strategy we sought a review of the technologies that are well established but are either too expensive or are at various stages of becoming commercialised to determine their viability for Australia Post over the next ten years.

The net result was that while a number were indeed viable for a new building this was not the case for a retrofit or a major upgrade of Australia Post’s existing facilities. While this was a disappointment we intend to keep a watching brief so as to be able to take advantage of a suitable commercially viable and cost effective technology solution when it becomes available. The following is a list of the options reviewed:

Technology category	Technologies reviewed	
Commercial air conditioning	<ul style="list-style-type: none"> • Chilled beams • Solar cooling • Batiso 	<ul style="list-style-type: none"> • Shaw method of air conditioning • Task air • Geothermal heating and cooling
Lighting	<ul style="list-style-type: none"> • Light Emitting Diodes (LED) • Organic Light Emitting Diodes (OLED) 	<ul style="list-style-type: none"> • Energy management • Intelligent energy management systems
Energy generation technologies	<ul style="list-style-type: none"> • Solar photovoltaic • Silicon photovoltaic • Concentrating photovoltaic • Thin Film Photovoltaic • Organic photovoltaic • Concentrating troughs • Fuel cells 	<ul style="list-style-type: none"> • Solar thermal • Power tower • Concentrating dish • Wind energy systems • Horizontal axis wind turbines • Vertical axis wind turbines • Combined Heat and Power (CHP)

5.1.6 2009–10 Results

The overall outcome of this year’s assessments is that 33 initiatives were identified at 38 sites resulting in 225 viable opportunities for implementation.

The opportunities classified as “to be implemented” include the facilities and opportunities involved in stage 1 (2010–11) of the NEMP implementation. It also includes the four sites going to be used for retail lighting trials.

Opportunities classified “under investigation” indicate the facilities that will be included in the second stage of NEMP implementation to be undertaken in 2011–12. This is reflected in the figures shown in Table 3 below.

Energy use of the entity during the current reporting period: 948,880 GJ

Status of opportunities identified		Total number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – ≤ 4 years		> 4 years		
			No of opp	GJ	No of opp	GJ	No of opp	GJ	
Business response	Under investigation	196	37	1,352	117	26,446	42	17,836	45,635
	To be Implemented	24	4	125	10	8,143	10	85	8,353.3
	Implementation commenced	0	0	0	0	0	0	0	0
	Implemented	1	0	0	1	2,887	0	0	2,887
	Not to be implemented	4	4	25	0	0	0	0	25
Outcomes of assessment	Total identified	225	45	1,502	128	37,477	52	17,921	56,900

Table 3 Facilities - opportunities identified from assessments completed during this reporting period.

Note: As required, the opportunities assessed to an accuracy of ±30 per cent or better.

5.2 2008–09 assessments update

During this period of reporting, our main focus was developing the business investment proposal for the NEMP and to gain approval. The business endorsed the NEMP in December 2009, and the remaining year was utilised for planning the first year of implementation. Therefore, many of the initiatives identified throughout the EEO process have not been implemented since the previous report.

Only an additional five opportunities were implemented in this reporting year, which when combined with the previous years implemented opportunities, save an approximate 13,400 GJ of energy per annum.

As stated in the 2009–10 assessments section, the opportunities classified as “to be implemented” include the facilities involved in stage 1 (2010–11) of the NEMP implementation.

Energy use of the entity during the current reporting period: 948,880 GJ

Status of opportunities identified		Total number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – ≤ 4 years		> 4 years		
			No of opp	GJ	No of opp	GJ	No of opp	GJ	
Business response	Under investigation	48 (82)	39 (35)	9,631 (7,515)	8 (46)	596 (9,832)	1 (1)	42 (42)	10,269 (17,389)
	To be implemented	39 (0)	24 (0)	27,681 (0)	11 (0)	13,211 (0)	4 (0)	1,285 (0)	42,177 (0)
	Implementation commenced								
	Implemented	18 (13)	13 (8)	3,939 (1,877)	4 (5)	9,258 (8,913)	1 (0)	212 (0)	13,409 (10,790)
	Not to be implemented	23 (10)	7 (0)	118 (0)	0 (1)	0 (10)	16 (9)	183 (84)	301 (94)
Outcomes of assessment	Total identified	128 (105)	83 (43)	41,368 (9,392)	23 (52)	23,065 (18,755)	22 (10)	1,723 (126)	66,156 (28,273)

Table 4 Facilities - update of opportunities identified from assessments in the previous reporting periods.

Note: The numbers in brackets are from the 2008–09 Report and included to allow easy comparison of the results between the two reports.

As required, opportunities assessed to an accuracy of ±30 per cent or better.

5.3 Future assessments and implementation for 2010–11

5.3.1 Audit facilities remaining in our ARS

We have completed 41 of the site assessments listed in the ARS, and an additional 23 that were not on the list. Over the 2010–11 reporting period we have 34 assessments to complete. Some review of the list may be required given the additional assessments already completed or currently underway.

5.3.2 NEMP audits

As mentioned above we will continue the implementation roll-out of our NEMP program which will include the pre-implementation assessments of a number of additional facilities not listed in the ARS.

6. Assessments – transport

Australia Post's fleet comprises more than 10,000 vehicles including motorcycles, cars, vans, small and large trucks and prime movers. Due to the large number of vehicles, we are undertaking the assessments by vehicle type; finding opportunities to reduce fuel use; and applying the viable opportunities to the fleet. The assessments are being undertaken via the methodology and timeframe specified in the Assessment and Reporting Schedule (ARS).

During the current reporting period, we conducted rigorous testing of heavy rigid trucks and articulated trucks, and analysis of the results in order to identify and evaluate fuel saving opportunities.

We are also continually analysing the design of the mail delivery network, which has resulted in finding opportunities to reduce fuel use while improving service quality and delivery staff safety.

As described in section 5; we maintained all of the key principles that underpin the assessment methodology.

6.1 2009–10 assessments

6.1.1 Heavy Vehicles

In line with the ARS timeline, we focussed on rigid trucks and prime movers opportunities. As a result, we have now assessed 86 per cent of our transport energy for energy efficiency opportunities, as shown in Table 5 below.

Fleet name	Period over which assessment was undertaken.	Energy use per annum in GJ in the current reporting year (Financial year 2009-10).
Rigid trucks	August 2009 – January 2010	326,229
Prime movers	August 2009 – January 2010	497,581
Total energy assessed		823,810
Total energy use of the group in the current reporting year		1,192,682
Total energy assessed expressed as a percentage of total current energy use		69%
Cumulative total of energy assessed during the EEO program, expressed as a percentage, based on current data		86%

Table 5 Transport - energy use assessed in the current reporting period

Note: This data is within \pm five per cent accuracy.

6.1.2 Environmental driver program

The environmental driver program outlined in the 2008–09 Public Report, was further developed and deployed. All drivers are scheduled to complete initial training by March 2011. The training includes six core elements: engine revving; idling; acceleration; gear changing and selection; and use of air conditioning. In addition to fuel savings, anticipated benefits include public and staff safety, reduced wear of engines, transmissions and tyres.

6.1.3 New fuel efficient motorbike

An improved fuel efficient motorcycle has been developed by Honda that Australia Post will seek to trial once available. It is expected to be here in December 2010.

6.1.4 Tyre pressure

An audit of linehaul tyre pressures found that the average tyre pressure of the fleet was 17.9 per cent below specification. Adjusting the tyre pressure of the linehaul fleet is expected to save 2.34 per cent of fuel consumption, and this initiative has subsequently been implemented. Annual savings are approximately 810 tonnes of carbon emissions.

6.1.5 Alternative Delivery modes

A trial of bicycles and tricycles has been completed successfully during 2009–10 allowing for a move away from motor bikes to electronically assisted tricycles and bicycles etc. Approximately 200 are already in place with orders for another 1,000 to be placed in the near future

6.1.6 Aerodynamics

A number of initiatives were identified that improve the aerodynamics of the heavy vehicles, resulting in a reduction of fuel consumption. Only some of these initiatives have since been implemented, and others require further investigation before being implemented. Some of these initiatives include;

- Optimising air scoops and deflectors
- Tear drop trailers
- Boat tails.

6.1.7 Results

The overall outcome of our new assessments is that we identified 20 new opportunities to reduce fuel use across our heavy vehicle fleet. We have already implemented five of these opportunities that will save around 24,100 GJ per annum, see Table 6 below.

Energy use of the entity during the current reporting period: 1,196,591 GJ

Status of opportunities identified		Total number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – ≤4 years		> 4 years		
			No of opp	GJ	No of opp	GJ	No of opp	GJ	
Business Response	Under investigation	10	2	33,599	1	16,953	7	123,183	173,735
	To be implemented	1					1	11,861	11,861
	Implementation commenced	2	1	8,201	1	3,466	0	0	11,667
	Implemented	5	5	24,143					24,143
	Not to be implemented	2					2	62,842	62,842
Outcomes of assessment	Total Identified	20	8	65,942	2	20,419	10	197,886	284,248

Table 6 Transport –opportunities identified from assessments in this reporting period.

As required, opportunities assessed to an accuracy of ±30 per cent or better.

6.2 2008–09 assessments update

As stated in the 2008–09 report, the assessment undertaken of our motorcycle fleet did not reveal any new opportunities. However we have continued to assess our motorcycle fleet and have reported on a new opportunity to be implemented, the improved efficiency motorbike from Honda as mentioned above.

6.2.1 Passenger vehicles

We have continued to progressively replace our passenger fleet with fuel efficient and hybrid vehicles through our supplier agreement with Toyota. The combined annual energy savings from this initiative are estimated to be more than 1.5 million litres of fuel (44,250 GJ) once fully implemented.

Status of opportunities identified		Total number of Opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – ≤4 years		> 4 years		
			No of opp	GJ	No of opp	GJ	No of opp	GJ	
Business response	Under investigation								
	To be implemented	1	1	44,250				44,250	
	Implementation commenced								
	Implemented								
	Not to be implemented	2	2	17,127				17,127	
Outcomes of assessment	Total identified	3	3	61,377				61,377	

Table 7 Transport - update of opportunities identified from assessments in the previous reporting period.

Note: No opportunities were identified in 2008–09, so therefore there was nothing to update, hence the reason there are no brackets. As required, opportunities assessed to an accuracy of ± 30 per cent or better.

6.3 Future assessments 2010–11

6.3.1 Mail Vans

In line with the ARS, we will assess our mail vans in the 2010–11 bringing the total of transport energy assessed to 98 per cent. We have recently agreed to participate in an Electric Vehicle trial with the Department of Transport in Victoria towards the end of 2011 following the arrival of one or two new electric vehicle from Mercedes. The vehicles will remain in the fleet after the completion of the trial. While electric vehicles are not a realistic option in the short term due to cost, they are likely to be the future solution for sedans and light commercial vehicles.

6.3.2 Last mile delivery strategy

As part of normal business practice, we are continually seeking to improve the fuel efficiency of the fleet through configuration changes, route optimisation, network reviews, increasing mail volumes per trip, and the introduction of more emissions-efficient vehicles.

6.3.3 Research into new engine technology and alternative fuel

Alternative vehicle fuels and technologies such as; biodiesel; Liquid Natural Gas (LNG); Compressed Natural Gas (CNG); electricity and hybrid technologies have the potential to reduce fuel costs and provide future price stability, reduce environmental impacts, and reduce Australia's reliance on imported fuels.

In the 2009 Public Report we described a research paper, *Engine Technology and Fuel Options*, which we commissioned. The paper described available and emerging engine technologies that may be adopted by vehicle manufacturers and a range of potential fuels. During 2010-11 Australia Post will conduct in-depth research into the environmental, financial and operational viability of alternative vehicle fuels. This investigation will include close liaison with existing and potential suppliers of alternative fuels and alternative-fuelled vehicles. Our analysis will cover vans, light and heavy trucks.

6.3.4 Line-haul speed policy

The heavy vehicle testing program facilitated the quantification of potential fuel savings of reducing line-haul truck speed to (for example) 95 or 90 km/h. This has the theoretical potential to save up to 800,000 litres of diesel every year, but might not be possible on some routes because the additional trip time might not be compatible with driver rest requirements and mail delivery schedules. Australia Post will analyse all line haul routes to determine the optimum vehicle speed on each, and develop and continually improve a line-haul speed policy.

7. Significant opportunities

7.1 Opportunity one – Environmental Driver Program

Last year Australia Post piloted several driver training programs designed to assess the potential for driver behaviour to affect fuel use. A program was selected and is to be implemented in 2010–11. The program will focus on engine revving, idling, braking, economical driving, fuel economy and the use of air conditioning.

7.2 Opportunity two – New Building Design

In December 2009, Melbourne staff moved into a new head office building which incorporated many energy and waste saving features. The building's design makes maximum use of natural light with workstations located nearest windows and light sensors will turn lights off when natural lighting levels are high. Energy efficient lighting has been installed throughout. In the new headquarters building energy is expected to be reduced (by more than 30 per cent per square metre) and water consumption reduced compared to previous usage.

As part of its commitment to our Carbon Reduction Strategy the Board also agreed that a standard needs to be developed for all future construction both new and retrofit to maximise the energy efficiency of the facility.

7.3 Opportunity three – Induction Lamps

The trial of induction lamps as a replacement for high bay metal halide lights, reported in last year's report, have proved to be very successful with savings of around 35 per cent achieved throughout the trial. These lights are now being implemented as part of our NEMP program in all of our major facilities across Australia. Additional savings in reduced heat load are also expected during the summer season.

7.4 Opportunity four – Truck Air Deflectors

During the heavy vehicle testing program at the Australian Automotive Research Centre in August 2009, the fuel consumption of a rigid truck was tested with the cabin air-deflector in several positions. 'Roll down' tests were conducted to allow calculation of the vehicle coefficient of aerodynamic drag for each deflector height, and lap tests at constant speed were conducted while monitoring the vehicle fuel consumption.

During the testing program, it was also discovered that the prime-mover cabin air deflector was not in the correct position, and this was confirmed with the vehicle manufacturer.

Analysis of the results indicates potential savings of 117,775 litres of diesel per year for rigid trucks and 92,249 litres of diesel per year for articulated trucks. We have since surveyed all trucks, and corrected the scoop height of all trucks in the Australia Post fleet.

8. Key Performance Indicators

Due to the variation in our business activities, no single Key Performance Indicator (KPI) can provide a true measure of our carbon efficiency. Consequently we have reported against three KPIs that reflect our business and enable a more meaningful comparison of our performance over time.

Specifically, we have used total energy consumption; per square metre of floor space to reflect our activities at facilities; and per kilometre travelled to reflect the impact from transport. The results demonstrate that although energy use has increased, it has done so in line with business activity, as our energy use per square metre of floor space and kilometre travelled has remained stable.

Group member	2009–10 Energy use (GJ)	2009–10 CO2-e emissions (tonnes)
Australia Post – stationary energy	948,880	227,568
Australia Post – transport energy	1,192,682	82,432
Australia Post total	2,141,562	310,000

Table 8 2009–10 total energy use and carbon emissions emissions.

Measure / GPI	Financial period			
	2006–07	2007–08	2008–09	2009–10
Energy use per financial period (GJ)	2,160,445	2,131,704	2,172,693	2,141,562
Energy use as an indicator GPI for stationary (GJ/m ² of floor space)	0.80	0.76	0.73	0.74
Energy use as an indicator GPI for transport (GJ/km travelled)	0.0067	0.0066	0.0067	0.0069

Table 9 Key Performance Indicators.