



Energy Efficiency Opportunities Act

Australia Post Public Report, 1 October 2008 – 30 June 2009

Corporate Public Affairs

Contents

1.	Managing Director’s endorsement	3
2.	Executive summary	4
3.	Introduction	6
3.1	Controlling corporation profile	6
3.2	Corporate group	7
3.3	Period covered by the report	7
4.	Leadership	8
4.1	Corporate responsibility strategy	8
4.2	Current carbon position paper	8
5.	Assessments – facilities	9
5.1	2008 / 2009 assessments	9
5.2	2007 / 2008 assessments update	12
5.3	Future assessments and implementation for 2009 / 2010	13
5.4	Facilities – opportunities that have been identified and evaluated	13
6.	Assessments – transport	15
6.1	2008 / 2009 assessments	15
6.2	2007 / 2008 assessments update	16
6.3	Future assessments	16
6.4	Transport - opportunities that have been identified and evaluated	17
7.	Significant opportunities	18
7.1	Opportunity 1 – environmental driver program	18
7.2	Opportunity 2 – high bay lamps	18
7.3	Opportunity 3 – Green Building Strategy	18
7.4	Opportunity 4 – Environment Facility Data Tool	18
8.	Key Performance Indicators	20

Tables

Table 1	Controlling corporation profile.....	6
Table 2	Facilities - energy use of sites assessed in the reporting period.....	9
Table 3	Facilities - initiatives identified in the current reporting period.....	10
Table 4	Facilities - opportunities identified from assessments completed during the reporting period	13
Table 5	Facilities - update of opportunities identified from assessments in the previous reporting period.....	13
Table 6	Facilities - results of extrapolating the savings from opportunities identified in previous assessments to additional sites.....	14
Table 7	Transport - energy use assessed in the current reporting period.....	15
Table 8	Transport - update of opportunities identified from assessments in the previous reporting period	17
Table 9	2008 / 2009 total energy use and CO2-e emissions.....	20
Table 10	Key Performance Indicators.....	20

1. Managing Director's endorsement

Climate change is one of the greatest economic, social and environmental challenges of our time. Corporations, governments and individuals need to address climate change by reducing greenhouse gas emissions; and central to this is the need to reduce our consumption of fossil fuels.

The Federal Government is actively developing strategies and programs to address climate change and one of its key initiatives is the Energy Efficiency Opportunities (EEO) program. The program requires us to identify opportunities to reduce our electricity, gas and fuel consumption, and publicly report on our activities.


Australia Post supports the program as it is complementary to our efforts to reduce our impact on the environment, and will be implementing viable opportunities that were identified through the EEO assessments across our facilities and fleet.

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

Graeme T John AO

Managing Director

Date: 17/12/2009

Declaration of accuracy and compliance (mandatory information)	
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> .	
	Managing Director

2. Executive summary

Australia Post is dedicated to providing high quality mail, financial, fulfilment and retail services to business and the community. Our mission is to meet our customers' needs by providing:

- innovative and easy-to-use products and services
- friendly service by knowledgeable staff
- consistent on-time delivery
- value for money
- modern, efficient networks.

To deliver our services, Australia Post runs a fleet of over 10,300 vehicles, 4,400 retail outlets and licensed post offices and 1,200 facilities. As a result, our operations have an impact on the environment.

We recognise that we have a responsibility to manage our environmental impacts and promote environmental sustainability. In doing this, we aim to meet or exceed regulatory and community standards and embed the principles of corporate responsibility within our business systems and culture.

2009 EEO Report

Australia Post's report covers the subsidiaries that are under our operational control, operate in Australia and do not exceed the EEO reporting threshold. 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. In contrast to the 2008 EEO Report, we will not be reporting on Australian air Express (AaE). AaE exceeds the reporting threshold and will be reporting separately in 2009 and beyond.

Following on from the 2008 EEO Public Report, which covered the period from 1 July 2006 to 30 September 2008, the assessment period covered by this report is 1 October 2008 to 30 June 2009. This reporting period will ensure that we report by financial year from 2010 as required by the *EEO Amendment Regulations 2008 (No. 1)*.

Leadership

In 2008 / 2009, Australia Post demonstrated leadership through the development and implementation of a corporate responsibility strategy, which was endorsed by the Australia Post board of directors.

We also developed a *Current Carbon Position Paper* to provide a detailed analysis of Australia Post's greenhouse gas emissions; factors that influence energy consumption; our estimated emissions to 2020; and the estimated cost of energy consumption to 2020. The research will underpin a carbon management strategy that will be developed to direct our approach to emissions reduction.

Assessments – facilities

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
2008 / 2009 site assessments	Assessed four sites in New South Wales	We found 11 initiatives, and 27 viable opportunities to implement those initiatives, across the four sites, with estimated savings of 38,033 GJ per annum. We have already implemented four of these opportunities that save 2,516 GJ per annum
2007 / 2008 site assessments	Implemented opportunities at sites previously assessed	We implemented 13 opportunities to save 10,790 GJ per annum
Extrapolated savings data	Extrapolated the savings from opportunities identified in previous assessments to mail and delivery centres to determine their viability for implementation	We found 19 initiatives, and 600 viable opportunities to implement those initiatives, across 102 delivery centres and 13 mail centres, to save 50,519 GJ per annum
Researched new technologies	Commissioned a research report, <i>Alternative Onsite Energy Assessment</i>	Awareness of new technology and its viability for implementation at Australia Post
Tools for facility managers	Provided tools to assist facility managers understand and monitor impacts from their site	Online Environment Facility Data Tool and checklist of opportunities

We finalised and extended programs that we reported on in the 2008 Report. Specifically, we:

- completed our trial of high bay lamps and selected a new induction high bay lamp technology that will reduce the electricity used for lighting by 60 per cent once implemented
- completed our Green Building Strategy that directs our approach to our real estate portfolio
- have extended our retail lighting trial to find lights that deliver energy savings and meet business requirements.

Assessments – transport

During the current 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
2008 / 2009 assessments	Motorcycle assessments	We trialled the PostScooter, an electrical delivery vehicle
Environmental Driver Program (EDP)	A proposal was developed to create an in-house pilot EDP designed to reduce fuel use and emissions through behaviour change	The Pilot has been approved and is being developed
Researched new technologies	Produced a research paper, <i>Engine Technology and Fuel Options</i>	Further research will be conducted into natural gas a potentially viable replacement for diesel

We finalised the passenger fleet initiative that was reported on in 2008 and completed a preferred supplier agreement with Toyota for the supply of hybrid and other fuel efficient vehicles, to gradually replace our sedans and wagons.

We have begun our 2009 / 2010 assessments and are assessing prime movers and small and large trucks through technical testing undertaken at the Australian Automotive Research Centre (AARC). One hundred and thirty seven individual tests were conducted to determine how external factors affect fuel efficiency. The tests were undertaken in collaboration with key vehicle, trailer and tyre manufacturers. In addition, as part of our last mile delivery strategy, we are trialling alternative delivery equipment including push and electric trolleys and electric cycles.

Significant opportunities

We provided more detail on our most significant opportunities including the environmental driver program, high bay lamps, Green Building Strategy and the online Environment Facility Data Tool.

Key Performance Indicators

We reported against three Key Performance Indicators (KPIs) to provide a true measure of our carbon efficiency. 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.

3. Introduction

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

- employ more than 35,000 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.

The extent of our operations means that we have an impact on the environment, specifically in electricity and fuel consumption and their consequent greenhouse gas emissions. We have been actively measuring, reporting and implementing initiatives to reduce our electricity and fuel consumption over many years.

The EEO program, with a focus on conducting assessments to determine opportunities to reduce energy use, complements our current strategies and initiatives. 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 reduce this 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 October 2008 – 30 June 2009
Head office address	GPO Box 1777, Melbourne, VIC 3001
Total annual energy use in PJ in 2008 / 2009 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
E-mail 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 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).

Australian air Express (AaE) and Startrack Express are joint ventures, 50 per cent owned, between Australia Post and Qantas. In the 2008 Report, Australia Post reported on AaE and it was agreed that Qantas would report on Startrack Express. However, subsequent to the report we recognised that AaE exceeds the reporting threshold and is not under our operational control. As a result, AaE will be reporting separately in 2009 and beyond.

Other subsidiaries and joint ventures have been excluded as they either operate overseas; are not under our operational control; or are reporting in their own right. Again, these exclusions reflect the 2008 Report. 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.

National Greenhouse and Energy Reporting is by financial year. Australia Post's first public report was from 1 July 2006 – 30 September 2008. Therefore, Australia Post must adjust the period of this report so that we can start reporting by financial year in 2009 / 2010 as required by the regulations.

As a consequence, the assessment period covered by this report is 1 October 2008 to 30 June 2009.

However, as required by the EEO Program, energy consumption data will be presented for the financial year from 1 July 2008 – 30 June 2009.

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. Following are the key strategies and programs that demonstrate leadership from Australia Post's senior management as a means of improving the environmental performance of Australia Post and all of its stakeholders.

4.1 Corporate responsibility strategy

In October 2008, Australia Post's board of directors endorsed our enterprise wide Corporate Responsibility (CR) strategy. The intent of our strategy is to be recognised as a corporation and workforce that create success through sustainable business practices. Our CR vision is "contributing every day for a sustainable tomorrow".

The CR strategy details our commitment to behave ethically and provides the structure for the company to meet that commitment. The seven goals of the strategy are:

1. to minimise our environmental footprint
2. to invest in the communities where we operate and our people live and work
3. to offer responsible and valued products and services
4. to integrate sustainable sourcing across the supply chain
5. to engage our workforce to apply sustainability practices
6. to understand and be responsive to stakeholder needs and expectations
7. to ensure effective governance and reporting.

To support our CR strategy, a corporate responsibility governance framework was established, which recognises that the management of our CR strategy, and its integration into our day-to-day business, require the active participation of our senior executives as well as co-ordination across Australia Post's various business divisions and portfolios.

Australia Post's CR executive committee (EC) sub-committee endorsed the governance structure in May 2009. This governance framework includes the following three forums: the CR EC sub-committee, the CR program working group and the CR workstream groups.

Defined reporting and review processes are central to the strategy and the EEO program forms part of the environment workstream.

4.2 Current carbon position paper

This year saw the development of a *Current Carbon Position Paper* to provide a detailed analysis of Australia Post's current greenhouse gas emissions and resource consumption, and an estimate of our greenhouse gas emissions levels at 2020.

As part of this analysis, we estimated the price of electricity, gas and fuel in 2020. Using information sourced from the Federal Government, CSIRO, CPA Australia and the Australian Industry Group we considered the key influences on price to be:

- **Fuel:** Carbon Pollution Reduction Scheme permits and their flow on impact on fuel prices; and the increased cost of a declining natural resource
- **Electricity:** The impact of the Carbon Pollution Reduction Scheme on electricity generation costs; and the likely increases in network and distribution charges.

At the same time we used historical emissions data to map our electricity, gas and fuel consumption against revenue, mail volumes, average temperatures and delivery points to determine what was the most likely to drive future consumption.

The majority of our electricity, gas and fuel consumption is fixed. For example, our vehicles still travel down every street and our facilities still use lighting and cooling when delivering and processing mail. Consequently, revenue and mail volumes do not have an immediate impact on our electricity, gas and fuel consumption. In addition, while the annual increase in delivery points (200,000 in 2008 / 2009) does result in an increase in fuel consumption, it is not a significant impact on our total fuel consumption.

The major factor influencing our electricity and gas consumption is temperature, with the movement in our emissions levels directly aligned to the temperature range at the time. This is not surprising when you consider that electricity accounts for 70 per cent of our overall emissions, and over 40 per cent of the electricity consumed is directly attributable to heating, ventilation and cooling (HVAC). As a result, improving the efficiency of our HVAC systems is a key strategy in reducing electricity and gas consumption and greenhouse gas emissions.

The *Current Carbon Position Paper* is the first of three papers, with the second paper focussing on identifying all of the opportunities Australia Post could adopt to reduce our emissions. The results of these papers will inform the development of a third paper, a Carbon Management Strategy, which will outline a proposed approach to emissions reduction. The opportunities identified in the Energy Efficiency Opportunities program are integral to the carbon management strategy.

5. Assessments – facilities

Australia Post's operations comprise over 1,200 owned facilities across Australia. The majority are retail outlets, followed by delivery centres, administration offices and mail centres. Due to the large number of sites, we are assessing:

- 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.

Assessments are conducted by state, in the time frame specified in the Assessment and Reporting Schedule (ARS), using a detailed energy questionnaire based on the ISO AS / NZS 3598 : 2000 Level 3 energy audit standard.

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.

During the reporting period from 1 October 2008 to 30 June 2009, we undertook assessments in line with the ARS and extended our program as follows:

- assessed four sites in New South Wales
- extrapolated the data from all assessments undertaken to date. We then applied the lessons to 19 mail centres and 318 delivery centres to produce a business case to implement the opportunities
- researched new technologies by commissioning a research report, *Alternative Onsite Energy Assessment*
- provided tools for facility managers and developed the online Environment Facility Data Tool and checklist of opportunities to assist facility managers understand, monitor and manage the impacts from their site.

These activities are described in section 5.1 "2008 / 2009 assessments" below.

5.1 2008 / 2009 assessments

5.1.1 New South Wales assessments

In line with the ARS timeline, we continued our assessments of sites in New South Wales as shown below.

Facility name	Period over which assessment was undertaken	Energy use per annum in GJ in the current reporting year (financial year 2008 / 2009)
Sydney West Letters Facility	September – October 2008	32,213
Sydney Gateway Facility	October 2008 – January 2009	46,117
Sydney Parcel Centre	October – November 2009	33,784
Leightonfield Delivery Centre	November 2008 – January 2009	5,986
Total energy assessed in 2008 / 2009		118,100
Total stationary energy use of the group in the 2008 / 2009		919,670
Total energy assessed in 2008 / 2009 expressed as a percentage of total stationary energy use		13%
Cumulative total of stationary energy assessed throughout the EEO program, expressed as a percentage of total 2008 / 2009 stationary energy use		28%

Table 2 Facilities - energy use of sites assessed in the reporting period

Note: This data is within ± 5 per cent accuracy. Excludes AAE assessments completed last year

The assessments involved at least two site visits to each site and were conducted by consultants who are technical experts in energy and greenhouse solutions and Australia Post staff members. The first visit was designed to:

- introduce the program to the facility manager and key operational staff
- present historical energy use data
- undertake a technical review of the site by:
 - applying data loggers to collect electricity use data at 15 minute intervals for a week (which is a business cycle for a facility)
 - assessing the site using the detailed energy questionnaire
 - recording the physical characteristics of the site
- undertake a business process review by:
 - determining the function and occupancy of the site
 - mapping energy use data against business activity
- consult the facility manager and key operational staff on:
 - current energy practices
 - any known problems
 - any plans to change business activities at the site
 - any suggestions for improving energy efficiency
 - other key staff who might have more information or ideas
 - any other information relevant to the assessment process
- advise of the approval, funding and implementation process for viable opportunities.

The second visit was designed to bring key staff members together to review the above information and all of the opportunities identified to reduce energy use; and categorise the opportunities into “to be investigated”; “to be implemented” or “not to be implemented”.

The assessments focussed on lighting and heating, ventilation and cooling (HVAC), as these functions are the primary consumers of energy at a facility. We found 11 initiatives to reduce energy use, and 27 viable opportunities to implement those initiatives, at the four sites. We have already implemented four of these opportunities that save 2,516 GJ per annum. The remaining 23 opportunities and number of facilities in which they are viable are summarised below.

Initiative	Number of facilities where opportunities may be implemented
Lighting	
Lighting control	4
Occupancy sensor	3
Zone control	1
Reduce light level	1
Low voltage reduction (LVR)	2
PE control	1
Induction lamps	2
Sky light	3
Heating, ventilation and air conditioning (HVAC)	
Economy cycle	1
Improve HVAC	4
Variable speed drive (VSD)	1

Table 3 Facilities - initiatives identified in the current reporting period

These figures have been included in Table 4 including the payback period by opportunity and the associated electricity savings. In addition:

- the data from the assessments were extrapolated to additional sites (described in section 5.1.2 “Extrapolated data”)
- the assessments have been included in the business case that is being developed to implement all opportunities across our sites (described in section 5.3 “Future assessments and implementation 2009 / 2010”).

5.1.2 Extrapolated data

As described, we are assessing a representative sample of delivery centres, and then applying the opportunities and associated savings, to the rest of the delivery centres to determine whether or not they are viable for implementation. This extrapolation process was undertaken in the current reporting period for both delivery centres and mail centres and the key steps have been described below.

Extrapolation steps	Activities
Opportunities	
Identifying opportunities	<ul style="list-style-type: none"> The opportunities derived from all site assessments undertaken, including the 26 undertaken in the first reporting period (1 July 2006 – 30 September 2008) and the four assessments from 1 October 2008 – 30 June 2009. A report detailing each opportunity's kWh savings, cost savings, implementation costs and payback period was produced. Opportunities with a payback period greater than five years were excluded.
Calculating average savings	<ul style="list-style-type: none"> The electricity savings were calculated by opportunity. The savings were presented as a percentage of a site's electricity use by opportunity.
Selecting sites for extrapolation	
Delivery centres	<ul style="list-style-type: none"> There are 325 owned or leased delivery centres nationally. Of these, seven have been audited. Audited results were extrapolated over the remaining 318 delivery centres. All owned facilities were included. Leased facilities with less than three years remaining on the current lease term were excluded. All extra small facilities (both leased and owned) were excluded.
Mail centres	<ul style="list-style-type: none"> There are 31 mail centres nationally. Of these, 12 have been audited. Audited results were extrapolated over the remaining 19 mail centres. Additional audits will be undertaken for all currently unaudited mail centres to confirm whether the opportunities are viable for the site.
Applying data to the sites	
Extrapolating data	<ul style="list-style-type: none"> The percentage kWh savings were applied to each site's total electricity consumption to determine kWh savings per opportunity per site. Importantly, we arranged the opportunities by the order in which they would be implemented. We then calculated the savings for the first opportunity, which produced a new total electricity use for the site. We then applied the percentage saving for the next opportunity, to the new site total, and so forth. This ensured that we didn't over-represent the savings, by continuing to apply a percentage saving to the original site electricity use. The extrapolation method was externally audited and found to be valid.
Costs and savings	<ul style="list-style-type: none"> The costs were established during the energy assessments and applied to each facility. Costs were increased by the Consumer Price Index (CPI) over time. Savings were calculated using the current average electricity price per state applied to the kWh savings for each initiative. Electricity prices comprise network and maintenance charges; and the price of the energy itself. Both these components are expected to increase due to the predicted impact of the Federal Government's Carbon Pollution Reduction Scheme; increasing demand; and the costs of establishing renewable fuel facilities and associated infrastructure. Opportunities that presented with a payback period of greater than four years were excluded.

As a result, we found 19 initiatives, and 600 viable opportunities to implement those initiatives, at 102 out of 325 delivery centres, and 13 out of 31 mail centres. The results of the extrapolation are included in Table 6.

5.1.3 Researched new technologies

On-site renewable energy generation is increasingly being adopted by individuals and companies as a means of reducing greenhouse gas emissions; reducing energy costs; providing security against increasing energy prices; and benefitting from government incentives. Australia Post commissioned a research report on the application of on-site renewable energy and alternative energy technologies to guide our strategic planning.

The research report, *Alternative Onsite Energy Assessment*, was tabled 5 March 2009. The technologies reviewed were:

- solar photovoltaic (pv)
- solar thermal
- wind
- biomass
- cogeneration and tri-generation

- ground source heat pumps
- fuel cells
- off-site options (wind, concentrated solar, geothermal, wave and tidal).

The report found that solar PV and thin film PV technologies are well suited to Australia Post buildings however, the shortest payback period was six years. Significant technological advancement, increased market uptake, government programs and targets, and advanced infrastructure are expected to improve the commercial viability of this technology in the next 10 years. We will continue to monitor technological developments so that we are able to take advantage of more efficient and cost effective technology as it becomes available.

5.1.4 Tools for facility managers

Facility managers have an important role to play in helping Australia Post manage and reduce our environmental impact by reducing resource consumption and waste to landfill.

To help managers monitor their facility's environmental performance, we have developed an online Environment Facility Data Tool that displays each facility's energy, water, waste and greenhouse gas emissions on a monthly and annual basis. Further information about the Environment Facility Data Tool is described in section 7 "Significant Opportunities".

5.2 2007 / 2008 assessments update

5.2.1 Results

We implemented opportunities that were identified in the previous report, and the figures are reflected in Table 5. The opportunities were implemented across nine sites and the estimated savings are 10,790 GJ per annum.

We have made a change to our reporting method. In the 2008 Report, we listed 139 individual opportunities. This figure included the number of opportunities, and also the number of times the opportunities were being considered in each facility. For example, we identified that we could implement motion sensors in five different areas at Seven Hills Delivery Centre, therefore, this was included as five opportunities. In this Report, we have changed our reporting method to include the number of opportunities, and the number of facilities that they will be implemented in. Therefore, the above example would be included as one opportunity. We changed the reporting style to streamline the numbers due to the vast number of opportunities that will be implemented across our facilities. Importantly, the number of opportunities will appear as though it is decreasing in Table 5 however, the savings will reflect the number of sites where opportunities are being implemented.

In addition, in the previous report, we listed the majority of the opportunities as "to be implemented", as this was the status determined at the second site visit. In this report, we have moved the majority of these opportunities to "under investigation". The reason for this, is that we have included the opportunities in the business case (described in section 5.3 "Future Assessments and Implementation for 2009 / 2010"), which is being reviewed. Consequently, opportunities will only be listed as "to be implemented", once a business case has been approved. We will continue this method of reporting in the future.

5.2.2 High bay lamps

In the 2007 / 2008 EEO report, we reported on a trial of high bay lamps at Dandenong Letters Centre to replace the metal halide lamps. As a result of the trial, we will be replacing the metal halide lamps with new induction high bay lamps. Further information about the opportunity is described in section 7 "Significant Opportunities".

5.2.3 Green Building Strategy

During the previous reporting period, we were preparing a Green Building Strategy. The strategy is now complete and addresses the sustainable development, energy efficiency and indoor working environment of Australia Post's facilities. Further information about the Strategy is described in section 7 "Significant Opportunities".

5.2.4 Retail lighting

As most of our retail outlets are located in shopping centres, the primary opportunity that we have to reduce electricity use is through installing more efficient lights and light controls.

In the previous reporting period, Australia Post trialled a new retail lighting design at two sites in New South Wales. The trials were designed to establish if a new lighting design meets the business requirement and delivers the expected energy savings. Due to the significance of this opportunity, we are extending the trials into the current reporting period so that we can gather additional data. Specifically, we are now trialling the lights and controls in five sites in Victoria so we can collect baseline data, measure savings and understand exactly what would be involved in changing the lights. We have engaged electrical engineers to undertake the trials and the results will be reported in the 2009 / 2010 EEO Public Report.

5.3 Future assessments and implementation for 2009 / 2010

We currently have 32 site assessments planned, which will continue to be undertaken in line with the schedule and methodology defined in the ARS.

We are developing a business case to assess the implementation of the opportunities identified in previous audits, and their application to other sites as described in section 5.1.2 "Extrapolated data" above. Overall the business case will address the implementation of 19 initiatives, and 600 viable opportunities to implement those initiatives, across 102 delivery centres and 12 mail centres. Any program of works that is approved will be governed by a cross function group comprising representatives from across the business, to track implementation of the work program and benefits.

5.4 Facilities – opportunities that have been identified and evaluated

Energy use of the entity during the current reporting period: 916,670 GJ

Status of opportunities identified		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	
Outcomes of assessment	Total identified	27	27,230	3,888	6,915	38,033
Business response	Under investigation	23	24,714	3,888	6,915	35,517
	To be Implemented					
	Implementation commenced					
	Implemented	4	2,516	-	-	2,516
	Not to be Implemented					

Table 4 Facilities - opportunities identified from assessments completed during the reporting period

Note: Opportunities assessed to an accuracy of ±30 per cent or better.

Status of opportunities identified		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	
Outcomes of assessment	Total identified	105 (139)	9,329 (8,895)	18,755 (10,062)	126 (0)	28,273 (18,957)
Business response	Under investigation	82 (54)	7,515 (3,027)	9,832 (6,549)	42 (0)	17,389 (9,576)
	To be implemented	0 (77)	0 (4,967)	0 (3,117)	0 (0)	0 (8,084)
	Implementation commenced					
	Implemented	13 (6)	1,877 (585)	8,913 (396)	0 (0)	10,790 (981)
	Not to be implemented	10 (2)	0 (316)	10 (0)	84 (0)	94 (316)

Table 5 Facilities - update of opportunities identified from assessments in the previous reporting period

Note: We have made changes to our reporting method, which are described in section 5.2.1 "Results". The numbers in brackets are from the 2008 Report and included to allow easy comparison of the results between the two reports. Opportunities assessed to an accuracy of ±30 per cent or better.

Status of opportunities identified		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	
Outcomes of assessment	Total identified	600	25,038	24,660	821	50,519
Business response	Under investigation	600	25,038	24,660	821	50,519
	To be implemented					
	Implementation commenced					
	Implemented					
	Not to be implemented					

Table 6 Facilities - results of extrapolating the savings from opportunities identified in previous assessments to additional sites

Note: Opportunities assessed to an accuracy of ± 30 per cent or better.

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 planned to assess the motorcycle fleet by 28 February 2009 using the ARS methodology; however we expanded our vehicle assessment program and:

- trialled an alternative motorcycle as part of our scheduled motorcycle assessment
- considered opportunities for behaviour change
- researched emerging engine technology and alternatives fuels.

These activities are described in section 6.1 "2008 / 2009 assessments" below. We expanded the program so that we could also focus on heavy vehicles and high-end fuel consumption; and gather more data to enhance the assessment methodology.

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

6.1 2008 / 2009 assessments

6.1.1 Motorcycles

In line with the ARS timeline, we focussed on motorcycle opportunities.

Facility name	Period over which assessment was undertaken	Energy use per annum in GJ in the current reporting year (financial year 2008 / 2009)
Motorcycles	2009	105,487
Total energy assessed in 2008 / 2009		105,487
Total transport energy use of the group in the 2008 / 2009		1,196,591
Total energy assessed in 2008 / 2009 expressed as a percentage of total transport energy use		9%
Cumulative total of transport energy assessed throughout the EEO program, expressed as a percentage of total 2008 / 2009 transport energy use		17%

Table 7 Transport - energy use assessed in the current reporting period

Note: This data is within ± 5 per cent accuracy.

We adopted a different approach to that described in the ARS and trialled an Oxygen PostScooter, which is an electric vehicle designed for the inner-city delivery market. The PostScooter, developed and manufactured in Italy, is used successfully by postal organisations in Europe.

Australia Post purchased one PostScooter to test its suitability for Australia Post conditions. The results of the trial demonstrated that the PostScooter was not able to meet business requirements. The primary concerns were that the maximum speed of the PostScooter is 45 km / hr and there would be minimal gain from the bike as it relied on fossil fuel for its electricity supply. This top speed is a significant limitation due to the long distances that some posties have to travel before they reach their rounds, and the hazard of travelling much slower than other traffic on freeways and major roads. In addition, the PostScooter was not Australian Design Rules (ADR) compliant and there appeared to be limited support from the manufacturer to import the PostScooter and comply with ADR requirements.

The potential fuel savings of the PostScooter were not estimated. However, trials of alternative vehicles are a key component of our fleet configuration assessments, and will continue as part of assessing our fleet.

6.1.2 Environmental driver program

Australia Post has the capacity to monitor a range of driver behaviours including speed, driving hours, engine revving and idling, using on board truck computers and communications (vehicle "telematics") fitted to prime movers and heavy rigid trucks.

A preliminary review of the data found that approximately four per cent of total engine running time can be categorised as unnecessary idling, which is defined as any one idling event exceeding three minutes. Heavy vehicles consume approximately two litres of fuel per hour when idling, which wastes fuel, costs money and generates greenhouse gas emissions.

To address unnecessary idling, Australia Post put forward a proposal in March 2009 to undertake an idling reduction program in Western Australia in conjunction with the Department of Environment and Conservation (DEC). The behaviour change program involved establishing baseline data, identifying barriers to change, driver workshops, and evaluation and refinement of the program. Due to the changing global financial situation, DEC experienced funding limitations and as a result, changed the scope of the program. The revised program was less suited to our needs so Australia Post started researching a replacement program.

A proposal was developed to create an in-house pilot Environmental Driver Program (EDP). The pilot EDP involves six core elements: engine revving; idling; acceleration; gear changing and selection; and use of air conditioning. Further information about the EDP is included in section 7 "Significant opportunities".

Final approval, the assessment of baseline data and implementation of the EDP are outside the reporting period, consequently, savings will be estimated and reported in the 2009 / 2010 EEO public report.

6.1.3 Research into new engine technology and alternative fuel

With growing pressure to reduce emissions from transport activity, vehicle engine efficiency is expected to improve, and environmentally cleaner fuels are expected to be developed and introduced on a more commercial basis. These developments will take time as they are dependent on demand, commercial investment, government policies and legislation, and the development of infrastructure to produce and deliver the new products. As an essential service provider, it is important for Australia Post to be prepared for these changes so that we have a secure fuel supply and can efficiently adapt to technological change.

Australia Post produced a research paper, *Engine Technology and Fuel Options*, in June 2009. The paper described available and emerging engine technologies that may be adopted by vehicle manufacturers and a range of potential fuels. It considered the application of these technologies and fuels and the potential impact they may have on the operational capability of Australia Post's motor vehicle fleet.

The paper assessed fuel energy density; biodiesel; ethanol; Liquid Petroleum Gas (LPG); Liquid Natural Gas (LNG); Compressed Natural Gas (CNG); electricity and hybrid technology. The outcome of the paper was that natural gas is presenting as a potentially viable alternative to diesel for applications ranging from light commercial (vans) through to heavy vehicles such as prime movers. Consequently, further research will be conducted into natural gas as an initial means of reducing greenhouse gas emissions.

6.2 2007 / 2008 assessments update

6.2.1 Passenger vehicles

As reported in the 2008 EEO report, we reviewed our passenger vehicles to establish a "fit-for-purpose" vehicle allocation strategy, which allocates the most appropriate and efficient vehicle to each role. 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. Since this report, we completed a preferred supplier agreement with Toyota for the supply of hybrid vehicles and other fuel efficient vehicles, to gradually replace our fleet of sedans and wagons.

6.2.2 Opportunities reported as under investigation

Two opportunities were listed as "under investigation". These opportunities were:

- optimise vehicle allocation and pooling policy and practice
- review, analyse and optimise staff vehicle salary package policy.

These opportunities are now listed as "not to be implemented". It was found that the emissions reductions from these opportunities were negligible due to the small number of vehicles available for car pooling; and that the staff vehicle salary package allows staff to privately purchase their cars in exchange for salary. The only action that Australia Post can take is to encourage the purchase of fuel efficient vehicles.

6.3 Future assessments

6.3.1 B-Doubles and heavy rigid trucks

In line with the ARS, we are assessing prime movers and small and large trucks in the 2009 / 2010 reporting period. The methodology includes:

- modelling the major transport tasks (transport task model) including details of:
 - the freight to be transported (volume, mass)
 - route (origin, destination, road surface, elevation profile, etc.)
 - time available
- modelling the energy consumption of the major vehicle types (vehicle energy model) by reconciling:
 - information on the vehicle (e.g. gross mass, frontal area)
 - time sliced data from the on-board data capture (e.g. speed, location and elevation, fuel flow rate).

The vehicle energy model will also provide a breakdown of energy used in:

- overcoming aerodynamic drag
- overcoming rolling resistance
- operating ancillary equipment
- impact of mass.

The assessment has begun with technical testing undertaken at the Australian Automotive Research Centre (AARC) at Anglesea in August 2009. The tests were undertaken in collaboration with key vehicle, trailer and tyre manufacturers. One hundred and thirty seven individual tests were conducted to determine how the following factors affected the fuel efficiency of B-Doubles and heavy rigid trucks:

- aerodynamic devices – side skirts on trailers, boat angle on rear of trailer and a splitter (gap between trailers)
- rolling resistance – tyre pressures
- highway speed – 100 km/h, 95 km/h and 90 km/h
- driving style
- impact of mass.

Through the tests we will be able to determine the impact of factors external to the vehicles; test the manufacturers claimed results; refine the vehicle energy model; and identify further opportunities to reduce fuel use. Full results will be published in the 2009 / 2010 Public Report.

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.

As part of this, Australia Post is developing a last mile delivery strategy, which involves trialling alternative delivery equipment including push and electric trolleys and electric cycles. This delivery equipment will reduce the effort required for non motorcycle rounds; allow flexibility in delivery methods to suit variations in rounds; address increasing delivery points and associated mail volumes; and increase the opportunity for part-time delivery roles that may suit a wide range of new employees.

6.4 Transport - opportunities that have been identified and evaluated

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

Status of opportunities identified		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	
Outcomes of assessment	Total identified	3	61,377			61,377
Business response	Under investigation	(2)	(17,127)			(17,127)
	To be implemented	1	44,250			44,250
		(1)	(44,250)			(44,250)
	Implementation commenced					
	Implemented					
	Not to be implemented	2	17,127			17,127

Table 8 Transport - update of opportunities identified from assessments in the previous reporting period

Note: The numbers in brackets are from the 2008 report and included to allow easy comparison of the results between the two reports. Opportunities assessed to an accuracy of ±30 per cent or better.

7. Significant opportunities

7.1 Opportunity 1 – environmental driver program

Australia Post is preparing a pilot Environmental Driver Program (EDP) that aims to reduce fuel consumption through behavioural change.

The pilot is designed to assess the potential for driver behaviour to be influenced; links between behaviour and fuel use; and the most effective way to influence driver behaviour through various training methods.

A baseline account of driver performance will be established before the training commences against a defined assessment criteria; and this data will be used to evaluate the extent to which driver performance has changed. The criteria will include revving, idling, braking, economical driving, fuel economy and use of air conditioning.

The proposal for the pilot was approved and broadly involves the following steps:

- develop and implement a pilot from August 2009 to January 2010
- finalise the pilot in response to feedback from February to April 2010
- undertake a national roll out of the final program from July 2010.

7.2 Opportunity 2 – high bay lamps

On average, lighting accounts for approximately 40 per cent of energy use at our facilities. We predominantly use metal halide lights across our major processing facilities, and in October 2008, we trialled both LED and induction lamps to find an energy efficient replacement.

We found that both the LED and induction lamps were more energy efficient and had less heat output than metal halide lamps. However, the induction lamps were preferred as they are compatible with the building control system and can be turned on and off without impact; the feedback regarding the quality of light and light disbursement was positive; and they were more cost effective. The induction lamps demonstrated a 60 per cent reduction in electricity use and have six times the lifespan of the metal halide units thereby reducing maintenance costs.

As a result, we are planning to progressively install the high bay induction lamps throughout our major processing facilities and have recommended that these lamps be included in new building projects.

7.3 Opportunity 3 – Green Building Strategy

We developed a Green Building Strategy that will guide our approach to management of the environmental performance of our real estate portfolio, including the design, construction, refurbishment, maintenance, operation and disposal of our facilities. The strategy focuses on energy and water efficiency, the indoor working environment, waste and building materials.

The Strategy comprises:

- vision and policy statement
- a business case context, which provides the basis upon which real estate portfolio investment decisions can be considered in the context of financial and environmental issues
- case studies
- guidelines and a management process for existing, new and leased buildings
- operation and procurement strategies
- implementation strategy.

The Strategy is being implemented by United Group Services (UGL Services) who are contracted to provide property services to Australia Post. UGL Services are responsible for facilities management, including property maintenance and repairs and support for Postpal – Australia Post's property assistance line.

7.4 Opportunity 4 – Environment Facility Data Tool

Behaviour change is a key component of our Corporate Responsibility strategy, and we are committed to empowering staff to make changes to reduce their environmental impacts. The first step in any behavioural change program is increasing people's awareness and knowledge of the relevant issues. As a result, we developed the Environment Facility Data Tool.

The tool is an easy to use, online program that allows all managers and staff to view the energy, water, waste to landfill and greenhouse gas emissions from each facility on a monthly and annual basis. Staff can compare facilities and also see the information at state, national and divisional levels. It is accompanied by a checklist of simple opportunities that could be implemented at a site level to reduce energy, water and waste.

Launched in May 2009, the tool is primarily aimed at facility managers so that they can understand the environmental impacts from their site, set targets, reduce their impacts, monitor their performance and educate staff. The tool is available through the intranet, preceded by a message from the Managing Director, and has been launched through bulletins, meetings and intranet promotions.

The tool has also been demonstrated to other companies, including joint ventures and external environmental organisations, encouraging awareness raising and cultural change beyond our corporation.

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	2008 / 2009 Energy use (GJ)	2008 / 2009 CO2-e emissions (tonnes)
Australia Post – stationary energy	919,670	219,179
Australia Post – transport energy	1,196,591	83,411
Australia Post total	2,116,261	302,590

Table 9 2008 / 2009 total energy use and CO2-e emissions

Measure / GPI	Financial period		
	2006 / 2007	2007 / 2008	2008 / 2009
Energy use per financial period (GJ)	2,097,894	2,038,259	2,116,260
Energy use as an indicator GPI for stationary (GJ/m ² of floor space)	0.75	0.70	0.70
Energy use as an indicator GPI for transport (GJ/km travelled)	0.0067	0.0064	0.0065

Table 10 Key Performance Indicators