



Energy Efficiency Opportunities Act

Australia Post Public Report, 1 July 2006 – 30 June 2011

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1. Managing Director's endorsement

I am pleased to present Australia Post's fourth annual Energy Efficiency Opportunities (EEO) Annual Report. This report marks the completion of this five year program cycle and looks back on the achievements that we have made over the past five years.

In 2010 Australia Post committed to reducing our carbon emissions by 25 per cent by 2020 (based on year 2000 levels). In the 2010–11 financial year our actions to reduce energy use across the business reduced our greenhouse gas emissions by almost five per cent, setting us on track to meet our 2020 target.

The process of identifying and costing opportunities for energy efficiency through this program has provided Australia Post with a solid foundation for reducing our carbon emissions. We are committed to continuing the EEO program at Australia Post and are planning the next five year program cycle to identify further opportunities to reduce our energy use.



Ahmed Fahour
Managing Director & CEO
Date: 6 December 2011

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

Australia Post's 2011 Energy Efficiency Opportunities (EEO) Annual Report marks the completion of our five year action plan and summarises the achievements we have made during this period. The reporting period is from 1 July 2006 to 30 June 2011.

The report covers all aspects of Australia Post's operational activities and includes all relevant subsidiaries in our corporate group as determined by the EEO Amendment Regulations 2008 (No. 1).

Key Performance Indicators

We report against three main KPIs, which are:

- Energy consumed per year in gigajoules (GJ)
- Stationary energy consumed per square metre of floorspace (GJ / m²)
- Transport energy consumed per 100 kilometres travelled (GJ / 100 km)

All measures indicate that we have made significant improvement since the previous year. This result demonstrates we are achieving some real outcomes as part of the EEO program and continually improving our business efficiency.

Leadership, people and decision making

In June 2010, Australia Post committed to a carbon reduction target of 25 per cent by 2020 (based on year 2000 levels). This target is being driven throughout the business by the setting of annual interim carbon reduction targets.

The target is supported by a working group that comprises of members throughout our business to identify new opportunities and determine the feasibility of initiatives.

To assist us in delivering on our EEO requirements significant investment has been made into conducting audits, undertaking research into new technologies and seeking advice from industry experts to assist us in identifying opportunities within our business.

Assessments

Australia Post, as outlined by our Assessment and Reporting Schedule (ARS) undertook assessments of our energy consumption activities over the five year cycle. Australia Post has successfully assessed 83 per cent of our energy consumption, above the 80 per cent required by EEO legislation.

Our assessment strategy involved undertaking energy audits at our facilities, and using representative sampling to assess our large number of retail and delivery facilities. Representative sampling was also used to assess our large fleet.

Outcomes

During our EEO program, Australia Post has identified a total of 421 stationary, and 15 transport opportunities that have a less than four year payback. Of this we have or will implement 312 stationary and nine transport opportunities, giving a total saving of around nine per cent of our energy consumption across our business.

Significant opportunities

Four major opportunities we have identified throughout our EEO program are;

1. National Energy Management Plan (NEMP)
2. Electronic assisted bikes
3. Tyre pressures
4. Environmental Driver Program

Communicating Outcomes

Australia Post continually updates our staff and management on the progress made from our EEO program using the multiple channels and committees we have available. The 2011 EEO annual report has been noted by the Australia Post board.

3. Introduction

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

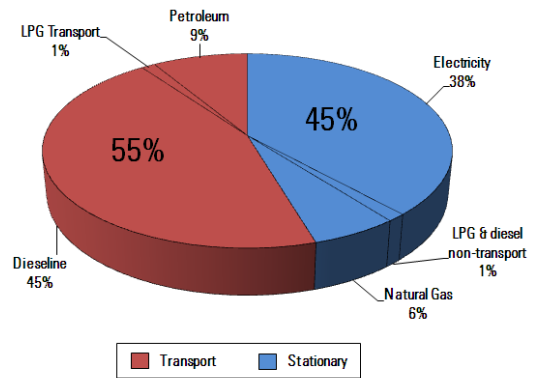
- employ more than 34,000 full-time and part-time staff, and 5,000 contractors,
- operate out of around 1,200 facilities, including 800 retail outlets and 250 delivery centres
- manage a fleet of almost 10,000 vehicles, including 130 prime movers, 1,000 mail vans and 7,000 motorcycles.

Australia Post’s energy consumption comprises of 45 per cent stationary energy and 55 per cent transport energy. The most significant sources of energy are from our use of diesel in our fleet and electricity at our facilities.

The Energy Efficiency Opportunities (EEO) program has provided us with a robust process to better understand our energy use and the opportunities and costs of increasing our efficiency. This understanding has assisted us to make decisions to implement initiatives to reduce our energy use.

This annual report marks the completion of our first five year EEO program, and summarises the major achievements made over the last five years. Specifically, this annual report includes:

1. details of Australia Post and the entities covered by this report,
2. the period covered by the report,
3. key strategies that demonstrate leadership and other activities established to support our EEO program
4. assessments conducted to find opportunities at facilities, and our fleet
5. the outcomes from the identified opportunities and the business decision,
6. significant opportunities to reduce our greenhouse gas emissions.



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 2011
Head office address	GPO Box 1777, Melbourne VIC 3001
Total annual energy use in petajoules (PJ) in 2010–11 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	Head of Sustainability
Address (postal)	111 Bourke Street, Melbourne VIC 3000
Phone	(03) 9106 7484
Email address	andy.trott@auspost.com.au

Table 1 – Controlling corporation profile

Australia Post corporate group also made some other minor changes, such as the acquisition of SecurePay in December 2010, and the divestment of the Printsoft Group and iPrint Corporate by 30 June 2011.

Since Australia Post's operations make up the vast majority of the energy activity, these changes have had minimal impact on our EEO program and the level of assessments required.

3.3 Assessment and Reporting Schedule (ARS)

Australia Post's Assessment and Reporting Schedule (ARS) was developed and submitted to the Department of Resources, Energy and Tourism (DRET) in 2007. The ARS sets out the plan for assessing our energy over the five year period. This plan provides the list of actions to undertake to cover off the requirements under the EEO. This report marks the completion of our five year ARS program and is the summary of our achievements made over the past five years.

Australia Post's next five year ARS program is currently being developed and will be submitted by October 2012.

3.4 Period covered by the report

Energy Efficiency Opportunities Amendment Regulations 2008 (No. 1) is designed to align EEO reporting with the National Greenhouse and Energy Reporting (NGER) legislation. This report covers the period 1 July 2006 to 30 June 2011, the first five year cycle of the EEO Program, for 2005–06 trigger year participants.

Start End

3.5 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 measures that reflect our business and enable a more meaningful comparison of our performance over time.

We have used total energy use as an overall indicator; and other measures such as per square metre of floor space to reflect our activities at facilities; and per kilometre travelled to reflect the impact from transport.

The results in the table below demonstrate that Australia Post's energy consumption has decreased, and our measures have improved since the previous year. This outcome indicates that we are on track to meet our carbon reduction target and the initiatives implemented from our EEO program are having an impact on improving our business efficiency.

Measure / Greenhouse Performance Indicator (GPI)	Financial period				
	2006–07	2007–08	2008–09	2009–10	2010–11
Energy use per financial period (GJ)	2,159,758	2,131,336	2,173,802	2,141,555	2,086,749
Energy use as an indicator GPI for stationary (GJ/m ² of floor space)	0.80	0.76	0.73	0.74	0.73
Energy use as an indicator GPI for transport (GJ/ 100 km travelled)	0.67	0.66	0.67	0.69	0.67

Table 4 – Greenhouse Performance Indicators (GPI) – progress over five year period

4. Leadership, people and decision making

A number of programs and working groups have been established to support Australia Post's EEO program, to ensure that the program is supported and integrated into all areas of our business. The following are the key strategies and programs developed over our five year program to support our EEO requirements on the areas of leadership, resources and decision making processes.

4.1 Carbon Reduction Target and Corporate Targets

In June 2010, the Australia Post board committed to a carbon reduction target of 25 per cent by 2020 (based on year 2000 levels). To drive our progress towards this target, the board of Australia Post has also set interim carbon reduction targets for our Managing Director and senior management to reduce our carbon emissions each year. This action demonstrates the leadership and commitment of our organisation to significantly reduce our carbon emissions to our staff and our stakeholders, and provides the drive to identify and implement energy saving initiatives.

4.2 People

Throughout the course of our EEO program, Australia Post has significantly invested in getting the right people involved in our program to achieve the best outcomes for our organisation. We have engaged with many industry experts to assist us in identifying opportunities, conducting audits and trials of technology and undertaking research into new and existing technologies to give us the knowledge we require to undertake comprehensive assessments of our business.

The internal Sustainability Team oversees the implementation of the EEO program and is responsible for managing the corporations' energy data, and undertaking reporting to the public and government on the EEO program progress.

Also, as part of our audit process we engage our facility level staff to assist us in understanding our operations at a site level, as part of our site audit methodology.

4.3 Carbon Steering Committee

Australia Post's Carbon Steering Committee has been established for a number of years and comprises of members from across the business with the objective of determining the feasibility of implementing energy saving initiatives. Also, new opportunities are presented to this group and discussed to determine if the investment should be undertaken.

This group has now evolved to be the committee managing the progress towards our annual corporate carbon reduction target to ensure the business achieves our targets.

5. Identifying opportunities

Australia Post's ARS outlines our strategy for assessing the energy use across our organisation over the five year cycle (2006–2011). When developing our ARS we segmented our energy consumption into two main areas, and we have aligned our reporting accordingly; the two main sections;

1. Stationary energy
2. Transport energy

As required by the EEO legislation, our first five year program needed to cover a minimum of 80 per cent of our energy consumption across our corporate group. As table 5 below demonstrates, Australia Post has successfully assessed 83.3 per cent of our energy consumption.

Total energy use covered by all assessments in this report	1,738,374	GJ
Total energy assessed as percentage of total energy use of the corporate group	83.3%	%

Table 5 – Aggregate energy assessed covered in this report (EEO public report template table 1.2)

Australian Post's corporate group is comprised of many subsidiaries and joint ventures, as explained the previous section. The entities that require reporting under the EEO have relatively immaterial energy consumption when compared to Australia Post as shown in table 3 above. Therefore the major focus of our energy assessments was on Australia Post's operations as shown in table 6 below.

Name of group member or business unit or key activity	Energy to be assessed	Total energy use (GJ)	Energy use assessed in this entity (GJ)	Energy use assessed as a percentage of total entity energy use	Energy use assessed as a percentage of total corporate energy use
Australia Post	Y	2,031,872	1,706,987	84%	82%
Decipha	N	5,264	0	0%	0%
Geospend	N	925	0	0%	0%
Post logistics Australasia	Y	47,613	31,387	66%	2%
Printsoft Group	N	718	0	0%	0%
SecurePay	N	357	0	0%	0%
Total		2,086,749	1,738,374	83%	83%

Table 6 – Assessment detail by group member (EEO public report template table 2.1)

As stated in Australia Post's ARS, the assessment methodology involves:

- 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 has key background information and the outcomes of the assessments to assist decision making.

5.1 Assessments – Stationary Energy

Australia Post's operations are comprised of over 1,200 owned and leased facilities across Australia. Of this around 800 are retail outlets, 250 are delivery centres, 50 are mail and parcel centres and the remaining are administration offices, IT etc. In relevance to the EEO legislation, Australia Post does not have any individual facilities that consume over 0.5 petajoules of energy per annum.

As shown in table 7 below, over the five year of Australia Posts EEO program assessed 81 per cent of our stationary energy.

Name of group member	Total stationary energy (GJ)	Percentage stationary energy assessed
Australia Post	892,213	82%
Decipha	5,264	0%
Geospend	761	0%
Post logistics Australasia	47,230	66%
Printsoft Group	718	0%
SecurePay	357	0%
Corporate total	946,543	81%

Table 7 – Stationary energy assessed by corporate group

Across the range of our facilities, there are many variations and differing characteristics, which has resulted in disproportionate energy intensity across our facilities, for example two per cent of our facilities consume 50 per cent of our energy. Consequently, we have a large amount of facilities with very little energy consumption.

As stated in our ARS our assessment strategy for our stationary energy included the following;

1. Conduct site audits at all our major energy consuming facilities such as our letters and parcel centres,
2. Conduct site audits at a sample of retail outlets and delivery centres to use the representative sampling methodology to apply the findings to the similar facilities,
3. Conduct research into innovative and emerging energy efficiency and renewable energy technologies to assess the viability and the potential to undertake a trial to further assess the opportunity

5.1.1 Energy audits

To directly assess our stationary energy audits have been conducted across our facilities. During the five year cycle from 1 July 2006 to 30 June 2011, we conducted 107 energy audits across our portfolio in line with the ARS, and directly assessed 560,000 gigajoules of energy.

Our assessments follow the audit methodology that is outlined in the EEO Assessment Handbook, and are to a Level 3 Audit standard. The assessments involved at least two site visits to each facility and were conducted by consultants with technical expertise in energy and greenhouse solutions. The audits consider the following information to identify energy saving opportunities;

- Energy consumption analysis
- Apportion energy consumption to end use areas
- Analyse trends and anomalies
- Energy saving analysis
- Review each energy end use system
- Identify, analyse and provide recommendations of viable energy saving opportunities
- Interviews with on site staff to leverage the knowledge and understanding of the facility

5.1.2 Major facilities

Our top energy consuming sites were a focus of our audit schedule to identify energy efficiency opportunities that would have a significant impact on our overall energy consumption. Australia Post's major facilities include all of our large mail and parcel sorting facilities located in the major cities of Australia. These facilities are large sites, often warehouse style facilities with long operating hours which presented a great opportunity to find energy efficiency improvements.

During the five year cycle, we conducted energy audits at these major facilities; 23 mail centres, four Parcel centres and eight administration and logistics warehouses. Assessing our major energy consuming facilities covered 46 per cent of our stationary energy.

5.1.3 Representative assessments

Representative assessment provides organisations with a method to identify opportunities across a large portfolio of facilities that share common characteristics. Representative sampling is conducted by auditing a sample of facilities, ensuring that all variations are covered. The findings can then be applied to all other similar facilities. For Australia Post, representative assessment was used to identify opportunities across our retail and delivery facilities.

Over the five year program, we conducted audits at;

- 54 delivery centres,
- 19 retail facilities.

The sampling methodology adopted was based on these main variable characteristics to ensure we get a true representation of our facilities;

- **Geographic location** – The key criteria for selecting specific sites in our representative sample is geographical variation. Heating and air conditioning has been identified as a major energy consumer so temperatures have a significant impact on energy usage. Sample sites were selected from locations ranging from northern Queensland to Tasmania where the majority of Australia Post facilities are located.
- **Size** – Within our delivery facilities the variation in building type is mainly due to a differing range in size from smaller facilities with only a few staff on site to large delivery centres with large facilities and high numbers of staff on site. Our retail facilities have three distinctly different types of buildings relating to the size. These are traditional older styled stand alone retail outlets, outlets within a shopping strip / street and outlets within a shopping mall / centre. The sampling will representatively cover of each of these building types and sizes.

5.1.4 Researched new technologies

To support our energy audits, Australia Post commissioned an analysis of new and upcoming technologies to determine their viability for Australia Post over the next ten years. The review focussed mainly on energy efficient lighting and air conditioning, and on site renewable energy generation. Australia Post continues to keep a watching brief on new technologies and assesses the viability of applying them to our operations to reduce our energy use and increase our energy efficiency.

5.1.5 Current carbon position paper

In 2008–09 Australia Post produced a detailed analysis of Australia Post’s current greenhouse gas emissions, resource consumption, and an estimate of our greenhouse gas emissions levels at 2020 and our costs. This analysis also included investigating what are our key factors that influence our energy consumption and the level of control we have over them. This paper is frequently updated to provide the business with the most accurate pricing forecasts to demonstrate to potential impact of cost increases into the future (e.g. the impact of the carbon pricing legislation).

5.1.6 Assessment summary

The overall assessment result of our stationary energy is outlined in the table below. As it shows, the majority of our energy assessed came from direct energy audits at our major facilities.

Assessment strategy	Energy assessed (GJ)
Major facilities	439,758
Delivery centres – representative sampling	164,401
Retail outlets – representative sampling	158,812
Total stationary energy assessed	762,971
Total stationary energy use	946,543
Total of energy assessed during the EEO program	81%

Table 8– Stationary energy assessment summary over five year ARS

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

5.2 Assessments – Transport Energy

Australia Post's fleet comprises more than 10,000 vehicles including motorcycles, cars, vans, small and large trucks and prime movers. As outlined in our ARS, the assessment of our transport energy efficiency opportunities was conducted using representative assessments. Potential energy efficiency improvements were identified and evaluated using a sample of vehicles from each vehicle type. Research into fleet efficiency and alternative fuels was also completed to enhance our understanding of our fleet.

As shown in the table below, over the five year EEO program, we have assessed 86 per cent of our transport energy.

Name of group member	Total transport energy (GJ)	Percentage stationary energy assessed
Australia Post	1,139,659	86%
Decipha	0	0%
Geospend	164	0%
Post logistics Australasia	383	0%
Printsoft Group	0	0%
SecurePay	0	0%
Corporate total	1,140,205	86%

Table 9 – Transport energy assessed by corporate group

5.2.1 Representative assessments

Assessing energy efficiency opportunities in our transport fleet involved segmenting all the major Australia post transport tasks and modelling the energy consumption of the major vehicle types in the service or the "vehicle energy model". Development of the "vehicle energy model" enabled Australia Post to identify and conduct early quantification of energy efficiency opportunities. The models also improve the testing of energy efficiency changes resulting from vehicle modifications of changes to procedures, by removing the effect of independent variables (e.g. weather, freight mass, etc).

5.2.2 Heavy vehicles trials

A series of technical trials were undertaken at the Australia Automotive Research Centre (AARC) at Anglesea in 2009. The objective was to accurately quantify the impacts on fuel consumption from speed, tyre inflation, aerodynamic aids and driving style.

The trials were successful in that they identified a number of initiatives that would improve the efficiency of our heavy vehicles fleet. A number of the opportunities identified in this trial have been implemented and others are still under investigation. More information about these initiatives can be found in the outcomes section.

5.2.3 Alternative fuels and vehicles

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. During 2010–11 Australia Post conducted in-depth research into the environmental, financial and operational viability of alternative vehicle fuels. The analysis primarily covered our vans and heavy trucks.

5.2.4 Assessment summary

As outlined in the ARS, the fleet grouping we used to assess our fleet, and also the period of when the assessment was undertaken.

Fleet name	Period over which assessment was undertaken	Energy assessed (GJ) (2010–11)
Sedans/wagons	July 2007 – June 2008	79,705
Motorcycles	January 2008 – February 2009	108,786
Rigid trucks	August 2009 – January 2010	303,280
Prime movers	August 2009 – January 2010	483,632
Total transport energy assessed		975,403
Total transport energy use		1,140,205
Total of energy assessed during the EEO program		86%

Table 10 – Transport energy assessment summary over five year ARS

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

6. Outcomes

The assessments we have undertaken over the five year EEO program has assisted in understanding the sources of our energy consumption and identified many energy efficiency opportunities. The opportunities were then required to be evaluated by the business and investment decisions made. Our EEO program has been effective in identifying many initiatives that we have since implemented and reduced our energy consumption.

6.1 Stationary assessments results

Since the beginning our Australia Posts EEO program, we have identified 527 opportunities, 421 with a payback of four years or less. Furthermore, there are 312 opportunities that will be implemented, or are implemented, and when complete will have an estimated saving of 87,443 GJ of energy, around nine per cent of our stationary energy.

We also have a significant amount of initiatives that are still under investigation for business viability, and we will continue to evaluate them into our next five year EEO program.

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 opps	GJ	No of opps	GJ	No of opps	GJ	
Opportunities assessed to an accuracy of ± 30 per cent or better									
Business response	Under investigation	53	27	1,875	17	766	9	274	2,916
	To be Implemented	264	130	13,074	134	9,179	0	0	22,253
	Implementation commenced								0
	Implemented	45	19	19,836	26	36,239	0	0	56,075
	Not to be implemented	162	30	17,814	38	9,518	94	21,577	48,909
Outcomes of assessment	Total identified	524	206	52,599	215	55,702	103	21,851	130,152
Opportunities assessed to an accuracy worse than ± 30 per cent									
Business response	Under investigation								
	To be Implemented								
	Implementation commenced								
	Implemented	3					3	5,579	5,579
	Not to be implemented								
Outcomes of assessment	Total identified	3					3	5,579	5,579

Table 11 – Stationary assessment results (EEO public report template table 2.2)

6.1.1 National Energy Management Plan (NEMP)

The most significant outcome of our EEO program has been the National Energy Management Plan (NEMP). The NEMP program is consolidating of opportunities that have been identified through EEO. The NEMP used the findings from the energy audited conducted as part of the EEO process and at our major sites and delivery centres, and extrapolated this out to all remaining Australia Post sites. Refer to *Section 7 – Significant Opportunities* for more information on this initiative.

The NEMP opportunities are presented in table 11 above, and make up the majority classified as “to be implemented” and “implemented”.

6.1.2 HVAC Energy Efficient Upgrades

It has been determined that as a part of our ongoing upgrade of our heating, ventilation and air-conditioning (HVAC) systems at our major facilities, further investment could be made during our standard maintenance program to significantly improve the energy efficiency of these systems whilst not making fundamental changes to the existing infrastructure.

6.1.3 Green building guide

Australia Post commissioned a report into developing a green building guide to manage the environmental performance of our real estate portfolio, including the design, construction, refurbishment, maintenance, operation and disposal of our facilities. The report gives guidance on energy and water efficiency, the indoor working environment, waste and building materials.

6.1.4 Retail lighting

Though our retail facility energy audits and representative assessment we gained a comprehensive understanding of our retail portfolio and the opportunities for energy efficiency savings. The assessments identified that the primary opportunity for reducing energy consumption is through the choice of lighting and light controls.

We conducted a trial in four facilities in Victoria, to assess a new lighting design aimed at increasing the efficiency of our lighting design. The trials were deemed successful and therefore a retail lighting initiative was developed that as part of our ongoing facility upgrade program. However, the lighting can only be upgraded during planned refurbishments because it is not cost effective to replace the lighting in its own right.

6.2 Transport assessments results

The assessment of our transport fleet has involved some rigorous and comprehensive technical audits and analysis. The overall outcome of our assessments is that we identified 18 opportunities to improve our fleet's efficiency.

It is pleasing to report that nine initiatives will or have been implemented, which will result in a total energy saving of 91,110 GJ energy, equating to a nine per cent reduction on our total transport energy use once fully implemented. Furthermore, there are seven initiatives still under investigation for business viability, and we will continue to evaluate them into our next five year EEO program.

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	
Opportunities assessed to an accuracy of ± 30 per cent or better									
Business Response	Under investigation	7	5	117,904	1	16,953	1	38,907	173,763
	To be implemented	1	1	7,086					7,086
	Implementation commenced	2	1	44,250	1	3,823			48,073
	Implemented	6	6	35,973					35,973
	Not to be implemented	2					2	62,842	62,842
Outcomes of assessment	Total Identified	18	13	205,213	2	20,776	3	101,748	327,737

Table 12 – Transport assessment results (EEO public report template table 2.2)

6.2.1 Tyre pressure policy

A review of the current tyre pressure of Australia Post's heavy vehicles identified that most were below the optimal range. As a result a tyre pressure policy was implemented to ensure our fleet's tyres were maintained at the optimal range, significantly increasing our fuel efficiency. See *Section 7 – Significant Opportunities* for more information about this initiative.

6.2.2 Environmental driver program

As an outcome of the AARC vehicle testing at Anglesea, an opportunity was identified that the promotion of more efficient driving behaviours would result in fuel reductions. This education program was rolled out and fully implemented in January 2011. See *Section 7 – Significant Opportunities* for more information about this initiative.

6.2.3 Alternative delivery modes

While reviewing our delivery modes, it was identified that a number of motorcycle rounds could potentially be replaced with bicycle and walking rounds. In 2010 we trialed electronically assisted pushbikes and tricycles as a replacement to motorcycles to reduce the amount of petrol we consumed. The trial has been a success and since we have procured an additional 1,000 bicycles which we will implement in 2011–12. See *Section 7 – Significant Opportunities* for more information about this initiative.

6.2.4 Aerodynamics

The AARC vehicle trials identified a number of initiatives to better optimise our fleet's fuel efficiency. A number of these included improvements to the aerodynamics of the heavy vehicles. A key finding was that some of the air deflectors on our heavy vehicles were not set at the optimal height/angle therefore an opportunity was identified to re-adjust the deflectors and achieve a fuel efficiency saving of around 8,000 GJ of energy.

6.2.5 Passenger vehicles

We have continued hybrid passenger fleet replacement program since we implemented it in 2009, and have been progressively replacing 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. At the end of the year, we had in total 87 hybrid vehicles in our passenger vehicle fleet, which is approximately 10 per cent of our passenger vehicles.

6.2.6 Delivery route optimisation

As part of normal business practice, we are continually seeking to improve the fuel efficiency of our last mile delivery network. In 2010 we implemented the delivery route optimisation (DRO) software that assists in determining the most efficient route for delivering mail. This initiative will apply to 6,353 delivery rounds, saving an average of 17.6 litres per round. This initiative will be rolled out across each delivery centre over the next few years until all viable rounds have been optimised.

6.2.7 Compressed natural gas (CNG) vehicles

The research into alternative fuels identified the opportunity to use compressed natural gas (CNG) as an alternative to diesel for our mail vans and potentially our heavy vehicles. This opportunity is still being investigated, and a trial may be undertaken in the next five year EEO program. This initiative will carry over into our next five year program, as it has the potential to significantly reduce fuel costs.

7. Significant opportunities

7.1 Opportunity one – National Energy Management Plan (NEMP)

The NEMP is the implementation of opportunities we have been identified through EEO program at our facilities. The NEMP used the findings from the energy audited conducted as part of the EEO process and at our major sites and delivery centres, and extrapolated this out to all remaining Australia Post sites. The opportunities were rolled up into one investment initiative called the NEMP, and was approved by the Australia Post board in December 2009, securing \$11.2 million dollars for implementation.

The NEMP has focused on reducing energy in 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.

A significant saving was identified with the trial of induction lamps as a replacement for high bay metal halide lights, with an estimated saving of around 35 per cent. Additional savings in reduced heat load are also expected during the summer season.

Once the program is fully implemented, 30,000 tonnes of carbon emissions will be saved. This is equivalent to approximately 10 per cent of our annual scope 1 and 2 greenhouse gas emissions

Initiative information	
Business response	Implementation commenced
Energy saved (GJ)	11,000
Greenhouse gas abated (CO ₂ -e tonnes)	30,000
\$ saved	\$ 3,726,400
Payback period	3.3

7.2 Opportunity two – Electronic assisted bikes

While reviewing our delivery modes, it was identified that a number of motorcycle rounds could potentially be replaced with bicycle and walking rounds. In 2010 we successfully trialled electronically assisted pushbikes and tricycles as a replacement to motorcycles to reduce the amount of petrol we consumed. Since then, we have procured another 1,000 to be deployed in 2011–12.

The bicycles come with electrical engines to give the postie the option of pedalling the bicycle or letting the engine pick up the work. We aim on increasing the electronic assisted bikes each year until we have replaced as many motorcycles as possible. There will be a limit to the number of delivery routes that can be serviced with these bikes, as many involve long distances or cover challenging terrain.

Initiative information	
Business response	To be implemented
Energy saved (GJ)	7,086
Greenhouse gas abated (CO ₂ -e tonnes)	400
\$ saved	\$767,000
Payback period	3.3

7.3 Opportunity three – Tyre pressure policy

The vehicles trials undertaken at the AARC demonstrated that tyre pressure could have a significant impact on fuel efficiency and there is an optimal pressure that the tyres should be maintained.

An audit of linehaul tyre pressures found that the average tyre pressure of the fleet was 18 per cent below the specifications. To rectify this, a tyre pressure maintenance policy was developed and implemented to ensure that drivers are regularly checking and maintaining their tyre pressures to the optimal range.

This focus on tyre pressure maintenance has had a significant improvement to the fuel efficiency of the fleet, saving an average of 2.34 per cent of fuel consumption (or 300 kilolitres of diesel a year). Additional benefits include tyre wear is greatly improved at the correct tyre pressure and the risk of failure from overheating is greatly reduced.

Initiative information	
Business response	Implemented
Energy saved (GJ)	19,397
Greenhouse gas abated (CO ₂ -e tonnes)	1,355
\$ saved	\$413,000
Payback period	0.03

7.4 Opportunity four – Environmental Driver Program

Another outcome of our AARC trials was that driver behaviours have a real impact on the fuel efficiency of a vehicle, and therefore educating our staff about good driver behaviour would reduce fuel consumption. From this the Environmental Driver Program was developed to target some key driving behaviours to increase efficiency. The training includes:

- 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.

A proposal was developed to create an in house pilot Environmental Driver Program. Upon the success of the trial, the program was fully implemented in January 2011. The program has achieved almost a two per cent savings in fuel consumption.

Initiative Information	
Business Response	Implemented
Energy saved (GJ)	7,621
Greenhouse gas abated (CO ₂ -e tonnes)	523
\$ saved	\$240,880
Payback period	0.2

8. Communicating Outcomes

The EEO program has identified many areas to improve the energy efficiency of our business. These have led to some significant savings and our achievements are communicated to our staff.

Australia Post has many tools and channels for communicating to our staff including our information bulletins, our monthly staff magazine *Post Journal* and our intranet.

EEO Communication

Each year the CEO is presented with the public/ government report which includes total energy use, and energy use KPIs, total energy savings and costs and associated business response. The Australia Post board reviews each public/government report and is noted before the report is approved and published.

Post Journal

The results of the EEO program and the related National Energy Management Plan have been communicated to staff through our staff magazine – *Post Journal*. Articles about energy savings due to lighting upgrades, electric assisted bicycles and other initiatives that have resulted from the EEO process have featured in the *Post Journal* magazine which is distributed to all staff.

Environmental Facility Data Tool

We are committed to empowering staff to make changes to reduce their environmental impacts. To increase our staff's awareness of their site's energy use 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 Australia Post's Intranet, preceded by a message from the Managing Director, and has been launched through bulletins, meetings and intranet promotions

National Energy Management Plan (NEMP) Posters

As part of the NEMP program quarterly posters reporting on ongoing energy consumption at the site are produced for the stage one sites.

The posters inform staff at the sites of the savings generated at their site as a result of energy efficiency initiatives put in place as part of the program. They also express appreciation to the staff and managers who assisted in the implementation of the works and notify staff of any changes that are occurring.