

# energy efficiency opportunities

Public Report 2011



*we can*



# PUBLIC REPORT 2011

This report constitutes the fourth public submission by TNT Australia Pty Limited (TNTA) under the Australian Federal Government's Energy Efficiency Opportunities (EEO) programme and details energy efficiency opportunities that are either implemented, being implemented or under investigation within TNTA for the period indicated below.

Approximately 95% of TNTA's reportable energy use is detailed in this report, including Riteway Transport Pty Limited, a wholly owned subsidiary which operates under the control of TNTA. Energy use by contractors is excluded from this report.

Energy data reported under the EEO programme and reflected in this report have been lodged in the EEO Module using the Online System for Comprehensive Activity Reporting (OSCAR).

## Part 1 - Corporation Details

### Controlling Corporation

TNT Australia Pty Limited

### Period to which this report relates

From 1 July 2006 To 30 June 2011

### Table 1.1 - Major Changes to Corporate Group Structure or Operations

#### Table 1.1 – Major Changes to Corporate Group Structure or Operations

TNTA is an international express freight transport company that transfers goods and documents to over 200 countries worldwide, with a focus on time-definite and day-definite pick up and delivery. TNTA picks up, transports, sorts, handles, stores and delivers documents, parcels and freight by combining its physical infrastructure, such as depots and trucks, with industry leading electronic and commercial systems to best serve its customers.

There has been no change to the Corporate structure or the nature of operations of the company. Nonetheless, there are developments during the year which have an impact on energy usage and efficiency opportunities:

- TNTA has continued its fleet replacement program, when possible, by introducing additional hybrid rigid trucks into the fleet which have lower emissions than the vehicles being replaced.
- During the fiscal year, the company terminated its lease in one of the major depots in Sydney and transferred to a new leased depot which may have a slight impact on the timing of electricity usage reporting.
- The sluggish global economic activity resulted in capital expenditure restrictions as part of the TNT global strategy which impacted the implementation of capital projects and consideration of capital expenditure proposals in Australia.



**Table 1.2 – Aggregate energy assessed covered in this report**

<b>Total energy use covered by all assessments in this report</b>	<b>533,457</b>	<b>GJ</b>
<b>Total energy assessed as percentage of total energy use of the corporate group*#</b>	<b>95</b>	<b>%</b>

Energy use within TANTA for FY10-11 totals 561,534 GJ, an increase of 12,065 GJ (2.2%) over the previous reporting period. With TANTA’s energy use impacted by many external factors, this outcome reflects a combination of energy efficiency and productivity improvements, introduction of new equipment and infrastructure, increase in customer activity and changes to the makeup of national transport activity.

Overall, energy use within TANTA is highly dependent on the gross level of diesel consumption which, in turn, is a direct representation of prevailing levels of operational activity. The volume of freight transported by TANTA during FY 10/11 reporting period has increased over the last 12 months, which is reflected by an increase in gross fuel consumption. Analysis of a unitised measure such as Fuel Litres Consumed per Tonne of Freight Transported, however, demonstrates that fuel efficiency savings have been achieved as a result of focused fuel efficiency initiatives.

This positive change is the result of a variety of fleet and operational initiatives over recent years including the removal of petrol powered vehicles from the TANTA fleet, the introduction of alternative fleet technologies (such as diesel-electric hybrid and CNG vehicles), an operational focus on network optimisation and freight consolidation, increasing use of GPS navigational systems, and driver eco-driving training.

Electricity consumption within TANTA, of which almost 10% is procured from sustainable ‘Green Power’ sources, has decreased in FY 10/11 as a result of consolidation of certain depots, i.e., combining two depots into one in certain sites, implementation of energy efficiency initiatives in new depot developments, and partly due to a delay in electricity billing in newly occupied sites.

**Table 1.3 – TNT Australia Energy use over the past four EEO reporting periods**

<b>Energy Source</b>	<b>FY 07/08</b>	<b>FY 08/09</b>	<b>FY 09/10</b>	<b>FY 10/11</b>
Diesel (kL)	9,215	9,484	10,931	11,335
Petrol (kL)	221	183	184	95
LPG (kL)	2,004	1,987	2,042	2,237
CNG (kg)	-	-	880	18,251
Electricity (kWh)	18,911,937	17,582,540	18,853,745	17,164,165



## Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

**Name of group member or business unit or key activity**

TNT Australia

**Total energy use in the last financial year**

561,534

GJ

**Energy use assessed in this entity as a percentage of total entity energy use\***

95

%

**Energy use assessed in this entity as a percentage of total corporate energy use**

95

%

**Accuracy of above estimates related to energy use assessed - only required if not ±5% or better**

-

%

Electricity energy assessments stemming from large scale depot development or refurbishment activities are reported to an accuracy of ± 30%. Energy savings to be derived from TNTA depot development activities are unable to be estimated more precisely than this as each depot is unique in its operation and subject to local influences, and the claimed energy savings of many new technologies are as yet unconfirmed.

Assessments related to vehicle replacement and Head Office opportunities have been reported to an accuracy of ± 15% again due to the unconfirmed technical performance of proposed new equipment and significant impact of behavioural considerations on anticipated energy savings.

**Period over which assessment was undertaken**

01/07/2006

30/06/2011

**Description of the way in which the entity carried out its assessment**

TNTA measures and monitors its consumption of fossil fuels (diesel, petrol, LPG, and CNG) in company owned and operated vehicle / forklift fleet, and electricity consumed in various TNTA sites. Vehicle fuel accounts for approximately 88% of TNTA's energy consumption whilst electricity and gas make up the remaining 12%.

The assessment of opportunities is undertaken by either one or a combination of the following processes:

- Analysis of energy usage and trends compiled monthly for TNT global corporate responsibility reporting;
- Periodic consultation with various energy efficiency stakeholders to identify energy efficiency opportunities and discussion on the status of previously reported opportunities;
- Review third party reports commissioned by TNTA to evaluate energy conservation measures of identified depots;

- Inclusion of energy efficiency considerations in capital expenditure proposals; and
- Updating of the EEO register with the opportunities identified during the year and indicating status of existing items.

TNTA has met the intent and key requirements of the Energy Efficiency Opportunities legislation and adheres to its EEO Assessment & Reporting Schedule submitted on entry to the EEO programme. The assessments were mainly carried out on the two major items as follows:

- In relation to vehicle fleet efficiency, TNTA has included the following:
  - introduction of new or improved vehicle technologies;
  - optimisation of fleet size to match operational requirements;
  - optimisation of operational activity; and
  - training of drivers in eco-driving techniques.
- With respect to electricity usage efficiency, TNTA is primarily focused on larger distribution hubs and major regional depots that consume the bulk of purchased electricity. In the submitted Assessment & Reporting Schedule, TNTA undertakes to assess energy use at seven major sites (14% of all TNTA facilities) which constitute 63% of total electricity consumption. Lower levels of assessment are conducted at smaller TNTA sites, each of which assumes local responsibility for energy efficiency initiatives via independent environmental committees. The principal investigation areas for electricity energy efficiency are:
  - freight distribution operational activities;
  - office / warehouse lighting, heating, and air conditioning; and
  - administrative functions that involve computing, printing or other technological functionality.



**Table 2.2 - Energy efficiency opportunities identified in the assessment**

<b>Table 2.2 – Energy efficiency opportunities identified in the assessment</b>									
<b>Status of opportunities identified to an accuracy of better than or equal to ±30%</b>		<b>Total Number of opportunities</b>	<b>Estimated energy savings per annum by payback period (GJ)</b>						<b>Total estimated energy savings per annum (GJ)</b>
			<b>0 – &lt; 2 years</b>		<b>2 – ≤ 4 years</b>		<b>&gt; 4 years</b>		
			<b>No of Opps</b>	<b>GJ</b>	<b>No of Opps</b>	<b>GJ</b>	<b>No of Opps</b>	<b>GJ</b>	
Business Response	Implemented	44	3	1,804	2	183	38	3,069	5,056
	Implementation Commenced	49					49	1,462	1,462
	To be Implemented								
	Under Investigation	19					19	3,142	3,142
	Not to be Implemented	9	2	880	1	1,056	6	1,506	3,442
Outcomes of assessment	Total Identified	120	5	2,684	3	1,239	112	9,179	13,102
<b>Status of opportunities identified to an accuracy of worse than ±30%</b>									
Business Response	Implemented								
	Implementation Commenced								
	To be Implemented								
	Under Investigation								
	Not to be Implemented								
Outcomes of assessment	Total Identified								



**Table 2.3 - Details of significant opportunities identified in the assessment**

Significant opportunities for improving the energy efficiency of the group that have been identified in assessments to date are set out below.

Description of Opportunity	Voluntary Information	
<p>As part of TNTA's corporate sustainability policy, TNTA continues to acquire Hino hybrid rigid trucks to replace older vehicles being retired. To date, 30 hybrid trucks have been introduced and an additional 10 trucks are proposed for next year. The vehicles being replaced are generally equivalent to Euro 1 standard with some even pre-dating the Euro 1 standard.</p> <p>The acquisitions comply with the latest emission standard 'Australian Design Rule 80/03' (Australian equivalent to Euro 5 vehicle emission standard). The available technology alternatives for rigid trucks are diesel hybrid and CNG technology. Future acquisitions would depend on the result of the evaluation of the performance of the Euro 5 conventional diesel vehicles against the CNG fuelled units which have been purchased earlier.</p>	Business Response	Implementation commenced
	Energy saved (GJ)	832 GJ pa (once 40 trucks have been acquired)
	Greenhouse gas abated (CO2-e)	
	\$s saved	\$26,000 pa (once 40 trucks have been acquired)
	Payback period	4+ years

Description of Opportunity	Voluntary Information	
<p>TNTA has commenced the introduction of an advanced On-road Driver Management System in metropolitan areas to optimise Pickup &amp; Delivery movements, so as to improve service quality performance and minimise fuel use. It is anticipated that kilometres travelled by drivers will be reduced due to missed pick-ups and return to base volumes being minimised.</p> <p>This initiative is difficult to quantify to a sufficiently accurate degree but is expected to improve service quality performance and reduce fuel usage.</p>	Business Response	Implementation commenced
	Energy saved (GJ)	
	Greenhouse gas abated (CO2-e)	
	\$s saved	
	Payback period	4+ years



Description of Opportunity	Voluntary Information	
<p>TNTA is required to relocate its current Brisbane North depot to another location due to the planned expansion of the Brisbane airport. This provided an opportunity for TNTA to review its operations and incorporate the operating requirements with energy efficient opportunities in developing the new site.</p> <p>TNTA has obtained a capital expenditure approval to develop a new depot equipped with energy efficient facilities such as translucent roof sheeting in the warehouse, energy efficient lights, solar hot water system, water saving taps, bike racks, and water retention facilities at the estate.</p> <p>The payback period for this project is still under investigation.</p>	Business Response	To be implemented and completed in 2012
	Energy saved (GJ)	
	Greenhouse gas abated (CO2-e)	
	\$s saved	
	Payback period	

Description of Opportunity	Voluntary Information	
<p>During the early part of 2011, the Mascot Depot was relocated to a new facility in Botany and consolidated the Sameday depot. This move provided an immediate energy saving of 700 GJ pa.</p> <p>As part of the capital expenditure review, the new Botany depot was identified as being only 2 years old, thereby complying with Environmentally Sustainable Development (ESD) principles. Initiatives at this depot include an open plan office layout with energy efficient lighting, air-conditioning system is fitted with thermostats and diffusers to ensure the appropriate level of air balance, water minimisation recycling program, and a new conveyor system has been installed which is expected to use less energy.</p>	Business Response	Implementation completed
	Energy saved (GJ)	700 GJ pa
	Greenhouse gas abated (CO2-e)	
	\$s saved	
	Payback period	4+ years

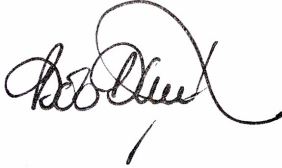


Description of Opportunity	Voluntary Information	
Energy reduction opportunities in the Laverton depot have been identified in an audit report conducted by Ecosave Pty Limited. The efficiency opportunities identified mainly relate to installing more energy efficient lighting and controls.	Business Response	Under investigation
	Energy saved (GJ)	2,711 GJ pa
	Greenhouse gas abated (CO2-e)	1,032 pa
	\$s saved	\$95,955 pa
	Payback period	4+ years

Description of Opportunity	Voluntary Information	
Energy reduction opportunities in the Townsville depot have been identified in an audit report conducted by Eco Efficiency Experts Australasia Pty Limited. The efficiency opportunities identified mainly relate to installing more energy efficient lighting and controls. However, this is subject to discussions with the lessor.	Business Response	Under investigation
	Energy saved (GJ)	122 GJ pa
	Greenhouse gas abated (CO2-e)	34 pa
	\$s saved	\$8,082 pa
	Payback period	4+ years

In summary, the reduction of particulate and greenhouse gas emissions from TNTA's vehicle fleet remains the primary focus of the company as this is the bulk of its energy consumption and is in alignment with providing efficient and cost effective services. Opportunities to further reduce electricity within the company continue to be identified although the impact is low and relatively standard from site to site.

## Declaration

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> .	
	Robert Black Managing Director
	<b>Date 19 December 2011</b>