

News Limited

Energy Efficiency Opportunities Act EEO Public Report 1

Period to which this report relates

Start End

Controlling Corporation

Due for submission to Department of Resources, Energy and Tourism by **31st December 2008**



One Degree.
It's about every one of us.

Contents: News Australia Holdings - EEO Public Report 1

Part 1: Summary of Assessments conducted thus far

- Table 1.1 - Description of the way in which the corporation has carried out its assessments and over what period each assessment was performed. A statement saying that the intent and key requirements of the Energy Efficiency Opportunities legislation have been met is made
- Table 1.2 - Group member/business unit/key activity/site that have been assessed

Part 2: Outcomes of and business response to opportunities that have been identified and evaluated for each business unit or site assessed

- Table 1.3 - Status of Opportunities
- Table 1.4 - Further detail on selected identified energy efficiency opportunities: details of at least three significant opportunities found through EEO assessments

Part 3: Voluntary Contextual Information

- Additional information on News Limited's One Degree program
www.1degree.com.au

Part 4: Company declaration



Part 1 - Summary of Assessments conducted thus far

Table 1.1

**Table 1.1 - Description of the way in which the corporation has carried out its assessments and over what period was each assessment taken.
A statement saying that the intent and key requirements of the Energy Efficiency Opportunities legislation have been met must be made.**

(See sub-section 22(3)(a) of the Act)

News Limited has been actively involved in greenhouse initiatives since 2000 – with business units participating in the Australian Government’s voluntary Greenhouse Challenge and Greenhouse Challenge Plus energy reduction programs. Certain business units also undertake additional energy use reporting such as the DEUS Energy Saving Action Plan in NSW. When the Energy Efficiency Opportunities (EEO) program was introduced in 2006, News Limited was well placed to be able to build on its existing energy efficiency program.

The great catalyst to the company’s enhanced commitment to energy efficiency came on May 9th 2007, when Rupert Murdoch announced that News Corporation would tackle climate change globally through a “Global Energy Initiative”. This set the goal of being carbon neutral in 2010, and reducing emissions globally by 10% in 2012. News Limited, the Australasian arm of News Corporation, made a commitment to go even further with a goal of reducing emissions by 20% by the end of 2010.

To achieve this, News Limited launched its award winning One Degree program – an initiative designed to raise awareness and assist staff and the public to reduce their impacts on climate change. One Degree is all about the small changes that everyone can make to help change the future of the planet, One Degree is an integral part of News Limited’s EEO program. Additional information on the One Degree program can be found at www.1degree.com.au. Dr Tony Wilkins, Manager of News Limited’s Environment & Climate Change Department, was invited by EEO staff to present News’ One Degree approach to energy efficiency to fellow EEO program participants at several cities in a series of Australian east coast government run EEO forums in July 2008.

As well as Greenhouse Challenge, DEUS and EEO reporting, News Limited also reports to News Corporation which publicly reports on its global emissions. News Corporation also participates in other voluntary schemes such as the Carbon Disclosure Project, and is a member of The Climate Group, a not for profit organisation working to reduce emissions from businesses around the world.

The primary objective of News’ assessment program has been to identify realistic and cost-effective energy conservation measures with a maximum four-year payback period that will help reduce our greenhouse emissions by 20% by the end of 2010. To achieve this News Limited established a national Energy Audit Program which complies with the Energy Efficiency Opportunities (EEO) Act.

Under the EEO Act, which is administered by the Department of Resources, Energy and Tourism (DRET), large, energy-using corporations are obliged to conduct energy assessments at nominated sites. These energy assessments must cover at least 80% of the controlling corporation's energy usage, and occur according to an EEO 'Assessment and Reporting Schedule'. For the purpose of producing meaningful EEO reports and data sets, which also align with News Corporation's voluntary carbon accounting, News Limited decided to disaggregate EEO assessments by business unit.

The national Energy Audit Program began in 2007 with energy assessments of 14 major sites, chosen to represent approximately 80% of News Limited's energy use. Leading consultants were engaged as energy audit partners from companies that included SMEC, GHD, Energetics and Exergy. This program, in its first year, meets and exceeds the Government's EEO requirement to have assessed 80% of group energy use within the first five year EEO cycle. Most importantly, it satisfies News Limited's objective to identify those opportunities that will allow our One Degree program to achieve our goal of a 20% reduction in carbon emissions. This Energy Audit Program has been supplemented by specialist IT reviews of energy usage conducted by HP and KPMG.

These assessments have drawn on existing management practices and also a number of new initiatives, and have involved the use of multi-disciplinary teams. **The assessments have complied with the intent and key requirements of the EEO program** and have to date identified significant opportunities for potentially achieving around 10% gains in overall energy efficiency. News Limited is continuing to conduct additional energy assessments of the group's energy use to further increase the opportunities to achieve energy efficiency gains.

The energy audits were performed to 'Level 2-3' status, with the goal of identifying all projects that could save energy while satisfying the criteria of meeting a four year financial payback or better. Several projects outside this payback criteria were also included as they provided additional benefits to the business. These assessments identified over a hundred projects that if implemented will save 65,091 GJ of energy annually, 16,031 tonnes of greenhouse gas emissions and between them have an average payback period of 2.2 years (or 2.6 years if potentially worthwhile projects outside the four year payback are included).

Parts 2 and 3 of this EEO public report include details of assessments that have been conducted over the period 1st July 2006 to 30th June 2008. Significant reductions in energy use and greenhouse emissions have occurred before this time and are not reported on here: for example, Advertiser Newspapers reduced its greenhouse emissions per printing plate impression by 57% between 2000 and 2005 as part of the Greenhouse Challenge program.

Part 1 - Summary of Assessments conducted thus far

TABLE 1.2

Table 1.2 - Group member/business unit/key activity/site that have been assessed	Energy use per annum in the year assessment is completed *	Energy data accuracy (if not within $\pm 5\%$) **	Reasons for not achieving data accuracy to within $\pm 5\%$ **
(see paragraph 1(a) of Schedule 4 of the Regulations)	(see paragraph 2 of Schedule 4 of the Regulations)	(see paragraph 5(a) of Schedule 4 of the Regulations)	(see paragraph 5(b) of Schedule 4 of the Regulations)
Adelaide Advertiser – admin	19,307		
Adelaide Advertiser – print centre	48,982		
Perth Print	22,582		
The Cairns Post – admin	3,375		
The Cairns Post – print centre	4,293		
Queensland Newspapers – admin Bowen hills sites x 2	21,950		
Queensland Newspapers – print centre	59,053		
The Gold Coast Bulletin – admin + Sun site	5,158		
The Gold Coast Bulletin – print centre	14,587		
North Queensland Newspaper Company – admin Ogden St	3,050		
North Queensland Newspaper Company – print centre	9,451		
Herald & Weekly Times – print centre	98,222		
Nationwide News – admin Holt St	41,368		
Nationwide News – print centre (DEUS)	110,488		
Total	461,866		
Percentage of total energy use of the group covered by this report	82.7%		

* Energy Bandwidth may only be used if approved in the Assessment and Reporting Schedule

** Data accuracy not within $\pm 5\%$ can only be included if approved in the Assessment and Reporting Schedule

Part 2: Outcomes of and business response to opportunities identified and evaluated

Table 1.3 (See paragraphs 3-6 of Schedule 4 and Schedule 6 of the Regulations)

Table 1.3 - Status of Opportunities		Number of Opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)	*Accuracy range (%)
			0 – < 2 years	2 – ≤ 4 years		
Outcomes of assessment	Identified (accuracy ≤ ±30%)	93	41,548	23,766	65,313	(accuracy ≤ ±30%)
	Identified (accuracy > ±30%)	2	2,500	260	2,760	(accuracy > ±30%)
	**Total Identified	95	44,048	24,026	68,073	
***Business Response	Under Investigation	32	2,228	22,052	24,280	(accuracy ≤ ±30%)
	To be Implemented	24	17,544	121	17,665	(accuracy ≤ ±30%)
	Implementation Commenced	13	20,266	891	21,156	(accuracy ≤ ±30%)
	Implemented	24	4,011	522	4,533	(accuracy ≤ ±30%)
	Not to be Implemented	2	0	440	440	(accuracy ≤ ±30%)

*The accuracy range for projected or actual costs, benefits and energy savings.

**You must ensure that this row is the sum of the two rows above it.

*** The data contained in each row of the business response area must total to the data contained in the 'Total Identified' row.

Note: An opportunity is any potential change to a system, activity or piece of equipment that:

- is identified during an EEO assessment;
- is consistent with legal requirements such as OHS, and
- may result in energy savings projects with payback periods of 4 years or less.

Part 2: Outcomes of and business response to opportunities identified and evaluated

Table 1.4 (See paragraph 7 of Schedule 4 of the Regulations)

Details must include a brief description of the opportunity and may optionally include details of the costs of implementation, energy/dollar savings and any other benefits (such as greenhouse reductions).

Table 1.4 Details of at least three significant opportunities found through EEO assessments

News Australia Holdings - Introduction to Table 1.4

The Energy Audit summary immediately below details the combined findings of more than a hundred project areas identified. This table does not include data from the specialist reviews of IT energy use recently conducted by HP and KPMG which will be included in future reports. News Limited has chosen to elaborate on the details of 27 energy efficiency opportunities across the business units which have participated in our energy audit program during the first EEO reporting period. The opportunities detailed below were selected to offer a snapshot of a wide variety of projects and project areas now being investigated.

News Limited: 14 site Energy audit summary:

Audits during FY07-08	Estimated cost (\$)	Electricity Savings identified (MWh)	Natural Gas Savings identified (GJ)	Total Energy Savings (GJ)	Potential GHG Savings (t.CO2-e)	kW Demand Saving	Energy & Other \$ Savings	Payback period (years)
Summary of all projects	\$3,984,536	16,544	6,122	65,091	16,031	522	\$1,519,528	2.6
Summary of all projects within 4 year payback or critical for business continuity	\$3,674,520	16,169	6,122	63,740	14,947	394	\$1,414,766	2.2

1. Advertiser Newspapers Mile End Print Centre

News Limited aims to transform its Australian business to achieve net zero carbon emissions by the end of 2010. As the bulk of News Limited's carbon footprint is linked to electricity usage at major printing and administrative sites, during the first EEO reporting cycle, News Limited initiated a program of energy audits at 14 key sites across the country. The energy audit conducted at the Mile End Print Centre in 2007 represented the first major audit under this program, and has identified potential savings of 26.6% of the site's current annual energy use. The Mile End Print Centre (MEPC) has previously completed an energy audit (covering the 1999-2000 financial year) for the purposes of the Australian Government's 'Greenhouse Challenge' Program.

EEO Project description 1: Mile End Print Centre - Optimisation of Compressed Air system

Compressed air is a significant energy use at the MEPC, and it is also an area where wastage occurs. It is estimated that \$86,000 per annum (energy cost only) is wasted through inefficiency of the compressed air system. Leaks in the distribution system, process equipment and the pneumatically activated smoke ventilation system are resulting in large standby losses. These losses equate to 82% of the maximum load. Minimising compressed air leakage through staff awareness will result in energy and cost savings.

The audit recommendations for the MEPC are to:

- raise staff awareness of the importance of identifying and fixing air leaks on equipment
- minimise the wastage from the system
- identify the actual compressed air demands
- re-evaluate the plant requirements and optimise plant selection for production requirements and energy efficiency

Additional project details

EEO project status: Implementation Commenced

EEO project completion date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 4,037

Amount of energy forecast to be saved per annum:

Forecast greenhouse gas reductions per annum: 970

Forecast energy expenditure savings per annum: \$85,929

Other Business Savings (\$) e.g. waste, maintenance per annum : \$16,165

EEO project simple payback (in years): 1.7

EEO Project description 2: Mile End Print Centre - Optimising fresh air intake and reducing conditioned/humidified air wastage.

Additional project details

EEO project status: Implementation Commenced

EEO project completion date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 5,931

Forecast greenhouse gas reductions per annum: 1,425

Forecast energy expenditure savings per annum: \$115,885

Other Business Savings (\$) e.g. waste, maintenance per annum : \$23,751

EEO project simple payback (in years): 1.8

Energy efficiency opportunities already underway at The Adelaide Advertiser Mile End Print Centre

The Mile End Print Centre has previously completed an energy audit covering the 1999-2000 financial year. Based on the outcome of that audit, various energy conservation measures (ECM) and energy management strategies were incorporated into an action plan. The following items were implemented as part of the 2004-05 'Greenhouse Challenge' program:

- monitor pulse meters on electrical supply
- reduce press hall HVAC run times by 12%
- purchase a variable output spiral valve air compressor
- weekly reporting of KPI's
- purchase of a portable 3 phase energy logger
- installation of solenoid isolating valves to some compressed air consuming devices in the publishing lines
- air compressor in paper store decommissioned
- roll out of LCD monitors to replace CRT monitors

2. Advertiser Newspapers Waymouth St Administration building 'Keith Murdoch House'

The headquarters of Advertiser Newspapers is located in Keith Murdoch House (KMH) - a purpose built 'green building' in Adelaide's CBD. KMH was constructed to a high-quality specification and it has been in operation since mid 2005. Special features of the building impacting on energy consumption are detailed below.

EEO Project description 3: Keith Murdoch House - Implement wake-on LAN system to enable computers to be switched off when not in use

A substantial amount of office equipment is left operating needlessly after-hours. Limited switching-off practices are in place for the workstations and LCD monitors. In particular the organisational policy is for workstation to be left on and only monitors to be switched off to allow for overnight software updates to the base stations. While performing the software updates is a critical business requirement, there are more efficient ways to facilitate this process.

A 'wake-on' LAN system leaves only the network cards of the workstations powered overnight, allowing each workstation to be remotely switched on when the updates are required to be installed and switched-off automatically afterwards. This will provide significant energy savings. Site staff informed us that this has already been investigated and was estimated to cost \$30,000 to implement. The energy savings reaped from this measure would give a payback of less than two years.

Additional project details

EEO project status: Implementation Commenced

EEO project completion date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: not available

Amount of energy forecast to be saved per annum: 1,184.4

Forecast greenhouse gas reductions per annum: 343

Forecast energy expenditure savings per annum: \$22,600

EEO project simple payback (in years): 1.3

EEO Project description 4: Keith Murdoch House - Optimise Building Management System

Building Management Systems (BMS) control almost all major energy use on the site. By fine tuning this system, heating/cooling and ventilation can become more efficient. A specialist staff member has been added to The Advertiser team to address this.

Additional project details: Detailed investigation into the operation of the BMS controls system. Adopt smart strategies for future use.

EEO project status: Implementation Commenced

EEO project completion date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: not available

Amount of energy forecast to be saved per annum: 3,262 GJ

Forecast greenhouse gas reductions per annum: 591

Forecast energy expenditure savings per annum: \$56,600

EEO project simple payback (in years): 0.9

Energy efficiency opportunities already underway at The Adelaide Advertiser

Keith Murdoch House is one of Australia's top green buildings. It is a showcase of energy and water efficiency which is responsive to human requirements, emitting minimum levels of carbon dioxide in its operation.

The following are some of the features built into the design:

Energy efficiency

- building façades have double glazing to north, east and west to decrease energy consumption
- fully shaded North facing façade
- roof insulation
- internal drapes
- ventilated glazed façade on the north side, effectively a third layer of glass
- high efficiency T5 tri-phosphor fluorescent tubes with electronic ballasts provide energy efficient lighting. Additional efficiency is achieved by zoned BMS control with over-ride switches for outside normal hours operation of lighting
- solar hot water system with natural gas boosting provides high efficiency hot water to the building facilities
- provision of power factor correction equipment

Air conditioning

- BESTEC accredited engineers have applied Greenstar principles to the design of the air-conditioning system
- air conditioning components selected using "whole of life" (or lifecycle) selection criteria with long life and high efficiency used as primary considerations
- reduction in air conditioning capacity requirements due to the energy efficiencies built into the building design

- flexible smart “zoned” air conditioning
- economy cycle utilizing “100% fresh air” operation to provide automatic free cooling when ambient conditions allow
- low velocity air distribution systems to reduce fan energy use
- reduction in energy usage by controlling fresh air intake to match building occupancy requirements determined using carbon dioxide monitoring
- reduction of *Legionella* risks by eliminating water cooling towers, which can carry disease-causing bacteria, with minimal increase in energy consumption, along with use of software that cuts energy used by efficient control of chilled water temperature and loads
- environmentally responsible refrigerants (R407c and R134e)
- large surface area filtration incorporated in the air conditioning system to reduce air flow resistance and increase efficiency.

Building Services

- fully automated computer controlled building services
- state-of-the-art building management systems (BMS) controlling operation/fault monitoring and recording. The BMS controls lighting on/off and heating. It is totally programmable and site adjustable
- the latest new-generation lift services with compact energy efficient gearless “machineroomless” lifts for lower operating costs and removal of the need for large plant rooms located on the top of buildings
- metering on all systems and water devices
- high efficiency helical Rotary Chillers

Water

- rainwater is collected in rainwater tanks with a mains water backup system to provide water to all toilets
- AAAA rated flow restrictors on taps
- dual flush cisterns
- sub water metering linked to the BMS
- no water cooling towers
- water Efficient plants in the roof garden

Pollution

- no CFC/HCFC blown insulation
- light pollution controlled
- no cooling towers
- ozone friendly refrigerants

3. Queensland Newspapers Administration and Editorial site at Bowen Hills

During the 07/08 financial year, Queensland Newspapers conducted audits at both its Print site (Murrarie Print Centre) and main administration site (Bowen Hills). These audits were conducted in partnership with the energy audit firms SMEC and GHD respectively. Between them these audits identified a total of 15 energy efficiency projects – 14 of these at the level of +/- 30% accuracy. In addition, the Bowen Hills administration site was also part of a Hewlett Packard audit of IT.

EEO project description 5: Bowen Hills - Server virtualisation

Server virtualisation offers efficiencies by reducing the number of physical computer servers, while allowing “virtual” servers to perform the functions required. In effect this means fewer physical computer servers to do the same job. Benefits include not only the saving of energy from the operation of fewer physical servers, but less heat to be removed from server rooms and more space made available in what is a crowded and growing workspace. This technology is being implemented across the News Limited group, and this example is indicative of the benefits available.

Additional EEO project details

EEO project status: Implementation commenced

EEO project date: between July 2008 and June 2009

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 1430 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 574 GJ

Forecast greenhouse gas reductions project will achieve per annum: 146 tCO₂-e

Forecast energy expenditure savings per annum: \$20,526 with an additional \$136,667 in other business savings

Simple payback (in years): 1

EEO project description 6 : Bowen Hills - Replace 200 CRT's monitors with LCD screens

LCD screens offer the potential of more than halving computer monitor energy use. LCD screens also reduce heat loads in buildings which must be removed in warm weather by air conditioning. While the less direct savings attributable to air conditioning are not estimated, the direct project savings are as follows:

Additional EEO project details

EEO project status: To be implemented

EEO project date: between November 2008 and January 2009

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 528 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 361 GJ

Forecast greenhouse gas reductions project will achieve per annum: 91 tCO₂-e

Forecast energy expenditure savings per annum: \$25,688

Simple payback (in years): 1.9

EEO project description 7: Bowen Hills - Install split system air conditioner in security office

There are currently two major areas of the Bowen Hills site that are air-conditioned unnecessarily for extended periods of time. One of these, the B Plant (provides cooling for the Advertising department and Security Office) currently operates 22 hours a day, 7 days a week - however a significant amount of this time is purely to cool the security office. The security office makes up a very small fraction of the area that B Plant serves. In effect, a very large unit is operating to cool a very small area, which is highly inefficient.

Consequently, the audit recommended that the site install a small split-system air-conditioner to provide cooling to the Security Office for all periods when the Advertising area does not require cooling. Bowen Hills site personnel had already considered the installation of a split system in the security office, with the analysis in the audit report providing the impetus for installation.

Additional EEO project details

EEO project status: Implemented

EEO project date: August 08 - August 08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 528 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 342 GJ

Forecast greenhouse gas reductions project will achieve per annum: 87 tCO₂-e

Forecast energy expenditure savings per annum: \$3,398

Simple payback (in years): 0.7

Energy efficiency opportunities underway at Bowen Hills prior to EEO program

The site has implemented a number of energy conservation measures in the past including:

- retrofitting a centralised chilled water system, driven by VSD chillers in 2003
- installing a BMS to control the new system, including the new economy cycles on AHUs A to H;

- the installation of VSDs on cooling tower fans
- ecolite autotransformers in Sunday Mail
- removal of dichroic lights in Contact Centre
- participation in a nationwide audit of server energy consumption
- computers are to be upgraded to more efficient towers and monitors as part of corporate IT&T strategy

4. Queensland Newspapers Murarrie Print Centre

SMEC (Snowy Mountains Engineering Corporation) performed an energy audit of Queensland Newspapers' print site at Murarrie (Brisbane) in late 2007. The assessment at Murrarie Print Site was performed through a joint effort by the site personnel and an external reviewer and identified 8 energy efficiency opportunity areas that if implemented could save approximately 17.6% of the site's current energy bill.

EEO project description 8: Murarrie Print Centre - Installation of a high speed roller door

There is a large door at the facility, located between the publishing hall and the dispatch dock, that is often left open, leading to a loss of conditioned air to the outside environment – and the wastage of the energy input through the chilled water system to cool the space in the first place. The installation of a high-speed roller door will reduce the loss of conditioned air, and hence the amount of work required by the chiller (or chillers) especially on hot days, producing an energy saving.

Additional EEO project details

EEO project status: Under investigation

EEO project date: TBA

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: New installation, so previous data unavailable.

Amount of energy forecast to be saved per annum due to EEO project implementation: 372 GJ

Forecast greenhouse gas reductions per annum: 93 tCO₂-e

Forecast energy expenditure savings per annum: \$6,593

Simple payback (in years): 3.3

Energy efficiency opportunities already underway at Murarrie

The site also has additional energy conservation measures in progress, which were conceived before the EEO energy audit review. These include:

- replacement of the window tinting in the front offices with a new tinting variant
- air conditioning on demand using CO2 sensor controls in specific office or near-office spaces - which we cover when discussing the installation of VSDs on fan coil units
- the possible utilisation of waste heat from the air compressors in winter to replace electric duct heating in some fan coil units

5. Gold Coast Bulletin Print Centre

SMEC performed an energy audit of the Gold Coast Bulletin's administration centre and separate print centre in early 2008. The audit of the print centre identified 6 energy efficiency opportunities, which if implemented, could save the site 15% of their current annual energy bill.

EEO project description 9: Gold Coast Bulletin Print Centre - Installation of a backup 600 kWr Variable Speed Drive Chiller

Variable Speed Drives (VSD) save energy by allowing lower motor speeds to be used when less work is required. Installing a VSD equipped chiller allows less energy to be used when air conditioning demands are lower, saving considerable energy.

Additional project details

EEO project status: Under Investigation

EEO project date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 3160 GJ

Amount of energy forecast to be saved per annum: 1,211 GJ

Forecast greenhouse gas reductions project will achieve per annum: 304 tCO₂-e

Forecast energy expenditure savings per annum: \$19,011

Other Business savings e.g. waste, maintenance per annum: \$5,061

EEO project simple payback (in years): 2.3

EEO project description 10: Gold Coast Bulletin Print Centre - Install Variable Speed Drives on 10 Air Handling Units

The 16 Air Handling Units (AHU) that serve the site run virtually continuously. Ten of these AHUs are candidates for speed control using Variable Speed Drives.

Additional project details

EEO project status: Under Investigation

EEO project date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 1988 GJ

Amount of energy forecast to be saved per annum: 767 GJ

Forecast greenhouse gas reductions project will achieve per annum: 192 tCO₂-e

Forecast energy expenditure savings per annum: \$12,028

Other Business savings e.g. waste, maintenance per annum: \$3,208

EEO project simple payback (in years): 3.1

Energy efficiency opportunities already underway at the Gold Coast Print Centre

The site also has additional energy conservation measures in progress, which were conceived before the external site review. These include:

- the installation of two high speed roller doors on the large bay doors between the reel store and outside paper store to limit the continuous loss of conditioned air to the outside
- the installation of a small variable speed driven air compressor to provide compressed air in non-production or quiescent periods, thus relieving the larger lead air compressors from operating at low-load
- the use of daylight sensors to switch hi-bay lighting in the press hall
- the use of timer switches to control external and security lighting
- the installation of occupancy sensors in a number of test locations across the facility, including the male and female washrooms
- ongoing roll out of LCD monitors to replace CRT monitors

6. Gold Coast Bulletin Administration and Editorial Centre

The assessment at Gold Coast Bulletin Administration & Editorial Centre was performed through SMEC engineering, and represented a joint effort by the site personnel and an external reviewer. It identified 5 energy efficiency opportunities within the 4 year payback criteria, which, if implemented, would represent an 8% saving on the size of the site's current annual energy bill.

EEO project description 11: Gold Coast Bulletin - Increase temperature set point in Server Room

The 19.1°C temperature set point in the server room is too low, and could be adjusted upwards to approximately 22.1°C, which would reduce energy consumed by the two package air-conditioners dedicated to cooling the server room. Typically, the energy used to cool a dedicated space reduces by approximately 4% for every 1°C increase in the relevant temperature set point for that space. Thus a 3°C increase in the server room temperature set point would cut overall air-conditioning energy usage by about 21,700 kWh per annum.

Additional project details

EEO project status: Under Investigation

EEO project date: TBC

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 651 GJ

Amount of energy forecast to be saved per annum: 78 GJ

Forecast greenhouse gas reductions per annum: 20 tCO₂-e

Forecast energy expenditure savings per annum: \$1,435

Other Business savings (\$) e.g. waste, maintenance per annum: \$327

EEO project simple payback (in years): 2.8

Energy efficiency opportunities already underway at the Gold Coast Print Centre

The site also has additional energy conservation measures in progress, which were conceived before the external site review. These include:

- the installation of mechanical window louvers on the east-facing executive offices, which allow the inhabitants to adjust incident sunlight and thus heat gain in the MD's office, financial manager's office, the boardroom and round room. This feature was incorporated in the original design of the White building, completed in 1989
- the use of variable air volume air-dispensers in the executive offices – again incorporated in the original design of the White

building

- the installation of window tinting on the executive offices to reduce solar heat gain during the morning within these east-facing offices
- the progressive replacement of magnetic ballasts with electronic ballasts on fluorescent light fixtures. Approximately 50 electronic ballasts have been replaced to date, which represents approximately 5% of the total installed fluorescent lighting capacity.
- the use of timer switches to control external and overnight security lighting.
- the replacement of CRT computer monitors with LCD monitors on 81% of all staff workstations.

7. Perth Print

The energy audit of News Limited's Perth Print facility was performed by SMEC through a joint effort by the site personnel and an external reviewer. There were 8 potential energy efficiency projects identified which, if installed, per year would save a total of 22% of the site's current annual energy bill.

Perth Print intends to convert all 34 east-facing windows on the administration offices from single-pane to double-glazed windows. The objective is to reduce the substantial heat gain through the windows during summer, and retain warmth within the respective offices during winter. The site reports that the windows are hot to the touch at midday in the height of summer.

Double glazing is a traditional – but effective – means of reducing heat gain inside a building structure. The air layer inside the double-layer of glass partially insulates the room, acting as a partial barrier to heat conduction through the window, either from outside in or inside out.

The double glazing is forecast to save approximately 25% of the total annual energy used to air-condition the building's east-facing offices, which equates roughly to 10,550 kWh per annum. Given the \$11,845 quoted cost of the project, this translates into a 12.1 year payback. Although the payback period is substantial, there are intangible benefits such as reduced air conditioning loads, the energy savings will persist as long as the building does, and from this perspective, is very valid.

EEO project description 12: Perth Print - Replacement of T8 light fittings with energy efficient T5 fittings

The site has already completed a number of lighting efficiency initiatives, including the installation of separate zone switching of hi-bay

lights in the paper store, and the use of timer switches on security lighting. The current project is partially completed with the Presshall area complete. The outstanding areas include the Publishing and Reel stand areas.

Additional project details

EEO project status: Implementation commenced

EEO project Date: August 08 - June 09

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 368 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 564 GJ

Forecast greenhouse gas reductions per annum: 132 tCO₂-e

Forecast energy expenditure savings (\$) per annum: \$19,000

Other business savings e.g. waste/maintenance per annum: \$6,000

EEO project simple payback (in years): 3.8

EEO project description 13: Perth Print - Installation of 2 x 600 KVA Active Power Regulators to reduce total harmonic distortion and improve power factor levels

The primary function of these units is to alleviate production delays/costs due to harmonic distortion. A secondary benefit is returning energy savings through eliminating power factor penalties and improved overall power factor.

Additional project details

EEO project status: Implemented

EEO project Date: April 08 - September 08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 21,967 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 659 GJ

Forecast greenhouse gas reductions per annum: 154 tCO₂-e

Forecast energy expenditure savings (\$) per annum: \$35,000

Other business savings e.g. waste/maintenance per annum: \$15,000

EEO project simple payback (in years): 2.2

Energy efficiency opportunities already implemented due to participation in Greenhouse Challenge Program

The site has been a member of the Australian Government Greenhouse Challenge program, and has consequently implemented a number of energy conservation measures in the past including:

- o economy cycle (via the BAS) on key air handling units – done as part of the building redevelopment
- o installation of a VSD energised air compressor to match power drawn by the air compressor more closely to the system demand.
- o installation of airless strapping machines in the publishing hall that require no compressed air and less polypropylene tape
- o installation of zoned light switches in the reel and paper store to ensure that the minimum necessary lighting is switched on at any one time.
- o rolling lighting replacements, including the use of tri-phosphor fluorescent tubes, as well as the testing of T5 retrofit kits in targeted office spaces around the facility
- o itinerant roll out of LCD monitors to replace CRT monitors.
- o insulation of the wall between the air handling units plant room and the press hall
- o installation of water meters for correct dispensing of water volumes in-process

8. Nationwide News Holt Street Administration and Editorial site

Nationwide News' Holt Street site, at Surry Hills, is also the headquarters for News Limited, the Australian arm of News Corporation. The site houses the executive and editorial offices for Nationwide News, which publishes The Australian, The Daily Telegraph, Sunday Telegraph, and The Sportsman newspapers.

The assessment at the News Limited Headquarters in Surry Hills was performed by an external reviewer from GHD, and identified primary energy and cost savings representing 5.4% of the site's total annual energy usage.

EEO Project description 14: Nationwide News (Admin) - Car Fleet and "Green Tomato Cars"

Nationwide News has a program of fleet pool car replacement in place. Already 11 efficient Toyota Prius hybrids have replaced conventional vehicles in the pooled car fleet and this is planned to increase.

In addition, Nationwide News makes available public transport tickets for staff traveling to do work outside the building. In reviewing taxi use it was decided to allow staff the opportunity to use "Green Tomato Cars" as an alternative. This newly established company utilizes Toyota Prius hybrids – and then offsets double the emissions of these vehicles. This has been a successful partnership.

EEO Project description 15: Nationwide News (Admin) - Install Variable Speed Drives (VSDs) on chilled and condenser water systems

The installation of VSDs on each of the 4 dedicated chilled water pumps will allow the pumps to dynamically control flow through their respective (active) chillers and therefore more precisely meet varying downstream chilled water requirements.

The use of variable speed drives to provide the required flow rate across each chiller would remove the need to use the existing manual throttling valves on each chiller, and so reduce the energy required to pump chilled water around the cooling water loop.

Additional project details

EEO project status: To be investigated

EEO project Date: December 08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 684 GJ

Amount of energy forecast to be saved per annum: 169 GJ

Forecast greenhouse gas reductions per annum: 252 tCO₂-e

Forecast energy expenditure savings per annum: \$24,064

EEO project simple payback (in years): 3.3

Energy efficiency opportunities already underway at Nationwide News (Holt St)

The site has implemented a variety of energy conservation measures (ECM) in the past, most of which were incorporated as part of the site refurbishment between 1997 and 1998. These include:

- installation of efficient screw chillers
- design and installation of a variable air volume air-conditioning system, which includes the installation of VSDs on most AHU fans coupled with the use of VAV boxes to control zone air-conditioning
- installation of an advanced BMS to allow for pervasive control and scheduling (automatic switching) of loads, such as the scheduling of lighting by zone, and the automatic control of most supply and exhaust fans
- replacement of old cathode ray tube (CRT) computer monitors with new LCD monitors that use substantially less energy, as well as the purchase of new, more energy efficient personal computers when replacing old machines

More recently the facility management team has conducted limited trials on a variety of lighting technologies - such as the installation of T5 retrofit kits, and the use of high-frequency ballasts on fluorescent lighting. At present, the facility management team is experimenting with zone air-conditioning temperature set points, and has adjusted these upwards by 1°C in all offices areas served by the central chilled water system.

9. Nationwide News Chullora Print Centre

The Nationwide News Chullora Print Centre completed a comprehensive review of energy usage and energy management in June 2006 to fulfill the NSW Department of Energy, Utilities and Sustainability's requirement that significant energy users in the State compile an Energy Savings Action Plan (ESAP). Among other details, the ESAP review established the site energy usage baseline, categorised and classified energy usage by equipment & category, defined the expected savings associated with energy conservation measures and provided an energy management improvement plan.

Chullora Print Centre: Previous energy saving measures

The Chullora Print Centre site was constructed with a variety of energy conservation measures in place, which have provided significant savings over the 12 years the plant has been operating. Furthermore, the original design has been supplemented with additional measures such as the recent installation of:

- three replacement air compressors with one unit being a variable speed driven air compressor to top up system air requirements
- a variable speed chiller and the reconfiguration of the condenser water circuit onto a common header (although the full benefits of these chilled water system improvements will only be available following the completion of a planned chiller control systems upgrade)
- three high speed roller doors to reduce conditioned air losses from the publishing hall that is expected to save over 250 MWh of electricity annually and a significant amount of natural gas
- the coating of the press hall roof with an infrared reflective paint to limit the daytime heat load on the building, which will reduce the air conditioning requirement by an estimated 450 MWh per annum

EEO Project description 16: Chullora Print Centre - Infrared reflective coating on Press Hall Roof

As part of the DEUS Energy Savings Action Plan, an investigation was undertaken into the feasibility of applying a proprietary infrared reflecting paint to the metallic roof surfaces of the Press Hall (2,850 m²) and the Publishing Hall (7,830 m²) of the print centre, in order to reduce the HVAC load within these areas. This project implementation was completed in Jan 08, and further details are listed below:

Additional project details

EEO project status: implemented
EEO project Date: 31st October 07 – 13th Jan 08
Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 81,558GJ
Amount of energy forecast to be saved per annum: 1,271 GJ
Forecast greenhouse gas reductions per annum: 452 tCO₂-e
Forecast energy expenditure savings per annum: \$24,572
EEO project simple payback (in years): 1.7

EEO Project description 17: Chullora Print Centre - Luminaire Replacement Program

Additional project details

EEO project status: to be implemented
EEO project Date: 31st October 07 – 13th Jan 08
Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 81,558GJ
Amount of energy forecast to be saved per annum: 2,377 GJ
Forecast greenhouse gas reductions per annum: 650 tCO₂-e
Forecast energy expenditure savings per annum: \$41,232
EEO project simple payback (in years): 3.65

10. The Cairns Post Print Centre

The assessment at the Cairns Post Print Centre was performed through a joint effort by the site managers and an external reviewer. The assessment has identified \$27,000 of potential energy savings per year, which is 18% of the site's current annual energy bill.

The assessment found that significant savings could be made by replacing the 22-year old chiller with a modern Variable Speed Drive (VSD) chiller system, the installation of VSDs on the air handling unit fans to step down power consumption by these fans during non-production periods, re-wiring air conditioning switches into adjacent light switches to ensure certain split system air conditioning units are switched off overnight, and the use of a small number of lighting controls.

The site has recently installed a VSD driven air compressor, which is already generating significant energy savings.

EEO project description 18: Cairns Post Print Centre - Install 320 kW high efficiency Power Pax Chiller and Cooling Tower

This chiller replacement alone will allow the Cairns Post to save approximately 9.5% of current total energy consumption. Coupled with the recent air compressor replacement and the other efficiency measures proposed in their audit report, the Cairns Post print site is well on track to be able to approach the 20% emissions reduction target set under the One Degree program for energy efficiency initiatives.

The proposed chiller replacement has a payback of between 7.5 to 10.8 years, which clearly exceeds the 4 year payback period to be considered under both One Degree and EEO programs. However, the opportunity was identified at the time of the site audit, and the site proceeded with the installation of a high efficiency chiller as the failure of the dated chiller was impacting on printing operations and operational costs. That is, the energy efficient chiller replacement proposed was justified on given that a new chiller was required on operational grounds – with energy savings as an added benefit.

Additional project details

EEO project status: Implemented

Project date: September 08 - October08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 1469 GJ

Amount of energy saved per annum: 371 GJ

Greenhouse gas reductions per annum: 93 tCO₂-e

Energy expenditure savings per annum: \$17,363

Other Business Savings (\$) e.g. waste, maintenance per annum : \$8,750

Simple payback (in years): 9.1

EEO project description 19: Cairns Post Print Centre - Install time clocks on hot water heaters

It is unnecessary for these domestic hot water systems to remain on after staff leave the building, and installation of 7-day timers (or better) are planned to be electrically connected to each of the hot water units to switch these units off in the early hours of the morning and on weekends. The installation of 7-day timers will remove 1kW from the site baseload, saving approximately 2,750 kWh per annum. This purchase and installation of timers will cost approximately \$600, but deliver over \$151 in savings per annum, for a payback of 4 years.

Additional project details

EEO project status: To be implemented

Project date: October 08 – December 08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 1469 GJ

Amount of energy saved per annum: 10 GJ

Greenhouse gas reductions per annum: 2 tCO₂-e

Energy expenditure savings per annum: \$159

Simple payback (in years): 3.8

Energy efficiency opportunities already underway at The Cairns Post

The site has an impressive record of identifying and implementing measures to minimise energy usage. The measures implemented previously to drive energy efficiency include:

- strict use of manual start-up and shut-down procedures before and after the completion of production runs to limit energy wastage by the chillers, air compressors and lighting after-hours. The air compressors are also manually switched off after print runs, and restarted by the maintenance shift as required in the morning
- installation of a rapid roller door on the main (forklift) entrance to the press hall to prevent conditioned air losses from the building, while still allowing for easy access by forklifts
- installation of a VSD on the condenser tower fan, which allows the fan to run at a low fraction of its rated load most of the time.
- in-house revision of chiller operating logic to prevent the device from hunting on start up
- lighting replacements, including the use of tri-phosphor fluorescent tubes
- use of 10 x skylights in the paper store to reduce the need for artificial lighting during the day, with the result that only 2 of the 8 installed hi-bay lights are on during the day
- separate switching of the 8 x 400 W hi-bay lights in the paper store – to ensure that the minimum necessary lighting is switched on at any one time
- push-button timer switches on the hi-bay lights in the materials storage shed
- itinerant roll out of LCD monitors to replace CRT monitors

11. Cairns Post Administration and Editorial site

The assessment at the Cairns Post Administration centre was performed at the same time as the assessment of Cairns' print site.

EEO Project description 20: Cairns Post (Admin) - Install lighting efficiency and occupancy controls

Lighting energy use represents approximately 16% of the site's total energy consumption. Cairns Post has already implemented a range of lighting energy conservation measures (ECMs). As a result, specific lighting ECMs that usually provide a decent payback (less than 4 years payback) at sites with no lighting controls are not recommended for the Cairns Post - a logical, but unfortunate result. The recommend lighting efficiency and occupancy control projects include, but are not limited to, the installation of the following technologies in a variety of areas:

- 360° Passive Infrared motion sensor (short range) Computer room (Level 1)
- eco-Lite dimmer (2.4 kVA) for fluoro lamp circuits
- eco-Lite dimmer (3.6 kVA) for fluoro lamp circuits
- push-button, digital time switch (fluoro circuit, up to 1200 W)

Additional project details

EEO project status: To be implemented

EEO project date: October – December 08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 580 GJ

Amount of energy forecast to be saved per annum: 47 GJ

Forecast greenhouse gas reductions per annum: 12 tCO₂-e

Forecast energy expenditure savings per annum: \$1,353

EEO project simple payback (in years): 1.5

EEO Project description 21: Cairns Post (Admin) - Installation of separate air conditioning for tenant

A tenant running retail business has previously enjoyed air conditioning provided by the Cairns Post at no cost. This has led to behaviour which wastes energy, for example, leaving the large shop front open to allow customers easy access to the store. By

installing a separate air conditioning system the tenant has become responsible for their air conditioning costs and modified their behaviour to retain air conditioned air within the shop.

Additional project details: Install 25kW ducted inverter air conditioner in tenancy, and remove tenancy from central air conditioning

EEO project status: Implemented

EEO project date: July 08 - July 08

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 119 GJ

Amount of energy forecast to be saved per annum: 119 GJ

Forecast greenhouse gas reductions per annum: 30 tCO₂-e

Forecast energy expenditure savings per annum: \$2,226

EEO project simple payback (in years): 8.8 Energy used by new air conditioner will be separately metered and paid for by tenant

Energy efficiency opportunities already underway at The Cairns Post

The site has an impressive record of identifying and implementing measures to improve energy efficiency, largely driven by the persistence of specific personnel, such as the building services manager. The energy conservation measures (ECM) implemented previously include:

- installation of a home-grown BMS system, which links the air-conditioning control, and lighting to the security system
- development and application of after-hours temperature set points for the site
- installation of variable air volume (VAV) air distribution in key areas
- installation of VSDs on 4 AHU fans, 2 chilled water pumps and the cooling tower fan
- installation of motorised dampers to isolate the tenancy from the central air-conditioning plant after business hours
- installation of an automatic-door at reception to limit conditioned air losses from the building
- lighting replacements, including the use of tri-phosphor fluorescent tubes and replacement of 50W halogen lamps with LED or compact fluorescent lamps
- itinerant roll out of LCD monitors to replace CRT monitors

12. Herald & Weekly Times Westgate Park Print Centre

In accordance with News Limited's EEO response and with News Corporation's Global Energy Initiative, the energy auditing firm Energetics was commissioned to conduct an assessment of energy use at The Herald and Weekly Times Westgate Park printing facility.

The energy audit Energetics conducted at Westgate Park (WGP) identified 7 energy efficiency opportunities at an accuracy of +/- 30%. Additional detail on two of these opportunities is listed below.

EEO project description 22: The Herald & Weekly Time Print Centre - Change signal for end of shift in publishing at WGP to control area valves

The publishing area isolation valves for compressed air are currently activated by switching lighting off. As lighting is on 24/7 due to operational requirements, an alternative signal is to be considered. Isolating the publishing area compressed air lines outside operating hours will reduce leaks and operation of the compressors.

Additional EEO project details

EEO project status: To be implemented

EEO project date: November 08 - TBA

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 11,633 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 1,861 GJ

Forecast greenhouse gas reductions project will achieve per annum: 685 tCO₂-e

Forecast energy expenditure savings per annum: \$32,521

EEO project simple payback (in years): 0.5

EEO project description 23: The Herald & Weekly Time Print Centre - Cultural change

Cultural or behavioral changes are recognized as a key initiative in reducing energy use and carbon emissions across the News Limited group. These examples at Westgate Park are indicative of actions being taken across the group.

Staff at Westgate Park can incorporate 'turn-off' of lights and machinery into their end-of-shift routines. One Degree promotional material is being used to raise the energy awareness of Westgate Park's production staff. Examples of this include:

- presses "End of Shift" Button which will reduce operation of ventilation and cooling plant
- switch off lights reminders in press control rooms and adjacent areas
- switch off waste conveyor reminders when not required

Additional EEO project details

EEO project status: To be implemented

EEO project date: November 08 - TBA

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 10,942 GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 2,517 GJ

Forecast greenhouse gas reductions project will achieve per annum: 926 tCO₂-e

Forecast energy expenditure savings per annum: \$5000

EEO project simple payback (in years): 0.1

EEO project description 24: The Herald & Weekly Times – Administration and Editorial offices Southbank Melbourne

HWT's IT Department has been heavily involved in News' IT energy efficiency projects assisting with writing the protocols for all Wake-on LAN programs around the News Group. Wake-on LAN and server virtualisation projects once implemented will result in significant energy savings for HWT and the other members of the News Limited group. An example of the savings that are forecast to be achieved at HWT alone has been included below:

Additional EEO project details – HWT file server virtualisation

EEO project status: Implementation commenced

EEO project date: July 08 – June 09

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: 426.34GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 225 GJ

Forecast greenhouse gas reductions project will achieve per annum: 133.1 tCO₂-e

Forecast energy expenditure savings per annum: \$20,526\$

Other business savings (e.g. waste/maintenance) per annum: \$45,000

EEO project simple payback (in years): 2.4

13. Townsville Bulletin Administration and Editorial site

The Townsville Bulletin has been a member of the Federal Government's Greenhouse Challenge Program between 2000 and 2004. Although the focus of energy conservation efforts during this membership were largely dedicated to the Townsville Bulletin Print site,

an effort was also directed towards making the Townsville Bulletin's Administration site on Ogden St more efficient. Implemented measures include:

- replacement of the 3 dated PAC unit serving the management offices, advertising and the eastern part of the pre-press department with modern, more energy efficient units
- installation of Innotech dynamic digital controllers (DDC) on two of the three new PAC units to allow for accurate control and time switching
- installation of a push-button timer switch on AC 5, the PAC unit serving the eastern side of the pre-press department, which allows staff working late to enable air-conditioning on demand – after the unit has been scheduled off
- use of timer switches to switch off the majority of the package air-conditioners when not in use
- careful establishment of set point temperatures on the site. Set point temperatures in most areas range from 21°C in the computer room to 24°C in the editorial offices
- installation of a number of occupancy sensors to automatically switch off lighting in specific areas
- use of timer switches to switch external lighting

EEO Project description 25: Townsville Bulletin (Admin) - Replace 4 old Air-conditioners

The four package air-conditioners that serve the Pre-press (east), Editorial, Fashion/CarsGuide/IT and Sun office are decades old, and estimated by the energy auditors to be about 30% less efficient than the more modern floor-mounted package units already installed in 3 locations across the site. Combined, the four old PAC units consume approximately 210 MWh per annum, which represents about 24% of the site's total electricity usage.

The Townsville Bulletin intends to replace the four old PAC units over the next financial year. The energy audit team estimated that the site could save up to 62 MWh per annum (or 30% of the energy usage by these dated PACS) by replacing the four old PAC units with their more modern equivalents.

Additional EEO project details

EEO project status: Implemented

EEO project date: 1 system replaced in Oct 08, others in CapEx budget

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: unknown GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 225 GJ

Forecast greenhouse gas reductions project will achieve per annum: 56 tCO₂-e

Forecast energy expenditure savings per annum: \$8,813

EEO project simple payback (in years): 8.6

14. Townsville Bulletin Print Centre

The assessment at the Townsville Print Centre was performed through a joint effort by the site personnel and an external reviewer from SMEC. The audit identified \$19,000 worth of potential energy savings per year, a figure which represents 8.6% of the site's current annual energy bill. Two opportunities that arose from the Townsville audit are discussed below:

EEO project description 26: Townsville Bulletin Print Centre - Solar films on 72 m² of Press Hall Windows

Through the audit process, the auditor recommended that the Townsville Print Centre should consider applying solar reflective film to the first floor press hall's south-east (SE) facing windows, thus reducing heat gain within this space on warm to very hot mornings. The Townsville Bulletin has already applied solar film to the SE ground floor windows which has cut heat gain in the adjacent reel stands area. The first floor press hall windows offer a much greater surface area (72 m²) to the morning sun, which streams into the press hall unhindered, unnecessarily loading the press hall air-conditioners.

The application of solar film will provide an estimated 21% annual reduction in energy usage on the two affected air-conditioners, which equates to an annual energy saving of 39.4 MWh, a cost saving of about \$3,835 per annum and a payback of about 3.3 years, as indicated in the figures below.

Additional EEO project details

EEO project status: To be implemented - Reliant on out of Cap Ex approval

EEO project date: Jan 2009 - tbc

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: unknown GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 142 GJ

Forecast greenhouse gas reductions project will achieve per annum: 36 tCO₂-e

Forecast energy expenditure savings per annum: \$3,835

EEO project simple payback (in years): 3.3

All energy savings for this potential efficiency measure will come from a reduced load on the refrigeration compressors in AC-11 and

AC-12 which serve the SE half of the press hall, particularly in the morning when both machines tend run at, or near, full capacity.

EEO project description 27: Townsville Bulletin Print Centre - Install additional distributed lighting controls

Lighting energy use represents approximately 10% of the site's total energy consumption, and forms a significant component of the overall site base load energy usage. Although the site utilises numerous occupancy sensors and personnel appear diligent about switching lights off when the relevant spaces are not occupied, the auditors recommended an additional set of automatic lighting controls that could be applied to reduce lighting energy consumption further. The measures proposed include the following:

- Installation of Push-button time switches
- Installation of Additional Occupancy sensors
- Installation of Photoelectric (PE) cells

Additional EEO project details

EEO project status: To be implemented - reliant on internal labour resources

EEO project date: Ongoing

Annual Energy Used by Process, System, Activity, or Piece of Equipment prior to implementation: unknown GJ

Amount of energy forecast to be saved per annum due to EEO project implementation: 114 GJ

Forecast greenhouse gas reductions project will achieve per annum: 29 tCO₂-e

Forecast energy expenditure savings per annum: \$3,066

EEO project simple payback (in years): 1.5

Part 3 - Voluntary Contextual Information

As mentioned previously in this report, News Limited has been working on reduction of energy use and greenhouse gas emissions since 2000 when The Adelaide Advertiser joined the Greenhouse Challenge program. Through this program, the team at Perth Print, Townsville Bulletin and the Advertiser achieved significant savings. For example, at Advertiser Newspapers between 2000-2005, a 57% reduction in greenhouse gas emissions per printing plate impression was accomplished.

News Corporation's Global Energy Initiative

"We want our business to be around for the next hundred or even two hundred years. This is not about business shouldering the responsibility for society; it's about leadership and innovation. So, we're working to reduce our own environmental impact – and we will be carbon neutral by 2010. But more importantly, we're working to inspire and enable our employees and our audiences to take action on these issues." – Rupert Murdoch, April 2008

On May 9th 2007, Rupert Murdoch announced a major initiative to address climate change - committing all News Corporation business across the world to be carbon neutral by 2010, and to inspire action around the world. Every News Corporation building upgrade from Brisbane to Bulgaria is now required to address its energy needs. Emissions which can't be reduced through efficiency or use of renewable energy will be offset to bring News Corp's total net greenhouse emissions to zero in the next two years.

In the US, from solar-powered golf carts on the Fox Lot in Los Angeles to new lighting at the New York Post – News Corp companies are making energy efficiency part of their every day operations.

In the UK, News Corp companies have built on the success of BskyB, which was the world's first media company to reduce its carbon footprint to zero in May 2006. Since then, News International has agreed to buy its electricity from hydroelectric power plants in Scotland.

In late 2007, News Corporation completed its first purchase of carbon offsets. More than 60,000 metric tons of carbon dioxide had been purchased by June 2008 from a portfolio of wind energy projects in the state of Maharashtra, India and in Manawatu, New Zealand.

One Degree



It's about every one of us

News Limited's One Degree program

In June 2007, News Limited launched One Degree – an initiative to reduce greenhouse gas emissions across our business and to raise awareness of climate change among our staff and the broader community. One Degree is now part of the way News Limited operates; and as a business News is now well on the way to achieving our goal of becoming carbon neutral by 2010.

Carbon neutral by 2010

News Limited, as part of News Corporation, will be carbon neutral by 2010; that is, we will no longer be a company that contributes to global warming. Where emissions remain that cannot be eliminated or sourced from renewable energy, we will invest in carbon credits to help fund alternative energy sources and to ensure that all of our carbon emissions are offset.

In March 2008, News Digital Media (NDM) became the first News Limited business to be carbon neutral – achieving this status through a combination of reducing and off-setting emissions generated in 2007. NDM has an aggressive plan to further cut emissions over the next few years to reduce its reliance on offsets.

An ongoing commitment

News Limited's climate change commitment builds on the company's environmental program established 18 years ago. To date, the program has led to the introduction of cleaner printing technologies, contributed to Australia's success as the world's leading recycler of newsprint and initiated ongoing environmental improvements to every News Limited business.

News Limited is acting to do what it can to reduce carbon emissions. At the same time, the company is uniquely placed to encourage other Australians to make a difference to address the threat of global warming.



One Degree of action

In the year to June 2007, News Limited generated 163,838 tonnes of carbon dioxide (or carbon dioxide equivalents₁). At the program's inception in June 2006, we pledged to cut these emissions by 20%, by 2010, saving 30,000 tonnes of greenhouse gasses – a figure that is equivalent to taking about 7,500 cars permanently off the road.

Everything from the electricity used to power News Limited presses, the fuel in our fleet cars, the carbon impacts of air travel, the heating and cooling of News Limited buildings and the way we handle our waste and recycling is being reviewed. We are looking at how we can do it better - how we can be more efficient, and how we may use renewable energy to meet our target.

News is in a strong position to do this by making serious and sustainable changes to our business at a facilities and management level, and by providing our employees with opportunities and incentives to cut their own emissions both at work and at home.

We have now performed energy audits across the majority of our business sites – with 16 sites representing more than 80% of our business energy use audited by November 2008. These audits involve a detailed review of air conditioning, lighting, compressed air use, staff behavioral opportunities and building management to name just a few areas, so we can identify ways to reduce emissions across all of our facilities.

These audits have identified more than a hundred ideas which will help us to meet our target, including:

- improving green ratings of existing buildings and incorporating this into designs of new buildings
- minimising waste of compressed air

- implementing variable speed drives as electric motors are installed or replaced
- expanding recycling to include mobile phones, printer cartridges and plates
- consolidating servers, printers and copiers
- investigating wake-on-LAN technology for desktop computers as part of a turn "IT" off campaign
- switching from old-fashioned CRT to lower-energy LCD screens
- improving energy efficiency for lighting, air conditioning and power management at all facilities

We are also looking at the energy we use outside of our offices and print centers and are making changes such as:

- reducing our fleet fuel consumption both by using more efficient vehicles and promoting greater use of public transport. News Limited is a foundation partner in the NSW DECC "Fleetwise" program looking at how to reduce emissions from business vehicle fleets
- implementing a Green Procurement Policy encouraging our business partners to address their own carbon footprints
- providing information and incentives to staff to change their own behaviour
- investigating the use of renewable energy such as diesel biofuels for generators

Across every part of our business, each of News Limited's divisions has identified the most appropriate and effective energy reduction initiatives for their business. Many of these are now completed or being implemented as demonstrated by the examples highlighted in this report.

Part 4 - Declaration

(See paragraph 8 of Schedule 4 of the Regulations and paragraph 22(4)(c) of the Act)

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 *Energy Efficiency Opportunities Act 2006* and *Energy Efficiency Opportunities Regulations 2006*.

Chair of the Board of Directors/CEO/Managing Director/equivalent officer (state position)