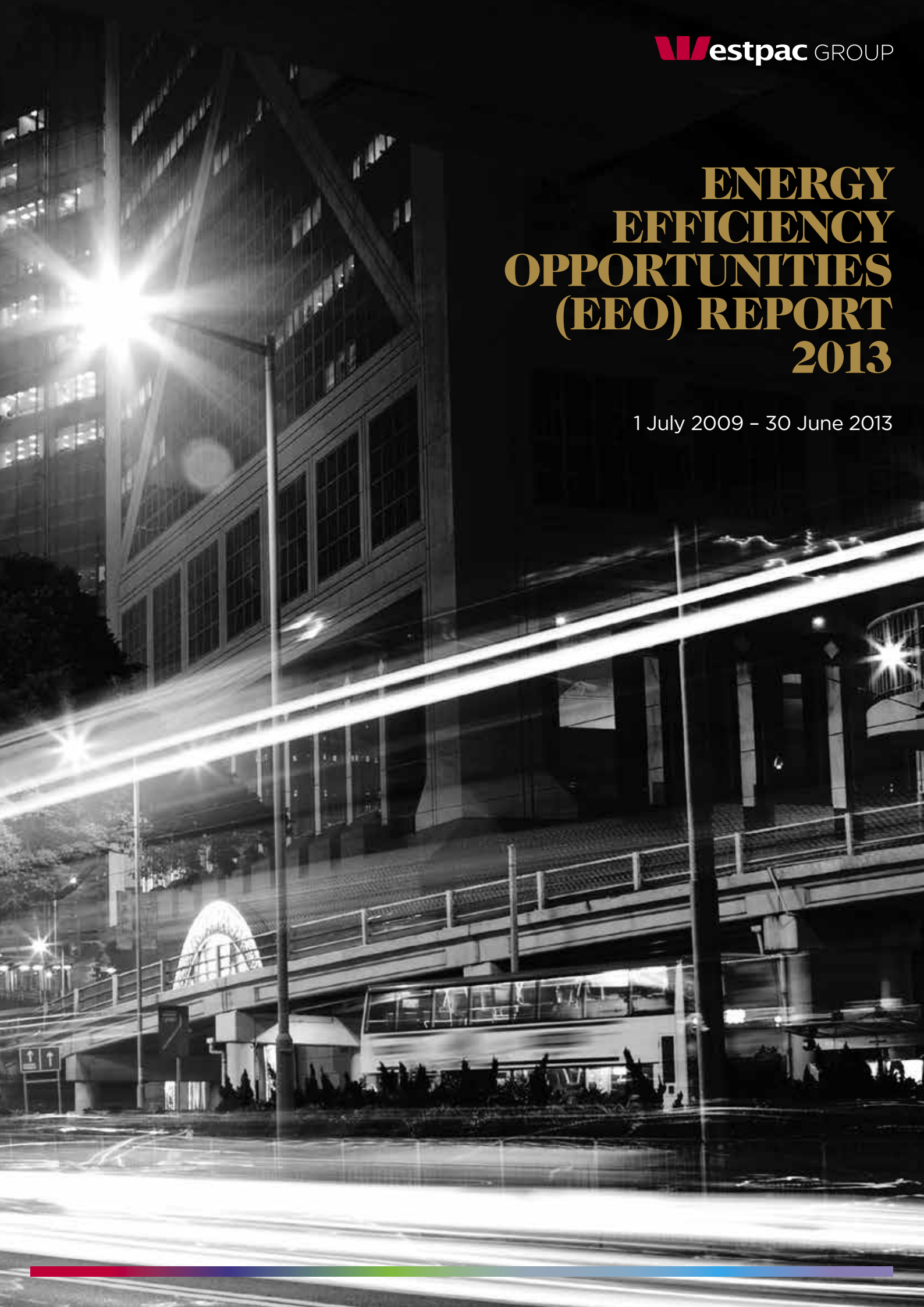


# ENERGY EFFICIENCY OPPORTUNITIES (EEO) REPORT 2013

1 July 2009 – 30 June 2013



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# ABBREVIATIONS

DRET DEPARTMENT OF RESOURCES, ENERGY AND TOURISM

EEO ENERGY EFFICIENCY OPPORTUNITIES

GJ GIGA-JOULES

THE WESTPAC GROUP OR THE GROUP

THE WESTPAC GROUP, CONSISTING OF WESTPAC BANKING CORPORATION ABN 33 007 457 141  
AND ITS SUBSIDIARIES WHICH ARE INCORPORATED IN AUSTRALIA



## DECLARATION

SUSTAINABILITY IS A CORE COMPONENT OF THE WESTPAC GROUP'S VISION 'TO BE ONE OF THE WORLD'S GREAT COMPANIES HELPING OUR CUSTOMERS, COMMUNITIES AND PEOPLE TO PROSPER AND GROW'.

The Westpac Group takes a long-term view on the issues that will impact future prosperity. Our approach is to systematically identify and shape those emerging issues that are important to our customers, our business and the community. It is also to share our knowledge and experience to make a positive difference.

I am pleased to present the Westpac Group's annual Energy Efficiency Opportunities Report detailing our commitment to energy efficiency and outcomes achieved through the EEO program over the last four years.

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.

A handwritten signature in cursive script that reads "Gail Kelly".

**Gail Kelly**  
Chief Executive Officer  
Westpac Group

Date: 14 December 2013

# 1.1 ABOUT THE WESTPAC GROUP

THE WESTPAC GROUP IS A FINANCIAL SERVICES COMPANY WITH OPERATIONS IN AUSTRALIA, NEW ZEALAND AND THE NEAR PACIFIC REGION AND MAINTAINS OFFICES IN KEY FINANCIAL CENTRES AROUND THE WORLD INCLUDING LONDON, NEW YORK, HONG KONG AND SINGAPORE.

We are ranked in the top 5 listed companies by market capitalisation on the Australian Securities Exchange (ASX).

The Westpac Group's portfolio of financial services brands and businesses is focused on a common goal - delighting around 12 million customers and helping them achieve their financial goals, from ensuring our retail customers can save and invest with confidence, to servicing the financial needs of multi-national corporate, institutional and government clients.

The Westpac Group has almost 30,000 full time equivalent staff in Australia and a network of over 4,000 facilities including:

- stand alone and in-store ATMs;
- data centres;
- tool of trade vehicles;
- commercial offices;
- customer contact centres;
- branches; and
- business banking centres.

## WESTPAC GROUP COMMITMENT TO SUSTAINABILITY

At Westpac Group, we believe that to be sustainable we must manage risks and opportunities in a way that best balances the long term needs of our stakeholders - our customers, employees, investors, suppliers, the community and the environment. Our challenge is to anticipate and shape the most pressing, emerging societal issues where the Westpac Group has the skills and experience to make a meaningful difference.

To guide our sustainability strategy we have ten measurable objectives for 2013-17, in three focus areas:

1. to help improve the way people work and live, as our society changes;
2. to help find solutions to environmental challenges; and
3. to help customers to have a better relationship with money, for a better life.

Implementation of the Sustainability Strategy is led by the Sustainability Council, a committee of General Managers from across the business.

The Board reviews the Group's approach to managing environmental, social and governance (ESG) risks on an ongoing basis. For more information on the Westpac Group, our Sustainability Strategy and ESG Risk Management Framework, refer to the Westpac website: [www.westpac.com.au](http://www.westpac.com.au).

## CORPORATE STRUCTURE

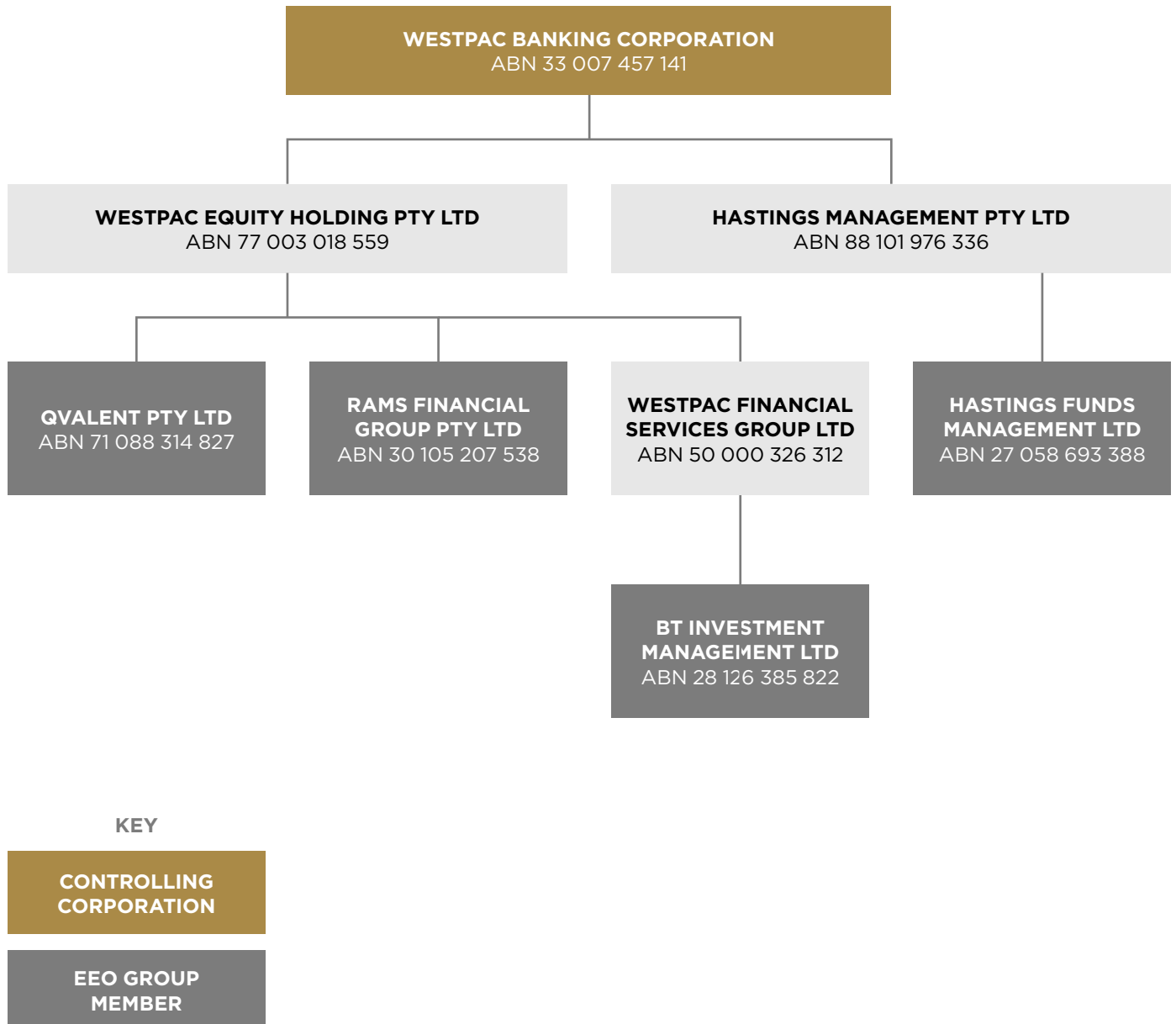
As at 30 June 2013, the Group consisted of 230 controlled entities, 165 of which are incorporated in Australia. The majority of controlled entities have no facilities, staff or physical assets. Only 19 entities are reportable under the EEO Act and belong to one of five group members:

- Westpac Banking Corporation (controlling corporation);
- BT Investment Management Ltd (BTIM);
- Hastings Fund Management Ltd (Hastings);
- Qvalent Pty Ltd; and
- RAMS Financial Group Ltd (RAMS).

The Westpac Group EEO Group Member Structure (Figure 1) is the same as that reported under the National Greenhouse and Energy Reporting Act 2007 and National Carbon Offset Standard Carbon Neutral Program. For a full list of entities, refer to the Westpac Group 2013 Annual Report.

There were no major changes to the corporate group structure or operations during the last twelve months.

FIGURE 1 - WESTPAC GROUP EEO GROUP MEMBER STRUCTURE



# 1.2 THE WESTPAC GROUP ENERGY USE

FROM 1 JULY 2012 TO 30 JUNE 2013, THE WESTPAC GROUP USED 780,042 GJ OF ENERGY WHICH IS 10% BELOW OUR 2008-09 ENERGY USE (FIGURE 2).

This reduction is attributed to the sale of subsidiaries in 2010, energy efficiency works, relocation to more energy efficient tenancies, the introduction of more energy efficient ATMs and fleet and a reduction in fleet numbers.

FIGURE 2: WESTPAC GROUP ENERGY USE

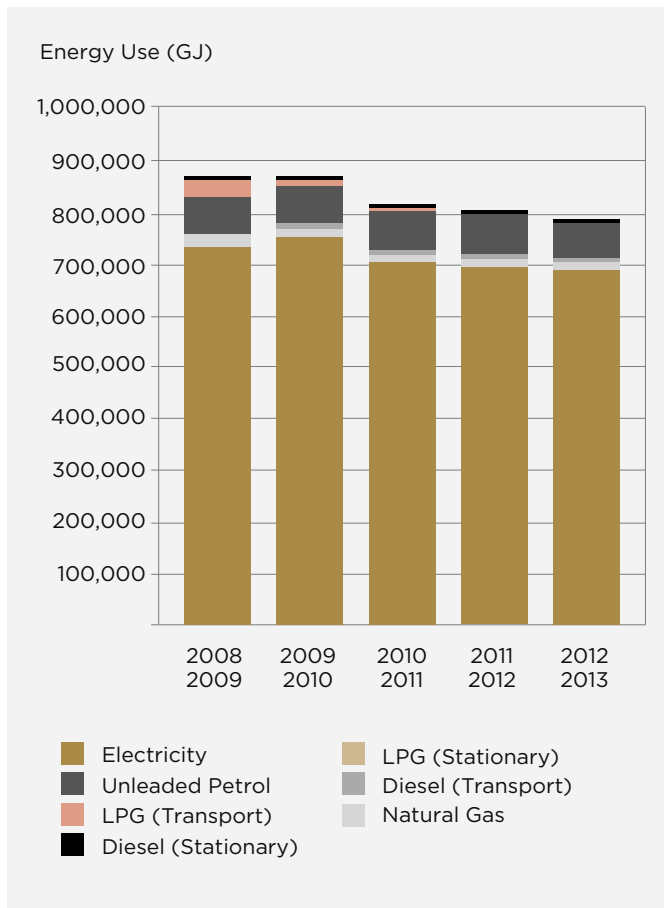
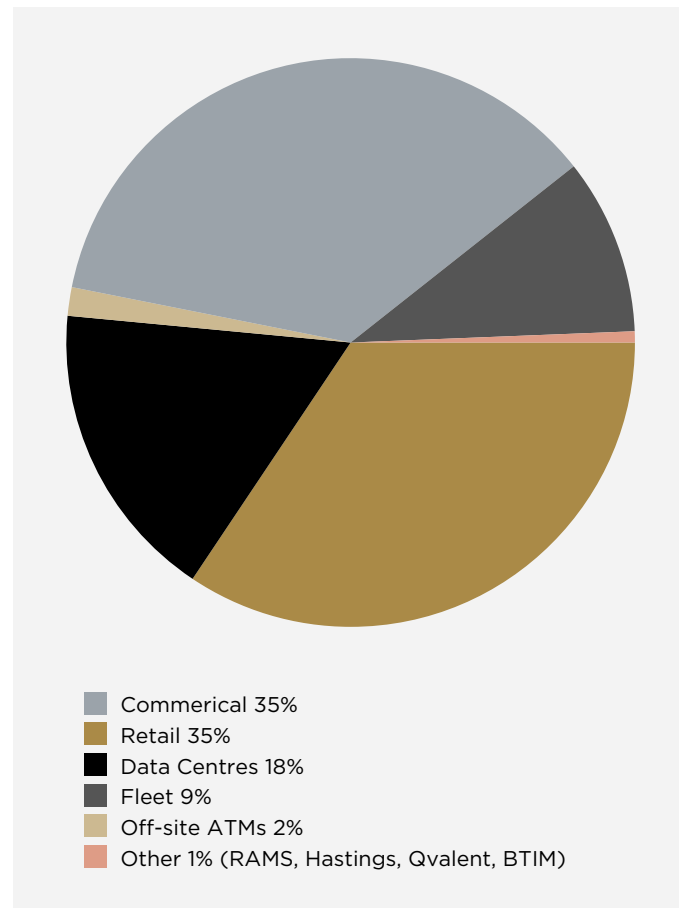


FIGURE 3: WESTPAC GROUP ENERGY SPLIT FOR 1/7/2012 - 30/6/13



The majority of energy consumed by the Westpac Group is electricity (88% of the total energy use) followed by unleaded petrol (9% of the total energy use). Energy is used predominantly by our commercial offices and retail network as shown in Figure 3.

Full details of the Westpac Group's environmental performance, including our carbon emissions, are included in the *Annual Review and Sustainability Report* which is available on our website: [www.westpac.com.au](http://www.westpac.com.au).

# 2.1 ABOUT THE ENERGY EFFICIENCY OPPORTUNITIES PROGRAM

THE ENERGY EFFICIENCY OPPORTUNITIES ACT 2006 (EEO ACT) IS A NATIONAL LAW THAT REQUIRES AUSTRALIAN CORPORATIONS WHO USE MORE THAN 500,000 GJ OF ENERGY PER YEAR TO ASSESS THEIR ENERGY USE, IDENTIFY OPPORTUNITIES TO IMPROVE ENERGY EFFICIENCY AND PUBLICLY REPORT FINDINGS EACH YEAR.

Organisations participating in the EEO Program must address six key elements:

1. Leadership;
2. People;
3. Information, Data and Analysis;
4. Opportunity Identification and Evaluation;
5. Decision Making; and
6. Communicating Outcomes.

The EEO Program is administered by the Department of Resources, Energy and Tourism (DRET). For more information on the EEO Program, refer to <http://energyefficiencyopportunities.gov.au>.

The Westpac Group has allocated personnel and budget to improve the energy efficiency of our facilities. The Group undertakes comprehensive energy assessments for all energy uses within its facilities, including analysis on how and where energy is used, energy trends over time, performance indicators, influences on energy use, assessment of major energy using equipment and processes and identification of cost effective energy efficiency opportunities. A range of people are involved in the energy assessment process, including internal subject matter experts, branch managers, our 'Sustainability Champions', service providers, facility managers, consultants, contractors and other personnel who influence energy use.

All energy efficiency opportunities identified through the energy assessment process, along with potential costs and savings, are recorded and tracked. These opportunities are reviewed by the business taking into consideration Westpac Group strategies for sustainability, property and technology; lease conditions; business benefits such as staff comfort, productivity and occupational health and safety; and energy and maintenance savings. From this, opportunities are categorised as "to be implemented", "under investigation" (ie where more information is required before a decision can be made) or "not to be implemented". Opportunities identified as "not to be implemented" are reviewed from time to time as energy prices, business priorities and changes in the economic climate occur.

Regular reporting of the outcomes of energy assessments, energy performance, savings achieved from energy efficiency works and business decisions is provided to the Board, senior management, operational staff and other key stakeholders on a monthly, quarterly, annual and ad hoc basis.

Full details of how and when we will carry out assessments are contained in our Assessment Plan. In 2013, the EEO Delegate approved an amendment to the Westpac Group Assessment Plan, reducing the number of branch representative assessments from 60 to 31.

## 2.2 WESTPAC GROUP ENERGY ASSESSMENTS

THE WESTPAC GROUP IS IN ITS FIRST 5 YEAR PROGRAM CYCLE AND MUST ASSESS 80% OF THE GROUP'S TOTAL ENERGY USE. TO MEET THE 80% ENERGY ASSESSMENT REQUIREMENT, THE WESTPAC GROUP ASSESSED:

- commercial offices to a Level 2 Energy Audit standard (as per AS3598:2000);
- the RAMS head office to a Level 2 Energy Audit standard (as per AS3598:2000);
- data centres to a Level 2 Energy Audit standard (as per AS3598:2000); and
- its retail network using the following representative assessments:
  - thirty one branches assessed to a Level 3 Energy Audit standard (as per AS3598:2000); and
  - seven business banking centres assessed to a Level 2 Energy Audit standard (as per AS3598:2000).

Combined, these facilities represent 86% of the Westpac Group's total energy use from 1 July 2012 to 30 June 2013.

Due to the large number of branches and business banking centres, the Westpac Group uses representative assessments. Representative assessments involve a detailed energy assessment and the identification of energy efficiency opportunities for a small population of facilities which are representative of the whole group. The findings are then extrapolated across the group. The use of representative assessments has reduced the number of retail assessments from over 1,160 to 38 resulting in cost and time savings for the Westpac Group.

Much of the activity in the past 12 months has focused on finalising commercial office and retail assessments as shown in Table 1. No facilities used over 0.5 PJ of energy. As the Westpac Group has assessed 80% of the Group's total energy, the next twelve months will allow us to focus on evaluating and implementing energy efficiency opportunities.



## 2. ENERGY ASSESSMENTS AND OPPORTUNITIES

TABLE 1: ENERGY ASSESSMENT SUMMARY (ACCURACY OF ENERGY DATA IS WITHIN ±5%.)

Facility assessed	Assessment Period	% of Energy Assessed	Energy use (GJ) for 1/7/12 - 30/6/13
<b>Commercial Offices</b>			
260 Queen St, Brisbane	May - August 2012	100%	3,515
345 Queen St, Brisbane	May - August 2012	100%	933
33 Corporate Dr, Cannon Hill	May - August 2012	100%	4,507
6 Technopark Dr, Kings Meadows	June 2012 - February 2013	100%	3,319
28-32 Elizabeth St, Hobart	June 2012 - February 2013	100%	1,324
167 St George's Terr, Perth	August 2012 - February 2013	100%	700
75 George St, Parramatta	August 2012 - April 2013	100%	4,483
32-38 Montgomery St, Kogarah	July 2012 - April 2013	100%	750
151 Clarence St, Sydney	October 2012 - April 2013	100%	3,501
2 Chifley Tower, Sydney	December 2012 - April 2013	100%	1,167
12 Langston Pl, Epping	February - April 2013	100%	8,904
Energy Assessments completed in previous years - Commercial Offices	July 2010 - June 2012	100%	233,292
<b>RAMS Head Office</b>			
Energy assessments completed in previous years - RAMS	July 2009 - June 2012	100%	1,021
<b>Data Centres</b>			
Energy assessments completed in previous years - Data Centres	July 2009 - June 2012	100%	120,751
<b>Retail - Business Banking Centres</b>			
153 Charters Tower, Hermit Park	September - December 2012	100%	505
The Sebel, Maroochydore	September - December 2012	100%	733
Warrigal Rd, Moorabbin (WBC)	October - December 2012	100%	354
424 Warrigal Rd, Moorabbin (BoM)	October - January 2013	100%	261
Energy assessments completed in previous years - Business Banking	May 2011 - June 2012	100%	2,166
Representative assessments - Business Banking	July 2012 - June 2013	100%	17,938
<b>Retail - Branches</b>			
203 New South Head Rd, Edgecliff	June - December 2012	100%	303
49-51 Belmore Rd, Randwick	June - December 2012	100%	287
477 Princes Hwy, Rockdale	June - December 2012	100%	234
345-347 Oxford St, Paddington	June - December 2012	100%	42
The Horsley Dr, Wetherill Park	June - December 2012	100%	339
319-323 Bong Bong St, Bowral	July - December 2012	100%	297
49-53 Mitchell St, Bendigo	August - December 2012	100%	550
134-136 Main St, Croydon	August - December 2012	100%	296

## 2. ENERGY ASSESSMENTS AND OPPORTUNITIES

Facility assessed	Assessment Period	% of Energy Assessed	Energy use (GJ) for 1/7/12 - 30/6/13
<b>Retail - Branches (cont)</b>			
256 Lonsdale St, Dandenong	August - December 2012	100%	271
655 Glenferrie Rd, Hawthorn	August - December 2012	100%	408
140-144 Main St, Lithgow	August - December 2012	100%	347
1025 Nepean Hwy, Rosebud	August - December 2012	100%	291
109-111 Burwood Rd, Burwood	September - December 2012	100%	339
Lakehaven Shopping Centre, Gorokan	September - December 2012	100%	136
Cnr Horton & Ocean St, Maroochydore	September - December 2012	100%	399
132 Junction St, Nowra	September - December 2012	100%	520
249 Windsor St, Richmond	September - December 2012	100%	271
431 Ruthven St, Toowoomba	September - December 2012	100%	666
16-18 Main St, Box Hill	October - December 2012	100%	334
Chadstone Shopping Centre, Chadstone	October - December 2012	100%	131
130 Rokeby Rd, Subiaco	October - December 2012	100%	280
39 Douglas Pde, Williamstown	October - December 2012	100%	138
49 Rundle Mall, Adelaide	November - December 2012	100%	687
4 Patricks Rd, Arana Hills	November - December 2012	100%	275
221 Queen Street Mall, Brisbane	November - December 2012	100%	199
7 Dawson St, Strathalbyn	November - December 2012	100%	88
27 Ocean St, Victor Harbour	November - December 2012	100%	258
4/639 Beach Rd, Warwick	November - December 2012	100%	362
93 Ware St, Fairfield	December 2012 - January 2013	100%	501
138 Mann St, Gosford	December 2012 - January 2013	100%	849
215 Port Rd, Hindmarsh	December 2012 - January 2013	100%	244
Energy assessments completed in previous years - Branches	July 2009 - June 2012	100%	431
Representative assessments - Branches	July 2012 - June 2013	100%	243,162
<b>Total energy assessed to date</b>		<b>100%</b>	<b>665,831 GJ</b>
<b>Total energy use of the Westpac Group in the current reporting year (1 July 2012 - 30 June 2013)</b>			<b>780,042 GJ</b>
<b>Total energy assessed as a percentage of total energy use</b>			<b>85%</b>

The Westpac Group has completed 78 energy assessments over the last four years, covering 665,831 GJ of energy or 85% of the Westpac Group's total energy consumption (Table 1). These assessments have identified 661 energy efficiency opportunities with potential energy savings of 112,536 GJ (Table 2).

Of the identified opportunities:

- 126 have or will be implemented saving 64,160 GJ of energy per annum;
- 345 require further information before a decision is made; and
- 190 opportunities will not be implemented as they do not meet EEO and/or Westpac Group business requirements.

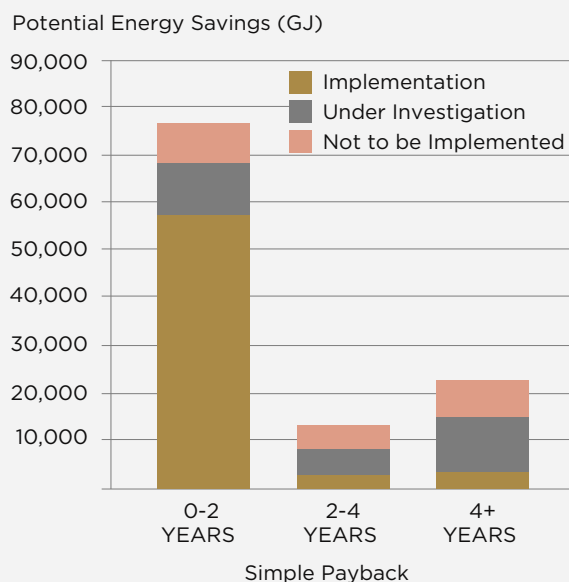
## 2. ENERGY ASSESSMENTS AND OPPORTUNITIES

TABLE 2: OPPORTUNITIES IDENTIFIED

Status of opportunities identified		Total Number of Opps	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	
<b>Opportunities assessed to an accuracy of ≤±30%</b>									
Business Response	implemented	84	57	31,855	10	1,852	17	2,535	36,242
	implementation commenced	14	9	13,748	3	664	2	1,173	15,584
	to be implemented	26	17	10,976	9	349	-	-	11,325
	under investigation	343	157	9,646	105	5,456	81	11,181	26,283
	not to be implemented	189	45	7,771	31	5,085	113	7,669	20,525
<b>Total Identified</b>		<b>656</b>	<b>285</b>	<b>73,996</b>	<b>158</b>	<b>13,405</b>	<b>213</b>	<b>22,558</b>	<b>109,960</b>
<b>Opportunities assessed to an accuracy of &gt;±30%</b>									
Business Response	implemented	2	2	1,009	-	-	-	-	1,009
	implementation commenced	-	-	-	-	-	-	-	-
	to be implemented	-	-	-	-	-	-	-	-
	under investigation	2	2	1,412	-	-	-	-	1,412
	not to be implemented	1	1	156	-	-	-	-	156
<b>Total Identified</b>		<b>5</b>	<b>5</b>	<b>2,577</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,577</b>

The majority of energy efficiency opportunities (approximately 68%) have a simple payback of less than 2 years as shown in Figure 4 and most of these opportunities have or will be implemented. The Westpac Group may implement an opportunity with a simple payback of more than 4 years based on a whole of business analysis (eg health and safety requirements, testing new technology or alignment of opportunity with business requirements). Likewise, the Group may decide to not implement an opportunity with a payback of less than 4 years where the opportunity does not meet business requirements.

FIGURE 4: POTENTIAL SAVINGS AND PAYBACK



# 3.1 REMOVAL OF HEAT RECOVERY SYSTEM FROM DATA CENTRE

<b>Electricity Saving</b>	297,398 kWh
<b>Cost Savings</b>	\$40,000
<b>Carbon Savings</b>	265 tCO <sub>2</sub> e
<b>Payback</b>	4.75 years

Our Data Centre had several staff areas which were heated by heat recovery units permanently installed for two chillers. Whilst providing for heating during winter months the heat recovery system remained in circuit for the chillers at all times which reduced the chiller coefficient of performance.

As part of the Ryde Computer Centre remediation program, people accommodation areas were consolidated. The heat recovery system was decommissioned and removed. Heating is now provided by duct heaters which only operate during colder months thereby increasing the efficiency of the chillers.

With removal of heat recovery system from Chillers 1 and 4 chiller duty cycle may be operated as desired without any compromise to chiller system efficiency thereby increasing chiller performance.

## 3.2 DATA CENTRE REMEDIATION PROGRAM

<b>Electricity Saving</b>	210,414 kWh
<b>Cost Savings</b>	\$25,200
<b>Carbon Savings</b>	187.3 tCO <sub>2</sub> e
<b>Payback</b>	6 years

With the increase in data centre capacity demand and a growing online presence, the Westpac Group initiated a data centre remediation project. The major focus was to create data centre capacity, increase reliance and address plant efficiency.

As part of this remediation program, a new plant area was created with additional 1200 square meters of data centre space, old light fittings containing inductive ballasts with twin 32 watt tubes were replaced with highly efficient low loss electronic ballast 36 watts single T5 tubes with motion control. Server consolidation and virtualisation program was also implemented.

Following remediation works, the data centre was assessed for CEEDA (Certified Energy Efficient Datacentre Award) and has been awarded Silver status. CEEDA is undertaken by British Computer Society where independent certifier assess data centre for best practices based on EU Code of Conduct for Data centres and energy efficient initiatives.

## 3.3 SUPPLEMENTARY AIR CONDITIONING

<b>Electricity Saving</b>	80,474 kWh
<b>Cost Savings</b>	\$32,733
<b>Carbon Savings</b>	70,817 tCO <sub>2</sub> e
<b>Payback</b>	0.8 years

One floor in 35 Pitt St Sydney operates outside of normal hours and requires air-conditioning afterhours. To provide this service the base building plant and air-conditioning was required to operate for the entire building. In July 2012, a reverse cycle supplementary air-conditioning unit with a condenser for heat/coolth rejection within the rooftop plantroom was installed to service the afterhours floor. This resulted in a 43% decrease in the buildings overnight electricity usage and significant cost savings.

