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THE COMMUNITY



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# 2012 Sustainability Performance Report



An overview of AGL's sustainability strategy and 2012 performance is available in the AGL Annual Report 2012.

#### Feedback

To provide feedback on AGL's sustainability performance or on any aspect of this report, please contact:

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Alternatively, you can visit the AGL Sustainability Blog and join the conversation at [aglblog.com.au](http://aglblog.com.au)



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In FY2012, coinciding with AGL's 175th year of operation, we have been focussed on achieving our new vision of creating energy solutions for the communities of today and tomorrow. In a year that has seen widespread scrutiny of energy costs, the introduction of a price on carbon and community concerns over power generation projects, AGL remains committed to building a sustainable future for all of our stakeholders – our customers, our employees, our investors, the community and the environment

### AGL's integrated business strategy

AGL's integrated strategy provides access to multiple profit pools and balances risk between upstream supply of energy and customers' demand for energy.

#### Upstream supply – renewable and thermal generation

Merchant Energy manages AGL's power generation assets and wholesale energy sourcing portfolio. Merchant Energy also manages energy sales to AGL's major customers and to other retailers, and provides energy efficiency services.

AGL has a diverse power generation portfolio, including baseload, intermediate and peaking generation plants spread across traditional thermal (coal and gas) as well as renewable sources (including hydro, wind, landfill gas and biomass). Renewable energy generation assets comprise around 48% of AGL's operated generation portfolio (by installed capacity), or 25% of owned, operated or controlled assets. The acquisition of Loy Lang A will reduce the proportion of AGL's renewable capacity to 27%. More information on AGL's renewable assets is available in the Climate Change chapter of this report.

**Strategic direction:** AGL has a medium-term target of owning and/or operating peak/intermediate generation to cover 80-120% of flexible demand.

#### Upstream supply – gas production

Upstream Gas is responsible for managing the growth of AGL's upstream gas portfolio to secure long-term, sustainable and market competitive gas supplies for customers and for power generation requirements.

AGL owns and/or operates coal seam gas exploration and production projects in six petroleum basins across New South Wales and Queensland. The investments that make up AGL's upstream gas portfolio include:

- > Camden Gas Project: 100% interest, operated by AGL;
- > Hunter Gas Project: 100% interest, operated by AGL;
- > Gloucester Gas Project: 100% interest, operated by AGL;
- > Galilee Gas Project: 50% joint venture interest, operated by AGL;
- > Silver Springs Project: 100% interest, operated by AGL;
- > Moranbah Gas Project: 50% joint venture interest, operated by Arrow Energy;
- > Spring Gully Gas Project: 0.0375-0.75% joint venture interests, operated by Origin Energy;

- > Diamantina Power Station: a 50% joint venture with APA Group to construct a power station in the Mt Isa region;
- > CSM Energy: 35% equity stake in a private company aiming to extract gas from mining operations and deliver it to market; and
- > New Zealand's Taranaki Basin: various non-operated shareholdings in exploration licences.

In Queensland, Upstream Gas manages the Silver Springs Underground Gas Storage Project which uses a depleted reservoir in the Surat Basin to store gas underground. In New South Wales, AGL has now received appropriate approvals to begin construction on its Newcastle Gas Storage Facility, an above ground, liquefied natural gas facility that AGL will use to manage winter peak demand for gas from 2015.

Upstream Gas also manages AGL's 9.9% equity interest in Torrens Energy Limited. AGL and Torrens Energy have entered into a Geothermal Alliance Agreement to jointly commercialise baseload geothermal projects close to the electricity transmission network.

**Strategic direction:** AGL is targeting gas storage withdrawal capacity of 250TJ/day, ownership of around 2,000 PJ of 2P upstream gas reserves for domestic supply and gas production that meets 40-50% of customer demand.

#### Transmission and distribution

Ownership of large-scale electricity or gas transmission and distribution systems that are used to transport energy from upstream supply facilities (gas production and electricity generation) to the end customer is not core to AGL's integrated strategy. AGL does not own gas or electricity distribution networks or electricity transmission networks, but does have some strategic investments in gas transmission infrastructure, as outlined in the Economic chapter of this report.

**Retail markets**

AGL retails natural gas, electricity and energy-related products and services (including solar) to around 3.5 million customer accounts across New South Wales, Victoria, South Australia and Queensland. Further information about AGL's retail customer numbers and churn figures are on page 19.

In FY2012 the total amount of energy sold to AGL's mass market customers was 15,410 GWh of electricity and 60.1 PJ of gas. AGL also sold an additional 17,374 GWh of electricity and 81.9 PJ of gas to major commercial and industrial customers.

**Strategic direction:** AGL is focused on increasing the provision of energy related services, assisting our customers to become more energy efficient. We will also continue to focus on growing New South Wales electricity customer accounts in the range of 800,000 to 900,000, creating a national customer base in the range of 3.6 million to 3.7 million in the medium term.

**Corporate support**

AGL's Retail Energy, Merchant Energy and Upstream Gas businesses are supported by a full complement of corporate services. Further information about AGL's integrated strategy is available in the Economic chapter of this report.

**Projects under development and construction**

AGL has a range of projects in different stages of development to deliver strategic depth and flexibility to its electricity generation, gas production and storage portfolios. These are discussed in the Economic and Climate Change chapters of this report.

During FY2012 AGL completed construction of the AGL Hallett 5 Wind Farm (52.5MW) and the Oaklands Hill Wind Farm (63MW). In November 2011, AGL officially opened its Silver Springs Underground Gas Storage project, located south of Roma, Queensland. The facility has a nominal capacity of 35 PJ.

**Investments and divestments**

On 29 June 2012, AGL completed the acquisition of the remaining 67.46% of the voting shares in, and loan notes issued by, Great Energy Alliance Corporation Pty Limited (GEAC), increasing its ownership from 32.54% to 100%. The consolidated entity also acquired 100% of the voting shares in Loy Yang Marketing Holdings Pty Limited.

On 25 July 2011, AGL acquired the Victorian based solar photovoltaic business, EKO Energy, from the privately owned company Rezeko Pty Ltd.

On 30 April 2012, AGL acquired the development rights for the Silverton wind farm in New South Wales through the acquisition of 100% of the voting shares in Silverton Wind Farm Holdings Pty Ltd. There were no divestments in FY2012.

### Hydro Electric Power Stations

#### Dartmouth Power Station

Location	Victoria
Capacity	180 MW

#### Kiewa Scheme Power Station

Location	Victoria
Capacity	391 MW

#### Eildon Power Station

Location	Victoria
Capacity	135 MW

### Wind Farms

#### AGL Hallett 1 Wind Farm

Location	South Australia
Capacity	94.5 MW

#### AGL Hallett 2 Wind Farm

Location	South Australia
Capacity	71.4 MW

#### AGL Hallett 4 Wind Farm

Location	South Australia
Capacity	132.3 MW

#### AGL Hallett 5 Wind Farm

Location	South Australia
Capacity	52.5 MW

#### Oaklands Hill Wind Farm

Location	Victoria
Capacity	63 MW

#### Wattle Point Wind Farm

Location	South Australia
Capacity	91 MW

#### Macarthur Wind Farm (in construction)

Location	Victoria
Capacity	420 MW

#### Silverton Wind Farm (proposed)

Location	NSW
Capacity	300 MW

### Solar Farms

#### Broken Hill Solar Farm (in development)

Location	New South Wales
Capacity	53 MW

#### Nyngan Solar Farm (in development)

Location	New South Wales
Capacity	106 MW

### Gas Storage

#### Newcastle Gas Storage (in construction)

Location	New South Wales
Capacity	1.5 PJ

#### Silver Springs Gas Storage

Location	Queensland
Capacity	35 PJ

The assets listed above and displayed on the map comprise upstream gas projects with 2P reserves\* or 2C resources\*, and power generation assets larger than 50 MW as at 30 June 2012. Operated as well as partly owned or non-operated assets are included.

#### Note

\* 2P, or proved plus probable reserves, are those quantities of gas that are estimated with equal certainty to be greater than or less than actual commercially recoverable quantities. 2C resources are considered not yet commercially recoverable.

### Thermal Power Stations

#### Loy Yang A Power Station

Location	Victoria
Fuel type	Coal
Capacity	2,200 MW

#### Torrens Island Power Station

Location	South Australia
Fuel type	Gas
Capacity	1,280 MW

#### Oakey Power Station

Location	Queensland
Fuel type	Gas
Capacity	282 MW
Not operated by AGL	

#### Somerton Power Station

Location	Victoria
Fuel type	Gas
Capacity	150 MW

#### Yabulu Power Station (50% interest)

Location	Queensland
Fuel type	Gas
Capacity	121 MW
Not operated by AGL	

#### Diamantina Joint Venture (50% interest) (in construction)

Location	Queensland
Fuel type	Gas
Capacity	121 MW
Not operated by AGL	

### Upstream Gas Projects

#### Gloucester Gas Project

Location	New South Wales
Reserves (2P)	669 PJ

#### Moranbah Gas Project (50% interest)

Location	Queensland
Reserves (2P)	376 PJ
Not operated by AGL	

#### ATP 1103 Exploration Project (50% interest)

Location	Queensland
Reserves (2P)	768 PJ
Not operated by AGL	

#### Camden Gas Project

Location	New South Wales
Reserves (2P)	142 PJ

#### Hunter Gas Project

Location	New South Wales
Reserves (2P)	142 PJ

#### Silver Springs

Location	Queensland
Reserves (2P)	61 PJ

#### Galilee Gas Project (50% interest)

Location	Queensland
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Operated by AGL



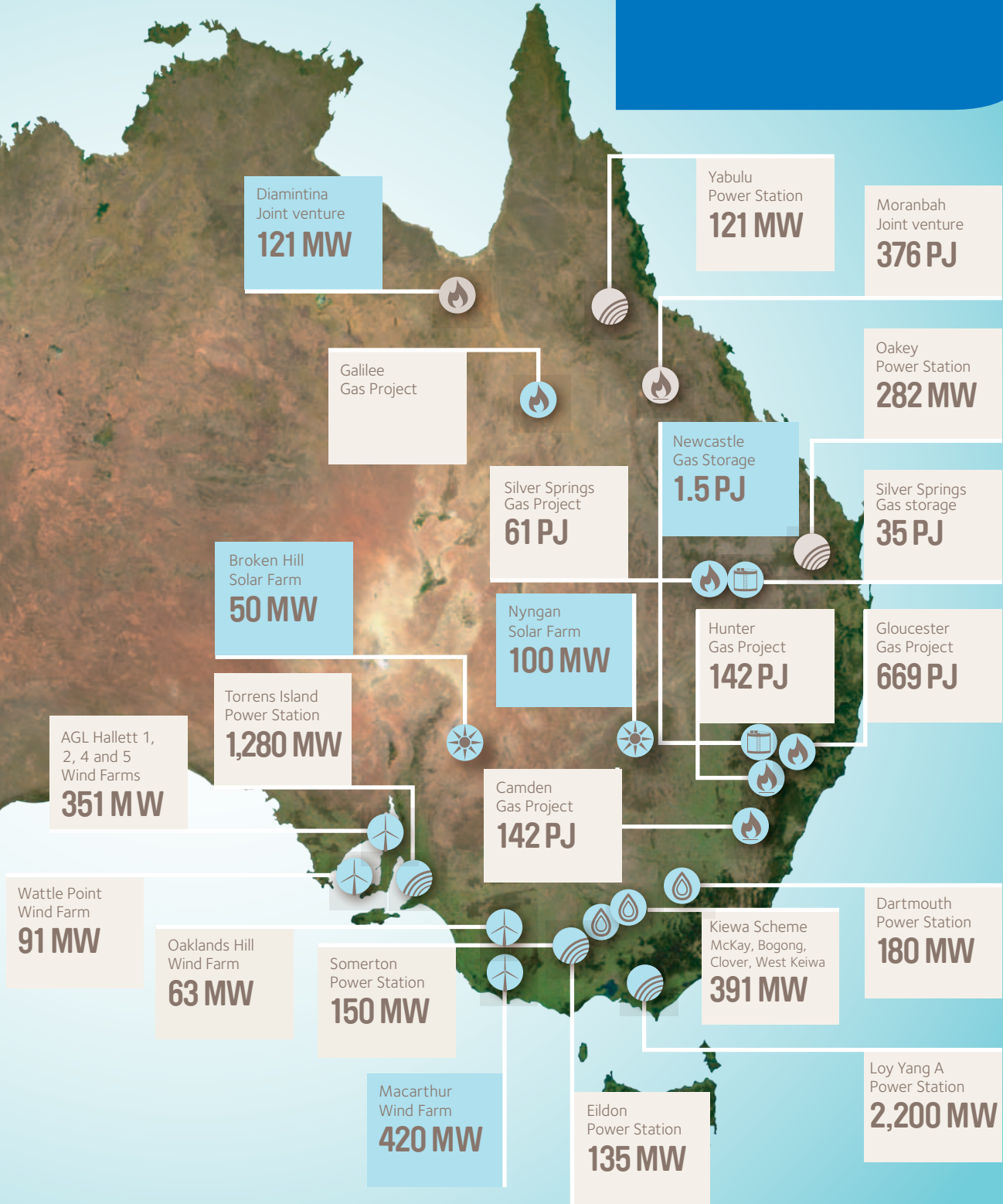
Not operated by AGL

 PROJECTS BEING DEVELOPED/ CONSTRUCTED

 COMPLETED



View the AGL Earth tool for more generation and upstream gas assets at [agl.com.au/earth](http://agl.com.au/earth)



AGL publishes sustainability performance data annually so that stakeholders can gain an understanding of the social, environmental and economic challenges and opportunities that face the organisation and the industry, and the steps that AGL is taking to enhance the long-term value of the business.

### Report scope

This report covers the performance of the AGL group of companies (AGL Energy Limited and its wholly owned Australian subsidiaries) (AGL) and the activities and facilities in Australia over which AGL had operational control for all, or part, of the financial year ended 30 June 2012 (FY2012). AGL Loy Yang has, however, been excluded from scope, on the basis that the acquisition occurred on 29 June 2012. All data in this report relates to FY2012 unless otherwise stated.

Together, the 2012 Sustainability Performance Report and the 2012 Annual Report provide the full account of AGL's performance for the period.

Where information regarding AGL's partially owned and non-operated investments is material, available and relevant, it is included and clearly referenced. This report excludes the performance of franchise AGL Energy Shops and AGL Assist.

The performance of joint ventures which are not operated by AGL is excluded.

AGL's previous Sustainability Report was released in November 2011, covering the 2011 financial year (FY2011). This and prior Sustainability Reports for AGL and The Australian Gas Light Company (AGLC) dating back to FY2004 are available on the AGL website at [agl.com.au](http://agl.com.au).

### Report structure

AGL's annual sustainability reporting comprises two main elements:

**1. AGL Annual Report 2012.** Sustainability performance information is incorporated within the Annual Report to provide a broader account of AGL's overall performance to shareholders and other stakeholders. Pages 10 to 23 of the Annual Report document AGL's performance against the 12 strategic sustainability indicators and targets that were set in 2011.

**2. Sustainability Performance Report 2012 (this report)**

This report provides detailed performance data across a wider range of subject areas, and has been prepared for stakeholders who have a special or detailed interest in particular aspects of AGL's sustainability performance.

This report is available online only.

Assurance Statements are available on pages 91 to 95. A Global Reporting Initiative (GRI) Index is located on pages 96 to 108.

### Global reporting initiative

The Global Reporting Initiative's (GRI) 'G3' Sustainability Reporting Guidelines and the GRI Electric Utility Sector Supplement were used in the preparation of this report. These documents provide guidance for organisations to use as the basis for disclosure about their sustainability performance, providing a universally applicable, generally acceptable and comparable framework that helps stakeholders understand reported information.

A full GRI content index is included on pages 96 to 108 of this report.

AGL has self-assessed the extent to which the GRI guidelines have been applied in the preparation of this report. AGL also engaged Net Balance Management Group Pty Ltd (Net Balance) to complete a third-party 'GRI Application Level' assessment of the report. Net Balance agreed with the self-assessment that the report meets the requirements of an 'A+' Application Level. This is reflected in the GRI application level table shown below.

It is AGL's intention to report at an 'A+' level in the future.

For further information about the GRI guidelines and application levels, refer to the GRI website at [globalreporting.org](http://globalreporting.org).

### Assurance

Net Balance has provided independent assurance over this report using the AA1000 Assurance Standard (2008). A 'Type 2 Moderate Level' of assurance was undertaken for the majority of the report, with the exception of information contained in the Environment chapter, which was assured to a high level of assurance. The assurance process assesses how well AGL meets the AA1000 AccountAbility Principles of Inclusivity, Materiality and Responsiveness, as well as testing the reliability of reported information. The Assurance Statement from Net Balance is included on page 94 of this report.

In addition, AGL has sourced further assurance about data accuracy and reliability through the following mechanisms:

- > Deloitte Touche Tomatsu has undertaken an assurance of AGL's methodology for determining greenhouse gas emissions (Operational, Equity, Energy Supply and Greenhouse Footprints).
- > Data in the Economic section of the report includes financial information from AGL's audited 2012 Financial Report. The full financial report is available on the AGL website at [agl.com.au](http://agl.com.au).

### GRI application level

		2002 In accordance	C	C+ Report externally assured	B	B+ Report externally assured	A	A+ Report externally assured
Mandatory	Self declared							
	Third party checked							✓
Optional	GRI checked							



### How to read this report

Performance data in this report has been structured into six chapters, representing the categorisation of AGL's sustainability risks: Economic, Customers, Community, People and Safety, Climate Change and Environment.

Within each chapter, two focus areas have been identified. Together, these 12 focus areas represent those issues considered to be the most material sustainability challenges for AGL.

A vision has been stated for each of the 12 focus areas. These visions are designed to help guide decision making. Short-term targets for FY2012 were published for each indicator in the 2011 Annual Report and 2011 Summary Performance Report. Performance against each of the FY2012 targets, and new targets for FY2013, are reported within this report and the FY2012 Annual Report.

The body of this report contains additional detail about each focus area, including AGL's management approach and further supporting data.

A set of subject areas that influence overall performance in each focus area has also been identified. Performance data for each of these subject areas is available in the body of the report. A roadmap showing the subject areas for each focus area is provided on the introductory page to each chapter of this report.

AGL recognises that there is not always a linear relationship between the identified subject areas and focus areas, and that each subject area may have an influence on performance in more than one focus area.

However, the selected structure is intended to provide a simple model for disclosing sustainability-related performance data. The representation of AGL's major sustainability risks and opportunities in this way will provide a map for the future that can be consistently communicated year after year, and which stakeholders can use to measure progress.

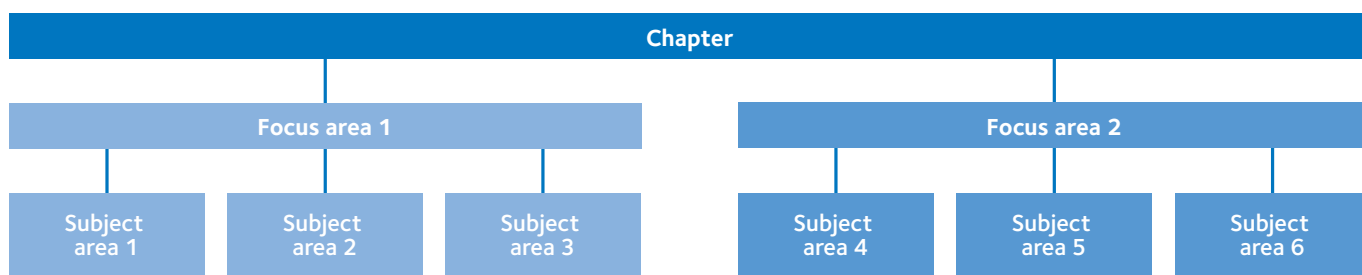
### Consultation about this report

AGL engages with different stakeholder groups on a regular basis, as outlined in the Stakeholder engagement section of this report (pages 13 to 14).

Specific comment on the scope and content of aspects of this report was also sought from the AGL Climate Change Council and the AGL Customer Council.

- > Feedback received from the AGL Climate Change Council included general disappointment at the acquisition of Loy Yang A power station. In response to the acquisition, AGL's Climate Change Council expressed a desire to see increased transparency with respect to emissions reporting and targets. There were also requests for greater clarification of AGL's future strategy regarding the acquisition of existing power stations.
- > Feedback received from the AGL Customer Council focussed generally on improving assistance measures for low-income households and improving transparency in relation to energy contracts and marketing.

### Reporting model



#### Chapter

Each chapter has an overarching goal, to guide long-term performance.

#### Focus areas

Within each chapter two focus areas have been identified which are considered to be material sustainability challenges for AGL.

To guide decision making and drive performance in each of the 12 focus areas:

- > a long-term vision has been stated
- > a one-year performance target has been set.

#### Subject areas

Success in each of the 12 focus areas is driven by performance in other subject areas. Where available, performance data is provided.

AGL recognises that there is not always a linear relationship between the identified 'subject areas' and 'focus areas', and that each subject area may have an influence on performance in more than one focus area.

## Economic

Vision	Target FY2012	Performance FY2012		Target FY2013
<b>Ongoing profitability</b>				
Industry leading earnings profile based on sustainable business practices.	Underlying profit: <b>\$470–500 million</b>	Underlying profit: <b>\$482 million</b>	✓	Underlying profit: <b>\$590–640 million<sup>1</sup></b>
<b>Sustainable growth</b>				
Solid returns from AGL's existing and new business activities.	Credit rating: <b>BBB</b>	Credit rating: <b>BBB</b>	✓	Improvement in return on funds employed.

## Customers

Vision	Target FY2012	Performance FY2012		Target FY2013
<b>Customer experience</b>				
Recognised industry leader in customer satisfaction.	Customer satisfaction score <sup>2</sup> : <b>&gt; major competitors</b>	Customer satisfaction score: <b>AGL<sup>3</sup> = 6.68</b>	✓	To have a higher annual mean customer satisfaction score than our competitors.
<b>Customers in hardship</b>				
Recognised industry leader in customer hardship policy.	Average energy debt of Staying Connected customers: <b>5% decrease</b>	Average energy debt of Staying Connected customers: <b>7.6% increase</b>	✗	5% reduction in the ratio of average energy debt of staying connected customers to average NEM household electricity bill.

## Community

Vision	Target FY2012	Performance FY2012		Target FY2013
<b>Community engagement</b>				
Best practice local community engagement.	Improve community engagement by implementing community engagement plan actions: <b>100%</b>	Implementation of community engagement plan actions: <b>100%</b>	✓	100% delivery of promises made to the community.
<b>Community contribution</b>				
Social Return on Investment (SROI) measured and at targets levels.	Employee Volunteering participation rate: <b>25%</b>	Employee Volunteering participation rate: <b>27%</b>	✓	Establish framework for SROI analysis, with outputs of Energy for Life strategic partnerships measured annually.

## Notes

- 1 Underlying earnings per share: FY2012 – 100 cents. FY2013 – the range is 107 to 116 cents.
- 2 As determined by a quarterly survey prepared by an independent third party provider.
- 3 Powerdirect and ActewAGL are not included under the AGL brand for the customer satisfaction score.

In 2010, AGL established a new framework for sustainability reporting. Twelve strategic indicators of success were developed, together with visions to guide performance in the longer term. FY2011 and FY2012 targets for each indicator were published in the 2010 and 2011 sustainability performance reports. An account of performance against each of the FY2012 sustainability targets is detailed below, together with new commitments for FY2013.

## People

Vision	Target FY2012	Performance FY2012		Target FY2013
<b>Employee engagement</b>				
Engagement score at 'best employer' level.	Engagement score: <b>8% point increase</b>	Engagement score <sup>1</sup> : <b>10% point increase</b>	✓	Further improvement in employee engagement <sup>2</sup> .
<b>Organisational safety</b>				
Zero harm.	Total Injury Frequency Rate: <b>4.0</b>	Total Injury Frequency Rate: <b>6.6</b>	✗	Total Injury Frequency Rate: <b>lower than 4.9<sup>2</sup></b>

## Climate change

Vision	Target FY2012	Performance FY2012		Target FY2013
<b>Carbon risk</b>				
Continuing to lower the emissions intensity of AGL.	Intensity compared to Australian electricity average*: <b>&gt;50% below</b>	Intensity compared to Australian electricity average*: <b>&gt;60% below Australian average</b>	✓	Emissions intensity of investments in new generation capacity: <b>lower than 0.7 tonnes per MWh</b>
<b>Sustainable generation sources</b>				
Australia's largest renewable energy company.	Renewable proportion of operated generation capacity**: <b>48%</b>	Renewable proportion of operated generation capacity**: <b>48%</b>	✓	Increase renewable investment capacity to: <b>1,740 MW<sup>3</sup></b>

## Environment

Vision	Target FY2012	Performance FY2012		Target FY2013
<b>Environmental risk</b>				
To have an environmental risk profile that is As Low As Reasonably Practicable (ALARP).	Develop biodiversity register for AGL assets and projects which identifies any impacts on biodiversity values.	The biodiversity register is established. It provides a company-wide baseline of information that will enhance our understanding of biodiversity risks.	✓	100% of approved risk register actions for the highest environmental risks implemented in accordance with targeted milestones.
<b>Water management</b>				
To be recognised as a prudent and responsible user of water that seeks to minimise the adverse impact of its operations on local water resources.	Implement the Produced Water Management Strategy, and develop plans for drill water and coal seam fracturing/flowback water.	Site specific water plans and reuse trials were undertaken in line with produced Water Management Strategy.	✓	Increase number of dedicated monitoring bores and stream gauging sites relative to overall number of CSG wells/sites.

### Notes

1 Engagement survey undertaken during May and June 2012.

2 The targets related to people will not include AGL Loy Yang for the FY2013 period. AGL Loy Yang will be included from FY2014.

3 As at 30 June 2012, AGL had 1320 MW of renewable capacity.

\* Figures refer to the sent out greenhouse gas emissions intensity of generation (scopes 1 and 2) from electricity generation assets over which AGL had operational control during FY2012. Generation from AGL Loy Yang is not included in these figures for either the period prior to, or following the AGL acquisition (generation from AGL Loy Yang will be included from FY2013 onwards). Generation assets that are not operated by AGL are not included (for example, where AGL has a right to electricity output or power purchase agreements with power stations operated by other organisations).

\*\* Figures refer to the capacity of electricity generation assets over which AGL had operational control, as at 28 June 2012 prior to the Loy Yang acquisition. The renewable component includes the installed capacity of hydro, wind, solar, biomass, biogas and landfill gas generation assets operated by AGL. Generation assets that are not operated by AGL are not included (for example, where AGL has a right to electricity output or power purchase agreements with power stations operated by other organisations).

## Governance and management

Best practice corporate governance standards support sustainable performance by AGL over time.

### Sustainability and corporate governance

AGL's governance structures and processes are consistent with the Australian Securities Exchange (ASX) Corporate Governance Council's 'Corporate Governance Principles and Recommendations – 2nd Edition' issued in August 2007. The eight ASX principles are:

- > **Principle 1:** Lay solid foundations for management and oversight
- > **Principle 2:** Structure the Board to add value
- > **Principle 3:** Promote ethical and responsible decision making
- > **Principle 4:** Safeguard integrity in financial reporting
- > **Principle 5:** Make timely and balanced disclosure
- > **Principle 6:** Respect the rights of shareholders
- > **Principle 7:** Recognise and manage risk
- > **Principle 8:** Remunerate fairly and responsibly

AGL's Annual Report includes a full statement disclosing the extent to which AGL has adopted and met the ASX principles and recommendations. The AGL Annual Report is available at [2012annualreport.agl.com.au](http://2012annualreport.agl.com.au).

### AGL Board and AGL Board Committees

At 30 June 2012, the AGL Board comprised seven independent non-executive directors (including the Chairman of the Board), and one executive director who is the Managing Director and CEO. Detailed information about the structure, responsibility and experience of the AGL Board is included in AGL's Annual Report.

The Board has established three standing committees of its members that meet regularly to oversee key risks affecting the business.

### Safety, Sustainability and Corporate Responsibility Committee

The Safety, Sustainability and Corporate Responsibility Committee operates under a formal Charter, which requires it to oversee promotion across AGL of the principles of safety, sustainability and corporate responsibility as the foundations of good management and good business. The Committee meets on a quarterly basis, visiting various AGL locations, to oversee and review:

- > AGL's actions to meet its obligations to maintain the health and safety of its people;
- > the social, environmental and ethical impact of AGL's policies and practices;
- > initiatives to enhance AGL's sustainable business practices and reputation as a responsible corporate citizen; and
- > the integration of safety, sustainability and corporate responsibility in the formulation of AGL's corporate strategy, risk management framework, and people and culture priorities.

A suite of internal sustainability key performance indicators is reported to the Committee at each meeting.

The Safety, Sustainability and Corporate Responsibility Committee Charter is available at [agl.com.au/SSCR](http://agl.com.au/SSCR).

### Audit and Risk Management Committee

The primary function of the Audit and Risk Management Committee is to assist the Board in fulfilling its responsibilities to provide shareholders with timely and reliable financial reports and to protect the interests of shareholders, customers, employees and the broader community through the effective identification, assessment, monitoring and management of risks. The Committee operates under a formal Charter.

The Audit and Risk Management Committee Charter is available at [agl.com.au/ARMC](http://agl.com.au/ARMC).

### People and Performance Committee

The People and Performance Committee convenes at least twice yearly to oversee the appropriate recruitment, retention and remuneration of directors, senior managers and other employees with the capabilities necessary to promote AGL.

The People and Performance Committee Charter is available at [agl.com.au/PPC](http://agl.com.au/PPC).

### Sustainability management structure

The AGL executive team builds sustainability considerations into business strategy and day-to-day operations.

Responsibility for AGL's sustainability strategy lies within the Economic Policy and Sustainability team within the Corporate Affairs business unit. This team is responsible for developing sustainability strategy and policies, liaising with the business on these policies and reporting progress on sustainability issues.

### Key systems and policies

A range of formal policies, plans and management systems govern AGL's day-to-day operations:

#### Risk management

AGL recognises that risk is dynamic and is inherent in all external and internal operating environments. AGL is committed to managing all risks effectively, and integrates risk management practices into all business processes and operations to drive consistent, effective and accountable action, decision making and management practice.

AGL has an integrated approach to Enterprise Risk Management which is consistent with the International Standard for Risk Management ISO 31000, the COSO Framework and ASX Corporate Governance Principles. The AGL Board has ultimate responsibility for overseeing the performance of AGL, including effectively monitoring risk management and internal control systems. To assist it in discharging its responsibilities, the Board has established the Board Audit and Risk Management Committee. AGL's Risk Management Policy sets out the objectives and accountabilities for the management of risk within AGL such that it is structured, consistent and effective. Key aspects of AGL's approach to risk management are outlined in the Economic chapter of this report.

AGL's Risk Management Policy is available at [agl.com.au/RiskPolicy](http://agl.com.au/RiskPolicy).

**Code of conduct**

AGL's Code of Conduct (the Code) sets out a number of overarching principles of ethical behaviour aligned with AGL's core values. The Code applies to directors, employees and contractors working on behalf of AGL.

The Code is administered by the AGL Ethics Panel. The Ethics Panel comprises: Company Secretary, Group Head of People and Culture, Head of Legal, Head of Group Audit, and an independent person with expertise in managing employee grievances. The responsibilities of the Ethics Panel include putting in place procedures for distribution of, and compliance with, the Code; investigation and reporting of any alleged breaches of the Code; and recommending to the Board any changes required to support the effectiveness of the Code.

The payment of membership fees and subscriptions to political parties is addressed in the Code, and the political networking forums in which AGL participates are outlined in the Stakeholder engagement section of this report.

AGL's Code of Conduct is available at [agl.com.au/CodeofConduct](http://agl.com.au/CodeofConduct).

**Health, safety and environmental management**

AGL's health, safety and environmental management system is based on the recognised standards AS/NZS/ISO 14001 (Environmental Management Systems) and AS/NZS 4801 (Occupational Health and Safety Systems). Life Guard sets the corporate standards and requirements for health, safety and environmental management for all aspects of AGL's business. Life Guard committees monitor and drive performance improvement and compliance with Life Guard.

AGL's Health, Safety and Environment Policy is available at [agl.com.au/Downloads/060922\\_Market-Disclosure-Policy-Corporate\\_About-AGL.pdf](http://agl.com.au/Downloads/060922_Market-Disclosure-Policy-Corporate_About-AGL.pdf).

**Market disclosure**

The Market Disclosure Policy outlines how AGL manages continuous disclosure obligations and communication with capital markets. An internal Market Disclosure Committee is responsible for ensuring that all AGL announcements are timely, contain clearly written, material information, and are objective and factual, to allow investors to assess the consequences of information on their investment decisions.

AGL's Market Disclosure Policy is available at [agl.com.au/Downloads/060922\\_Market-Disclosure-Policy-Corporate\\_About-AGL.pdf](http://agl.com.au/Downloads/060922_Market-Disclosure-Policy-Corporate_About-AGL.pdf).

**Privacy**

AGL's Privacy Statement and companion internal document, the Privacy Policy, outline AGL's responsibilities and commitments in relation to the privacy of customers, shareholders, employees and other stakeholders. The Statement is consistent with the National Privacy Principles, as documented in the *Privacy Act 1988* (Cth).

AGL's Privacy Statement is available at [agl.com.au/Privacy](http://agl.com.au/Privacy).

**Legislative compliance**

AGL is committed to embedding compliance risk management practices within the broader risk management and governance frameworks, and integrating it into all business processes and operations to drive consistent, effective and accountable decision making. The Compliance Policy and Plan covers legislative requirements, management responsibilities, training, reporting on compliance and provision for internal audit. AGL's approach to compliance is consistent with the Australian Standard on Compliance Programs (AS 3806-2006).

AGL's Compliance Policy is available at [agl.com.au/CompliancePolicy](http://agl.com.au/CompliancePolicy).

**Public policy advocacy**

AGL aims to provide stakeholders with access to the right information so that the effects of energy market and climate change policy on both AGL's business and AGL's customers are fully understood. AGL participates in the development of public policy by providing submissions, consulting with government, participating in government networking events and by speaking at government inquiries.

AGL also works with a number of energy industry associations to provide common industry and business positions to governments on energy market and greenhouse policy issues. However, there are occasions where AGL's position differs from the association to which it belongs. Where possible, AGL informs stakeholders of this difference of opinion to avoid confusion. Refer to the Stakeholder Engagement section of this report for further information.

Copies of AGL's submissions are publicly available on relevant government department websites. Selected submissions are also published on AGL's corporate blog at [agblog.com.au](http://agblog.com.au).

Key issues for which AGL plays a policy advocacy role are listed below.

**Price risk**

Price risks exist for energy retailers where regulated prices do not reflect current energy costs. AGL actively participates in regulatory price reviews when they arise.

**Energy regulation**

AGL recognises that an efficient market and regulatory framework assists in ensuring that the industry and its customers are not exposed to inappropriate costs and risks. To facilitate the development of a consistent framework for Australia's energy markets, AGL has made a number of submissions to energy regulators.

**Climate change**

In FY2012, AGL contributed to a number of public policy discussions. AGL continues to advocate the adoption of a broad-based emissions trading scheme in Australia.

## Stakeholder engagement

Engaging in constructive dialogue with stakeholders keeps AGL responsive to issues important to customers, employees, investors, regulators and the wider community

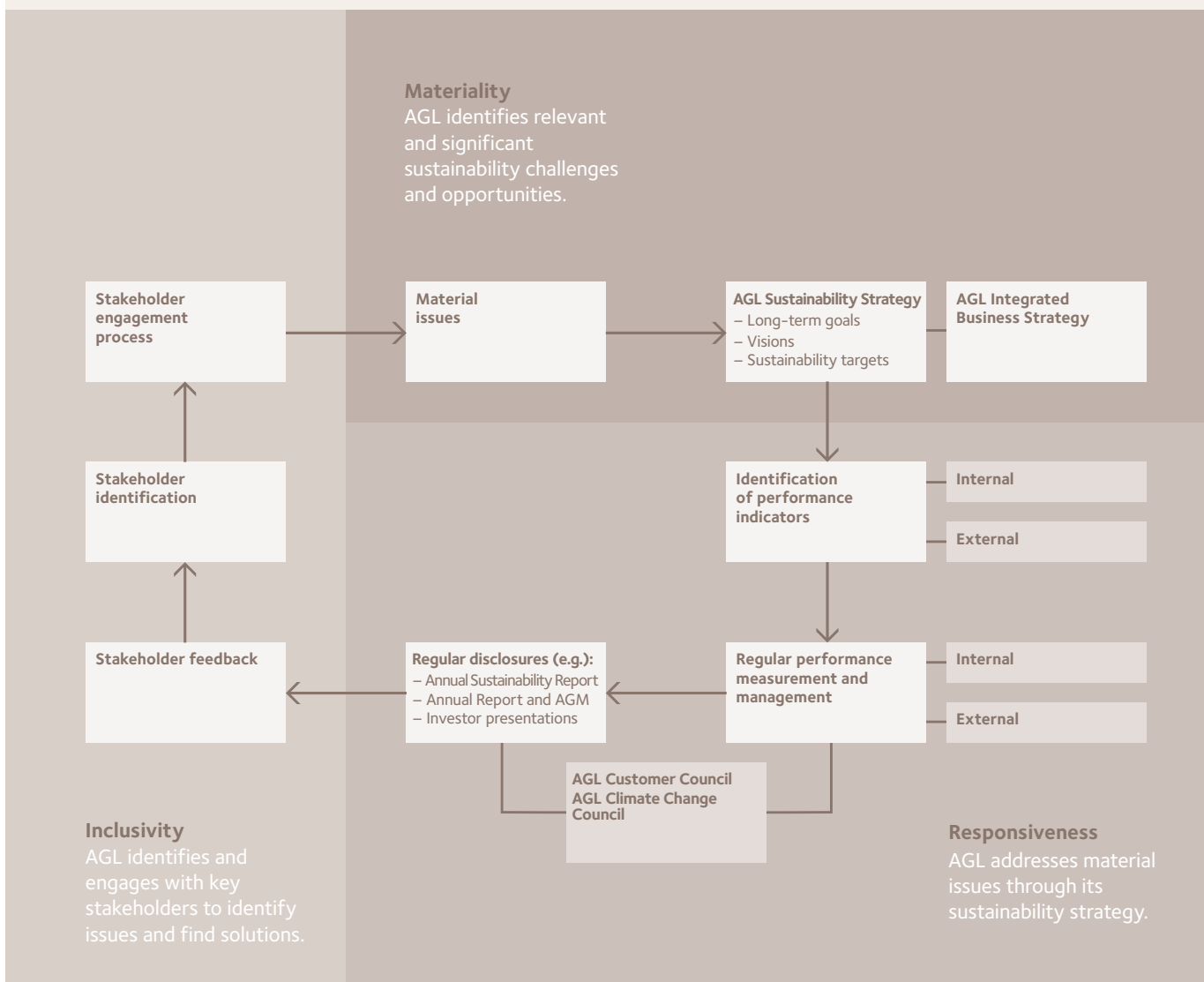
### AA1000 principles

AGL incorporates the principles of inclusivity, materiality and responsiveness, as shown in the diagram below.

The AA1000 principles are:

- > Inclusivity: An organisation shall be inclusive
- > Materiality: An organisation shall identify its material issues
- > Responsiveness: An organisation shall respond to stakeholder issues that affect its performance.

### Integration of AA1000 principles



Stakeholder groups/main issues	Engagement mechanisms
<p><b>Employees</b> To remain competitive AGL requires a high performance culture where people are safe, engaged, accountable, empowered, recognised and rewarded.</p> <p>The key issues for AGL employees include: career development and training; appropriate remuneration and recognition; workplace safety; personal wellbeing; and a fair, equitable and inclusive workplace. Employee engagement surveys show that company reputation and corporate responsibility are important issues for AGL employees.</p>	<p>The AGL Engagement Survey is undertaken annually, and provides employees with the opportunity to give feedback about the organisation.</p> <p>AGL uses a 360° feedback program for senior leaders throughout the business.</p> <p>AGL Senior Leadership Group forums are used throughout the year to inform and update leaders across the business about the key priorities, projects and issues of each business group.</p> <p>AGL holds 'CEO roundtable' events, which provide AGL's CEO with an informal opportunity to meet employees at all levels and to directly hear and discuss successes, challenges, issues and achievements.</p> <p>Twice-yearly Employee Roadshows are held to present financial results, operational highlights, and strategic priorities. A Diversity Big Day Out is held for employees where information and training is provided around diversity and work/life balance. Feedback is also sought on other mechanisms that AGL could utilise to encourage and promote diversity.</p>
<p><b>Investment community</b> In addition to market disclosure obligations, AGL recognises the importance of engaging with the investment community about the non-financial risks and opportunities that may influence the company's performance and growth in the longer term.</p> <p>Investors are increasingly interested in AGL's responses to environmental, social and governance risks. Around 50% of all funds under management by Australian asset managers fall under a UN PRI commitment to integrate sustainability considerations into their analyses. AGL's preparations for a carbon-constrained future are of particular interest to analysts.</p>	<p>The Annual General Meeting (AGM) provides shareholders with the opportunity to review financial results, and to vote on a range of issues. The AGM also provides the opportunity for shareholders to ask questions of AGL's Directors and senior executives concerning performance and strategy.</p> <p>AGL makes regular announcements to the ASX concerning significant matters including financial results, acquisitions and divestments.</p> <p>AGL publishes an Annual Report and Sustainability Performance Report each year to provide AGL's stakeholders (including investors) with relevant financial and non-financial results for the year, and to provide a summary of AGL's business strategies and plans for the next year. Producing an Annual Report is a legal requirement for AGL, and shareholders are able to provide direct feedback on the results contained within the report at the Annual General Meeting.</p> <p>AGL voluntarily publishes an annual Sustainability Performance Report to provide a broader spectrum of information regarding social, environmental and economic performance.</p> <p>AGL participates in the Dow Jones Sustainability Index, the Carbon Disclosure Project and the FTSE4Good Index. These tools are used by the investment community to collect relevant non-financial performance information to facilitate informed investment decisions.</p> <p>AGL conducts semi-annual independent qualitative and quantitative surveys of equity investors and analysts, allowing these stakeholders to provide unattributed feedback on management, strategy, disclosure, financial performance and balance sheet structure.</p> <p>Other engagement mechanisms include: institutional investor and equity analyst events, including domestic and international 'roadshows'; presentations to stockbrokers and industry conferences; and investor tours of assets and operations.</p>
<p><b>Government</b> AGL's business is affected by the policy decisions and other announcements of Federal and State Ministers and their departments. Governments have a responsibility to ensure the accessibility of essential services, such as energy, along with the development of energy infrastructure in accordance with its own policy principles. These principles can include consideration of climate change impacts and sustainability.</p> <p>State and Federal governments are concerned with a wide range of energy industry issues including: the approval and development of energy infrastructure, climate change and renewable energy policies, energy pricing, and reliability of energy supply.</p>	<p>AGL's Government Affairs team has regular dialogue with relevant State and Federal governments in relation to a range of policy issues – this dialogue includes engagement via discussion, meetings, submissions (both directly and via industry associations), attendance at events and the provision of briefings. AGL's Government Affairs team develops and maintains strong relationships through each of the Ministerial offices with which it engages on AGL's behalf.</p> <p>AGL is a member of Labour and Liberal political networking forums in the States where AGL operates, and Federally. AGL pays to attend political functions from time to time, either via its membership of these organisations, or separately. Some of these payments create reporting obligations under either the Federal or a State political donations framework, and AGL complies with the requirements of each of those jurisdictions.</p>
<p><b>Regulators</b> Jurisdictional energy regulators are responsible for price regulation and monitoring compliance against jurisdictional energy regulations. Regulatory decisions can have a significant impact on AGL's business.</p> <p>The key issues for state energy regulators include: reliability, and more recently, affordability of energy supply, efficient investment in utility infrastructure, and compliance against consumer protections and other parts of the regulatory framework.</p>	<p>AGL engages with New South Wales, Victorian, Queensland and South Australian energy regulatory bodies, and national bodies such as the Australian Energy Regulator, Australian Energy Market Operator and the Australian Energy Market Commission, including direct engagement and activities undertaken as part of industry associations.</p>
<p><b>Investment partners, joint ventures and suppliers</b> AGL has a range of investments in upstream electricity generation and gas production.</p> <p>AGL has business relationships with investment partners and suppliers.</p>	<p>The mechanisms for engagement with investment partners, joint ventures and suppliers vary, but can include meetings and correspondence, as well as more formal arrangements such as representation on the ActewAGL Board.</p>
<p><b>Energy industry</b> AGL plays an active role in leading industry support for renewable and greenhouse initiatives within the Australian energy industry.</p> <p>The business impacts of energy policy are a primary concern for the Australian energy industry.</p>	<p>During FY2012, AGL participated in the Business Council of Australia, the Private Generators Group, the Australian Financial Markets Association, the Energy Retailers Association of Australia, and the Clean Energy Council. AGL is also a member of the Energy Supply Association of Australia (esaa) and is a signatory to the esaa Sustainable Practice Framework.</p> <p>AGL's CEO, Michael Fraser, is the current chair of the Clean Energy Council, and AGL also has representation on the Board of the Energy Retailers Association of Australia.</p>

Stakeholder groups/main issues	Engagement mechanisms
<p><b>Customers</b></p> <p>To maintain and improve market share within Australia's highly competitive energy market, it is essential that AGL responds to customer feedback and constantly seeks to improve the level of customer service provided. AGL endeavours to work collaboratively with governments and the community sector to support customers who are experiencing difficulty accessing and affording essential services such as energy.</p>	<p>Customers are concerned with the rising cost of energy; improving energy efficiency in their homes and businesses; the quality of AGL's customer service; billing (for example, timeliness or accuracy); and the impact, perceived or real, of government policy, such as the carbon tax.</p> <p>The Customer Council meets on a quarterly basis and is briefed on a wide range of matters that affect AGL customers and the communities in which AGL operates. In 2012, the Customer Council Charter was revised to provide for an independent chair. By improving governance of this body, it is anticipated that stakeholder engagement in this context will be enhanced.</p> <p>In November 2009, AGL launched the Customer Connections program which provides opportunities for AGL to interact with small groups of customers in an open discussion about their experiences with AGL. In FY2012, AGL held one customer face to face session, and in FY2013 we plan to host quarterly sessions. The main objective of these sessions is to provide an opportunity for AGL employees from all areas and levels of the business to listen to customers, face to face (generally over a dinner hosted by AGL), in a non-transactional environment about their experience and expectations of AGL.</p> <p>The AGL Customer Charter outlines AGL's commitment and time frames for responding promptly to phone and written enquiries. AGL's Customer Advocacy team also deals directly with customer concerns.</p> <p>The account management of AGL's major commercial and industrial customers is approached on a customer-preferred basis; however mechanisms include face-to-face meetings, executive engagement, dedicated communications, general correspondence and carbon briefings.</p> <p>Other feedback mechanisms available to customers include an online information request facility.</p>
<p><b>Local communities</b></p> <p>The success of AGL is shaped and measured not only by financial outcomes, but also by the social and environmental impact that our actions have on the wider community. Effective engagement with the community on development projects is vital to AGL's long-term success. Only by engaging the community at every stage of the development process, with transparency, accountability and regular communication, is AGL able to deliver and operate projects with the respect and support of the community.</p>	<p>The key issues for local communities include the environmental, social and economic impacts of developments and infrastructure.</p> <p>As part of the development approval and construction processes for each major project, AGL consults with the local community and obtains feedback.</p> <p>Community Consultation Committees (CCCs) are in place for upstream gas projects, including the Camden Gas Project, the Hunter Gas Project, the Gloucester Gas Project and the Newcastle Gas Storage Facility. Each CCC is chaired by an independent chairperson and includes local council appointed representatives, local residents, local environment groups and AGL representatives. The CCCs form a key forum for community involvement.</p> <p>AGL has opened information centres in two areas with significant and relatively new operations. In South Australia, the Burra Information Centre is located near to the Hallett wind farms. In New South Wales, the Hunter Customer Service and Information Centre was opened in May 2011 to share information on coal seam gas operations in the area.</p> <p>The information centres provide a focal point for local community engagement concerning the construction and operation of infrastructure.</p> <p>AGL has established a number of websites for energy generation projects in development. The websites provide information on the projects and aim to address community concerns. An online contact form is located on each of the websites, together with the details of a community consultation hotline to allow AGL to respond to specific community enquiries. Refer to the Energy Generation page on the AGL website for further information (<a href="http://agl.com.au/about/EnergySources/Pages/energy-assets.aspx">agl.com.au/about/EnergySources/Pages/energy-assets.aspx</a>).</p> <p>AGL is increasingly using social media to communicate and engage with the community. The AGL Sustainability Blog is a forum for AGL to provide timely and accessible information to interested stakeholders on a broad range of issues, such as: AGL's customer focused initiatives, key external presentations by employees, and rapidly evolving energy policies. The AGL blog is updated frequently, with around 60 blog posts by AGL contributors in FY2012. The blog was visited by 7,662 unique visitors in FY2012.</p>
<p><b>Non-government organisations (NGOs)</b></p> <p>AGL engages with NGOs to understand the causes which they represent and to find constructive ways to work together to deliver mutually beneficial outcomes.</p>	<p>NGOs represent a range of community interests, including social welfare and environmental conservation.</p> <p>The AGL Climate Change Council includes representatives from AGL and NGOs such as WWF-Australia, Australian Conservation Foundation and the Climate Institute. The Climate Change Council meets quarterly to enable discussion and constructive dialogue on a range of issues relating to climate change, including government policy, emission reduction targets and program implementation.</p> <p>AGL is a member of the Climate Institute Climate Partners Network. As a Climate Partner, AGL is a constituent of a collective of leading businesses working together to promote climate change solutions and transition Australia to a low-carbon, clean energy economy.</p> <p>The AGL Customer Council includes representatives from the following NGOs and community groups: Consumer Action Law Centre, Farmers Federation of South Australia, Kildonan UnitingCare, Public Interest Advocacy Centre, Queensland Council of Social Services, St Vincent de Paul Society, and UnitingCare Wesley Adelaide.</p>



AGL's goal is to deliver superior growth in total shareholder returns and enhance the quality of earnings through sound risk management and diversification of earnings streams.

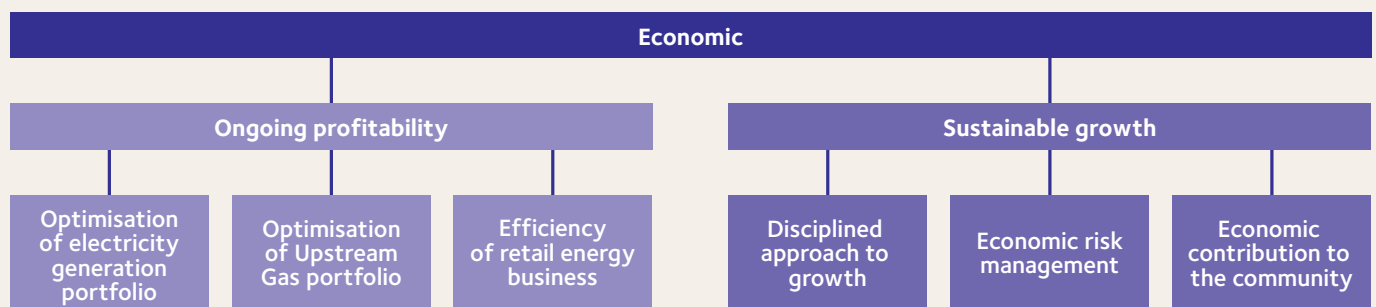
Australia is embarking upon a decade of transformational reform within electricity and gas markets. Policies such as the Renewable Energy Target will require approximately \$30 billion of new investment in renewable energy infrastructure by 2020. The introduction of carbon pricing is expected to create fundamental shifts in the way energy is produced and consumed. In this environment, achieving growth in total shareholder returns and diversification of earnings streams requires companies to develop portfolio flexibility and significant rigour in their investment process.

AGL has developed sophisticated portfolio flexibility around its core integrated business strategy to thrive in this transformational environment. Rigorous investment processes and appropriate hurdles for the rate of return on investments will continue to drive total shareholder returns.

The two key focus areas for the Economic chapter of this report are ongoing profitability and sustainable growth.

**Ongoing profitability:** In a capital constrained environment, shareholder returns as measured by underlying profit are increasingly important. Continued focus on the integrated business strategy and optimising returns from each business unit will position AGL to deliver growth in coming years.

**Sustainable growth:** The nature of the national energy market and the accompanying institutional arrangements means that it is crucial for AGL to have an investment grade credit rating. An investment grade credit rating also generally provides more favourable borrowing margins and offers shareholders additional confidence in the security and sustainability of earnings.



Performance Summary			
Vision	Target FY2012	Performance FY2012	Target FY2013
<b>Ongoing profitability</b>			
Industry leading earnings profile based on sustainable business practices.	Underlying profit: <b>\$470–500 million</b>	Underlying profit: <b>\$482 million</b>	✓ Underlying profit <sup>1</sup> : <b>\$590–640 million</b>
<b>Sustainable growth</b>			
Solid returns from AGL's existing and new business activities.	Credit rating: <b>BBB</b>	Credit rating: <b>BBB</b>	✓ Improvement in return on funds employed.

Note

1 Underlying earnings per share: FY2012 – 100 cents. FY2013 – the range is 107 to 116 cents.

## Introduction to ongoing profitability

In a capital constrained environment, shareholder returns as measured by underlying profit are increasingly important. Continued focus on its integrated business strategy will position AGL to deliver growth in coming years.

### Approach

AGL retails gas and electricity to residential, small business, commercial and industrial customers. The cost of supply fluctuates with movements in energy prices. AGL's integrated business strategy balances risk between upstream supply of energy and customer demand for energy.

Vertical integration provides AGL with a natural hedge against energy price movements, while providing access to multiple profit pools. Horizontal integration through operating across the National Electricity Market provides further diversification of earnings streams. Benefits flow through to customers in the form of lower energy costs and to shareholders in the form of dividends resulting from diversified sources of income and improved quality of earnings. This approach is known as the AGL integrated business strategy.

**Vision for ongoing profitability:** AGL's vision is to have an industry leading earnings profile based on sustainable business practices.

**Drivers:** Delivery of AGL's integrated business strategy has a direct influence on the underlying profit result and on other financial performance indicators. Optimisation of performance in the three business areas of Merchant Energy (electricity generation), Upstream Gas and Retail Energy is addressed on pages 17 to 19.

### Performance

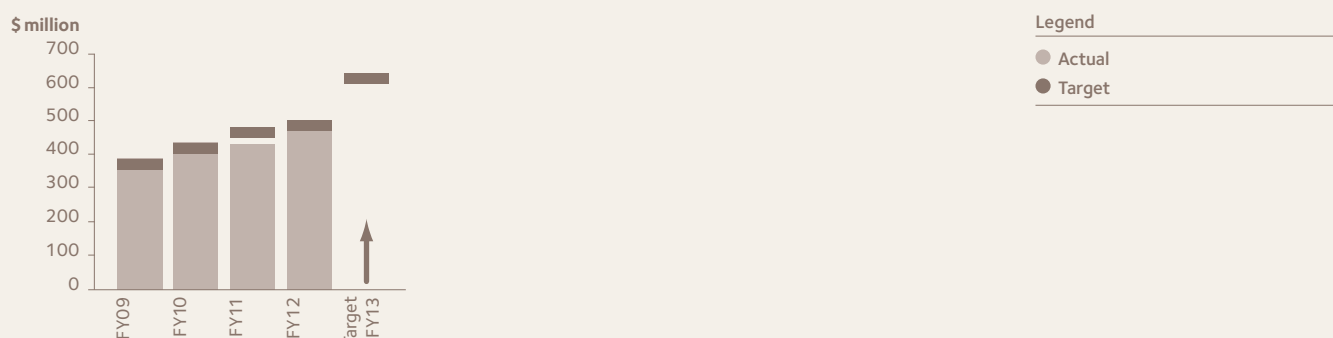
AGL delivered an Underlying Profit of \$482 million for FY2012, representing an 11.8% increase compared to the prior corresponding period. This result was within the guidance range of \$470–\$500 million issued to the market on 21 October 2011. The underlying profit was largely driven by strong Merchant and Retail results. Retail results were strong due to higher customer numbers and growth in gross margin per customer. Merchant results benefited from no repeat of FY2011 severe weather events combined with strong portfolio performance across electricity, gas and eco-markets.

On 23 October 2012, AGL announced a guidance range of \$590–640 million for FY2013.

AGL shareholders were paid dividends totalling 61 cents per share for the full financial year FY2012, an increase of one cent per share, or 1.7%, on the FY2011 dividend.

In FY2013, AGL will be targetting total shareholder return to provide a more comprehensive measure of ongoing profitability.

## Underlying Profit



## Economic

## Ongoing profitability

**Optimisation of electricity generation portfolio**

AGL has Australia's largest privately owned, operated and controlled portfolio of renewable generation assets and a pipeline of renewable development opportunities. AGL's integrated business strategy is consistent with a carbon constrained future.

The acquisition of Loy Yang A significantly increases AGL's generating capacity and output providing more scope to optimise the portfolio.

**Approach**

Over the next decade, it is estimated that the industry will need to spend approximately \$30 billion on new renewable generation assets in order to meet targets pursuant to the Commonwealth Renewable Energy Target. Based on current customer numbers, AGL would need to invest approximately \$5.1 billion if it were to meet its share of the mandated scheme. The current and future earning potential of AGL's electricity generation portfolio is influenced by many factors, including the operational efficiency of the assets and their availability and ability to start reliably when electricity prices are high.

For wind farms, the capacity factors achieved determine revenue, and AGL recognises the importance of accurately projecting capacity factors during the development stages of projects to ensure that actual performance meets the investment case.

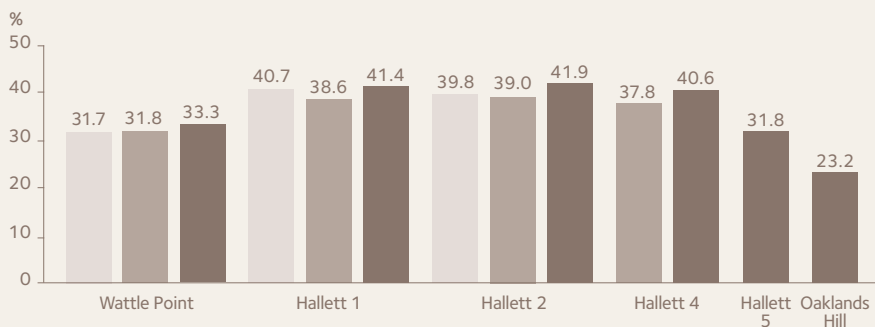
For all renewable generation assets, revenue is partly dependent on the value of Renewable Energy Certificates and partly on the wholesale National Electricity Market price. Higher returns are possible where individual investor costs are lower than the costs associated with the marginal project required to meet the Renewable Energy Target. Through early site selection, AGL has sourced some of the best sites for wind development in the country, allowing for potentially greater returns over the long term.

**Performance**

During FY2012, the operational performance of gas and hydro generation assets has been strong with dam levels at Eildon and Dartmouth increasing from 86% and 64% respectively, as at 1 July 2011, to 90% and 86% respectively as at 30 June 2012 due to significant rainfall in Victoria.

Commercial availability and start reliability of generation assets show strong performance well above the international benchmark, as highlighted in the chart below.

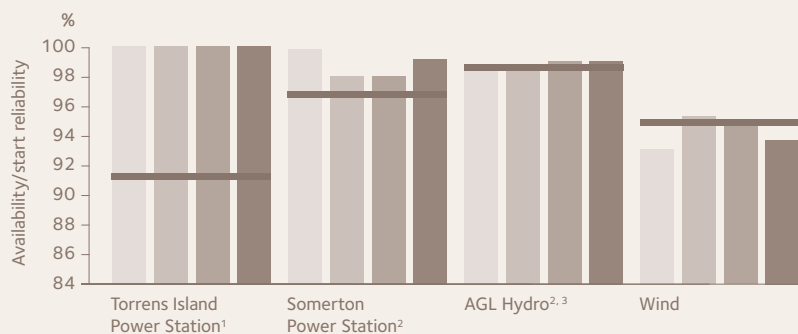
During FY2012, AGL completed the construction of 120 MW of new renewable energy. At 30 June 2012, AGL had 420 MW of new renewable generation under construction.

**Wind farm generation****Legend**

- Capacity factor FY10
- Capacity factor FY11
- Capacity factor FY12

**Note**

Hallett 5 achieved practical completion on 28 February 2012.  
Oaklands Hill achieved practical completion on 23 March 2012.  
Oaklands Hill Wind Farm – Overnight shutdown of nine turbines.

**Commercial availability/start reliability****Legend**

- FY09
- FY10
- FY11
- FY12
- International benchmark<sup>3</sup>

**Notes**

- 1 Commercial availability is used to measure Torrens Island performance, and represents the percentage of times the plant is available to operate when required.
- 2 Start reliability is used to measure the performance of Somerton and AGL Hydro. Start Reliability is the percentage of times the plant started successfully when asked to start.
- 3 North American Electric Reliability Council Five Year Average. Note that the benchmark for Hydro facilities has been adjusted for the difference in operating regime between the North American fleet and AGL's fleet which operate as peaking plant which increases the frequency of starts and stops.

# Ongoing profitability

## Optimisation of Upstream Gas portfolio

AGL has a target of acquiring 2,000 PJ of 2P gas reserves in the medium term to manage security of supply.

### Approach

AGL continues to be a significant purchaser of gas in the wholesale market. AGL's Upstream Gas group is focusing on building a diversified domestic gas portfolio to deliver duration and flexibility. AGL is targeting medium-term ownership of around 2,000 PJ of 2P upstream gas reserves for domestic supply<sup>1</sup>, but will continue to purchase gas from the wholesale market if this achieves superior economic outcomes.

### Performance

Over the past 12 months, AGL's gas reserves entitlement has been expanded by 77 PJ (3.7%) to 2,166 PJ at the 2P level, and by 342 PJ (9.4%) to 3,982 PJ at the 3P level. AGL's share of gas reserves in the Bowen Basin increased by 93 PJ during the year and the first independent review at Silver Springs since the acquisition of Mosaic Oil NL in October 2010, resulted in a downward revision of 2P reserves by 3 PJ.

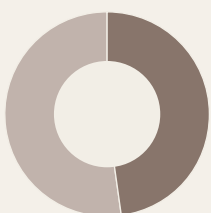
Over the next few years, AGL intends to focus on proving up additional reserves. The potential value creation is substantial, although the contribution to earnings will be limited until the reserves are developed and ready for production and delivery to market.

It is anticipated that with the investments and existing wholesale contracts in place, AGL is likely to be able to satisfy supply requirements for customers well beyond 2018. The combination of remaining wholesale contract volumes plus reserves demonstrates growth in the sustainability of the business.

### Note

1 Excludes ATP 1103.

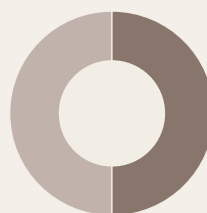
### Current gas portfolio



#### Legend

● Contract	48%
● Equity gas	52%
Gas portfolio	4,212 PJ

### Future gas portfolio



#### Legend

● Contract	50%
● Equity gas	50%

## Economic

## Ongoing profitability

### Efficiency of retail business

Optimisation of AGL's operating model to deliver a 'lowest-cost-to-serve' outcome is crucial, given that retail energy markets in which AGL competes are among the most competitive in the world.

#### Approach

AGL is focusing on the management and growth of margins, by leveraging its upstream strategy and achieving retail economies of scale through a service platform capable of supporting four to five million customers.

In FY2012 AGL undertook a system upgrade designed to provide a better experience for large business customers. This project involved the migration of large customers onto the SAP Billing System from four legacy systems; the building of a pricing engine to automate and streamline gas and electricity pricing; and the design of a meter data management system to manage the increased data flow that will be generated by smart meters. The system became operational in December 2011.

As noted in the FY2011 sustainability performance report, AGL online was launched for residential customers in April 2011 to enable customers to self serve and also to increase the ease of switching to AGL. As at 30 June 2012, over 300,000 customers have registered with AGL online, with more than 50% of those customers choosing paperless billing.

#### Performance

Relatively high levels of retail competitor activity persisted throughout FY2012. AGL's average national customer churn for FY2012 was 15.4%, compared to an average market churn of 20.3%<sup>1</sup>.

During the year, total customer accounts increased by 180,224 to approximately 3.47 million. Importantly, dual fuel customer accounts increased by 151,038 (10.3%) to 1.62 million.

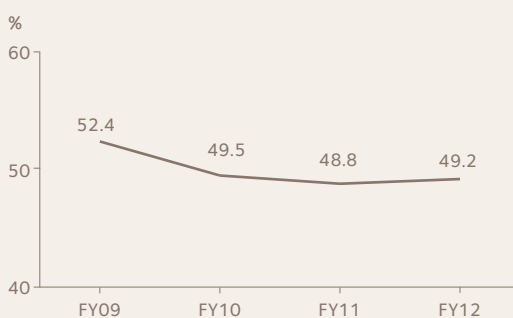
The business is now operating more efficiently, with the cost to serve per customer account falling 4% from \$66.01 to \$63.36. However, the level of operating costs as a proportion of gross margin increased from 48.8% in FY2011 to 49.2% in FY2012 as a result of New South Wales customer amortisation costs.

The ongoing business priorities for Retail Energy are to build AGL's retail capability, achieve operational excellence and continue to improve customer service. During FY2011, Retail Energy commenced a project to grow AGL's total New South Wales electricity customer base to between 800,000 and 900,000 customers over the next three years. A net 151,940 customers were added during FY2012. More than 200,000 new customers have been acquired since the project commenced.

#### Note

<sup>1</sup> Churn figures relate to mass market customers and do not include commercial and industrial customers.

#### Net OPEX to gross margin ratio



#### Retail markets by state and fuel type

State	Gas	Electricity	Total
NSW	711,185	619,920	1,331,105
Vic.	486,971	637,708	1,124,679
SA	117,271	458,822	576,093
Qld	74,607	367,482	442,089
<b>Total accounts (Net) 30 June 2012</b>	<b>1,390,034</b>	<b>2,083,932</b>	<b>3,473,966</b>
Percentage change from 30 June 2011	+1.5%	+8.3%	+5.5%

## Introduction to sustainable growth

An investment grade credit rating generally provides more favourable borrowing margins and offers shareholders additional confidence in the security and sustainability of earnings and dividends.

### Approach

The National Electricity Market is a gross pool, uniform, first-price, electricity market auction. The market design and accompanying institutional arrangements require large retailers to retain investment grade credit ratings to ensure smooth flow of trade and transactions in the wholesale market. Critically, an investment grade credit rating and improved capital efficiency substantially enhance AGL's ability to fund future growth.

**Vision for sustainable growth:** AGL's vision is to maintain a solid credit rating reflecting underlying growth potential.

**Drivers:** Applying a disciplined approach to growth (page 21) and an appropriate economic risk management framework (page 22) are crucial strategies in maintaining a BBB credit rating in the long term, and allowing sustainable growth. Sustainable growth through future investments in electricity generation and upstream gas is also contingent on delivering new projects that provide economic benefit to both AGL and the community.

## Performance

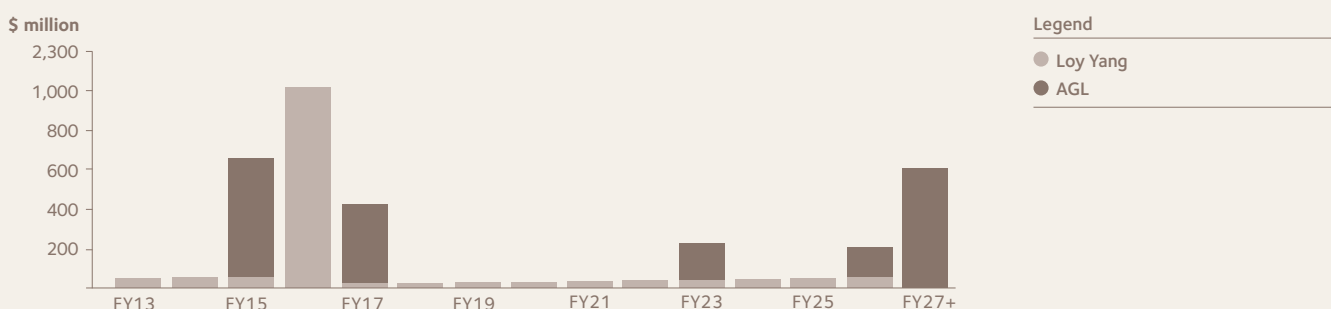
Standard & Poors (S&P) reaffirmed AGL's long-term credit rating of BBB/stable following the successful completion of a \$650 million subordinated note issue and \$900 million equity raising to fund the acquisition of the remaining 67.5% of the shares in, and loan notes issued by, Great Energy Alliance Corporation Pty Ltd (GEAC) which it did not already own. This allowed partial repayment of existing GEAC bank loans.

In July 2011, AGL entered into a \$1 billion syndicated loan facility, comprising of a \$600 million three year term loan tranche and a \$400 million five year revolving tranche. The funds were partially used to refinance \$886.7 million of debt, repaid in October 2011. As at 30 June 2012, \$750.0 million of the facility had been utilised.

Also in July 2011, AGL entered into a \$200 million loan facility with EKF, the Danish export credit agency. The funds will be used to partially fund AGL's 50% interest in the construction of the Macarthur Wind Farm. Amortising over 18 years, the loan matures in 2031. As at 30 June 2012, \$150 million of the facility had been utilised.

In FY2013, AGL will be targetting improvement in return on funds employed to provide a more comprehensive measure of sustainable growth.

## Debt maturity



## Economic

## Sustainable growth

**Disciplined approach to growth**

A disciplined approach to growth is critical to improving shareholder returns and maintaining sustainable growth.

**Approach**

AGL's rigorous investment processes, appropriate hurdle rates of return and focus on return on assets (EBIT to Funds Employed Adjusted) will contribute to maintaining a BBB long-term credit rating.

**Performance****EBIT to Funds Employed + Adjusted**

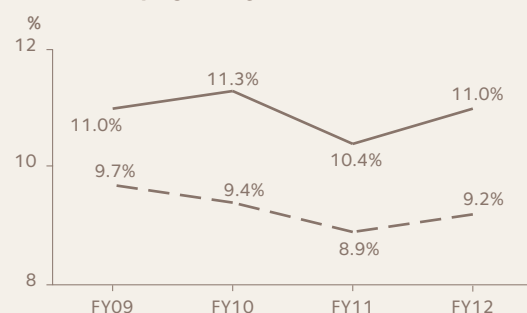
EBIT to Funds Employed Adjusted measures return on investment and the efficiency of AGL's assets. This metric is used to calculate Long Term Incentive Plan entitlements for the AGL executive team and nominated senior leaders to ensure a close alignment with shareholders' interests.

EBIT to Funds Employed Adjusted increased in FY2012 due to higher operating EBIT.

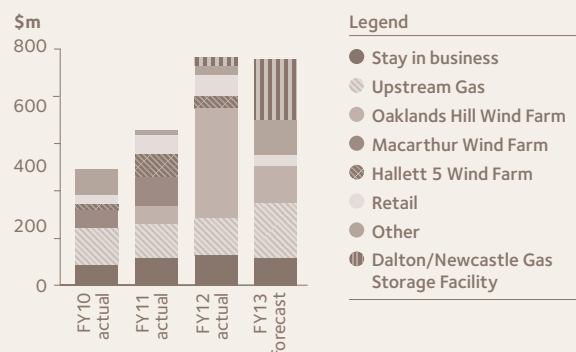
**Capital management and expenditure**

Focus on capital management and operating cash flow has enabled AGL to maintain a strong balance sheet. This leaves AGL well positioned to continue investing in its pipeline of electricity generation and upstream gas development projects. AGL has indicative capital commitments for FY2013 of almost \$800 million. AGL maintains flexibility to accelerate or defer capital expenditure on its projects depending on market conditions.

As discussed throughout this report, during FY2012 AGL acquired The Great Energy Alliance Corporation, owner of Loy Yang A power station. To fund this transaction and enable the refinancing of a significant portion of acquired debt, AGL successfully launched a \$650 million subordinated notes issuance and a \$900 million renounceable entitlement offer equity raising.

**EBIT to Funds Employed and EBIT to Funds Employed Adjusted****Legend**

- EBIT to Funds Employed Adjusted
- EBIT to Funds Employed

**Capital projects expenditure****Legend**

- Stay in business
- Upstream Gas
- Oaklands Hill Wind Farm
- Macarthur Wind Farm
- Hallett 5 Wind Farm
- Retail
- Other
- Dalton/Newcastle Gas Storage Facility

## Economic risk management

AGL effectively manages economic risks by integrating risk assessment into decision-making and management processes.

### Wholesale energy risks – approach and performance

A number of commercial optimisation activities are utilised in AGL's electricity, gas and environmental products portfolio management division, including:

- > reducing wholesale electricity costs through optimising load diversity between customer classes and regions;
- > optimising across the gas and electricity portfolios with arbitrage opportunities provided by gas generation assets;
- > accelerating or decelerating hedging programs based on AGL's view of future market prices; and
- > employing a variety of instruments including weather derivatives to balance risk and return.

All of these commercial activities have independent risk management oversight to maintain portfolio positions within defined limits. Risk management performance is monitored through a continuous review of hedging contracts, the physical portfolio position and the possible economic outcomes from these positions. A Risk Management Committee of senior business managers meets regularly to review these performance measures.

During FY2012, portfolio projected positions and portfolio projected economic risk measures remained within the required limits of the Wholesale Energy Risk Management Policy. The acquisition of Loy Yang will further manage wholesale energy risk through reducing the net short position within AGL's electricity portfolio.

### Price regulation risks – approach and performance

A key issue within the energy sector is the continued regulation of household and small business electricity and gas prices by state governments. In FY2009, Victoria became the first state in Australia to discontinue regulation of retail prices and since 2010 it has been one of the most competitive retail electricity markets in the world, as reported in the World Energy Retail Market Rankings Report by Vaasa ETT. Some other states have also committed to remove price regulation when competition is demonstrated to be effective. AGL continues to be concerned about the financial risks that exist for energy retailers where regulation of prices is continued, as there will always be a risk that the regulated rate will not reflect current energy costs.

AGL is an active participant in price review processes across the National Electricity Market. During FY2012, a key consideration in these reviews was the adjustment of regulated prices to account for the introduction of a carbon price under the *Clean Energy Act 2011* (Cth). In South Australia, the adjustment of electricity prices for carbon was based on the intensity of existing generation assets within the state, while in New South Wales and Queensland, the impact of the carbon price reflected the intensity of existing generation assets in the NEM. In Queensland, regulated prices for FY2013 were also significantly affected by the Queensland Competition Authority's change in approach to a market based methodology and new tariff structures, as well as a Government mandated price for the main residential tariff. In New South Wales, the review of wholesale energy costs was within expectations while South Australia regulated prices were limited by the cap under the Relative Price Movement methodology. In regulated gas pricing in New South Wales, a carbon component was approved by IPART and prices were adjusted according to the Voluntary Transitional Pricing Arrangement which expires in June 2013.

### Treasury risks – approach and performance

AGL's activities expose it to a variety of financial risks. These risks include market risk (including foreign exchange risk, commodity price risk and interest rate risk), credit risk and liquidity risk. AGL's overall risk management program focuses on the unpredictability of markets and seeks to manage the impact of these risks on AGL's financial performance, by utilising a range of derivative financial instruments to hedge risk exposures.

During FY2012, hedging thresholds for interest rate, foreign exchange and credit risk were consistent with the Treasury Policy except where approved by the board. AGL's stated policy is to further diversify its funding sources and lengthen the maturity profile. AGL maintained the appropriate liquidity buffer in accordance with Board approved levels throughout the year.

AGL has a BBB/stable credit rating assigned by Standard & Poors, and AGL manages its balance sheet, financial ratios and risks with the objective of retaining this rating.



# Financial Performance Summary

## Financial performance summary

Detailed financial information is available in AGL's 2012 Annual Report, which is available at [www.agl.com.au](http://www.agl.com.au)

Financial performance summary				
	FY09	FY10	FY11	FY12
Revenue	6.1b	6.6b	7.1b	7.5b
Operating earnings before interest and tax <sup>1</sup>	643.1m	652.1m	656.5m	730.4m
Net finance costs	94.0m	47.5m	37.4m	51.2m
Underlying net profit after tax <sup>1</sup>	378.8m	428.9m	431.1m	482.0m
Underlying basic earnings per share	82.3	92.5	91.4	100.0 cps <sup>4</sup>
Total annual dividend <sup>2</sup>	54.0 cps	59.0 cps	60.0 cps	61 cps
Total assets <sup>3</sup>	9.0b	8.7b	9.7b	14.7b
Shareholders' equity	5.8b	5.8b	6.3b	7.1b
Underlying operating cash flow (before interest and tax)	618.4m	674.1m	715.3m	750.7m
Total capital expenditure	552.1m	389.7m	522.6m	767.7m
Gearing net debt/(net debt + equity)	7.8%	6.7%	6.9%	26.1%
EBIT to average funds employed return	9.7%	9.4%	8.9%	9.2%
EBIT to average funds employed adjusted return	11.0%	11.3%	10.4%	11.6%

### Notes

- 1 Excluding significant items and fair value movements of financial instruments.
- 2 Dividends in FY2009, the interim dividend for FY2010, and the final dividend in FY2011 were fully franked. The final dividend for FY2010 and the interim dividend in FY2011 were unfranked. FY2012 dividends were fully franked.
- 3 Includes derivative financial instrument contracts at fair value.
- 4 The comparative earnings per share for 2009, 2010 and 2011 have been restated for the bonus element of the one-for-six share rights issue completed in June 2012.

## Distribution of revenue

	FY09	FY10	FY11	FY12
Revenue	6,051.1m	6,610.7m	7,072.5m	7,455.6m
Other income <sup>1</sup>	1,869.2m	6.4m	0	2.9m
Total revenue	7,920.3m	6,617.1m	7,072.5m	7,458.5m
Cost of goods, services, materials and other external costs	-5,633.2m	-5,895.6m	-5,911.7m	-6,333.4m
Wages, salaries and benefits to employees	-283.5m	-318.1m	-330.6m	-356.4m
Dividends to shareholders	-236.1m	-255.9m	-268.4m	-278.2m
Net interest paid on borrowings	-81.5m	-35.8m	-25.5m	-38.5m
Income tax (expense)/income	-390.6m	-21.5m	-234.9m	-48.0m
Movement in retained earnings	1,295.4m	90.2m	301.4m	-310.4m

### Note

- 1 Includes profit on sale of non-core assets.

## AGL's goal is to become a world-class customer-focused energy company.

AGL operates in an extremely competitive environment and this means that we must continuously strive to provide value to our customers through exceptional customer service and innovation.

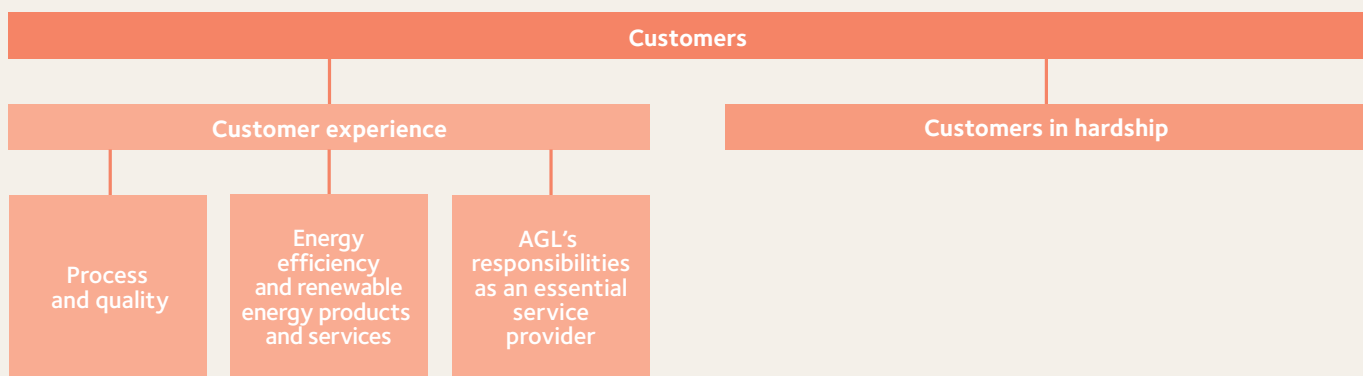
Throughout FY2012, AGL has implemented a number of programs and initiatives designed to improve customer experience, including:

- > a complete re-engineering of our Customer Service Centre processes and operational framework, resulting in improvement across a range of measures, such as first call resolution and average speed of answer;
- > the launch of the AGL Smarter Living Centre and AGL Smarter Living Store, aimed at helping our customers to become more energy efficient;
- > greater on-line sales and service capabilities, as well as increased interaction with our customers via social media;
- > a new partnership with Fly Buys, which rewards AGL customers for everyday spending on energy in their home; and
- > gaining a better understanding of customer hardship from a demographic perspective, allowing us to tailor solutions more effectively in future.

The two key focus areas for the Customer chapter of this report are customer experience and customers in hardship.

**Customer experience:** There are a range of contributing factors that affect customer experience. This section of the report outlines how AGL measures customer experience, and provides performance data on some critical aspects of service delivery over the past 12 months (page 26). This chapter also addresses energy efficiency services and renewable energy products that AGL offers (page 28), and the way in which AGL manages its responsibilities as an essential service provider (page 29).

**Customers in hardship:** AGL recognises the importance of assisting vulnerable customers to reach a sustainable energy consumption position. AGL addresses this issue from a number of perspectives including information provision, community support and direct assistance through the Staying Connected program. In FY2012, the average level of debt for customers on the Staying Connected program was the primary indicator used to assess our level of success with respect to early intervention and assisting customers to return to a sustainable energy consumption position.



### Performance Summary

Vision	Target FY2012	Performance FY2012	Target FY2013
<b>Customer experience</b>			
Top ranking energy company for customer satisfaction.	Customer satisfaction score <sup>1</sup> : <b>&gt; major competitors</b>	Customer satisfaction score: <b>AGL<sup>2</sup> = 6.68</b>	✓ To have a higher annual mean customer satisfaction score than our competitors.
<b>Customers in hardship</b>			
Recognised industry leader in customer hardship policy.	Average energy debt of Staying Connected customers: <b>5% decrease</b>	Average energy debt of Staying Connected customers: <b>7.6% increase</b>	✗ 5% reduction in the ratio of average energy debt of Staying Connected customers to average NEM household electricity bill.

#### Notes

- 1 As determined by a quarterly survey prepared by an independent third party provider.
- 2 Powerdirect and ActewAGL are not included under the AGL brand for the customer satisfaction score.

## Introduction to customer experience

AGL measures customer satisfaction to monitor whether initiatives are successful in improving the customer experience.

### Approach

The AGL Customer Charter clearly outlines for both customers and employees what customers can expect from AGL. The Charter contains a set of customer promises, and defines the standards to which AGL can be held to account.

The Charter is available on the AGL website at [agl.com.au/charter](http://agl.com.au/charter).

Within the Customer Charter there are four key promises:

- > *We will deliver quality service*
- > *We will provide value for money*
- > *We will understand our customers' needs and deliver to them*
- > *We will be there with the answers for our customers.*

AGL strives to deliver on these promises, meeting the needs of customers by providing a consistent level of service.

AGL uses a range of measures to assess whether the Customer Charter promises are being met, including speaking directly with customers. For example, 'after call' surveys are carried out within AGL customer service centres and this year we also began outbound calls to customers to discuss their experiences with AGL. From the information acquired, robust root cause analysis is undertaken to understand the drivers of customer dissatisfaction, as well as where processes can be changed to improve the customer experience.

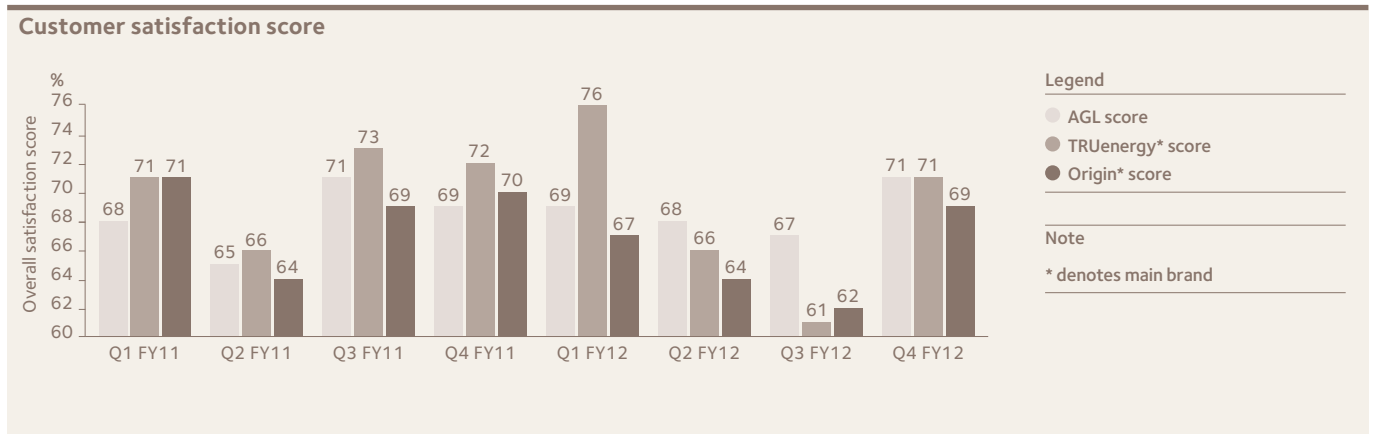
**Vision for customer experience:** AGL's vision is to be the top ranking energy company for customer satisfaction, by delivering on a range of initiatives and continuous improvement programs throughout the Retail Energy business.

## Performance

AGL measures customer satisfaction each quarter to gauge the degree to which customers are serviced to the standard they expect, and whether initiatives to improve customer service have been successful. On a quarterly basis a sample of customers across all energy retailers are asked: "Overall, how satisfied are you with the services provided by your current energy retailer on a scale of 0 to 10, where 0 is not at all satisfied, 5 is neutral and 10 is extremely satisfied?". The mean (average) of respondents' scores is determined for each retailer.

During FY2012, AGL's customer satisfaction score averaged 6.68 (up from 6.65 in FY2011), with a score of 6.88 in the fourth quarter of FY2012 (up from 6.67 in the corresponding quarter of FY2011). AGL's customer satisfaction score has been higher than our major competitors, namely TRUenergy and Origin (main brands, not inclusive of their New South Wales retailer acquisitions) since quarter two 2012. Positive service experiences are the key reasons for customer satisfaction with AGL. Particularly in the final quarter of the year, a number of AGL customers cited product reliability and pricing discounts and rewards as reasons for their satisfaction.

Customer dissatisfaction is mainly influenced by the cost of energy, with fewer AGL customers nominating poor service or billing experiences as reasons for dissatisfaction.



## Process and quality

AGL measures success in customer experience using a range of performance indicators and by participating in external benchmarking programs.

### Customer Charter Metrics

AGL's Customer Charter Metrics were established and monitored to enable AGL to measure the customer experience. The Customer Charter Metrics are published externally on AGL's website and enable customers to hold AGL to account.

A number of the Customer Charter Metrics are supported by 'service level commitments', which enable AGL to measure and track achievement of certain Customer Charter promises.

The Customer Charter Metrics, published quarterly in the Customer Experience Dashboard on AGL's intranet, are:

#### We will respond to you

AGL's FY2012 target for customer service centres was for 75% of calls to be answered by customer service representatives within 30 seconds during normal business hours. This target was met overall for FY2012, with the performance levels achieved each quarter being 62.28%, 83.05%, 80.22% and 78.40%.

#### We will always try to resolve your enquiry first time

AGL aims to have customer service representatives resolve a customer's enquiry on the first call. For FY2012, the percentage of enquiries resolved during the first call was 81.32% (FY2012 average). AGL commenced measurement of first call resolution in the second half of FY2011, with an average score of 80.82% during that period.

#### We can help you move

AGL aims to help a customer move premises by raising the customer's move request with the distributor within 24 hours of application. Energy regulations in some jurisdictions stipulate the timeframe within which the retailer must raise a customer's request

for connection with the relevant distributor, ranging from the next business day (Victoria) and within two hours (New South Wales electricity).

In FY2012, AGL set a target to raise 95% of move requests within 24 hours, and this level of service was consistently met.

#### We will connect your energy supply

AGL promises to work with a customer's distributor in order to determine the availability of supply. On average, new connections take up to 15 days depending on access and availability of supply.

In FY2012, the average number of business days taken to connect energy supply was 12.

#### We will bill you on time

In FY2012, AGL met its target to bill 99% of customers on time. This effectively means that customers were billed every three months (and every two months for gas customers in Victoria), pursuant to regulatory requirements.

AGL recognises that bill smoothing can assist customers to better manage their energy costs. As at the end of FY2012, more than 120,000 customers were on the bill smoothing program, up from more than 98,000 customers as at the end of FY2011.

### Net Promoter Score (NPS)

AGL's NPS is measured quarterly via an external survey that asks customers across all energy retailers: "on a scale of 0-10, how likely is it that you would recommend Retailer X to a friend or colleague?" The NPS is calculated by subtracting the percentage of 0s to 6s from the percentage of 9s and 10s.

AGL's average NPS for FY2012 was -37.8, a decline of 1.2 points compared to the FY2011 average of -36.6. During FY2012, AGL's NPS peaked at -30.5, which was also the peak score during FY2011.

### Customer Charter commitments

Customer Charter	Our promise	FY2011: Average	FY2011: Year end	FY2012: Average	FY2012: Year end
We will respond to you	We will answer your calls promptly during normal business hours	65.87% of calls answered within 30 seconds	63.38% of calls answered within 30 seconds	75.99% of calls answered within 30 seconds	78.40% of calls answered within 30 seconds
	We will always try to resolve your enquiry first time	79.97% of calls resolved during first call	80.06% of calls resolved during first call	81.32% of calls resolved during first call	82.00% of calls resolved during first call
We can help you move	Let us know at least three business days before you move and we can arrange supply of energy to the property to which you are moving	95.48% customers connected with energy when three business days notice of move provided	96.29% customers connected with energy when three business days notice of move provided	95.93% customers connected with energy when three business days notice of move provided	95.86% customers connected with energy when three business days notice of move provided
We will connect your energy supply	On average, new connections take 15 business days subject to access and availability of supply	Average new connection took 12.5 business days <sup>1</sup>	Average new connection took 12 business days <sup>1</sup>	Average new connection took 12 business days <sup>1</sup>	Average new connection took 12 business days <sup>1</sup>
We will bill you on time	If you're a residential or small business customer, we will send a bill at least every three months (every two months for Victoria gas)	Bills issued to 99.76% of customers on time	Bills issued to 99.80% of customers on time	Bills issued to 99.75% of customers on time	Bills issued to 99.82% of customers on time
We will help those having difficulty paying	If you're a residential customer you also have the option of bill smoothing	98,294 customers on bill smoothing program	98,294 customers on bill smoothing program	108,314 customers on bill smoothing program	120,216 customers on bill smoothing program

#### Note

1 The results exclude South Australian electricity customers, where an appointment system is used which is outside of AGL's control.

## Customers

## Customer experience

**Customer Services Benchmarking Australia (CSBA)**

AGL benchmarks the customer service provided in all three customer service centres via an external program. CSBA conducts mystery shopping calls to customer service centres, and provides quarterly reports ranking AGL's performance against other energy and utility companies.

In the fourth quarter of FY2012, AGL was ranked fifth out of the energy companies surveyed, compared to eleventh in the corresponding quarter of FY2011. The improvement in AGL's ranking can largely be attributed to a decrease in the average speed to answer (meaning that customers did not have long to wait before being connected with a Customer Service Representative).

**Ombudsman complaints**

AGL has two key indicators for Ombudsman complaints against which we measure our improvement in this area. The two indicators are total complaints per 10,000 customers and our market share of complaints as a comparison against our customer share in the market. We also track absolute numbers of complaints to understand movements in particular jurisdictions.

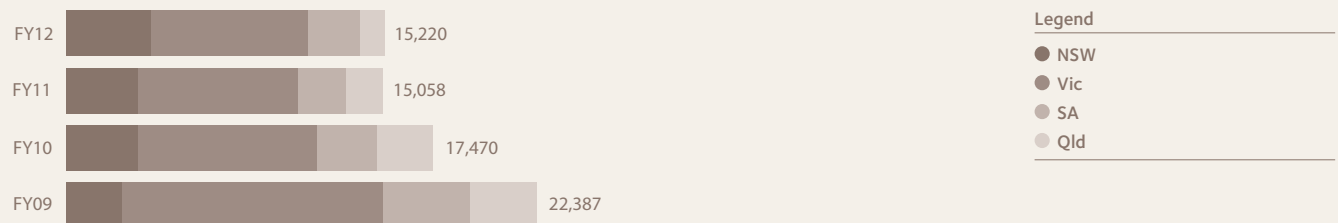
In the quarter ending 30 June 2012, AGL received 39.8 complaints per 10,000 customers, an 11.5% reduction compared to the

corresponding quarter of FY2011. This is a pleasing result which has resulted from a more consistent approach to business process improvement based on robust complaint root cause analysis.

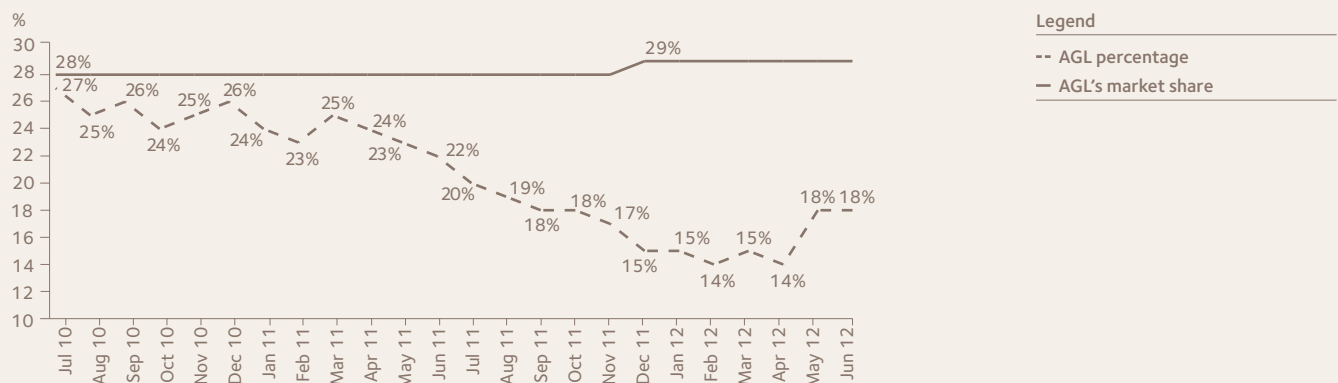
Measuring Ombudsman complaints in terms of the company's market share of complaints against overall customer market share, provides an understanding of how AGL compares to other retailers. At the end of FY2012, AGL's national market share of Ombudsman complaints was 18% compared to 23% at the end of FY2011.

In regards to absolute volumes, AGL received a total of 15,220 Ombudsman complaints during FY2012. This represents an overall increase in total Ombudsman complaints of 2.5% compared to FY2011, with the largest changes experienced in New South Wales [17.8%] and South Australia [13.3%.]

Ombudsman complaints provide AGL with a reference to areas of the business that require improvement. Root cause analysis of Ombudsman complaints is undertaken and fed back into the business in order to rectify issues where possible. In FY2012, the majority of Ombudsman complaints related to high bills, disconnection for debt, solar PV, identification and management of payment difficulties and estimated reads (largely due to meter access issues at the customer's premises).

**Ombudsman complaints<sup>1,2,3</sup>****Notes**

- 1 Reported figures represent complaints to the various state Ombudsman Offices that are provided to AGL for resolution. Enquiries, complaints referred to other agencies or instances where the customer has been advised by the Ombudsman to contact AGL directly are not included.
- 2 All ActewAGL complaints are excluded.
- 3 Data from FY2010-FY2012 includes Ombudsman complaints related to PowerDirect.

**Ombudsman complaints (percentage of market share)<sup>1,2,3</sup>****Notes**

- 1 Reported figures represent complaints to the various state Ombudsman Offices that are provided to AGL for resolution. Enquiries, complaints referred to other agencies or instances where the customer has been advised by the Ombudsman to contact AGL directly are not included.
- 2 All ActewAGL complaints are excluded.
- 3 Data from FY2010 to FY2012 includes Ombudsman complaints related to PowerDirect.

## Energy efficiency and renewable energy products and services

Helping our customers save energy is core to AGL's retail strategy. In an environment of rising prices and a carbon constrained future, reducing energy consumption is of increasing importance to both our residential and our business customers. AGL is committed to assisting our customers to 'live smarter', by providing simple, affordable solutions to help them reduce energy use, manage their household budgets and enhance comfort levels within their homes.

In October 2011, AGL launched two market-leading websites, AGL Smarter Living Centre and AGL Smarter Living Store, in response to customers asking for solutions to improve energy efficiency in their homes and businesses. Now combined into one website, AGL SmarterLiving brings together all of AGL's energy efficiency products, services and packages in one place to provide consumers with simple, personalised advice and practical solutions to reduce energy use.

### Energy efficiency

AGL met all of its regulated targets under the Victorian, South Australian and New South Wales state-based energy efficiency schemes, with the exception of AGL Sales Pty Ltd which fell short of its priority group electricity licence target in South Australia<sup>1</sup>.

In the 2011 calendar year, 708,746 tCO<sub>2</sub>e have been abated through AGL's energy efficiency activities for residential households<sup>2</sup>. This abatement was created from installations such as energy saving light bulbs, low-flow showerheads and energy efficient hot water systems.

In the same period, 2,586 household audits and assessments have been completed for concession card holders to meet the targets specified under the South Australian energy efficiency scheme.

AGL has also taken a leadership role in improving the energy efficiency performance of business customers. AGL has a team of more than 150 people across South Australia, Victoria, New South Wales, Queensland and the Australian Capital Territory who identify, evaluate and implement energy efficiency and embedded generation projects for business customers.

AGL is currently working towards offering an energy reporting service that will assist our customers to better understand and manage their energy use, while providing practical solutions to manage their energy consumption.

### Green products

The Government-administered GreenPower™ program enables retailers to provide customers with electricity that is sourced from new renewable energy that is in addition to mandatory purchases required under the 20% Renewable Energy Target. Accredited GreenPower can only be produced from approved renewable generation facilities built after January 1997. AGL has been a participant in GreenPower since official accreditation commenced in 2001. AGL offers a suite of GreenPower products for residential customers, allowing them to choose a product that meets their needs.

During the 12 months to 31 December 2011, AGL's sale of GreenPower accredited electricity was 287,360 MWh, an increase of 52.5% compared to the prior corresponding period. This increase is largely due to the acquisition of a number of business customers, many of which are government entities.

### Rooftop solar photovoltaic (PV)

Following AGL's purchase of Eko Energy at the beginning of the financial year, the business was rebranded to AGL Solar and experienced significant growth through its integration with AGL. Major accomplishments for AGL Solar included the implementation of improved IT systems and the rapid expansion of our sales and installation capabilities. During FY2012, AGL installed 3,588 rooftop solar PV systems at Australian homes and businesses, equating to 8,378 kW of installed capacity.

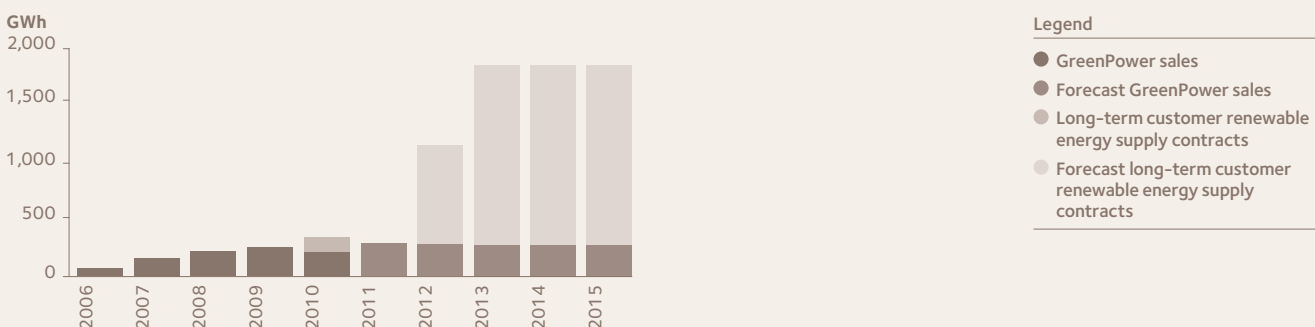
AGL Solar demonstrates our commitment to distributed generation and energy services, which are essential components of providing the energy solutions of tomorrow for our customers and communities.

AGL economists have had research published assessing the social equity of mandated feed-in tariffs for solar PV in Australia. The articles, published in the journal *Economic Analysis and Policy*, established that the effective burden of funding mandated feed-in tariffs was highest on low-income energy consumers. Accordingly, AGL supported winding back feed-in tariffs to improve the social equity of this renewable energy policy. The research is available on AGL's Sustainability blog, [aglblog.com.au](http://aglblog.com.au).

### Notes

- 1 Note that, pursuant to the relevant regulations, the shortfall amount has been added to AGL's tCO<sub>2</sub>e reduction target for the 2012 compliance year.
- 2 For the state-based energy efficiency schemes, the regulatory compliance year is managed on a calendar year basis, hence the reason figures in this section are reported per calendar year, rather than per financial year.

## AGL GreenPower and renewable energy supply contracts



### AGL's responsibilities as an essential service provider

The essential nature of the services and products provided by AGL requires a responsible approach to disconnection; sales and marketing; and accessibility of information, including the availability of concessions.

#### Wrongful disconnections

In all of the jurisdictions in which AGL retails energy, there are regulations governing the processes which must be followed when disconnecting a customer for non-payment of an account. In Victoria, energy legislation prohibits disconnection of residential customers other than in accordance with regulations, and retailers are required to pay customers \$250 per day for every day they are off supply after having been wrongfully disconnected. In Queensland, in the event of a wrongful disconnection, AGL pays a one-off GSL (Guaranteed Service Level) payment of \$130 to Energex (the distributor) and the customer is redirected to claim that amount from Energex. In New South Wales and South Australia, there are no payment amounts stipulated in the regulations – accordingly, we compensate customers on a fair and reasonable basis for any loss of food, costs of alternative accommodation and/or damage to electrical appliances, based on receipts produced.

In FY2012, out of a total of 596 complaints concerning a potential wrongful disconnection in either Victoria or Queensland, after investigation, AGL made wrongful disconnection payments to 170 customers in Victoria, an increase of 18% compared to 144 customers in FY2011. Seventy-six customers were found to have been wrongfully disconnected in Queensland.

Analysis has identified the following major causes of wrongful disconnections:

- > customer showed signs of hardship or payment difficulty but it appears that they were not given the full assistance required by the regulations prior to disconnection
- > notifications for disconnection were not sent within the required regulatory time frames, often due to the fact that AGL had not updated the correct mailing and/or service address details for the customer.

In November 2011, AGL formally commenced data collection on the number of wrongful disconnections in South Australia and New South Wales. A weekly and monthly report is uploaded onto the AGL intranet so that the business is aware of performance levels and can focus on areas requiring improvement. In NSW, between November 2011 to June 2012, we disconnected 26 customers in error. During the same period in South Australia, we disconnected 21 customers in error.

AGL remains committed to ensuring it fulfils all regulatory obligations, undertaking disconnection of a customer's supply as an absolute last resort. However, it is clear that there is room for improvement and we are continuing to investigate areas of non-compliance. One area which we aim to improve is the quality of customer contact notes taken by Customer Service Centre representatives during their conversations with customers. In some instances, notes do not provide adequate detail as to what assistance the customer was offered in response to their payment difficulty, and in the absence of such documentation, it is difficult to prove that the appropriate assistance was offered.

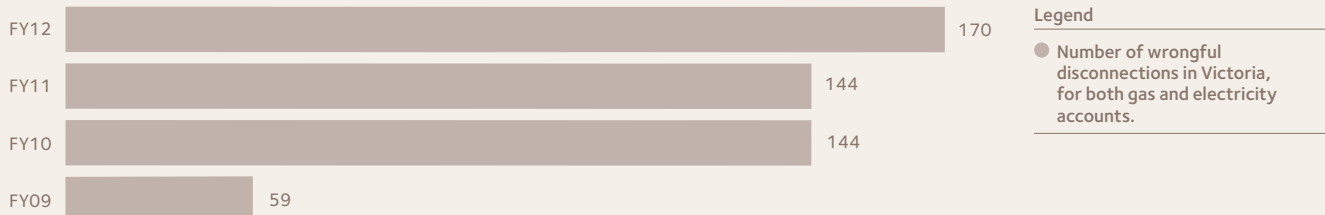
#### Responsible sales and marketing

In FY2012, AGL has continued to build on the work that was commenced in recent years aimed at improving performance in field sales.

A key advancement in FY2012 has been the introduction of the industry Code of Conduct (the Code) for face-to-face marketing of energy contracts, which is independently managed by Energy Assured Limited (EAL). As communicated in the FY2011 sustainability report, the Code was developed by the Energy Retailers' Association of Australia (of which AGL is a member) in response to community concerns about door to door sales. The aim of the Code is to introduce a base level of standardised training to door to door sales agents and to help increase consumer confidence in door to doors sales as a marketing channel. The Code sits alongside a suite of other regulatory and legislative measures which cover door to door marketing activities.

In preparation for its formal launch of EAL in January 2012, all field sales agents were required to undergo refresher training to ensure that they met with all requirements of the EAL and broader regulatory and legislative requirements.

#### Wrongful disconnections (Victoria only)



Since the formal launch of EAL, AGL has maintained strict compliance with the Code, and we are using it as a means by which to improve the performance of our sales representatives and to improve customer experience. In addition to the management of sale representatives pursuant to the Code, we have also conducted reviews of adherence by our sales partners to the Code. It is expected that our sales partners operating under the Code will be formally audited by EAL towards the end of 2012.

This year, we have also maintained quarterly road shows with the AGL field sales team in all states in which we market. These road shows are focused on providing field sales agents with the skills and knowledge to sell AGL products in a compliant and customer friendly manner. The road shows are also used to launch and update new field sales tools and processes. The road shows are conducted by senior staff from our external field sales providers, as well as senior AGL staff. All field sales staff are required to attend.

In addition to attending the quarterly road shows, all field sales staff undergo continual monitoring and training conducted by their team managers or one of the dedicated state based trainers. In FY2012, AGL invested in an additional six full-time training resources through our field sales partners to ensure that field sales teams have continual access to training support.

To ensure overall continual improvement of our sales channels, including field sales, AGL has initiated an end to end review of our existing sales quality framework. The revised framework will be progressively rolled out during FY2013.

The above initiatives are all focused on continual improvement of our sales processes to ensure that they meet community expectations and regulatory and legislative requirements, and are also conducted in a manner which exhibits AGL's underlying values as a business. However, while AGL continually strives to improve the performance of all sales channels, we recognise that correct processes are not always followed by field sales agents. At the time of writing, the ACCC had commenced litigation against AGL in respect of potential breaches of the Australian Consumer Law by two AGL field sales agents.

Overall, complaints from the door-knocking channel have decreased in FY2012, with 0.19 complaints per 100 sales compared to 1.12 complaints per 100 sales in FY2011. While we remain committed to reducing complaint numbers even further, the fact that we have seen a reduction in the past 12 months would appear to indicate that initiatives, such as the introduction of EAL, have had a positive impact.

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### Accessibility

AGL continues to provide a free translator service so that customers are able to access important information on AGL's services and products, regardless of whether English is their primary language. In addition, AGL has energy efficiency brochures available for customers in 10 different languages.

As part of the Customer Service Centre review mentioned earlier in this chapter, in FY2012 we have increased the ability of our Customer Service Representatives to refer customers experiencing payment difficulty to Staying Connected, AGL's customer hardship program. Throughout the coming year, we will review these procedures to ensure that the referral process is working to its maximum potential.



## Customer hardship

As an essential service provider, AGL recognises the importance of providing assistance to vulnerable customers to help them manage their energy use and meet their payments.

### Approach

AGL supports the implementation of a 'shared responsibility model' with respect to customers experiencing payment difficulty, recognising the need for customers, industry, government, and the community sector to work together in order to achieve the best possible outcomes for vulnerable customers. With the cost of energy continuing to increase, AGL recognises that as a major retailer, it must contribute to ongoing debate on the most effective ways to assist customers experiencing difficulty managing their energy costs.

Understanding that it has a direct role to play in assisting hardship customers, AGL takes a multifaceted approach to the management of these customers, by:

- > creating an environment in which customers feel confident in discussing their payment difficulties. We recognise that if we do our best to engage effectively with customers before they find themselves in acute payment difficulty, then we may better be able to assist them to manage their energy debt;
- > piloting a variety of approaches to gain a better understanding of what forms of payment assistance work most effectively for different customer groups. For example, it may be that some customers require minimal extra support and do not need the full range of measures offered in the Staying Connected program;
- > facilitating customer access to appropriate government and community support mechanisms; and
- > aligning AGL's *Energy for Life* program to specifically address the issues associated with energy related debt (for further information see page 44).

AGL's hardship program, Staying Connected, has been assisting low-income and vulnerable customers since 2003. Staying Connected is designed to provide assistance to customers experiencing financial hardship to the extent that they are unable to make payments as required under AGL's standard credit guidelines. While participating in the program, customers are protected from disconnection, and are offered a range of services, including payment plans and home energy audits.

During FY2012, the Staying Connected program has maintained its focus on embedding and refining the case management process introduced just prior to the start of the year.

Additionally, as noted above, Staying Connected, in conjunction with AGL's credit team and Contact Centres, has piloted a range of engagement approaches in order to provide greater flexibility for customers who may be at risk of financial hardship. The aim of these pilots was to engage with customers earlier in the billing cycle, before they required the full suite of assistance offered through Staying Connected. We are currently working through the outcomes of these pilots, which will subsequently inform further improvements in the way in which AGL approaches customer hardship.

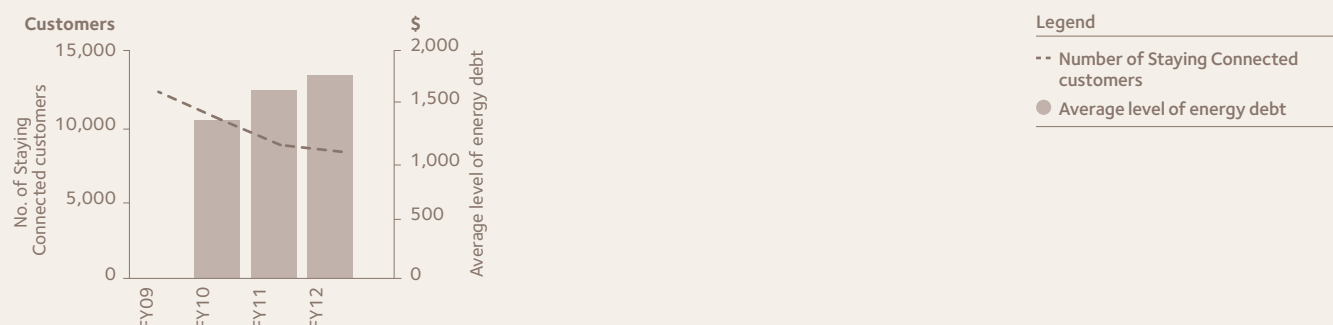
**Vision for customers in hardship:** AGL's vision is to be a recognised industry leader in customer hardship policy.

### Performance

At the end of the financial year, 8,213 customers were participating in the Staying Connected program. This represents a decrease of 5% compared to the 8,652 customers participating in the previous year.

The average level of energy debt among Staying Connected participants at the end of FY2012 was \$1,784, up 7.6% from \$1,658 in FY2011. Unfortunately, this means that we did not meet our target of a 5% reduction of the average debt. We have not been able to identify one single issue which has contributed to this outcome, however, it is likely that the fact that the cost of energy has increased in the last 12 months has subsequently resulted in an increase in energy debt for many customers already struggling to manage their bills. Accordingly, the target for FY2013 has been adjusted to reflect real (rather than nominal) changes in the level of customer debt.

Average level of debt of customers on Staying Connected



Average level of debt per customer is only one of a number of measures we use to assess the success of the Staying Connected program. There are inherent limitations in this particular measure, given that energy costs are increasing year on year and because of external factors in the broader economy, which impact on the ability of customers to manage their costs.

Other indicators AGL uses to track the success of Staying Connected include the time it takes for a customer to return to a sustainable energy consumption position, and the number of times each participant has joined the Staying Connected program.

Of the Staying Connected participants as at 30 June 2012, 22% have been on the program for two or more years. Approximately 17% of Staying Connected participants were customers returning to the program.

Over the course of the year AGL worked with a consortium of community and consumer organisations to address issues associated with significant long-term customer hardship. AGL was able to provide approximately \$200,000 of assistance to 89 customers, all of whom were identified and referred by financial counsellors.

AGL continues to offer Staying Connected participants energy efficiency advice and home energy consumption audits, which assist customers to return to sustainable energy consumption levels as well as a sustainable debt position. In Victoria and South Australia, AGL partnered with Kildonan UnitingCare and Mission Australia and during FY2012, 826 energy audits were completed by these two community sector partners on behalf of AGL. In Queensland and New South Wales, AGL worked in partnership with the government funded home energy efficiency programs in those states, referring eligible customers for assistance.

AGL is currently restructuring its assistance to financial counselling organisations in order to achieve a nationally consistent model which is designed to integrate with Federal Government assistance programs.

### AGL Advocacy work

During FY2012, AGL maintained an open dialogue with customers and consumer representatives in order to foster mutual understanding and awareness of customer issues.

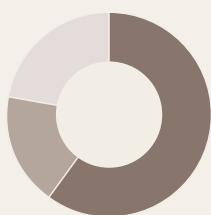
The AGL Customer Council continued to meet quarterly, discussing AGL's performance and policy positions. During the year, the Reverend Harry Herbert, who co-chaired the AGL Customer Council since its inception in 1998, stepped down. Reverend Herbert advocated strongly for the rights of customers during his time as Chair, and provided great insight on how best to assist vulnerable customers. In November 2011, we were pleased to welcome Dr Lynne Chester as the new Chair of the AGL Customer Council. Dr Chester, a senior lecturer in the Department of Political Economy at the University of Sydney, has extensive knowledge of the energy industry, focussing on issues such as regulation, energy markets and energy poverty. In FY2013, the AGL Customer Council will focus on refining the shared responsibility model, ensuring all stakeholders recognise the importance of their role, as well as discussing how best to assist vulnerable customers to engage with confidence in the energy market, enabling them to meet their energy needs at the lowest possible cost.

AGL recognises the need to work with community and consumer organisations on a range of issues that impact consumers. Typically, the resolution of many of these issues involves ongoing discussion and negotiation with consumers, industry, government and the community sector.

During FY2012, AGL:

- > worked with industry and the community sector to address high numbers of disconnections in the Queensland market;
- > was the only retailer present at the South Australian Council of Social Service Affordability Summit in October 2011;
- > worked with a number of community organisations to assist in the effective implementation of the federally funded Home Energy Saver Scheme (HESS); and
- > collaborated with the community sector to apply for funding through the Low Income Energy Efficiency Program (LIEPP) for a range of new and ambitious programs to assist our most vulnerable customers (at the time of writing, the outcomes of these funding applications were still pending).

### Number of years on Staying Connected program



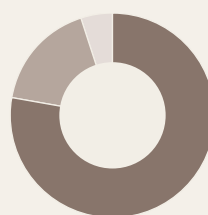
#### Legend

● 1 year or less	60%
● 1 to 2 years	18%
● 2 or more years	22%

#### Note

Data is based on Staying Connected population, as at 30 June 2012.

### Staying Connected return customers



#### Legend

● First time Staying Connected customer	78%
● Return Staying Connected customer (second time)	17%
● Multiple Staying Connected customer	5%

#### Note

Data is based on Staying Connected population, as at 30 June 2012.

AGL's goal is to connect our business and employees with the community in ways which make a genuine positive contribution, engage our people and strengthen our business.

The success of AGL is measured not only by its financial performance, but also by the social and environmental impacts that company decisions and actions have on the wider community.

AGL has a responsibility to work with the community to develop mutually beneficial energy projects, and to sensitively manage the associated environmental, social and financial outcomes. Only by engaging communities during the entire project life-cycle is AGL able to achieve a 'social licence to operate', delivering projects while addressing community concerns.

The variable nature of AGL's development projects necessitates a tailored approach to community engagement based on the needs of individual communities and projects. AGL aims to establish constructive working relationships and multidirectional communication channels with community stakeholders including customers, government groups, asset owners, local community groups, indigenous groups, businesses, residents and local media. AGL also supports local communities through sponsorships, providing financial and in-kind support for issues important to those communities.

To build on engagement with the local communities in which AGL owns and/or operates assets, AGL's Corporate Citizenship program *Energy for Life* seeks to make a genuine contribution to the wider community. This integrated program provides a platform to link

employees with community and charity organisations important to AGL and our people.

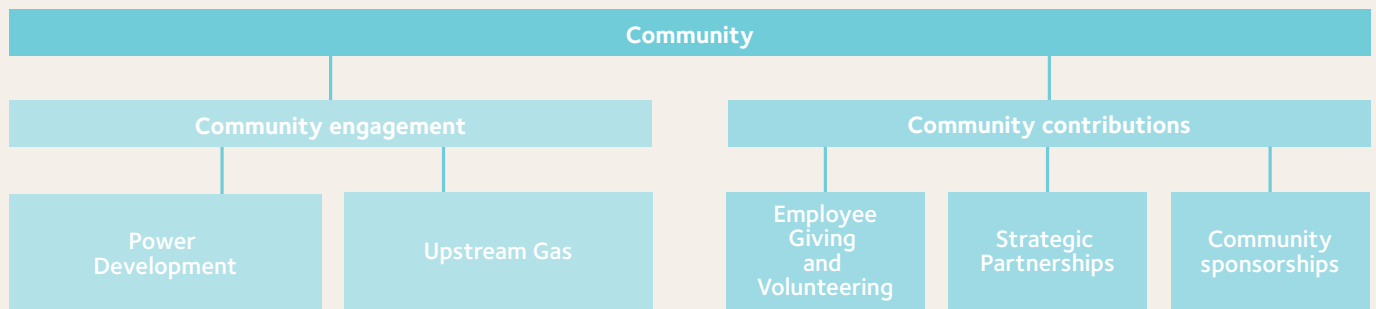
*Energy for Life* has three core planks:

- > Employee Giving;
- > Employee Volunteering; and
- > Strategic Partnerships

The two key focus areas for the Community chapter of this report are community engagement and community contribution.

**Community engagement:** Community consultation, as measured by the proportion of successfully implemented community engagement plans, is vital to the success of new developments, the expansion of existing infrastructure and ongoing operations.

**Community contribution:** AGL has an opportunity to positively contribute to local communities and community causes that reflect the interests of AGL employees. Community contributions are the measured investments made to local communities through direct investment, sponsorships, Employee Giving and Volunteering and our Strategic Partnerships. The success of AGL's community contribution program is measured by the level of community investment with a particular focus on investments which employees contribute to, namely Employee Volunteering and Employee Giving.



Performance Summary			
Vision	Target FY2012	Performance FY2012	Target FY2013
<b>Community engagement</b>			
<b>Best practice local community engagement.</b>	Implementation of community engagement plans: <b>100%</b>	Implementation of community engagement plans <sup>1</sup> : <b>100%</b>	✓ 100% delivery of promises made to the community.
<b>Community contribution</b>			
<b>Social Return on Investment (SROI) measured and at targets levels.</b>	Employee Volunteering participation rate: <b>25%</b>	Employee Volunteering participation rate: <b>27%</b>	✓ Establish framework for SROI analysis with outputs of <i>Energy for Life</i> strategic partnerships measured annually.

**Note**

1 Active plans in place for operated, committed projects with activities on the ground.

## Introduction to community engagement

AGL has long recognised that to achieve or maintain a social licence to operate it must engage constructively with communities and all our stakeholders.

### Approach

AGL's capability to deliver new renewable energy and upstream gas projects is dependent on AGL adopting a sustainable project delivery model whereby new projects deliver economic benefit to both AGL and the community. To this end, AGL understands that genuine engagement with stakeholders is essential for achieving sustainable development. As AGL continues to develop new power generation and coal seam gas production projects, we have an increasing physical footprint and presence in the community. Communities adjacent to AGL projects, and the broader community generally, understandably have views and questions about how AGL's activities may interact with their way of life, their livelihoods and their local environment.

AGL is committed to listening and providing comprehensive and accurate information to communities, as well as facilitating adequate opportunities for communities to give feedback and raise concerns. Community engagement mechanisms employed by AGL include community meetings, community consultative committees, newsletters and factsheets, websites/micro-sites, stalls and displays at community events, dedicated information centres, site visits, briefings and workshops.

AGL also supports regional communities, creates employment opportunities, provides facilities and enhances existing services, including health, education and welfare, through contributions to local, regional and national economies. To complement engagement with the regional communities in which AGL owns and/or operates assets, AGL's *Energy for Life* program seeks to make a genuine contribution to the wider community (page 44).

**Vision for community engagement:** AGL's vision is to achieve best practice local community engagement.

**Drivers:** Listening, understanding and responding to community concerns, effective communication and constructive community engagement across all Power Development projects (page 35) and Upstream Gas projects (page 38) are essential for maintaining AGL's social licence to operate.

### Performance

Community engagement plans are in place for all coal seam gas projects and all power development projects. The community engagement plans outline community engagement activities, define AGL's community engagement goals, and allow the tracking and measurement of success.

In early 2012, AGL committed additional resources to meet the growing needs of community engagement. A number of new community relations positions have been created in Upstream Gas and Power Development.

Dedicated resources in the form of Community Relations Managers have been allocated to the Hunter, Gloucester and Camden Upstream Gas projects. This additional resourcing will further improve AGL's approach to community engagement.

Three new community consultative committees have also been established – two for power development projects and one for the Newcastle Gas Storage Facility Project in New South Wales.

The Safety, Sustainability and Corporate Responsibility Committee, a sub-committee of the AGL Board, which meets quarterly, visits AGL's operational and development sites to understand in greater detail the views of the local communities.

## Power Development

AGL is a long-term owner/operator of electricity generation assets, including wind farms, hydro and other power stations, and is committed to being a valued member of the local community.

### Approach

The community is a key stakeholder in AGL's power development projects. AGL manages power development projects in accordance with a project management framework that addresses community consultation as an important part of the project communications plan.

AGL's approach to community engagement is based on the needs of the community and the nature of individual projects. AGL's Power Development group has established a Community Charter that publicly sets the objectives for community engagement for construction projects:

- > **Principle 1:** We will deliver on our promises to the community – with actions, not words.
- > **Principle 2:** We will endeavour to respond to all queries within five working days.
- > **Principle 3:** We may not be able to solve all perceived problems put to us, but we will investigate, aim to find a solution and communicate the outcomes.
- > **Principle 4:** We are committed to being a valuable member of the community by using our resources to build a stronger local community.
- > **Principle 5:** We will leave a positive legacy in the community that extends beyond the life of the project.

### Performance

AGL's Power Development construction projects are managed in accordance with a Project Management Framework which requires community engagement plans to be developed as part of the communication plan for each project.

Power Development also undertakes the necessary community consultation on projects during development.

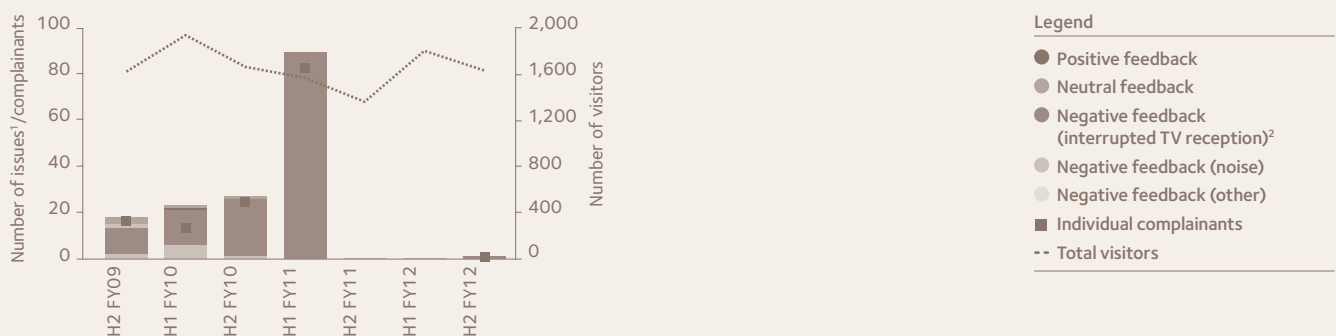
In a public statement 'Wind Turbines and Health' the National Health and Medical Research Council<sup>1</sup>, Australia's peak health body, concluded that there is no published scientific evidence to link wind turbines with adverse health effects. The Victorian Department of Health has also examined the available scientific literature on wind farms and supports the NHMRC, concluding that there are no direct health effects that can be attributed to modern wind turbines<sup>2</sup>.

AGL will continue to monitor research in this area.

### Notes

- 1 [nhmrc.gov.au/publications/synopses/new0048.htm](http://nhmrc.gov.au/publications/synopses/new0048.htm)
- 2 [health.vic.gov.au/environment/communitywindfarms.htm](http://health.vic.gov.au/environment/communitywindfarms.htm)

### Community feedback at Burra Information Centre



### Notes

- 1 Issues raised and noted in the community feedback register at Burra Information Centre are categorised and counted. However if an individual contacts AGL more than once on a specific issue (e.g. TV reception) they are listed as one complainant only and attributed to the half-year period where the issue was first raised.
- 2 Timeline for the development of the satellite television project within the Hallett/Burra area;
  - > 5 January 2010: Digital television Australia wide media release.
  - > 20 January 2010: First satellite television installation complete.
  - > 30 June 2011: 186 orders were placed as part of the satellite television project. Of those orders, 170 installations were completed by the end of FY2011.
  - > 30 June 2012: 28 satellite services were installed in FY2012 as part of the satellite TV project.

### Hallett wind farms

With five wind farm projects situated in South Australia, and four of these located in the Hallett region, AGL has a significant presence in the local community. During FY2012, the AGL Hallett 1 Wind Farm, the AGL Hallett 2 Wind Farm and the AGL Hallett 4 Wind Farm were operational. In FY2011, the AGL Hallett 4 Wind Farm achieved practical completion and AGL commenced operation of the wind farm on 25 May 2011. Of the remaining two wind farms, the AGL Hallett 5 Wind Farm completed construction in 2012 and is now operational, while Hallett 5 was sold to Eurus Energy in May 2012 and AGL will continue to operate and maintain the facility.

The AGL Information Centre in Burra is recognised within the local community as the place to obtain information and provide feedback on the Hallett wind farm projects. Visitor numbers and feedback from the community received through this centre as well as other channels is measured. During FY2012:

- > over 3,481 people visited the Centre, compared to 2,900 in FY2011
- > no complaints were raised by members of the community in FY2012 at the Centre.

With the knowledge that television reception in the region is already marginal, and that the wind farms may cause further deterioration to some residents living near the wind farms, in 2010, AGL commenced a community project to provide satellite services to any resident within a predefined area encompassing the wind farms. In FY2012, AGL funded installation of 37 satellite dishes and receivers to residents within the predefined area. As noted above, no complaints were registered with the Centre in FY2012; this is a decrease on FY2011, when a total of 89 complaints were registered, all in the first half of the year. This decrease in community complaints coincides with AGL's roll out of satellite television to Hallett residents within the region of the wind farms.

During FY2012, representatives from AGL and two partner companies involved in the construction of AGL's wind farm projects in the Hallett region participated in an Aboriginal Cultural Awareness Workshop, facilitated by two members of the Ngadjuri people. The workshop sought to move the relationship with the local aboriginal group beyond contracts and legislation. The workshop greatly improved the participants' awareness and understanding of the history of the indigenous people, both locally and in other parts of the country. By facilitating greater respect and appreciation for the local aboriginal culture, the Ngadjuri are hopeful that people who work and live in the area will be more willing to report archaeological sites that they may come across, thus preserving their cultural history.

With the support of the Mt Bryan community, AGL created a wind energy information display in the heart of Mt Bryan township. The display includes a 42 metre long wind turbine blade and six information boards. Prior to installation, the blade was painted by members of the local community.

### Hallett Wind Farm Community Fund

Through the AGL Hallett Wind Farm Community Fund, AGL is providing annual grants to local community based projects and groups. AGL will provide \$15,000 for each wind farm (following development approval) each year for the next 25 years, indexed at CPI.

Since the inception of the AGL Hallett Wind Farm Community Fund more than \$237,200 has been donated to community organisations.

In FY2012, \$64,600 was donated to a range of activities including Sponsorship of Burra Community School to support an art excursion, a new reception desk for the local art gallery and new cutlery for the Booborowie Hall.

### AGL Hallett Wind Farm Community Funds



#### Notes

Amounts are rounded down to the nearest \$100.

Total committed funding for FY2010 was \$46,400. At the time of publishing the 2010 Sustainability Report an additional \$2,500 was earmarked for a particular community group bringing the reported total to \$48,900. This additional \$2,500 was subsequently withdrawn.

Amounts relate to the committed allocated funds for each calendar year.

### Macarthur Wind Farm

In November 2010, AGL and joint venture partner Meridian Energy commenced construction of the 420 MW Macarthur Wind Farm in western Victoria. The project is the largest wind farm in the Southern Hemisphere and when completed will consist of 140 wind turbines that will generate enough renewable energy to power the equivalent of 220,000 average Victorian households per year.

As part of the project AGL and Meridian have committed to contributing combined funding of \$100,000 to a Macarthur Wind Farm Community Fund. AGL is working with Moyne Shire to ensure that these contributions are allocated to the maximum benefit of the local community. During FY2012 over \$84,800 worth of investment was made in the local community by the Macarthur Community Fund including the installation of blinds at Macarthur Primary School, a shed fit out and station upgrade at Hawkesdale Community Emergency Response Team, a blood centrifuge unit for Macarthur Community Health and a fire fighting unit for the Rural Fire Brigade.

The project has invested a significant amount of money in local road upgrades as part of its community commitments and in support of its construction activities. An additional \$200,000 has been provided to Moyne Shire and \$300,000 provided to VicRoads to assist with other road upgrades in the local area.

The Macarthur project is expected to create long-term employment opportunities and associated benefits for local businesses and services in the area. AGL estimates that up to 900 construction and manufacturing jobs will be created in the region. This includes up to 300 on-site jobs during the peak construction period, and up to 30 full-time ongoing operations and maintenance positions to service the wind farm during its 25 year design life.

### Oaklands Hill Wind Farm

In August 2010, AGL commenced construction of the 63 MW Oaklands Hill Wind Farm in western Victoria.

Located in the vicinity of the Grampians National Park, Oaklands Hill Wind Farm has been designed with turbines spaced between seven to 12 diameters apart (or approximately 600 to 1000 metres apart) – ensuring the wind farm blends into the context of the landscape.

As part of Oaklands Hill Wind Farm, AGL initially established a community fund valued at \$50,000 to support local projects. AGL funding was allocated through consultation, ranking and agreement with local recognised community associations. AGL increased the fund to \$120,000 after reviewing project submissions.

During FY2012, AGL committed funding to a number of community projects including a splint set for the local Ambulance, a walking track, resurfacing netball courts, tables for Glenthompson War Memorial Hall, lighting for the Lions Park and a skate park upgrade.

In addition to the community fund, each year for the next 25 years (commencing in 2010) AGL has committed \$10,000 towards improving Broлга habitat, with the first four years of funding having been paid up front to establish the project. A further annual payment of \$10,000 is also committed towards salinity management in the region.

Up to 160 construction crew were on-site over the construction period, which substantially boosted the local economy with increased spending on local goods and services. Construction achieved practical completion in late February 2012, with five permanent operational staff remaining based on site, with maintenance support crews visiting the site regularly.

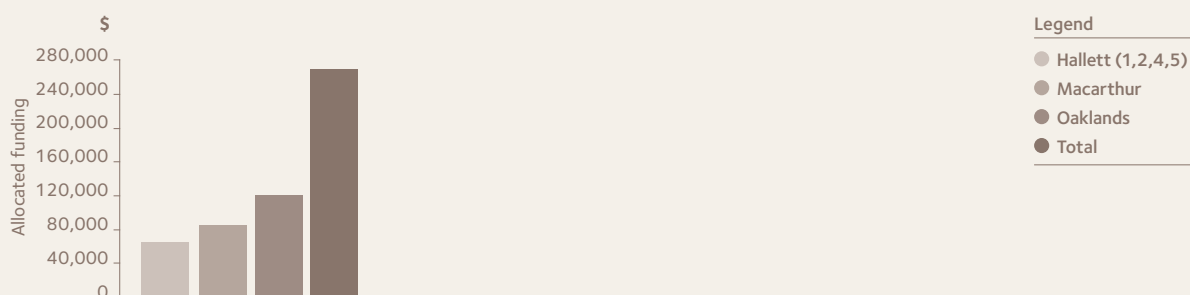
### Other projects

During FY2012, community consultation has also been undertaken as part of the development approval process for the following Power Development projects:

- > Tarrone Power Station, Victoria (gas fired);
- > Coopers Gap Wind Farm, Queensland;
- > Silverton Wind Farm, New South Wales;
- > Dalton Power Station, New South Wales (gas fired);
- > The Bluff Wind Farm, South Australia; and
- > Solar Flagships, New South Wales.

Information on each project is available on the AGL website at [agl.com.au](http://agl.com.au)

### AGL Wind Farm Community Funds



### Notes

Amounts are rounded down to the nearest \$100.  
Amounts relate to actual expenditure in financial year 2012.

## Upstream Gas

AGL is committed to ensuring that coal seam gas (CSG) exploration and production activities minimise impacts on the environment and the community, and can comfortably co-exist with other land uses, including residential, viticulture and tourism. AGL recognises the importance of co-operative engagement with community stakeholders.

### Approach

To engage the community and effectively respond to community concerns, AGL consults with landowners, neighbours, residents, local councils and relevant government agencies during all stages of the project life-cycle.

Currently, only AGL's Camden Gas Project in New South Wales is in commercial production stage. AGL also operates coal seam gas exploration projects in Gloucester, Galilee and the Hunter Valley. AGL also operates conventional oil and gas assets in Silver Springs, and has two gas storage projects: Stage 1 of the Silver Springs Underground Gas Storage Project commenced operation in late 2011, and the Newcastle Gas Storage Facility is in development. In the Cooper Basin, AGL is the operator for a large oil exploration permit, and holds geothermal permits in Victoria, New South Wales and Queensland.

AGL acknowledges the significant levels of concern in rural and regional communities surrounding the Australian CSG industry, particularly in relation to issues such as land access and water resources. Over the past 12 months, we understand there has been widespread unease in some local communities with regard to the industry. This was demonstrated to AGL in Gloucester when protest action by members of the community, concerned about potential water impacts, delayed the commencement of drilling.

AGL believes that greater levels of community engagement can assist to address many of these concerns. By committing additional, locally based community relations resources AGL is working towards achieving greater levels of community engagement.

AGL seeks to provide local communities with a high level of information in relation to proposed and operating projects. We enable interested community members to access relevant information through regular community meetings, drop-in sessions, field days, site visits, newsletters, newspaper advertising, email updates, Community Consultative Committees (CCCs), and one-on-one conversations with stakeholders. Dedicated sections on AGL's website provide project information including meeting minutes and other relevant documentation, including Environmental Assessment reports.

The Camden, Gloucester and Hunter projects have active CCCs, each chaired by an independent chairperson. The three CCCs include local council appointed representatives, local residents, local environment groups and AGL representatives. The CCCs provide a forum for community involvement, where members can ask questions and make suggestions which AGL responds to and adopts where appropriate. The CCCs participate in consultation processes for proposed exploration and development activities and also oversee the environmental performance of those activities once in operation. In 2012, AGL established a CCC at the Newcastle Gas Storage Facility, to provide an additional opportunity for dialogue between the project and the community.

AGL has established dedicated groundwater and surface water monitoring networks across its Gloucester, Hunter and Galilee exploration areas, and in the vicinity of its proposed natural gas storage facility at Tomago. Refer to page 87 for further information.

### Performance

Community engagement plans are in place and active for each of AGL's Upstream Gas projects. The community engagement plans outline the key stakeholder groups that AGL will engage with during project development and operation, and the mechanisms for engagement.

During FY2012, AGL actively participated in the New South Wales Government's review of strategic regional land use planning and made a public submission to the New South Wales Government's Upper House inquiry. In the submission AGL advocated for greater community consultation requirements, stronger water management regulation and a code of conduct to set minimum industry standards for projects in New South Wales.

### Camden Gas Project

The Camden Gas Project in the Macarthur region of New South Wales consists of low-pressure underground gas gathering lines and the Rosalind Park Gas Plant. As at the end of FY2012 there were 143 wells, of which 89 were operational and producing natural gas.

In FY2012 the Camden gas project team began a series of "open days". These open days provided members of the public, government, the media and other key stakeholders opportunities to meet the project team and tour the Camden Gas project.

Community consultation regarding the proposed northern expansion included briefings for state and local government agencies, landowners and stakeholders through a program of meetings and workshops.

The Camden CCC met on four occasions during FY2012. A community representative for the proposed northern expansion of the Camden Gas Project attended the CCC during the year.

Topics discussed by the Camden CCC during FY2012 included:

- > the proposed northern expansion of the project;
- > environmental monitoring and incident reporting;
- > changes to the New South Wales planning legislation;
- > groundwater monitoring; and
- > compensation for landowners

Other key community engagement initiatives during FY2012 included:

- > participation in the Camden and Campbelltown regional shows;
- > joining with Barragal Landcare in a regeneration activity on EMAI land;
- > community Partnership with Mater Dei School in Camden; and
- > community Partnership with Youth Off the Streets and the Koch Centre for Youth in Macquarie Fields.



## Community

### Hunter Gas Project

In May 2011, AGL opened the Hunter Customer Service and Information Centre in Singleton. The Information Centre provides the community with access to information on the Hunter Gas Project and AGL's other operations. The centre forms part of AGL's response to community concerns surrounding AGL's activity in the Hunter region. Since the opening of the Community Information Centre in Singleton, the centre has hosted a number of community information sessions and drop in sessions, informing the community about AGL's latest activities in the Hunter region. During FY2012, 317 people visited the Information Centre.

The Hunter CCC has replaced the Bulga CCC, and Mrs Margaret Macdonald-Hill, was appointed by the NSW Minister for Mineral Resources as the independent chairperson of the newly formed Hunter CCC. The Hunter CCC membership includes representatives from local government, business, agriculture, water, industry, tourism, Local Aboriginal Land Council, New South Wales Government, land owners, AGL and local interest groups. This broad membership also represents a wide geographical area. Each CCC member has been appointed to their position by the New South Wales Minister for Resources and Energy. Participation in the group is voluntary.

Meetings of the Hunter CCC commenced in July 2011, and six meetings were held during FY2012. These meetings were held at various locations across the project area, and included a trip by Hunter CCC members to visit AGL's Camden Gas Project and the Rosalind Park Gas Plant.

Topics discussed by the Hunter CCC during FY2012 included:

- > groundwater monitoring;
- > changes to the New South Wales Planning system and developments in Strategic Regional Land Use Planning;
- > property values; and
- > the Hunter Gas Project work plan

We recognise the natural beauty of the region and will ensure our activities are carried out responsibly and can co-exist with other land uses. For example, AGL is demonstrating the ability for CSG exploration to coexist with agriculture in one of Australia's premier wine making regions through its purchase and ongoing operation of the Spring Mountain vineyard at Broke. During FY2012, AGL purchased two additional properties near Broke. On the Yellow Rock property, AGL will continue demonstrating the ability for CSG to co-exist with multiple land uses, as has been demonstrated at AGL's Windermere property at Bulga, since 2009.

In addition to this, and to underscore our commitment to the wine heritage of the Hunter Valley community, AGL invited Hunter Valley winemakers to compete for the (independently judged) 2012 AGL Hunter Wine Excellence Scholarship. The produced wines showcased the fruit sourced from AGL's vineyards in the Hunter Valley and the talent of the winemakers. The winemaker who won the competition will travel to Europe and the United States of America to enrich their knowledge of wine making.

During the year, AGL conducted a number of community information sessions throughout the Hunter region. The topics discussed included groundwater, aboriginal heritage, seismic surveys and exploration drilling.

### Gloucester Gas Project

The Gloucester CCC has been one of the most active CCC groups within AGL project areas. The committee has actively participated in the development of the community engagement plan, CSG focus groups, water forums and the appointment of an Independent Peer Reviewer to review AGL's groundwater study. AGL recognises that Gloucester has a proud agricultural heritage, and in consultation with the CCC, we are seeking to minimize the impact of our activities on farming land.

The Gloucester CCC met on seven occasions in FY2012. This included two extraordinary meetings to discuss the scope and appointment of the Independent Peer Reviewer.

Topics discussed by the Gloucester CCC during FY2012 included:

- > groundwater;
- > work program activities;
- > seismic surveys;
- > hydraulic fracturing and drilling; and
- > the terms of reference and structure of the Gloucester CCC

AGL's commitment to community engagement included the establishment of a regular column in the local Gloucester paper and the hosting of seven community information sessions, as well as the offer of small group briefings to local council and community organisations.

AGL continued facilitating a youth development program at Gloucester during FY2012. The aim of the program is to mentor young people using community volunteers. During the reporting period AGL worked with the mentors and young people to assist them take up local volunteering projects.

During FY2012, AGL also provided support to the local branch of the Westpac Rescue Helicopter support group and provided sponsorship for a number of community events, including the Gloucester Show, Gloucester High School and Gloucester Junior Cattle Show.

AGL recognises there is a shortage of medical practitioners in regional communities and that communities find it difficult to attract new medical practitioners to rural areas. In early 2012, AGL therefore committed to facilitating access to medical practitioners for the community by agreeing to pay the accommodation costs for a local doctor for a 12 month period.

In late FY2011, the Environmental Defender's Office, representing the Barrington Gloucester Stroud Preservation Alliance, lodged an appeal against the project approval for AGL's Gloucester Gas Project. The approval for the Gloucester project was granted by the NSW Independent Planning Assessment Commission in March 2011. As at the end of FY2012, the case is awaiting judgement in the Land and Environment Court.

In December 2011, in response to community concerns, AGL committed to delaying planned drilling activities until the findings of the Land and Environment court had been handed down and until an independent peer review of the groundwater studies to date had been conducted and the results made publicly available.

The independent peer review has been conducted, the results have been made publicly available and community information sessions have been conducted to provide additional information to the community.

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### Galilee Gas Project

AGL is the operator of the Galilee Gas Project, a 50/50 CSG exploration joint venture with Galilee Energy Ltd. During FY2012, AGL communicated regularly with key individual and community stakeholders, including local and state governments, and landowners.

AGL and Galilee Energy Ltd are both members of the Galilee Basin Operators' Forum (GBOF), a group of CSG operators in the Galilee Basin. In November 2010, the GBOF engaged leading independent environmental consultancy RPS to research and prepare a baseline water assessment report for development of a regional Galilee Basin aquifer model. A final draft of the report has been prepared and on completion, will be made available on the GBOF website and a copy provided to the Queensland Water Commission. This report will further inform a regional understanding of aquifers and bore water supplies at this early stage of petroleum exploration in the Galilee Basin.

During FY2012, AGL and joint venture partner Galilee Energy Ltd contributed \$18,000 towards the purchase of a weed misting unit. The unit will be used by the Desert Channels Queensland community group to conduct a series of weed misting trials on local properties with the aim of providing effective and cost-efficient management of 'Prickly Acacia'. The trial results will be shared amongst landholders and Landcare group members. Results will take 12-18 months, as the spray program requires a number of applications, several months apart, then allowing weed die back over a 12-24 month period.

Other community initiatives during FY2012 as part of the Galilee Gas Project included;

- > sponsorship of the Muttaborra Sheep Show;
- > participation in the Annual Longreach Show;
- > hosting community information sessions in Longreach and Barcardine; and
- > presentations at local council forums and rural media events.

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### Silver Springs Underground Gas Storage Project

In November 2011, AGL opened the Silver Springs Underground Gas Storage Facility. As part of the opening AGL invited local landowners and government officials, to provide them with an opportunity to gain a better understanding of the project and view the facilities.

During FY2012, the Silver Springs project team has worked closely with the local community stakeholders and feedback suggests that in-kind donations are perceived to have been AGL's most beneficial contribution to the local community. These donations have included;

- > the donation of a surplus accommodation block to the Wallumbilla SES;
- > the donation of a surplus accommodation block and an ablation block to the Surat SES; and
- > the donation of a cold room, a chest freezer and steel tubing to the Teelba Primary School.

The Galilee and Silver Springs projects are significant elements of AGL's upstream gas portfolio, ensuring longer term security of gas supply (refer to page 18 of this report).

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### Other projects

In FY2012, AGL received approval from the NSW Department of Planning for the proposed Newcastle Gas Storage Facility Project at Tomago. Community consultation for the project continued with local stakeholders who have community leadership in restoration and habitat protection, including the Hunter Botanic Gardens at Tomago, the Native Animal Trust and the Port Stephens Council Koala Steering Team, to develop long-term sustainable community partnership programs. In late FY2012, the CCC for the Newcastle Gas Storage Facility was established and the first meeting was held early in July 2012.

## Summary

Contributing to the communities in which AGL operates and the communities in which AGL employees live and work brings benefits to both AGL and the community.

Communities benefit from the receipt of in-kind and financial support, and AGL and its people benefit through improvements to employee engagement that can come from Employee Volunteering and Employee Giving initiatives and from strengthening relationships with the community.

## Approach

AGL not only contributes to the community through a variety of localised initiatives in the regions where it operates (discussed previously), but also contributes to the wider community through AGL's Corporate Citizenship program, *Energy for Life*.

AGL is committed to rigorous measurement and reporting of its community investments and moving towards a target of social return on investment for our community contributions. This approach is embodied in AGL's public reporting and our evidence based approach to the development of our strategic partnerships.

This year, AGL has applied the same framework to its community investments as in the previous year, breaking down community contributions by charitable cause (i.e. social welfare, environment, emergency relief, health or other), as well as by motivation for investment (i.e. charitable donation, community investment or commercial initiative).

AGL also breaks down its community contribution according to the three *Energy for Life* program areas (Employee Volunteering, Employee Giving and strategic partnerships), as well as the support provided to the local community through the AGL Hallett, Oaklands and Macarthur Wind Farm Community Funds, other local community initiatives, contributions arising from key brand sponsorships, and charitable donations.

In recognition of the contribution employees make to AGL's level of total community investment, a key measure of success and engagement with the *Energy for Life* program is the value of the community contribution arising from employee participation in Employee Volunteering and Employee Giving initiatives, reported annually (page 45).

**Vision for community contribution:** AGL's vision is to have social return on investment measured, and at target levels.

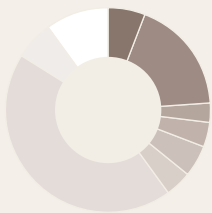
**Drivers:** The success of AGL's community contribution is influenced by engaging employees in the Employee Volunteering and Employee Giving initiatives, and by developing strategic charitable programs and partnerships that leverage the skills and strengths of AGL and its employees. This integrated approach has been developed to strengthen long-term relationships between our employees and our charity partners.

## Performance

Using the London Benchmarking Group model of measurement, AGL's total community investment (including cash, staff volunteering and in kind contributions) in FY2012 has been valued at more than \$2,259,900. Compared to the previous year the total community investment by AGL has increased, with \$1,575,300 having been invested in FY2011.

The value of AGL community contributions made through Employee Giving (AGL matching component only) and Employee Volunteering amounts to more than \$310,100 for FY2012.

### Community contribution by program area<sup>1</sup>



#### Legend

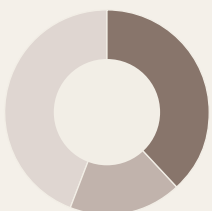
● Local Community Initiatives	6%
● Donations – Other	18%
● Hallett Wind Farm Fund	3%
● Macarthur Wind Farm Fund	4%
● Oaklands Wind Farm Fund	5%
● Payroll Giving and Events	4%
● Sponsorships	44%
○ Warmth in Winter	6%
○ Employee Volunteering	10%

Total value of investment<sup>3</sup> \$2,259,900

#### Notes

- 1 Represents the community contributions as split between the various AGL programs.
- 2 This represents AGL's matched funding only, not the donations given by employees.
- 3 Total value of investment rounded to nearest one hundred dollars.

### Community contribution by motivation for investment<sup>1</sup>



#### Legend

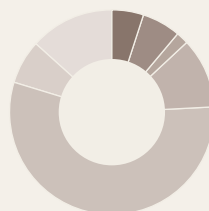
● Charitable donation	38%
● Community investment	18%
● Commercial initiative	44%

Total value of investment<sup>2</sup> \$2,259,877.15

#### Notes

- 1 The motivation types comprise:
  - > Charitable donation – If the contribution is made out of a sense of moral responsibility or in response to society's expectations.
  - > Community investment – If the contribution was made out of a belief that companies have a long-term interest in fostering a healthy community in which it operates. This is often considered enlightened self-interest.
  - > Commercial initiative – If the contribution is part of a program that is designed to provide direct benefits to the Company, including stronger brand image, increased profitability, reduced costs and improved customer loyalty.
- 2 Total value of investment rounded to the nearest one hundred dollars.

### Community contribution by charitable cause<sup>1</sup>



#### Legend

● Arts and culture	5%
● Economic development	6%
● Education and young people	2%
● Environment	11%
● Health	55%
● Social welfare	7%
● Other	13%

Total value of investment<sup>2</sup> \$2,259,877.15

#### Notes

- 1 Represents the value of AGL's community contribution by subject focus (charitable cause).
- 2 Total value of investment rounded to nearest one hundred dollars.

### Community sponsorships

AGL sponsors key events in local communities to build stronger relationships with the communities in which AGL operates.

#### Kiewa area sponsorships

AGL has significant operations in the Victorian Alpine region with four hydro electric power stations as part of the Kiewa scheme, including the Bogong Power Station. AGL is also a large employer in the region with almost 70 employees (by headcount) based at AGL's Mt Beauty office.

During FY2012, AGL sponsored the Kangaroo Hoppet in the Bogong High Plains of Victoria's Alpine National Park. The Kangaroo Hoppet is Australia's premier long distance cross country ski race.

#### AGL Action Rescue Helicopter

Since FY2009, AGL has been the naming right sponsor of the Sunshine Coast Helicopter Rescue Service (the Service) to help ongoing vital rescue, medical and search missions throughout south-east and central Queensland. AGL provides the Service with regular funding for ongoing operations, and enables Queensland-based customers to donate to the Service through their AGL accounts. This donation facility was set up by AGL in 2007 prior to the official sponsorship. AGL currently has 15,740 active customers making contributions via their electricity bills to the AGL Action Rescue Helicopter.

During FY2012, AGL customers in Queensland contributed over \$266,700.

Over the lifetime of the relationship between AGL and the Helicopter Service, AGL customers have contributed more than \$1.3 million.

Payments are made directly to the Sunshine Coast Helicopter Rescue Service.

### Other sponsorships

In FY2010, AGL entered into a four-year sponsorship of the Giant Panda exhibit at Adelaide Zoo in South Australia. In FY2010, AGL donated and installed a solar PV system for the Giant Panda exhibit. The system generates 50% of the energy required for the exhibit and reduces carbon emissions by 14.4 tonnes of CO<sub>2</sub>e annually. AGL also provided an LCD information and educational screen in the exhibit detailing how solar power works.

In conjunction with the Heritage Council of Victoria, the Melbourne Restoration Fund and public donations, AGL assisted in the restoration of the iconic 'Skipping Girl' neon display in Melbourne in late FY2009 and AGL supplied 100% GreenPower Accredited Renewable Energy to power the sign, and annual maintenance funding, as part of a five-year sponsorship.

In February 2012, AGL donated and installed a solar power system to the iconic Skipping Girl sign so she can keep skipping for many years to come.

## Corporate Citizenship – *Energy for Life*

AGL's community citizenship program, *Energy for Life*, seeks to make a genuine contribution to the wider community.

### Approach

AGL's Corporate Citizenship Program *Energy for Life* takes an integrated approach to link employees with community and charity organisations important to AGL and our people through three core initiatives:

- > Employee Giving
- > Employee Volunteering
- > Strategic Partnerships

A key measure of success and engagement with the *Energy for Life* program is the value of the community contribution arising from employee participation in Employee Volunteering and Employee Giving initiatives, reported annually (page 45). This is provided in addition to the direct investments made through AGL's strategic partnerships in FY2012 through the Warmth in Winter program.

In FY2012, AGL undertook a significant revitalisation of the *Energy for Life* program, in particular, looking closely at AGL's strategic partnerships. The review was conducted with the objectives of developing an evidence based approach to corporate citizenship, to better leverage AGL's core business functions and to respond effectively to emerging sustainability risks.

In conducting the revitalisation, AGL drew on employee surveys, external stakeholder consultation, the latest research from AGL's Economic Policy and Sustainability group on customer hardship and an assessment of emerging sustainability risks to the business and the industry.

Drawing on these inputs, AGL made a strategic decision to shift the focus from homelessness in ongoing strategic partnerships, to more of an holistic approach with a focus on early intervention through the development of new partnerships with community organisations addressing financial hardship.

Three new long-term partnerships, initially spanning a five to six year period, have been formed with The Smith Family, St Vincent de Paul and Cancer Council Australia to target three phases of intervention: prevention and education, intervention and capacity building and crisis support. Partnerships with The Smith Family and St Vincent de Paul have also focused support on a geographic basis to 'at risk' suburbs identified by AGL economic research. (See AGL Applied Economic and Policy Research and Working Paper No. 31 at [agblog.com.au](http://agblog.com.au))

Taking steps towards a social return on investment measurement of our program, AGL places a high value on strengthening the body of knowledge around the impact of the partnerships. As a result, AGL will also be dedicating funding in the coming year to support The Smith Family in the longitudinal tracking of students' progression after leaving the *Learning for Life* child sponsorship program.

More details on *Energy for Life* can be found at [agl.com.au/about/Sustainability/EnergyForLife/Pages/EnergyForLife.aspx](http://agl.com.au/about/Sustainability/EnergyForLife/Pages/EnergyForLife.aspx)

## Employee Volunteering and Employee Giving

AGL provides support for employees to make a genuine contribution to the community – by volunteering time and/or by providing direct financial donations to causes that reflect their interests.

### Volunteering

AGL's Employee Volunteering program gives all employees the opportunity to take one day of paid volunteering leave each year to support community causes and charitable organisations.

As well as delivering social outcomes for the community, volunteering provides business benefits to AGL – by engaging employees, promoting teamwork and building morale.

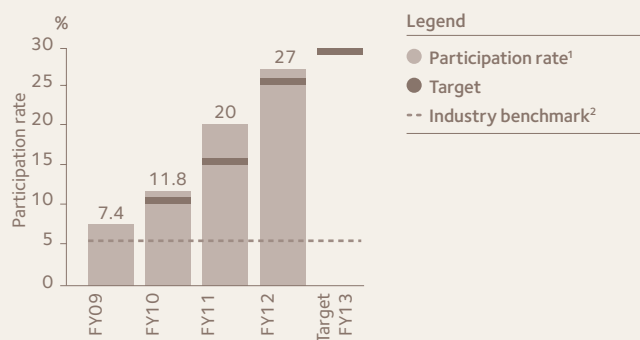
AGL provides the flexibility for employees to take volunteering leave in a variety of ways including team projects, pursuing individual interests, and participating in AGL-led initiatives. In FY2012, volunteering activities were undertaken across the jurisdictions in which AGL operates, ranging from providing support to aged care facilities, conservation projects, assisting crisis support facilities, rebuilding houses in Victoria affected by bushfires and food preparation for the homeless.

AGL set a target of 25% participation rate (by headcount) for Employee Volunteering in FY2012, and exceeded this target for the third consecutive year, reaching a total of 27% of the workforce recording a Volunteering leave day.

During FY2012, 564 employees contributed 4,149 hours of service to community services and organisations. Compared to the 3,180 hours of volunteering leave recorded in FY2011, this represents an increase of 31.5%. For FY2013, AGL has set a target to achieve 30% of the workforce (by headcount) recording a volunteering leave day.

The 4,182 hours of volunteering leave taken in FY2012 has been valued at more than \$230,000.

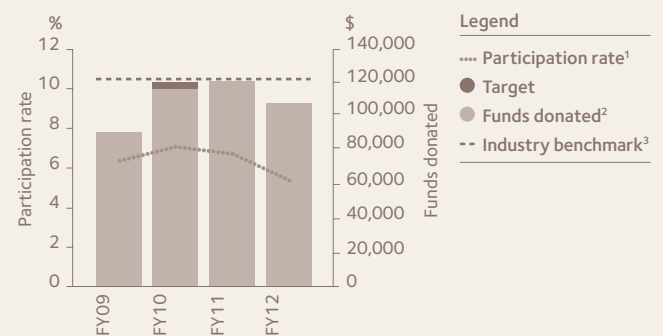
### Employee Volunteering



#### Notes

- 1 Participation rates are determined by comparing the total number of employees that recorded volunteering leave each financial year with the total number of employees (by headcount) as at 30 June in the corresponding year.
- 2 Average participation rate by companies in the 2011 LBG Australia and NZ Energy and Water Sector.

### Employee Giving



#### Notes

- 1 Average monthly participation.
- 2 Includes AGL matching.
- 3 Average participation rate by companies in the 2011 LBG Australia and NZ Energy and Water Sector.
- 4 A specific target for participation rate was not set in FY09, FY11 and FY12.

### Employee Giving

AGL employees can elect to make regular payroll contributions to selected charity partners through the Employee Giving initiative. AGL enables employees to double the impact of financial contributions to these charitable organisations by matching each employee contribution to a total maximum of \$200,000 per year.

AGL's 10 charity partners are the Australian Marine Wildlife Research and Rescue Organisation, beyondblue, Cancer Council Australia, CanTeen, CARE Australia, Habitat for Humanity Australia, Kids Helpline, RSPCA, The Salvation Army and WWF-Australia. As of 1 July 2012, AGL also added new strategic community partners The Smith Family, St Vincent de Paul, Burns Trust and the AGL Action Rescue Helicopter to the employee giving program. This was an additional step taken to integrate our strategic partnerships into broader *Energy for Life* initiatives.

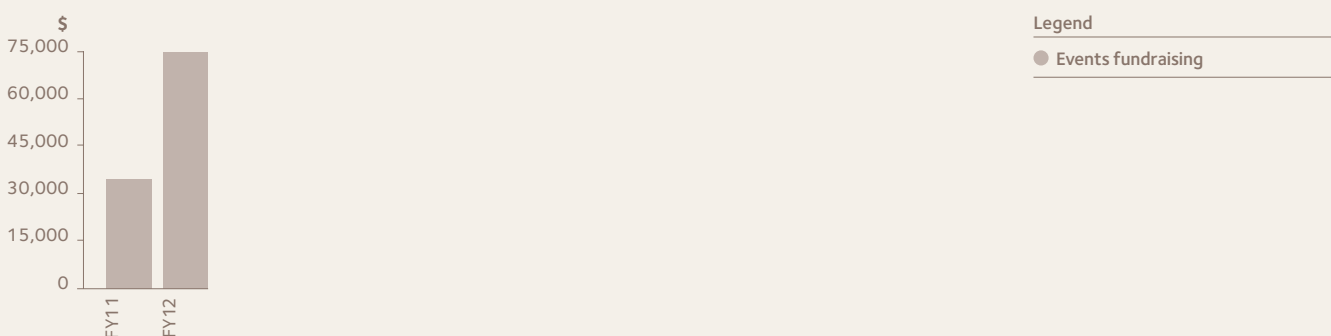
During FY2012, the average monthly participation rate in Employee Giving was 6.39%, a slight decrease compared to the FY2011 rate of 7.5%. Donations to AGL's 10 charity partners through Employee Giving totalled more than \$105,909 in FY2012 (including employee donations and AGL's matched contribution), a slight decrease from FY2011, when more than \$119,000 was donated.

In addition to funds raised through payroll giving in FY2012, AGL employees increased their participation in charity partner events, raising \$75,142 for events such as Movember, Australia's Biggest Morning Tea and Pink Ribbon Day. These funds raised by employees are matched dollar for dollar by AGL and represented a 112% increase in funds raised through events since FY2011, when around \$35,000 was raised.

This brings the total donations in FY2012 to AGL's charity partners through Employee Giving, events and matching to \$182,000, an increase of \$30,000 when compared with last year's total of \$152,000.

In FY2012, AGL was a proud supporter and the third highest corporate fundraiser in Australia for the CARE Walk in Her Shoes Challenge, raising almost \$15,400 to support women and children in poverty.

### Employee Fundraising Events



#### Note

Amounts include AGL matching donations.



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## Strategic Partnerships

As an energy company committed to encouraging energy efficiency across the community, AGL places a special emphasis on assisting vulnerable Australians by pursuing initiatives that deliver sustainable change.

A major review of AGL's Strategic Partnerships was completed in 2012. As mentioned earlier in this chapter, a major review of AGL's strategic partnership has precipitated a shift from a focus on homelessness. Accordingly, FY2012 will be the final year of the Warmth in Winter program, which AGL has proudly supported for a number of years.

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## Warmth in Winter

AGL's Warmth in Winter initiative seeks to make a practical contribution to support homeless Australians by inviting crisis accommodation services to apply for a cash rebate, based on their previous year's winter energy bills.

The energy bill rebates provided by AGL allow these community organisations to redirect funds to other essential services that directly benefit their clients.

In FY2012, AGL contributed \$143,500 to the energy bills of 73 crisis accommodation services across Australia, a decrease compared to FY2011 when almost \$190,000 was contributed. This funding is equivalent to providing over 111,000 warm winter nights for homeless Australians, a decrease of almost 12% compared to the 126,000 warm winter nights funded in FY2011.

The proportion of the winter energy bills funded for each successful applicant varied from 9.9% to 100%, depending on a range of factors including any previous funding received by the applicant and the dollar value of the organisation's energy bills.

## Introduction

AGL's goal is to engage our employees in ways that support our business, grow their skills and deliver outstanding results in a safe and sustainable way.

Employees are critical to the delivery of AGL's business strategies, and to achieving the organisation's vision of creating energy solutions for the communities of today and tomorrow. It is important to create a safe, inclusive and engaging work environment where employees can contribute to delivering a positive customer experience.

The AGL Values that underpin business at AGL are:

- > One Team
- > Delivery
- > Authentic
- > Vitality
- > Safe and Sustainable.

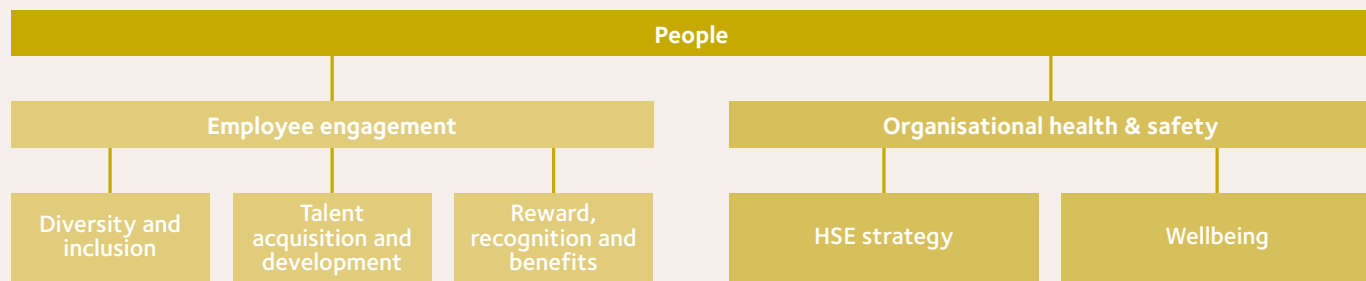
The way in which employees live these values shapes the perception of the AGL brand, as well as influencing stakeholders' day-to-day experiences and interactions with AGL.

A safe and secure work environment is a key element of AGL's strategy, which is reflected through the establishment of a specific People and Performance Board sub-committee. AGL has adopted a broad view of workplace health and safety, encompassing not only the physical safety of employees, but also the overall health of employees in terms of financial, emotional, creative and social wellbeing.

The two key focus areas for the People chapter of this report are employee engagement and organisational health and safety.

**Employee engagement:** In the context of a rapidly changing energy industry, maintaining and improving employee engagement is increasingly important for attracting and retaining talented employees, and ultimately, for the delivery of business results.

**Organisational health and safety:** Organisational health and safety performance is indicative of the values that underpin an organisation, the business 'culture', and the effectiveness of health and safety policies and procedures. Safety performance is also a significant influencing factor for employee engagement.



Performance Summary			
Vision	Target FY2012	Performance FY2012	Target FY2013
<b>Employee engagement</b>			
Engagement score at 'best employer' level.	Engagement score <sup>1</sup> : <b>8% point increase</b>	Engagement score: <b>10% point increase</b>	✓ Engagement score <sup>2</sup> : <b>Further improvement in employee engagement</b>
<b>Organisational health and safety</b>			
<b>Zero harm.</b>	Total Injury Frequency Rate: <b>4.0</b>	Total Injury Frequency Rate: <b>6.6</b>	✗ Total Injury Frequency Rate lower than: <b>4.9<sup>2</sup></b>

<sup>1</sup> Engagement survey undertaken during May and June 2012.

<sup>2</sup> The targets related to People will not include AGL Loy Yang for the FY2013 period. AGL Loy Yang will be included from FY2014.

## Employee engagement

### Introduction to employee engagement

Employee engagement measures the degree to which employees are intellectually and emotionally connected and committed to the company they work for, and is a core metric for measuring the health and success of the organisation.

#### Approach

AGL undertakes the annual AGL Engagement Survey to understand how engaged employees are by measuring key drivers that are important to them such as employment experience, career opportunities, company reputation, change management, customer focus, safety and diversity.

This year, AGL transitioned to a new survey provider, ORC International, an independent global employee research organisation. The transition has enabled a more timely delivery of reports, online reporting, greater ability to analyse engagement data, and action plans stored and tracked centrally. Whilst there has been a change in survey provider, the same methodology has been used to calculate engagement scores to provide a direct comparison against 2011 results.

A shorter pulse survey was conducted in 2012 as a means of tracking progress against engagement action plans that were formulated following the 2011 AGL Engagement Survey. These plans aimed to address the key opportunities to drive improvement in employee engagement. The pulse survey covered the key engagement questions, which assess employee advocacy ('say'), employee commitment ('stay') and employee discretionary effort ('strive'), as well as open-ended questions to provide verbatim commentary.

AGL uses the results from the pulse survey to refresh action plans to address the key opportunities to drive improvement, where appropriate, in employee engagement.

**Vision for employee engagement:** With the transition to the new survey provider, ORC International, AGL has reviewed and updated the question set that will be used to create the engagement score in future surveys. Additional questions were trialled in the 2012 engagement pulse survey to ensure the engagement questions used are more relevant to the organisation in terms of understanding employee engagement. In light of this, a new baseline 2012 engagement score has been provided by ORC International to set targets for FY2013. Based on the new approach, the AGL overall engagement score for 2012 was 70%. This score places AGL just below Aon Hewitt's Best Employer benchmark. AGL's focus for next year is to improve employee engagement further.

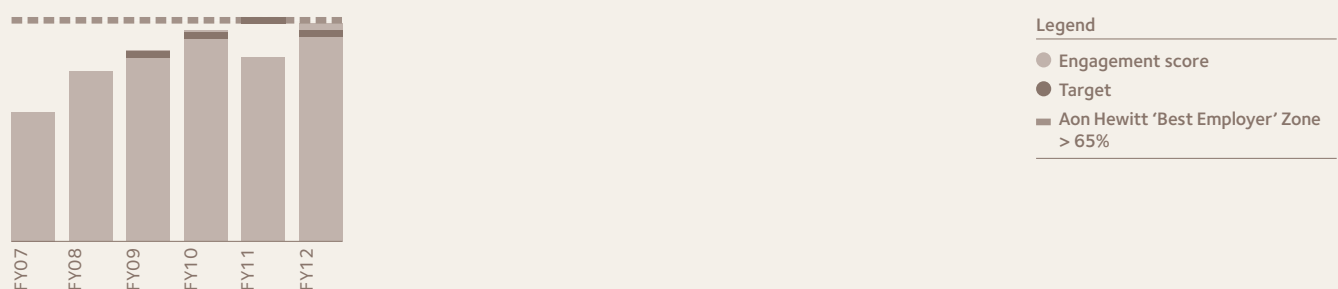
**Drivers:** Improving performance in key areas such as diversity and inclusion (page 50), talent acquisition and development (page 52), and reward and recognition (page 55), will influence the engagement of employees over the long term. Safety (pages 58 to 62) also has a strong influence on engagement.

#### Performance

AGL set a target to increase engagement by eight percentage points compared to the FY2011 score. AGL overall achieved an engagement score of 64%, which exceeded the set target. There was an improvement across most areas within AGL and, in particular, within the larger business groups, Retail Energy and Merchant Energy. This improvement has been achieved through sustained focus on identifying and addressing the key issues impacting engagement in each major business group. Initiatives have been implemented in FY2012 across all the areas that drive engagement. We also acknowledge that in FY2012 the organisation was more stable in comparison to FY2011, when a period of significant organisational change impacted on employee engagement.

Employee engagement scores are used as a key performance indicator in senior managers' Performance and Development Reviews. Operational leaders and employees are measured on their contribution to specific engagement action plans that have been agreed in their business units and other activities that aim to positively impact on engagement. In FY2013, senior leaders will also be measured on the achievement of engagement action plans.

### Employee engagement



#### Note

The FY2012 pulse survey was conducted in May-June 2012 with an overall response rate of 85%.

## Diversity and inclusion

AGL values the diversity in its workforce, and recognises that diversity is supported and enhanced by an inclusive workplace culture.

### Approach

An inclusive workplace, where all employees feel safe and confident to contribute their ideas and perspectives, facilitates more creative, innovative and effective solutions for achieving AGL's business objectives.

A diverse workforce and an inclusive workplace culture are attractive to potential employees and provide AGL with an edge when competing for talent and in retaining talented people. A diverse workforce, with its broad range of experience and perspectives, also has a better opportunity to understand and engage AGL's customers and the communities in which it works. AGL's Diversity Strategy comprises the following components:

- > AGL Diversity and Inclusion Council (chaired by the Managing Director)
- > AGL Ethics Panel
- > AGL Code of Conduct and AGL Values
- > Diversity and Inclusion Policy
- > issues resolution – AGL Ethics Line; Workplace Issues Resolution Guidelines, Employee Assistance Program
- > education and training (induction and refresher compliance training and inclusive leadership training)
- > metrics and performance tracking.

The focus areas for AGL's Diversity and Inclusion Council for FY2012 were women in the workplace; flexibility and carers needs; and embedding an inclusive workplace culture.

AGL was recognised as a 2012 Employer of Choice for Women by the Equal Opportunity for Women in the Workplace Agency (EOWA).

### Women in the workplace

AGL monitors gender diversity at each level of the organisation and, in particular, the representation of women in leadership. AGL faces similar challenges to other Australian organisations in retaining and realising the potential of its female leaders who have the capability and aspiration to move into senior leadership positions. In addition, many of the roles that offer the critical experiences and career pathways for future AGL leaders are non-traditional occupations for women and so the female talent pool is small relative to men.

Of the leaders at AGL, 35% (headcount basis) are female, an increase from 34% in FY2011, which is lower than the overall proportion of women in AGL's workforce (46%).

AGL continues to monitor gender pay equity through various forums including the Diversity and Inclusion Council and the People and Performance sub-committee of the Board. AGL's most recent pay equity analysis was completed in October 2011. AGL's gender pay gap was below the Australian benchmark pay gap of 17.4% in all groupings except for one senior leader grouping.

In FY2011 AGL incorporated pay equity analytics and reporting into its annual remuneration review system and supporting processes. These enhancements have brought gender equity to the forefront of leaders' remuneration decisions and have delivered a more efficient means for AGL to ensure gender equity in the remuneration outcomes for all employees. AGL's diversity and inclusion strategy includes initiatives to address the drivers behind AGL's gender pay equity gap.

In November 2011 AGL held its second diversity conference, a follow up to the all-female conference held the year before. These conferences provide information, skills and networking opportunities to advance women in the workplace. The 2011 conference, "Gender equity: it's everyone's business", was attended by 100 employees from across the business, including women and men, and was focussed on educating and enrolling men as advocates for women in the workplace and of AGL's initiatives to drive gender diversity.

As noted above, AGL has been recognised by the Equal Opportunity for Women in the Workplace Agency (EOWA) as a 2012 Employer of Choice for Women. The Employer of Choice for Women (EOCFW) citation is a prestigious acknowledgment by EOWA of organisations that are recognising and advancing women in the workplace. To receive the citation, AGL demonstrated a commitment to removing barriers to women in the workplace; gender pay equity; and training of employees on their rights and obligations in relation to sex-based harassment. Supported by quantitative evidence, AGL demonstrated that it is achieving real outcomes for women in the workplace. 2012 recipients, including AGL, will hold the award for two years.

AGL remains compliant with the Equal Opportunity for Women in the Workplace Act 1999 (Cth) and following its 2012 EOCFW award, is not required to report under the Act until May 2013.

In December 2011, AGL's new Parental Leave Policy was launched (following agreement from AGL's Diversity and Inclusion Council in March 2011 to make significant enhancements in order to position AGL amongst best practice organisations). These enhancements include an increase in paid parental leave from 12 to 14 weeks with leave extended to the primary care giver (whether male or female). Paid partner leave (concurrent leave) was also extended to two weeks (previously one week). Employees have the opportunity to take paid parental leave and paid partner leave in a flexible way, to meet their individual circumstances. AGL's paid parental leave is available to employees in addition to any paid parental leave to which they are entitled under the Australian Government Paid Parental Leave scheme.

During FY2012 AGL also implemented new talent management metrics to monitor the representation of women on the succession plans for business critical roles. This metric is supporting development planning for women across the company with the aim of deepening the pool of potential female successors for critical roles.

During the reporting period, 71 women were due to come back from maternity leave. Of these 32 (45%) returned to full-time employment, 27 (38%) returned to work on a part-time basis, and 12 (17%) chose not to return to work (down from 37% in FY2011).

## Employee engagement

### Inclusive workplace

AGL recognises that all people working in, or visiting, AGL workplaces have the right to be treated with respect and fairness and to enjoy an environment free of discrimination, harassment, bullying and other unlawful behaviour. This is a key characteristic of an inclusive workplace.

AGL's Diversity and Inclusion Policy covers the rights and obligations of employees and leaders under state and federal anti-discrimination and occupational health and safety legislation.

AGL encourages employees to speak up about unacceptable and unlawful behaviour, and commits to resolve issues effectively and as quickly as possible. During FY2012, AGL addressed eight issues relating to unacceptable behaviour in the workplace (compared to six issues in FY2011). Six of these issues were substantiated following investigation in accordance with AGL's Workplace Issues Resolution Guidelines, and disciplinary action, in the form of dismissal, formal warnings and additional training was taken.

AGL's Ethics Panel continues to support the Diversity Policy Framework as a forum for addressing systemic issues related to employee behaviour in the context of the AGL Code of Conduct. The independent Ethics Panel member provides an Ethics Line service, acting as a last resort contact point for potential breaches of the Code and to investigate matters in an impartial and independent manner.

### Flexibility and carer's needs

Following the 2011 Engagement Survey which identified that 39% of employees identify as having caring responsibilities, AGL is implementing initiatives to build confidence in employees and leaders to request and successfully manage flexible working arrangements across the business. A series of presentations were held in March and May 2012 to promote flexible work and highlight success stories of leaders and employees who are currently managing, and benefiting from working flexibly. These success stories, flexible work tools and processes are accessible to employees through AGL's intranet.

AGL is implementing a number of initiatives in FY2013 to support employees who are parents, with the aim to increase the retention of women who take parental leave. Facilitated workshops which provide women newly returned from parental leave with support, practical tools and connections with other working mothers in AGL will commence in July 2012. Similar workshops for working dads are planned for later in 2012. Other initiatives have focussed on providing access to flexible working arrangements and building confidence in leaders to manage flexible work.

AGL's Purchased Leave Policy provides employees with the opportunity to purchase up to two weeks additional leave each year. 178 employees were approved for Purchased Leave in FY2012, representing 8.4% of AGL's employees (by headcount).

## Employee engagement

### Talent acquisition and development

Attracting and retaining the right people, and developing their skills and talents, is one of the most critical challenges and opportunities AGL faces in meeting its strategic objectives.

The 'war for talent' in the energy sector presents a strategic opportunity and threat for AGL. The energy industry is rapidly changing due to government deregulation, climate change policies and the development of renewable energy technology. Having the right people with the right skills in place will be a key enabler for AGL in responding to these challenges.

#### Talent acquisition

The strength of a good employer brand lies in the ability to attract the right people with the right skills who are the right fit for the business. The business benefits through decreased attrition rates, and customers benefit by dealing with enthusiastic and engaged employees. In turn, a positive customer experience is reflected in AGL's bottom line and in shareholder value.

AGL offers a work environment which is stimulating, collaborative and productive. AGL also supports the aspirations of employees who seek to develop their careers at AGL – whether moving up through leadership roles in the organisation or by expanding their skills and experience as specialists in their chosen field. The AGL Employment Value Proposition (EVP) describes the unique and compelling rewards and benefits (tangible and intangible) offered by AGL, in return for the skills, capabilities and experiences that employees bring to AGL.

During FY2012, AGL undertook further work to enhance and communicate its EVP, including the launch of an EVP booklet which was distributed to all employees with a letter from the CEO. This booklet summarises and explores AGL's EVP and the letter highlighted initiatives completed over the past 12 months that have helped make AGL an even better place to work. Commencing in July 2012, AGL is embarking on a major research project to segment EVPs down to each Business Unit. This work will be completed during the FY2013 reporting period.

After the successful pilot of AGL's new recruitment delivery model within Customer Services, in FY2011, AGL has expanded it to support the entire company. The RPO (Recruitment Process Outsourcing) is an outsourced team ("AGL Careers") of on-site recruitment specialists that support the business for the recruitment of all permanent and contracting positions at AGL. The results so far are impressive with leader satisfaction with AGL Careers reported at 93%. The new model has delivered a significant reduction of agency usage with 96% of hiring sourced directly by AGL Careers without the assistance of recruitment agencies.

During 2012, AGL launched LinkedIn as part of its social media strategy for talent acquisition. LinkedIn will open up new candidate sourcing channels and marks an exciting transition into a more proactive and innovative approach to sourcing talent for AGL. LinkedIn is the world's largest professional network with over 150 million members globally and growing by one member every two seconds. 3 million of these members are in Australia.

#### Talent management

AGL's Talent Management Program comprises four key areas – identifying critical roles, succession planning, building talent pipelines and talent metrics.

In 2012, the business continued to focus on identifying 'critical roles'. These are roles that, if vacant, pose the most significant business risk because they are key to AGL's new business development, revenue generation or operational management. Typically critical roles are difficult to fill quickly with either an external hire or a ready internal successor. There has also been an additional focus on identifying roles that are critical to fulfilling AGL's growth strategy and roles that will drive competitive advantage and profitability.

To ensure the sustainability of AGL's most critical business functions, it is now a requirement that all senior critical roles have a succession plan in place to ensure that there is a pipeline of key talent being actively developed in the capability areas required for role success. Profiling of critical roles is being undertaken to enable 'role success' to be defined and then used to develop and source talent.

### Compliance training

Compliance Area	Completion Rate <sup>1</sup>
Code of Conduct	94%
Diversity and Inclusion	91%
Health, Safety and Environment	95%
Information Security	87%
Privacy	89%
Risk	86%
Trade Practices Act (TPA) <sup>2</sup>	Course under re-development

#### Notes

- Completion rates include employees that have completed the courses for their Induction or Annual Refresher training. Employees that were still in their Induction period as at 30 June 2012 have been excluded from the completion rate.
- The new *Competition and Consumer Act 2011* (Cth) (formerly the TPA) course is currently being re-developed and will be ready for the next Induction/Refresher training rollout in December 2012.

## Employee engagement

There has been a strong focus on defining organisational-wide talent pools and building bench strength, in particular, at the middle to senior leadership levels. The people planning sessions have generated a target list of key talent ready for a new role within the next 12 months, as well as upcoming opportunities such as projects, secondments and role vacancies. This has enabled proactive career planning for key individuals needing critical experiences or representing a retention risk.

A talent metrics scorecard has been introduced to assess a range of talent risks and to allow comparisons across business units within AGL. These metrics will be tracked and assessed on an annual basis, to ensure the talent management program minimises risks such as key resource risk and vacancy risk, as well as focusing on gender diversity.

### Induction

AGL runs a structured induction program for new employees which includes an information pack, seven compulsory compliance training modules (which must be completed within the 4 weeks of joining AGL), and a Corporate Welcome Day which is a full day, face-to-face workshop offered at AGL's major sites. During FY2012, 311 new employees attended an AGL Corporate Welcome Day.

Providing adequate learning and development opportunities is critical to ensuring that customer service employees deliver a quality customer experience and are aware of their compliance obligations in performing their role. All new hires in customer service roles receive a thorough three-week induction in relevant processes, systems and service skills prior to any customer contact. Training to develop the competence and confidence of customer services employees is also provided when new process and system enhancements are introduced, to minimise the risk of service levels being impacted during change.

### Learning and development

AGL's online learning platform, Empower, provides a central portal for the delivery of compliance training and offers employees improved access to learning and development opportunities. In FY2012 all employees were required to complete compliance training via Empower as outlined in the table on page 52.

During FY2012, AGL also continued to deliver and enhance its leadership development programs, as outlined in the table below.

All accredited leadership programs have now been presented as single subject enrolments, to allow leaders more flexibility in selecting subjects aligned to their Career Development Plans (CDP). When the leader completes all eight subjects, they become eligible for the national qualification validated by the Registered Training Organisation – Australian Institute of Management.

Additional development programs are added to the leadership curriculum each year, based on CDP outcomes such as influencing or presentation skills. In FY2012 the program enhancements included developmental areas of emotional intelligence and business analytics.

A major program of work undertaken in FY2012 was the redesign of AGL's Leadership and Self-Leadership imperatives to further expand capabilities in diversity; change agility; innovation; community focus and safety leadership. All leadership training and development events were then re-aligned to these refreshed capabilities.

Over the last 12 months, AGL has rolled out inclusive leadership training to 370 leaders. This training provides leaders with education and support around unconscious bias. Developed in partnership with Deloitte, the customised workshop builds on traditional anti-discrimination and harassment compliance training to cover concepts of diversity, inclusion and unconscious bias.

### Leadership training and development programs

Program	Purpose	FY12 participation rate
Leadership In Action Foundations	One-day introduction for leaders new to AGL or those newly promoted to leadership roles.	87 leaders
AGL Frontline Leadership Diploma	Provides frontline leaders with the knowledge and skills to achieve better performance and increased productivity at the organisational level. Offered through the Australian Institute of Management (AIM).	13 leaders graduated 18 additional leaders commenced 144 single subject enrolments
AGL Frontline Leadership Diploma for Emerging Frontline Leaders	Adapted from the AGL Frontline Leadership Diploma, this program aims to develop existing senior technicians in AGL's Energy Services business for future leadership roles.	31 emerging leaders
Advanced Diploma of Management for Leaders/Specialists	This program provides an accredited professional development program for leaders and specialists and a bridge to/from the AGL Academy. Offered through the AIM.	4 graduated (2011) 18 additional commenced (2012) 54 single subject enrolments
CEB Human Resources Leadership Academy"	This program provides an opportunity for HR professionals to develop leadership skills and business acumen.	2 graduates (2012)
360 degree feedback program for leaders	This program provides direct feedback and follow up coaching on how leaders are perceived by their key stakeholders in relation to the AGL Values and the AGL Leadership Capabilities Framework.	73 leaders
Additional Leadership Development Programs based on Career Development (CDP) Outcomes	Influencing Skills (TOYF) Presentation Skills (TSP) Productive Thinking; Emotional Intelligence; Business Analytics.	203 participants
People Centred Implementation (PCI)	This program is AGL's preferred methodology for leaders who facilitate change through people: Foundations & Practitioner levels.	165 participants
Inclusive Leadership workshop	This program provides leaders with education and support around diversity, inclusion and unconscious bias.	369 leaders

## Employee engagement

**Turnover**

Total turnover, which includes voluntary and involuntary turnover, for FY2012 was 26%, a decrease from 29% in FY2011. This decrease reflects the lower involuntary turnover in 2012 compared to the turnover that arose from the major organisational change programs implemented in the prior year. Voluntary turnover (or attrition) decreased to 16% in FY2012, from 18% in FY2011.

Attrition is highest for employees in their first year with AGL and those that are aged under 30 (27% each). Attrition in the under 30 age group is almost equal between men and women at 27% and 28% respectively. The under 30 age group is mostly represented in AGL's customer service centres which historically have experienced higher attrition at 30% in 2012 than the AGL average, but at a level that is competitive with market benchmarks for call centres.

The decrease in attrition in the customer service centres over the last twelve months (attrition was 36% in 2011) follows the introduction of AGL's new recruitment delivery model. The new model represents a significant change in talent acquisition strategy, effectively bringing the function on-site to ensure a robust recruitment process, improved sourcing strategies, consistent communication of AGL's EVP and creating enhanced candidate experience which positively impacts company reputation.

AGL has achieved a significant year-on-year reduction in attrition in its customer service centres – from 55.0% in 2009 to 30% in 2012. AGL continues to focus on recruitment, training and support to continue the trend of reducing turnover in customer service centres.

Note – the methodologies used to calculate the attrition rates quoted above for AGL as a whole and for Customer Services are different. Attrition for customer services has been calculated as a proportion of the number of permanent employees, excluding those on parental leave. Attrition for AGL has been calculated as a proportion of the full time equivalent of permanent employees and employees on maximum term contracts, including people on parental leave. Prior year comparisons use the same methodologies respectively.

**Voluntary and involuntary turnover<sup>1,2</sup>****Notes**

- 1 Total number of departures per FTE (full-time equivalent).
- 2 In FY2011 and FY2012 turnover is a percentage of FTE as at 30 June. Prior to FY2011 turnover is a percentage of the relevant 12 month average FTE.
- 3 In FY2012 FTE includes fixed term, permanent full-time, and permanent part-time employees on a FTE (Full-time equivalent) basis as at 30 June 2012. Excludes casuals, labour hire and contract workers.



## Employee engagement

### Reward, recognition and benefits

Providing clear expectations and recognising and rewarding performance and contribution to the business is motivating for employees and critical to achieving AGL's goals and targets.

### Performance and Development Review process

AGL's Performance Management Cycle is an important process for creating a high performance organisation, where people take accountability for delivering results and for building the capability needed to progress their careers in AGL.

AGL's Performance and Development Review (PDR) process is used to measure and manage employee performance. The PDR process incorporates measurable objectives, regular (at least monthly) one-to-one conversations between leaders and employees, mid-year and full-year performance reviews, career development planning and stakeholder feedback.

The PDR provides employees with clarity about what is expected of them, and links reward and recognition of employees' performance and contribution to the business in a transparent and equitable manner.

To increase the transparency of the PDR process, a company-wide calibration process is undertaken to ensure that performance ratings are applied consistently and equitably.

During June 2012, AGL transitioned PDR processes and paper-based documents for employees who are not employed under an enterprise bargaining agreement (EBA) onto an online platform, *mycareernet*. As the foundation of an integrated talent management system, *mycareernet* will provide a central data repository and common, web-based portal for AGL's performance, career and talent processes. Employees who are covered by EBAs are expected to transition to *mycareernet* in FY2014.

To ensure employees' efforts are aligned to strategic goals, mandatory objectives are developed and cascaded through the executive team to other layers of leadership (where relevant). The mandatory objectives for FY2012 included: financial, health safety and environment, employee engagement, and customer satisfaction targets.

### Career development

In the context of a rapidly changing energy industry, being able to offer attractive and challenging careers is critical to attracting and retaining talented employees, and ultimately, to the delivery of business results.

AGL's Career Management Framework is composed of five career factors that need to come together to deliver an employee's long-term career growth. This framework helps leaders in their discussions about employees' career development strengths, gaps and potential career moves, as well as projects or experiences that may be needed for their development.

In addition to the new Career Development Framework, there are a range of processes and offerings that enable employees to realise their career aspirations in AGL:

- > Career Development Plan
- > promotion of internal job opportunities
- > career development workshops
- > talent management
- > assisted education program
- > 360 degree feedback
- > leadership development
- > personal development.

AGL's new remuneration Position Framework launched in FY2012, describes the architecture of all positions in AGL and, as such, provides an accessible matrix of potential career paths for employees planning their careers at AGL. A hierarchy of work levels defines the "size" of a position relative to other positions at AGL, and categorises each role according to four streams of work, each with a different focus. The Position Framework is underpinned by the Hay job evaluation methodology, an internationally recognised methodology for "sizing" jobs.

### Assisted Education program

AGL supports employees completing formal qualifications at secondary and tertiary level through the Assisted Education program. This program supports employees financially and by allowing time off work to study.

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### Reward and recognition

Remuneration is a core driver for many employees. AGL regularly benchmarks remuneration broadly to the external market as well as focussing on relevant industry sectors such as resources, key specialist areas such as energy trading and other key roles. By regularly comparing our offering against the market, we ensure our remuneration policies are effective in attracting and retaining the right people. Generally total remuneration is targeted within the 50th to 75th percentile market range.

AGL's remuneration system includes a short- and long-term incentive program for senior managers and a short-term incentive for middle and emerging leaders, with payment of the incentive based on achieving a combination of company and individual targets. Currently, 65% of AGL's employees (1,363 people) are eligible to participate in short-term incentive programs, and 1% of employees (22 people) are eligible to participate in long-term incentive programs.

All employees (with the exception of defined senior executives, and employees with less than 12 months of service) are eligible to participate in the Share Reward Plan, under which employees are invited to take up ownership of up to \$1,000 of AGL shares at no personal cost, subject to AGL achieving specific business outcomes. These business outcomes include improvement in customer satisfaction, financial growth, and achievement of Health, Safety and Environment action plans. In FY2012, 78% of employees (1,676 people) were invited to participate in the Share Reward Plan<sup>1</sup>. As a result of partial achievement of these business outcomes, the Board awarded \$950 of AGL shares to eligible employees (to be paid in FY2013).

The Customer Service incentive program has both short- and long-term components. Performance is assessed against a monthly scorecard and a short-term incentive is paid to the top 30% of performers each month. The top 30% of performers nationally who achieve a Performance and Development Review (PDR) rating of three or higher at the end of the PDR cycle are also eligible for an annual incentive.

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### Employee benefits

AGL offers:

- > 14 weeks paid parental leave for primary carer (women and men, with flexibility to take this leave at half pay over 28 weeks)
- > two weeks paid partner leave which can be taken at the time of birth
- > option to take paid parental leave and paid partner leave on a flexible basis
- > up to two weeks purchased leave
- > 25% employee discount on AGL energy usage and service charges
- > up to two years salary continuance income protection in the event of an illness or injury
- > financial and study leave support for employees pursuing further study through the Assisted Education program
- > access to a counselling service for employees and their families
- > volunteering leave (Employee Volunteering)
- > AGL matched charity giving program (Employee Giving)
- > wellbeing program
- > flexible work options
- > discounted health insurance.
- > AGL VIP energy discounts for family and friends
- > Share reward and share purchase plan
- > Living the Values awards
- > Service award program
- > Social Club

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#### Notes

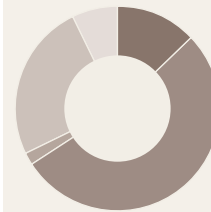
- <sup>1</sup> This figure is based on a headcount number of 2,126 as at 1 September 2012, the time at which the share offer was made.

# Employee engagement

## Additional people data

At 30 June 2012, AGL had a total of 2,107 employees corresponding to 2004 full-time equivalent (FTE) employees. This compares to 2,083 employees (2,031 FTE) at the end of FY2011.

## AGL workforce

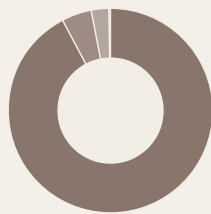


State	%
NSW	13%
Vic.	53%
Qld	2%
SA	25%
ACT	7%
<b>Total employees (FTE)<sup>1</sup></b>	<b>2,004</b>

### Note

<sup>1</sup> Includes fixed term, permanent full-time, and permanent part-time employees on a FTE (full-time equivalent) basis as at 30 June 2012. Excludes casuals, labour hire and contract workers.

## Employees by employment status

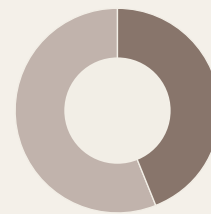


Employment Status	%
Permanent full-time	92.2%
Permanent part-time	4.8%
Fixed term full-time	2.7%
Fixed term part-time	0.2%
<b>Total employees (FTE)<sup>1</sup></b>	<b>2,004</b>

### Note

<sup>1</sup> Includes fixed term, permanent full-time, and permanent part-time employees on a FTE (full-time equivalent) basis as at 30 June 2012. Excludes casuals, labour hire and contract workers.

## Employees by contract type



Contract Type	%
Awarded	44%
Salaried	56%
<b>Total employees (FTE)<sup>1</sup></b>	<b>2,004</b>

### Note

<sup>1</sup> Includes fixed term, permanent full-time, and permanent part-time employees on a FTE (full-time equivalent) basis as at 30 June 2012. Excludes casuals, labour hire and contract workers.

## Employees by gender<sup>1</sup>

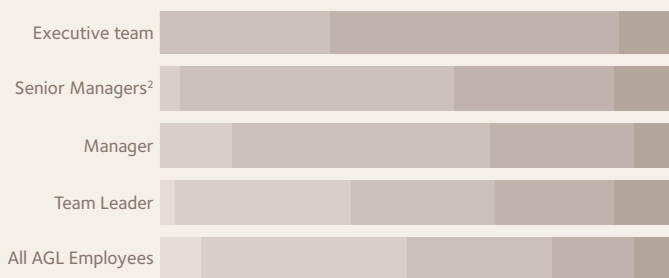
Employee Group	Males (%)	Females (%)	Percentage change (females) since FY11 <sup>3</sup>
Executive team	89%	11%	No change
Senior Managers <sup>2</sup>	71%	29%	Increased by 2 PP
Manager	68%	32%	Decreased by 1 PP
Team Leader	56%	44%	Decreased by 3 PP
All AGL Employees	54%	46%	Decreased by 1 PP

Gender
Males
Females

### Notes

- <sup>1</sup> Includes fixed term, permanent full-time, and permanent part-time employees on a Headcount basis as at 30 June 2012. Excludes casuals, labour hire and contract workers.
- <sup>2</sup> Senior managers refers to General Managers and Head of Functions.
- <sup>3</sup> PP = Percentage points.

## Employees by age<sup>1</sup>



Age Group
Under 24
25-34
35-44
45-54
55-64
Over 65

### Notes

- <sup>1</sup> Includes fixed term, permanent full-time, and permanent part-time employees on a FTE (full-time equivalent) basis as at 30 June 2012. Excludes casuals, labour hire, contract workers, and all AGL Loy Yang employees.
- <sup>2</sup> Senior Managers refers to General Managers and Head of Functions.

# Organisational Health and Safety

## Health and Safety Performance

AGL's commitment to safety is one of the core values underpinning the way we do business.

### Approach

Providing a safe and healthy workplace for our employees and contractors is a key priority for AGL. Safety performance is regularly monitored by the executive team and at the AGL Board level through the quarterly meetings of the Safety, Sustainability and Corporate Responsibility Committee. Safety performance is also reviewed in leadership and team meetings across the business.

A health, safety and environmental (HSE) management system (known as 'Life Guard'), documents AGL's framework of policies, standards, guidelines and procedures for consistent and continuous improvement in health, safety and environmental performance, and is a key element of ensuring compliance with HSE legislation.

AGL's HSE Strategy and annual HSE Action Plans are built on four cornerstones which are: leadership, systematic approach, continually building an active HSE culture, and safe workplaces and equipment.

Further details on the implementation of the AGL HSE Strategy can be found on page 60.

AGL assesses workplace risks in consultation with employees and, where appropriate, independent external advisors, and manages these risks by identifying and implementing suitable controls. HSE risks are managed as a component of organisation-wide risks, using the Fully Integrated Risk Management approach. Some of AGL's HSE risks include: contact with fixed or moving plant and equipment; slips/trips; psychological injury; fatigue; musculoskeletal injury; working remotely; flammable gas; electricity; and customer contact hazards.

**Vision for organisational safety:** AGL's vision is to have zero harm.

**Drivers:** Safety performance is driven by a systematic approach to safety strategy, and a workplace culture that actively embraces safety as a core business value (page 60). Employee wellbeing (page 62) and employee engagement (page 55) are also key drivers of safety performance.

### Health and Safety Performance

AGL measures and tracks safety performance, using a number of trailing performance indicators, based on reported safety incidents. AGL also tracks leading indicators of Health and Safety to provide insight into trends.

### Total injury frequency rate (TIFR)

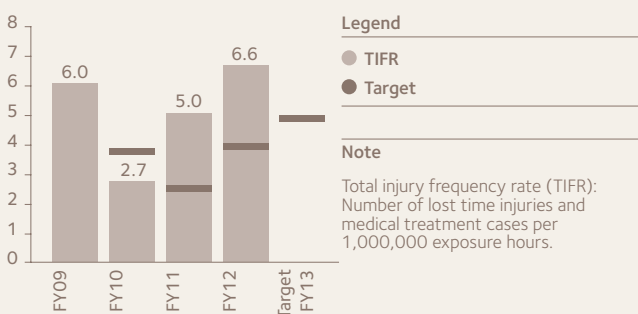
In FY2012, AGL's TIFR increased to 6.6, compared to 5.0 in FY2011. Disappointingly, this means that AGL has not met the FY2012 TIFR target of 4.0.

The factors contributing to the increase in TIFR include:

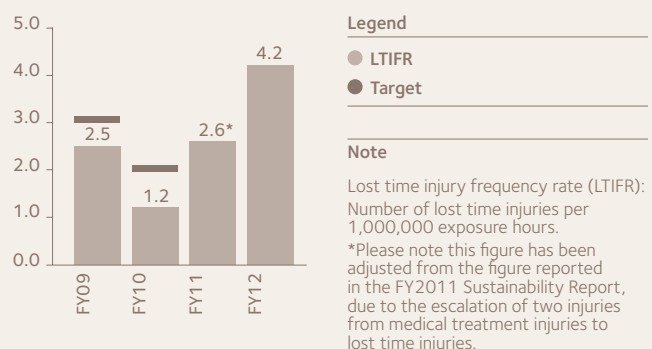
- > An increase in "non-event related" injuries, where repetitive exposure resulted in soft tissue damage or joint deterioration; and
- > An increase in injuries to employees over the age of 50, particularly in relation to incidents involving slips, trips and falls and manual handling.

For FY2013, AGL has set a target of having a TIFR lower than 4.9, to address the negative trend in TIFR and work towards AGL's vision of zero harm.

Total injury frequency rate



Lost time injury frequency rate



## Organisational Health and Safety

### Other Health and Safety performance indicators

#### Lost time injury frequency rate (LTIFR)

AGL's LTIFR in FY2012 increased to 4.2, compared to 2.6 in FY2011. There were 17 lost time injuries during FY2012. (FY2011: 11.)

#### Medical treatment injury frequency rate (MTIFR)

MTIFR for FY2012 increased slightly to 2.5, compared to 2.4 in FY2011. There were 10 medical treatment injuries during FY2012 (FY2011: 10).

#### Fatalities

In FY2012 there were no fatalities.

#### Injury severity rate

In addition to safety indicators that track the frequency of incidents, the tracking and reporting of the lost time injury severity rate provides a measure of the impact of lost time injuries, by looking at the amount of time lost, rather than only the frequency at which incidents occur.

The average days lost has decreased to 17.5, compared to 31.5 in FY2011. This figure reflects a significant reduction in the proportion of lost time injuries requiring more than 20 days away from work, when compared with FY2011.

#### Incidents

At AGL an incident is defined as anything that did or could result in an injury or illness to any person, damage to plant, an adverse affect to AGL's reputation or damage to the environment. As such, incidents include potential incidents or 'near misses'. AGL also measures 'significant' incidents. These are near misses which had high potential risk.

The number of significant incidents reported has decreased during FY2012 to 24, compared to 36 in FY2011. This reduction has been the result of extensive work to address issues relating to electrical safety and permit to work procedures.

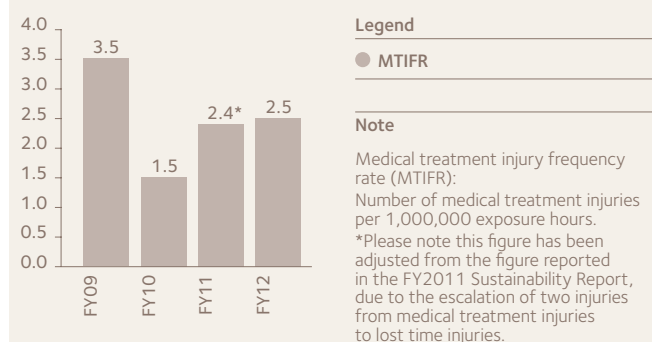
In particular, the Safe Systems of Work Program at the AGL Torrens Island Power Station commenced during FY2012. This is a broadly scoped program of works to ensure continuous improvement of the key activities that affect safety performance on site. Included in the program is a range of projects to streamline, enhance, improve and address the processes, systems and management that underpin the safety performance at AGL Torrens. The program will run over approximately three years.

Examples of the projects contained within the Safe Systems of Work Program include; updating of risk assessments for all confined spaces on site; review and updating of all safe work instructions; and the full implementation of the AGL Torrens Permit to Work System.

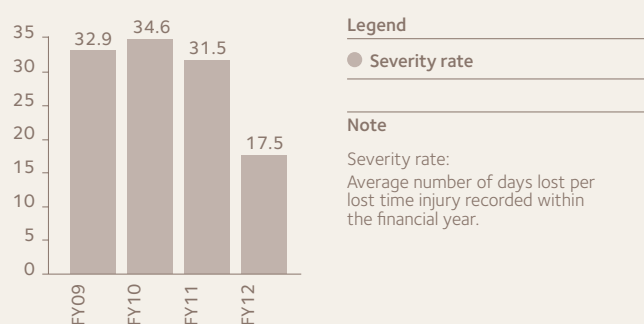
#### Contractor safety performance

AGL monitors and reports the LTIFR of contractors, to provide a more comprehensive representation of AGL's safety performance. In FY2012 the LTIFR for contracted workers was 1.1, which compares favourably to the LTIFR of 4.2 for AGL employees, and is a decrease from 1.7 in FY2011.

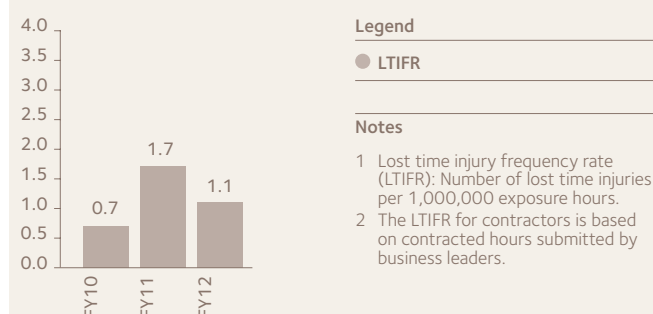
### Medical treatment injury frequency rate



### Severity rate



### Contractor lost time injury frequency rate<sup>1,2</sup>



### Fatalities

Year	Number
FY09	0
FY10	0
FY11	0
FY12	0

## Organisational Health and Safety

### Health, Safety and Environment Strategy

AGL's strategy is based on our commitment to provide a safe workplace, with engaged and resilient employees.

AGL understands the importance of having a strong, risk-focused health, safety and environment culture. The AGL Health, Safety and Environment (HSE) Strategy provides the framework to drive change in HSE culture and performance, assisting AGL in achieving its goal of being a safe and sustainable business.

The HSE Strategy is built on four cornerstones which are:

- > leadership
- > an active HSE culture
- > safe workplaces and equipment
- > a systematic approach.

The HSE Strategy is enabled through the delivery of the annual HSE Action Plans, and measured through HSE monthly performance reports.

#### Leadership

Strong and dedicated safety leadership is an essential component of achieving a 'zero-harm' work environment at AGL. An effective safety culture requires commitment, accountability and continuous reinforcement from all levels of management, including the AGL Board.

The AGL Board and executive team review safety performance via the monthly Group Performance Report. The Board Safety, Sustainability and Corporate Responsibility Committee also reviews safety performance on a quarterly basis, as well as reviewing audit findings and recommendations, strategic priorities and incident performance.

Safety is included as an agenda item in all business unit leadership team meetings. In addition, the Merchant Energy and Upstream Gas business units have established HSE Councils as a further mechanism for monitoring safety performance. Membership of these councils includes leaders, employees and Health and Safety team members from the business unit.

### Active HSE Culture

Improving the safety culture at AGL continued to be a focus during FY2012.

The process for conducting 'safety and wellbeing conversations' has become well-established at AGL. A safety and wellbeing conversation is a tool for ensuring leaders and employees participate in open discussions about safe and healthy behaviour, with a view to challenging and preventing unsafe, or unhealthy, behaviour.

During FY2012, AGL recorded 1,242 safety and wellbeing conversations across the entire business. Senior leaders discussed the outcomes of safety and wellbeing conversations at leadership team meetings, with the purpose of improving the quality of conversations conducted and highlighting any potential safety improvements. Increased use of the safety and wellbeing conversation process has encouraged senior leaders to engage directly with employees to demonstrate AGL's commitment to safety, particularly in relation to employee wellbeing.

New employees and contractors are introduced to the safety culture at AGL through the delivery of induction training. AGL's online induction program was completed by 733 new employees, transferees and contractors as at 30 June 2012. Existing employees with over one year's service are required to complete an annual online refresher in AGL's HSE framework. As at 30 June 2012, 1,946 existing employees and contractors had completed this program, equating to 100% of eligible employees.

During FY2012, the safety training provided to new leaders at AGL was reviewed and revised. A workshop introducing new leaders to AGL's HSE framework was piloted in June 2012, with further workshops to be held in FY2013.

### Workplaces and equipment

In addition to managing HSE systems, safety culture and leadership, the physical risks present in AGL work environments are assessed and managed continuously. Risk registers in each of AGL's business units have been reviewed during FY2012 to ensure risk levels are as low as reasonably practicable.

HSE consultation committees and representatives are an important link in engaging with employees on matters relating to safety, health and the environment; and in delivering the HSE Strategy.

During FY2012, AGL continued to consult with employees on HSE issues with 71 employee representatives on the nine HSE Committees, covering AGL's 2004 employees (FTE basis).

The HSE committees discuss, among other topics, the potential risks present in workplaces and the safe use of equipment.

## Organisational Health and Safety

### Systematic Approach

AGL's HSE management system, Life Guard, is based on the requirements of AS/NZS 4801 (2001): Occupational Health and Safety Management Systems; and AS/NZS ISO 14001 (2004): Environmental Management Systems.

Internal and external audits of the Life Guard system facilitate a culture of continuous improvement. Audit findings are reflected in both local action plans and improvements to the management system, strategic direction and safety programs.

In FY2012, Noel Arnold & Associates completed the second year of a three-year audit cycle of AGL's Life Guard HSE Management System. Audits were conducted at 14 AGL sites, covering all business units. Topics covered by this year's audits included incident management, emergency response, and management of hazardous substances, as well as a number of environmental topics. The audits recognised the visible commitment of leaders to HSE, the systems in place at sites to ensure effective risk management and the communication with employees on HSE matters. During FY2013, AGL will develop action plans to respond to the auditors' recommendations, focusing on incident close-out and emergency response planning.

On 1 January 2012, harmonised Work Health and Safety legislation was enacted which impacted AGL's operations in New South Wales, Queensland and the Australian Capital Territory. AGL undertook a number of activities to prepare for the new legislation, which included training workshops for employees, updating Life Guard system documentation to reflect the new requirements, and implementing action plans to address detailed changes applicable to individual business units.

AGL has annual HSE Action Plans in each business unit, tailored to deliver improvements for specific risk areas. During FY2012 AGL completed 99% of the actions in the HSE Action Plans, delivering improvements in:

- > completion of incident investigations;
- > communication of incident investigation findings;
- > risk control;
- > contractor safety management; and
- > completion of online training.

# Organisational Health and Safety

## Wellbeing

AGL supports the wellbeing and good health of its people through a range of initiatives, and recognises the influence that employee wellbeing can have on employee engagement and on achieving a high performance culture.

### Approach

At AGL we understand that there are many factors that contribute to employee wellbeing. *Wellbeing@AGL* provides programs in three key areas to support employees in making informed choices that will enhance their health and wellbeing.

The wellbeing framework for FY2012 included:

#### Physical Health

- > annual flu vaccinations;
- > Fruit at Work; and
- > Wellbeing Online.

#### Emotional Health

- > Resilience Program pilots; and
- > the Employee Assistance Services including the Employee Assistance Program (EAP)

#### Financial Health

- > discounts on Health Insurance and gym memberships.

During FY2011, AGL undertook a comprehensive benchmark study of the management of employees' emotional wellbeing. To address the findings of this study, in FY2012 AGL developed an employee Resilience Program consisting of workshops, online learning and personal action plans. This program was piloted extensively with 185 employees. The Resilience Program is being implemented across AGL in FY2013. Further work is being undertaken to address leadership capability of managing mental health in the workplace during FY2013.

As a result of the benchmark study of the management of employees' emotional wellbeing, AGL is also focussed on improving the implementation of change across the organisation. Specifically, AGL utilises the "People Centred Implementation" (PCI) methodology to introduce change in a way that actively involves employees. In FY2012, 165 employees were trained in the PCI methodology.

The Employee Assistance Program is another component of the wellbeing program that supports the emotional wellbeing of AGL employees. The service provides confidential and independent counselling for AGL employees and their immediate family members.

A leader hotline is also available through the Employee Assistance Program. AGL leaders have access to support and coaching on people management issues. This service is designed to assist leaders to proactively address issues.

### Performance

Based on FTE, AGL employees participated in, on average, 1.6 wellbeing activities throughout the year.

## Wellbeing programs and participation rates

Wellbeing activity	FY10 Participation rate (of FTE) <sup>1</sup>	FY11 Participation rate (of FTE) <sup>1</sup>	FY12 Participation rate (of FTE) <sup>1</sup>
Employee Assistance Programs <sup>2</sup>	7%	9%	5%
Fruit at Work <sup>3</sup>	45%	73%	66%
Influenza vaccination (seasonal program)	38%	41%	39%
Wellbeing Online	N/A	32%	39%

### Notes

- 1 Participation rates for 1 July to 30 June, based on FTE as at 30 June.
- 2 This equates to 109 new cases for the year.
- 3 Fruitbaskets ordered for teams equivalent to 45%, 73% and 66% of FTE in FY2010, FY2011 and FY2012 respectively.



## Introduction

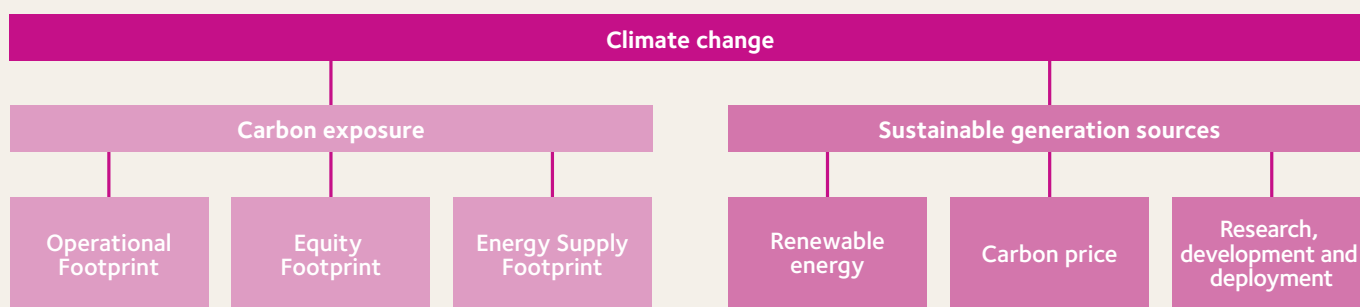
## AGL's goal is to invest in cleaner energy forms to reduce the greenhouse gas intensity of energy across the supply chain.

Both major Australian political parties support reducing greenhouse gas emissions by 5% relative to 2000 levels by 2020. While there is currently disagreement about the policy mechanism for reducing emissions, it is clear that investment in new infrastructure needs to be considered within the context of broad political support for reducing greenhouse gas emissions. That said, existing infrastructure is likely to be used well into the future and our investment in incumbent efficient generation such as the Loy Yang A Power Station is necessary to ensure security of supply while continuing to invest in new renewable and low emission generation for the future.

The two key focus areas for the Climate change chapter of this report are carbon exposure and sustainable generation sources.

**Carbon exposure:** Risks to AGL presented by climate change mitigation policies (for example, carbon pricing) could become significant over time. To pre-emptively manage these risks and work towards minimising exposure, the emissions intensity of new electricity generation plant built by AGL is included as a key performance indicator. Underpinning this indicator is a range of strategies, including responding to the introduction of a carbon price. AGL's greenhouse footprint is also included in this section of the report.

**Sustainable generation sources:** The opportunities for AGL in cementing a leadership position in low greenhouse gas emitting energy generation and supply are significant. AGL continues to be Australia's leading investor in renewable energy, leveraging off existing policies and positioning the company for future value realisation as the costs of carbon become accounted for in the energy supply chain.



Performance Summary			
Vision	Target FY2012	Performance FY2012	Target FY2013
<b>Carbon exposure</b>			
Continuing to lower the emissions intensity of AGL.	Intensity compared to Australian electricity average*: <b>&gt;50% below</b>	Intensity compared to Australian electricity average*: <b>&gt;60% below</b>	✓ Emissions intensity of investments in new generation capacity lower than 0.7 tonnes per MWh <sup>2</sup> .
<b>Sustainable generation sources</b>			
Australia's largest renewable energy company.	Renewable proportion of operated generation capacity**: <b>48%</b>	Renewable proportion of operated generation capacity**: <b>48%</b>	✓ Increase renewable investment capacity to 1,740 MW <sup>1</sup> .

## Notes

1 As at 30 June 2012, AGL had 1,320 MW of renewable capacity.

2 Refer to page 74 of the report for further information regarding this target.

\* Figures refer to the sent out greenhouse gas emissions intensity of generation (scopes 1 and 2) from electricity generation assets over which AGL had operational control during FY2012. Generation from AGL Loy Yang is not included in these figures for either the period prior to, or following the AGL acquisition (generation from AGL Loy Yang will be included from FY2013 onwards). Generation assets that are not operated by AGL are not included (for example, where AGL has a right to electricity output or power purchase agreements with power stations operated by other organisations).

\*\* Figures refer to the capacity of electricity generation assets over which AGL had operational control, as at 28 June 2012 prior to the Loy Yang acquisition. The renewable component includes the installed capacity of hydro, wind, solar, biomass, biogas and landfill gas generation assets operated by AGL. Generation assets that are not operated by AGL are not included (for example, where AGL has a right to electricity output or power purchase agreements with power stations operated by other organisations).

## Climate change adaptation risks

Climate change and climate change mitigation policies, such as carbon pricing, bring a number of additional risks to AGL's operations and investment strategy.

Extreme weather events and changes in weather patterns present risks to AGL's business in terms of physical impacts to energy infrastructure, as well as financial risks associated with changes in energy demand.

### Categories of climate change adaptation risk

#### Energy demand

Demand for electricity in Australia is correlated to both economic activity and temperature. Historically, as the economy grows, so does demand for energy. As temperatures rise, so too does the demand for electricity because of higher utilisation of air conditioning. Wholesale electricity prices at peak demand times can often increase by several thousand percent. Electricity demand is likely to become peakier with increased summer air conditioning load. Peakier characteristics of the electricity sector require retailers and integrated energy companies such as AGL to devote significant resources to managing price volatility. AGL's recent acquisitions and investments demonstrate strategic efforts to manage price volatility. These commercial risks are being managed by consistently updating forecasts of energy demand based upon the latest temperature and other weather data; and investing in assets that provide profitable solutions, such as gas and hydro peaking generation and gas storage capabilities.

As a result of changes to the collation of data, the uptake of energy efficiency initiatives, the deployment of solar PV panels and general price elasticity of demand, underlying energy demand forecasts have been reduced by the Australian Energy Market Operator. Unfortunately, in the context of climate change it is likely that peak demand will continue to grow in excess of underlying energy demand. This has a number of negative consequences, including a deterioration of the capital stock utilisation. In other words, it is the gap in the growth rates of peak demand and underlying energy demand that create problems for consumers and producers. Accordingly, AGL has been a leading advocate of the introduction of smart metering technologies and dynamic pricing to provide incentives to market participants to reduce peak demand (see AGL Applied Economic and Policy Research Working Paper No. 24 and AGL Applied Economic and Policy Research Working Paper No. 31 at [www.aglblog.com.au](http://www.aglblog.com.au)).

#### Physical risks to infrastructure

AGL owns a number of power stations and gas production assets in the eastern states of Australia. The adaptation related risks to AGL include both physical damage and reduced supply reliability. Physical damage could result from extreme weather events including exceptional bushfires and floods, which may reduce operating capacity. In turn, reduced supply reliability could potentially impact AGL's ability to supply retail customers cost-effectively.

#### Water availability risks

AGL owns a number of hydro electricity generation assets. When these assets were acquired, a key element of the due diligence work undertaken involved long-term hydrology considerations.

#### Regulatory risks

AGL has identified climate change, and the changing regulatory, economic and social environment impacts associated with mitigation policies, including the introduction of a carbon price, as a significant key risk.

#### Customer

AGL seeks to help its customers use energy more efficiently to lower their energy costs and to reduce their own greenhouse gas emission footprints. The Energy Services business unit provides strategic consulting advice on climate change risks and opportunities to customers, implements projects that reduce a customer's carbon footprint, and assists in managing exposure to increased costs related to climate change policy responses. Preparatory work undertaken in the latter half of the last decade advising customers of the need to understand energy efficiency opportunities is beginning to lead to significant project opportunities.

In FY2012, AGL held a number of workshops for our customers providing advice in relation to minimising the impact of carbon pricing on their businesses. These workshops had a strong practical component in relation to energy efficiency opportunities. To complement this information, AGL provided a 'checklist' for companies to utilise to understand how carbon pricing will impact on their bottom line (see AGL Applied Economic and Policy Research Working Paper No.21). Working with customers in this way is critical to AGL's long-term success.

## Actions taken in FY2012 to address climate change risks

### Vulnerability assessment of electricity assets

The most material adaptation risk identified by AGL is the continued decline in the capital utilisation rate within the electricity industry. As the rate of peak demand continues to grow in excess of underlying energy demand, greater levels of infrastructure are required for comparably less time. This creates an 'energy market death spiral' whereby prices increase further as a result of greater fixed costs spread over lower output. AGL Applied Economic and Policy Research Working Paper No.31, which raised this concept, received extensive media coverage. Actions taken by AGL within this context include: engaging with policy makers about the need to introduce smart metering technologies and dynamic pricing; promoting bill smoothing for our customers to avoid "bill shock"; and working with our customers to explore individual energy efficiency opportunities.

AGL has continued to update physical vulnerability assessments of critical infrastructure. This ongoing assessment is based on key Australian publications by the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and Bureau of Meteorology (BOM).

The CSIRO/BOM report in February 2010 concluded that:

- > Australia may become hotter in coming decades: Australian average temperatures could rise by between 0.6 and 1.5 °C by 2030. Warming would be lower near the coast and in Tasmania and higher in central and north-western Australia. These changes would be experienced through an increase in the number of hot days.
- > Much of Australia may become drier in coming decades: Compared to the period 1981–2000, rainfall may decrease in southern areas of Australia during winter, in southern and eastern areas during spring, and in south-west Western Australia during autumn. An increase in the number of dry days is expected across the country, but it is likely that there will be an increase in intense rainfall events in many areas.

The vulnerability assessment considered the potential risks emerging from issues of water availability, interrupted access to market through transmission being compromised and reliability of plant. Potential opportunities were also evaluated, in particular the value of peaking plant in meeting peakier electricity load at times of high temperatures.

### Project Carbon Price Implementation

In November 2011, the Federal Parliament passed the *Clean Energy Act 2011* (Cth) (CEA), which introduced a price on carbon from 1 July 2012. Operating at a pre-determined price for three years, the carbon pricing mechanism is a cap and trade emissions trading scheme.

Under the CEA, AGL anticipates a direct liability of around 27 mtCO<sub>2</sub>e arising from emissive facilities (primarily electricity generation) and the embodied emissions associated with natural gas supply to customers. In the first year of the carbon pricing mechanism, the price is set at \$23. As such, AGL's liability under the CEA will equate to around \$620 million. However, as a net-purchaser of electricity for customers (see greenhouse supply footprint on page 71), AGL estimates the CEA will result in an additional, approximately, \$1 billion cost to supply our customers.

To prepare for the commencement of the carbon pricing mechanism, AGL assembled a cross-business project team to assess the impacts and implement the necessary changes to meet compliance, and the new costs of supplying energy. The CEA introduces new measuring and reporting requirements, new procedures with respect to managing an energy supply portfolio, and changes to the way that tariffs for electricity and gas supply are structured.

Consequently, AGL's project team included expertise from:

- > wholesale electricity and gas markets;
- > retail electricity and gas supply;
- > communications;
- > finance and emissions accounting; and
- > legal and regulatory.

Given commencement of the price in just over six months after passage of legislation, the timeline for the project was challenging. As noted earlier, in the lead up to 1 July 2012, AGL held a series of seminars with large market customers to assist in budgeting for the impacts of the carbon pricing mechanism – this is believed to be an Australian first. Information and communications to assist customers to understand the reform was also developed, including animations, social media and more traditional print media.

As at end of FY2012, AGL was on track to commence pricing emissions in its portfolio of energy supply for both electricity and gas.

## Carbon exposure

### Introduction to carbon exposure

In the energy industry, to obtain an accurate picture of a company's greenhouse performance it is not enough to look solely at the total amount of greenhouse gas emitted from the company's operations. It is equally important to examine the greenhouse gas emissions intensity of the assets managed and invested in by the company, and how the company's business strategy will contribute to the overall greenhouse intensity of Australia's economy into the future.

The acquisition of the Loy Yang A power station will materially impact AGL's carbon risk. While this report excludes the emissions from Loy Yang A (due to the acquisition occurring so close to the end of the reporting period), future reports will see a material increase in AGL's emissions footprints. AGL understands the concerns of stakeholders in relation to this material increase. The AGL Climate Change Council has provided critical feedback in relation to the acquisition of Loy Yang. AGL has clarified that the current target in relation to carbon risk is poorly worded. This is because AGL has never ruled out acquiring *existing* coal-fired plant but continues to rule out funding and building *new* coal-fired plant. Accordingly, future targets in relation to carbon risk will better reflect this strategic intent. That said, AGL understands that the Climate Change Council is disappointed with AGL's decision to acquire the Loy Yang A power station.

For FY2013, AGL has adopted a target to reflect potential acquisitions of existing power stations within an investment strategy focused on new renewable and low emission power stations. By focusing on the intensity of investments in new power generation capacity, AGL is providing scope for acquisition of incumbent existing power stations while demonstrating intent to deliver on a longer term vision of continuing to lower the emissions intensity of AGL.

### Approach

The greenhouse intensity of AGL's operated electricity generation portfolio compared to the market average is the traditional way in which AGL has measured how well the organisation is positioned to manage the risk of regulatory intervention through a carbon price. Due to the clarification in strategy on page 74, in future periods AGL will be moving to a new approach whereby the emissions intensity of investment in *new* electricity generation will be benchmarked.

**Vision for carbon exposure:** AGL's vision is to continue to lower the emissions intensity of AGL.

**Drivers:** In addition to measuring the greenhouse intensity of generation as an indicator of future economic impacts on AGL, AGL also uses three approaches for measuring and communicating the greenhouse gas impact of its business: an Operational Footprint (page 68), an Equity Footprint (page 70) and an Energy Supply Footprint (page 71).

### Performance

The greenhouse intensity of electricity generated from AGL's operated assets compared to the market average is one way to determine how the portfolio is positioned to compete in an energy market that includes a price on carbon.

The greenhouse gas intensity of AGL's operated electricity generation assets decreased by 13% compared to FY2011, to 0.31 tCO<sub>2</sub>e/MWh (sent-out). While this performance meets the benchmark set for FY2012 in the 2011 AGL Annual Report (AGL operated emissions intensity less than half the market average), the intensity of AGL's operated assets inclusive of a full year of Loy Yang emissions would result in AGL's intensity being above the market average (slightly more than 1 tCO<sub>2</sub>e/MWh (sent-out).

From next year, AGL's target will be for investments in new generation capacity to have a combined intensity lower than 0.7 tCO<sub>2</sub>e/MWh.

## Greenhouse footprint

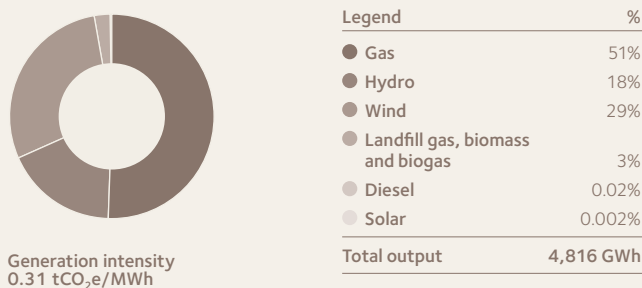
A summary of AGL's three greenhouse footprints is presented below. Further detail about each footprint is provided in the following pages.

Operational Footprint <sup>1</sup>		Equity Footprint		Energy Supply Footprint	
The Operational Footprint covers the emissions from activities and assets that AGL operates. The Operational Footprint increased by 0.5% to 1.604 MtCO <sub>2</sub> e compared to FY2011.		The Equity Footprint sets out AGL's share (by percentage investment) of the emissions from fully or partly owned assets. The Equity Footprint has increased by 5% to 8.4 MtCO <sub>2</sub> e compared to FY2011, largely as a result of increased emissions from AGL's stake in the Loy Yang A Power Station.		The Energy Supply Footprint estimates the supply chain greenhouse gas emissions associated with the electricity and gas AGL sells to its customers. The Energy Supply Footprint decreased by 9% in FY2012, due to both a decrease in energy supply volumes and a decrease in emissions intensity of electricity compared to FY2011.	
FY12	1.604 MtCO <sub>2</sub> e	FY12	8.4 MtCO <sub>2</sub> e	FY12	46.5 MtCO <sub>2</sub> e
FY11	1.596 MtCO <sub>2</sub> e	FY11	8.0 MtCO <sub>2</sub> e	FY11	49.2 MtCO <sub>2</sub> e
FY10	1.489 MtCO <sub>2</sub> e	FY10	8.0 MtCO <sub>2</sub> e	FY10	51.0 MtCO <sub>2</sub> e

### Notes

- AGL's Operational Footprint includes scope 1 and scope 2 emissions only. Scope 3 emissions were included in this footprint in previous Sustainability Reports, therefore historical emissions have been recalculated to include only scope 1 and scope 2 emissions.
- Greenhouse gas emissions associated with the Loy Yang A Power Station and adjacent mine are not included in the 2012 Operational Footprint because AGL acquired these assets very late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.

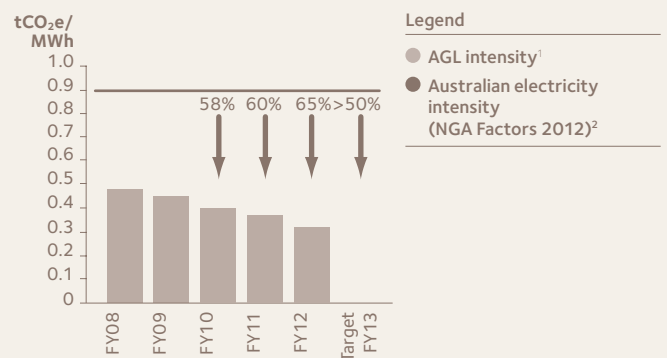
## Output and intensity of AGL operated electricity generation assets<sup>1</sup>



### Notes

- These figures relate to the sent-out greenhouse gas emissions (scope 1 and scope 2) intensity of generation assets over which AGL has operational control, regardless of who owns the asset. Assets where AGL controls or has rights to the electricity output only are not included.
- Generation and emissions associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place so late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.

## Intensity of AGL operated electricity generation assets<sup>1</sup>



### Notes

- These figures relate to the sent-out greenhouse gas emissions (scope 1 and scope 2) intensity of generation assets over which AGL has operational control, regardless of who owns the asset. Assets where AGL controls or has rights to the electricity output only are not included.
- Australia-wide scope 2 greenhouse gas emissions intensity figure is from the National Greenhouse Accounts (NGA) Factors published by the Department of Climate Change and Energy Efficiency, July 2012 (latest estimate is 0.89 tCO<sub>2</sub>e/MWh).
- Generation and emissions associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place so late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.

## Operational Footprint

The Operational Footprint covers the emissions from activities and assets that AGL operates.

### Performance

The Operational Footprint remained fairly constant in FY2012, increasing by 0.5% compared to FY2011, to 1,604 ktCO<sub>2</sub>e (Scope 1 and Scope 2). Emissions from power generation increased by 0.1%, emissions from corporate activities and oil and gas exploration, storage and production decreased by around 12% and emissions from LPG production and project construction increased modestly.

The greenhouse intensity of electricity produced from AGL's operated electricity generation portfolio was 0.31 tCO<sub>2</sub>e/MWh (sent-out) in FY2012, a decrease of 13% compared to FY2011. This decrease was due to an increase in renewable generation as a result of new wind generation capacity commencing operation, and because FY2012 was the first full year of operation for the Hallett 4 Wind Farm commissioned in FY2011. During FY2012 there was a 15% increase in electricity generation sent out, and a 0.1% increase in greenhouse gas emissions from AGL's operated electricity generation assets compared to the previous year.

### Electricity generation

AGL's portfolio of gas fired power generation includes the Torrens Island Power Station (1,280 MW intermediate generation plant) and the Somerton Power Station (150 MW peaking plant), as well as embedded natural gas fired cogeneration plants at Coopers and Symex, and the 12 MW embedded coal seam gas fired power station at Moranbah.

AGL's operational footprint in FY2012 is dominated by greenhouse gas emissions from gas fired generation assets. In FY2012, gas fired generation comprised 94% of AGL's operational greenhouse gas emissions. This remained stable compared to FY2011, when 94% of emissions also arose from the operation of these facilities.

With a 3% increase in generation from the Torrens Island Power Station, emissions from gas fired generation in FY2012 increased by 2% compared to the previous year, to 1,395 ktCO<sub>2</sub>e.

Emissions from the Somerton Power Station decreased by more than 50%, commensurate with the decrease in generation sent out from that facility. As a peaking power station, generation output from Somerton can fluctuate significantly year to year, depending on demand.

Emissions from renewable generation assets are, by their nature, small compared to other types of generation. AGL's operated renewable generation portfolio includes hydro generation assets in Victoria and New South Wales, and the Wattle Point and Hallett wind farms in South Australia. During FY2012, emissions from these facilities totalled 14 ktCO<sub>2</sub>e.

The commissioning of the AGL Bluff (Hallett 5) and Oaklands Hill Wind Farms, and the first full year of operation for the AGL Hallett 4 Wind Farm contributed to a marked increase in renewable generation compared with FY2011. In FY2012, sent-out renewable generation from AGL's operated assets increased by 33% compared to FY2011, to a total of 2,369 GWh. In particular, FY2012 saw large increases in wind and hydro generation, which increased by 62% and 7% respectively, compared to the previous year. This follows the large increase in AGL's renewable generation in FY2011 and FY2010 (which increased by 34% and 25% respectively, as compared to the

previous year in each case).

The AGL Energy Services division within Merchant Energy operates a variety of other 'embedded' generation facilities, including landfill gas, biomass and biogas generation facilities and the Wilpena Pound Solar/ Diesel facility. Emissions from these facilities decreased by around 4% to 9 ktCO<sub>2</sub>e in FY2012, compared to the previous year. This was largely due to a 3% reduction in generation sent out from the Werribee biogas generator.

During FY2012, AGL also had operational control of the construction of the Macarthur Wind Farm in Victoria (via a Joint Venture), resulting in 10 ktCO<sub>2</sub>e of greenhouse gas emissions.

### Hydrocarbon Extractions (HC Extractions)

AGL owns the HC Extractions facility at Kurnell, New South Wales. HC Extractions produces LPG and naphtha from oil refinery waste gas. HC Extractions greenhouse gas emissions result from natural gas use, electricity consumption and minor emissions associated with fugitive emissions at the site. Greenhouse gas emissions for FY2012 were 26 ktCO<sub>2</sub>e, 8% higher than FY2011, returning to normal levels following a major shutdown during FY2011.

### Upstream Gas

Greenhouse gas emissions from AGL's Upstream Gas projects decreased by 12% compared to FY2011, to 34 ktCO<sub>2</sub>e. These emissions largely arise from AGL's oil and gas production operations at the Camden Gas Project in New South Wales, and in the Surat Basin in Queensland, along with the Silver Springs Gas Storage Facility which commenced operations during FY2012.

Emissions from the Camden Gas Project decreased by 7% compared to FY2011 to 18 ktCO<sub>2</sub>e, with gas production at the facility increasing by 1% over the same period. Emissions from oil and gas production at Silver Springs and associated fields in the Surat Basin decreased by 23% in FY2012, to 7 ktCO<sub>2</sub>e, as a result of lower energy production (down by 47%) during the construction and commissioning of the adjacent Silver Springs Gas Storage Facility. Gas storage involves the compression and injection of gas into an underground reservoir. The facility commenced operation in August 2011, and produced 8 ktCO<sub>2</sub>e of greenhouse gas emissions during FY2012.

AGL commenced oil production at the ATP1056P in the Cooper Basin in Queensland during the year, resulting in emissions of 0.3 ktCO<sub>2</sub>e during the year.

AGL's gas development projects in the Gloucester and Hunter regions in New South Wales continued to have very low levels of activity during FY2012, and as a result, the associated greenhouse gas emissions were minimal (0.2 ktCO<sub>2</sub>e in total). These projects undertook no well drilling, well testing, venting or flaring during the reporting period.

AGL's Upstream Gas business has historically had low greenhouse gas emissions, because most of the projects have been in their initial stages of exploration and well testing. Upstream Gas emissions account for less than 3% of AGL's total Operation Footprint. AGL expects Upstream Gas emissions to increase over time as projects progress from exploration and testing, to production.

**Retail and Corporate**

AGL manages a number of office facilities where employees carry out services related to the provision of gas and electricity to customers, and provide corporate services to support the broader business. Activities contained in this data included electricity use and vehicle transport. During FY2012, corporate activities resulted in 5 ktCO<sub>2</sub>e of greenhouse gas emissions.

**Scope 3 emissions**

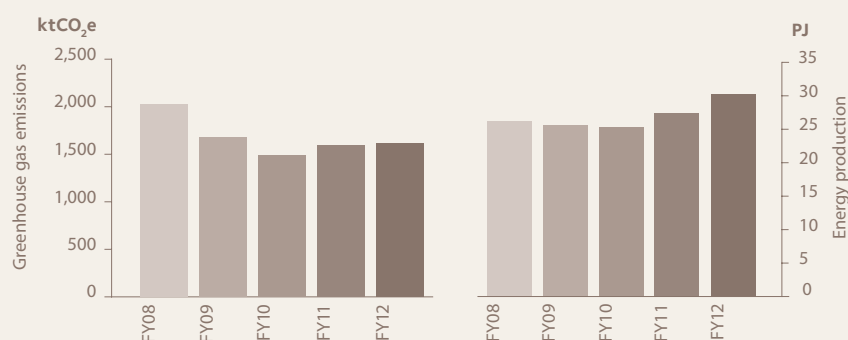
Scope 3 emissions are classified as indirect emissions (other than associated with the purchase of steam/heat or electricity) that occur outside an organisation's direct boundary. The primary sources of scope 3 emissions from AGL's operated activities are from the purchase of fuel (mainly natural gas), with 88% arising from the use of natural gas and coal seam gas primarily in AGL's electricity generation assets. In FY2012, AGL's scope 3 emissions were 340 ktCO<sub>2</sub>e, which represents a slight increase of 3% from 332 ktCO<sub>2</sub>e in FY2011.

This is largely related to an increase in generation from the Torrens Island Power Station (and a corresponding increase in the use of natural gas in the facility).

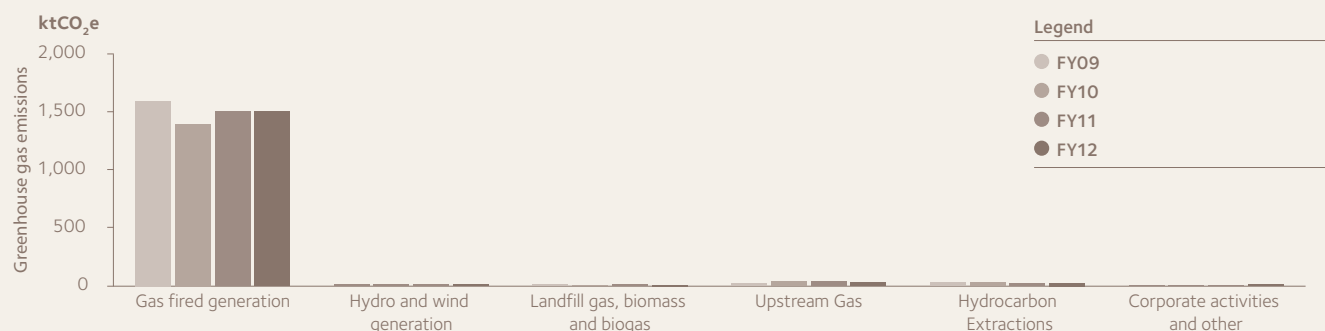
**AGL Loy Yang Power Station**

On 29 June 2012, AGL finalised the acquisition of the Loy Yang A Power Station and adjacent brown coal mine. Given that the acquisition occurred so late in the financial year, the emissions from this facility have been excluded from the AGL Operational Footprint for FY2012. AGL will include emissions from these facilities in the FY2013 operational footprint.

In FY2012, the greenhouse gas emissions from the Loy Yang A Power Station, mine and office totalled 20.4 million tCO<sub>2</sub>e (Scope 1 and Scope 2), an increase of 4% compared to FY2011, when greenhouse gas emissions were 19.6 million tCO<sub>2</sub>e. The emissions intensity of electricity generated increased by 3% from 1.28 t CO<sub>2</sub>e/MWh in FY2011 to 1.31 t CO<sub>2</sub>e/MWh in FY2012.

**Operational Footprint: Greenhouse gas emissions and net energy production****Notes**

- Includes scope 1 and 2 greenhouse gas emissions and net energy production for assets where AGL had operational control during the period. This does not include Oakey or Yabulu power stations, or AGL's non-operated Upstream Gas joint ventures. Greenhouse gas emissions and net energy production have been calculated in accordance with the *National Greenhouse and Energy Report Act* methodologies. Net energy production includes the sent-out generation from AGL's operated power stations, cogeneration steam production, oil and gas sales from operated Upstream Gas assets, and the production of LPG, naphtha, hydrogen and return gas at the Hydrocarbon Extraction facility. It does not include any energy production for use within the facility.
- Generation and emissions associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place so late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.

**Operational Footprint: Greenhouse gas emissions by activity type****Notes**

- Includes scope 1 and 2 greenhouse gas emissions for assets where AGL had operational control. This does not include Oakey or Yabulu power stations, or AGL's non-operated Upstream Gas joint ventures. While emissions from AGL's corporate and retail activities have been included (calculated in accordance with the *National Greenhouse and Energy Reporting Act*) it should be noted that these emissions have been partially offset by purchasing 100% GreenPower at AGL's main offices in Sydney, Melbourne, Adelaide and Mount Beauty.
- Generation and emissions associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place so late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.

## Equity Footprint

The Equity Footprint sets out AGL's share (by percentage investment level) of the emissions from fully or partially owned entities. The Equity Footprint indicates to AGL shareholders the greenhouse gas impacts associated with their investment.

### Performance

The Equity Footprint increased by 5% to 8.4 MtCO<sub>2</sub>e in FY2012, primarily driven by an increase in emissions associated with AGL's equity share in the Loy Yang A Power Station during the year.

The greenhouse intensity of electricity produced from electricity generation assets that AGL fully or partly owned in FY2012 was 0.95 tCO<sub>2</sub>e/MWh (sent-out), remaining constant compared to FY2011. This intensity is dominated by AGL's equity share of Loy Yang A Power Station, which provides around 60% of AGL's equity share of electricity generation each year.

The emissions and generation from the operation of AGL's Wattle Point, Hallett 1, Hallett 2, Hallett 4 and Oaklands Hill Wind Farms are not included in this footprint as they are operated but not owned by AGL. The Hallett 5 Wind Farm is included for the period until it was sold on 14 May 2012.

### Included interests

AGL's stake in Loy Yang Power dominates AGL's Equity Footprint. The Loy Yang A Power Station and mine produced emissions of 20.4 MtCO<sub>2</sub>e in FY2012, with AGL's equity share estimated to be 6.7 MtCO<sub>2</sub>e. On 29 June 2012, AGL completed the acquisition of the remaining 67.5% of the Loy Yang A Power Station and adjacent mine that it did not already own. The 2012 Equity Footprint therefore accounts for 32.5% of emissions from the power station and mine for 364 days of 2011/12, and 100% of emissions for the final two days of the period. The greenhouse intensity of the electricity produced by the Loy Yang Power Station during FY2012 was 1.31 tCO<sub>2</sub>e/MWh sent-out (including scope 1 and 2 emissions). This power station operates at the low end of the emissions intensity range of 1.2 to 1.5 tCO<sub>2</sub>e/MWh for Victorian coal fired generators, and is considered to be one of the most efficient among these generators.

The Equity Footprint includes each facility in AGL's Operational Footprint, apart from the AGL wind farms (which are generally operated but not owned by AGL). The Hallett 5 Wind Farm is included for the period until it was sold in May 2012. The

emissions from AGL's operated joint ventures are adjusted in the Equity Footprint, so as to account for AGL's share of ownership. The Equity Footprint also includes estimates of the emissions from AGL's construction projects prior to completion and/or AGL operation, including wind farms, the Diamantina Power Station and the Qenos Cogeneration unit (emissions estimates based on available data from similar projects), and emissions from AGL's Energy Services assets that are not part of AGL's operated facilities (such as landfill gas flares, Compressed Natural Gas bus refuelling sites and the Isis Bagasse biomass cogeneration site).

The Moranbah Gas Project is a joint venture between AGL and Arrow Energy, which produces coal seam gas from the Bowen Basin in Queensland (AGL has a 50% interest in the project). AGL has estimated the FY2012 greenhouse gas emissions from these activities based on data provided by Arrow Energy, calculated in accordance with the National Greenhouse and Energy Reporting regulatory framework.

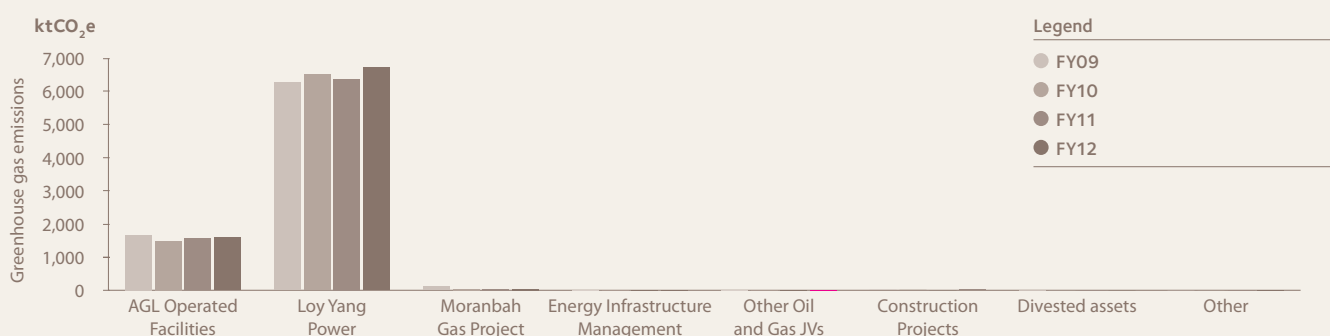
The Equity Footprint includes the emissions associated with AGL's 35% and 37.5% interests in a number of oil and gas production licenses in the Cooper Basin, until December 2011 when AGL divested these assets. Emissions arose as a result of oil and gas production, and coal seam gas exploration. AGL also holds a 50% interest in Energy Infrastructure Management (EIM) which operates a range of gas infrastructure assets, including a number of pipelines. AGL's equity share of these emissions has been estimated based on information provided by EIM and Acer Energy.

AGL's other oil and gas interests include a 33.33% interest in the Lytton Crude Oil Terminal in Queensland, and production licences in the Surat and Bowen Basins in Queensland and (non-operated) exploration permits in the Taranaki basin in New Zealand (which have low or negligible emissions). Any significant emissions from these assets have been estimated from information provided by Santos and IOR Terminal.

During the reporting period, AGL also had equity interests in CSM Energy, Central Queensland Energy Joint Venture, Mascotte Joint Venture, and Torrens Energy. AGL has assumed that the greenhouse gas emissions associated with the minimal activities associated with these projects are negligible.

In addition, AGL has a 50% interest in the ActewAGL Retail Partnership, which includes the operation of the retail electricity, gas and water businesses of ActewAGL. Minimal greenhouse emissions result from office based activities for the ActewAGL partnership.

### Equity Footprint: Greenhouse gas emissions



#### Notes

- Includes scope 1 and scope 2 greenhouse gas emissions from assets that AGL owns fully or in part (by percentage ownership).
- Greenhouse gas emissions for the Loy Yang A Power Station and associated assets are included in the AGL Equity Footprint on an equity share of 32.5% until 28 June 2012, and 100% thereafter.



## Energy Supply Footprint

The Energy Supply Footprint is an estimate of the total supply chain greenhouse gas emissions associated with the electricity and gas supplied by AGL to its customers. The Energy Supply Footprint covers greenhouse gas emissions resulting from the production, transportation, distribution and consumption of electricity and gas.

### Electricity Supply Footprint

Greenhouse gas emissions are produced during the generation of electricity (primarily carbon dioxide) from the combustion of fossil fuels such as coal and natural gas. Energy losses occur across the energy supply system (transmission and distribution systems, and power stations' auxiliary loads).

Power stations therefore have to generate more electricity than is used by end-use consumers to cover the losses associated with the transmission and distribution networks used to deliver electricity to the customers. The direct (physical) emissions occur at the point of generation (power stations), where the fuel is combusted. There are few direct emissions from transmission and distribution, and there are no direct greenhouse gas emissions at the consumer end of the supply chain.

The Energy Supply Footprint emissions associated with the provision of electricity to AGL's customers in FY2012 has decreased by 3% to 35.6 MtCO<sub>2</sub>e compared to the previous year. This is largely due to a decrease in generation intensity (as documented in the National Greenhouse Accounts factors), with supply volumes remaining fairly constant year on year at 33 TWh.

### Gas Supply Footprint

In the case of gas supply, greenhouse gas emissions arise from production and processing at gas fields, transmission, distribution, and when gas is combusted by AGL's customers in their homes and businesses.

During gas production, there is some venting of carbon dioxide and methane at the gas field, minor fugitive emissions during processing, and the combustion of some natural gas to operate processing equipment. Further emissions occur during transmission and distribution, comprising fugitive emissions and emission arising from the use of additional natural gas in compressors along the pipelines. At the consumer end of the supply chain, the combustion of natural gas produces the bulk of the supply chain greenhouse gas emissions.

The Energy Supply Footprint emissions associated with the provision of gas to AGL's customers has decreased by 13% compared to FY2011 to 10.9 MtCO<sub>2</sub>e, in line with a 14% decrease in gas supply volumes. The intensity supplied to AGL customers in FY2012 has remained relatively constant compared with FY2011.

#### Note

- In 2011, AGL revised the methodology used to calculate the AGL Energy Supply Footprint. The values provided in 2012 are calculated using this new methodology, and for consistency, historical values have also been recalculated. The Gas Supply Footprint includes all supply chain and combustion emissions associated with the supply of electricity and natural gas by AGL Energy and its wholly owned subsidiaries to mass market, commercial and industrial, and wholesale customers. Electricity and gas supplied by ActewAGL (of which AGL is a 50% partner) are excluded from the Supply Footprint. Emissions associated with the wholesale supply of natural gas (by AGL) to AGL-operated power stations are also excluded, to avoid double counting (the Electricity Supply Footprint includes upstream and generation emissions from supplying electricity). These scope 1 and scope 3 emissions are included in AGL's Operational Footprint.

### Electricity Supply Footprint<sup>1,2</sup>

Source	Emissions (MtCO <sub>2</sub> e)			
	FY09	FY10	FY11	FY12
Generation	35.1	34.7	33.2	32.2
Transmission and distribution	2.8	3.5	3.3	3.4
Consumption	0.0	0.0	0.0	0.0
<b>Total</b>	<b>37.9</b>	<b>38.2</b>	<b>36.5</b>	<b>35.6</b>

#### Notes

- The Electricity Supply Footprint estimates the life cycle greenhouse gas emissions associated with the electricity that AGL sold to its customers during the period. Estimates are calculated using emission factors published by the Commonwealth Department of Climate Change and Energy Efficiency.
- Values may not sum due to rounding.

### Gas Supply Footprint<sup>1,2</sup>

Source	Emissions (MtCO <sub>2</sub> e)			
	FY09	FY10	FY11	FY12
Production	2.0	1.9	1.7	1.4
Transmission and distribution	1.3	1.2	1.2	1.1
Consumption	9.4	9.6	9.7	8.4
<b>Total</b>	<b>12.7</b>	<b>12.7</b>	<b>12.6</b>	<b>10.9</b>

#### Notes

- The Gas Supply Footprint estimates all supply chain and combustion emissions associated with the natural gas that AGL sold to its customers during the period. Estimates are calculated using emission factors and Australian greenhouse gas inventory data published by the Commonwealth Department of Climate Change and Energy Efficiency.
- During FY2012, AGL became aware that the published scope 3 greenhouse gas emission factors published by the Commonwealth for natural gas consumption in each state do not include fugitive emissions from the operation of low pressure distribution networks. AGL has therefore estimated these emissions from data in the Australian Greenhouse Gas Inventory, and has adjusted data reported in previous reporting periods accordingly.
- Values may not sum due to rounding.

## Greenhouse footprint – supporting information

### Supporting information – Operational Footprint

#### Data preparation and boundaries

Greenhouse gas emissions, energy consumption and energy production data reported as part of the AGL Greenhouse Footprint have been prepared in line with AGL's interpretation of the *National Greenhouse and Energy Reporting Act 2007* (Cth) and supporting regulations.

Notable exceptions are as follows:

- > Despite inclusion in the AGL Energy Limited 2012 annual Report under the *National Greenhouse and Energy Reporting Act* (Cth), greenhouse gas emissions, energy production and energy consumption related to the Great Energy Alliance Corporation Pty Limited facilities acquired by AGL on 29 June 2012 are excluded from AGL's 2012 Operational Footprint (since the acquisition occurred so late in the financial year). For completeness, the emissions from the AGL Loy Yang Power Station and associated facilities are reported separately to the AGL 2012 Operational Footprint;
- > Energy consumption is included in the Operational Footprint only if it is combusted or otherwise disposed or used in an AGL operated facility. Energy that is 'consumed' by way of transformation from one commodity to another, and renewable energy sources (wind, water and solar) are not included in the Operational Footprint consumption values;
- > All electricity production reported in the Operational Footprint is presented on a 'sent-out' basis (i.e. excluding generation that is consumed within the facility and is not sold to any market or customer);
- > Oil and gas energy production is presented on a 'sales' basis, and excludes any production used within the facility, or energy forms that are transformed from one energy commodity to another;
- > Energy is not included in the Operational Footprint as either consumption or production if the commodity is on-supplied to another user without significant processing or transformation.

#### Reporting period

The data presented in the AGL greenhouse footprints for FY2012 has been prepared for the reporting period 1 July 2011 to 30 June 2012.

#### Greenhouse gas emissions estimation methodology

The Operational Footprint has been estimated in line with the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (as amended) published by the Commonwealth of Australia for the FY2012 reporting year, and related guidelines. Unless otherwise indicated, greenhouse gas emissions are the sum of scope 1 and scope 2 greenhouse gas emissions, expressed in tonnes of carbon dioxide equivalents (tCO<sub>2</sub>e).

#### Energy consumption and energy production measurement

The measurement of energy consumption and energy production presented in the Operational Footprint has been carried out in line with the National Greenhouse and Energy Reporting (Measurement) Determination 2008 (as amended) published by the Commonwealth of Australia (unless otherwise indicated and subject to the exceptions noted above). Energy consumption and energy production are all expressed in gigajoules (GJ), unless otherwise indicated.

#### Organisational boundaries

Greenhouse gas emissions, energy consumption and energy production presented in the Operational Footprint have been reported for the corporate group of AGL Energy Limited (the parent company and its wholly owned Australian subsidiaries), as determined in line with the *National Greenhouse and Energy Reporting Act 2007* (Cth).

#### Operational boundaries

Greenhouse gas emissions, energy consumption and energy production in the Operational Footprint have been reported for facilities over which AGL has 'operational control', as defined in the *National Greenhouse and Energy Reporting Act 2007* (Cth), within the organisational boundaries.

As noted previously, energy and greenhouse gas emissions for the Loy Yang A Power Station and associated facilities are excluded from the Operational Footprint for FY2012, although for completeness this information has been provided separately.

## Carbon exposure

### Scope 3 greenhouse gas emissions

Scope 3 greenhouse gas emissions have been presented separately from the Operational Footprint for FY2012. Scope 3 greenhouse gas emissions have been treated separately as the reporting of this data is not required under the *National Greenhouse and Energy Reporting Act 2007* (Cth). Scope 3 emission sources from AGL's activities include purchase of fuel (mainly natural gas) and electricity use for power stations and office-based activities. Scope 3 emissions from sources such as office waste disposal and travel are negligible and have not been estimated.

Scope 3 emissions have been estimated using emission factors published by the Commonwealth in the *National Greenhouse Accounts Factors* (July 2011).

### Supporting information – Equity Footprint

The Equity Footprint sets out AGL's share (by percentage investment level) of the emissions from fully or partially owned entities (in Australia and overseas). AGL considers that the Equity Footprint broadly meets the requirements of the WBCSD/WRI Greenhouse Gas Protocol's 'Equity Share Approach' to greenhouse accounting.

AGL sources data from equity partners, where available, otherwise assumptions are made on the basis of the best available information (including where activity levels for a facility are so low that emissions are assumed to be negligible). Equity Footprint data reported includes scope 1 and scope 2 emissions.

### Supporting information – Energy Supply Footprint

The Energy Supply Footprint estimates the life cycle greenhouse gas emissions associated with the supply of electricity and natural gas by AGL to its customers. The Supply Footprint estimates emissions from fuel extraction and processing, electricity generation, transmission, distribution and end use for electricity and natural gas supplied to retail, commercial and wholesale customers by AGL Energy and its wholly owned subsidiaries. Supplies of electricity and gas by ActewAGL are excluded. Electricity sold by AGL's power generation assets into the National Electricity Market is also excluded from this footprint (although all of AGL's purchases from the NEM pool to supply its customers are included). Other goods and services supplied by AGL are not considered.

In preparing the Supply Footprint, AGL employs scope 1, 2 and 3 emission factors published by the Commonwealth Department of Climate Change and Energy Efficiency, as well as emissions data from the Australian National Greenhouse Gas Inventory (relating to the oil and gas sectors for 2010). AGL understands that the state-based scope 3 emission factors published for natural gas in the *National Greenhouse Accounts Factors* (July 2011) do not include the fugitive greenhouse gas emissions from low pressure distribution networks. As a result, AGL has estimated an emission factor for natural gas distribution based upon emissions data published in the Australian Greenhouse Gas Inventory, and gas volume data published by the Energy Supply Association of Australia.

For consistency, the Gas Supply Footprint data from previous years has been adjusted to include similar estimates of natural gas distribution emissions.

Emissions associated with the wholesale supply of natural gas (by AGL) to AGL-operated power stations are also excluded to avoid double counting (the Electricity Supply Footprint includes upstream and generation emissions from supplying electricity). These scope 1 and scope 3 emissions are included in AGL's Operational Footprint.

The model used to estimate the Supply Footprint was redeveloped in 2011. In 2012, AGL continued to use this method, and data from prior years has also been recalculated for consistency using this method.

## Sustainable generation sources

### Introduction to sustainable generation sources

AGL continues to focus on investing in new electricity generation that is renewable or low greenhouse gas intensity.

#### Approach

AGL's strategy is focused on renewable generation investment. This investment is largely driven by opportunities created by Australia's 20% Renewable Energy Target legislation which has bipartisan political support. Historic investment in renewable energy has positioned AGL to have a relative carbon-intensity advantage with the introduction of a carbon price from 1 July 2012. AGL has stated that it will not invest in new coal-fired generation capacity due to the emissions profile being inconsistent with anticipated longer-term requirements in relation to emission reductions. While AGL understands the concerns by many of our stakeholders in relation to the acquisition of the remaining two-thirds of the Loy Yang A power station, emissions from the energy sector remain unchanged as a result of AGL's move to full ownership.

AGL has investments across a wide range of electricity generation technologies. AGL's hydroelectricity assets are concentrated around the Victorian and New South Wales border, and provide 796 MW of peak generation capacity. Both gas fired generation and hydro generation can be quickly switched on. AGL typically deploys this generation in shoulder and peak periods, to put additional supply into a higher-priced wholesale electricity market.

In addition to hydroelectricity, AGL owns/operates renewable generators in a range of locations and technologies. Landfill gas generation is scattered around Australia, including the eastern states, Tasmania and Western Australia. AGL's wind generation portfolio is concentrated in South Australia; however, there are numerous projects in the development pipeline that will diversify the geographical location of wind assets. These renewable assets provide generation across the three categories of base, intermediate and peak electricity duties.

AGL has investments in three gas-fired power stations – the 1,280 MW Torrens Island Power Station, the 150 MW Somerton Power Station and the 12 MW Moranbah Power Station. At the end of the reporting period, AGL also acquired the remaining two-thirds of the 2,200 MW Loy Yang A power station. However, due to this acquisition occurring at the end of the reporting period, it has been excluded from the data in this section. It will be included in sustainability reporting from FY2013 onwards.

AGL has secured a range of prospective renewable and low emission gas generation development options. This pipeline of developments will sustain AGL's position as Australia's leading integrated renewable energy company. AGL also has a suite of complementary gas fired assets.

**Vision for energy sources:** AGL's vision is to be Australia's largest renewable energy company.

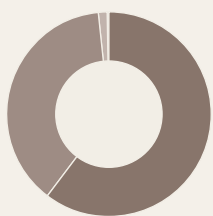
**Drivers:** AGL's investment decisions are influenced by the Renewable Energy Target (page 75), the carbon price (page 76), and the commercialisation of emerging renewable technologies (page 77).

#### Performance

In FY2012, AGL completed construction of the 52.5 MW AGL Hallett 5 Wind Farm and the 63 MW AGL Oaklands Hill Wind Farm respectively, increasing AGL's operated renewable generation capacity to 1,320 MW.

Renewable energy capacity now makes up 48% of AGL's operated capacity, compared to 45% in FY2011. This excludes the capacity related to the acquisition of Loy Yang A. Inclusive of Loy Yang A, renewable energy capacity makes up 27% of AGL's operated capacity.

#### Installed capacity of operated generation assets<sup>1</sup>

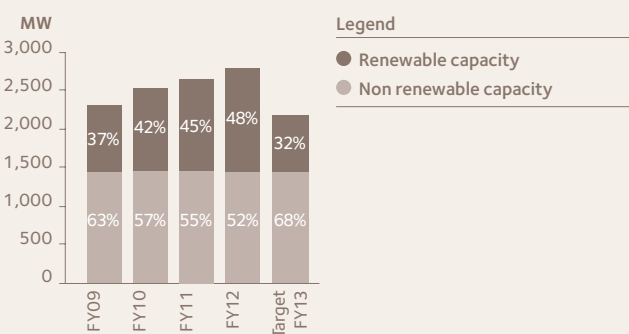


Legend	
● Gas	1,451 MW
● Hydro	796 MW
● Wind	504 MW
● Landfill gas, biomass and biogas	20 MW
● Solar	0.1 MW
● Diesel	0.4 MW
● Coal	0 MW
Total installed capacity (operational control)	
	2,772 MW

#### Notes

- This breakdown includes only those assets where AGL has operational control, as at 28 June 2012. When these figures are added to those assets where AGL has other ownership or operational interests, including the control of electricity dispatch or equity stake (apportioned by investment level), AGL's total installed capacity is 5,447 MW.
- Generation and emissions associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place very late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.

#### Installed capacity of operated electricity generation<sup>1</sup>



#### Notes

- These figures relate to the capacity of electricity generation assets over which AGL has operational control, regardless of who owns the asset. Assets where AGL has rights to the electricity output only are not included.
- Generation and emissions associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place very late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.
- The FY13 forecast is based on the Macarthur Wind Farm commencing commercial operation (and the inclusion of the AGL Loy Yang Power Station).

## Sustainable generation sources

### Renewable energy target

Investing in renewable energy delivers an immediate benefit in ensuring AGL contributes its share of meeting Australia's Renewable Energy Target, and in the medium term will deliver greater value to the organisation when the cost of carbon is accounted for in the energy supply chain.

#### Approach

In August 2009, the Commonwealth Government passed legislation introducing a 20% Renewable Energy Target (RET) by 2020 for Australia. The new Large Scale Renewable Energy Target (LRET) requires 41,000 GWh of renewable generation by 2020 to 2030, a four-fold increase on the original Mandatory Renewable Energy Target. Retailers are required to comply with the target by purchasing Large Scale Renewable Energy Certificates (LGCs) created by renewable energy generators. The LRET constitutes the vast majority of the 20% RET by 2020.

The market for LGCs was oversupplied during FY2012. This was largely a legacy issue associated with the 2010 split of the original RET into a Small Scale Renewable Energy Scheme (SRES) and the LRET. Significant surplus volumes of certificates created as a result of the installation of small scale solar PV and solar hot water are gradually being used for compliance. AGL expects that significant new investment will be required in FY2013 to ensure that sufficient renewable energy is being produced in FY2016 to meet the expanded LRET targets.

A critical issue in FY2013 will be the statutory review of the Renewable Energy Target by the Climate Change Authority (CCA). The CCA is required to review the operation of the RET and provide a report back to the Commonwealth Parliament by December 2012. It is critical that the RET be left unamended. It is one of the few energy policies where bipartisan support exists and is designed to underpin investments with lifespans of several decades. Amendments to the scheme would be likely to have serious negative consequences for investor certainty. Accordingly, AGL will be vigorously advocating for the policy to be left unamended during the statutory review (see AGL Applied Economic and Policy Research Working Paper No.35). At the time of printing, the CCA had issued its draft recommendations which involve no material change to the legislative framework underpinning the LRET.

### Performance

#### Building new renewable generation

It is estimated that meeting the 20% target by 2020 will require around \$30 billion of investment in new renewable energy generation. As an energy retailer with a significant market share of Australia's electricity consumption, AGL's developments are poised to make a significant contribution to meeting this target.

In FY2012, AGL completed work on the 52.5 MW AGL Hallett 5 Wind Farm and the 63 MW AGL Oaklands Hill Wind Farm. These projects add 115.5 MW of new renewable capacity to AGL's operated electricity generation portfolio. AGL is continuing to develop a number of other renewable projects including:

- > Macarthur Wind Farm: The 420 MW Macarthur project in south-western Victoria will be one of the southern hemisphere's largest wind farms, producing enough energy to power 220,000 households.
- > Solar PV: Following success in the Commonwealth Government's Solar Flagships program, AGL is developing two of the largest solar projects in the world, totalling 159 MW. Within New South Wales, AGL will develop a 106 MW project at Nyngan and a 53 MW project at Broken Hill.
- > Silverton Wind Farm: During FY12, AGL also acquired the rights to build up to 1,000 MW of new wind capacity near Silverton, approximately 25 kilometres from Broken Hill in western New South Wales.

#### Securing demand

AGL's strategy of investing in renewable energy is not only in response to government-mandated targets. Consumer-driven demand is also important. As part of managing issues such as legislative risk, AGL has sought to contract renewable electricity supply directly with large consumers that is in addition to mandated targets. AGL has secured significant customer loads for renewable energy, which effectively underwrite new renewable energy projects. Through these contracts, AGL is meeting its goal of being Australia's largest retailer of new renewable energy, selling more than 1 TWh annually.

## Sustainable generation sources

### Carbon price

“AGL wants to see the bipartisan emission reduction target achieved at the lowest cost to our customers and all Australian families and businesses.”

– Michael Fraser, AGL CEO and MD

#### Approach

As discussed earlier in this chapter, on 1 July 2012, a fixed carbon price of \$23/tonne of carbon dioxide equivalent (CO<sub>2</sub>e) was introduced in Australia. Facilities with greenhouse gas emissions greater than 25,000 tonnes will be required to pay the fixed price for each tonne of emissions. Following two further years of fixed prices, it is intended that an emissions trading scheme will apply from 2015. While the *Clean Energy Future* package of legislation underpins this scheme design, there is significant uncertainty about the longevity of the scheme. There is clear disagreement between the two major political parties about the mechanism to reduce emissions, although there is agreement in relation to the public policy objective – a 5% reduction of emissions by 2020 relative to 2000 levels.

Despite uncertainty regarding bipartisan political commitment for the introduction of a price on carbon emissions, the vast majority of industry commentators and representatives, including the Energy Supply Association of Australia, support the introduction of a well-designed national emissions trading scheme (ETS). AGL supports the introduction of emissions trading. Adopting a market-based trading approach will allow Australia to achieve its 2020 greenhouse gas reduction target range of 5% to 25% below 2000 levels by 2020, in a way that minimises costs for Australian families and businesses.

AGL continues to strategically prepare and measure performance in relation to the management of greenhouse gas emissions.

AGL is well prepared to participate in emission reduction activities. The National Greenhouse and Energy Reporting Scheme requires AGL to disclose scope 1 and scope 2 emissions. Although a compliance obligation, this reporting protocol directly feeds into AGL's investment strategy and risk management. AGL is progressing its carbon risk assessment process beyond mitigation to look more closely at adaptation issues, and has continued to update vulnerability assessments of critical infrastructure, working off the release of updated information on the impacts of climate change on Australia's physical climate.

#### Domestic emissions trading

AGL's integrated strategy reflects the acceptance of Intergovernmental Panel on Climate Change advice that significant greenhouse gas emission reductions are required by the middle of this century to stabilise the concentration of CO<sub>2</sub>e in the atmosphere.

### Clean Energy Future – impact on AGL

Australia's electricity supply sector is dominated by coal fired generation, providing some 81% of Australia's electricity (esaa 2010). Consequently, electricity generation accounts for more than one-third of greenhouse gas emissions in Australia. Consistent with the Board approved AGL Greenhouse Gas Policy, AGL has identified that placing a cost on greenhouse gas emissions will alter the economic incentives for electricity generation. In particular, lower intensity generation over time will become comparatively lower cost relative to coal fired generation, increasing its market share and contributing to the reduction of Australia's greenhouse gas emissions.

In terms of electricity generation and upstream gas assets directly owned or controlled by AGL, an ETS would require AGL to pay a carbon price (fixed for the first three years and variable beyond 2015) for each tonne of greenhouse gas emissions. It would also require AGL to pay a carbon price for the combustion emissions associated with small gas customers, including households. In addition to the costs incurred in paying the carbon price directly, AGL would also experience increased costs in electricity and gas purchased from wholesale markets, as those producers seek to recover their costs for paying a carbon price for their direct emissions. Subsequently, energy consumers will face uplifts in energy prices as the cost of emissions is introduced to the energy supply chain. After several years of ongoing detailed analysis, AGL has a thorough understanding of these aggregated impacts on its business.

#### Mandatory markets

AGL has continued to participate in the existing climate-related markets such as the New South Wales Greenhouse Gas Reduction Scheme, and the Queensland 13% Gas Electricity Scheme. As a result of the introduction of the *Clean Energy Future* package of legislation and the application of a carbon price from 1 July 2012, the NSW Government announced the closure of the NSW Greenhouse Gas Reduction Scheme from 30 June 2012.

#### Voluntary abatement

AGL has secured significant customer contracts for renewable energy, which effectively underwrite new renewable energy projects. Through these contracts, AGL is meeting its goal of being Australia's largest retailer of new renewable energy, selling more than 1 TWh annually.

#### International emissions trading

AGL does not have facilities operating outside of Australia. As such, AGL is not engaged in international emissions trading.

## Sustainable generation sources

### Research, development and deployment

Technology in the energy supply sector is developing quickly. Changes to fuel sources, location of generation, consumption patterns, and the availability of data, are all changing.

#### Approach

With a focus on deployment of technologies that are approaching commercialisation, this year AGL has been successful in partnering directly with technology proponents and other members of industry to participate in important renewable energy programs supported by the Federal Government.

#### Renewable energy

In June 2012, AGL was selected as a winning bidder under the Commonwealth Solar Flagships Program, part of the Australian Government's \$5.1 billion Clean Energy Initiative. AGL, together with First Solar (Australia) Pty Ltd (First Solar), will deliver large-scale solar PV power projects totalling 159 MW at two locations in New South Wales. AGL will develop a 106 MW project at Nyngan and a 53 MW project at Broken Hill. First Solar will provide engineering, procurement and construction services for both projects, using its advanced thin-film PV modules. As required by the Solar Flagships Program, AGL's project will also include a research component under the Education Infrastructure Fund (EIF). The role of the EIF is to build a modern, productive, internationally-competitive Australian economy by supporting world-leading, strategically-focused infrastructure investments that will transform Australian tertiary education and research. The Commonwealth Government will provide \$40.7 million to UQ and UNSW to support construction of research infrastructure under the EIF.

### Investment partner initiatives

#### Loy Yang Power

On 29 June 2012, AGL acquired the remaining two-thirds of Loy Yang Power (previously AGL was a minority investor in the brown coal fired power station with a 32.5% equity stake in the Greater Energy Alliance Corporation (GEAC) which owned Loy Yang Power). Although the most efficient of Australia's brown coal fired generators, Loy Yang A Power Station is one of the largest point source emitters of greenhouse gas emissions in Australia.

Given the change in ownership structure, AGL will continue to review and engage with technology providers focused on reducing the emissions profile of brown coal. There has been a significant amount of work conducted during the past few years at Loy Yang examining methods of reducing emissions and improving the thermal efficiency of brown coal generation technologies. Initiatives such as the trial of Mechanical Thermal Expression (MTE) technologies and participation in the Post Combustion Carbon Capture Project in partnership with Mitsubishi Heavy Industries are important examples of this work. AGL will continue to work with all our stakeholders in assessing and developing new technologies related to brown coal electricity generation.

#### ActewAGL

In June 2011, ActewAGL signed a landmark agreement with Better Place in relation to the provision of renewable electricity for the deployment of electric vehicles. The \$60 million supply agreement will result in new renewable energy being provided over 10 years to electric vehicles purchased and operated within the Australian Capital Territory. ActewAGL has been working with Better Place for some time on the deployment of electric vehicles within Canberra. Electric vehicles have the capacity to significantly reduce Australian transportation greenhouse gas emissions and to provide alternatives to peak load management for electricity network operators. Further information on electric vehicles can be found in AGL Applied Economic and Policy Research Working Paper No.27.

## AGL is committed to achieving excellence in environmental management and performance.

A number of AGL's operations have a material environmental footprint and have the potential to interact with, and impact on, various aspects of the environment.

AGL's corporate health, safety and environmental management system, Life Guard, establishes a framework of requirements, policies, environmental standards and compliance guides based on the ISO 14001 Environmental Management System standard. Life Guard provides a framework to enable continuous improvement in health, safety and environmental performance and facilitates the pro-active management of environmental risks and compliance responsibilities.

AGL's approach to environmental management is also guided by the AGL Environmental Principles, which are available on the AGL website at [agl.com.au/EnvironmentalPrinciples](http://agl.com.au/EnvironmentalPrinciples).

Key elements of the principles include commitments to:

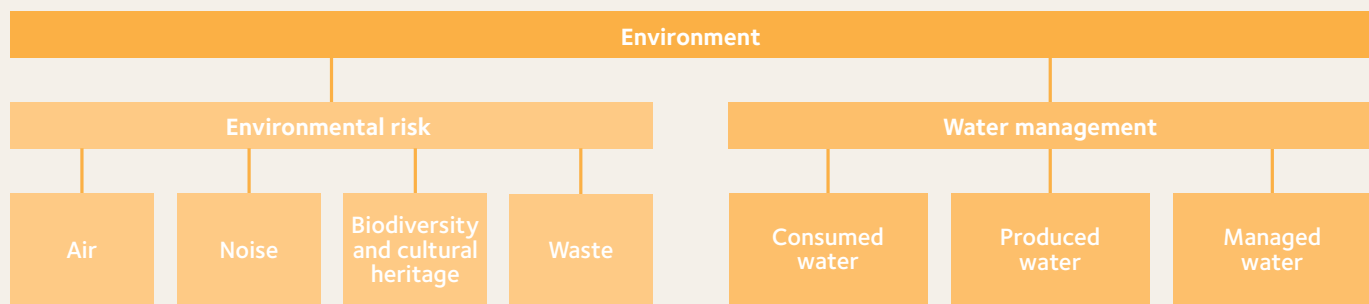
- > meet or exceed statutory obligations;
- > report environmental performance consistent with recognised standards;
- > provide leadership and actively participate in the policy debate on energy and environmental matters;
- > reduce risk and minimise environmental impact; and
- > consult with stakeholders on how best to achieve environmental objectives.

AGL's operations are subject to a range of environmental laws, regulations and policies as well as project and site-specific environmental permits and approvals issued at federal, state and local government level. AGL monitors compliance with these regulatory requirements and engages with regulators and other stakeholders. AGL also monitors and publicly reports environmental footprint data via its annual Sustainability Report, and provides relevant information to regulatory agencies and bodies.

The two key focus areas for the Environment chapter of this report are environmental risk and water management.

**Environmental risk:** AGL's environmental program is driven by the environmental risk profile of the business and by regulatory requirements. AGL's long-term vision is to have an environmental risk profile that is 'as low as reasonably practicable'. This aspiration marries both the need to operate in an environmentally responsible manner and the need to target resources and efforts on a risk basis.

**Water management:** Management of water resources is a critical environmental issue facing Australia and one that is relevant to AGL's business. AGL's long-term vision is to be recognised as a prudent and responsible user of water that seeks to minimise the impact of its operations on local water resources.



### Performance Summary

Vision	Target FY2012	Performance FY2012	Target FY2013
<b>Environmental risk</b>			
To have an environmental risk profile that is As Low As Reasonably Practicable (ALARP).	Develop biodiversity register for AGL assets and projects which identifies any impacts on biodiversity values.	The biodiversity register is established. It provides a company-wide baseline of information that will enhance our understanding of biodiversity risks.	✓ 100% of approved risk register actions for the highest environmental risks implemented in accordance with targeted milestones.
<b>Water management</b>			
To be recognised as a prudent and responsible user of water that seeks to minimise the adverse impact of its operations on local water resources.	Implement the Produced Water Management Strategy, and develop plans for drill water and coal seam fracturing/flowback water.	Site specific water plans and reuse trials were undertaken in line with the Produced Water Management Strategy.	✓ Increase number of dedicated monitoring bores and stream gauging sites relative to overall number of CSG wells/sites.



## Introduction to environmental risk

The understanding and management of risk is crucial to the ongoing success of any business. The management of environmental risk is particularly important to AGL's businesses that regularly construct new plant and operations, hold long-term leases on land used by third parties for other purposes, and operate in sensitive environments such as National Parks.

### Approach

AGL's approach to the identification of environmental risks is consistent with the approach taken in the ISO 14001 Environmental Management Systems standard. More broadly, AGL's approach to risk management, as outlined in the AGL Risk Management and Assessment Framework, is modelled on the ISO 31000 Risk Management standard. Risks identified via the ISO 14001 'aspects and impacts' approach are assessed from the perspectives of 'inherent risks', and 'treated risks' (which take into consideration existing control measures). This approach enables AGL to identify critical controls. It also helps identify where the highest residual risks remain so resources can be targeted appropriately, or informed decisions can be made about accepting certain risks.

AGL's health, safety and environmental management system, Life Guard, contains standards relating to Environmental Aspects and Impacts and Risk Management. These standards provide high-level guidance on the process for identification of environmental risks.

**Vision for environmental risk:** AGL's long-term vision is to maintain an environmental risk profile that is 'As Low As Reasonably Practicable' (ALARP). This requires continual improvement that is driven by an understanding of risks, and a commitment and targeted work program to reduce the highest risk items where practicable.

**Drivers:** Issues associated with the use and management of water resources are outlined on pages 86 to 90. The key environmental issues of atmospheric emissions, noise, biodiversity and cultural heritage and waste are discussed on pages 81 to 85.

Climate change risks are addressed in the Climate Change chapter of this report.

## Performance

AGL's key environmental risks are systematically identified and reviewed in workshops run in the Upstream Gas and Merchant Energy business units. The workshops involve a diverse range of operations personnel and environmental specialists. Given that internal and external factors result in continuous changes to AGL's environmental risks, risk registers and actions to reduce risks are regularly reviewed and, where appropriate, updated.

During FY2012, AGL's significant environmental risks included risks related to surface water, groundwater, biodiversity and the management of historic land contamination. Work programs have been developed to address these risks, and targeted actions have been approved by senior leaders for implementation.

Some examples of activities completed in FY2012 to reduce environmental risk towards ALARP include:

- > independent audits of performance against the environment-specific standards and compliance guides of AGL's HSE Management System. Audits were undertaken at Torrens Island Power Station, AGL's Hydro assets, Somerton Power Station, AGL Hydrocarbon Extractions LPG plant, Camden Gas Project and Silver Springs, as well as corporate and retail sites. The sites were audited against more than twelve standards and compliance guides, including environmental impacts, ecosystem protection, and waste management and minimisation;
- > development of environmental management plans for a number of licensed sites within the Merchant Energy business;
- > a review of the adequacy of bunding (liquid containment facilities) at select Merchant Energy sites;
- > training for key operational staff and leaders in environmental incident management, in light of legislative changes impacting on the New South Wales Environment Protection Authority reporting requirements; and
- > the establishment of an AGL-wide environmental network, which provides a forum for facilitating a consistent, risk-based approach to environmental management across AGL.

### Environmental incidents and licence compliance

AGL is subject to a range of environmental laws and policies as well as site-specific environmental permits and approvals issued at federal, state and local government levels. The table below sets out environmental issues and non-compliances against these requirements that occurred during the reporting period.

During FY2012, there were no fines, infringement notices, or formal warnings applied to sites that AGL operates.

A total of 59 environmental incidents and near misses at AGL operated sites, or sites where AGL was undertaking operational activities, were recorded in AGL's corporate incident reporting systems during FY2012, compared with 53 recorded in FY2011. The number and quality of incident and near-miss reports reflects continued improvement in incident reporting and management. The majority of incidents reported in FY2012 were low risk spills and leaks.

Two incidents were rated as having a high potential environmental risk, and both of these related to noise issues at operational wind farms. These issues are discussed further on page 83.

A non-compliance with the Environment Protection Licence for the Camden Gas Project was identified at the end of FY2012. Following an internal review of operational procedures for the project, AGL realised that it had not performed continuous monitoring of air emissions as required by its licence. Continuous air monitoring is used to ensure the exhaust gases of natural gas compressors meet the allowable annual licence emission load limits, and do not exceed the emission limit at any point in time. While independent quarterly air emissions monitoring, which has always been performed at the Camden Gas Project, confirms AGL is well below its emission limits, AGL acknowledges that monitoring should have been performed on a continuous basis. AGL is taking immediate steps to address the issue, including the appointment of technical experts PAE Holmes to review the emission monitoring program, conducting monthly independent emission monitoring replacing the continuous air monitoring equipment at Camden and keeping government, community and other interested stakeholders informed of air monitoring.

In addition to environmental incidents at AGL operated sites, during FY2012 a release of saline water occurred at the Moranbah Gas Project Joint Venture where Arrow Energy is the operator. Further information can be found in the 2012 Annual Report available at [2012annualreport.agk.com.au](http://2012annualreport.agk.com.au).

Environmental incidents and non-compliance summary	
Site	Comment
Torrens Island Power Station, SA	Voluntary sampling of soil and ground water at Torrens Island Power Station in 2010 and 2011 detected notifiable levels of petroleum hydrocarbons and trichlorethene at a number of separate locations. In line with EPA requirements, groundwater monitoring and investigations are continuing to determine the extent and nature of the impact, and the development of a management plan.
Torrens Island Power Station, SA	In July 2011, approximately 2 litres of oil was spilt into the Port River from a cooling water screen gearbox. The oil was promptly contained and cleaned up, and the EPA and Port Authority were notified in accordance with the site EPA licence.
Hallett 2 (Hallett Hill) Wind Farm, SA	A permanent acoustic treatment to the turbines at the Hallett Hill wind farm was implemented in late 2011 to address an audible tone that AGL detected at a nearby residence during certain wind conditions. Comprehensive noise testing was undertaken in early 2012 to confirm that the tone was no longer audible at the residence. AGL kept the resident and the EPA informed of the steps that we took in relation to this issue.
Hallett 4 (North Brown Hill) Wind Farm, SA	Post-construction noise testing was undertaken in late 2011 during which an occasional audible tone was detected at a neighbouring residence during certain wind conditions. This occasional audible tone resulted in a non-compliance with the noise criteria during the particular wind conditions. A permanent acoustic treatment is being implemented at the wind farm. We have communicated developments to the resident and the EPA.
Yarrowonga Power Station, Vic	In April 2012, an oil leak at Yarrowonga Power Station resulted in a small volume of oil entering the tail bay waterway immediately downstream of the station. The oil did not enter the flowing Murray River. The spill was contained and cleaned up. The release was reported to the NSW EPA and other agencies in accordance with the NSW EPA Incident Notification Protocol.
Werribee Biogas Facility, Vic	In June 2012, a non-compliance with EPA licence air emission limits was identified on one of the nine generators located at the Werribee biogas facility following routine stack testing. Upon identification of the non-compliance, EPA was notified, and investigations are underway to determine the root cause and implement necessary corrective actions.
Camden Gas Project, NSW	An independent environmental compliance audit completed in September 2011 found that compliance with NSW Government requirements under the various approvals and licences for the Camden Gas Project was of a high standard, although some minor non-compliances were identified. The audit report was submitted to the Department of Planning and Infrastructure, and together with AGL's corrective action plan can be viewed at <a href="http://www.agk.com.au/camden">www.agk.com.au/camden</a> .  A non-compliance with the Environment Protection Licence for the Camden Gas Project was also identified at the end of FY2012 when, following an internal review of operational procedures for the project, AGL realised that it had not performed continuous monitoring of air emissions as required by licence. AGL is taking immediate steps to address this issue, including replacing the continuous air monitoring equipment at Camden.
Silver Springs Oil and Gas Project, Qld	In September 2011, approximately 1000 litres of hydrocarbon was released as a result of equipment failure on a well pump. Clear up and isolation of the spill occurred as soon as it was identified. The incident was reported to the (then) Department of Environment and Resource Management.

## Air

AGL has a portfolio of power generation plants which are fuelled by the combustion of a range of traditional and non-traditional fuels which result in the emission of combustion products to the atmosphere. Some of AGL's upstream gas assets also produce emissions to air.

### Approach

During FY2012, AGL operated gas fired power plants at Torrens Island in South Australia and Somerton in Victoria, and a range of smaller plants powered by non-traditional fuels at the sites of some of AGL's major customers. All of AGL's thermal power plants produce emissions to air, as do AGL's gas operations in New South Wales, and gas and oil operations in Queensland. For many of these sites, air emissions are regulated by State Government agencies via site-specific licences.

The emissions generated by many of the power generation units at AGL's major customer sites are a consequence of harnessing the energy contained within what would otherwise be considered 'waste' streams. These 'wastes' are put to good use as fuel, rather than disposed of with no reclamation of their calorific value. For example, power is produced from burning biogas at the Melbourne Water Werribee Sewage Treatment Plant in Victoria, and from burning macadamia nut shells at the Suncoast Macadamia plant in Queensland.

AGL recognises that emissions to air from its plants can potentially contribute to regional airshed environmental issues, such as photochemical smog, so it is important that plants run efficiently and within the parameters set by regulatory licences. Undertaking regular maintenance helps keep equipment running efficiently, and AGL regularly monitors emissions to verify compliance with regulatory requirements.

Air emissions are reported to State government regulators as required, and also to the Federal Government's National Pollutant Inventory (NPI) each year. The NPI is a publicly available database of emissions from Australian industrial facilities.

In recent years, the NPI has indicated that emissions of nitrogen oxide (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and particulates (measured as PM<sub>10</sub>) from AGL's portfolio of operated electricity generation facilities have accounted for less than 2% of emissions for each pollutant type for the electricity generation sector. However, following AGL's acquisition of the Loy Yang power station in late June 2012, air emissions will be a material issue for AGL going forward. Ensuring compliance with air emission limits from the AGL Loy Yang power station will continue to be a key priority at the station.

## Performance

Torrens Island Power Station has the capacity to run on either natural gas or fuel oil. Natural gas is a cleaner fuel and is the primary fuel used. Fuel oil, which has a relatively high sulphur content, provides a back-up option to run if natural gas becomes unavailable and is typically used for short periods of time each year. Due to the fact that the station did not need to run on fuel oil during FY2012, SO<sub>2</sub> emissions from the power station dropped significantly in FY2012 compared to previous years. Particulate and VOC emissions were also lower. NO<sub>x</sub> and CO emissions at Torrens Island Power Station were slightly higher in FY2012 compared to FY2011 due to the fact that power generation output from the station was slightly higher in FY2012.

During FY2012, power output at Somerton gas-fired power station was approximately half of the FY2011 power output, and this is reflected in the Somerton air emissions data.

Emissions from the Hydrocarbon Extractions plant are roughly proportionate to the amount of LPG produced, which was slightly higher in FY2011 compared to FY2012. As noted in previous Sustainability Reports, since FY2010 AGL's reported emissions of VOCs have been significantly lower compared to previous years. This is mostly due to the introduction of a 'Leak Detection and Repair' (LDAR) program at the Hydrocarbon Extractions plant in 2009. The LDAR program comprises the regular measurement of fugitive emissions of VOCs, and the use of a different EPA-approved estimation methodology than was used previously. This new and more accurate estimation methodology results in fugitive emissions being calculated as approximately 90 percent lower than when estimated using the former EPA-approved estimation methodology (which was theoretical and did not incorporate any measured data).

Since FY2010, air emission data from AGL operated power generation plants at major customer sites has been included in AGL's Sustainability Report. The sites include: Suncoast Macadamias, Melbourne Water Werribee biogas plant, Moranbah power station, Coopers co-generation plant, Symex co-generation plant and seven landfill gas generation facilities in New South Wales, Western Australia and Tasmania. The increase in reported CO and SO<sub>2</sub> emissions from major customer sites during FY2012 is mostly attributable to increased generation output from the Werribee biogas plant.

At Camden Gas Project, gas sales during FY2012 were consistent with previous years, however there has been an upward trend in reported NO<sub>x</sub> and CO emissions. These emissions are mostly influenced by the compressor engine load, and the tuning parameters used to optimise the operating performance of each gas compressor as each compressor approaches their scheduled major overhaul. Air emissions from the Camden plant are measured by external air monitoring specialists quarterly and are well below licence limits.

During FY2012, the Silver Springs Oil and Gas Project changed from being a conventional gas exploration and production operation, to being primarily an underground gas storage facility. AGL acquired the depleted Silver Springs/Renlim gas reservoir in the Bowen Surat Basin in central Queensland in October 2010, and subsequently developed it into a gas storage facility. The storage facility, which included commissioning an additional compressor, began operations in August 2011. The reported increases in NO<sub>x</sub>, CO and PM<sub>10</sub> emissions at Silver Springs in FY2012 are related to the operation of this new compressor, and old compressors coming back online.

Air emissions<sup>1,2</sup>



Legend

- Torrens Island Power Station
- Somerton Power Station
- Camden Gas Project
- Hydrocarbon Extractions
- Major customers<sup>3,4</sup>
- Silver Springs Oil and Gas Project<sup>5</sup>

Notes

1. All figures rounded to two significant figures.
2. Air emission data for AGL sites is publicly reported NPI data (see <http://www.npi.gov.au/>) with the exception of Hydrocarbon Extractions (HCE). HCE emissions for NOx, PM<sub>10</sub>, SO<sub>2</sub> and VOC comprise EPA reported data incorporating site-specific emission factors, which are more representative than NPI estimates. CO is not captured in EPA reporting; therefore NPI reported CO emissions are used for HCE.
3. Major Customer sites for which air emission data is reported for FY09 are: Suncoast Macadamias, Melbourne Water Werribee biogas unit, Moranbah Power Station, Coopers co-generation plant, Symex co-generation plant, Jackson St Landfill co-generation, and McRobies Gully Landfill.
4. In FY2010, FY2011 and FY2012 the Major Customer sites for which air emission data is reported are those listed in the note above, together with the following additional sites: Gosnells Landfill co-generation, Kincumber Landfill, Rockingham Landfill co-generation, Shoalhaven Landfill and Woy Woy Landfill.
5. AGL took ownership of the Silver Springs Oil and Gas Project in October 2010, hence data is shown for FY2011 and FY2012 only.

## Noise

The generation of noise is an unavoidable characteristic of some of AGL's business activities, notably generation of electricity, and drilling undertaken as part of upstream gas projects. Many of AGL's projects involve development of rural land that is already occupied and used for other purposes by third parties. The management of noise impacts is vitally important in such settings, where background noise levels are low and amenity expectations are high.

### Approach

AGL's coal seam gas projects involve drilling wells to extract methane from coal formations deep below the ground. Due to operational requirements, such as the availability of drilling teams, sometimes drilling needs to be undertaken 24 hours per day, seven days per week. A number of activities are undertaken to minimise the likelihood of offsite noise impacts associated with drilling operations. For example, well locations are selected to avoid the likelihood of causing impacts to sensitive receivers where possible, and acoustic noise walls can be erected on the perimeter of the drill site if necessary. At sensitive sites, noise monitoring is also undertaken to ensure drilling operations remain below regulatory compliance limits.

AGL's wind farm projects are typically constructed on land that is used for agricultural purposes. A standard condition of the necessary development consents is that both pre- and post-construction noise monitoring is undertaken to ensure that, once operational, the wind farm meets relevant noise requirements.

We take any community concerns about noise issues very seriously, and have processes in place to ensure a prompt response to any concerns raised. We are committed to working with the local communities in which we operate, and to ensuring that our operations meet all regulatory requirements.

## Performance

During FY2012, AGL worked proactively with the wind turbine supplier for the Hallett Hill Wind Farm (Hallett 2) to address an audible tone that we had detected at a residence during certain wind conditions.

A permanent acoustic treatment was developed by the turbine supplier and installed in late 2011. Prior to implementation of this permanent acoustic treatment output at the site was curtailed, with 16 of the wind turbines shut down at night. AGL undertook comprehensive noise testing in early 2012 to confirm that the tone was no longer audible at the residence. We continue to work with the turbine supplier to ensure that a similar solution is rolled out across our fleet of similar turbines which may have similar tonal characteristics.

While the Bluff and Oaklands Hill wind farms are compliant with noise requirements, we are working with the turbine supplier to develop a permanent acoustics treatment to address tones from the turbines that are occasionally audible at nearby residences in certain wind conditions. We have voluntarily implemented operational constraints on some turbines at Oaklands Hill wind farm while the acoustic treatment is being developed. We have kept the South Australian and Victorian Environment Protection Authorities (EPA) informed of the steps we have been taking.

Post construction compliance noise monitoring at the North Brown Hill wind farm detected a tone that was occasionally audible at a neighbouring residence during certain wind conditions. A permanent acoustic treatment is being implemented at the wind farm, and we have communicated developments to our neighbouring resident and the South Australian EPA.

### Biodiversity and cultural heritage

AGL operates and develops energy generation and upstream gas assets on land that, in many cases, has value for reasons of biodiversity and cultural heritage, in addition to its commercial value. AGL is committed to developing and operating its assets in an environmentally and socially responsible manner.

#### Approach

AGL's Health, Safety and Environment Management System outlines the requirements for ensuring that all potential impacts on biodiversity and cultural heritage resulting from AGL's activities are identified, assessed and as far as is reasonably practicable, managed and minimised, prior to activity being undertaken. All large AGL sites and projects also maintain risk registers which, where relevant, detail site specific risks and risk management measures related to biodiversity and cultural heritage.

Most of AGL's development projects are considered under planning legislation as State-significant major projects, and therefore require comprehensive environmental impact assessments including flora and fauna studies and cultural heritage assessments. Following development approval, projects are undertaken strictly in accordance with approved environmental management plans. Compliance with the requirements of AGL's HSE system at operational and development sites is audited on a regular basis.

Native flora and fauna is present in the vicinity of most of AGL's development projects, and AGL aims to protect biodiversity by limiting the footprint of its activities to already disturbed areas. For example, at coal seam gas exploration projects, AGL locates its drill sites and campsites on already disturbed ground where possible.

Where habitats are affected, AGL takes steps to restore and protect them. In some cases, AGL establishes "offset" habitats which are managed for conservation purposes, in accordance with regulatory requirements. AGL also regularly sponsors initiatives that support the conservation of both biodiversity and cultural heritage.

#### Performance

In FY2012, AGL developed a biodiversity register, which documents the biodiversity values of around 40 operational and development sites. The biodiversity register was compiled using existing sources of information (for example, flora and fauna surveys) and has identified information gaps that exist in relation to older assets which are now owned by AGL. A work plan will now be developed to gather additional information for assets located in areas of high biodiversity value.

Some of AGL's operations are located in regions of low biodiversity value, while others are located in close proximity to protected areas. AGL sites located in or adjacent to protected areas include Torrens Island Power Station, Kiewa Hydro Scheme, Werribee biogas generation facility, Gloucester and Hunter coal seam gas projects and the Newcastle Gas Storage Facility. The biodiversity register will assist in refining our understanding of our biodiversity risks, and ensure actions are targeted to our highest priority operations.

The biodiversity register also documents the management strategies and biodiversity offset habitats AGL has implemented to compensate for habitat loss at a number of locations, such as the offsets currently being established as part of the Newcastle Gas Storage Facility and Gloucester Gas Project. These offsets support a variety of vegetation communities, such as Spotted Gum – Ironbark woodland, and valuable habitats for ten threatened fauna species listed under the *Threatened Species Conservation Act 1995* (NSW) and *Environment Protection and Biodiversity Conservation Act 1999* (Cwth).

In FY2012, AGL undertook a number of voluntary activities to support the conservation of biodiversity and cultural heritage. For example, we presented to indigenous groups, such as the Georgina Diamantina Coopers Aboriginal Group, on how AGL undertakes cultural heritage monitoring, and we sponsored a community initiative to eradicate the *Acacia Nilotica* weed in Western Queensland. We also sponsored presentations by ecologists to tertiary students on the environmental management strategies being implemented at our wind farms. A number of AGL employees also took paid workdays to do volunteer work with conservation groups such as Landcare, Hunter Botanic Gardens and Friends of Westgate Park.

#### AGL Biomass Policy

In recognition of the effect that electricity generation can have on biodiversity, AGL has published a Biomass Policy which states that AGL will not source fuel for power generation from native forest or from crops located in areas cleared of native forest after 1990. The policy is available at [agl.com.au/BiomassPolicy](http://agl.com.au/BiomassPolicy).

## Waste

AGL's approach to waste management is consistent with the waste management hierarchy, where the approach taken, in order of decreasing preference, is to avoid, reduce, reuse, recycle and responsibly dispose of wastes. This approach reduces the impact of our activities on the environment, and reduces our operating costs and risks.

### Approach

AGL's operations produce a variety of different waste streams which are either reused, recycled or disposed of to landfill.

At AGL's industrial sites, opportunities to reuse wastes are sought, and materials such as scrap metal and waste oil are recycled. The management of drilling muds and cuttings will be an increasingly important issue for our coal seam gas projects as these projects move from exploration to production. Hazardous wastes are transported to licensed waste management facilities using regulated waste tracking systems.

At AGL's call centres and major offices, waste is segregated and paper, cardboard, and common domestic recyclables are collected for recycling.

Water-based waste streams from AGL office and operational sites are discharged either to sewer under licence from the relevant water authority, or treated and discharged in accordance with requirements of relevant regulatory authorities.

### Performance

#### Hazardous waste

During FY2012, AGL generated around 280 tonnes of hazardous waste. More than 70% of the hazardous waste generated was waste oil and oily waste that was collected and sent to recycling facilities, where it can be cleaned up and reclaimed for use as an alternative fuel.

Around 40% of the hazardous waste that was disposed of to landfill was generated at Torrens Island Power Station, and included contaminated soil, asbestos and grease trap waste. These wastes were disposed of at licenced waste disposal facilities in accordance with South Australian EPA requirements. Smaller amounts of hazardous waste, such as waste oily rags and waste chemicals, were generated at a range of other operational sites.

#### Non-hazardous waste

During FY2012, AGL generated approximately 6000 tonnes of non-hazardous waste. Around 68% of non-hazardous waste generated comprised drill cuttings from the Camden Gas Project, which were subsequently recycled. In FY2012, 4,000 tonnes of drill cuttings were dried and then diverted to a Sydney-based company which cleans, screens, separates and uses the drill cuttings to make a variety of construction materials, including bricks.

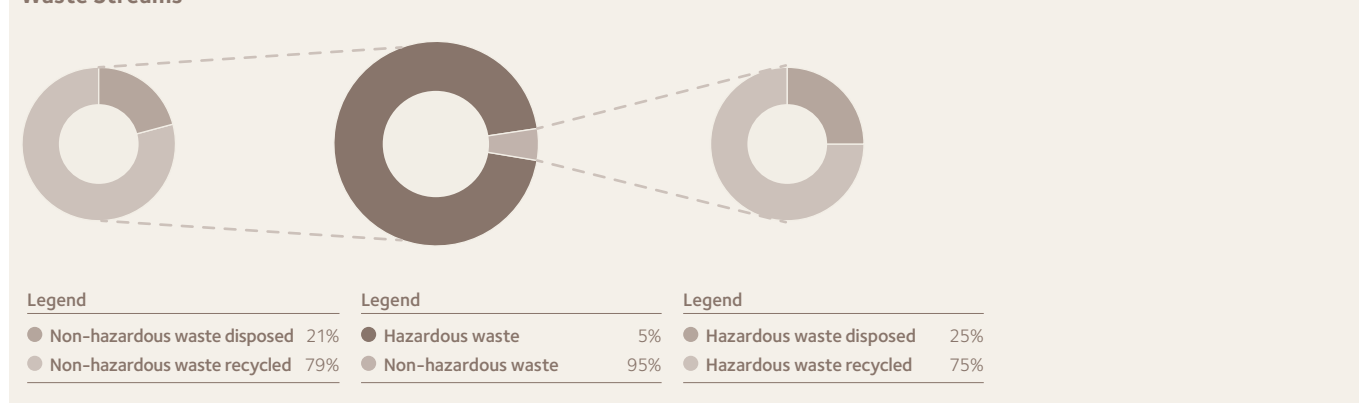
The remainder of the non-hazardous waste produced at AGL sites in FY2012 comprised mostly 'general waste' that was disposed of to landfill, and materials that were collected for recycling, including paper, cardboard and scrap metal.

#### Wastewater

In FY2012, more than three quarters of the wastewater generated from AGL offices and operational sites was sent offsite, mostly via sewer, for treatment. The remaining wastewater included sewage that was treated and disposed of onsite at Torrens Island Power Station, and wastewater that was treated and disposed of onsite at Hydrocarbon Extractions. At the Hydrocarbon Extractions plant, purged water from the cooling tower and stormwater runoff from the site are spray irrigated in accordance with an EPA licence. The stormwater runoff passes through an interceptor to remove any hydrocarbons that may have been picked up by rainwater falling on the plant, prior to irrigation.

The management of produced water that is a by-product of upstream gas production and exploration projects is discussed separately on page 88 of this report. The management of marine water which is used for cooling at Torrens Island Power Station and then returned to the source environment is discussed on page 87.

## Waste Streams



## Introduction to water management

Australia remains the driest inhabited continent, even though rainfall trends vary considerably with time and there are some areas of Australia that have relatively high average annual rainfall. Approximately half of AGL's power generation assets and upstream gas projects are located within typically water stressed areas in South Australia, Queensland and New South Wales.<sup>8</sup>

### Approach

As a company that owns hydro power stations and petroleum exploration and production projects, the sustainable management of water resources is of direct relevance to AGL's businesses, and is a responsibility that AGL takes seriously.

AGL uses water resources in various ways:

- > to produce steam in thermal power stations;
- > to reduce emissions to air at some thermal power stations;
- > to generate power at hydro power stations;
- > to cool and lubricate drill bits in petroleum drilling operations; and
- > for hygiene purposes in offices, where the majority of AGL's employees are located.

This water is drawn from a variety of sources, including from fresh and marine surface waterbodies, aquifers, collected rainwater and from water retailers.

AGL also produces water from coal seams and conventional oil and gas projects as a by-product of its petroleum exploration and production activities. Continued growth of the Upstream Gas business is a core part of AGL's integrated business strategy and as such the management of groundwater brought to the surface (hereafter referred to as produced water) is a key focus of AGL's environmental management program.

For coal-seam gas, the Camden Gas Project is the only AGL-operated coal seam gas project that has progressed through the exploration phase into full scale production. AGL's projects in the Hunter Valley and the Galilee Basin are currently in exploration phase, and the AGL project at Gloucester is in development phase. These three projects can be expected to progress to full-scale production over the coming years, increasing the volume of produced water compared to the amount reported this year.

Presently, the Silver Springs Underground Gas Storage project and surrounding production fields account for the majority of water generated by AGL's conventional oil and gas projects. Further exploration and production testing at AGL's Cooper Basin project is expected in FY2013, although volumes of produced water from this project are forecast to remain low given it is still in exploration phase.

**Vision for water management:** AGL's vision is to be a prudent and responsible user of water that seeks to minimise the adverse impact of its operations on local water resources.

**Drivers:** Information about produced water, consumed water and managed water across AGL's sites is presented in the following pages.

### Performance

AGL recognises that stakeholders including communities, regulators and investors, are concerned about the management of water issues, particularly in relation to the growing coal seam gas sector.

The extraction of gas from coal formations involves the drilling of gas production wells into the earth (typically several hundred to around one thousand metres deep), stimulating the coal formation, and allowing gas to flow to the surface. Before the gas can be brought to the surface, water that exists within the coal formation must first be removed so that the gas can 'flow' and be extracted. This process is referred to as dewatering.

To determine whether there is any impact on local groundwater resources resulting from dewatering, in FY2012 AGL continued to develop dedicated groundwater and surface water monitoring networks across its upstream gas projects. Results to date from AGL's dewatering program at the Galilee, Gloucester and Camden Gas Projects suggest that groundwater in deep coal seams in these project areas is relatively isolated from water resources in shallow aquifers and streams, and negligible water level declines and water quality impacts have occurred due to AGL's exploration activities.

In relation to the management of produced water that is brought to surface, during the previous reporting period AGL developed a Produced Water Management Strategy (the PWM Strategy) for CSG projects. The long-term objective of the PWM Strategy is to substantially increase the proportion of produced water that is beneficially reused for environmental, industrial/commercial, mining and/or primary production purposes. The PWM Strategy identifies appropriate treatment and beneficial reuse options for produced water for each of AGL's coal seam gas projects.

In FY2012, a number of initiatives, such as the development of site specific water plans and reuse trials, were undertaken in line with the PWM Strategy, and these will be further progressed in FY2013 as the relevant regulatory frameworks in Queensland and New South Wales are finalised.

During FY2012, AGL also developed draft strategies for drill water, fracture stimulation and flowback water, and produced water from conventional petroleum projects. A brine water strategy is also planned for 2013. Together with the existing PWM Strategy for CSG projects, these strategies will form the water management framework for AGL's upstream gas projects.

The following pages provide further details on AGL's approach and performance in relation to water management.

#### Note

<sup>8</sup> As defined in the World Business Council for Sustainable Development Global Water Tool 2010.



## Consumed water

Water is an essential resource for AGL's operations. AGL operates in regions where water restrictions are common, and seeks to minimise water consumption where possible.

### Approach

AGL consumes water for a variety of purposes as outlined below:

- > AGL's largest consumer of water is the Torrens Island Power Station, where water is consumed in the production of steam. Around 90% of the water used at this power station is sourced from an aquifer located approximately 130 metres below the site. This saline water is passed through a reverse osmosis unit and a demineralisation process to remove salts prior to use in the power generation process;
- > cooling water is required at the Hydrocarbon Extractions Plant to cool the process that takes Caltex Refinery waste fuel gas to extract LPG and Naphtha;
- > at Somerton Power Station, water is injected into the combustion chamber to reduce emissions of nitrogen oxides from the plant;
- > at Upstream Gas exploration and production project sites, water is used to lubricate and cool drill bits during drilling operations; and
- > water is essential at all of AGL's offices for provision of basic amenities.

The acquisition of the Loy Yang A power station and associated coal mine by AGL in June 2012 will greatly increase AGL's future water consumption and the power station will account for the vast majority of AGL's water use in the coming years. The most significant water consumption at AGL Loy Yang is related to the cooling tower system; each day the cooling system evaporates approximately 80ML of water drawn from the La Trobe River and local government reserves.

## Performance

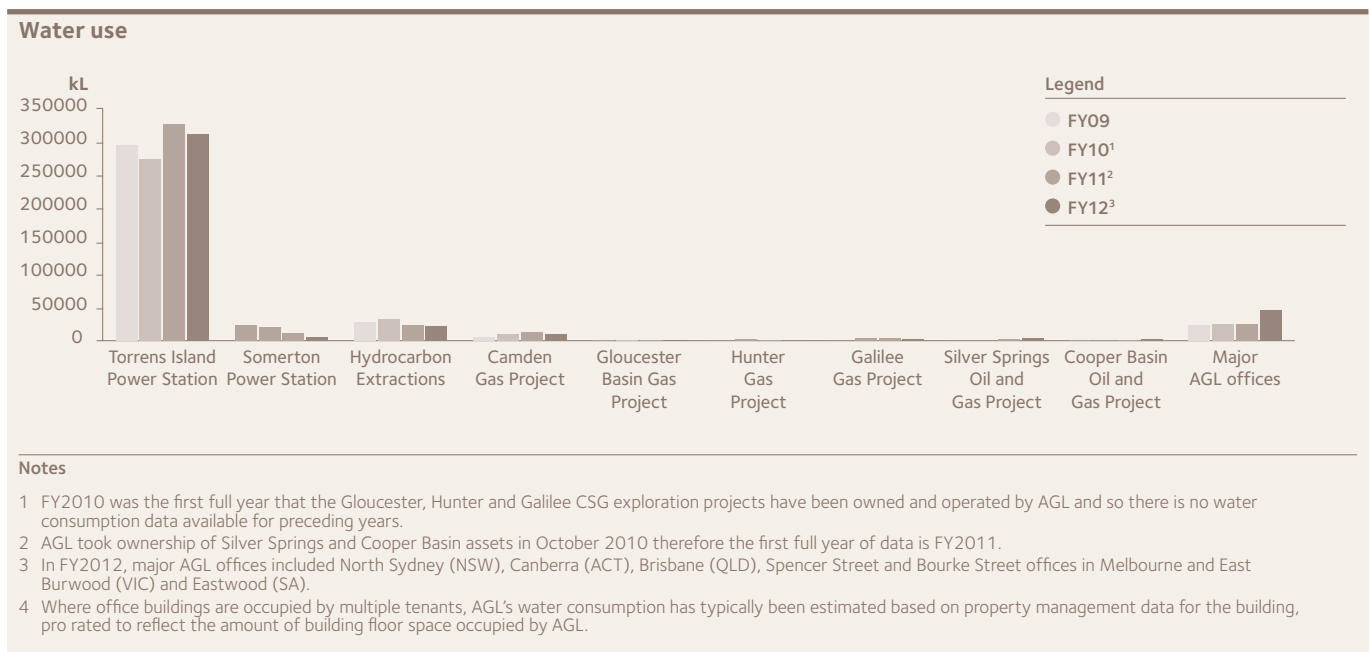
In FY2012, over 70% of the water consumed at AGL's sites comprised groundwater drawn from beneath the Torrens Island Power Station, while the majority of the remaining consumed water consisted of potable water purchased from retail water suppliers. A small portion of water was derived from other sources, such as harvested rainwater.

In addition, AGL makes important non-consumptive use of water resources. This is discussed separately under 'Managed Water' on page 90.

In general, for power generation assets, the amount of water consumed is proportional to the amount of power generated over a particular time period. As Torrens Island Power Station consumes the largest amount of water of all AGL's operated assets, total water use is strongly influenced by the power generated by this asset in a given year.

Power output at Torrens Island Power Station in FY2012 was up slightly compared to FY2011, although water consumption reduced following works to fix town water pipe leaks and improve water use efficiency for the generating units. Power output at Somerton Power Station during FY2012 was significantly down compared to previous years and this is reflected in the water consumption data.

In recognition of the need to use water sustainably across coal seam gas operations, AGL will finalise water management strategies during FY2013 for drill water, and fracture stimulation/flowback water as well as conventional produced water. These strategies will sit alongside AGL's PWM Strategy and, together with a Brine Water Management Strategy, will form AGL's overarching water management framework for unconventional and conventional oil and gas projects.



## Produced water

Deep groundwater is brought to the surface (or 'produced') as an unavoidable by-product of upstream gas exploration and production activities.

### Approach

#### Coal seam gas projects

Community and government stakeholders are increasingly focused on the potential loss of water resources and contamination of ground or surface water arising from the activities of Australia's coal seam gas industry. At AGL, water management is a key component of coal seam gas exploration and production projects, and all of AGL's coal seam gas activities are designed to have a minimal impact on the environment and to protect water resources.

Before the gas can be brought to the surface, water that exists within the coal formation must first be removed so that the gas can 'flow' and be extracted. The quantity of water produced varies depending on the location of the project and also the stage of the production cycle of any given well. Some locations, due to the inherent characteristics of the geology, produce greater volumes of water per well than similar scale projects located elsewhere.

As a project moves from the exploration stage to the production stage, the number of wells increases substantially. The total volume of water removed from the coal formations increases in the initial years then decreases again as the wellfield reaches maturity. Currently, only AGL's Camden Gas Project in New South Wales is in commercial production stage. In the future, as some of AGL's exploration projects move into production stage, the volume of produced water from AGL's operations will increase.

The quality of produced water also varies depending on the location. Produced water varies from low salinity (for example in the Galilee Basin) to moderate salinity in some locations such as in the Hunter, and at Camden and Gloucester. The salinity of produced water is generally less than one-third that of seawater. It is safe to use for a variety of purposes (most of which require some blending or treatment to reduce the salinity hazard), and AGL is actively seeking to increase the proportion of produced water that is beneficially reused for environmental or commercial purposes.

To prevent shallow beneficial aquifers from being connected to the deep coal seam gas water bearing zones, AGL uses internationally accepted well construction practices. AGL has dedicated groundwater monitoring networks to test the water level and the water quality characteristics of shallow aquifers used for water supply, to identify any changes during coal seam gas exploration and production programs. Surface water monitoring is also in place where there are surface water bodies nearby.

#### Conventional oil and gas projects

Conventional oil and gas exploration and production has been undertaken in Australia for over 60 years, and technology related to all petroleum exploration and production (both conventional and unconventional) has grown from conventional oil and gas technology.

The extraction of gas and hydrocarbon liquids from conventional oil and gas projects requires drilling wells to intersect the target reservoir, usually a section of sandstone that is disconnected from any beneficial water aquifer by hundreds and sometimes thousands of metres. Hydrocarbons produced are either free flowing, or use artificial lift methods (i.e. pumping).

Water produced from conventional projects is significantly lower than CSG operations and generally increases as oil production declines. In October 2012, AGL acquired two conventional projects in Queensland, one oil and gas project at Silver Springs (including the Silver Springs Gas Storage Project) and one oil exploration project in the Cooper Basin.

The water generated from both these projects is handled through traditional technologies and is managed to prevent impact to both surface and subsurface environments. Water quality is somewhat variable and highly dependant on the source reservoir. Treatment of this water prior to storage and disposal options includes removal of hydrocarbons where necessary. Long term water management strategies can include evaporation ponds and reinjection to depleted oil and gas reservoirs.

### Performance

The volume of water produced at each of AGL's coal seam gas projects is monitored. The greatest volume is being produced at the Galilee Project which, despite only being in exploration stage, is located within a geological basin that is characterised by higher formation permeabilities and groundwater yields. The number of wells flow-tested at the Galilee Project area in FY2012 was five, compared to the Camden Gas Project which had 138 wells installed as at end FY2012, of which 88 were operational and producing gas.

The total volume of water produced during FY2012 at all coal seam gas project sites was around 220 ML. In addition, during FY2012, around 100 ML of water was produced at AGL's conventional oil and gas projects. In FY2012, produced water was either stored on-site in lined, aboveground holding ponds, or transported off-site approved for recycling and reuse, or disposal.

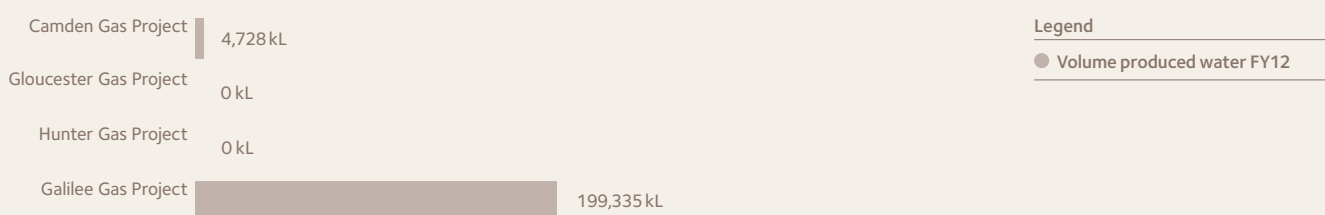
AGL's Produced Water Management Strategy, which was developed during FY2011, identifies potential reuse options for the Camden, Hunter, Gloucester and Galilee Gas Projects. During FY2012, AGL contracted an environmental consulting group to investigate water treatment technologies for the potential beneficial use of the Galilee Gas Project produced water. We will continue with the program of work to execute the beneficial reuse of produced water across these sites during FY2013.

During FY2012, approximately 6 ML of water produced from coal seam gas activities was taken to liquid waste recyclers and treated for reuse industrial processes. No irrigation using produced water occurred in FY2012 as the irrigation approval at Gloucester lapsed and the new approval was only granted at the end of FY2012. However, AGL plans to expand the irrigation area at Gloucester and commence an irrigation trial following the receipt of the new approvals from the NSW Department of Trade and Investment, Regional Infrastructure and Services, the Office of Environment and Heritage, and endorsement from the Department of Primary Industries.

Groundwater monitoring networks were initially established in the Hunter Gas Project during FY2009, followed and Galilee (FY2009) and by Gloucester (FY2010). During FY2012, the monitoring networks were expanded at the Gloucester and Camden North project areas, and within the vicinity of the proposed Newcastle Gas Storage Facility, with the installation of 18 new dedicated groundwater monitoring bores and two new surface monitoring locations. Seventy dedicated groundwater monitoring bores, five perched water monitoring bores, and 16 surface monitoring locations are now operational across these five projects (Hunter, Gloucester, Galilee, Camden North and the Newcastle Gas Storage Facility). Additional monitoring locations are planned for these projects and also at Camden in coming years.

Results to date from AGL's dewatering programs at the Hunter, Galilee and Camden gas projects suggest that groundwater in deep coal seams in these project areas is relatively isolated from water resources in shallow aquifers and streams, and negligible water level declines and water quality impacts have occurred due to AGL's exploration or production activities.

### Coal seam gas produced water<sup>1,2</sup>



### Notes

- Produced water comprises natural groundwater generated from coal seams during flow testing and production dewatering. It does not include other water streams (drill water, fracture stimulation/flowback water and brine water) that usually require separate water management.
- Monitoring data for water production levels is provided for Gloucester, Hunter and Galilee gas projects. Produced water data for Camden Gas Project is calculated from recorded volumes removed from the well sites.
- No water was produced at the Gloucester and Hunter Gas exploration projects in FY2012 as no pilot testing of production was undertaken. Testing will resume in FY2013.

## Managed water

In addition to the consumption of water resources, AGL also makes important non-consumptive use of water, including water drawn from the Port Adelaide River to cool the Torrens Island Power Station, and the water that is passed through hydro power stations. AGL takes its responsibilities as short-term steward of water resources seriously and manages this carefully.

### Approach

AGL's use of water for cooling purposes at Torrens Island Power Station is regulated by its Environment Protection Authority licence. The average temperature increase from the cooling water inlet to the cooling water outlet is required to be less than 10°C. An external consultant audits and validates compliance with this requirement on a two-yearly basis. The last audit report was issued in December 2010, and found AGL to be compliant with requirements, and the next verification audit will be completed in December 2012.

AGL's hydro power generation assets are located across Victoria and New South Wales. The different assets/schemes operate under different water release arrangements as described below:

- > **Mountain Streams Scheme (Royston, Rubicon, Lower Rubicon and Rubicon Falls power stations) and the Kiewa Scheme (Bogong, McKay Creek, Clover and West Kiewa power stations), Victoria** – AGL holds non-consumptive bulk water entitlements with the Victorian Department of Sustainability and Environment (DSE) to use all inflows to the catchment for power generation at its power station assets. The entitlement sets minimum and maximum water flows and rates of change of releases, although AGL has discretion within these boundaries as to how and when water is released within the catchments.
- > **Dartmouth and Eildon, Victoria** – AGL holds water agreements with Goulburn Murray Water (GMW) to generate electricity from all irrigation releases from these storage dams which are operated by GMW. AGL owns regulating pondage downstream of these power stations. Under the water agreements, GMW specifies what flows it wants in the river system downstream of AGL's pondage and so using its pondages, AGL has some flexibility in how this is achieved. GMW must be notified of any water that AGL releases so they can allocate the water appropriately to users downstream.
- > **Cairn Curran and Yarrawonga, Victoria** – AGL holds water agreements with GMW to generate electricity from all irrigation releases from these storage dams, which are operated by GMW. The release of water is dictated by the needs of irrigators, although AGL has the right to produce power from any irrigation releases.
- > **Pindari, Copeton, Burrendong and Glenbawn power stations, New South Wales** – AGL operates these power stations under a water agreement with New South Wales State Water that entitles AGL to generate electricity from all irrigation releases of water from the storages. The release of water is dictated by the needs of irrigators, although AGL has the right to produce power from any irrigation releases.

Where AGL has discretion for releases of water (i.e. where water release is not dictated by irrigation needs), potential environmental impacts are managed by controlling river discharges to within the agreed rates of rise and fall and minimum and maximum flow rates as specified by the relevant authority or agency.

An important annual activity undertaken in the Mountain Streams and Kiewa schemes is desilting of some of the storages and dams to maintain capacity and, in turn, the operating flexibility within the schemes. An environmental working group, (comprising AGL, the Environment Protection Authority Victoria, Victorian Department of Sustainability and Environment (DSE), Parks Victoria, Victorian Department of Primary Industries, local catchment authorities and the Freshwater Ecology section of the Arthur Rylah Institute for Environmental Research), meets annually to review processes, monitoring data and the annual works program.

To minimise the environmental impact of the desilting operations, the activity is conducted during higher flow winter months. Silt is removed by direct flushing into the river system, and also by excavation if required. Environmental parameters agreed by the desilting working group are monitored at a variety of downstream locations at a frequency of 15 minutes to one hour depending on location. This process has been undertaken for more than 10 years and annual studies indicate that there have been no detectable impacts on the ecology of the river system, as indicated by long-term monitoring of macro-invertebrates and blackfish undertaken by the Freshwater Ecology section of the Arthur Rylah Institute for Environmental Research at DSE for AGL.

### Performance

During FY2012, AGL made non-consumptive use of approximately 584 GL of water drawn from the Port Adelaide River to cool the Torrens Island Power Station, a 12% decrease compared to FY2011. Over the same period, the sent out generation from the Torrens Island Power Station increased by 3%.

More than 5300 GL of water passed through hydro power stations during FY2012, compared to 4000 GL in FY2011. Following a prolonged period of low inflows and storage volumes, drought-breaking rainfall in 2011 increased inflows to the catchments where our hydro assets are located. In FY2012, many of the regulated dams at AGL's hydro power stations were filled to capacity, and inflows into the Kiewa and Rubicon hydro schemes were around long-term average inflow levels.

Desilting operations occurred as planned for the Kiewa and Rubicon hydro schemes for FY2012. AGL is intending to install automatic monitoring systems at selected locations on both the Kiewa and Rubicon Rivers to monitor the impacts of desilting by recording parameters including turbidity, pH and temperature at 15 minute intervals. A trial system has been installed on the Kiewa River at Tawonga Bridge to measure impacts of the 2012 Kiewa desilting activities. This monitoring will also provide valuable information on the natural annual range of the variability of the measured parameters.

# Assurance Statements





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## Independent Assurance Report to the Directors of AGL Energy Limited in respect of AGL Energy Limited's 2012 Sustainability Performance Report Greenhouse Gas Emission data

We have been engaged by AGL Energy Limited to conduct a limited assurance engagement on the following greenhouse gas (GHG) emissions data disclosed in the *Carbon Exposure* section of the *Climate Change* chapter of the AGL Energy Limited Sustainability Performance Report for the year ended 30 June 2012 ('2012 Sustainability Performance Report'):

- Operational Footprint
- Equity Footprint
- Energy Supply Footprint

(collectively 'AGL GHG Emissions Data')

prepared in accordance with the basis of preparation as disclosed in the 2012 Sustainability Performance Report.

### AGL Energy Limited's Responsibility for the AGL GHG Emissions Data

The directors of AGL Energy Limited are responsible for ensuring that the AGL GHG Emissions Data is prepared and fairly presented in accordance with the basis of preparation as disclosed in the 2012 Sustainability Performance Report.

This responsibility includes establishing and maintaining internal control relevant to the preparation and fair presentation in accordance with the basis of preparation as disclosed in the 2012 Sustainability Performance Report.

### Our Responsibility

Our responsibility is to express a conclusion on the AGL GHG Emissions Data based on our procedures. We conducted our engagement in accordance with Australian Standard on Assurance Engagements ASAE 3000 Assurance Engagements Other than Audits or Reviews of Historical Financial Information, issued by the Australian Auditing and Assurance Standards Board, in order to state whether we have become aware of any matter that causes us to believe that the AGL GHG Emissions Data has not been prepared, in all material respects, in accordance with the basis of preparation as disclosed in the 2012 Sustainability Performance Report. Our engagement provides limited assurance as defined in ASAE 3000.

The procedures conducted in performing our limited assurance engagement included:

- Performing a risk assessment, including considering internal control relevant to AGL's preparation of the AGL GHG Emissions Data to inform further procedures
- Interviewing the process owners responsible for the preparation of the AGL GHG Emissions Data
- Analysing and inspecting, on a sample basis, the key systems, processes and procedures and supporting documentation relating to the collation, validation, presentation and approval process of the AGL GHG Emissions Data
- Comparing the AGL GHG Emissions Data against the basis of preparation described in the Sustainability Performance Report.

Liability limited by a scheme approved under Professional Standards Legislation.

Member of Deloitte Touche Tohmatsu Limited

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A limited assurance engagement is substantially less in scope than a reasonable assurance "audit" conducted in accordance with ASAE 3000 and accordingly does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion.

ASAE 3000 also requires us to comply with the relevant ethical requirements of the Australian professional accounting bodies.

**Limitations of use**

This report is made solely to AGL Energy Limited in accordance with our engagement letter dated 13 September 2012. We disclaim any assumption of responsibility for any reliance on this report to any person other than AGL Energy Limited or for any purpose other than that for which it was prepared.

**Independence**

In conducting our engagement, we have complied with the independence requirements of the Australian professional accounting bodies.

**Conclusion**

Based on the procedures performed, we have not become aware of any matter that causes us to believe that the AGL GHG Emissions Data has not been prepared, in all material respects, in accordance with the basis of preparation as disclosed in the 2012 Sustainability Performance Report for the year ended 30 June 2012.

A handwritten signature in blue ink that reads "Deloitte Touche Tohmatsu".

DELOITTE TOUCHE TOHMATSU

A handwritten signature in blue ink that reads "BJ Pollock".

BJ Pollock

Partner

Sydney, 6 December 2012



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## INDEPENDENT ASSURANCE STATEMENT

To the Board of Directors and Management of AGL Energy:

AGL Energy Limited (AGL) commissioned Net Balance Management Group Pty Ltd (Net Balance) to provide independent assurance over the AGL Sustainability Performance Report 2012 and the top 12 sustainability targets (excluding economic targets) as specified within the 2012 AGL Energy Annual Report (the Reports). The Reports present AGL's sustainability performance over the period 1 July 2011 to 30 June 2012. AGL was responsible for the preparation of the Reports and this Statement presents the assurance provider's independent opinion. Net Balance's responsibility in performing its assurance activities is to the Board and Management of AGL in accordance with the terms of reference agreed with them. Other stakeholders should perform their own due diligence before taking any action as a result of this Statement.

### Assurance Standard and Objectives

Net Balance provided 'Type 2' assurance in accordance with the AA1000 2008 Assurance Standard (AA1000AS). This involved assessing the organisation's adherence to the AA1000 AccountAbility Principles (2008) and assessing the accuracy and quality of the sustainability information contained within the Reports. A full description of the assurance standard and methodology applied is available in our more detailed assurance statement available at [www.agl.com.au/about/Sustainability](http://www.agl.com.au/about/Sustainability).

### Our Independence

Net Balance was not responsible for preparing any part of the Reports. Our team's independence was ensured by selecting members with no other involvement with AGL during the reporting period that could impair the team's independence or objectivity, in accordance with our Independence Policy, a copy of which is available at <http://www.netbalance.com/services/assurance>.

### Findings and Conclusions

#### Adherence to AA1000 Principles

##### *Inclusivity*

AGL has diverse stakeholders and maintains multiple processes for engaging stakeholders. This broad range of processes assists with understanding stakeholder concerns and developing relationships. Some of the processes we observed are well-developed in terms of AGL actively seeking stakeholder feedback and incorporating it in decision-making. These processes are allowing AGL to achieve high quality relationships with these stakeholders. The key area that requires continual focus for AGL is community engagement in areas of AGL's operations and explorations. This year Net Balance observed increased focus on providing resources for community stakeholders in Upstream Gas operations to increase their capacity to be involved in decision-making, as well as providing increased resources to manage the engagement.

##### *Materiality*

AGL has an actively managed risk process that includes sustainability-related risks. AGL's material issues have been identified as the top 12 sustainability targets. The areas covered by the sustainability targets have a variable level of impact on the organisation and extent of management required. This may suggest that there is a similar variability in the materiality levels of these targets for AGL. Some additional refinement of the materiality process is suggested.

##### *Responsiveness*

Generally AGL is responsive to material issues and stakeholders. AGL responded to a key recommendation from the 2011 Assurance Statement for improving management of health and safety data processes. AGL has also sought to address the environmental data recommendations made by Net Balance in the last Assurance Statement. This has resulted in an improvement in accuracy and





auditability of the data reported. Net Balance would like to see further improvements in environmental data collection systems.

#### Reliability of Performance Information

Overall, it is Net Balance's opinion that the information presented within the Reports is fair and accurate. The Reports were found to be a reliable account of AGL's sustainability performance during the reporting period. Information on the reliability of performance information is available in our more detailed assurance statement available at [www.agl.com.au/about/Sustainability](http://www.agl.com.au/about/Sustainability).

#### The Way Forward

Net Balance found the Reports appropriately address AGL's material sustainability issues. Recommendations and suggestions have been provided in a separate, more detailed report presented to AGL's Board and Management.

On behalf of the assurance team  
30 November 2012  
Melbourne, Australia

Terence Jeyaretnam, FIEAust  
Director, Net Balance & Lead CSAP (AccountAbility UK)



# Global Reporting Initiative (GRI) Index

This report meets the requirements of an 'A+' GRI Application Level.



● Core ● Additional \* esaa Sustainable Practice Framework

Ref.	Description	Location of disclosure within report	Additional information
<b>Strategy and analysis</b>			
1.1	Statement from the most senior decision maker of the organisation about the relevance of sustainability to the organisation and its strategy.	Annual Report Page 6, 7, 8	–
1.2	Description of key impacts, risks and opportunities.	Annual Report Page 10	–
<b>Organisational Profile</b>			
2.1	Name of the organisation.	Page 6	–
2.2	Primary brands, products and/or services.	Page 2	–
2.3	Operational structure of the organisation, including major divisions, operating companies, subsidiaries and joint ventures.	Page 2	–
2.4	Location of the organisation's headquarters.	–	101 Miller Street, North Sydney, NSW, Australia
2.5	Number of countries where the organisation operates, and the names of countries with either major operations, or that are specifically relevant to the sustainability issues covered in the report.	Page 6	–
2.6	Nature of ownership and legal form.	Page 6	–
2.7	Markets served (including geographic breakdown, sectors served and types of customers/ beneficiaries).	Page 19	–
2.8	Scale of reporting organisation, including: Number of employees, net sales (for private sector organisations) or net revenues (for public sector organisations), Total capitalisation broken down in terms of debt and equity (for private sector organisations) and Quantity of products or services provided.	Page 2, 23, 57	–
2.9	Significant changes during the reporting period regarding size, structure or ownership including: the location of or changes in operations including facility openings, closings and expansions, and changes in the share capital structure and other capital formation, maintenance and alteration operations (for private sector organisations).	Page 2, 3	–
2.10	Awards received in the reporting period.	Annual Report Page 11	–
<b>Report Parameters</b>			
3.1	Reporting period for information provided.	Page 6	–
3.2	Date of most recent previous report (if any).	Page 6	–
3.3	Reporting cycle (annual, biennial, etc).	Page 6	–
3.4	Contact point for questions regarding the report or its contents.	Inside front cover	–
3.5	Process for defining report content, including: Determining materiality, prioritising topics within the report and identifying stakeholders the organisation expects to use the report. Include an explanation of how the organization has applied the 'Guidance on Defining Report Content' and the associated Principles.	Page 6, 7, 12, 13, 14	–
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	Page 6	–
3.7	State any specific limitations on the scope or boundary of the report.	Page 6	–
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	Page 6	–
3.9	Data measurement techniques and the basis of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	Page 6, 72	–
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	–	Not applicable.
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	–	Not applicable.
3.12	Table identifying the location of the Standard Disclosures in the report.	GRI Index	–
3.13	Policy and current practice with regard to seeking external assurance for the report.	–	It is AGL's intention to continue to have future Sustainability Reports assured to the AA1000 Assurance Standard and/or ISAE 3000 Standard.

Ref.	Description	Location of disclosure within report	Additional information
<b>Governance, commitments and engagement</b>			
4.1*	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	Page 10	–
4.2*	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	Annual Report Page 35	–
4.3*	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	Annual Report Page 42	–
4.4*	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	Annual Report Page 39	–
4.5*	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	Annual Report Page 50, 51, 52, 53, 54, 55, 62, 63	–
4.6*	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	Annual Report Page 34	–
4.7*	Processes for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental and social topics.	Annual Report Page 35	–
4.8*	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	Page 10, 11	–
4.9*	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct and principles.	Annual Report Page 36, 37, 38	–
4.10*	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental and social performance.	Annual Report Page 35, 36	–
4.11*	Explanation of whether and how the precautionary approach or principle is addressed by the organisation.	Page 78	AGL's Environmental Principles are available at: <a href="http://agl.com.au/EnvironmentalPrinciples">agl.com.au/EnvironmentalPrinciples</a> .
4.12*	Externally developed economic, environmental and social charters, principles or other initiatives to which the organisation subscribes or endorses.	–	AGL is a signatory to the Energy Supply Association of Australia's Sustainable Practice Framework.
4.13	Memberships in associations and/or national/international advocacy organisations in which the organisation: has positions in governance bodies, participates in projects or committees, provides substantive funding beyond routine membership dues or views membership as strategic.	Page 12, 13, 14	–
4.14*	List of stakeholder groups engaged by the organisation.	Page 12, 13, 14	–
4.15*	Basis for identification and selection of stakeholders with whom to engage.	Page 12, 13, 14	–
4.16*	Approaches to stakeholder engagement including frequency of engagement by type and by stakeholder group.	Page 12, 13, 14	–
4.17*	Key topics and concerns that have been raised through stakeholder engagement and how the organisation has responded to those key topics and concerns, including through its reporting.	Page 12, 13, 14	–
<b>Management Disclosures</b>			
–	Economic	Economic Chapter	Disclosures on management approaches for <b>economic performance</b> and <b>market presence</b> are found within the Economic chapter, under the 'Approach' heading on relevant pages.
–	Environmental	Climate Change Chapter  Environment Chapter  Customer Chapter	For disclosures on management approaches for <b>energy and emissions</b> (greenhouse gas emissions) refer to the Climate Change chapter, under 'Approach' headings on relevant pages.  Refer to the Environment chapter for disclosures on management approaches for: <b>materials; water; biodiversity; emissions; effluents and waste; compliance; transport and overall</b> .  See the pages within the Customer chapter which describe energy efficiency and renewable energy products and services, for disclosures on the environmental impacts of <b>products and services</b> .
–	Labour practices	People Chapter	Disclosures on management approaches are contained within the 'approach' section of relevant pages in the People chapter.

Ref.	Description	Location of disclosure within report	Additional information																								
–	Human rights	People Chapter	Disclosures on management approaches are contained within the 'approach' section of relevant pages in the People chapter.																								
–	Society	Community Chapter	Disclosures of management approach for <b>corruption, public policy, anti-competitive behaviour, and compliance</b> are contained within the Governance and Management pages of the report.																								
		Introduction > Governance and management	<b>Community</b> management disclosures are contained with the Community chapter.																								
–	Product responsibility	Customer Chapter	For disclosures on management approaches refer to relevant pages of the Customer chapter.																								
<b>Performance Indicators</b>																											
EU1	Installed capacity, broken down by primary energy source and by regulatory regime.	Page 4, 5, 74	–																								
EU2	Net energy output broken down by primary energy source and by regulatory regime.	Page 67	In addition to the electricity generation, AGL's operated power generation assets also produced 297 TJ of energy as steam, provided to AGL's customers from the Coopers and Symex cogeneration facilities.																								
	<b>Output and intensity of AGL operated electricity generation assets<sup>1</sup></b>																										
		<table border="1"> <thead> <tr> <th>Legend</th> <th>%</th> <th>Notes</th> </tr> </thead> <tbody> <tr> <td>● South Australia</td> <td>76</td> <td>1 These figures relate to the sent-out electricity generation from assets over which AGL has operational control, regardless of who owns the asset. Assets where AGL controls or has rights to the electricity output only are not included.</td> </tr> <tr> <td>● Victoria</td> <td>19</td> <td>2 Generation associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.</td> </tr> <tr> <td>● New South Wales</td> <td>3</td> <td>3 Values may not sum to 100% due to rounding.</td> </tr> <tr> <td>● Queensland</td> <td>2</td> <td></td> </tr> <tr> <td>● Tasmania</td> <td>0.3</td> <td></td> </tr> <tr> <td>● Western Australia</td> <td>0.3</td> <td></td> </tr> <tr> <td>Total output</td> <td>4,816 GWh</td> <td></td> </tr> </tbody> </table>	Legend	%	Notes	● South Australia	76	1 These figures relate to the sent-out electricity generation from assets over which AGL has operational control, regardless of who owns the asset. Assets where AGL controls or has rights to the electricity output only are not included.	● Victoria	19	2 Generation associated with the Loy Yang A Power Station and mine are excluded from this data for 2012, since AGL's acquisition took place late in the financial year (29 June 2012). This data will be included in FY2013, for the first full year of AGL's operation.	● New South Wales	3	3 Values may not sum to 100% due to rounding.	● Queensland	2		● Tasmania	0.3		● Western Australia	0.3		Total output	4,816 GWh		
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EU3	Number of residential, industrial, institutional and commercial customer accounts.	Page 19	As at the end of June 2012, AGL had 20,272 connection points for industrial and commercial customers.																								
EU4	Length of above and underground transmission and distribution lines by regulatory regime.	Page 2	Not applicable. AGL does not control, own or operate any electrical transmission or distribution businesses.																								
EU5	Allocation of CO <sub>2</sub> e emissions allowances or equivalent, broken down by carbon trading framework.	Page 76	Under the <i>Clean Energy Future</i> package of legislation, which commenced on 1 July 2012, AGL will receive Australian emission unit permits. The record of allowances under this framework will be reported from FY2013 onwards.																								
EC1*	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	–	The following financial information is contained in the Annual Report: revenues (page 64); operating costs (page 68); employee compensation (page 68); retained earnings (page 101); payments to capital providers (page 102); and payments to governments (page 86). Information on donations and other community investments are on pages 36, 37, 40, 42, 43, 44, 45, 46, 47 of this report.																								
EC2*	Financial implications and other risks and opportunities for the organisation's activities due to climate change.	Page 64, 65	–																								
EC3	Coverage of the organisation's defined benefit plan obligations.	–	Australian law requires 9% of salary to be contributed by employers to complying superannuation funds on behalf of their employees. AGL makes superannuation contributions for all employees and complies with the statutory requirement to contribute a minimum of 9% of salary.  AGL's obligations to pay pensions under the superannuation plan are met directly through the fund, and maintained separately from the resources of the organisation. 95.4% of employees are in defined contribution funds, and 4.6% in a defined benefit fund.																								
EC4	Significant financial assistance received from government.	–	Cash assistance of \$240.1m was received on 22 June 2012, one week before AGL completed the acquisition of Loy Yang A on 29 June 2012. At the time the money was provided, AGL owned 32.5% of Loy Yang A and therefore directly received a one third benefit. During FY2012, AGL also received an amount of \$4,937,057 in relation to the Australian Government's Research and Development Tax Concession.																								
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.	–	Not disclosed.																								
EC6	Policy, practices and proportion of spending on locally based suppliers at significant locations of operation.	–	AGL does not have a specific policy mandating the use of locally based suppliers. AGL chooses the supplier who is most appropriate for the job, and this often includes local suppliers.																								

Ref.	Description	Location of disclosure within report	Additional information
EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.	–	AGL's recruitment practice is to ensure that it hires people who are the best fit for the role. In the majority of cases we look to the local community first when hiring people from outside AGL.
EC8*	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in kind or pro bono engagement.	Page 34, 40	AGL operates an information centre in Burra (in the Hallett region of South Australia, where AGL operates a number of wind farms), and the Hunter Customer Service and Information Centre in Singleton.  During FY2012 AGL continued the roll out of satellite dishes and receivers to residents within the Hallett community who neighbour wind farms that are either in development, construction or operation.
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	Page 31, 32	–
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime.	Page 2, 3, 17, 74	–
EU11*	Average generation efficiency of thermal plants by energy source and by regulatory regime.	–	The efficiency curves for Torrens Island (A & B) Power Station (TIPS), both actual and target are depicted below. TIPS represents 46% of AGL's installed capacity (by operational control). (Note – this excludes the Loy Yang A power station.)
	<p><b>AGL Torrens Island A Station average efficiency FY2012 and Generator Efficiency Standards (GES) best practice target vs unit output</b></p> <p><b>AGL Torrens Island B Station average efficiency FY2012 and Generator Efficiency Standards (GES) best practice target vs unit output</b></p>		
	<p><b>Legend</b></p> <p>— A Station FY2012 average efficiency</p> <p>- - GES best practice target for plant age (30+ yrs)</p>		
	<p><b>Legend</b></p> <p>— B Station FY2012 average efficiency</p> <p>- - GES best practice target for plant age (30 yrs)</p>		
EU12*	Transmission and distribution losses as a percentage of total energy.	–	Not applicable. AGL does not control, own or operate any electrical transmission or distribution businesses.
EU6*	Management approach to ensure short and long-term electricity availability and reliability.	Page 2, 3	AGL contributes information to the Australian Energy Market Operator (AEMO). AEMO tracks plant availability to ensure reliability through short – and medium-term availability outlooks.
EU7	Demand-side management programs including residential, commercial, institutional and industrial programs.	Page 28, 32	–
EU8	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development.	Page 77	–
EU9	Provisions for decommissioning of nuclear power sites.	–	Not applicable. AGL does not control, own or operate any nuclear power facilities.

Ref.	Description	Location of disclosure within report	Additional information
EN1	Materials used by weight and volume.	–	<p>Approximately 730 tonnes of paper was used for bill printing, marketing and office use during FY2012. AGL is encouraging customers to utilise its paperless billing system (introduced in April 2011) to decrease paper use. Almost 10% of AGL customers were using the paperless billing system as at 30 June 2012, and this figure is increasing each week.</p> <p>For construction materials, Power Development projects are constructed via Engineering, Procurement and Construction (EPC) contracts, therefore AGL does not directly purchase construction materials. However, approximately 317,000 tonnes of concrete and 6,700 tonnes of steel were purchased through EPC contracts for the construction of the Macarthur Wind Farm during FY2012. Approximately 700 tonnes of concrete and 650 tonnes of steel were purchased and used directly by AGL's upstream gas and merchant energy businesses.</p>
EN2	Percentage of materials used that are recycled input materials.	–	AGL typically purchases office paper with 80% recycled content.
EN3*	Direct energy consumption by primary energy source.	Page 67	The greenhouse emissions from consumed energy are accounted for in AGL's Greenhouse Gas Footprint. Energy data is also available in AGL's response to the Carbon Disclosure Project, which is available at <a href="http://www.cdproject.net">www.cdproject.net</a>
EN4	Indirect energy consumption by primary energy source.	Page 67	The greenhouse emissions from consumed energy are accounted for in AGL's Greenhouse Gas Footprint. Energy data is also available in AGL's response to the Carbon Disclosure Project, which is available at <a href="http://www.cdproject.net">www.cdproject.net</a>
EN5	Energy saved due to conservation and efficiency improvements.	–	<p>At Torrens Island Power Station, energy savings achieved through the implementation of sliding pressure on the B station boilers are estimated to be almost 13,000 MWh for FY12, representing a saving of around 7% of electricity used, and a saving of 0.2% of the total energy used.</p> <p>In addition, solar panels installed at the AGL Solar warehouse are expected to generate around 10 MWh per annum of renewable energy, replacing electricity that would otherwise be sourced from the grid.</p>
EN6*	Initiatives to provide energy efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	Page 28	–
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	–	Not disclosed.
EN8*	Total water withdrawal by source.	Page 86, 90	–
EN9	Water sources significantly affected by withdrawal of water.	Page 38, 86, 89	<p>Torrens Island Power Station (TIPS) cooling water and water passed through Hydro Power stations is returned to source effectively immediately thus there is negligible impact (other than temperature at TIPS which is regulated via an EPA licence).</p> <p>A groundwater and surface water investigation and monitoring program is conducted at AGL's Hunter, Gloucester, and Galilee gas exploration projects, and in the vicinity of the proposed Newcastle Gas Storage Facility at Tomago in New South Wales. A groundwater monitoring program is also in place at Camden Gas Project.</p>
EN10	Percentage and total volume of water recycled and reused.	Page 87, 90	<p>The majority of water withdrawn for use in operations is recycled/re-used, as a large proportion of the water used comprises water withdrawn for cooling water at Torrens Island Power Station and water passed through AGL Hydro Power stations.</p> <p>Volumes of water produced at CSG operations and recycled are disclosed in the report.</p>

Ref.	Description	Location of disclosure within report	Additional information
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	Page 84	<p>AGL assets in or adjacent to protected areas include:</p> <p>Part of AGL's Kiewa Hydro Electric Scheme, in north-east Victoria, operates adjacent to and surrounded by the Victorian Alpine National Park.</p> <p>AGL's Hydrocarbon Extractions (HCE), located at Kurnell in Sydney, is adjacent to the Caltex oil refinery. HCE encompasses a small plant area of approximately 6 Ha. Kurnell is primarily an industrial area, located near to both the Towra Point Nature Reserve and Botany Bay National Park.</p> <p>The Torrens Island Power Station is surrounded by water bodies comprising the Port Adelaide River and the Barker Inlet, which are part of a sanctuary of 118 km<sup>2</sup> created under the Adelaide Dolphin Sanctuary Act to protect a resident bottlenose dolphin population (See EN25 for further information).</p> <p>For AGL's development projects, relevant information regarding sensitive environments is included within environmental impact assessments. Environmental assessments for a number of projects are disclosed on project websites (see: <a href="http://www.agl.com.au/about/EnergySources/upstreamandgenerationprojects/Pages/default.aspx">www.agl.com.au/about/EnergySources/upstreamandgenerationprojects/Pages/default.aspx</a>).</p>
EN12*	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	Page 84	<p>AGL's activities during FY2012 have not had a significant impact on biodiversity in protected areas or areas of high biodiversity value outside protected areas. As outlined on page 84, although native flora and fauna is present at a number of AGL development and exploration projects, AGL actively seeks to design projects to avoid disturbance to flora and fauna, and constrain activities to areas of low environmental significance wherever possible.</p> <p>Where AGL development projects are located in sensitive environments, environmental impact assessments (EIA) are undertaken with the aim of minimising any impacts. For example, in FY2012 AGL completed an EIA for the Newcastle Gas Storage Facility. A number of stakeholders were involved in the EIA process and establishment of measures to minimise impacts on biodiversity. In particular, AGL is working with the Hunter Regional Botanic Gardens to minimise impacts on a nationally threatened species, Earp's Gum, and has worked with the Native Animal Trust group to ensure protection of koalas.</p> <p>Environmental assessments for a number of projects are available on project websites (see: <a href="http://www.agl.com.au/about/EnergySources/upstreamandgenerationprojects/Pages/default.aspx">http://www.agl.com.au/about/EnergySources/upstreamandgenerationprojects/Pages/default.aspx</a>).</p>
EN13	Habitats protected or restored.	Page 84	<p>As outlined above, AGL seeks to protect habitats by limiting the construction/exploration footprint of its development projects to already disturbed areas where possible. Where habitats are affected, AGL takes steps to restore and protect them.</p>
EN14*	Strategies, current actions and future plans for managing impacts on biodiversity.	Page 84	<p>AGL's health, safety and environmental management system, Life Guard, contains standards relating to Environmental Aspects and Impacts and Risk Management, which provide high-level guidance on the process for identification of environmental risks. Life Guard contains an Ecosystem Protection Compliance Guide which covers the protection of ecosystems within and adjacent to AGL sites.</p> <p>Where AGL sites are located in sensitive environments, environmental management systems or plans are in place, which reflect both the requirements of the AGL corporate HSE management system, and the local aspects of operations. As an example, the Environmental Management Plan for the Waukivory wells which form part of the AGL Gloucester Gas Project outlines actions and strategies for managing impacts on local flora and fauna – see <a href="http://www.agk.com.au/gloucester/assets/pdf/Review%20of%20Environmental%20Factors%20for%20Waukivory%20March%202011.pdf">http://www.agk.com.au/gloucester/assets/pdf/Review%20of%20Environmental%20Factors%20for%20Waukivory%20March%202011.pdf</a> (Appendix C).</p> <p>Further, as detailed in the Environment Chapter, all large AGL sites / projects maintain environmental risk registers which, where relevant, detail site specific environmental risks and risk management measures. Further, in FY2012, AGL developed a corporate biodiversity register to provide a company-wide view of AGL's biodiversity risks and enable a strategic approach to biodiversity risk management.</p>
EN15	Number of IUCN Red List and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	Page 84	<p>In Australia, the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (the EPBC Act) is the national legislation that identifies threatened species. The EPBC Act categories for listed threatened species are broadly in line with IUCN categories.</p> <p>EPBC listed species are present, or have the potential to be present, at more than 14 AGL operated sites. Information on threatened species is documented in site specific flora and fauna assessments and management plans, and consolidated in AGL's Biodiversity Register. AGL has management plans in place to avoid, minimise and mitigate adverse impacts and ensure compliance with EPBC Act requirements.</p>



Ref.	Description	Location of disclosure within report	Additional information
EN16*	Total direct and indirect greenhouse gas emissions by weight.	Page 67	–
EN17	Other relevant indirect greenhouse gas emissions by weight.		Refer to AGL's CDP submission available at: <a href="http://www.cdproject.com">www.cdproject.com</a> .
EN18*	Initiatives to reduce greenhouse gas emissions and reductions achieved.	Page 3, 66, 74	From FY2013, AGL will be reporting initiatives at Loy Yang as part of this criteria.
EN19	Emissions of ozone depleting substances by weight.	–	In FY2012, AGL purchased 34kg of ozone depleting substances (R22 and R410A) for Torrens Island Power Station, and 3900kg for the Hydrocarbon Extractions LPG plant (R22). The amounts purchased are to offset losses from air-conditioning systems, and therefore it is assumed that approximately the same weight of ozone depleting substances were emitted during FY2012 from these sites.
EN20*	NOx, SOx, and other significant air emissions by type and weight.	Page 82	–
EN21*	Total water discharge by quality and destination.	Page 89, 90	The most significant discharges from AGL sites during FY2012 related to cooling water discharged from Torrens Island Power Station, and water that passes through AGL's hydro power stations. Page 90 of the report provides details on the volumes discharged and how these discharges are monitored and managed.  In addition, page 89 of the report outlines that more than 300 ML of water was produced at AGL's upstream gas projects during FY2012. Almost all of this water was stored on-site in holding ponds. During FY2012, around 6ML of produced water was treated for reuse in industrial processes.
EN22*	Total weight of waste by type and disposal method.	Page 85	–
EN23	Total number and volume of significant spills.	Page 80	–
EN24	Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III and VIII, and percentage of transported waste shipped internationally.	–	Not a material issue for AGL.
EN25	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the reporting organisation's discharges of water and runoff.	Page 84, 90	AGL's biodiversity register documents details, such as protected status and biodiversity value, of AGL sites which are located within close proximity to water bodies. The most significant of these sites are the Kiewa hydroelectric scheme, which is adjacent to the Alpine National Park, and the Torrens Island Power Station (TIPS).  TIPS is surrounded by a 118 km <sup>2</sup> marine sanctuary created under the <i>Adelaide Dolphin Sanctuary Act</i> to protect a resident bottlenose dolphin population. The Act imposes a general duty of care to take all reasonable measures to prevent or minimise any harm to the Sanctuary. The Act does not limit or impair the operation of the Environment Protection Act under which the Torrens Island Power Station is licensed to discharge warm condenser cooling water to the marine environment.  Within the waters of the Dolphin Sanctuary is the Barker Inlet – St Kilda Aquatic Reserve, the purpose of which is to protect samphire, mangrove and seagrass communities and their role as a fish and crustacean nursery and breeding areas. The Barker Inlet is listed in the Directory of Important Wetlands of Australia (Environment Australia, 2001) as a nationally important marine and coastal zone wetland.  The Kiewa Scheme has power stations, dams and pondage located on the East Kiewa, West Kiewa and Kiewa Rivers, and some of the schemes sites are located within the Alpine National Park which has protected status.  The harvesting and utilisation of the water from the catchments for a variety of purposes, including the generation of electricity over the past 40 years, has altered the ecological systems of the waterways not only within the catchment but also those below the catchment. The ecological systems have largely adapted to these changes however there are ongoing impacts on the environment from the operation of the schemes as a result of changes to natural flows.  For details on desilting of AGL's hydro scheme water storages and the cooling water discharged at Torrens Island Power Station, refer to page 90 of the report.
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Page 28, 66, 74	–
EN27	Percentage of products sold, and their packaging materials that are reclaimed by category.	–	This indicator is not relevant to AGL's core products (gas and electricity).
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Page 80	As outlined on page 80 of the report, there were no fines applied to AGL's operations during the reporting period for non-compliance with environmental laws and regulations.
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations and transporting members of the workforce.	Page 71	–

Ref.	Description	Location of disclosure within report	Additional information
EN30	Total environmental protection expenditures and investments by type.	–	Environmental protection expenditure is not reported.
EU13	Biodiversity of offset habitats compared to the biodiversity of affected areas.	Page 84	As outlined at EN13, offset habitats are sometimes required to be established where habitat areas are affected during the construction of AGL projects. When determining offset sites, various factors are taken into consideration including site condition and landscape context. The principle of quality versus quantity invariably applies. Appropriate sites are selected with input from specialist ecologists and in consultation with statutory agencies (as required).  Where relevant, information regarding offsets habitats related to AGL development projects is disclosed on project websites (see: <a href="http://www.agl.com.au/about/EnergySources/upstreamandgenerationprojects/Pages/default.aspx">www.agl.com.au/about/EnergySources/upstreamandgenerationprojects/Pages/default.aspx</a> ).
EU14*	Programs and processes to ensure the availability of a skilled workforce.	Page 52, 53	–
EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region.	–	As at 30 June 2012, 2.7% of AGL employees will be eligible to retire in 5 years time, and a further 6.0% of employees will be eligible to retire in 10 years time (based upon a retirement age of 65 years).
EU16	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors.	Page 58	AGL's health, safety and environment policy (see: <a href="http://agl.com.au/HSEPolicy">agl.com.au/HSEPolicy</a> ) is applicable to all employees and contractors.
EU17	Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities.	–	Not disclosed.
EU18*	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	Page 60	The number of new employees, transferees and contractors who have completed the on-line HSE induction is reported.
LA1	Total workforce by employment type, employment contract and by region.	Page 57	–
LA2*	Total number and rate of employee turnover by age, group, gender and region.	Page 54	–
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	Page 55, 56	AGL's employee benefits are accessible to all AGL employees, regardless of their part-time or full-time employment status (although some have eligibility criteria, such as minimum service terms).
LA4	Percentage of employees covered by collective bargaining agreements.	–	AGL is party to seven major Enterprise Bargaining Agreements (EBAs) covering approximately 43.8% of our workforce.
LA5	Minimum notice period(s) regarding operational changes, including whether it is specified in collective agreements.	–	AGL is party to seven major Enterprise Bargaining Agreements (EBAs) covering approximately 43.8% of our workforce. While no minimum notice period is specified, these agreements document AGL's obligation to consult with our employees and their union representatives prior to the implementation of major organisational change that impacts our employees' status or future employment with AGL. The remaining (non EBA) workforce have similar rights under the Fair Work Act (Cth), requiring all employers to consult on major workplace changes prior to implementation.
LA6*	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	Page 60, 61	–
LA7*	Rates of injury, occupational diseases, lost days and absenteeism, and number of work related fatalities by region.	Page 58, 59	–
LA8	Education, training, counselling, prevention and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	Page 60, 61, 62	–
LA9	Health and safety topics covered in formal agreements with trade unions.	–	AGL's Life Guard HSE system is relevant to all employees regardless of whether they are covered by specific union agreements.
LA10*	Average hours of training per year per employee by employee category.	Page 53	This indicator has been partially answered on the basis that AGL does not currently report on training by all employee categories.  In FY2012 over 10,384 hours of leadership and development training was undertaken by AGL employees.  In addition, over 40,536 hours of training was delivered for AGL's Retail Energy group (the majority of the training being undertaken by Customer Service Representatives) during FY2012.  These figures include customised training programs, managed by AGL's in-house learning and development function. Figure does not include public training programs, seminars, and conferences attended by AGL employees.
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	Page 52, 53, 55	–

Ref.	Description	Location of disclosure within report	Additional information
LA12	Percentage of employees receiving regular performance and career development reviews.	Page 55	All employees are required to have regular performance and career development reviews at AGL.
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	Page 57	Refer to AGL Annual Report 2012 (Directors' Report).
LA14*	Ratio of basic salary of men to women by employee category.	Page 50	This indicator has been partially answered, on the basis that the ratio is not currently reported by employee category.
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	–	Not applicable. For Australian investments, human rights are protected by law.
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	–	<p>Within AGL's commercial agreements with suppliers (including agreements with overseas suppliers), there are unconditional obligations that require the supplier to comply with internal AGL standards and policies. For example, compliance with AGL's Code of Conduct is a specific obligation in contracts. Overseas suppliers are also bound to comply with external policies and standards that AGL operates to in Australia, including Australian laws, regulations and standards.</p> <p>AGL monitors these obligations throughout the term of the agreement and should there be a breach, AGL would exercise its right of termination associated with these obligations.</p>
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	Page 52	The percentage completion rate of employees completing on-line induction and refresher training for Diversity and Inclusion is disclosed and this equates to approximately 945 hours of training. The compulsory induction training provides education about discrimination, harassment and other unlawful behaviour.
HR4*	Total number of incidents of discrimination and actions taken.	Page 51	–
HR5*	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.	–	AGL complies with Australian legislation regarding human rights in areas including diversity, discrimination, freedom of association, child labour, layoffs and health, safety and environment. We support, in principle, the United Nations Global Compact on human rights for businesses.
HR6	Operations identified as having a significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour.	–	AGL complies with Australian legislation regarding human rights in areas including diversity, discrimination, freedom of association, child labour, layoffs and health, safety and environment. We support, in principle, the United Nations Global Compact on human rights for businesses.
HR7	Operations identified as having significant risk for incidents of forced or compulsory labour, and measures taken to contribute to the elimination of forced or compulsory labour.	–	AGL complies with Australian legislation regarding human rights in areas including diversity, discrimination, freedom of association, child labour, layoffs and health, safety and environment. We support, in principle, the United Nations Global Compact on human rights for businesses.
HR8	Percentage of security personnel trained in the organisation's policies or procedures concerning aspects of human rights that are relevant to operations.	–	All employees must undertake compulsory induction training, which provides education about discrimination, harassment and other unlawful behaviour.
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	–	Not disclosed.
EU19	Stakeholder participation in the decision making process related to energy planning and infrastructure development.	Page 12, 34, 35, 39	–
EU20	Approach to managing the impacts of displacement.	–	AGL sites its development projects to avoid the need to physically displace individuals or communities. See also EU22.
EU21	Contingency planning measures, disaster/emergency management plan and training programs, and recovery/restoration plans.	–	AGL employs a holistic, integrated and consistent approach to risk management. AGL also maintains a Business Continuity Management Policy and Framework and multiple levels of response plans. AGL has a number of emergency response plans that address key risks. Any scenario that could materially impact AGL operations or reputation would be considered a continuity event and the AGL Code Red response plan would be activated.
EU22	Number of people physically or economically displaced and compensation, broken down by type of project.	–	<p>AGL sites its development projects to avoid the need to physically displace individuals or communities. For wind farms and upstream gas projects AGL makes direct payments to landowners whose land is included in the development site. This provides landowners with additional revenue, with minimal disruption (where possible) to the use of their land.</p> <p>The economic impact of AGL's wind farm developments in the Hallett region of South Australia was assessed in FY2010 by Sinclair Knight Mertz. The study found that the developments had had a positive economic impact on the region. See AGL's 2010 Sustainability Performance Report at <a href="http://www.agl.com.au/about/Sustainability/Pages/SustainabilityReport.aspx">www.agl.com.au/about/Sustainability/Pages/SustainabilityReport.aspx</a></p>
SO1*	Nature, scope and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating and exiting.	Page 12, 34, 35, 38	–

Ref.	Description	Location of disclosure within report	Additional information
SO2	Percentage and total number of business units analysed for risks related to corruption.	Page 10, 11	<p>AGL recognises that risk is dynamic and is inherent in all external and internal operating environments and is committed to managing all risks effectively. AGL employs a holistic, integrated and consistent approach to risk management, whereby all risks identified are measured in accordance with the following consequence categories – financial; business interruption; customer impact; reputation; regulatory/legal; environment and community; and, health and safety. An escalation process is in place which will determine the level and urgency of management and/or Board attention in accordance with the assessed materiality level. A full review and assessment of material strategic (i.e. Tier 1) risks occurs annually, however a proactive continual review process is also in place with quarterly reporting to the Audit and Risk Management Committee. As part of the review process, all business units across the enterprise are assessed on an ongoing basis for material operational risks and issues. AGL's Internal Audit program includes provision for auditing for fraudulent activity.</p> <p>AGL's Risk Management Policy can be found here (<a href="http://agl.com.au/Downloads/AGL%20Energy%20Risk%20Policy%20Final%20210809.pdf">agl.com.au/Downloads/AGL%20Energy%20Risk%20Policy%20Final%20210809.pdf</a>).</p>
SO3	Percentage of employees trained in the organisation's anti-corruption policies and procedures.	Page 52, 53	<p>The AGL Code of Conduct explains: what obligations AGL has to put in place mechanisms to assist employees and contractors to act in accordance with the overarching principles of ethical behaviour; and how AGL's employees and contractors should act consistently with the principles.</p> <p>AGL provides education about discrimination, harassment and other unlawful behaviour through compulsory induction training. Completion rates for Code of Conduct induction and refresher training is disclosed.</p>
SO4	Actions taken in response to incidents of corruption.	Page 51	–
SO5	Public policy positions and participation in public policy development and lobbying.	Pages 10, 11	–
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	Page 10	<p>AGL does not make ex gratia donations to any political party or to any individual in, or seeking to obtain, political office.</p> <p>However, during FY2012 AGL paid a total of \$13,365 in reportable donations to the Federal Liberal party. These payments, which were required to be disclosed to the Australian Electoral Commission under the provisions of the <i>Commonwealth Electoral Act 1918</i> (Cth), represent the subscription fee for membership of the Federal Liberal party's business networking forum, and attendance at various functions. In addition, AGL paid \$5,000 to host an event at Queensland's Liberal National Party conference in FY2012, which was required to be disclosed to the Electoral Commission Queensland under the <i>Electoral Act 1992</i> (Qld). AGL's activities in FY2012 did not require the reporting of any donations to the NSW Election Funding Authority under its <i>Election Funding, Expenditure and Disclosures Act 1981</i> (NSW).</p> <p>The AGL Code of Conduct requires AGL to adopt an even-handed approach to all mainstream political parties when paying to attend political functions, and from time to time AGL does pay to attend such functions in each jurisdiction in which it operates. How AGL manages this activity is contained under the "Managing conflicts of interest" section of the Code.</p> <p>AGL meets its obligations to disclose any reportable political donations as required by Commonwealth, Queensland and NSW legislation, and these disclosures are made publicly available on the websites of the Australian Electoral Commission and its Queensland and NSW equivalents, the Electoral Commission Queensland and the NSW Election Funding Authority respectively.</p>
SO7	Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcome.	Page 30	<p>In April 2012, the Australian Competition and Consumer Commission commenced proceedings in the Federal Court of Australia against AGL Sales Pty Limited ("AGL Sales") and AGL South Australia Pty Limited ("AGL SA") for alleged contravention of the unsolicited sale provisions of the Australian Consumer Law by AGLSA, AGL Sales and AGL's contractor CPM Australia Pty Ltd. At the time of writing the matter remained before the Court.</p>
SO8*	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	–	<p>During FY2012, AGL did not have any significant fines or non-monetary sanctions for non-compliance with laws and regulations. For non-compliance with environmental laws and regulations, see page 47 of the FY2012 Annual Report. For legal actions for anti-competitive behaviour, anti-trust and monopoly practices, see SO7. For non-compliance with laws and regulations concerning the provision and use of products and services, see PR9.</p>
EU23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services.	Page 31, 32	–

Ref.	Description	Location of disclosure within report	Additional information
EU24	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services.	Page 30, 31, 32	–
EU25*	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases.	Page 58, 59	–
EU26	Percentage of population unserved in licensed distribution or service areas.	–	Not applicable. AGL does not control, own or operate any electrical transmission or distribution businesses.
EU27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime.	Page 29	–
EU28	Power outage frequency.	–	Not applicable. AGL does not control, own or operate any electrical transmission or distribution businesses.
EU29	Average power outage duration.	–	Not applicable. AGL does not control, own or operate any electrical transmission or distribution businesses.
EU30	Average plant availability factor by energy source and by regulatory regime.	Page 17	–
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	Page 58	The health and safety impacts of the generation of electricity and gas production, in AGL's assets, and the retailing of energy by AGL are addressed.  Advice on using energy safely is provided on the AGL website ( <a href="http://agl.com.au/Downloads/Safety%20Advice.pdf">agl.com.au/Downloads/Safety%20Advice.pdf</a> ).
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	Page 58, 59	Health and safety performance of AGL's assets and operations is reported. These incidents relate to the life cycle stages of energy production and retailing. AGL is not responsible for energy transmission and distribution to end users.
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	–	As a generator and retailer of energy, AGL's primary products are gas and electricity.  To assist customers, indicative greenhouse gas emissions associated with their consumption of energy are provided on gas and electricity bills, and energy savings tips can be found on AGL's website.
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes.	Page 29, 30	Data on complaints received in relation to sales and marketing activity is provided.
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	Page 25, 26, 27	Customer complaints to Ombudsmen are reported.
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion and sponsorship.	Page 29, 30	–
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship by type of outcomes.	Page 29, 30	–
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	–	During FY2012, there have been no substantiated privacy complaints received by the Office of the Privacy Commissioner where AGL has been found to be in breach of the <i>Privacy Act 1998</i> (Cth).
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	–	AGL has not had any fines levied by any regulatory body in the last financial year. In circumstances where an overcharge to customers occurs, AGL ensures that any overcharge is rectified and applied as per regulatory requirements, including any interest or applicable credit.

Ref.	Description	Location of disclosure within report	Additional information
<b>esaa Sustainable Practice Framework</b>			
	<b>esaa Principle</b>	<b>Location of disclosure</b>	<b>GRI Profile Disclosure/Indicator</b>
1	Maintain good corporate governance practices.	Governance and management	4.1-1.12, EC2, SO8
2	Deliver value to shareholders, customers and the community.	Economic, Customer and Community chapters	EC1, EC8
3	Provide a safe, secure and reliable energy supply.	Economic chapter	EU6, EU25
4	Engage key internal and external stakeholders on significant sustainability matters.	Stakeholder engagement	4.14-4.17
5	Maintain and enhance workforce health, safety, wellbeing and development.	People chapter	LA2, LA6, LA7, LA10, LA14, HR4, EU14, EU18
6	Develop and implement climate change responses.	Climate change chapter	EN3, EN6, EN16, EN18
7	Improve environmental performance and resource efficiency.	Environment chapter	EU11, EU12, EN8, EN12, EN12, EN14, EN20, EN21, EN22
8	Foster and support community programs.	Community chapter	SO1
9	Promote measurement and reporting of sustainability performance.	About this report	–

