

# ANNUAL REVIEW & SUSTAINABILITY REPORT 2012



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## ABOUT THIS REPORT

This is Pacific Hydro Pty Ltd's fourth annual Sustainability Report, covering the period 1 July 2011 to 30 June 2012. This is the first year we have combined the Annual Review with our Sustainability Report into one document. This report covers the sustainability performance of Pacific Hydro Pty Ltd and its wholly and majority-owned subsidiaries, including the assets and offices in Australia, Brazil and Chile that we operate.

The performance of joint ventures (JV) and consortiums not operated by Pacific Hydro (a total of 371MW installed capacity) are excluded from the scope of this report. However, summary information on the excluded joint ventures has been provided in recognition of their material impact on our business (see p.6–7). Previously JV data was reported by exception. As we are no longer reporting by exception, our abatement and generation figures will appear to have decreased.

This, and prior sustainability reports dating back to 2009, are available at [pacifichydro.com](http://pacifichydro.com)

All dollar amounts are in Australian dollars, unless otherwise stated.

The Global Reporting Initiative (GRI) G3.1 Guidelines and the Electric Utilities Sector Supplement have been applied to a B Level and checked by the GRI. The report is not externally assured, but work towards obtaining external assurance continues as part of our long-term sustainability strategy.

x Not achieved

✓ Achieved

o Ongoing



Follow the links when  
you see this symbol  
to find out more

# ABOUT US

## COMPANY PROFILE

Pacific Hydro is a leading renewable energy company, producing clean power from natural resources.

For 20 years we have lived our vision – powering a cleaner world – by identifying, delivering and operating renewable energy projects and providing clean power and carbon abatement products and services to customers across the globe.

With hydro, wind, solar and geothermal power projects at varying stages of development, construction and operation in Australia, Brazil and Chile, we continue to provide strong returns for the environment, local communities and investors.

### RENEWABLE ENERGY GENERATED

**1.8 MILLION** MEGAWATT HOURS

### REVENUE

**\$197 MILLION**

### OPERATING ASSETS

**15**

### TOTAL RECORDABLE INJURY FREQUENCY RATE

**7.2**

### GREENHOUSE GAS EMISSIONS ABATED

**1.2 MILLION** TONNES

### INVESTED IN COMMUNITIES

**\$377,000**

### EMPLOYEES

**278**

### EMPLOYEE TRAINING AND DEVELOPMENT SPEND

**\$642,000**



## VISION

POWERING A CLEANER WORLD.

## MISSION

TO PRODUCE ELECTRICITY  
PROFITABLY THROUGH  
THE INNOVATIVE  
COMMERCIALISATION OF  
CLEAN ENERGY RESOURCES.

## OUR LEADING VALUES

### LEADERSHIP

Having the courage to lead and innovate.

### ENERGY

Helping to meet the world's energy needs while making a positive and lasting difference to the environment.

### ACTION

Achieving our goals by working together, with integrity and an entrepreneurial spirit.

### DEDICATION

We are dedicated to ensuring a healthy and safe environment for our employees, the sustainability of our business and positive outcomes for our communities.

### INCLUSION

We are committed to promoting a work environment where inclusion and diversity are valued.

## A MESSAGE FROM OUR CHAIRMAN

This year Pacific Hydro is celebrating 20 years of clean energy.

The platform established by all the hard work of the employees and management of Pacific Hydro over these 20 years has put the company in a great position.

A number of achievements for the past year are highlighted in the report. However, we also faced challenges due to extended outages at our joint venture assets in Chile, which have impacted on the overall performance of the group for almost the full financial year. During this time, I am pleased to report that the Board and our owner, Industry Funds Management (IFM), remained fully committed to the long term value of the business.

Pacific Hydro is an important part of the IFM Australian Infrastructure Fund, which has delivered net returns of 12.13% per annum since its inception (to 30 June 2012) to more than five million Australian members of industry superannuation funds.

Pacific Hydro continues to deliver sustainable infrastructure investment opportunities, enhancing energy security and reducing carbon emissions through its renewable energy projects.

The pursuit of these opportunities will ensure a very bright future for Pacific Hydro.

GARRY WEAVEN



# A MESSAGE FROM OUR CEO

## WELCOME TO OUR FIRST COMBINED ANNUAL REVIEW AND SUSTAINABILITY REPORT, AN IMPORTANT STEP TOWARDS IMPROVING THE COMMUNICATION OF OUR BUSINESS AND SUSTAINABILITY PERFORMANCE TO OUR STAKEHOLDERS.

The 2011–12 Australian financial year saw us continuing to live our vision – powering a cleaner world – through the development, delivery and operation of renewable energy projects.

Our core strategy of investing in three of the strongest combined renewable energy markets and GDP growth countries – Australia, Brazil and Chile – continues to generate growth opportunities and shareholder value.

More than 1.8 million megawatt hours (MWh) of clean, renewable energy were generated by our assets, leading to the abatement of over 1.2 million tonnes of greenhouse gas emissions.

Health and safety remained a priority for us and we achieved two of our three key performance indicators. Due to the number of reportable incidents that occurred during the year, we failed to achieve our Total Recordable Injury Frequency Rate target.

Throughout the year, we continued to work and support our host communities globally through our community investment funds and a range of community relations activities.

We continued to support and promote the ten principles of the United Nations Global Compact throughout our business, further aligning our operations and strategies with these key areas. In late 2011, Pacific Hydro was recognised for its corporate social responsibility efforts in Chile, ranking tenth out of 40 companies in the prestigious PROhumana Foundation Corporate Social Responsibility ranking.

Operationally, our assets in Australia and Brazil performed well with high levels of availability and efficiency. One of Pacific Hydro's longest running assets, the Ord hydro plant in Western Australia, delivered its highest generation ever and well-above-average wind resources in the second half contributed to good performance in Brazil.

In Chile, our 111 megawatt (MW) Chacayes run-of-river hydro plant was completed on time and has delivered excellent operational performance since commencing commercial operations despite continued dry hydrological conditions. However, an extended outage of our two hydro projects at our Tinguiririca Energía joint venture, caused in part by the collapse of a small section of the tunnel at La Higuera, had a material impact on Pacific Hydro's overall group results.

Despite these challenges, the year ahead is looking promising for Pacific Hydro as we celebrate 20 years of clean energy.

Our three core markets – Australia, Brazil and Chile – are all resource-based economies which are expected to continue benefiting from demand from China and India for their mineral and energy products. As these three economies grow, so too will their demand for clean and secure energy supplies. Pacific Hydro will play a significant role in meeting that demand for new clean energy.

In Australia, we are becoming a clean energy retailer, offering solutions for medium and large commercial and industrial organisations looking for a reliable, flexible, and cost-effective service to meet their electricity supply needs.



A partnership recently formed with Vale, the world's second-largest mining company, in Brazil, will see us jointly build, own and operate two wind farms in Brazil's Northeast.

In Chile, we will continue to work together with SN Power, our joint venture partner, to finalise the works in progress and to resume operations at Tinguiririca Energía. We are also focussed on developing our first wind farm in the north of the country and continuing to develop our run-of-river hydro project pipeline.

I hope you enjoy reading about our business and sustainability achievements over the last financial year and have the opportunity to discover how we powered a cleaner world over the last 20 years at [pacifichydro.com.au/20years](http://pacifichydro.com.au/20years).

A handwritten signature in blue ink that reads "Rob Grant". The signature is fluid and cursive, with a long horizontal stroke at the end.

**ROB GRANT**



The Pacific Hydro group achieved many important milestones despite significant challenges faced during the reporting year.

We made significant enhancements to our revenue forecasting and risk framework and saw the rollout of a new SAP finance system in Australia. However, the roll out to Chile and Brazil has been delayed.

Market conditions for new renewable energy projects in Australia and Brazil continued to be a challenge for our business. In Chile, our focus was on the completion of existing construction projects. The ongoing financial support received from our owner, IFM, clearly demonstrated their commitment to Pacific Hydro's long term strategy.

At the end of the financial year, the signing of a consortium agreement with Vale to jointly build and operate two wind farms in the Northeast of Brazil was an crucial strategic step for us as we continue to grow our business in South America.

A diversity and inclusion strategy was developed and implemented across the business to further strengthen our values. Voluntary turnover reduced by 3% since the previous year to 10.8%.



## AUSTRALIA

The move to become a clean energy retailer in Australia was approved by the Board in 2011.

As a retailer, our solutions will help medium and large organisations to meet their sustainability and carbon reduction objectives, building on our track record of helping Australian electricity retailers and large energy consumers to meet their green energy needs over the last 20 years.

With a focus on operational excellence, we implemented a new operations and maintenance agreement for our Portland assets and fully transitioned our Codrington wind farm to in-house maintenance.

We also maintained our focus on technology and geographic diversification. The planning application of our Keyneton wind farm in South Australia was lodged and we continue to work with community members to address concerns about the project. We also further progressed plans to jointly develop conventional geothermal projects with exploration company GreenRock Energy.

While the Moree Solar Farm project was unsuccessful under the Federal Government's Solar Flagships Program, the New South Wales project continues to be developed with partner Fotowatio Renewable Ventures.





## CHILE

The first generation from our 111MW Chacayes run-of-river hydro plant in late 2011 was the most important achievement for Pacific Hydro in the reporting period.

Already awarded Environmental Initiative of the Year for the sustainable development measures put in place in its early design stages, Chacayes was chosen by Chilean President Sebastián Piñera as the location to announce Chile's National Energy Policy in March 2012.

Since commencing commercial operations, Chacayes has delivered excellent operational performance despite continued dry hydrological conditions that have also impacted our other assets in Chile.

In June 2012, we submitted the Declaration of Environmental Impact of our first wind project in Chile, the Punta Sierra wind farm, to the Environmental Assessment Service of the Coquimbo Region, an important step in Pacific Hydro's technology expansion strategy in the country.

CONTINUED PG.6

## BRAZIL

With a population of 190 million people and increasing electricity demand created by a growing middle class, the wind power led Brazilian renewable energy market presents exciting growth prospects for Pacific Hydro.

Early in 2011, we made a strategic decision to pursue opportunities in the Brazilian unregulated clean energy market to build on our wind farm project development pipeline and supply clean electricity to large industrial and resources companies.

In June 2012, we signed a Consortium Agreement with Vale, the world's second-largest mining company, to jointly build, own and operate two wind farms in Brazil's Northeast. Under the partnership, each company will have 50% ownership of the wind farms and Vale will be the sole off-taker for 20 years.

Operationally, the business unit achieved an availability of 97.5% for our operating assets, despite the impact of corrective maintenance on underground cables at Vale dos Ventos, delivering positive results.



## TINGUIRIRICA ENERGÍA

While the Tinguiririca Energía Joint Venture in Chile is not included in the scope of this report, its social, environmental and economic performance has a material impact on our business. A performance summary has been provided as part our Annual Review.

Tinguiririca Energía is co-owned (50%) by Pacific Hydro and Norwegian company SN Power. The two run-of-river plants, La Higuera and La Confluencia, are located in the Tinguiririca Valley, in the sixth region. The stations add more than 310MW to Chile's electricity generation capacity. Tinguiririca Energía's thermal back-up power station Colmito, in the fifth region of Chile, opened in 2008 and has an installed capacity of 57MW.

It was a difficult year for Tinguiririca Energía due to an extended outage resulting from the collapse of a 20 metre section of the 17 kilometre tunnel at the 155MW La Higuera project. While remedial works are progressing well, the outage significantly impacted financial performance for the reporting period. Tunnel remediation works are continuing as planned and the plant will be operational in 2013.

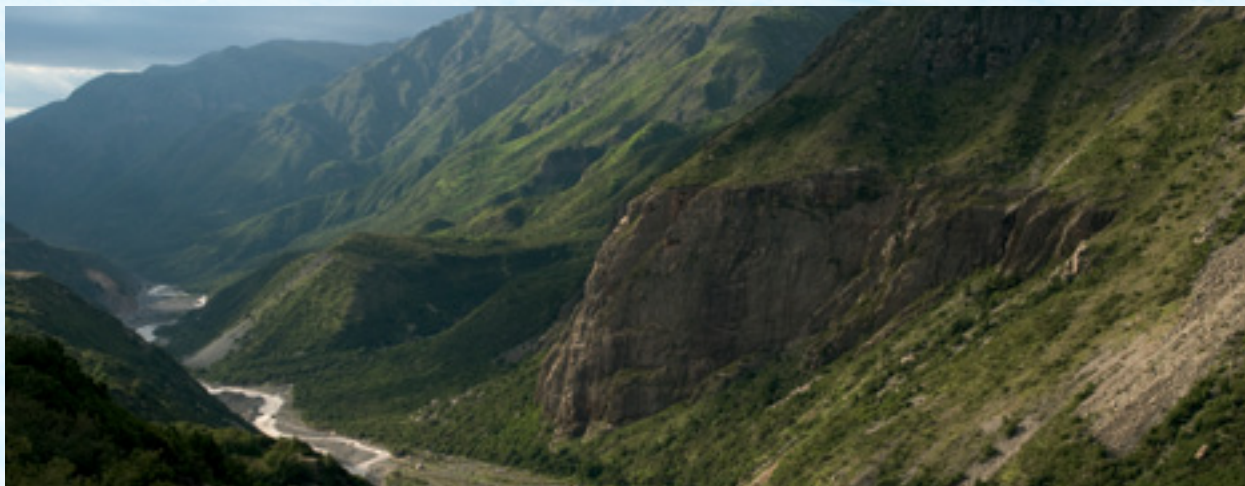
## BUSINESS OPERATIONS AND FINANCE

La Higuera and La Confluencia generated over 190,000MWh of clean energy during the reporting period, which abated over 117,000 tonnes of carbon dioxide equivalent (CO<sub>2</sub>-e).

The two hydro plants are registered under the Kyoto Protocol's Clean Development Mechanism, a scheme allowing projects which reduce emissions to earn certified emission reduction credits, or CERs, which can then be sold or traded with industrialised countries. La Higuera was registered under CDM in 2006 and La Confluencia in 2011.

La Higuera and La Confluencia received capital funding from both shareholders and were debt financed by a consortium of international banks. The consortium, led by the International Finance Corporation, includes DNB, Nordea, SEB and Santander. All the commercial banks are signatories to the Equator Principles. The banks chose to model the Equator Principles on the environmental standards of the World Bank and the social policies of the International Finance Corporation.

During the completion of La Higuera in October 2010, a number of construction and mechanical failures occurred. As a result of these delays, a significant financial cost was incurred by Tinguiririca Energía relating to, amongst other things, lost revenue, increased and unplanned costs and additional repair costs. Since June 2011, an arbitration process has been underway between La Higuera and contractor Queiroz Galvão.



TINGUIRIRICA VALLEY, CHILE



## WORKPLACE – HEALTH AND SAFETY

Tinguiririca Energía achieved a TRIFR of 6.7 with no fatalities occurring during the reporting period. A continued focus remained on improving health and safety performance, with a number of initiatives implemented to promote safe behaviour. One such program was the fourth annual road safety campaign to promote safe driving on the roads that lead to the La Higuera and La Confluencia hydro plants. Brochures and CD's were handed out and movie screenings held for employees, locals and tourists to support the message.

## WORKPLACE – HUMAN RESOURCES

Overall, Tinguiririca Energía has 89 employees, 83 staff and 6 managers. There are 13 female staff and 70 male staff, while there is 1 female manager and 5 male managers. In 2010, a scholarship program was developed to encourage further professional development through vocational or academic pathways. In 2012, 12% of the total workforce participated in the program. Total staff turnover was 8.9% for the reporting period.

Employees of Tinguiririca Energía are entitled to participate in the collective bargaining process and 42% of employees are covered by collective bargaining agreements.

## COMMUNITY

One of the major stakeholder groups is the local irrigators who use the Tinguiririca River for irrigation and agriculture. The Water Users Association have raised concerns regarding the hydro operations upstream and Tinguiririca Energía are working closely with them to achieve long term solutions for optimal water management in the Tinguiririca Valley. Tinguiririca Energía have also committed to supporting improvements to the irrigation infrastructure in the Valley. Some of the initiatives include an online monitoring system for irrigator intakes, evaluating alternatives for improving water efficiency, cloud seeding to stimulate rain and providing support to improve canal irrigator organisations such as the Water Users Association.

More broadly, community engagement creates value for both Tinguiririca Energía and the community. Meetings are held in different locations with community leaders, neighbourhood councils and other organisations to share information, maintain communication, strengthen trust and identify opportunities. The 'open door' policy in the San Fernando office encourages visitors and addresses concerns or queries from interested community members.

Over \$100,000 was invested in the local community through the community investment program, Tinguiririca Participa. As well as providing funding opportunities for locals living in the Tinguiririca Valley, the program works with community and grassroots leaders, providing training and assisting with preparation of social and community needs assessments.

## ENVIRONMENT

All three Tinguiririca Energía assets operate under an Environmental Management System (EMS) based on the ISO 14001 standard. Annual audits against the EMS occur to demonstrate compliance against national legislation and as a requirement of the lenders. Waste and emissions are monitored at all three sites. During the reporting period, La Confluencia emitted 7 tonnes of CO<sub>2</sub>-e, La Higuera emitted 110 tonnes of CO<sub>2</sub>-e and Colmito emitted 699 tonnes of CO<sub>2</sub>-e.

Minimum ecological flows are required to preserve aquatic life and river-bank dwelling species. Our water management system includes monitoring to measure water quality and ensure ecological flow requirements are met. Results are reported to local environmental regulators periodically and we received no fines for environmental incidents during the reporting period.

Monitoring programs exist for the most significant wildlife species native to the area, with results showing that no species have suffered negative impacts as a result of our presence in the region.

Tinguiririca Energía provided funds for maintenance of a major road, the I-45, to improve the infrastructure in the area. The road was also watered daily to minimise dust pollution and annoyance for locals.



[tinguiriricaenergia.cl](http://tinguiriricaenergia.cl)

# WHAT SUSTAINABILITY MEANS TO US

## OUR SUSTAINABILITY STRATEGY

Our commitment to sustainability supports our vision of powering a cleaner world. It enables us to support our neighbouring communities, enhance our supply chain relationships and attract and retain the best staff. It also allows us to focus on long-term sustainable business opportunities, manage risks, enhances our corporate reputation and provides a competitive advantage.

To enhance the integration of sustainability into our business practices, our Sustainability Strategy has been embedded within the corporate 2012–17 Business Plan. The Sustainability Strategy outlines our sustainability objectives, strategies and deliverables. It focuses on setting consistent and cohesive sustainability objectives to support the four pillars of our Sustainability Framework (see diagram below) across the Australia, Brazil, Chile and Corporate business units.

Results from our materiality assessment and internal consultation feed into the development of sustainability objectives.



THE PORT BROUGHTON GOLF CLUB IN SOUTH AUSTRALIA RECEIVED FUNDING THROUGH OUR SUSTAINABLE COMMUNITIES FUND

## OUR SUSTAINABILITY FRAMEWORK





## OUR STAKEHOLDERS

We define our stakeholders as individuals and groups who are impacted by our activities or those who can impact our future development. Due to their diverse interests, we adapt our approach and engagement activities to suit each situation. The table to the right shows the stakeholder groups who have been identified as the key audiences for this report, as well as how we have engaged with them during the past year. All of these groups were invited to contribute to our materiality assessment survey, which assisted in the identification of topics to include in this report.

STAKEHOLDER GROUP	METHODS AND FREQUENCY OF ENGAGEMENT
Shareholders (Owner)	Monthly Board and quarterly Committee meetings; periodic Industry Funds Management investor briefings; annual five year business planning process; regular strategy reviews
Banks and financiers	Regular formal and informal meetings; ad-hoc reports, written correspondence and phone calls; occasional site visits; health, safety, sustainability and operational reporting as required
Communities and landholders	Formal and informal community consultation sessions and work tables as required; one-on-one meetings as required; occasional site visits; ongoing interaction with community and landholder liaison officers; regular newsletters; regular community engagement and investment activities
Employees	Monthly online CEO update; monthly line manager communications; monthly lunchtime forums hosted by CEO, general managers or functional teams; six monthly and annual performance reviews; regular social functions and events; annual Organisational Alignment and Engagement Survey; regular intranet news updates
Contractors and suppliers	Expressions of Interest; quotations and tender processes; regular meetings; Sustainable Supplier Assessments as required; contracts across the project lifecycle – development, delivery and operations
Customers	Regular meetings; ongoing written communications and phone conversations with existing customers; on-going relationship development with a range of prospective customers through meetings, attendance at market events and sponsorship of market-related seminars and conferences
Government authorities – local, state and federal	Regular meetings; regular written submissions as required; occasional site visits; ongoing formal participation and representation on industry associations and other bodies

## DETERMINING REPORT CONTENT AND MATERIALITY

This report aims to present the sustainability topics that are most important to our business and our stakeholders.

Each year, we conduct a materiality assessment to determine the topics of most interest, or materiality, to our stakeholders. This exercise enables us to determine key areas to be taken into account during the business planning process so that sustainability strategies and deliverables can be set as well as identifying topics to be included in annual sustainability reports.

## METHODOLOGY

We apply the Global Report Initiative's definition of materiality as being topics "that reflect the organisation's significant economic, environmental and social impacts, or that would substantively influence the assessments and decisions of stakeholders."

This year, the external element of our assessment comprised an anonymous written survey with a total of 29 questions, with a number of additional questions asked of specific stakeholder groups. Stakeholders were asked to list topics or issues they thought were important for Pacific Hydro to address. We received 53 responses and allocated topics an 'external ranking' based on the number of times the topic was mentioned by stakeholders.

Following this, an 'internal ranking' of topics was conducted, based upon an assessment of company policies and business strategies, risk framework and registers, stakeholder feedback, peers and business norms.

The results of the internal and external rankings are shown on the following page. A line was drawn to highlight the topics that received a high internal and external ranking and could be considered priority areas in the development of sustainability strategies and the content of sustainability reports. All key topics identified through this process have been addressed in this year's report and are referenced below.

## SUSTAINABILITY PILLAR

## TOPIC

## LOCATION IN REPORT

### COMMUNITY

Relationships with communities

Developing Communities, p.33  
Impacts, p.33–37

Consultation and engagement  
with communities

Community engagement and consultation,  
p.33

### ENVIRONMENT

Environmental impacts  
of Pacific Hydro activities

Environment, p.39–43

### WORKPLACE

Internal communications and alignment

Inclusion and Diversity, p.27, 29  
Employee engagement, p.30

### BUSINESS OPERATIONS AND FINANCE

Responsible power generation

Products and Services, p.16–17  
Response to Climate Change, p.18  
Operational Excellence, p.20

Governance and transparency

Board, p.12  
Risk Management, p.13  
Compliance, p.13  
Ethical Behaviour, p.13–14

Delivering value

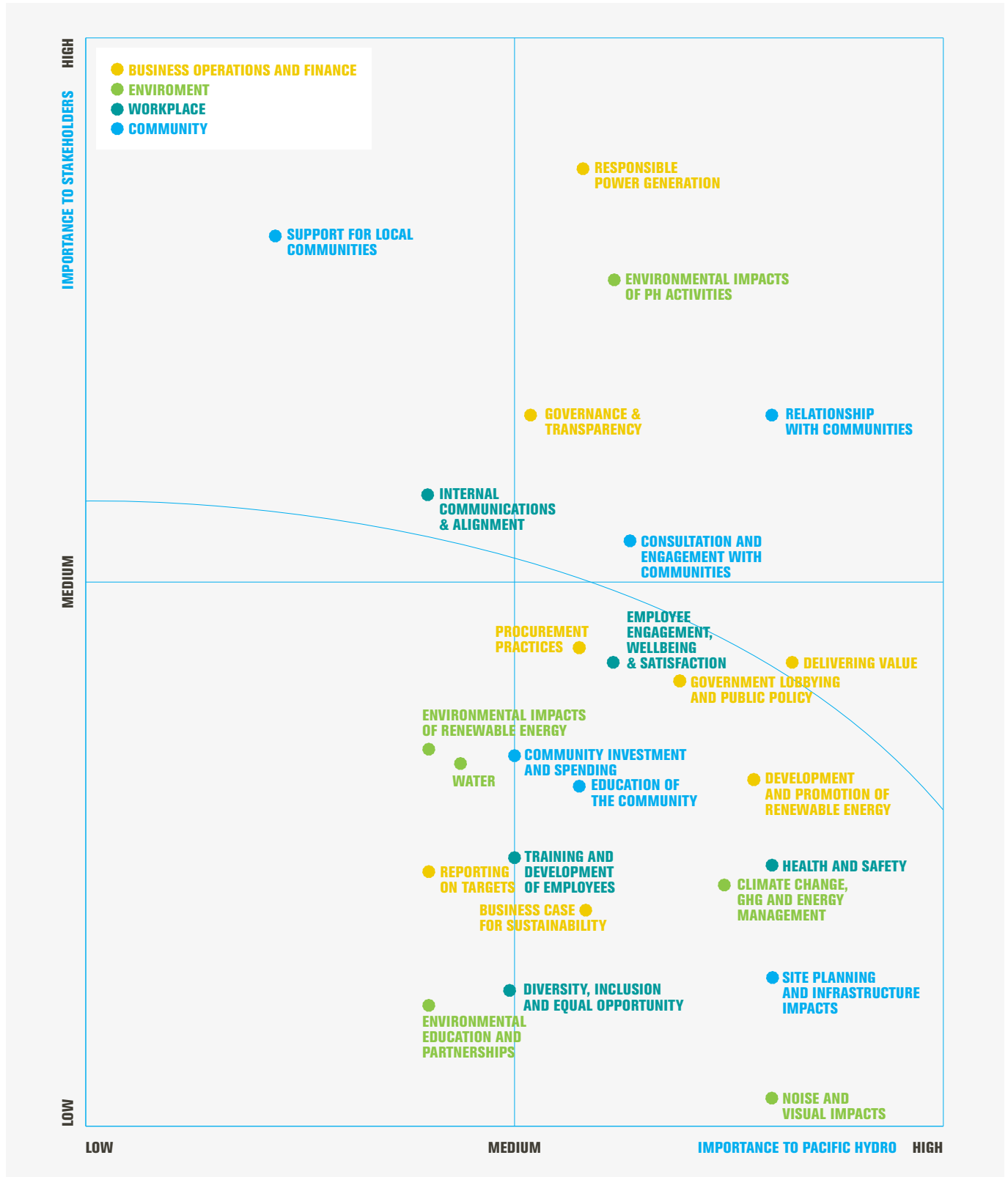
Economic performance, p.16  
Products and services, p.16–17

Government lobbying and public policy

Public Policy Advocacy, p.21–22



## INTERNAL AND EXTERNAL MATERIALITY RANKING



# GOVERNANCE, ETHICS AND RESPECTING RIGHTS

## OWNER

Pacific Hydro is a wholly-owned subsidiary of the Industry Funds Management (IFM) Australian Infrastructure Fund. The investment management company specialises in the management of investment products across private equity, infrastructure, debt and listed equities portfolios, and is wholly owned, through Industry Super Holdings Pty Ltd, by a large number of Australian superannuation funds.

 [ifm.net.au](http://ifm.net.au)




## BOARD

Our Directors are committed to principles of sustainability and are responsible for ensuring that the company maintains an appropriate corporate governance structure. This protects and enhances shareholder value by ensuring the integrity of reporting and by maintaining appropriate internal controls.

As at 30 June 2012, the board consisted of seven non-executive members from diverse backgrounds, professions and working environments, including three representatives from IFM along with four independent Directors. This structure ensures robust governance and continuous disclosure to our shareholder. Kate Spargo, who has been a Director of Pacific Hydro for eight years, retired effective 30 June 2012.

Three permanent committees (Health, Safety, People and Sustainability; Audit, Finance and Risk; and Projects and Operations) meet at least quarterly and are responsible for considering and giving direction on specific areas on behalf of the Board.

The Health, Safety, People and Sustainability Committee has specific responsibilities for sustainability performance and related issues. The Board receives a monthly report from management that includes information on our social, economic and environmental performance.

 [pacifichydro.com/our-board](http://pacifichydro.com/our-board)  
 [pacifichydro.com/our-management](http://pacifichydro.com/our-management)  
 [pacifichydro.com/corporate-governance](http://pacifichydro.com/corporate-governance)

## GENERAL MANAGEMENT COMMITTEE

Our General Management Committee (GMC) is charged with developing and implementing long-term strategy within the policy parameters agreed with the Board. Comprised of our CEO and his eight direct reports, the GMC are directly responsible for the performance of geographical business units and functional disciplines within the organisational structure. They are supported by a team of experienced and highly-skilled executive managers.

The GMC works closely with the Board to manage the affairs of the company, including strategic development, corporate governance and performance against key qualitative and quantitative objectives.

## BOARD MEMBERS

NAME	POSITION	COMMITTEE MEMBERSHIPS
Garry Weaven	Chairman and Owner's Representative (IFM)	Audit, Finance and Risk Projects and Operations
Geoff Coffey	Independent Non-Executive Director	Audit, Finance and Risk (Chair) Projects and Operations
Roger Gill	Independent Non-Executive Director	Health, Safety, People and Sustainability Projects and Operations (Chair)
Brett Himbury	Non-Executive Director and Owner's Representative (IFM)	Health, Safety, People and Sustainability Audit, Finance and Risk
Kyle Mangini	Non-Executive Director and Owner's Representative (IFM)	Audit, Finance and Risk Projects and Operations
Anita Roper	Independent Non-Executive Director	Audit, Finance and Risk (since August 2012) Health, Safety, People and Sustainability (Chair from 1 July 2012)
Kate Spargo	Independent Non-Executive Director	Health, Safety, People and Sustainability (Chair until 30 June 2012)



## RISK MANAGEMENT

Sustainability is embedded in our Enterprise Wide Risk Management Framework (EWRMF) and is crucial to achieving the company's vision and mission, delivering corporate objectives and providing greater certainty and confidence to our shareholder and other stakeholders.

The enterprise-wide approach incorporates strategic development and commercial sustainability, risk profile and review, governance, controls and compliance and assurance mechanisms to manage key risks across all business units. The General Management team are responsible for implementing risk-mitigating strategies in accordance with the EWRMF, while the Audit, Finance and Risk Committee oversees and reviews the effectiveness of the framework.

Risk assessments are undertaken periodically across all our business units for all development opportunities, delivery and operations.

## COMPLIANCE

As a responsible clean energy company, we are committed to complying with all relevant laws, regulations and standards. Various compliance mechanisms are built into our Enterprise Wide Risk Management Framework.

Management responsibility for compliance is reinforced by an Annual Compliance Report prepared by each general manager addressing the state of compliance within the areas of their management responsibility. Any identified non-compliances are subject to a rectification plan and opportunities for avoidance of similar non-compliance in future are identified.

## ETHICAL BEHAVIOUR

### CODE OF CONDUCT

Our Code of Conduct provides guidance on ethical behaviour for our employees and directors globally and outlines our approach and responsibilities to customers, landholders, commercial partners, shareholders and the financial community. All new employees receive training in and are required to sign the Code of Conduct, which also details the company's standards and position on issues including bribery, anti-competitive behaviour and discrimination and applies to all employees and contractors.

## CORRUPTION AND ANTI-COMPETITIVE BEHAVIOUR

All managers and employees who regularly deal with overseas counterparties receive periodic training on corruption. The training explains the policies and procedures relevant to the jurisdictions in which we operate.

In addition to this, during the reporting period in Australia, managers were provided with training with respect to the *Competition and Consumer Act 2010* and its implications for the business and how people should conduct themselves.

Our Whistleblower Disclosure and Investigation Procedure investigates any reports of improper or corrupt conduct, breaches of company policy, the Code of Conduct and any relevant laws. There were no reported incidents of corruption or anti-competitive behaviour during the reporting period.



SURVEYING ROADS IN CHILE



BIRD MONITORING AT CHACAYES HYDRO PLANT

## DONATIONS

While monetary donations to political parties are prohibited under our Code of Conduct, we do occasionally participate in political fundraising activities to enable direct communication with policy makers.

## HUMAN RIGHTS

We respect the rights of our employees, contractors and the broader community. We comply with all relevant laws relating to human rights and our human rights commitments are covered by the following policies:

- 1 Equal Opportunities Policy
- 2 Code of Conduct
- 3 Whistleblowers Disclosure and Investigation Procedure
- 4 Health, Safety and Sustainability (HSS) Policy
- 5 Community Charter

Indigenous heritage is protected under Federal and State legislation in Australia as well as through our HSS Policy, which ensures that land and resources under our care are managed with sensitivity and that we have due care for cultural heritage, local conditions and concerns.

There were no identified incidents involving human rights or indigenous rights during the reporting period. We have been requested by the Brazilian authority IPHAN (the Brazilian National Cultural Heritage Institute) to provide additional information relating to the Cultural Heritage study presented for our Vale dos Ventos and Millennium wind farms. An archaeology consultant has been engaged and we expect to collect and present the requested information during FY 2012–13.

Refer to p.31 for more information about Respecting Rights at Work.

## EXTERNAL COMMITMENTS

We continued to strengthen our commitment to the principles of the United Nations Global Compact (UNGC), further integrating considerations of environment, anti-corruption, labour and human rights into our business operations and strategies. Information regarding our progress against the UNGC principles is included throughout this report.



[pacifichydro.com/sustainability/sustainability-reports](http://pacifichydro.com/sustainability/sustainability-reports)



FIRE SAFETY TRAINING IN CHILE



# BUSINESS OPERATIONS AND FINANCE

## OUR APPROACH

We have a clear strategy to deliver long term value to our shareholders and partners in a transparent, ethical and economically sustainable way.

Our strategy for sustainable economic growth involves:

- Optimising the operational efficiencies and earnings from existing assets;
- Developing a diversified portfolio of renewable energy assets through development or acquisitions that deliver growth and economic value;
- Reviewing and capturing appropriate emerging renewable developments and acquisitions; and
- Developing vertical integration opportunities that complement our operations and development of new projects.

Best practice and continuous improvement is sought in the management of our development, construction and operation of sites and is governed by internal management systems and Asset Management Framework. Our Enterprise Wide Risk Management Framework incorporates strategic development and commercial sustainability; risk profile and review; governance; controls and compliance; and assurance mechanisms to manage key risks across all business units.

As a signatory to the United Nations Global Compact, we advocate for responsible business practices within our sphere of influence. We are committed to supporting local suppliers, as demonstrated by our voluntary participation in the Sello Pro Pyme initiative.

## PROGRESS AGAINST GOALS FOR 2011–12

### STRATEGIES

### PROGRESS ON DELIVERABLES

#### ECONOMIC RETURNS

Maximise shareholder returns

- x Australian and Brazilian energy generation was on budget, however Chile was below due to joint venture outages and dry hydrology in the Cachapoal region. This in turn led to reduced financial returns compared to plan. (p.16)

#### RENEWABLE ENERGY POLICY AND ADVOCACY

Develop policy and regulatory positions for the company and pursue these positions via appropriate channels

- ✓ Active participant in the carbon price debate (p.21–22)
- ✓ Maintained engagement with governments and opposition (p.21–22)
- ✓ Pursued policy and regulatory outcomes that enhance the further adoption of clean energy (p.21–22)

#### SUSTAINABLE SUPPLY CHAIN

Review and improve our supply chain assessment processes

- ✓ The assessment survey was reviewed and the process was adopted and rolled out across all business units for multiple suppliers. (p.23)



## ECONOMIC PERFORMANCE

Sales revenue was \$197 million for the reporting period, an increase of 29 per cent on the previous year. The increase was driven primarily by the Chacayes hydro plant in Chile commencing commercial operations in October 2011. In Australia and Brazil, there was an increase in revenue following improvements in generation volumes, which was partially offset by lower spot energy prices in Australia.

The economic impacts exclude Pacific Hydro's equity accounted investments except where otherwise stated.

## PRODUCTS AND SERVICES

We sell a range of products associated with the generation from our wind farm and hydro power assets. These products include electricity, electricity derivative products and energy related environmental products, such as European Union Certified Emission Reduction credits (CERs), Large Generation Certificates [formerly known as Renewable Energy Certificates] and GreenPower. Our customers include energy retailers, mining companies and large consumers such as businesses and government.

## DIRECT ECONOMIC IMPACT

\$AUD	Australia \$'000	Brazil \$'000	Chile \$'000	Corporate \$'000	FY 2011-12 Total \$'000	FY 2010-11 Total \$'000	FY 2009-10 Total \$'000	FY 2008-09 Total \$'000
<b>ECONOMIC VALUE GENERATED</b>								
Revenue	95,334	25,426	75,800	–	196,560	151,904	114,836	118,767
<b>ECONOMIC VALUE DISTRIBUTED</b>								
Operating costs (Cost of Sales)*	27,050	6,533	17,257	–	50,840	45,376	38,192	32,935
Employee wages and benefits	7,159	1,144	9,170	10,796	28,269	26,474	18,930	17,066
Earnings Before Interest Tax Depreciation and Amortisation**	–	–	–	–	112,023	81,179	86,759	75,132
<b>OTHER CASH (OUT)/IN FLOWS</b>								
Interest payments to providers of finance	15,538	8,830	26,810	–	51,178	56,677	39,470	19,673
Payments of income tax	–	–	3,503	16,999	20,502	8,144	3,224	5,904
Community fund investment	242	15	118	–	377	353	339	325
<b>CAPITAL EXPENDITURE</b>								
Project Development Expenditure***	4,594	2,022	6,929	–	13,545	10,725	7,621	16,341
Construction and minor capital	4,212	475	28,715	1,503	34,905	141,480	204,438	390,517
Shareholders' Equity****	–	–	–	–	862,451	896,384	1,029,537	934,597

\* OPERATING COSTS INCLUDES THE PORTION OF EMPLOYEE WAGES AND BENEFITS AMOUNTS CHARGED TO OPERATING ASSETS.

\*\* EARNINGS BEFORE INTEREST TAX DEPRECIATION AND AMORTISATION (EBITDA) IS CALCULATED BY TAKING RESULTS FROM OPERATING ACTIVITIES ADJUSTED FOR DEPRECIATION AND AMORTISATION AND FOREIGN CURRENCY GAINS AND LOSSES.

\*\*\* RELATES TO PRE-CONSTRUCTION DEVELOPMENT EXPENDITURE IN ORDER TO PROGRESS EACH PROJECT'S TECHNICAL AND COMMERCIAL ELEMENTS.

\*\*\*\* INCLUDES SHAREHOLDER LOANS AND EQUITY ACCOUNTED INVESTMENTS



## PACIFIC HYDRO COMMITS TO SMALL AND MEDIUM ENTERPRISES

Many of the suppliers engaged by Pacific Hydro Chile are classified as small and medium sized enterprises (SMEs). One of the greatest challenges for SMEs is maintaining an adequate cash flow, which provides the foundation for business growth and development opportunities. Sello Pro Pyme is an initiative of the Chilean Ministry of Economy, designed to provide improved financial conditions for SMEs. Receiving the Sello Pro Pyme certification, or stamp, demonstrates a commitment, usually made by large organisations, to pay their suppliers within a 30 day period. Pacific Hydro was one of the first companies to receive this certification, just one of the many ways we support the development of corporate social responsibility throughout the Chilean economy.

"This certification ensures that we are doing our share to support small and medium sized entrepreneurs," said Noortje Magis, Chief Financial Officer, Chile. "These business partners provide essential services to our value chain and this is another avenue to express our company's commitment to sustainability, and a new step towards a model of business that considers the sustainable development of all our stakeholders."

Patricio Silva, a Pacific Hydro supplier and local entrepreneur from Chacayes said: "My family's quality of life has improved significantly. I started with a very old truck called 'La Joyita' and today I have two vans and a truck for myself and my team. I am very proud of what I have achieved and I am very thankful for the initial support I received from Pacific Hydro".

Sello Pro Pyme certification recognises Pacific Hydro's long-standing approach towards working with small businesses. We continue to look for further opportunities to support and strengthen relationships with our small, but vital, business partners.

ABOVE SELLO PRO PYME CEREMONY, HELD AT LA MONEDA PALACE IN SANTIAGO, CHILE

## CERTIFIED EMISSION REDUCTIONS

Certified Emission Reductions (CERs) are an international carbon based instrument that can be utilised by countries that have committed to carbon emission reduction targets through the Kyoto Protocol, or by companies required to reduce emissions under mandated schemes such as the European Emissions Trading Scheme.

## LARGE GENERATION CERTIFICATES

In Australia, all electricity retailers and some large electricity consumers are required to purchase a minimum amount of electricity from renewable sources under the Large-scale Renewable Energy Target (LRET). These companies meet the requirement by procuring Large Generation Certificates (LGCs) – [formerly known as Renewable Energy Certificates, or RECs]. All of Pacific Hydro's Australian renewable energy projects commissioned after January 1997 are qualified to produce LGCs.

## GREENPOWER

Today more than 700,000 Australian households and businesses support renewable energy by purchasing GreenPower electricity products. This voluntary action adds to the demand for renewable electricity created by the mandatory Australian Renewable Energy Target and illustrates the widespread support for increasing the level of renewable energy generation in Australia. All of Pacific Hydro's Australian renewable energy projects commissioned after January 1997 qualify as GreenPower generators.

## RETAIL

During the reporting period, we moved towards becoming a clean energy retailer in Australia. Since mid-2012, we have offered solutions for medium and large organisations looking for a reliable, flexible, and cost-effective service to meet their electricity supply needs.

Over the last 20 years, we developed an impressive track record in fostering positive, long-standing relationships with our local communities – and that's how we will do business with our retail customers. As a retailer, we remain dedicated to our vision – powering a cleaner world – so we'll only sell electricity to customers who are committed to buying a minimum 10% GreenPower.

## RESPONSE TO CLIMATE CHANGE

Our commitment to powering a cleaner world reflects our dedication to addressing climate change. We endeavour to reduce greenhouse gas emissions while meeting growing global energy needs. There are four key components to our response to climate change:

- 1 Developing more new renewable energy projects to help reduce the global reliance on fossil fuels;
- 2 Helping our customers address their climate change mitigation obligations and reach their voluntary targets by providing suitable products and services;
- 3 Advocating for government action to reduce carbon emissions; and
- 4 Minimising our own carbon footprint.

Our development pipeline of renewable energy projects, including run-of-river hydro plants, wind farms, conventional geothermal projects and a large-scale solar farm, will allow us to improve our products and services to meet the current and future needs of our customers.

We advocate policy and industry responses to climate change. This occurs in a range of ways, from working with governments to address regulatory market issues impacting renewable energy generation, to lobbying for the transition to a low-carbon economy.

This year our carbon footprint reduced by 6 per cent, primarily due to the completion of our Chacayes hydro plant in Chile and we have set a global reduction target for our own electricity consumption over the next two years.

Climate change presents significant opportunities as well as considerable risk to our business. Changes to long-term climatic conditions such as the number of extreme weather events have the potential to impact our revenue and operating costs. Climate change risks are addressed through our Risk Management Framework, knowledge gathering from weather forecasting services and risk management practices. Regulatory changes related to climate change in areas such as carbon, electricity and governance, pose potential risks and opportunities. Our business model will allow us to act on opportunities to expand our geographic spread and diversify into other renewable technologies. In addition, we are well placed to increase business and community awareness of climate change through our stakeholder relationships.



## CELEBRATING THE OPENING OF CHACAYES

### INAUGURATION

In October 2011, we celebrated the inauguration of the 111MW Chacayes run-of-river hydro plant in Chile's Alto Cachapoal Valley, approximately 120 km south of Santiago, at a formal ceremony attended by Chile's Minister for Energy.

At an investment of over US\$450 million, the plant will contribute 111MW of installed capacity to Chile's national grid, enough clean energy to supply more than 300,000 local homes. Its operations are estimated to abate over 340,000 tonnes of CO<sub>2</sub>-e per year – the equivalent to taking more than 130,000 vehicles off the road.

### CELEBRATING WITH OUR HOST COMMUNITIES

Prior to the official Chacayes inauguration, a celebration was held with our host communities and local staff. A family function was held at the Chacayes camp with games, music and entertainment.

The guests had the opportunity to watch a play about our environmental and sustainability values, and a video that paid homage to the support of our host communities and all the work that has been done since the project's inception.

"We are very pleased to celebrate this important milestone with our host communities," said Pacific Hydro Chile General Manager José Antonio Valdés. "Without the support of these communities we wouldn't have been able to celebrate the opening of Chacayes today and this is a way to recognise our joint work."

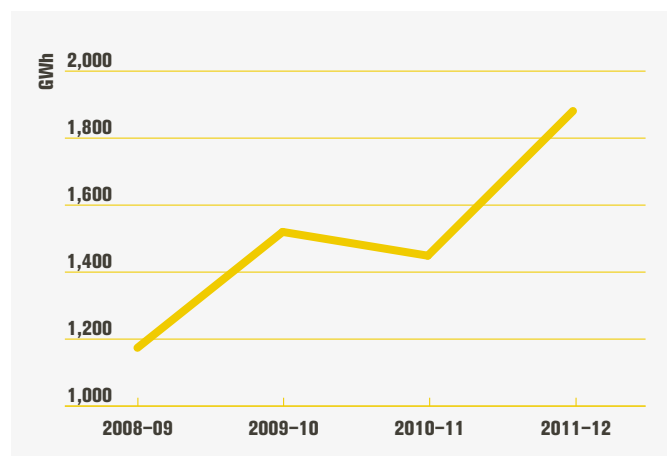
ABOVE OFFICIALS AT THE OPENING OF THE CHACAYES HYDRO PLANT



## INSTALLED CAPACITY

ASSET	LOCATION	PHASE	OWNERSHIP	TECHNOLOGY	CAPACITY (MW)
The Drop	Australia	Operations	100%	Hydro	2
Glenmaggie	Australia	Operations	100%	Hydro	4
Eildon Pondage	Australia	Operations	100%	Hydro	5
William-Hovell	Australia	Operations	100%	Hydro	2
Ord	Australia	Operations	100%	Hydro	30
Challicum Hills	Australia	Operations	100%	Wind	53
Codrington	Australia	Operations	100%	Wind	18
Portland Wind Energy Project (PWEP I) – Yambuk	Australia	Operations	100%	Wind	30
PWEP II – Cape Bridgewater	Australia	Operations	100%	Wind	58
PWEP III – Cape Nelson South	Australia	Operations	100%	Wind	44
Clements Gap	Australia	Operations	100%	Wind	57
Millennium	Brazil	Operations	100%	Wind	10
Vale dos Ventos	Brazil	Operations	100%	Wind	48
Coya & Pangal	Chile	Operations	100%	Hydro	76
Chacayes	Chile	Operations	73%	Hydro	111
La Higuera	Chile	Operations	50%	Hydro	155
La Confluencia	Chile	Operations	50%	Hydro	158
Colmito	Chile	Operations	50%	Thermal Backup	58

## GENERATION GIGAWATT HOURS (GWH) 2008-12



## PERENIA PTY LTD

Perenia, a joint venture between Pacific Hydro and SMEC, provides complete carbon solutions for companies looking to respond to the opportunities and challenges associated with the impact of climate change. Perenia has developed a diverse portfolio of Certified Emission Reductions (CERs) from projects in both developing and industrialised countries, operating throughout Australia and Asia.

 [pereniacarbon.com](http://pereniacarbon.com)

## OPERATIONAL EXCELLENCE

Operational excellence is sought in the management of all our operational assets and is governed by our Asset Management Framework and management systems. The framework and systems ensure the operational aspects are managed giving greater certainty of operating costs, short and long-term availability, reliability, and safety of our generation assets. They are also considered during the development and delivery phase, to ensure that the lifecycle costs are optimised.

Four asset management benchmarking exercises and operations performance reviews were conducted during the reporting period. These initiatives evaluate the effectiveness of our systems and processes, asset performance and condition. The outcomes of these studies form the basis of our strategic decisions in relation to the use, maintenance and expectations of the assets lifetime performance.

Our Operations and Engineering Services teams work to identify opportunities to improve asset performance and reliability. During the year, our Operations team in Australia implemented systems to significantly reduce turbine stoppages and made improvements to cleaning and maintenance activities. In Brazil, we implemented a remote system to control and respond to electrical faults using iPhones. While being relatively minor changes, the initiatives increased productivity and availability and decreased manual handling risks, environmental spill risks and man power required, as well as improving response times. We endeavour to be ahead of the curve in our systems and asset operations to allow us to anticipate, adapt and respond to meet changing standards in electrical systems and health and safety.

We take on work experience students, final year engineering students and apprentices to support local employment, industry growth and enable cross sharing of information and experiences between the students and our employees.

We also work to better understand climatic conditions. In the planning stages of wind projects, our engineers collate long-term data from meteorological sources with our internal readings to estimate wind conditions in any given area. Our internal data comes from meteorological masts, or met masts, which are erected at one or more points within a proposed project. These met masts measure wind speed, turbulence, direction, temperature and pressure. For accurate correlation and analysis of our data with Bureau of Meteorology data, the quality and reliability of our internal measurement is critical. Met masts are designed, installed and operated according to wind monitoring industrial standards. Data from met masts is subject to quality control checks.

Our longest serving met mast stands at Cape Sir William Grant, our final development project in Portland, Victoria. Standing at over 50 metres in height, the met mast has taken accurate wind readings for over ten years. We have begun to investigate new technologies for measuring wind conditions that offer increased safety measures, provide greater economies of scale and allow us to investigate more potential sites.



TRICAHUE PARROTS, CHILE



GEARBOX CHANGEOUT AT CHALLICUM HILLS WIND FARM, AUSTRALIA

## PUBLIC POLICY ADVOCACY

Our involvement in public policy development reflects our view that policies in renewable energy are both a major opportunity for our business and one of the key risks that we face.

Key issues in which we play a policy advocacy role are listed on the following pages.

### AUSTRALIA

During the year we played a key role in advocacy for the renewable energy industry as an independent company and as a member of a number of industry bodies. In all arenas we highlight the benefits of renewable energy and proactively sought opportunities to provide informed advice to local, state and federal policy makers and regulatory bodies.



LANE CROCKETT, GENERAL MANAGER AUSTRALIA, ENGAGING WITH OUR HOST COMMUNITIES

## PUBLIC POLICY ISSUE

Carbon pricing

## OUR POSITION

We support a price on carbon. Australia's Carbon Price Legislative Package is a long-term foundation policy to assist Australia's transition to a low carbon economy. Working alongside the carbon price, the Renewable Energy Target will remain the key driver of investment in clean energy to 2020 in Australia. During the year we contributed to the debate on carbon pricing through discussions with industry groups, authorities, politicians, communities and the media.

Energy reform

We advocate for reforms to transmission and interconnector investment frameworks, transmission project funding reforms and emissions standards for new generation plants. We seek a complementary reform package in energy policy and regulation in order to ensure the country's long-term goals to transform the stationary energy sector to clean, renewable energy can be achieved.

Wind farm planning regulations

We support the development of community engagement guidelines and toolkits for wind farms. During the year, we made a number of submissions regarding changes to South Australian and Victorian wind farm planning regulations.

Renewables and retail energy prices

Strong interest in electricity retail price rises has recently focussed on the cost of renewables to retail customers, even though large scale renewables are a very small component of retail bills. We have emphasised that around 90% of retail energy bills are driven by network costs, generation costs and retail margins. This position is backed by recent Government reports such as the Australian Energy Market Commission's report on future retail prices, which predicts that the impact of large scale renewable energy on price rises is small.



## BRAZIL

We continued to advocate for improvements to the electricity grid in the Northeast of Brazil through the joint commissioning of a study with Vale and other engagement activities.

### PUBLIC POLICY ISSUE

Transmission limitations for wind power generation

### OUR POSITION

We support the proposal of a prioritisation scheme for grid reinforcement in Northeast Brazil. The proposal, supported by a study undertaken by Pacific Hydro and Vale, will be presented to the National Operator of the System (Operador Nacional do Sistema Eléctrico) and the National Planning Agency (Empresa de Pesquisa Energética). It addresses investor concerns relating to a systemic crisis in the energy sector, where energy not transmitted is idle, thus increasing energy costs and sector risk for investors.

## CHILE

We continued to contribute to the development of the renewable energy industry, focusing on engagement with political authorities, energy and industry associations, technical bodies and environmentalists.

### PUBLIC POLICY ISSUE

Non-Conventional Renewable Energy Law

### OUR POSITION

Currently, only hydro power plants with an installed capacity of below 20MW are classified by law as Non-Conventional Renewable Energy (NCRE) generators. As it stands, this law precludes larger scale run-of-river hydro projects from benefiting from Chile's renewable energy law. We believe the limit should be removed for run-of-river hydro power plants, to promote development of larger renewable energy projects which are better placed to efficiently utilise Chile's abundant water resources and which will stimulate further investment. We also support the removal of the words 'Non-Conventional' from the law to prevent confusion when considering energy alternatives that have been previously defined as "non-conventional". Such amendments will allow our own Chilean assets that trade and commercialise carbon credits in international markets, to be classified as renewable generators domestically and be eligible for the same benefits as small hydros.

Transmission system and connection

The ongoing development of energy projects is a key factor to addressing the energy security goals in Chile. Currently, the construction and approval process for transmission lines is delaying the incorporation of new energy projects to the transmission system. We have continued to work with energy sector authorities and the Generators Association to pursue solutions, as well as preparing an official position statement with regard to this issue.

## SUPPLY CHAIN

We recognise our impacts on people, the environment and the economy are driven not only by our direct activities, but also by activities in our supply chain. Our sustainable supplier survey and evaluation tool identifies key sustainability risks and opportunities across areas such as governance, safety, labour standards, local content and environmental management. This year 27 supplier surveys were evaluated including, for the first time, six survey responses from suppliers in Latin America.



CONSTRUCTION WORKERS IN CHILE



MILLENNIUM WIND FARM, BRAZIL

## LOOKING AHEAD: STRATEGIES FOR 2012–17

### 2012–13

### 2013–17

#### ECONOMIC RETURNS

To achieve above benchmark economic returns for shareholders

Maximise shareholder returns

#### DEVELOPMENT

Continue project development to bring new clean energy supply to each of our markets

Continue to embed sustainability principles and practices into organisation processes and behaviours

#### CLEAN ENERGY POLICY ADVOCACY

Influence legislation and market mechanisms favourable to clean energy investment

# WORKPLACE

## OUR APPROACH

Our people are critical to the success and longevity of our business, and ensuring their health, safety and wellbeing is our top priority. Employees at all levels are given industry-leading training and development opportunities, which help us to develop as a business.

We provide a safe and healthy workplace for staff, and support initiatives which improve their wellbeing. Inclusion is one of our core values, supporting our culture of innovation and diversity.

## PROGRESS AGAINST GOALS FOR 2011–12

### STRATEGIES

### PROGRESS ON DELIVERABLES

#### HEALTH AND SAFETY

Achieve a real year-on-year improvement for both leading and lagging health and safety key performance indicators

- o There were no fatalities and we achieved a TRIFR of 7.2, no change from the previous year. The target was 6.1 (15% reduction).
- ✓ Total percentage of corrective actions closed out was 95% against a target of 85%.
- ✓ 100% of employees participated in at least one health and safety activity per quarter.

Benchmark construction and operational assets against relevant industry benchmarks

- ✓ Benchmarking activities were completed resulting in the deployment of 12 global health, safety and environmental standards to achieve industry best practice. (p.26)

Develop and deliver health and safety leadership training

- ✓ Completed (p.26)

#### EMPLOYEES

Attract, recruit, develop and retain employees to ensure the achievement of business goals

- ✓ Training and development programs implemented, equating to over \$2,000 per employee. (p.28–29)
- ✓ Over 80% of approved Organisation Alignment Survey (OAS) workshop initiatives were implemented.
- ✓ Voluntary turnover was 10.8%, a 3% decrease on the previous year. (p.28)

Develop and implement a global diversity strategy

- ✓ Our Inclusion and Diversity Strategy was launched and “Inclusion” was added to our Leading Values. (p.27, 29)

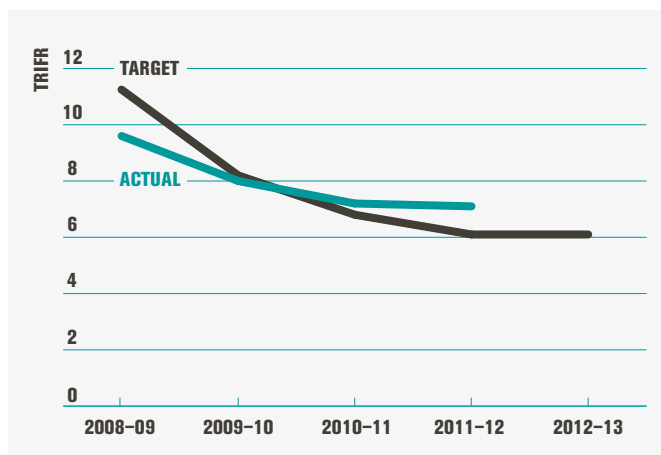


# HEALTH AND SAFETY

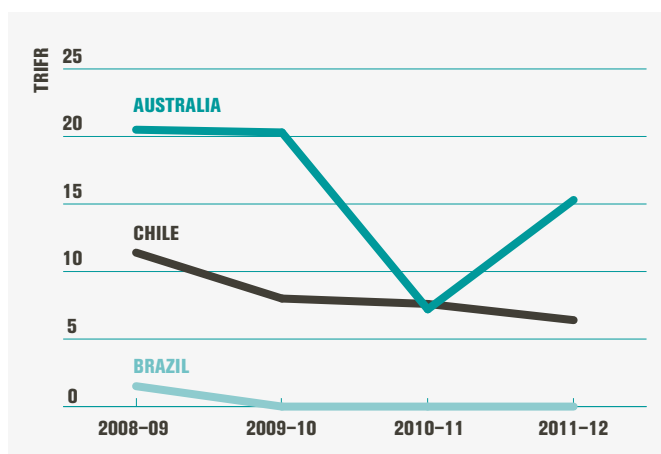
## HEALTH AND SAFETY PERFORMANCE

Dedication to ensuring a healthy and safe environment for our employees is one of our core values. Our Health, Safety and Sustainability (HSS) Policy outlines our commitments to ensuring a healthy and safe environment for our employees. Each year, corporate HSS objectives are set with the aim of decreasing injury rates, improving management systems and increasing employee engagement. Performance against these objectives is directly linked to each employee's performance appraisal and short-term incentive payment.

### 2008-12 OVERALL TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR)

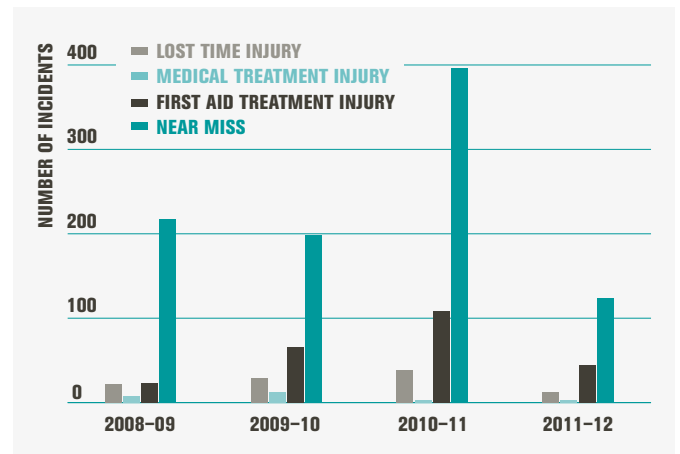


### 2008-12 TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR) BY BUSINESS UNIT



\* FROM 1 JULY 2011, THE AUSTRALIAN BUSINESS UNIT INCLUDED CORPORATE HOURS AND INCIDENTS.

### 2008-12 TOTAL NUMBER OF INCIDENTS REPORTED



We follow ILO standards in each of our countries of operations in classifying and responding to incidents.

Total Recordable Injury Frequency Rate (TRIFR) is calculated as such:  $(\text{Number of Lost Time Injuries} + \text{Number of Medical Treatment Injuries}) \div \text{Number of Hours Worked} \times 1,000,000$ .

'Lost Time' refers to number of scheduled work days lost.

## DISASTER AND EMERGENCY PLANNING

Coordinated emergency management plans, including emergency evacuation programs, are in place at all operational and development project sites. These systems are tested annually via desktop reviews and mock exercises. A number of community planning bodies are consulted during the development and/or testing of our emergency plans to ensure appropriate and adequate training is provided to all response personnel. Mock exercises are attended by employees, contractors, local emergency response services and other community members.

We are in the process of building a heights training facility at one of our regional offices in Victoria to provide a controlled environment in which to test and train employees in heights safety.

All site-based leading hands receive fire warden training. All Melbourne staff were given the opportunity to complete fire extinguisher and hose reel training with the Melbourne Metropolitan Fire Brigade.

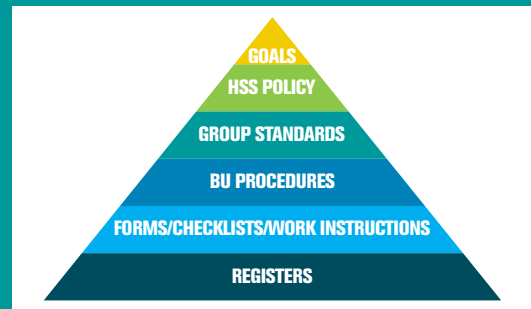
Periodic fire evacuation exercises are undertaken at each of our offices to ensure our employees are evacuated quickly and safely.

## HEALTH AND WELLBEING

Looking after the health and wellbeing of our employees improves productivity and engagement within our business. We have a broad range of strategies within our health and wellbeing program, which are designed to prevent serious conditions and illnesses in employees.

A formal Health and Wellbeing Policy is currently under development and will be supported by a range of initiatives. A number of core initiatives are already implemented globally, such as the daily provision of fresh fruit, annual health checks, flu shots, audiometric testing and pre-placement health screening for relevant staff, periodic ergonomic assessments of work stations and language lessons (English classes in Chile and Brazil, and Spanish classes in Australia). Health and safety leadership training sessions were held in each business unit, which all employees were encouraged to attend. Employee Assistance Programs are available in Australia and Chile. Other initiatives are country specific. For example, employees in Chile can participate in company-sponsored sporting events, such as long distance cycling, mountain climbing, fun runs and a women's soccer tournament held between major energy companies in Santiago. Brazilian employees have access to health insurance, a dental plan and subsidised meal vouchers. The Australian business unit received a \$10,000 grant from the Victorian Government to be used for health and wellbeing initiatives to support existing programs. One of these was an initiative that aims to prevent work-related psychological injuries and occupational stress.

In Australia and Chile, we have also implemented health and safety awards to recognise and reward employees for outstanding behaviour or identifying improvement opportunities to systems, processes or equipment to reduce risks relating to health and safety.



## HEALTH AND SAFETY SYSTEMS

Ensuring the health and safety of our employees, contractors and other stakeholders will always be our primary concern. One of the challenges of having operations in three distinct geographic regions is achieving consistency in our approach to managing health and safety. While being geographically diverse, our projects and assets in Australia, Chile and Brazil can be similar in terms of activities performed, and related risks. All three business units operated under an effective group-wide Health, Safety and Sustainability Policy and successful Health, Safety and Environmental (HSE) procedures and processes in each country. However, we identified an opportunity to develop and implement a consistent, group-wide HSE management system.

A set of Pacific Hydro's Group Health and Safety Standards were developed after an extensive consultation process that included corporate and business unit health and safety teams and a review of industry best practices. The standards were developed at a group level above the business units and act as a framework to drive alignment of the business unit management systems. They are also fully integrated with our Enterprise Wide Risk Management system to ensure that strategic development, governance, compliance and risks cover health and safety impacts.

Looking forward, guidance documents will be developed to identify minimum requirements and to ensure consistency. An audit tool has also been developed and will be implemented in a three year staged approach. The tool will assist business units to comply with the standards and promote continual improvement.

**ABOVE** PACIFIC HYDRO'S HEALTH SAFETY AND ENVIRONMENT MANAGEMENT SYSTEM FRAMEWORK

# HUMAN RESOURCES

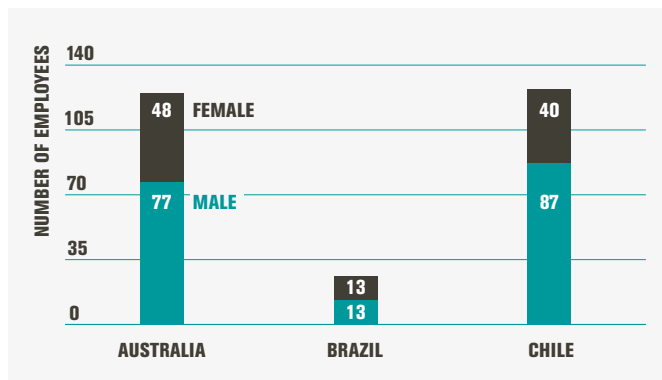
## INCLUSION AND DIVERSITY

We see the promotion of inclusion and diversity within our organisation as a way of embracing and leveraging from our differences to enhance our competitive advantage. We are proud of our inclusive and diverse culture and have taken steps to strengthen this through the launch of our comprehensive Inclusion and Diversity Strategy. Equal employment opportunity and anti-discrimination are specifically addressed in our Code of Conduct.

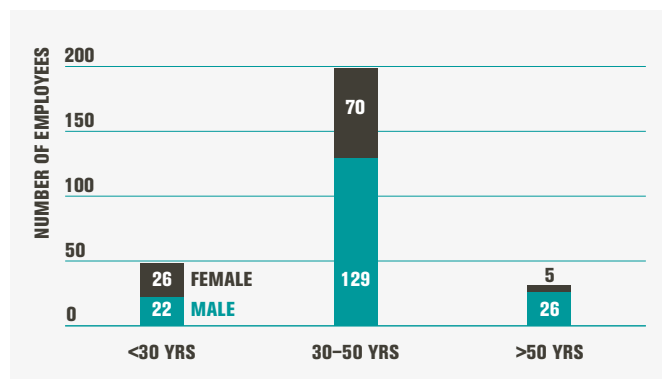
Our workplace is family friendly and we encourage employees to manage family commitments with work responsibilities through a host of initiatives. Opportunities such as part-time employment, job sharing, working from home and staggered start and finish times are offered to employees, where appropriate, in an effort to achieve work/life balance. Our Maternity and Paternity Leave Policies were merged during the year into a Parental Leave Policy, which goes beyond statutory requirements relating to parental leave rights in each of our countries.

## EMPLOYEE PROFILE AS AT 30 JUNE 2012

### EMPLOYEES BY REGION AND GENDER\*

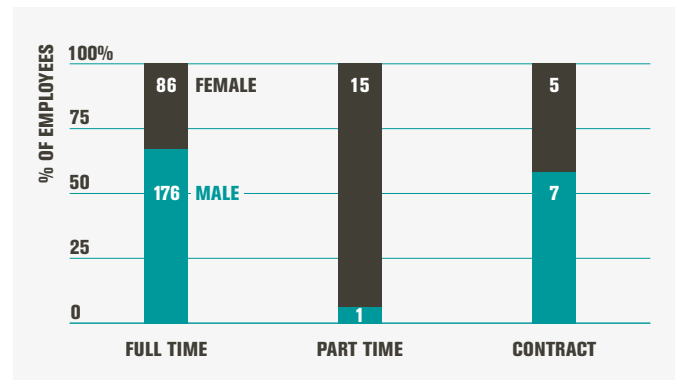


### EMPLOYEES BY AGE AND GENDER\*

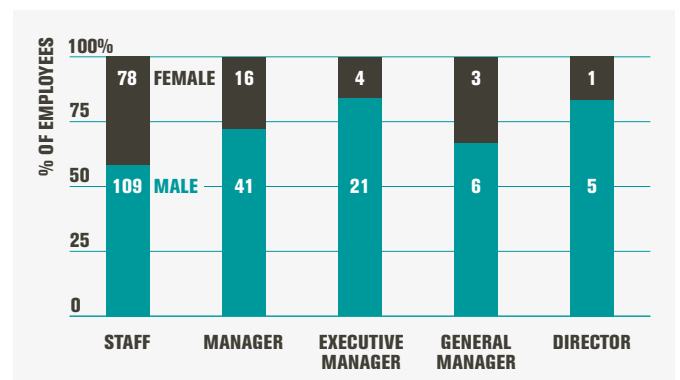


\*EMPLOYEE PROFILE STATISTICS EXCLUDE DIRECTORS AND CONTRACTORS.

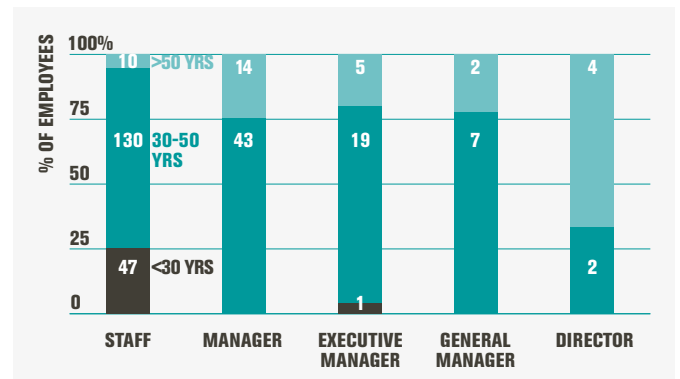
## EMPLOYEES BY EMPLOYEE TYPE AND GENDER



## EMPLOYEES BY EMPLOYEE LEVEL AND GENDER



## EMPLOYEES BY EMPLOYEE LEVEL AND AGE

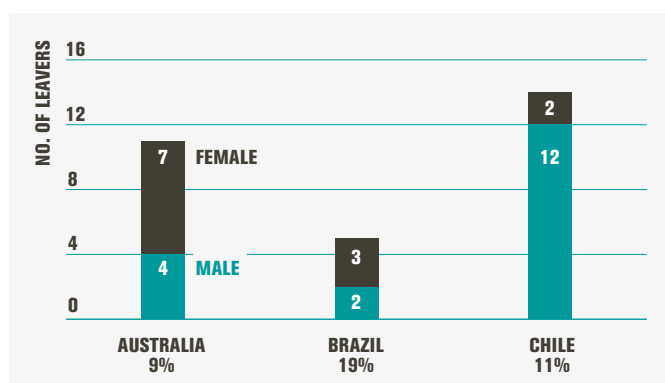




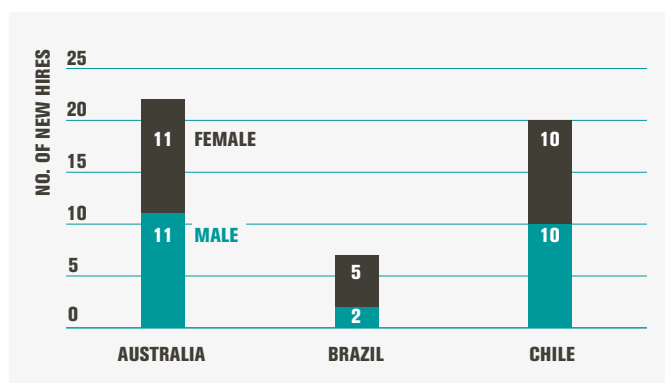
## TURNOVER

Total voluntary turnover for the reporting period was 10.8%, a 3% decrease on the previous year.

### 2011-12 TURNOVER BY GENDER AND REGION



### 2011-12 NEW HIRES BY GENDER AND REGION



## TRAINING AND DEVELOPMENT

Developing our staff to their full potential allows us to meet our business needs, fulfil personal aspirations of employees and exceed shareholder expectations. We provide a broad spectrum of internal training courses that are offered to all office and site-based employees. Employees are also given generous funding support to attend external training or to pursue further education opportunities. These training and development programs equip our staff with the necessary knowledge, skills, behaviours and commitment to drive business performance and enable growth and success. Our training and development spend for the reporting period was \$642,000, which equates to over \$2,000 per employee.

We continue to invest heavily in internal and external training specific to health and safety matters. We have implemented a variety of training courses, including hazard and risk identification, incident investigation, monthly online training courses on a variety of issues including manual handling and slips, trips and falls.

All employees receive annual performance appraisals, in which performance targets are set in line with our business plan. Six-monthly reviews are held to assess performance against targets before the annual performance appraisals. Professional development opportunities are formally identified and discussed during employee performance appraisals.

Our education sponsorship program was designed to help employees develop their skills through part time, long-term study and provide the opportunity to earn or improve a formal qualification. Each business unit has a tailored program to meet regional and staff requirements and have established their own assessment criteria. Currently, there are eight employees in Australia, five in Brazil and 11 in Chile participating in the program.

We encourage movement between business units as a way of developing employees, sharing skills and improving cultural awareness between our countries of operation. Previously, most transfers were Australians moving to Chile as the Chilean business unit expanded rapidly. In the past year, however, a number of Chileans were successfully seconded to Australia in key roles. We will continue to look for opportunities to transfer employees between business units.

Where required, restructuring processes are managed in Australia through our Redundancy Policy. Statutory requirements in Chile and Brazil include similar provisions for employees in those regions. A Retirement Transition Policy is currently under development and will be launched later this year.



## CELEBRATING WORLD DAY FOR CULTURAL DIVERSITY

In May 2012, we celebrated our first World Day for Cultural Diversity. It was an opportunity to share what diversity means to Pacific Hydro and formally announce our new Inclusion and Diversity Strategy and Statement:

*Pacific Hydro is committed to promoting a work environment where inclusion and diversity are valued and where people in each of our geographic business units are involved, supported, respected and treated fairly.*

*We believe that having people with diverse capabilities, ways of thinking and experience will benefit our workplace and create a competitive advantage. To achieve this we will develop a culture that includes, attracts and retains a broad range of personal backgrounds and attributes in the company.*

The statement was developed using feedback provided from internal employee workshops. The strategy will initially focus on cultural diversity, work/life flexibility and gender diversity.

Each office shared presentations to learn about the cultures of Australia, Brazil and Chile.

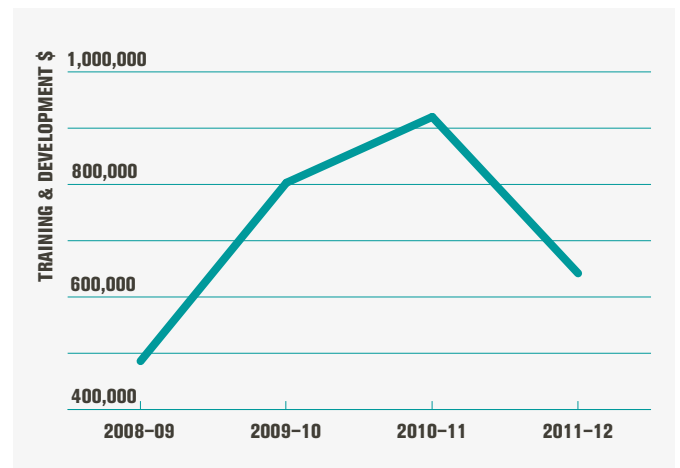
In Australia, the Melbourne office hosted a lunch, with national dish contributions from over 15 countries, while in our regional offices in Portland and Yambuk, staff got into the spirit by enjoying some sweets from Chile and Brazil.

In Brazil, the team used video conference to link its two offices (in Natal and São Paulo), enjoying a morning tea and a variety of juices from different regions in the country.

Staff in Chile shared dishes from around the world, including England, Canada, Australia, Malaysia, Holland, Venezuela, Panama, Nicaragua and Chile, and many chose to dress up in their national dress.

**ABOVE** EMPLOYEES CELEBRATING DIVERSITY DAY IN CHILE

## TRAINING AND DEVELOPMENT SPEND 2008-12



AN EMPLOYEE PARTICIPATING IN HEIGHTS TRAINING IN AUSTRALIA

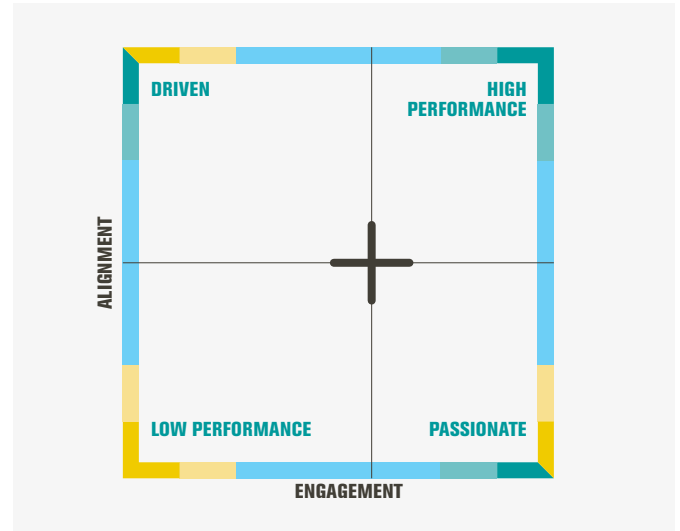
## EMPLOYEE ENGAGEMENT

Since 2006, we have conducted annual staff surveys to assess employee satisfaction and identify areas for improvement. In response to feedback from employees about the length and complexity of the survey, and to gain a deeper understanding of employee engagement and alignment with our business strategies and objectives, we changed to an Organisational Alignment and Engagement Survey. While maintaining a few core questions, the new survey uses different methodology and thus results cannot accurately be compared to previous years.

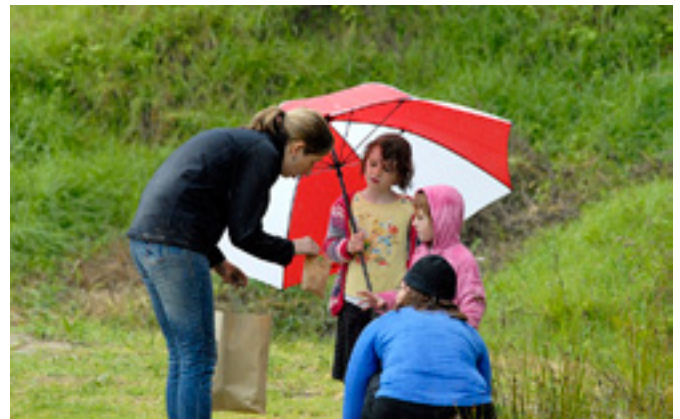
The diagram to the right shows our alignment and engagement results. The results indicate that our employees are passionate and engaged, but we recognise areas for improvement to raise our alignment score. Results are displayed as a percentage of employees who scored statements as agree or strongly agree on a seven-point rating scale. The colour-coding indicates how our average raw score compares to other organisations in the benchmark database (yellow is bottom decile, light yellow is bottom quartile, light blue is second and third quartile, light green is top quartile and dark green is top decile).

The results indicate that our Overall Global Alignment score was 51%, which sits in the second and third quartile when compared to the benchmark database. Our Overall Global Engagement score was 66%, also in the second and third quartile, and only 5% below the top quartile. Although revealing areas for improvement, the response rate of 84% demonstrates the value that employees place on this exercise.

Whilst the overall scores are made up of a number of indicators, two strategic areas – senior leadership and overall alignment – have been identified as areas for further attention. We have set a Key Performance Indicator to increase scores in those areas to move into the next quartile. Targeted initiatives and programs will continue to be implemented to address issues raised during the survey process.



RESULTS OF THE ORGANISATIONAL ALIGNMENT AND ENGAGEMENT SURVEY SHOWN GRAPHICALLY



STAFF AND COMMUNITY MEMBERS AT A TREE PLANTING DAY IN PORTLAND, VICTORIA



LUIS AGUILAR AND ALVARO MENA, MEMBERS OF THE CHILE OPERATIONS TEAM IN THE CHACAYES POWER STATION



## RESPECTING RIGHTS AT WORK

We comply with all applicable laws, regulations and other legal requirements with respect to labour laws. In Australia, 5.6% of employees are covered by collective bargaining agreements. No direct employees in Chile are covered by collective bargaining agreements and employees in Brazil are covered under relevant legislation. We have not identified any risks at any of our operations relating to the rights of employees to freedom of association or collective bargaining.

Employee grievances are covered by our Grievance Procedure, Whistleblower Disclosure and Investigation Procedure, Equal Opportunity Policy and Code of Conduct. These policies and procedures encourage employees to seek and use appropriate mechanisms to address any grievances. Any issue not adequately addressed through these internal provisions can be taken to our Employee Assistance Program or relevant external organisations.

All employees in Australia and Chile complete annual training in our Equal Opportunity (EO) Policy. Two complaints under the EO Policy were made during the reporting period. Both incidents were investigated under the EO Policy guidelines, appropriate disciplinary action was taken, and both incidents are now resolved. We are currently developing similar policies for our Brazil office.

There were no reported incidents of discrimination during the reporting period.

## REMUNERATION AND BONUSES

Our Remuneration Policy aims to attract, motivate, and retain employees by aligning team and individual rewards with business performance and ultimately value creation for shareholders. It ensures employees are remunerated in a way that is both market competitive and consistent with best practice. Global consistency of our remuneration structure and rewarding both financial and non-financial performance are key aspects of the policy.

We did not employ any entry-level employees during the reporting period, but our minimum wage levels across all our regions meet or exceed legal minimums.

All benefits provided to full-time employees are granted to all part-time employees on a pro-rata basis.

## LOOKING AHEAD: STRATEGIES FOR 2012–17

### 2012–13

### 2013–17

#### HEALTH AND SAFETY

Build and sustain a strong health and safety culture within the company and have zero harm to employees and others

To have zero harm to employees and others

#### EMPLOYEES

Attract, recruit, develop and retain employees through the Human Resources Framework to maximise performance

Continue to measure, maintain and improve employee satisfaction and alignment

Promote an inclusive culture that embraces diversity

# COMMUNITY

## OUR APPROACH

As an employer, neighbour, customer and supplier, we have a multi-faceted role in the local communities which we operate in around the world.

We aim to develop mutual trust and respect with our local communities through honest and open communication.

Our goal is to deliver community programs and initiatives that provide clear benefits and meaningful outcomes that make a lasting difference to our host communities and that are aligned ultimately with our own corporate objectives.

We do this by:

- communicating openly and constructively with our local communities;
- becoming involved in and supporting projects and events near our project sites so we can better understand and become part of our host communities; and
- leveraging off our areas of expertise to address community needs.

## PROGRESS AGAINST GOALS FOR 2011–12

### STRATEGIES

### PROGRESS ON DELIVERABLES

#### COMMUNITY RELATIONS

Engage openly with our local communities and maintain our community relations programs

- ✓ A wide range of activities were undertaken throughout the year to enable us to better understand, support and enhance our host communities. (p.33–37)

#### COMMUNITY INVESTMENT

Continue and enhance our community investment programs (eg Sustainable Communities Fund in Australia and Creciendo Juntos in Chile)

- ✓ Our community investment programs continue, including an external review which was undertaken to ensure that they continue to provide maximum benefit to our local communities. (p.33)

## COMMUNITY ENGAGEMENT AND CONSULTATION

Our approach to community consultation ensures stakeholders are both well informed and have the opportunity to provide feedback in the development of proposed projects. Consultation styles are adapted to suit the needs of the local community and other stakeholders. The methods of consultation and engagement range from formal and informal community consultation sessions, newsletters and surveys, to community investment activities and dedicated community relations staff.

Our Community Charter aims to ensure our approach to communities is consistent across the globe. Additionally, our Community Affairs Policy in Brazil provides further guidance on developing and sustaining relationships with local communities in the region.

### DEVELOPING COMMUNITIES

In Australia, we participated in the Future Leaders of Industry program, providing opportunities for young people in rural areas to gain hands-on experience in their chosen industry or career. Students in the program are appointed a mentor, and spend a full day in the workplace, learning about the industry, job roles and potential educational pathways. Participants also work on personal skills development, leadership skills, presentation development, communication and goal setting.

Our wind farms in Brazil host regular education sessions with high schools, technical institutes and universities through our Open Doors program. Students from local primary and secondary schools, indigenous schools and technical institutes, as well as other visitors to the wind farms learn about energy generation, particularly renewable energy, and its impact on the Brazilian electrical system. Depending on their educational requirements, they also learn about operations systems and processes, some technical activities, our environmental obligations and activities, as well as general concepts of sustainability.

We continued our partnership with OTIC (Organismo Técnico Intermedio de Capacitación O'Higgins), an intermediate technical training agency, and the Hope Corporation (Corporación La Esperanza) in Chile. This year the partnership provided training to 36 people from the local communities of Coya, Chacayes Termas de Cauquenes, on leather craft, wood carving and catering. These topics were decided through community consultation sessions to determine areas of development interest within the local area. Since 2007, over 380 local residents have received training through this program.

## IMPACTS

### COMMUNITY INVESTMENT PROGRAMS

Our aim is to operate in a socially responsible way, maintaining good relations and promoting social development and cohesion in our host communities. Local community engagement, impact assessments and development programs have been implemented at all of our operations, except our Australian hydro plants. Community investment funds have also been established at each of our operations, except our Australian hydro plants, and are tailored to the needs of each different community. Through each fund, a portion of profits made by each project are invested back into local communities through a number of grants in education, health and safety, environment, sport, culture and the arts.

While the investment programs are tailored to each site to best address the needs of each community, we have been very successful in knowledge-sharing between business units to improve how the programs operate. Through the funds, we strategically promote innovative, creative solutions to local issues, encouraging organisations to create partnerships delivering community services. In this way, we hope to work towards achieving positive, long term outcomes that have broader community outcomes.

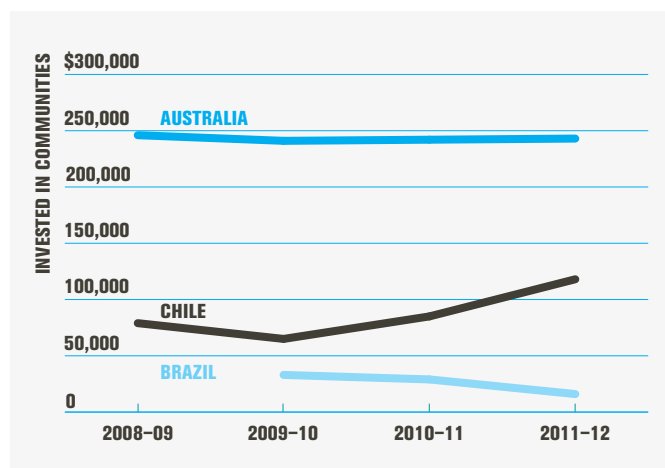
In Australia, the Chalicum Hills Sustainable Communities Fund provided \$5,000 to implement a mentoring program for at risk youth. This innovative program trains volunteers as mentors who then spend regular time with children at risk of neglect or abuse. The mentors offer a supportive, non-judgemental relationship to the parent(s) and the child offering practical guidance and help in accessing social and recreational activities.

Our Brazilian business unit continues to develop their fund, providing training and development to community leaders and other key figures, including teachers and business owners, in how to successfully develop funding applications.

One of the projects supported by Creciendo Juntos, our community investment program in Chile, was to put a roof on the Chacayes local gymnasium. Three different groups prepared separate applications, all relating to the gym roof, all of which were successful. Due to the support of Pacific Hydro, the applicants were able to secure additional funding from other sources, including the local government. Since completion, the gym has become a hub for one of the communities of the Alto Cachapoal Valley (Chacayes), hosting social gatherings and town meetings as well as sporting activities.



## COMMUNITY INVESTMENT FUND SPEND



## INDIRECT ECONOMIC IMPACT

Often our projects are located in rural areas with small populations and low economic activity. In addition to our standard community investment activities, a useful way for us to have a positive impact is by assisting with the development of infrastructure or provision of support in areas such as education.

In Australia, our Community Relations team provide in-kind support to many of our partner organisations. One of these groups is the Portland Young Professionals Network, comprised of around 70 residents aged from 20 to 35. The group is auspiced by the Committee for Portland and aims to address some of the challenges around attracting and retaining young professionals in regional areas. It offers social, personal and professional development opportunities for members as well as supporting local events through volunteering. Pacific Hydro has supported the group by providing staff with expertise in areas like social media to share that knowledge with network members. Local staff also provide some administrative and communications support and event facilitation.

Two unsealed roads connect residents of the small township of Barra do Camaratuba with the larger municipality of Mataraca City. During the wet season, road conditions deteriorate quickly, preventing children from Barra do Camaratuba from attending school and community members from accessing medical facilities and other essential services. We engaged a local road works company to grade and level the road, allowing the lives of these community members to return to normal.

We provided funding for a language teacher at a rural Chilean school, giving local teachers and students the opportunity to develop valuable foreign language skills. The Colegio San Lorenzo (San Lorenzo Primary School), located in the Machalí township, near our Chacayes, Coya and Pangal hydro power plants, now has an in-house English teacher who takes classes for both students and teachers. We also provide support with maintenance and watering of the roads around our host communities to avoid real or potential impacts of trucks on local roads. We have also assisted local community members in Chile to apply to a program that promotes ecotourism within the Reserva Nacional Rio de los Cipreses, located close to our hydro plants. The program is jointly run by the Chilean environmental and tourism bodies, CONAF and SERNATUR. Pacific Hydro helped community members to identify and define potential projects, and to develop and submit applications for funding. Some of the projects we helped develop are to provide healthy food items for visitors, develop an area at the reserve entrance for souvenir trade, provide a service of local guides for tours in the reserve and to develop a camping site.

In all our countries of operation, we also provide training and other assistance to individuals and community groups. Examples include in health, safety, environmental matters, sustainability, marketing and public relations, cultural and indigenous heritage, and other sessions as required. Old electrical hardware, including printers, computers and laptops are also donated to community groups where possible.

In isolation these may seem small initiatives, but collectively they make a powerful impact, as each one results in positive outcomes for our host communities.



MAKING IMPROVEMENTS TO LOCAL ROADS IN BRAZIL



## CELEBRATING MATARACA CITIZENS DAY IN BRAZIL

Every Brazilian resident is required to possess a birth certificate and personal identification card as legal proof of their identity. However, not all residents of Mataraca City and the surrounding district (the community that hosts our Vale dos Ventos and Millennium wind farms in Northeast Brazil), are able to travel to a doctor to register their children, or can afford the notary fees to obtain personal identification cards. This means these citizens are not legally recognised by the Brazilian Government, are unable to gain legal employment and cannot fully participate in and contribute to community life.

For the second consecutive year, Pacific Hydro, along with the Mataraca City Hall and a number of other sponsors, organised the Mataraca Citizenship Day. Around 1,500 residents from the city and surrounding areas participated in the free event, receiving legal documentation such as birth certificates, personal identification cards and electoral cards. Medical and oral health checks, nutritional information sessions, including cooking demonstrations and environmental education and awareness training, were also provided. Programs like the Mataraca City Citizenship Day allow us to make a tangible difference to the lives of those living near to our operations.

**ABOVE** LOCAL COMMUNITY MEMBERS ATTENDING THE MATARACA CITIZENS DAY

## JOB OPPORTUNITIES AND LOCAL SOURCING

Although our policies and procedures do not specifically mandate using locally based contractors and suppliers, or directly employing locally, we endeavour to support local communities wherever possible. We define local as the region in which a project or asset is located.

In Australia, we continue to actively seek and engage local suppliers and contractors where they are competitive in price, quality and service. In Ararat, Victoria, over \$250,000 was spent during the reporting period with local engineering companies through the manufacturing of turbine parts. In Portland, Victoria, over \$600,000 was spent on maintenance activities performed by local labour and maintenance contractors. Supporting local workers and local industry provides benefits, not only to our own organisation, but to the sustainable development of the region.

In the Northeast of Brazil, our two development projects, Paraiso Azul and Paraiso Farol, are moving towards construction phase. In preparation for this, we have partnered with a local technical institute to provide skills training to local residents in a number of areas. Participation in this program will not guarantee employment once the projects reach construction, but provides them with the skills required to apply for available positions, either with our projects or for other organisations. It also provides an increase of skilled workers in the region.

In Chile, our Chacayes hydro plant moved from construction to operations phase, significantly reducing the workforce required. We have worked closely with employment groups representing workers from the Chacayes area to ensure where local workers have the necessary skills and qualifications, they be given opportunity to apply for and receive employment at our asset.

In each of our business units, we have employed apprentices as part of our commitment to developing young workers in rural and regional areas. For employees, apprenticeships recognise existing skills, provide a combination of training and employment and experience and lead to nationally recognised qualifications. They also offer local employment opportunities to assist with the prevention of population decline in regional areas.

## VISUAL AMENITY

We recognise that developing and operating a wind farm creates changes to the visual landscape of an area. In Australia, as part of our planning application process and environmental assessment, independent landscape and visual impact assessments are conducted. This includes production of a series of photomontages depicting how the wind farm will look from a number of different local viewpoints. These montages are made available during the community consultation process and form part of the planning application documentation.

At Keyneton Wind Farm in South Australia, we trialled a new feedback methodology that included comments from community members on their values and relationship with the landscape. As part of our community engagement processes the landscape architect undertook a cognitive mapping exercise where participants were asked to analyse a series of qualitative values relating to landscape surrounding the proposed wind farm, and also complete a landscape survey. The outcomes of this exercise were included within the landscape and visual impact assessment included within the planning application.

The findings from the landscape value assessment, along with those from the cultural heritage assessment and environmental and biodiversity considerations, were significant enough for us to revise the turbine layout. This includes the removal of 18 turbines to minimise the impact on the community and the environment. While there is opposition to this project within the Keyneton community, we welcome communication and continue to engage community members throughout the entire development process.

Once projects reach operations, we work with impacted land holders to minimise their visual impact through a series of measures. Our visual screening program in Portland was completed during the reporting period with all cooperating landholders.

In Brazil, a questionnaire was developed for the Touros community to assess attitudes towards the local lighthouse. The results will assist us in understanding the value given to visual amenity in the area, and how our proposed turbines might affect this. Further assessment and discussion will be undertaken should findings indicate additional landscape characteristics were important to the community.



## COMMUNITY ATTITUDES TO WIND FARMS IN AUSTRALIA

In November 2011, we commissioned an independent research company, Qdos, to conduct community polling on attitudes to wind farms and renewable energy.

The telephone survey interviewed one thousand residents across Victoria, New South Wales and South Australia, in areas where wind farms are already in existence or under development. "We were especially interested to hear what local communities living close to existing and proposed wind farms had to say," said Lane Crockett, General Manager, Pacific Hydro Australia.

The key findings included:

- Community support for wind energy remains strong, both nationally and in each state, with 83% nationally, 84% in Victoria, 90% in South Australia and 77% in New South Wales.
- Support in Victoria for wind farms remains almost unchanged with 2010 results at 83% per cent and 2011 results at 84%.
- Nationally, over 7 in 10 people support wind farms being built nearby and over 8 in 10 agree that "wind farms are an important part of our clean energy future".

The results confirm that the majority of regional Australians support wind generation and continue to have positive attitudes towards wind farms in their local communities. It also confirms that wind energy is overwhelmingly more popular than non-renewable forms of energy.

The results of the poll coincided with the release of a report from the CSIRO on "Exploring community acceptance of rural wind farms in Australia" and confirm the headline finding that there is stronger community support for the development of wind farms than might otherwise be assumed from media coverage.



[www.pacifichydro.com.au/files/2012/01/2011-Community-Polling-Presentation-Results.pdf](http://www.pacifichydro.com.au/files/2012/01/2011-Community-Polling-Presentation-Results.pdf)

ABOVE LANDHOLDERS AT THE CODRINGTON WIND FARM, VICTORIA



## HEALTH

There has been significant debate and media coverage on the effects of wind farms on health, wildlife and amenity. In relation to perceived health concerns we rely on the advice from Governments and reputable health organisations. There are now 17 international reviews on the risks of health impacts from wind farms. The findings are consistent in that there is no credible evidence in the peer reviewed published scientific literature that there are any direct adverse physiological health effects from exposure to wind turbines.

To inform ourselves and the community, we commissioned an independent acoustics consultancy, Sonus, to measure the levels of infrasound near two of our wind farms, as infrasound is often cited as the potential cause of ill-health. The measurements indicate the levels of infrasound from the wind farms are below human perception levels and are lower than those found at the beach, in the city and near a gas fired power station.

However, poorly designed wind farms can cause annoyance to some nearby neighbours if the audible noise levels are too high. See p.42 for more information on wind farms and noise.

Renewable power is safer, cleaner and healthier than fossil fuel based generation. We have called for a review of the health impact from all forms of power generation so that policy makers and communities can make informed choices on the best technologies for the future. We have also called for health impact assessments to be included in the planning decisions for new power generation plant.

## INFRASOUND

Infrasound is a naturally occurring phenomenon which is constantly present in the atmosphere and can be emitted naturally in the human body, generated by natural sources such as waves and waterfalls. It can also be emitted from man-made sources such as vehicles, air-conditioning systems and wind farms.

The Queensland Department of Environment and Resource Management sets the common audibility threshold for infrasound noise level at 85 dB(G). This threshold allows an acceptable level of infrasound in the environment from a noise source to protect against the potential onset of annoyance.

Independent studies show that infrasound generated by wind turbines is well below such established thresholds of perception and is similar to levels produced by other natural and man-made sources.



[www.pacifichydro.com.au/files/2011/10/Sonus-Report.pdf](http://www.pacifichydro.com.au/files/2011/10/Sonus-Report.pdf)

## LOOKING AHEAD: STRATEGIES FOR 2012–17

### 2012–13

### 2013–17

#### COMMUNITY RELATIONS

Develop, implement and manage programs that positively engage local communities

Further enhance community relations

#### COMMUNITY INVESTMENT

Promote and improve our community investment programs

Further enhance community investment programs

# ENVIRONMENT

## OUR APPROACH

We aim to provide a net benefit to our planet by producing renewable energy with minimal impact on biodiversity, natural resources and our climate.

We do this by:

- implementing environmental management systems and continuously improving our environmental performance;
- understanding that reducing the impacts of climate change begins with our own activities and working to reduce our own carbon footprint; and
- regularly engaging policy makers, local communities and the general public on renewable energy and broader climate change issues and advocating climate change policies in our areas of interest.

## PROGRESS AGAINST GOALS FOR 2011–12

### STRATEGIES

### PROGRESS ON DELIVERABLES

#### ENVIRONMENTAL MANAGEMENT

Maintain environmental management systems and meet compliance obligations

- ✓ All operational sites operate under an Environmental Management System (EMS) and we received no environmental fines. (p.39)

#### CARBON MANAGEMENT

Develop a carbon strategy and value proposition including corporate goals and targets

- ✓ A carbon strategy and value proposition was developed and endorsed by the General Management Committee.

#### OPERATIONAL EXCELLENCE

Incorporate sustainability metrics (eg International Hydropower Association Sustainability Assessment Protocol) into annual operations performance reviews

- ✓ Sustainability metrics were incorporated into our Asset Management Framework and Benchmarking Exercise.

## ENVIRONMENTAL COMPLIANCE AND OUR ENVIRONMENTAL MANAGEMENT SYSTEM

We aim to be an industry leader in environmental management, continually striving to improve our environmental performance and practices. We conduct our business in accordance with the spirit and letter of all applicable environmental laws and regulations. Our Health, Safety and Sustainability (HSS) Policy includes our environmental aims and the manner in which we seek to achieve those aims. It is applicable to all employees and directors, as well as contractors and visitors to our sites or offices.

The HSS Policy is implemented in part through our Environmental Management System (EMS). Every operational site operates under an EMS, which is based upon or certified to the international standard in environmental management systems, ISO 14001. Regular internal and external audits occur to ensure compliance against ISO 14001, the responsibility for which lies with country-level environment managers and Health, Safety and Environment teams.

During the reporting period we recorded one spill classified as 'significant' under our EMS, which was a sulphur hexafluoride (SF6) gas leak of 0.740 grams.

No fines were received during the reporting period relating to non-compliance with any environmental laws or regulations. We received two non-monetary sanctions in Chile.

## BIODIVERSITY

Biodiversity is a major consideration during the early phases of project development. We undertake extensive site assessments and surveys of both flora and fauna, including species of concern to stakeholders such as avifauna (birds and bats), terrestrial fauna, flora and threatened species.

Assessments of species were recently carried out as part of the environmental assessment at our proposed Keyneton Wind Farm in Australia. Following these assessments, and in accordance with the ecological consultants' recommendations, a number of modifications to the proposed turbine layout were made. These included removing or relocating turbines in order to avoid habitat or respect buffer zones around ecologically sensitive areas.

In Brazil, our First Steps biodiversity program, developed for our Paraiso Azul and Paraiso Farol wind farms will help us to identify site biodiversity, potential impacts of our activities and the most appropriate ways to minimise and mitigate these impacts. The First Steps program will ensure adequate controls are in place in terms of required documentation, compliance with relevant legal requirements and demonstrate our commitment to responsible, sustainable development.

In Chile, we continue to work on a cumulative impact assessment to better understand social and environmental impacts occurring in the Cachapoal Valley, where our Coya, Pangal and Chacayes hydro plants are located. The information gathered includes data on current use of and activities occurring in the Valley, and will allow for more comprehensive planning and decision-making related to current and future projects in the area. We also continued our partnership with the Alto Cachapoal Scientific Fund to promote research and knowledge related to the Cachapoal Basin.

## NATIVE VEGETATION

While we take a precautionary approach to all our development, construction and operating activities, occasionally some tasks require us to remove or otherwise interfere with native vegetation. We abide by all local and national legislative requirements concerning native vegetation and we minimise interference and damage through systematic site surveys, careful environmental planning and appropriate offsetting arrangements.

Over 60 hectares of land within the Upper Cachapoal Valley were used during construction of Chacayes for tasks such as access, working platforms and temporary sites offices. To date, more than 75% of the affected land has been restored with 14 species native to the area, and the remaining land will be completed during FY2012–13.

## THREATENED SPECIES

While our operations do not directly impact any conservation-significant species, any such species or habitats that may potentially be affected by our operations are identified during our environmental assessments and appropriate mitigation measures put in place within site Environmental Management Plans. These include regular monitoring, timely restoration of disturbed areas and establishing habitat diversity within reclaimed areas.



## GREENHOUSE GAS EMISSIONS AND ENERGY USE

This year Pacific Hydro's assets generated more than 1.8 million megawatt hours of clean, renewable energy, leading to the abatement of more than 1.2 million tonnes of greenhouse gas emissions.

During the reporting period, 4,440 tonnes<sup>1</sup> of greenhouse gas emissions were generated through construction, operation and office-based activities and 41,982 gigajoules of energy consumed.

The construction of the Chacayes run-of-river hydro project accounted for 52% of the company's total greenhouse gas emissions and 67% of energy consumption during the reporting period, mainly resulting from vehicle diesel consumption. The project reached completion during the reporting period, resulting in a 41% decrease in emissions from the project which in turn reduced the company's total emissions by 6% from the previous year.

Emissions were 19% lower across our other assets and offices in Chile.

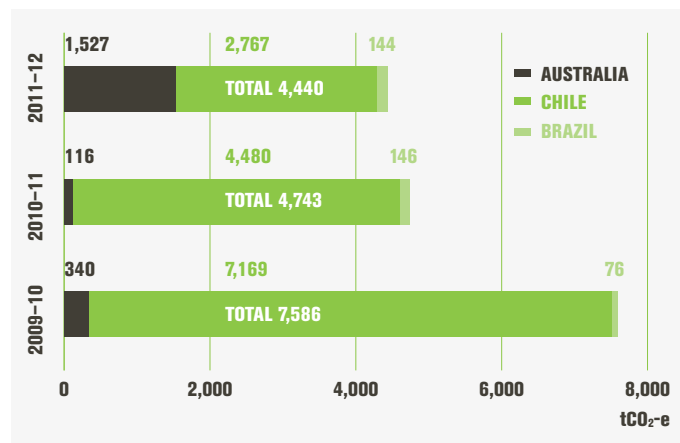
In Australia, greenhouse emissions increased from 117 tonnes to 1,528 tonnes, although 1,332 tonnes of this increase was due to changing the way we report emissions from purchased electricity use. In previous years we reported zero emissions because we use 100% GreenPower, sourced from our renewable energy assets. This year, while we still use 100% GreenPower, we have aligned our reporting methods with the Australia NGERs legislation, which does not recognise the actual source, but instead attributes a state based emissions factor to all electricity consumption.

In Brazil, emissions were 1% lower than the previous year. The majority of emissions were generated from electricity consumption and transport vehicles.

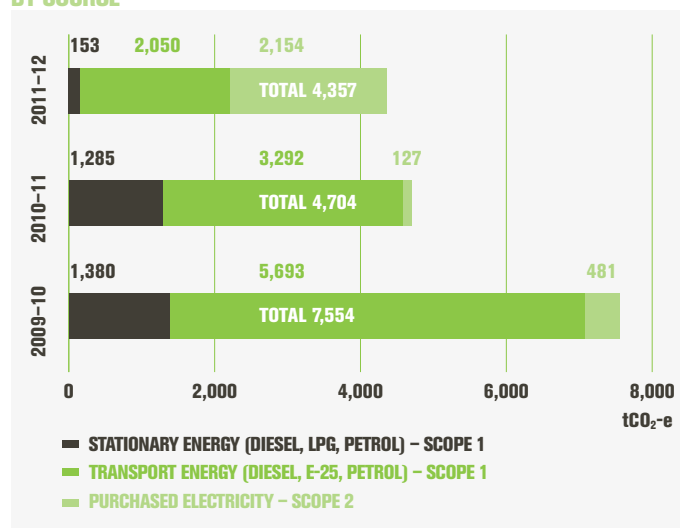
Scope 3 emissions reduction initiatives implemented during the year included reducing air travel, increasing length of trips and promoting the use of video conferencing. Data collection is improving and we anticipate that we will be able to include flight emissions data in next year's report.

The emissions intensity of our operations is significantly lower than conventional electricity generators, because our power stations utilise zero-emission sources of fuel such as wind and water rather than higher emission sources such as coal and gas.

## 2009–12 TOTAL GREENHOUSE GAS EMISSIONS (SCOPE 1 AND 2) BY COUNTRY



## 2009–12 TOTAL GREENHOUSE GAS EMISSIONS (SCOPE 1 AND 2) BY SOURCE



## EMISSIONS INTENSITY OF OPERATIONS (TONNES CO<sub>2</sub>-E/MWH)

COUNTRY	EMISSIONS INTENSITY
Australia	0.00102
Brazil	0.00081
Chile	0.00082

(\*NOTE: THIS CALCULATION CONSIDERS OPERATIONS EMISSIONS OF ASSETS ONLY, NOT CORPORATE OFFICES)

<sup>1</sup> Includes scope 1 and 2 greenhouse gas emissions of assets and offices over which Pacific Hydro has operational control, regardless of who owns the assets.



## ANDEAN CONDOR CONSERVATION PROGRAM

The Andean Condor is a Chilean national symbol, currently listed as 'near threatened' on the International Union for the Conservation of Nature (IUCN) Red List.

While our projects do not have an impact on Andean Condors or their habitat, we recognise the significance of this iconic species to Chilean people and our local communities. This has inspired us to work together with the Chilean Ornithological Association to support the rehabilitation of injured condors.

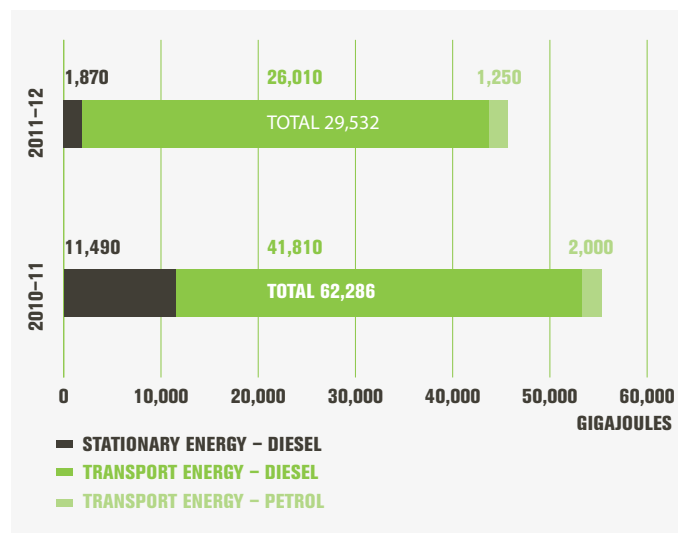
The Andean Condor conservation program rehabilitates injured condors and takes condors born in captivity through a complex process of medical recovery, socialisation and muscle development. Injured condors that have previously lived in the wild usually require minimal assistance. However, birds born in captivity require a long, complex and costly rehabilitation.

In March 2012, we achieved a special milestone, releasing five condors back into the wild in the Alto Cachapoal Valley, close to our Chacayes run of river hydro plant.

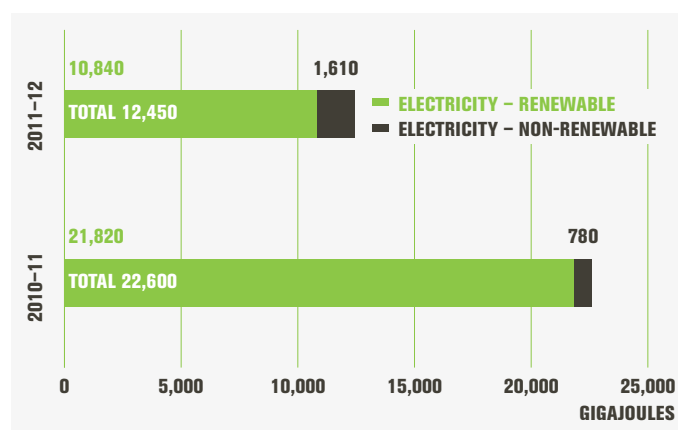
Prior to release, condors are fitted with microchips, wing bands and radio or satellite transmitters to allow comprehensive and ongoing monitoring of the birds' reintegration back into the environment. The conservation program also provides educational materials and activities to promote the work being undertaken.

**ABOVE** VICTOR LOPEZ, EXECUTIVE MANAGER, OPERATIONS IN CHILE RELEASING ONE OF THE REHABILITATED CONDORS

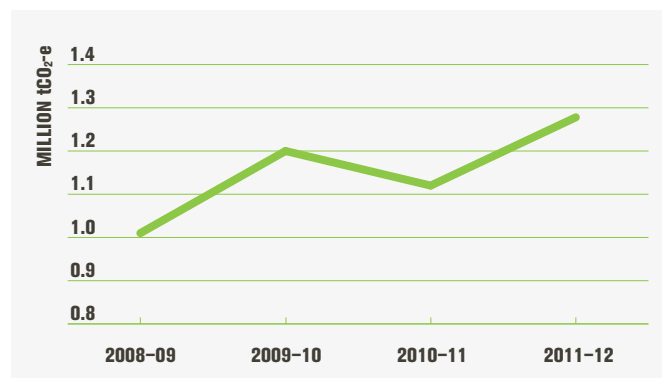
## TOTAL DIRECT ENERGY CONSUMPTION (SCOPE 1) BY PRIMARY SOURCE



## TOTAL INDIRECT ENERGY CONSUMPTION (SCOPE 2) BY PRIMARY SOURCE



## 2008-12 ABATEMENT (TONNES CO2 EQUIVALENT)



## WIND FARMS AND NOISE

Noise levels at dwellings near to our wind farms are modelled, measured and ultimately restricted in accordance with government regulations and planning conditions.

In Australia, we communicate with landholders, neighbours and communities about wind farm noise emissions generated by our wind farms from the design stage through to planning application, construction and operation. We commission independent acoustic consultants to provide noise impact assessments, including background noise monitoring, to demonstrate compliance with the government regulations and planning conditions.

After commissioning, testing of noise levels occurs to demonstrate compliance with regulatory requirements. Wind farm noise may be audible at times depending on house location and factors such as the number of turbines operating, wind speed and wind direction and other atmospheric conditions like temperature or humidity. We continue to work with individual community members to address their concerns.

We have a formal complaints procedure which can be used by members of the community if they have concerns relating to Pacific Hydro, including issues relating to noise.



## RECYCLED ART AT BARRA DO CAMARATUBA PRIMARY SCHOOL IN BRAZIL

Over the last few years, we have partnered with the Barra do Camaratuba Primary School to work on projects to benefit the school. This year, grade five students suggested an environmental initiative that not only would benefit the environment, but would leave a lasting reminder of their time at the school.

Their idea was to upgrade the school's facade as the name of the school had become faded and dull over time. Engaging students from other year levels at the school, as well as the rest of the Barra do Camaratuba community – around 900 residents – the children collected thousands of polyethylene terephthalate (PET) plastic bottle caps. The caps were then stuck onto the wall, repainting the school name in a bright and colourful design. PET bottle caps cannot be recycled at many sorting and recycling facilities and often end up in landfill, so collecting and using the caps for something useful addresses an environmental issue in a very creative way.

Not only did the project give the school facade a facelift, it provided the students and residents of the community an opportunity to think about waste creation, innovative ideas about recycling opportunities and about the concept of sustainability in a broader context. Pacific Hydro is proud to participate in projects that engage local youth, promote environmental sustainability and add value and bring together local communities in this way.

**ABOVE** IMPROVING THE BARRA DO CAMARATUBA SCHOOL WALL



## WATER

We rely on water to power our hydro plants in Australia and Chile. In all cases, water is diverted from a river or pre-existing storage source, through our power stations and then returned to the adjacent river system. This method ensures minimal flooding, has low environmental impact and requires only non-consumptive water rights.

Our operational wind farms consume only minimal volumes of water sourced from on-site rain water tanks. In Brazil, we measure our water use. However, in Australia, we do not have systems in place to measure water use at many sites as we have chosen to focus on other aspects of resource use, namely paper use, energy consumption and waste generation.

In Chile, we monitor water levels to ensure water flow is adequate to preserve aquatic life and river-bank dwelling species. Water quality is also monitored at Chacayes Liquid Industrial Waste Treatment plant to minimise the risk of contaminated water affecting the environment or communities.

The Cachapoal River, the source for our Chacayes hydro plant, is used by a number of other stakeholders in the Cachapoal Valley including mining organisations, other hydro plants, irrigators and water sanitisers. The Irrigators Association of the Cachapoal Valley has implemented a collaboration and participation model to ensure that all major players are represented and their interests heard. The design and implementation of the model was led by Pacific Hydro and our Resources Manager, Patricio Correa, has been appointed as Director of the Association. The Chilean Government has observed the success of this model and has implemented similar models in other catchment basins.

## WASTE

In Australia, we measured performance against three initiatives identified as areas of importance and achieved mixed results:

- 1 Improving lighting: The initiative was postponed and will occur during the 2012–13 financial year.
- 2 Reducing bottle waste: We were not able to see a reduction in waste produced by plastic bottles due to potential manual handling risks identified in purchasing larger bottles.
- 3 Reducing paper consumption: A joint initiative between the Health and Safety and Information Technology teams significantly reduced the amount of printing and waste paper collected by implementing a swipe system requiring employees to use their building pass to trigger printing.

We continue to monitor and improve our waste management processes and have set targets around operational activities, including improving waste management in the Melbourne office and developing cultural heritage registers for some sites. Progress against these targets will be reported next year.

In Brazil, our commitment to waste management has assisted local small business. For example, we were able to support a resident of the Barra do Camaratuba community, Luis Amaral da Silva's small recycling business. Our Natal office and Vale dos Ventos and Millennium wind farms provided almost 14 kilograms of unavoidable paper, cardboard and aluminium waste products to his business during the reporting period.

The completion of construction at our Chacayes hydro plant in Chile and the associated decommissioning and demolition of temporary works, generated 1,051,496 kilograms of domestic, industrial and hazardous waste. Waste management, sorting, transport and disposal processes are implemented at each site, including the Santiago office.

## LOOKING AHEAD: STRATEGIES FOR 2012–17

### 2012–13

### 2013–17

#### ENVIRONMENTAL MANAGEMENT

Maintain environmental management systems and meet compliance obligations

Develop a corporate environmental audit program  
Improve data collection to enable full ecological footprint calculation

#### CARBON AND ENERGY MANAGEMENT

Implement carbon strategies and management plans, including achieving a reduction in office electricity consumption

Continue implementation of carbon and energy strategies

# GRI AND UNGC INDEX

THE INDEX BELOW PROVIDES PAGE NUMBERS FOR THE GRI INDICATORS AND UNGC PRINCIPLES CONTAINED WITHIN THIS REPORT. A DETAILED INDEX CAN BE FOUND AT [PACIFICHYDRO.COM/SUSTAINABILITY/SUSTAINABILITY-REPORTS](http://PACIFICHYDRO.COM/SUSTAINABILITY/SUSTAINABILITY-REPORTS).

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3.1 – 3.4	Report parameters Report Scope and boundary	Full	About Us Health and Safety Performance Detailed GRI & UNGC Index		1 25 Online
3.5		Full	Determining Report Content & Materiality Our Stakeholders		10–11 9
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3.9 – 3.12		Full	Detailed GRI & UNGC Index		Online
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PR7	Marketing communications	Full	2012 Full GRI & UNGC Index		Online
PR8	Customer privacy	Full	2012 Full GRI & UNGC Index		Online
PR9	Compliance	Full	2012 Full GRI & UNGC Index		Online



## CONTACT US

Feedback on this report can be sent to  
[sustainability@pacifichydro.com](mailto:sustainability@pacifichydro.com)

### AUSTRALIA

Level 11, 474 Flinders Street  
Melbourne, Victoria 3000 Australia  
T +61 3 8621 6000 | F +61 3 8621 6111

### BRAZIL

Alameda Santos, 700—Cj. 62 —  
Condomínio Edifício Trianon Corporate  
Cerqueira César — São Paulo — SP  
CEP 01418-100 — Brazil  
T +55 11 3149 4646 | F +55 11 3149 4649

### CHILE

Av. Isidora Goyenechea  
3520, Piso 9, Las Condes  
Santiago, Chile  
T +56 2 519 4200 | F +56 2 519 4240

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