

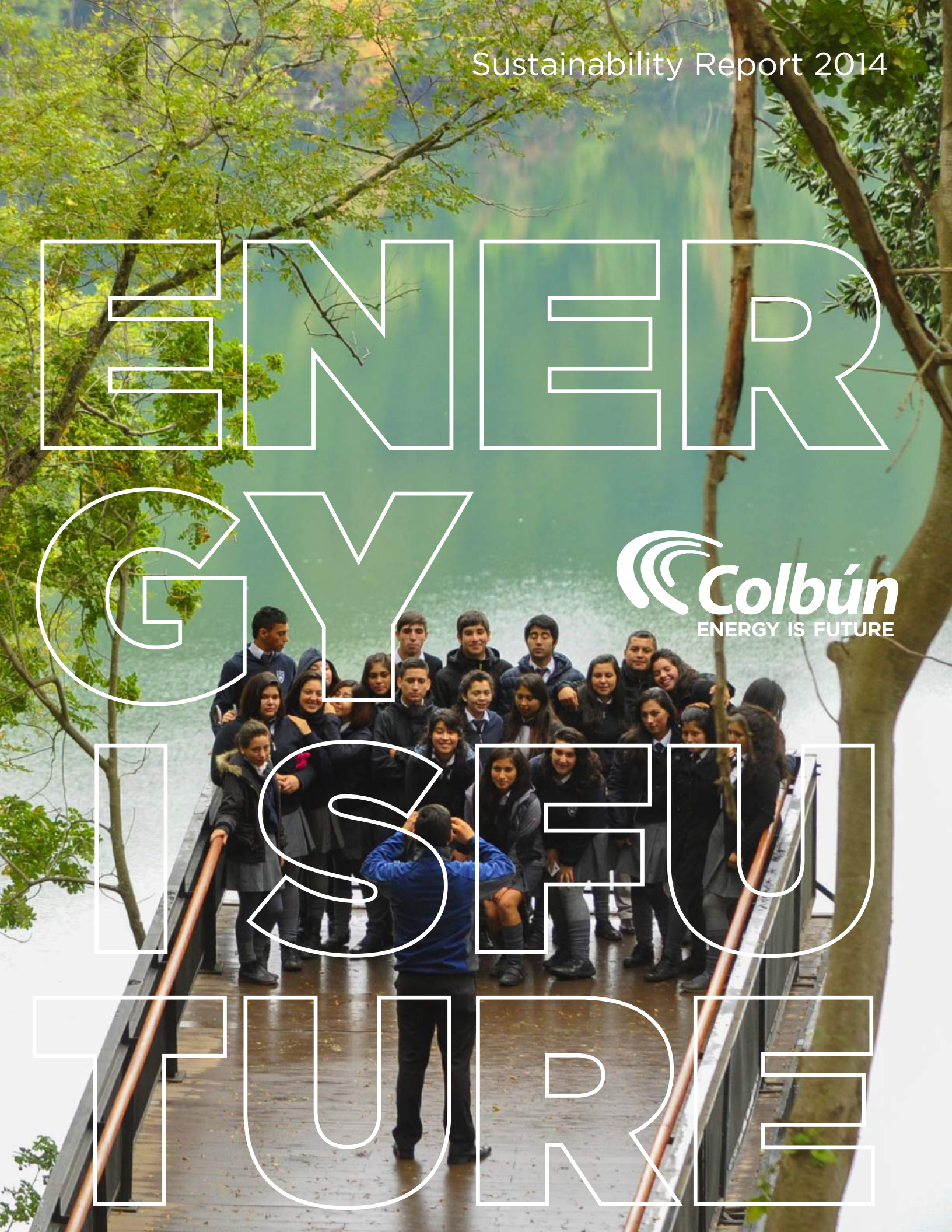
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Sustainability Report  
**Colbún 2014**



## Sustainability Report Colbún S.A. 2014

> G4-3, G4-5, G4-7, G4-28, G4-30

### Alcance:

Desempeño de Colbún S.A. y sus filiales durante 2014.

El presente documento no mide los indicadores en materia de sostenibilidad de Hidroaysén, Eletrogas o Transquillota, ya que se trata de sociedades coligadas de Colbún S.A.

Durante 2014 hubo cambios significativos en el tamaño, estructura, propiedad accionaria o cadena de suministro de la organización. El último reporte fue publicado en Octubre del 2014, informando la gestión del año 2013 (G4-29).

### Metodología:

Informe elaborado de acuerdo a los principios de la Iniciativa Global de Reportes (GRI), en su guía G4, nivel de conformidad CORE (“básico”) y suplemento para el sector eléctrico (G4-32). No se realizaron re expresiones en la información reportada del año anterior, ni cambios significativos en la cobertura de los aspectos reportados (G4-22, G4-23).

### Colbún S.A.

Dirección: Av. Apoquindo 4775, Piso 11. Santiago, Chile.

Teléfono: (56 2) 2460 4000

[www.colbun.cl](http://www.colbun.cl)

Para mayor información, sugerencias, inquietudes o consultas respecto a este documento, puedes escribir a Ana Luisa Vergara, Gerencia División de Desarrollo Sustentable, a [reporte\\_sostenibilidad@colbun.cl](mailto:reporte_sostenibilidad@colbun.cl) (G4-31).

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Las siglas que se muestran bajo algunos títulos, corresponden a indicadores de perfil y desempeño establecidos por el Global Reporting Initiative (GRI 4).

Los indicadores llamados “Colbún” dan cuenta de la gestión específica de nuestra Compañía.

El detalle de estos indicadores se encuentra en el anexo ubicado al final de este documento.

Para que todos nuestros grupos de interés se vean reflejados en este documento, incorporamos las preguntas que nos hicieron durante el proceso de “levantamiento de materialidad”, las cuales podrán ser identificadas con el siguiente ícono:





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## Interview to

# Thomas Keller, Chief Executive Officer, Colbún S.A.

> G4-1, G4-2

**How would you describe your experience during these first few months in Colbún?**

It has been an intensive, challenging, highly enriching and very positive process. These have been months of a humble learning and fortunately I have had a lot of assistance from Colbún's people, colleagues and directors. The impression I had with respect to the quality of the human teams has been confirmed. Therefore, I am very pleased to work at Colbún.

**What is your view regarding the sustainability of the industry and more specifically of Colbún?**

Speaking of sustainability as something separate from the business itself is artificial. Successful management is defined by good results in all business dimensions, i.e. economic, social and environmental. Sustainability is then crucial to enable the industry and Colbún to meet the superior mission of generating electric power at competitive costs, abiding by high standards in community and environmental issues.

**Looking at the business in a comprehensive manner, how would you evaluate the 2014 management period?**

2014 was established as the consolidation year for the Company and I think our results show that we were up to par. This is to the credit of all Company workers, to whom I reiterate my acknowledgement and congratulations. It was a good year from the economic viewpoint, with the highest Company's EBITDA ever. Although the fact that 2014 was hydrologically better than previous years which also contributed to achieving our goals, the high availability of our power plants, the successful commissioning of the new Angostura power plant and in general, the greater balance between our electric power sale commitments and our own cost-efficient generation capacity also played a significant role.

The commissioning of Angostura Hydroelectric Power Plant in the Biobío Region deserves special mention, as it was carried out not only in an exemplary manner from a technical viewpoint, but also in terms of the relationships with the communities that host our operations.



**We cannot understand this business only from an economic management perspective. This document addresses all the relevant dimensions for the success of our operation.**



In environmental matters, it is worth outlining the good performance of Santa María Complex's Unit I, which has consistently operated within the framework of the obligations undertaken in the RCA and with indicators that in general, are above those required by the applicable standards. This has doubtlessly contributed to enhance and maintain good relationships with a community that coexists in a complex environment.

2014 was also a good year in terms of safety, aspect where we continue to improve and to approach the excellence levels we aim at. An example of the flawless manner in which we operate in terms of safety is the high-risk activities conducted in the maintenance of the pipelines of Hornitos Power Plant in Aconcagua. This shows that we can outperform. But we still have lost-time accidents that remind us there is a long way to go.

Last but not least, we have seen significant progress in terms of the work environment. Maintaining good work relationships within the company is of the utmost importance in our strategy because people are the reflection of the good and bad things we might be doing.

**And what would you say were the main difficulties?**

Although between 2007 and 2014, Colbún was the power generation company that installed more new generation capacity in the SIC, with close to 900 MW, I would have liked to advance our growth strategy further and faster; this is pending. Although we started the construction of La Mina Project (34 MW) in the Maule Region, we still need to have a clearer vision regarding Santa María's Unit II (Biobío) and to expedite the development of San Pedro Project (Region of Los Ríos). We expect the social and community conditions will soon allow us to make an investment decision for Santa María II and, during the first half of 2015, we want to enter San Pedro Project with the Environmental Impact Evaluation System (SEIA).

**In 2014 an energy agenda was promoted that contained a series of associated draft laws; what is your view in connection with this issue and with Colbún's involvement in the public discussion?**

The roadmap established in the Energy Agenda is quite ambitious. We have witnessed the approval of the Bidding Law for regulated companies, which is a significant step forward as it embraces certain challenges that will ensure greater flexibility and lower risk for regulated market bids. There are other issues pending, as the Ley de Asociatividad (Associativity Law) that seeks to provide an institutional framework to the companies-community relationships, and the new Transmission Law that we find very relevant due to the slow development of this industry segment.

As Colbún, we have sought to have a more active role at the different instances where we have been convened both by the union association as well as directly by the authorities and the other groups legitimately interested in these subjects.

**Along these lines, what are the main risks for the development of the business?**

The risks are at sight. The risk of having projects suspended especially those involving base generation is huge and that will force us to sell energy at extremely high prices. It is impossible for our country to grow at significantly high rates without competitive energy prices.

**What achievements would you like to have accomplished at the closing of 2015?**

In 2015 we must work out several aspects to ensure profitable and sustainable growth. In addition to the growth plan mentioned above, it is fundamental to update our commercial policy to address new external conditions, develop a strategy to strengthen the Company's stance in Non Conventional Renewable Energies (NCRE), and go ahead in the identification and materialization of investment opportunities in other countries of Latin America. The other important objectives are to continue improving our safety indicators and to show a flawless environmental management, as well as materializing the initiatives we have planned for an excellent people management.

**To close, what is the level of importance you assign to the Sustainability Report?**

One of the characteristics of the Sustainability Reports that we have wanted to promote in Colbún is the dialogue with our stakeholders. In that sense, this Report is not another single document, but it is a very valuable tool that enables us to come closer to those groups and manage the challenges we face year on year.

Also, reading it is an opportunity to have a comprehensive view on the Company's activities. As I said, we cannot understand this business only from an economic management perspective. This document addresses all the relevant dimensions for the success of our operation.

Central Angostura



## **Chapter — 01**

# Sustainability and Colbún

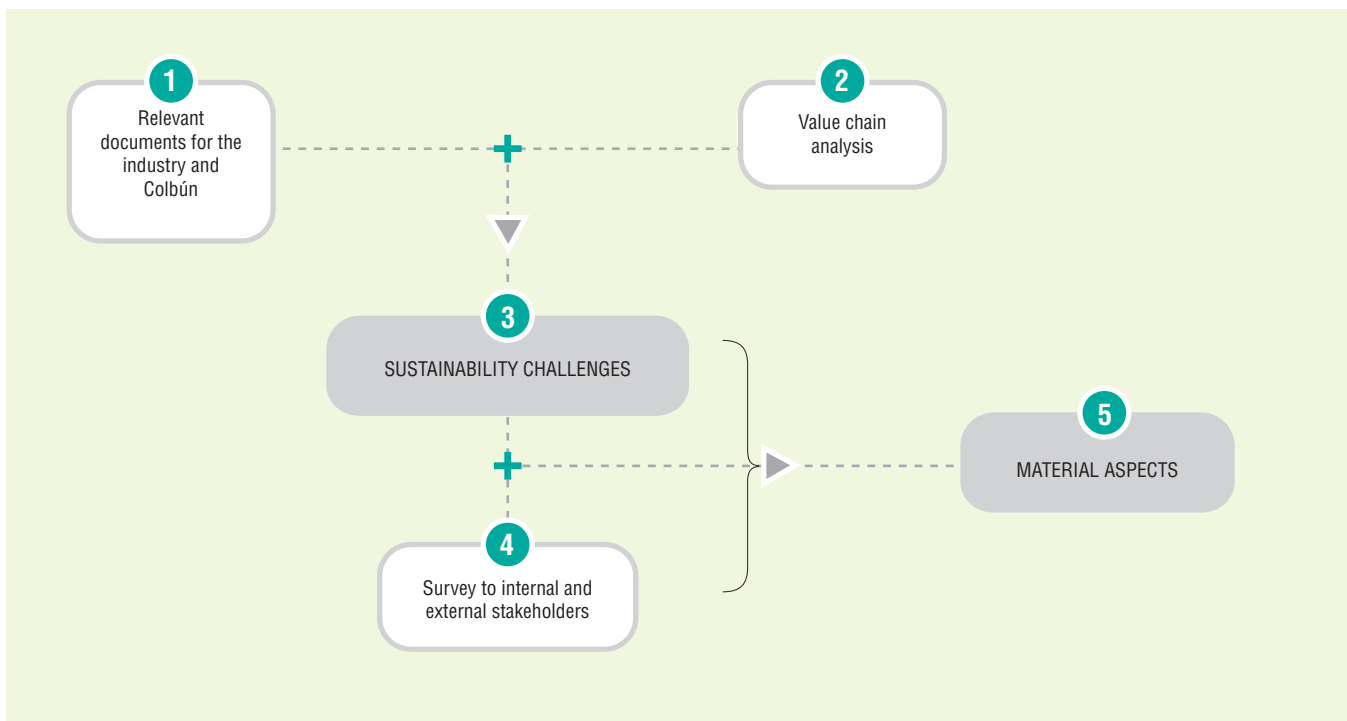
## 01 / How was this report built?

Below is a detail of the construction process of our 2014 Sustainability Report, through the "materiality collection" process.

### Collection of the most relevant topics for the 2014 Report

> G4-12, G4-18, G4-19, G4-20, G4-21, G4-26, G4-27

Following the methodology of the fourth generation of guidelines prepared by the recently published Global Reporting Initiative, we supplement the work carried out for the 2013 Report materiality process.



#### 1. Relevant documents for the industry and Colbún

> G4-18



Agenda de energía



El cuestionario Índices de Sostenibilidad del Dow Jones



Energías renovables y generación eléctrica en Chile



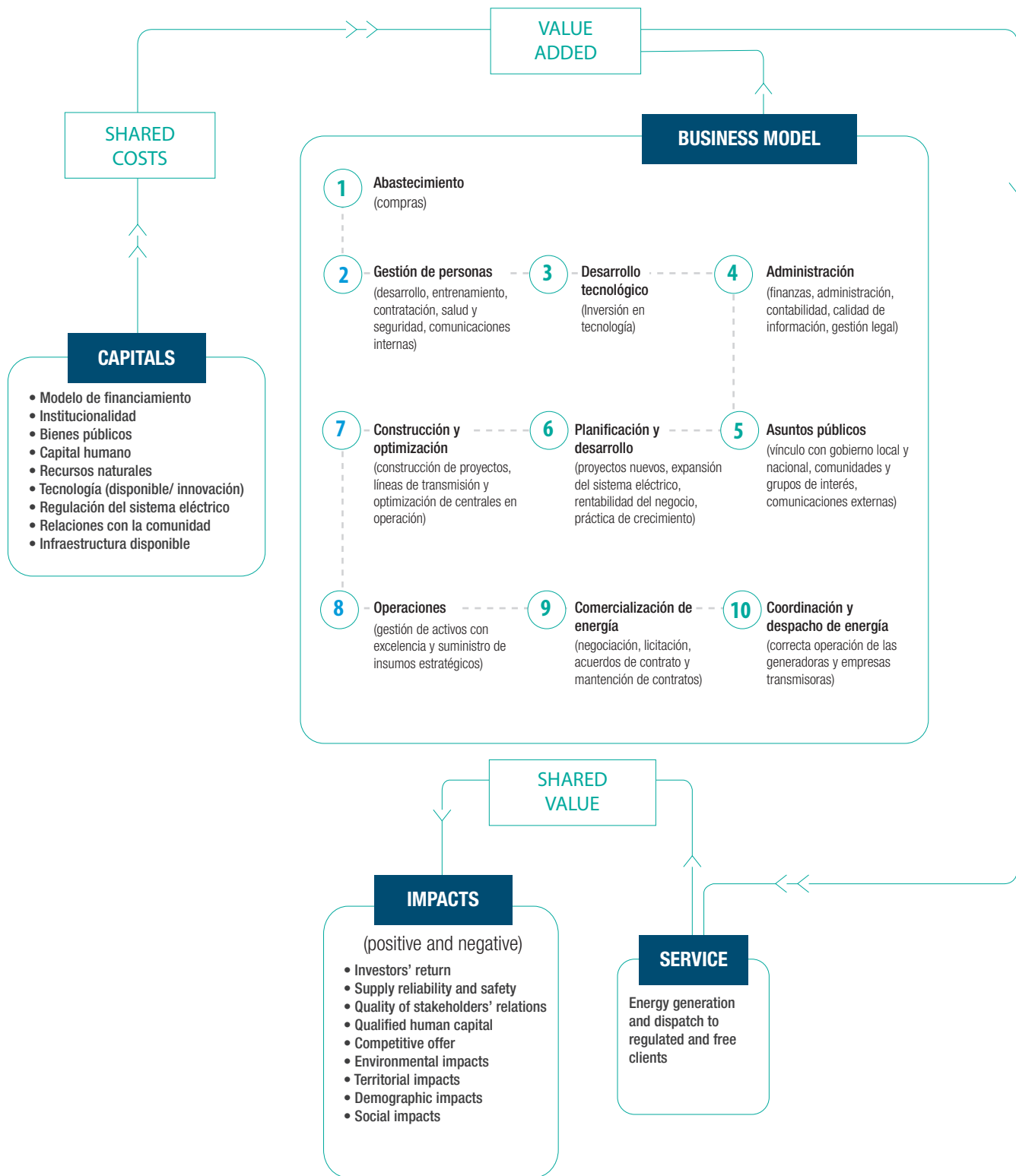
Comisión Asesora para el desarrollo eléctrico

- > ¿Cómo se construyó este reporte?
- > Colbún: energía es futuro
- > Nuestros fundamentos
- > Instancias en las que participamos
- > Relacionamiento con grupos de interés
- > Integración del Directorio y la sostenibilidad
- > La ética en Colbún



## 2. Value chain analysis

> G4-12, G4-18





### 3. Ámbitos en los cuales tenemos desafíos de sostenibilidad

> G4-18 , G4-19

Sustainable economic growth	High performance and comprehensive training
Energy matrix and public policies	Workers' involvement and inclusion
Generation projects	Communities' information/communication
Ethics mgt and corp. Governance	Local employment and suppliers
Biodiversity	Commercial relationship standards
Health and safety	Availability and reliability
Conciliation of work and personal lives	Generation supplies
Emissions and climate change	Social investment
Water resource	Social program impact assessment
Efficiency in the use of resources	Colbún's culture among contractors



### 4. Query to stakeholders (internal and external)

> G4-18 , G4-26

Stakeholder	Query
Investors	Larraín Vial. AFP Hábitat. Interviews to Board members (2).
Workers	Interviews to front line managers (10) and Sustainable Development Division managers (4). Interviews to collective contract leaders and members of the Welfare Board (3).
Environment	Former Director of the Environmental Evaluation Service of the Biobío Region.
Community and Society	Perception survey to relevant players (89 players). Perception survey to key communities: Quilaco, Santa Bárbara, Coronel (384 community members in each location).
Contractors and Providers	GE (General Electric). G4S (safety guard contracting company). Los Avellanos (PYME contractor of Carena Power Plant).
Clients and Suppliers of Primary Energies	CODELCO. Metrogas.



## 5. Material aspects

> G4-18, G4-20, G4-21

After analyzing the query process, definition was made of the most relevant management aspects for Colbún's sustainability. These “**MATERIAL ASPECTS**”, were reviewed and validated with the Manager of the Sustainable Development Division, Juan Pablo Schaeffer. This Report identifies material aspects that will be rated in terms of their materiality (relevance), stakeholder group(s) that mentioned them in the query, the objective of the company in connection thereto, how are they managed, measured and who is accountable for each of these aspects within the organization.

### Prioritization of material aspects

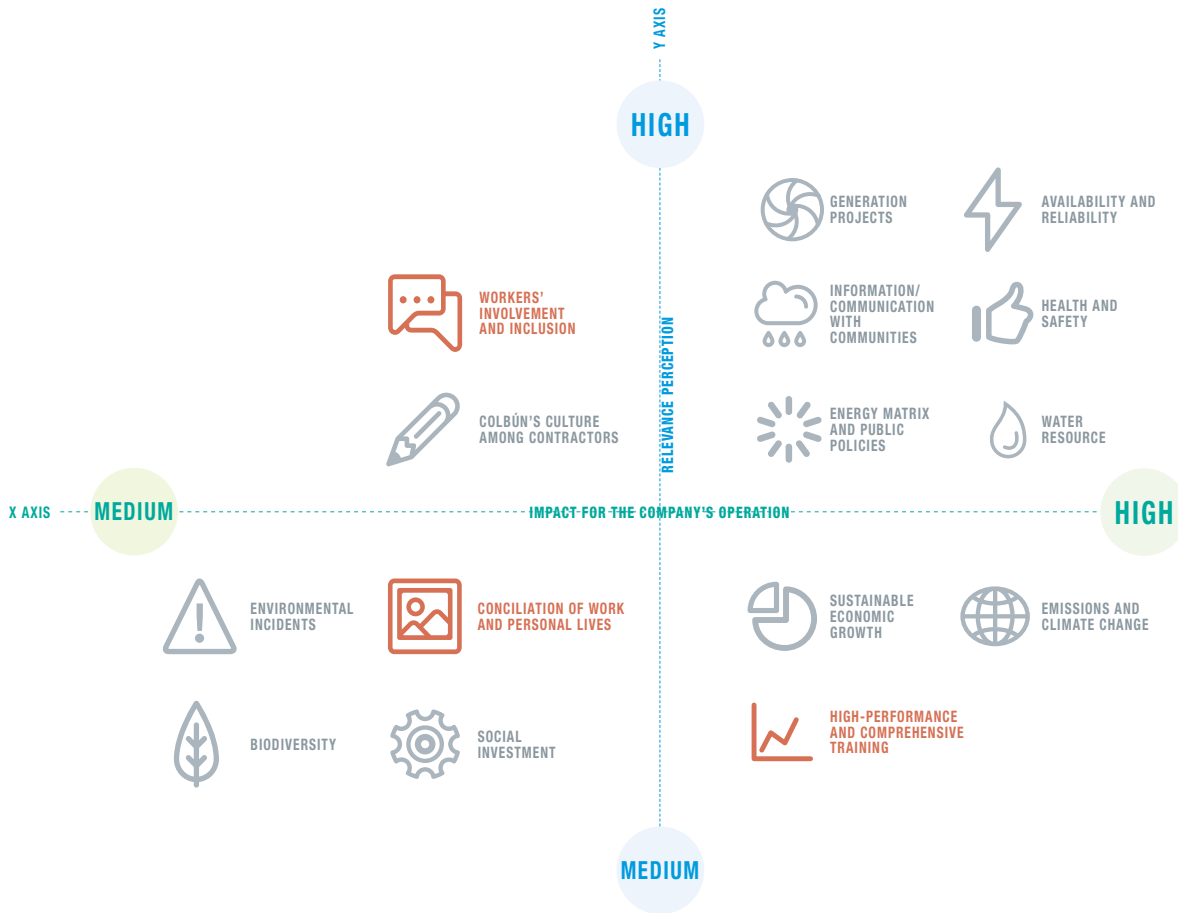
> (G4-18, G4-27)

According to the G4 Global Reporting Initiative guidelines, material aspects are defined by the impacts these may have inside and outside the organization and by the perception of relevance assigned by the stakeholders.

According to such definition, the prioritization of material aspects was done in agreement with the **perception of relevance to the stakeholders** -shown in the “Y axis”-, and crossed with the **impact of each aspect on the Company** or the **impact the Company's operation may have on such aspect** – shown on the “X axis”-. For example, on the one hand, the efficient use of the water resource is an aspect of high impact potential on Colbún and, on the other the Company's operation may affect the availability of the resource.

Similarly, the coverage of the impact indicates whether it is internal or external. For example, the impact of the view on the energy matrix and its related public policies may eventually affect Colbún, but also the society as a whole. On the contrary, the impact of the workers' professional career development is only limited to the internal Company's environment.

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COVERAGE OF THE IMPACT (INTERNAL)  
 COVERAGE OF THE IMPACT (INTERNAL AND EXTERNAL)

Note: This chart does not reflect the relative importance of the subjects in the same grid.

## 02 / Colbún: energy is future



Power Station Rucúe

We are a company with 961 workers aimed at providing safe, competitive and sustainable energy; we seek to generate long-term value for all our stakeholders, excelling in the integration of the technical, economic, social and environmental dimensions.

The effort and the commitment of the 794 men and 167 women, high performance technicians and professionals is fundamental to develop our business and to generate energy with our 3,278 MW of installed capacity in the Central Interconnected System (SIC) that runs from Taltal in the North to Isla Grande de Chiloé in the South.

### Headcount

> G4-10

Region	2013			2014		
	Women	Men	Total	Women	Men	Total
RM	120	272	392	120	281	401
V Region	15	195	210	18	186	204
VI Region	1	23	24	1	23	24
VII Region	3	93	96	5	94	99
VIII Region	17	205	222	17	170	187
X Region	2	17	19	2	18	20
XIV Region	6	22	28	4	22	26
<b>TOTAL</b>	<b>164</b>	<b>827</b>	<b>991</b>	<b>167</b>	<b>794</b>	<b>961</b>

NOTE: Of the total number of workers 5 are fix-term employees and 6 part-time workers.



**Map of the Power Plants**

> G4-6, G4-8, G4-9



# 03 / Our foundations

> G4-56

We seek to be the raw model in the generation of safe, competitive and sustainable energy. To this end, it is fundamental to generate mutual trust relationships with our stakeholders, integrating them to our business strategy and jointly creating value to the society and Colbún.

VALUES { Integrity Excellence Passion Innovation Collaboration

MISSION  
 We seek to generate long-term value by developing and managing energy infrastructure assets, excelling in the integration of the economic, technical, environmental and social dimensions.

VISSION  
 A Chilean company, the raw model in the generation of safe, competitive and sustainable energy.

STRATEGIC PILLARS { CONSOLIDATION GROWTH DIVERSIFICATION AND RISK MANAGEMENT

STAKEHOLDERS' INTEGRATION

<p><b>Investors</b></p> <p>Maximize the value of the company over a long-term horizon, through an excelling operation and profitable and sustainable growth.</p>	<p><b>Workers</b></p> <p>Provide high-quality employment and a work climate that allows collaboration and personal development.</p>	<p><b>Community and society</b></p> <p>Foster local development and provide clear and transparent information about our projects an operations.</p>	<p><b>Contractors and providers</b></p> <p>Exchange good practices seeking to promote high quality, safety, environmental and social standards.</p>	<p><b>Environment</b></p> <p>Generate electric power balancing the pillars of safety and competitiveness with sustainability thus minimizing the impact on the environment.</p>	<p><b>Clients and suppliers</b></p> <p>Have a safe, competitive and sustainable electric power supply; and provide information and analysis for an adequate decision making.</p>
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## 04 / Instances where we participate

> G4-15, G4-16

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### Collaborative instances and institutions where we participate

Organization	Description	Start Date
<b>Carbon Disclosure Project (CDP)</b> www.cdp.net	Promotes de measurement of carbon emissions from private companies and governmental entities.	2009
<b>Water Disclosure Project (Water CDP)</b> www.cdp.net/water	Promotes the monitoring and the measurement of the usage of water resources.	2011
<b>Programa Bota por mi Vida</b> www.fundacionsanjose.cl	Paper recycling at the offices of the Metropolitan Region and the Vth Region.	2011
<b>Centro de Líderes Empresariales para el Cambio Climático</b> www.clgchile.cl	Fosters policies and actions to face the climate change.	2009
<b>Centro de Estudios Públicos (CEP)</b> www.cepchile.cl	Its goal is the study and the dissemination of the values, principles and institutions that serve as the basis for a free society.	2008
<b>Concurso Junior del Agua</b> www.juniordelagua.cl	It seeks to increase the interest, creativity and knowledge amongst high school youngsters to promote water awareness.	2009

### Union and business associations where we participate

Organization	Description	Start Date
<b>Asociación Gremial de Generadoras</b> www.generadoras.cl	Promotes the development of power companies.	2011
<b>Acción RSE</b> www.accionrse.cl	Fosters CSR-related work and the sustainable development in Chile.	2011
<b>Asociación de Industriales del Centro de Talca (ASICENT)</b> www.asicent.cl	It seeks to collaborate with the development of its associates and with the progress of Maule Region.	2011
<b>Cámara de la Producción y del Comercio de Concepción (CPCC)</b> www.cpcc.cl	Fosters the productive development of the Biobío Region.	2010
<b>Corporación Industrial para el Desarrollo Regional del Biobío (CIDERE)</b> www.ciderebiobio.cl	Works for the development of the Biobío Region.	2010
<b>Corporación para el Desarrollo de la Región de los Ríos (CODEPROVAL)</b> www.codeproval.cl	Multi-sectoral corporation that fosters the growth and development of Los Ríos Region.	2010
<b>Instituto de Ingenieros de Chile</b> www.iing.cl	Seeks to promote science and engineering.	2010
<b>Confederación de la Producción y del Comercio (CPC)</b> www.cpc.cl	Promotes the conditions that allow creating business initiatives and promote free competition and sustainable growth.	2010
<b>SOFOFA</b> www.sofofa.cl	Promotes and disseminates good business practices.	2009
<b>Corporación Pro Aconcagua</b> www.proaconcagua.cl	Fosters the sustainable development of the Aconcagua Valley.	2009

## 05 / Relationship with stakeholders

> G4-24, G4-25, G4-26, Colbún-9

We participate in a sector that produces a fundamental asset for the economic and social development of the country. This is why we seek to empathize with the interests of the society through diverse dialogue channels with our stakeholders.

### Dialogue with strategic stakeholders

Stakeholder	Hearing and dialogue channels
Investors	<ul style="list-style-type: none"> <li>• Area dedicated to Investor Relations.</li> <li>• Breakfasts and work meetings.</li> <li>• National and international conferences.</li> </ul>
Workers	<ul style="list-style-type: none"> <li>• Informative and participative meetings of members of the organization and People Management team at the power plants.</li> <li>• Extended meetings of supervisors and department leaders with the General Manager.</li> <li>• Meetings with unions and workers' associations.</li> <li>• Work climate survey specific to Colbún and Great Place To Work (GPTW).</li> <li>• Internal services survey.</li> <li>• Consultation and allegation mechanisms linked to compliance with the Code of Ethics (hotline and email).</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Early and voluntary citizen participation.</li> <li>• Lectures at seminars and participative talks.</li> <li>• Environmental RSE Committee and Center of Leaders for Climate Change.</li> <li>• Dialogue tables with community players.</li> </ul>
Community and Society	<ul style="list-style-type: none"> <li>• Work/dialogue tables around general and specific subjects (e.g.: tourism, fishermen, indigenous communities, neighbors' associations, irrigators, agreements with municipalities, etc).</li> <li>• Periodic meetings with authorities and neighbors.</li> <li>• Early and voluntary citizens' participation in new projects.</li> <li>• Visits to power plants, Colbún's Energy House and Angostura Visitors' Center.</li> <li>• The Public Affairs team can be readily contacted in the field on their mobile phones.</li> <li>• Participation in union and regional associations (Board of Directors and work tables to address specific subjects).</li> <li>• Periodic meetings with the national, regional and local media.</li> <li>• Dissemination of San Pedro Project modifications.</li> <li>• Angostura del Biobío Facebook page.</li> <li>• Entrepreneurial Centers in Santa Bárbara-Quilaco, Coronel and Concepción (data collection of the community's productive development concerns and interests).</li> <li>• Public addresses at Santa María Complex in Coronel and Concepción.</li> <li>• "Open door" policy on Fridays at Santa María Complex to take care of the neighbors' concerns and the community in general.</li> <li>• Participative noise monitoring at Coronel.</li> <li>• Perception survey at key communities: Quilaco, Santa Bárbara, Coronel.</li> <li>• Perception survey of relevant players linked to all of our projects and power plants.</li> <li>• Sustainability Report (query process).</li> </ul>
Contractors and Providers	<ul style="list-style-type: none"> <li>• Participation at business instances.</li> <li>• Suppliers and bidders' website.</li> <li>• Feedback delivery meetings.</li> </ul>
Clients and Suppliers of Primary Energies	<ul style="list-style-type: none"> <li>• Our commercial team provides personalized service to clients and suppliers.</li> </ul>

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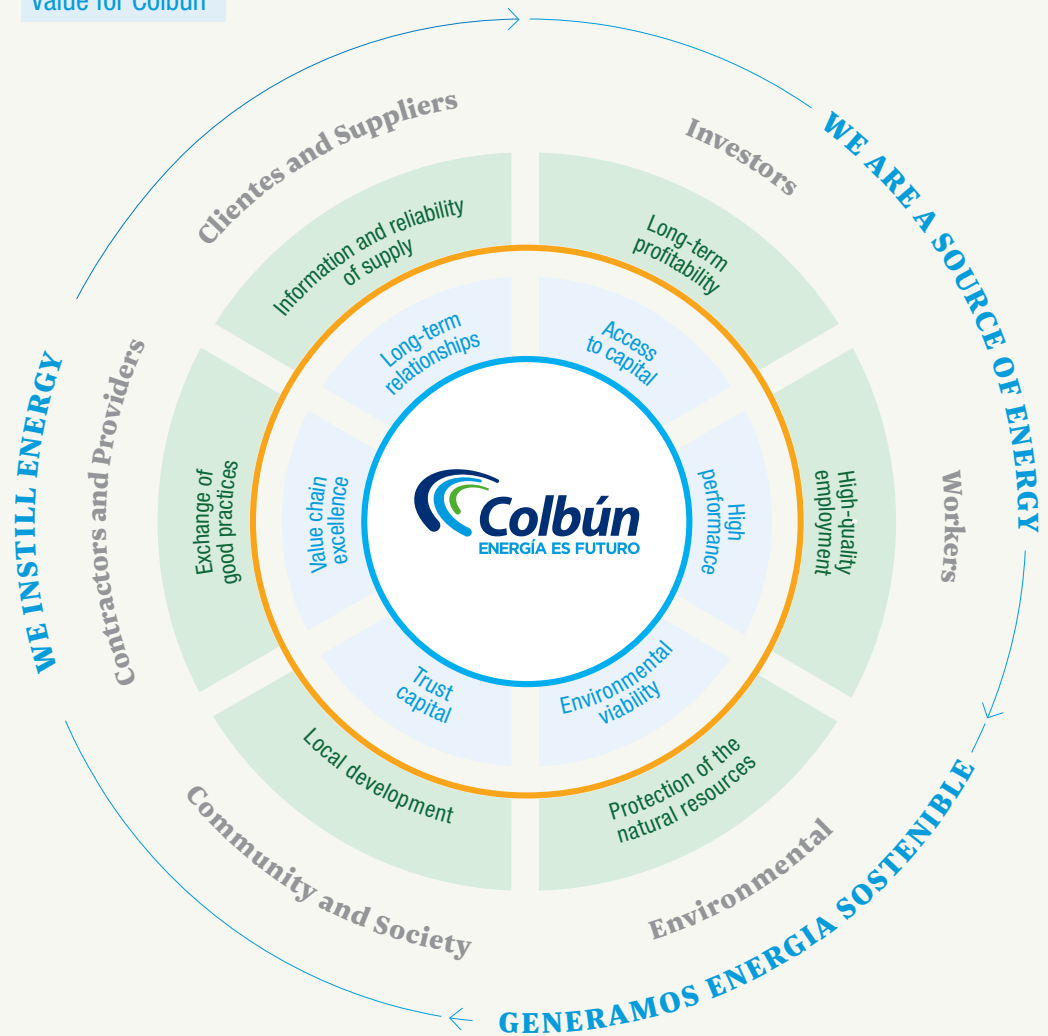


Santa María Complex

## Sustainability Turbine

Value for stakeholders

Value for Colbún



## 06 / Composition of the Board of Directors and Sustainability

El Directorio de Colbún atiende el cumplimiento de la Política de Sostenibilidad de manera transversal, sin que exista un miembro en particular responsable del tema. Es así como tanto en las sesiones mensuales del Directorio, como en el reporte gerencial, se incluye el desempeño social, ambiental y de seguridad, además de revisar los resultados financieros, la gestión operacional y discutir temas de desarrollo estratégico.

**In 2014, ALAS20 acknowledged Bernardo Larraín as “Sustainability Leader Director”, for his leadership in integrating the sustainability to Colbún.**

## 07 / Ethics at Colbún

> G4-56

At Colbún we have a Code of Ethics that promotes behaviors that facilitate constructive coexistence and enriches the life of each individual who works at the company.

As part of the commitments undertaken in 2013 to increase the dissemination of our Ethics Management System, and in order to promote the use of this tool, we incorporated this subject to new workers' induction training during 2014.

Our Ethics Committee is made up of Paula Martínez, Organization and People Management Manager; Rodrigo Pérez, Legal Affairs Manager; and Juan Andrés Morel, Internal Auditing Manager, who reports directly to the Board of Directors. The queries and allegations received during 2014 were duly addressed, investigations were conducted and recommendations were made to the General Management. The results of the investigations were informed to the Board's Auditing Committee which was set up at the end of 2014.

In connection with this area, we reviewed our Crime Prevention Model relating to the Corporate Criminal Liability Law (Law 20,393) to update it and to reinforce its use among our workers. Consequently, during 2014 we made five training sessions at our corporate offices and we expect to extend the coverage to the power plants.

Power Station Canutillar



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### How did you go along with integrating innovation to Colbún's management divisions?

Our innovation strategy is based on the search of initiatives and projects that add value to the Company, improve our competitiveness and enable the installation of new capacities and practices within our organizational culture. To meet these objectives, in 2014 we worked jointly with AUKAN, DICTUC's innovation unit in designing an innovative management project per the guidelines and the co-financing provided by CORFO to this kind of initiatives: **Innovation Management Platform, Colbún 2014.**

More than **40 executives and professionals** from Colbún's headquarters participated in the project; they received periodic training in innovative tools and methodologies, in addition to working in specific challenges defined by the upper management so as to ensure their alignment with the Company's strategic planning. As a result, **8 specific ideas or projects** were identified, which were

presented to the Innovation Panel, made up of executives from all Colbún's divisions, who are responsible for evaluating them and for determining which of them should be implemented during 2015. In addition, **within the framework of an open innovation platform implemented at our Thermoelectric Complex Santa María de Coronel, we invited workers and contractors to propose initiatives that turn this plant into the safest power plant in Chile.** The project was highly successful, convening **more than 70 workers and collaborators** who uploaded more than 50 ideas. Of these, 19 were implemented and 15 are still under assessment.

Lastly, Colbún has supported the Foundation Foro Innovación since its inception in the delivery of the AVONNI innovation awards, in the category "AVONNI social start-up". Since 2014 we have been promoting the delivery of these awards in the regions where we have operations and projects.

Equipo Innovación, Casa Matriz






Tomás González,  
Equity Research, BTG Pactual





# Chapter — 02

## Investors

Stakeholder	Challenge	Highlights / Actions Executed	Page	Progress Status
Investors	Consolidate Colbún S.A.'s economic results	<ul style="list-style-type: none"> <li>Revenue generated amounted to US\$1,503 million, an operating income measured by EBITDA of US\$536.6 million, and net income of US\$79.5 million.</li> </ul>	30	
	Start up the Angostura Plant in a timely manner and free of conflicts	<ul style="list-style-type: none"> <li>In July of 2014, with the presence of the President of the Republic, Michelle Bachelet, and the Minister of Energy, Máximo Pacheco, we inaugurated the Angostura Hydroelectric Plant, the largest hydroelectric project built in Chile since 2004.</li> </ul>	23	
	Encourage a long-term energy strategy on the part of the State	<ul style="list-style-type: none"> <li>See section “Colbún’s vision around institutional changes and Chile’s energy matrix”, contained in the Chapter “Clients and Suppliers”.</li> <li>Participation by Thomas Keller, Colbún’s General Manager, before the Senate’s Mining and Energy Committee.</li> <li>Active participation in the Generators Association (AGG).</li> </ul>	104-106	



Fulfilled



Moderately fulfilled



Pending

**W**e are committed to maximizing the long-term value of the company for our investors, by means an excellent operation and a sustainable and profitable growth, in agreement with the risks involved in this business. We want to generate long-term profitability for our investors, keeping them duly informed to ensure access to the capital in competitive conditions to foster our growth.

## 01 / Colbún in numbers

> G4-4, G4-7, G4-9, G4-13, G4-EU1



961

workers

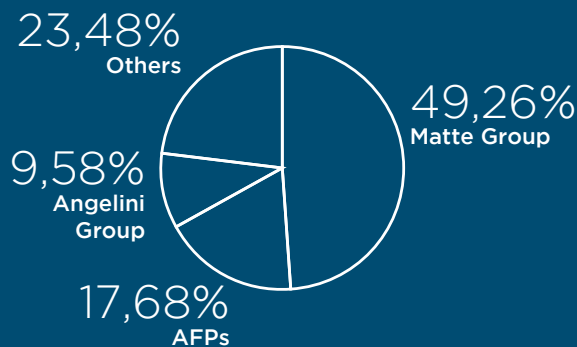


Transmission  
lines

890

kilometers

### Ownership



- Second largest generation company in the SIC, system that covers approximately 90% of Chile's population.
- The second largest market share in the SIC, equivalent to 21.3% of the installed capacity (MW).

12,735<sup>GWh</sup>

Energy Sales

US\$ 536.6 million<sup>1</sup>

EBITDA

US\$ 79.5 million

Net Income

35.71%

Margin EBITDA

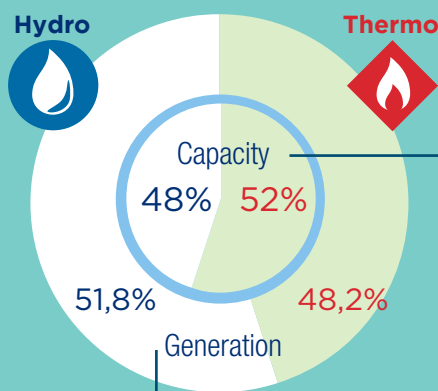
<sup>1</sup> For further information on the Company's Financial Statements please refer to our 2014 Annual Report, pages 101-265, at [www.colbun.cl](http://www.colbun.cl) (G4-17)

## &gt; Colbún en cifras

- > ¿Cómo nos organizamos?
- > Aspecto material: Crecimiento económico sostenible

With the presence of the President of the Republic Michelle Bachelet and the Minister of Energy Máximo Pacheco, we inaugurated Angostura Hydroelectric power plant in July of 2014, the largest hydroelectric project built in Chile since 2004 with a capacity of 316 MW, equivalent to 70% of the entire demand of Concepción. This power plant, located at the Biobío Region, enabled the tourism development with state-of-the-art infrastructure, and received more than 35,000 visitors in 2014.

## Generation (GWh) and Installed capacity (MW)



12,835<sup>GWh</sup>

2014 Generation

3,278<sup>MW</sup>

Installed capacity

**Regulated Clients**

Chilectra,  
CGE,  
SAESA,  
among others.

**Non-regulated Clients**

Codelco,  
Anglo American,  
Metro S.A.,  
Aguas Andinas.

We were awarded the third place in the category “Best Entrepreneurial Initiative” by the Diario Financiero for our Angostura Hydroelectric Power Plant. Such award is granted to the most outstanding initiatives, companies and businessmen in the readers’ view.

## Main Colbún Shareholders

Majority Shareholders	%
MINERA VALPARAÍSO S.A.	35.17
FORESTAL COMINCO S.A.	14.00
ANTARCHILE S.A.	9.58
AFP HÁBITAT S.A.	4.70
AFP PROVIDA S.A.	4.66
BANCO DE CHILE POR CUENTA DE TERCEROS CA	3.97
AFP CAPITAL S.A.	3.69
AFP CUPRUM S.A.	3.67
BANCO ITAÚ POR CUENTA DE INVERSIONISTAS	3.24
BANCO SANTANDER - JP MORGAN	2.18
LARRAÍN VIAL S.A. CORREDORA DE BOLSA	1.46
SANTIAGO STOCK EXCHANGE, SECURITIES EXCHANGE	1.33
Other shareholders	12.36

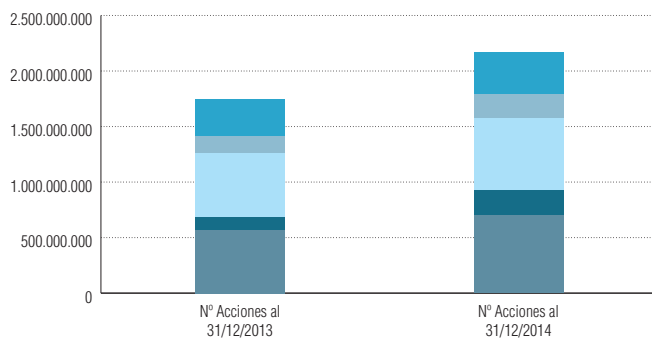


Power Station Colbún

### Increase in share ownership

2013-2014 (Main 5)

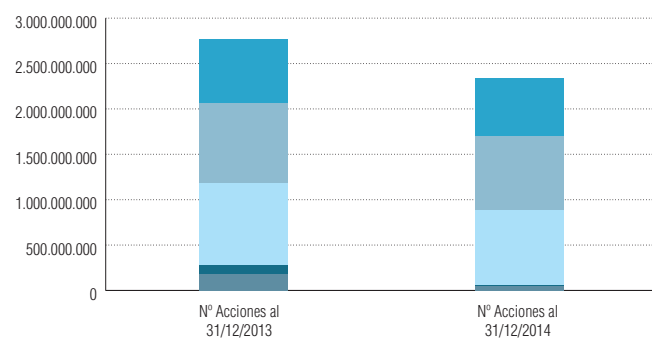
- Banco Santander - JP Morgan
- Banchile Corredores de Bolsa S.A.
- AFP Cuprum S.A.
- Bolsa de Comercio Stgo Bolsa de Valores
- Banco de Chile por Cuenta de Terceros C.A.



### Decrease in share ownership

2013-2014 (Main 5)

- AFP Capital S.A.
- AFP Provida S.A.
- AFP Habitat S.A.
- Bolsa de Valores
- CIA. de Seg. de Vida Cons. Nac. de Seguros S.A.



## Administrative structure

Affiliated Companies	
Colbún Transmisión S.A.	100%
Termoeléctrica Nehuenco S.A.	100%
Termoeléctrica Antilhue S.A.	100%
Sociedad Hidroeléctrica Melocotón Ltda.	100%
Río Tranquilo S.A.	100%
Empresa Eléctrica Industrial S.A.	99.99%
Colbún International Ltda.	99.99%

Related Companies	
Transmisora Eléctrica de Quillota Ltda.	50%
Centrales Hidroeléctricas de Aysén S.A.	49%
Electrogas S.A.	42.5%

> **Colbún en cifras**

- > ¿Cómo nos organizamos?
- > Aspecto material: Crecimiento económico sostenible



## 02 / How are we organized?

> G4-17, G4-34, G4-38

Colbún's Board of Directors regulates our Corporate Governance. Our Board of Directors is composed of nine members that can be re-elected indefinitely, and may or may not be shareholders. In May of 2014, Mr. Bernardo Matte Larraín left the Board of Directors and was replaced with Mr. Juan Eduardo Correa, appointed in the Board meeting No. 587/14 of May 27, 2014.



### Directors

Up, left to right:

**EDUARDO NAVARRO BELTRÁN**

Director  
I.D.: 10.365.719-9  
Business Engineer, Pontificia Universidad Católica de Chile

**JUAN EDUARDO CORREA GARCÍA \***

Director  
I.D.: 12.231.796-k  
Industrial Civil Engineer, Pontificia Universidad Católica de Chile

**BERNARDO LARRAÍN MATTE**

Chairman  
I.D.: 7.025.583-9  
Business Engineer, Pontificia Universidad Católica de Chile

**SERGIO UNDURRAGA SAAVEDRA**

Director  
I.D.: 4.280.259-K  
Business Engineer, Pontificia Universidad Católica de Chile

**JUAN HURTADO VICUÑA**

Director  
I.D.: 5.715.251-6  
Civil Engineer, Universidad de Chile

Down, left to right:

**ARTURO MACKENNA ÍÑIGUEZ**

Director  
I.D.: 4.523.287-5  
Industrial Civil Engineer, Universidad de Chile

**VIVIANNE BLANLOT SOZA**

Director  
I.D.: 6.964.638-7  
Economist, Pontificia Universidad Católica de Chile

**ELIODORO MATTE LARRAÍN**

Director  
I.D.: 4.436.502-2  
Industrial Civil Engineer, Universidad de Chile

**LUIS FELIPE GAZITÚA ACHONDO**

Vice president  
I.D.: 6.069.087-1  
Business Engineer, Universidad de Chile



## Executives

Left to right:

**JUAN ANDRÉS MOREL FUENZALIDA**

Internal Auditing Manager  
ID: 7.096.735-9  
Civil Hydraulic Engineer, Pontificia Universidad Católica de Chile  
Entry: 10-01-2012

**EDUARDO LAUER RODRÍGUEZ**

Engineering and Project Division Manager  
ID: 6.994.492-2  
Civil Mechanical Engineer  
Fach Hochschule de Munchen  
Entry: 11-01-2010

**MAURICIO CABELLO CÁDIZ**

Generation Division Manager  
ID: 10.391.635-6  
Civil Mechanical Engineer, Universidad de Santiago de Chile  
Entry: 12-01-2012

**SEBASTIÁN FERNÁNDEZ COX**

Development Manager  
ID: 10.673.365-1  
Commercial Engineer, Universidad de los Andes  
Entry: 19-01-2015

**THOMAS KELLER LIPPOLD**

CEO  
ID: 5.495.282-1  
Commercial Engineer Universidad Adolfo Ibáñez  
Entry: 10-01-2014

**PAULA MARTÍNEZ OSORIO**

Human Resources Manager  
ID: 14.449.738-4  
Psychologist, Universidad Diego Portales  
Entry: 01-01-2012

**JUAN EDUARDO VÁSQUEZ MOYA**

Business and Energy Management Division Manager  
ID: 7.868.160-8  
Civil Electric Engineer, Universidad de Chile  
Entry: 07-01-2008

**SEBASTIÁN MORAGA ZÚÑIGA**

Finance and Administration Division Manager  
ID: 12.026.836-8  
Commercial Engineer, Universidad Adolfo Ibáñez  
Entry: 04-01-2014

**RODRIGO PÉREZ STIEPOVIC**

Legal Affairs Manager  
ID: 10.313.675-K  
Lawyer, Pontificia Universidad Católica de Chile  
Entry: 12-01-2007

**JUAN PABLO SCHAEFFER FABRES**

Sustainable Development Division Manager  
ID: 10.373.614-5  
Lawyer, Pontificia Universidad Católica de Chile  
Entry: 02-01-2015

## Board of Directors

Integrantes	Cargo en el máximo órgano de gobierno	Remuneración Anual Fija (miles de CLP)		Comité de Directores (mles de CLP)	
		2013	2014	2013	2014
Bernardo Larraín Matte	Chairman	55,201	57,624		
Luis Felipe Gazitúa Achondo	Vice-chairman	27,601	28,812	9,199	9,580
Bernardo Matte Larraín*	Director	27,601	11,828		
Eliodoro Matte Larraín	Director	27,601	28,812		
Arturo Mackenna Íñiguez	Director	27,601	28,812		
Eduardo Navarro Beltrán	Director	27,601	28,812		
Juan Hurtado Vicuña	Director	27,601	28,812		
Sergio Undurraga Saavedra	Director	27,601	28,812	9,199	9,580
Vivianne Blanlot Soza	Director	27,601	28,812	9,199	9,580
Juan Eduardo Correa García*	Director		16,984		
		<b>276,009</b>	<b>288,120</b>	<b>27,597</b>	<b>28,740</b>

## Change of executives

In 2014, Thomas Keller (57, Commercial Engineer from Universidad Adolfo Ibáñez and MBA from the University of Chicago) was appointed Chief Executive Officer; he has had a successful career path in the mining industry as the Vice-president of Finance and Administration and later the Executive President of Compañía Minera Doña Inés de Collahuasi, Vice-president of Administration and Finance of Codelco and finally as the Executive President of the state-owned mining company, position he held until June of 2014.

The Board of Directors recognized and thanked Ignacio Cruz's management as the Chief Executive Officer, outlining among his achievements the successful commissioning of two significant Company projects: the 342 MW Santa María I Thermoelectric Power Plant and the 316 MW Angostura Hydroelectric Power Plant. This adds to the improvement in the financial results, safety indicators and the consolidation of Colbún, its power plants and projects' insertion in their social and environmental surrounding.

During 2014, Sebastián Moraga undertook as the Finance and Administration Manager in replacement of Cristián Morales. Similarly, in January of 2015 we set up the Development Management Unit led by Sebastián Fernández, and in February of 2015 Juan Pablo Schaeffer undertook the Sustainable Development Management in replacement of Nicolás Cubillos. In the same date, the Safety and Occupational Health Management started to report to the Sustainable Development Division.

**“Thomas will be responsible for leading the company through a new growth plan that will combine Chile’s development with eventual investment opportunities in other regional markets. Similarly, he will be charged with deepening the ongoing financial and operational consolidation process as well as with ensuring better safety, environmental and social standards”.**

Bernardo Larraín M., Chairman of Colbún S.A.

\*In the Board session of May 27, 2014, Mr. Bernardo Matte Larraín resigned to the Board and was replaced with Mr. Juan Eduardo Correa García.



## Communication and transparency

It is of the utmost importance for us in Colbún that all our investors and shareholders, no matter their size, are duly informed of the Company's operations and latest developments.

Therefore, by means of our investor and power sector analysts' area we have strengthened the communication through visits to our power plants, participation in breakfasts, meetings at our offices and local and international investors' conference calls, providing timely response to their requests.

In addition, in a proactive manner and on occasion of the quarterly publication of the financial results, this area prepares press releases and holds international conference calls to update the presentation of results to our investors. This material is available for any interested individual at our Company website.

**“At Colbún they are doing an excellent job because they have been able to develop projects free of conflicts with the community. The market is acknowledging such effort that provides greater certainty to its activity”.**

Klaus Lührmann, Gas Supply and Dispatch Manager of Metrogas.

Power Station Carena



## 03 / Material Aspect: Sustainable economic growth

> G4-14, G4-27

<b>Why is it material?</b>
We are a company involved in producing a fundamental asset for the economic and social development of the country and, as such, we must ensure economic results that enable us to continue operating over time.
<b>Which stakeholder mentioned this in the survey?</b>
Sustainable economic growth was addressed in our internal consultation by the following stakeholders: investors, clients and suppliers, workers.
<b>What is our objective?</b>
We seek to be a profitable, sustainable and ever-growing company.
<b>How do we manage?</b>
To maximize the value of the Company, at Colbún we seek to integrate with excellence the economic, technical, environmental and social dimensions in the management and development of the power generation. We also have a Risk Management Division, which strategy is to ensure compliance with the principles of stability and sustainability by eliminating or mitigating the uncertainty that may affect it. Tolerable risk levels, the metrics to assess risk and the frequency of risk analyses are policies regulated by the Company's Board.
<b>How do we measure?</b>
EBITDA (Colbún-1), Direct economic value generated and distributed (G4-EC1).
<b>Who is accountable?</b>
All Colbún's workers contribute to the good results of the Company.

### 2014 Economic results

> Colbún-1

2014 was a year of good economic results. We were able to consolidate a growth process started in 2007 and which entailed the construction of 7 power plants with an investment of US\$ 2,000 million, adding 900 MW to the Central Interconnected System (SIC). This plan finished with the commissioning of Angostura Hydroelectric Power Plant in the Biobío Region. Similarly, we progressed in consolidating the operation of Santa María I and we achieved better availability levels of our power plants in 2014.

Thus, we generated revenues by US\$ 1,503 million, an operating income measured by EBITDA of US\$ 536.6 million and net income by US\$ 79.5 million.

**“We are very pleased with the yearly results, but we know we must continue working to achieve excellence in our social environmental management, world-class standards in the availability of our power plants and in own workers and contractors’ safety indicators.”**

Bernardo Larraín M., Chairman of Colbún S.A.

**“2014 was a good year for the sector; the Ministry made a significant effort to diagnose and implement an action plan; however, definition is still pending on how to develop and bring forward the base power generation.”**

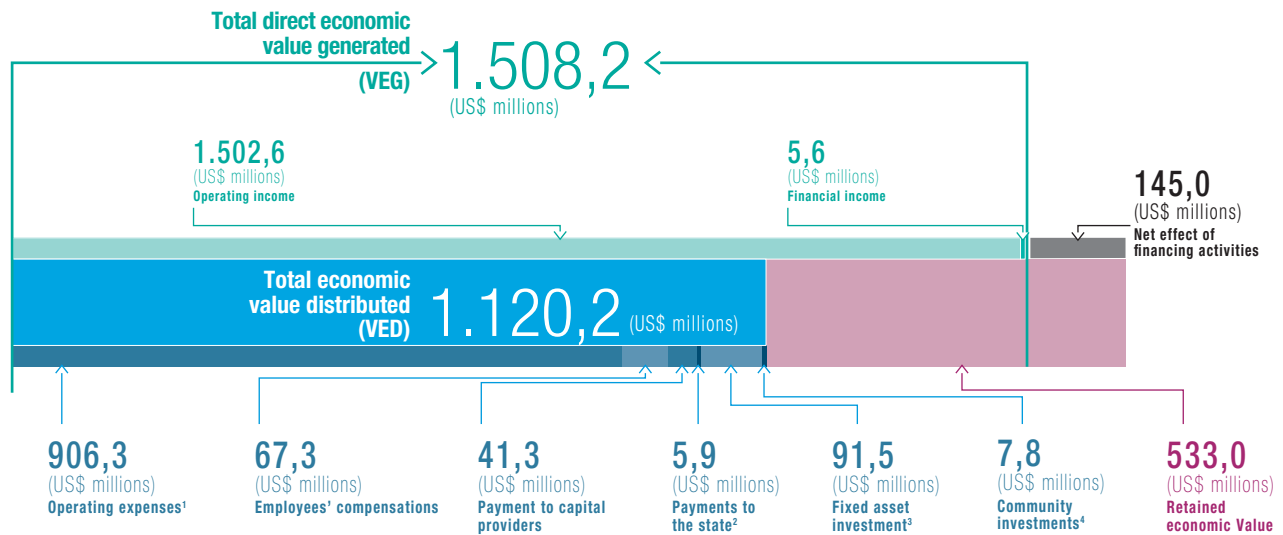
Luis Felipe Gazitúa, Vice-chairman of Colbún S.A.

## Distributing our value

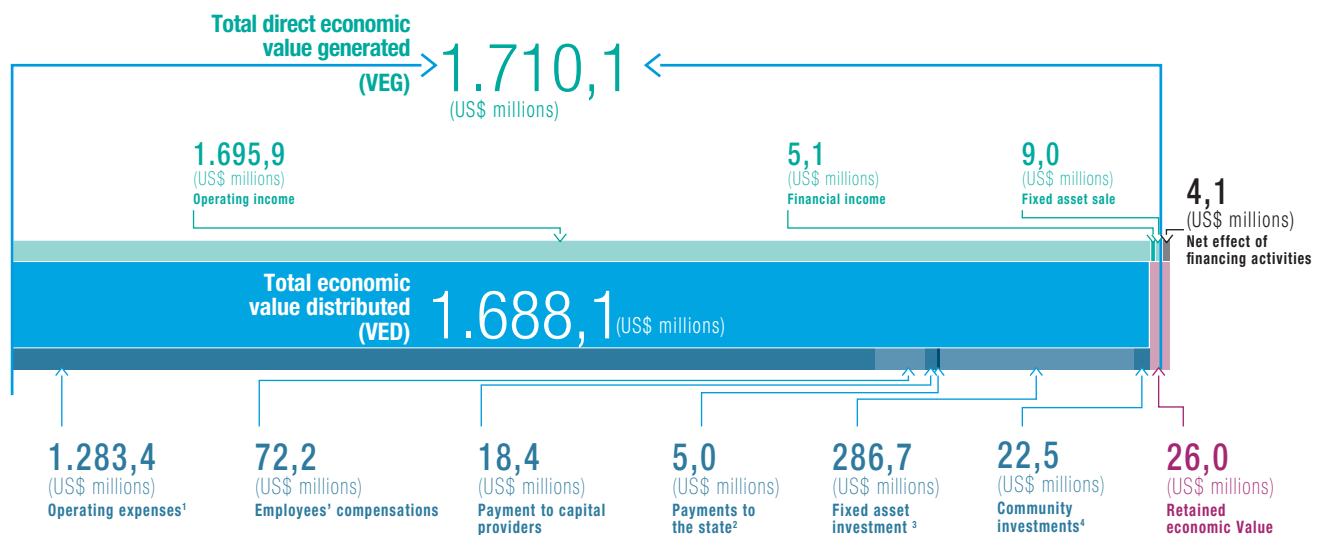
> G4-EC1

We think that the business strategy of a company operating in a sector that produces such an important good for the economic and social development of a country as the electric power should be aligned with the general interest. Similarly, the creation of Colbún's economic value is distributed among the various stakeholders that participate in our business: workers, contractors and providers, shareholders, energy suppliers, the environment and the communities where we operate.

### 2014



### 2013



Notas:

<sup>1</sup> These amounts include the expenses in providers, contractors and operating services. They do not include expenses relating to the construction of the power plants.

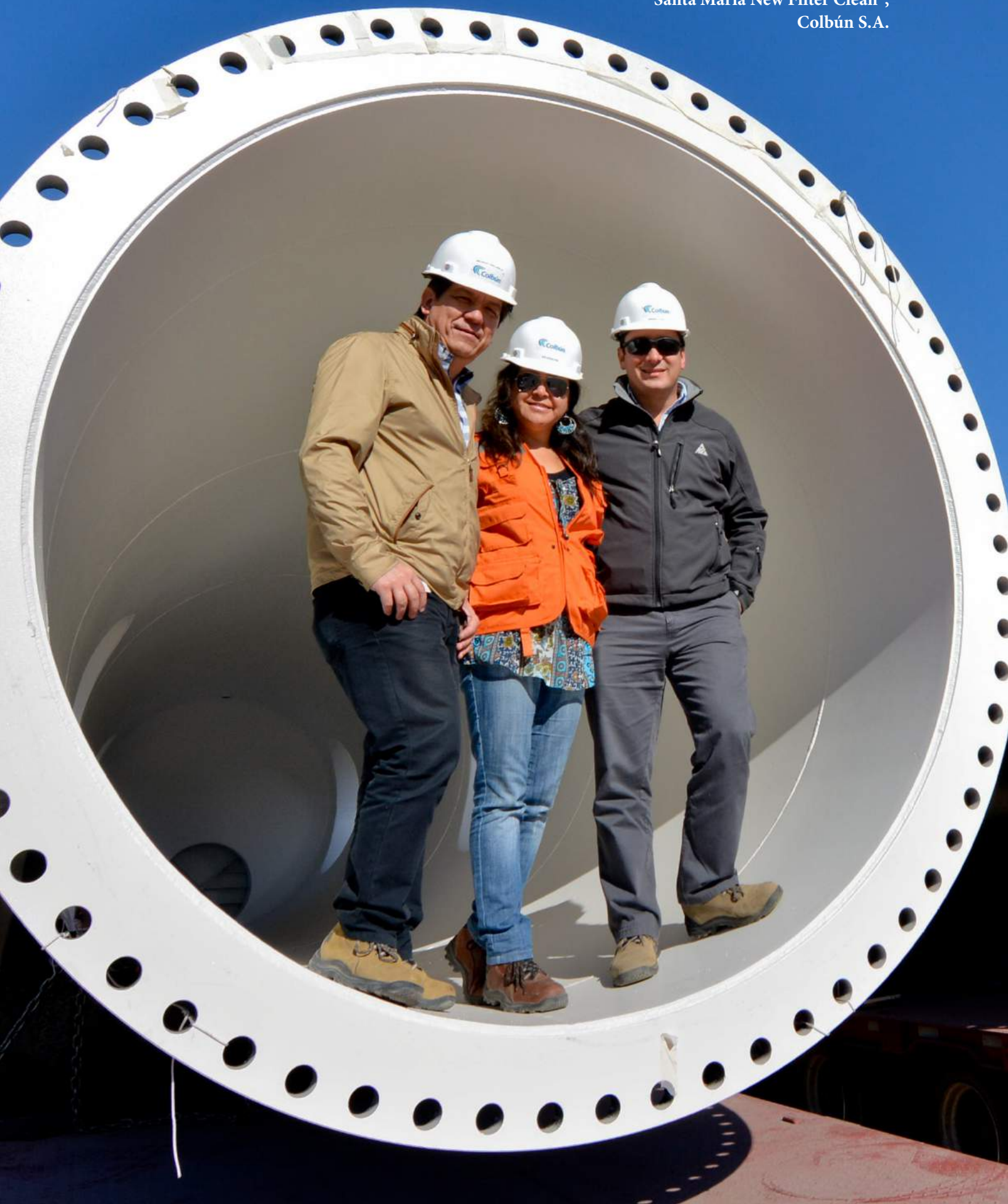
<sup>2</sup> Colbún recognized a total of MMUSD 90.1 in taxes, including deferred taxes in 2014.

<sup>3</sup> These amounts include the expenses in providers, contractors and construction services for our projects.

<sup>4</sup> The community investments include both the Environmental Qualification Resolution (RCA) and the Social Corporate Responsibility (RCE) indicators. The reduction as compared to the previous year is due to the completion of Angostura project.







<sup>5</sup> For further information on Colbún's Financial Statements, please refer to our 2014 Annual Report, pages 101-265, at [www.colbun.cl](http://www.colbun.cl) (G4-17).

Mauricio Orellana, Eve Escalona, Héctor Correa,  
"Santa Maria New Filter Clean",  
Colbún S.A.



# Chapter — 03

## Colbún and Its Workers

Stakeholder	Challenge	Highlights / Actions Executed	Page	Progress Status
Workers	Add innovation in all Company managements	<ul style="list-style-type: none"> <li>• Further the “work-family” conciliation practices.</li> <li>• Encourage internal competitions and career development paths.</li> <li>• Improve the occupational safety and health conditions and culture.</li> </ul>	18	
	Disseminate the Ethics Management System	<ul style="list-style-type: none"> <li>• We added the Ethics Management System as part of the new workers’ induction.</li> </ul>	18	
	Increase instances for dialogue/participation between workers and Company	<ul style="list-style-type: none"> <li>• We designed a program to provide union leaders with academic and practical training that will help them strengthen their leadership and communicational skills, and develop a strategic outlook regarding their performance and to improve dialogue with the Company.</li> <li>• Innovation workshop with the active involvement of people from different Company areas.</li> </ul>	44	
	Further the family-work conciliation practices	<ul style="list-style-type: none"> <li>• We expanded the activities for personnel and their families to 100% of our facilities (for example: Work Day with Children, Cultural Talks, etc.).</li> <li>• Sports activities designed for the family.</li> </ul>	47	
	Leverage internal contests and career development	<ul style="list-style-type: none"> <li>• Of the 126 existing openings, 52% was filled through direct promotions and internal competitions.</li> </ul>	35	
	Improve the safety and occupational health conditions and culture	<ul style="list-style-type: none"> <li>• We developed training designed for the acquisition of competencies in safety and occupational health for seven area supervisors through the diploma courses with Mutual de Seguridad.</li> <li>• This year we had two labor accidents with 7 days lost</li> </ul>	48-50	



Fulfilled



Moderately fulfilled

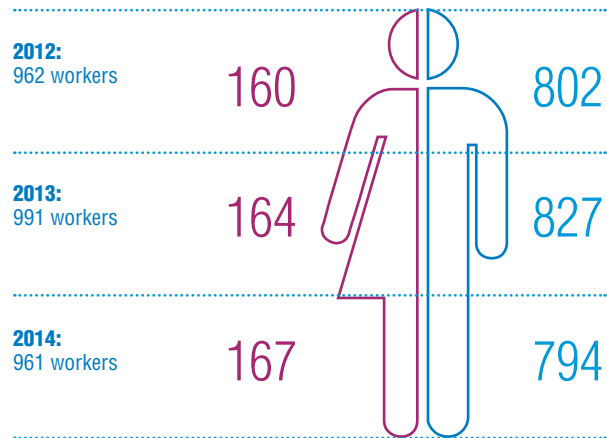


Pending

We strive to be the most attractive company to work for in this industry and, to this end, we are committed to deliver **quality employment** in a work environment that enables continuous improvement, collaboration and development of people. Likewise, we seek to provide the tools and policies in order for our employees to perform their duties efficiently, safely, motivated and in a manner that is consistent with their personal and family life, achieving **high performance**.

## 01 / 2014 people management highlights

- We improved our general average in the **Work Environment Survey** (from 70% in 2012 to 75% in 2014) and **Bottom-Up Assessment** (from 80% to 82%).
- We updated the **Internal Order, Hygiene and Safety Regulation**, including new subjects, such as the mandatory defensive driving course for those who drive company vehicles, harassment and discrimination at the workplace, mandatory use of uniforms or work clothes, and leave for mammography and prostate check-ups, among others.
- We implemented the **Worker's Virtual Folder**, providing an easy technological means to access information on their personal folder through the Self-Service Portal, for all workers.
- We expanded **activities for personnel and their families** to 100% of our facilities (for example, Labor Day with Children, Cultural Talks, etc.).



- Together with prestigious universities, we developed **specialized training courses and diplomas** (for example, Process Management Diploma, Union Management Diploma, etc.).
- We conducted the **Executive Leadership Program** together with the Business School of Universidad de Los Andes, dealing with subjects such as “Work-Family Conciliation”, “The Y Generation”, “The Role of the Leader”, and “Talent Development.”
- Regarding the work on **Competencies Management**, we determined the gaps in the different positions associated to operations by means of four different plant assessments (Santa María, Nehuenco, Canutillar and Colbún). This information will help in the design of 2015 training plans.
- We successfully closed **two collective bargaining processes** with the workers' group in Angostura Plant and Santa María Complex.

"Día con Hijos". Carena Power Plant



Antilhue Power Plant



## 02 / Material Aspect: High Performance and Comprehensive Training

> G4-27

<b>Why is it material?</b>
The training of our workers and their motivation for development are two key components of an attractive place to work for the 167 women and 794 men that make up our Company.
<b>Which stakeholder mentioned this in the survey?</b>
High performance and comprehensive training were addressed in our internal consultation by the following stakeholders: workers, contractors and providers.
<b>What is our objective?</b>
We seek to leverage the development of employees working in the different Colbún plants, projects and offices.
<b>How do we manage?</b>
We offer undergraduate and graduate scholarships, leadership program, in-person orientation, remote orientation and plant visits, training in languages, soft skills and specific technical formation. These training activities are carried out through the funding of external training or courses taken internally. In addition, we work on internal mobility through competitions and direct promotions.
<b>How do we measure?</b>
Average number of training hours per year per employee, broken down by gender and job category (G4-LA9) / Skill Management and Continuous Learning Programs that promote employability of workers and help them manage the end of their careers (G4 -LA10) / Percentage of employees whose performance and professional development is assessed on a regular basis, broken down by gender and professional category (G4-LA11) / Ratio between the base salary of men as compared to women per employee category and significant fields of activity (G4-LA13) / Number and rate of hires and average employee turnover broken down by age, gender and job category (G4-LA1) / Working positions filled through internal competition (Colbún-8).
<b>¿Quién es responsable?</b>
Organization and People Management.

Our employees are Colbún's main capital; they are located across seven regions in the country. Our commitment to them is to deliver quality jobs and a work environment enabling their continuous improvement. In 2014, we leveraged internal mobility and, of the 126 openings, 52% were filled by direct promotions and internal competitions (Colbún -8).

### Average employee turnover, broken down by age group and gender

> G4-LA1

		Workers leaving the organization (Number)	Turnover Rate (%)
Gender	Hombre	83	10.5
	Mujer	6	3.6
<b>TOTAL</b>		<b>89</b>	<b>9.3</b>
Age Groups	Younger than 30	6	5.9
	Between 30 and 50 years old	58	8.9
	Older than 50	25	11.9
<b>TOTAL</b>		<b>89</b>	<b>9.3</b>

Note: This table includes both voluntary and non-voluntary turnover rate.

**In 2014, the turnover rate remained at 9.3%. In turn, there were fewer hires due to the closing of engineering projects, resulting in a December 2014 headcount lower than the same month the previous year.**

Hornitos Power Plant



- > **Hitos de la gestión de personas 2014**
- > **Aspecto material: Alto desempeño y formación integral**
- > Aspecto material: Participación de trabajadores e inclusión
- > Aspecto material: Conciliación vida personal y laboral
- > Aspecto material: Salud y seguridad

## Competitive remunerations

Para asegurar que nuestras remuneraciones sean competitivas, cada año adquirimos estudios de mercado asociados a remuneraciones, para comparar nuestras rentas y compensar a cada trabajador en base a sus capacidades y experiencia, con sentido de equidad interna y externa.

### Relationship between the base salaries of men compared to women, broken down by professional category

> G4-LA13

Category	2013			2014		
	Base salary – Women	Base Salary – Men	% women's salary compared to men's	Base salary - Women	Base Salary – Men	% women's salary compared to men's
Executive <sup>1</sup>	4,860,058	7,338,509	66.23	5,591,433	7,920,947	70.59
Professionals and Technicians <sup>2</sup>	1,948,257	2,060,257	94.56	2,067,583	2,158,583	95.78
Other workers <sup>3</sup>	838,323	780,664	107.39	941,509	842,587	111.74

Locations with significant operations	2013			2014		
	Base salary – Women	Base Salary – Men	% women's salary compared to men's	Base salary - Women	Base Salary – Men	% women's salary compared to men's
Metropolitan Region	1,746,198	3,306,032	52.82	1,901,057	3,565,604	53.32
5th Region	988,695	1,212,168	81.56	1,220,552	1,425,243	85.64
7th Region	985,055	1,457,027	67.61	1,264,777	1,565,798	80.78
8th Region	1,341,190	1,470,575	91.20	1,660,109	1,640,274	101.21

Note: The salary gap between men and women in executive positions is partly due to the fact that only five women work at this level. There are no women in the positions of division managers or general managers and, therefore, the average salary is lower. In the other groups the differences are not significant. Salary differences have to do with the type of position and not with the gender of the person filling the position.

**Noteworthy is the fact that in 2014, the average salary gap between men and women at Colbún decreased by region and by position.**

<sup>1</sup> Executives: managers and assistant managers

<sup>2</sup> Professionals and Technicians: area heads and supervisors, engineers, analysts, maintenance technicians, etc.

<sup>3</sup> Other workers: administrative personnel, drivers, office helpers, grinders, telephone operators, guards, secretaries, operations assistants, etc.





Nehuenco Complex

## Training

By maintaining the focus on the development of our employees, in 2014 we invested an average of \$441,454 per trainee, which translates into an average of 59 training hours.



San Ignacio / Colbún Power Plants

**In collaboration with the Business School of Universidad de Los Andes, we held a four-day program for Company managers and assistant managers. By means of themes such as “The Y Generation” and “the leader’s role”, we were able to provide tools for people management and standardize practices to help us improve the efficiency and the work environment of our teams.**

### Colbún's Training Programs

#### > G4-LA10

Program	Description	Type of Program	Number of Beneficiaries 2013	Number of Beneficiaries 2014
Undergraduate Scholarships	Training in technical institutions or universities	Funding for external training or education	57	55
Graduate Scholarships	Further studies for outstanding professionals and executives at the best universities in Chile and abroad	Funding of external training or education	12	4
Leadership Program	Develop leadership skills for Company managers, assistant managers and supervisors	Internal training courses	133	134
Livelink Document Manager Program	Knowledge about the attributes of document managers	Internal training courses	17	6
E-learning Company Induction Program	Dissemination of the relevant business aspects to individuals joining the Company	Internal training courses	80	24
In-Person Company Induction Program	Dissemination of the relevant business aspects to individuals joining the Company	Internal training courses	79	40
Plant Visit Induction Program	Dissemination of information on the plants for new personnel and headquarter individuals who have not had a chance to visit them	Internal training courses	59	30
Languages	Further training in foreign languages	Funding for external training or education	73	89
"Capacitate!"(Be Trained!)	Development of soft and technical among workers	Funding for external training or education	52	62
Technicians	Training in specific technical areas	Funding for external training or education	325	565



**2014 Total number of workers trained**

> G4-LA9

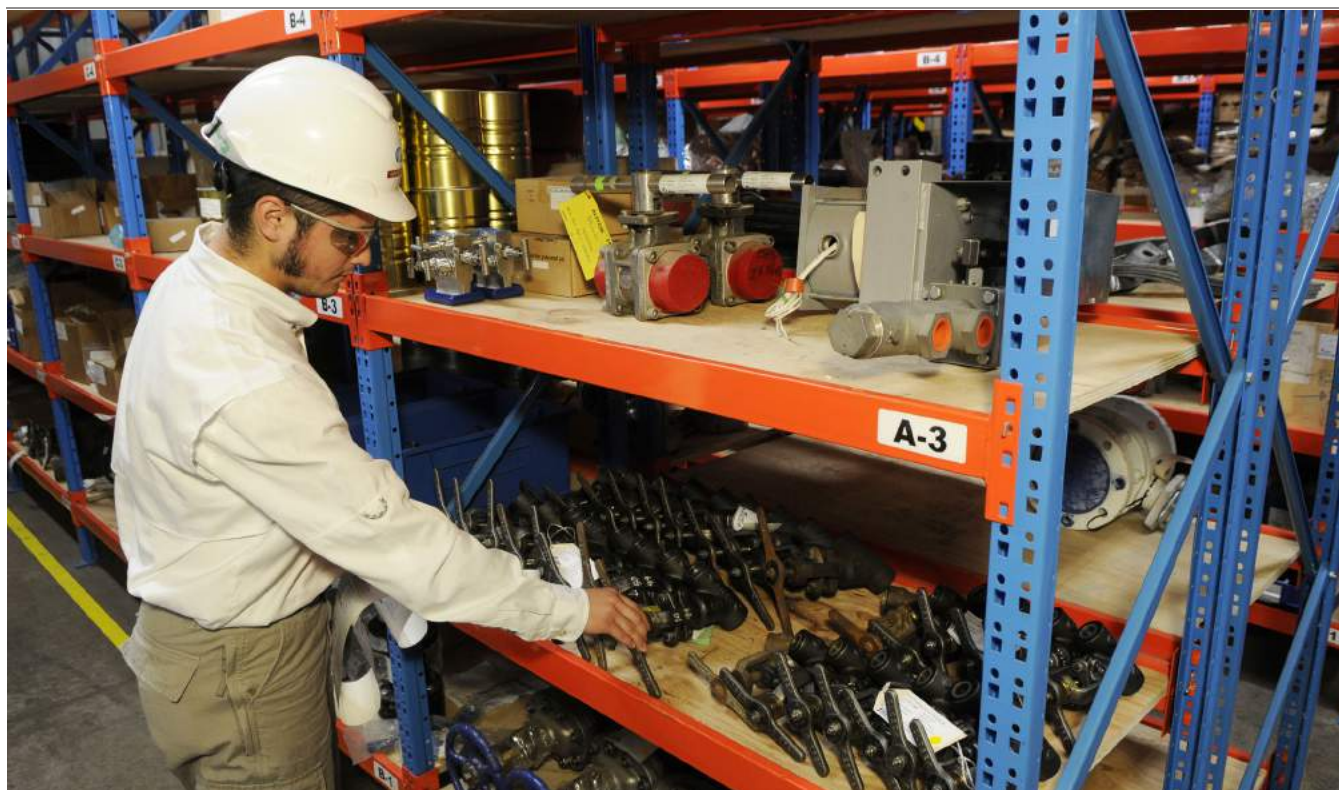
2014 Category	Number of workers	Women		Average training hours	Number of workers	Men		Total	
		Number of training hours	Average training hours			Number of training hours	Average training hours	Attendants	Hours
Executives	5	183	36.6	45	2,105	46.8	50	2,288	
Professionals and Technicians	77	6,389	83.0	460	36,524	79.4	537	42,913	
Administrative personnel	24	2,930	122.1	11	728	66.2	35	3,658	
Qualified workers	4	735	183.8	111	7,706	69.4	115	8,441	
<b>Total</b>	<b>110</b>	<b>10,237</b>	<b>93.1</b>	<b>627</b>	<b>47,063</b>	<b>75.1</b>	<b>737</b>	<b>57,300</b>	

Nehuenco Complex



Canutilar Power Plant





Complejo Nehuenco

## Performance Assessment

We seek continuous improvement through the ongoing review of individual and group goals and objectives and constant assessment and feedback from supervisors.

To achieve these objectives, a performance assessment system was implemented in 2010 for staff with permanent contracts, integrating aspects of objective and quantifiable performance with the qualitative characteristics of the worker. In 2014, the proportion of workers assessed increased due to the higher number of people under permanent contract, namely, 945 workers.

As in 2013, and striving to align our employees with the objectives of the Company, goals relating to Colbún's sustainability were maintained. Specifically, corporate objectives include indicators such as "Social and Environmental Management" and "Safety Management".

**In the bottom-up assessment survey we obtained better perception in the question "Is my boss is a good boss?" from 79% to 82%. Also, most of the factors showed improved assessment, mainly "performance feedback" and "concern for professional development."**

### Total number of Colbún workers assessed

> G4-LA11

	2013			2014		
	Women	Men	Total	Women	Men	Total
Total number of workers	164	827	991	167	794	961
Number of workers assessed	148	768	916	163	782	945
% of total number of workers	90.2%	92.9%	92.4%	97.6%	98.5%	98.3%

## Competencies-based Management

The survey on competencies started in 2013 with Fundación Chile. The process of competencies-based assessment started in 2014 for the operations positions at Central Santa Maria I, Nehuenco, Canutillar, Colbún and Dispatch Center Santiago. The critical processes and the technical competencies required for carrying them out as well as the existing gaps were identified. Based on this information, in 2015, we will work on the training plans and a behavior survey will be conducted in order to achieve the operational excellence sought by the Company.

> Hitos de la gestión de personas 2014

> **Aspecto material: Alto desempeño y formación integral**

> Aspecto material: Participación de trabajadores e inclusión

> Aspecto material: Conciliación vida personal y laboral

> Aspecto material: Salud y seguridad

Power Station Angostura



## Recognition

In 2014 we furthered the work started in 2013 around the “Sello Colbún” (Colbún’s Hallmark) concept, through various activities, including the campaign “Somos una Energía” (We are the Power) that seeks to highlight the values and behaviors shared by the employees in our organization; the kickoff of this program was a video contest where all Colbún’s plants participated along with many headquarter areas and managements.

To leverage the knowledge and practice of these behaviors during the year, we continued with the internal dissemination of values and the recognition program “Brilla con Energía” (Shine with Power), rewarding this year the value of **Excellence**, where co-workers gave their acknowledgment to 21 individuals showing daily responsibility and quality work.

### “Brilla con Energía” EXCELLENCE



Óscar Montaña  
Los Pinos Plant



Alfredo Muñoz  
Antihue Plant



Angélica Fuentes  
Carena Plant



Carlos Hernández  
Canutillar Plant



Federico Larraín  
Internal Audit, Legal Affairs  
and General Managements



Carolina Reyes  
Communications And Public Affairs Management (DDS)



Eliana Laprida



Daniel Gordon  
Environmental Management  
And Sustainability Assistant  
Management (DDS)



Yoana Gómez  
Engineering and Project Management



Hans Heyer



Roberto Mundaca  
Biobío complex  
(Angostura and  
Rucúe-Quilleco)



Francisco Mühlhausen  
Organization And  
People Management



Luisa Martínez  
Occupational  
Health And Safety  
Management



Waldo Aravena  
Finance And  
Administration  
Division (Without  
Shared Services)



Pedro Sánchez  
Candelaria Plant



Fabiola Riquelme  
Alto Maule and  
Melado Project



Luis Fredes Lagos  
Colbún Complex



Víctor Aguilera  
Santa María Complex



Ramón Sepulveda  
Shared Services  
(Fin. & Adm. Division)



Paulina Basoalto  
Business and Energy  
Management Division



Rosario Osoro  
Generation Division  
(Headquarters)



Alvaro Valencia  
Angostura Project

> **Aspecto material: Alto desempeño y formación integral**

&gt; Aspecto material: Participación de trabajadores e inclusión

&gt; Aspecto material: Conciliación vida personal y laboral

&gt; Aspecto material: Salud y seguridad

Also in 2014, we rewarded the **“Outstanding Leaders”** by recognizing the 16 supervisors with the best results in their bottom-up assessment, who stood out due to their performance, way of working and relationship with their respective teams.

**“Outstanding Leaders”****Teams with less than 5 workers**

Cristian Araneda  
Santiago  
(Environmental  
Management - Projects)



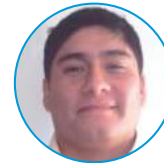
Mack Ronal Ortiz  
Canutillar Plant  
(Mechanical Maintenance)



Susana Karina Morales  
Santiago  
(Special Projects RCA/  
SCR)



Esteban Guillermo Viguera  
SANTIAGO  
(Telecommunications and  
Remote Metering)



Lester Andrés Galleguillos  
Los Quilos Plant  
(Electrical Maintenance)



Jose Miguel Espinoza  
Santiago  
(Electrical Technical  
Assistance Assistant  
Management)



Paula Veronica  
Martinez  
Santiago  
(Organization and  
People Management)



Pablo Esteban Poblete  
Biobío Complex  
(Maintenance,  
Control and  
Telecommunications  
Rucúe)



Belmar Segundo  
Nuñez  
Santa María  
Complex (Electrical  
Maintenance)



Aldo Javier Morales  
Nehuenco Complex  
(Mechanical And Civil  
Works Area)



Juan Marcelo Ortiz  
Los Quilos Plant  
(Mechanical  
Maintenance)

**Equipo superior a 8 personas**

Mario Antonio Gajardo  
Biobío Complex  
(Operations Rucúe-  
Quilleco)



Juan Elias Salinas  
Santiago  
(CDEC Market  
Management)



Francisco Javier Neira  
Colbun Complex  
(Mechanical Area)



Nestor Eugenio Sbarbaro  
Santa María Complex  
(Mechanical Maintenance  
Area)



Jose Angel Fuentealba  
Biobío Complex

## 03 / Material Aspect: **Workers' Involvement and Inclusion**

> G4-27

<b>Why is it material?</b>
Involvement is an opportunity for all members in a company to contribute to the best results, turning their jobs into a more relevant and attractive instance. In issue of providing formal instances to encourage company-workers dialogue has become relevant within a context of the recent labor discussions and reforms in the country.
<b>Which stakeholder mentioned this in the survey?</b>
The involvement of workers and the issue of inclusion came up in the internal consultation process and were addressed by the following stakeholders: workers, contractors and providers.
<b>What is our objective?</b>
We seek to align, motivate and leverage the sense of belonging, commitment and pride among our workers.
<b>How do we manage?</b>
We maintain open communication channels for each individual worker and labor organizations, and strive to expand the amount of information delivered, closeness and fluent communications.
<b>How do we measure?</b>
Activities to leverage dialogue with and involvement on the part of workers (Colbún-9) / Percentage of employees covered by collective agreements (G4-11) / Outcomes of Work Climate Surveys (Colbún-10).
<b>Who is accountable?</b>
Organization and People Management

### **Relationship with our Workers**

> Colbún-9

At Colbún, we believe it is fundamental to improve the quality of the labor relationships we establish with our workers and, therefore, in 2014, we designed a program to provide union leaders with academic and practical training that will help them strengthen their leadership and communicational skills, and develop a strategic outlook regarding their performance. In this manner, 15 of our union leaders and workers' representatives will join the Union Management Diploma Program until May of 2015; this program is delivered by the School of Economics and Business of Universidad de Chile. The program was designed jointly by the Managerial Development Center of the University and Colbún's Training Unit.

Negociación Colectiva, Power Station Angostura



**In 2014, we successfully conducted two new collective bargaining processes with groups of workers at the Angostura Plant and Santa Maria Complex, both for a coverage period of four years and involving a total of 76 workers. Negotiations developed in the friendly and respectful atmosphere that characterizes the spirit of cooperation prevailing in Company-workers relationships.**



- > Hitos de la gestión de personas 2014
- > Aspecto material: Alto desempeño y formación integral
- > **Aspecto material: Participación de trabajadores e inclusión**
- > Aspecto material: Conciliación vida personal y laboral
- > Aspecto material: Salud y seguridad

### Percentage of workers covered by collective agreements

> G4-11

Collective agreement	Union	Year signed	2013			2014		
			Number of workers subscribed	% Of total in each facility	% Of total Colbún	Number of workers subscribed	% Of total in each facility	% Of total Colbún
Contract with Union Carena	Industrial Power Company	2013	25	76%	3%	25	76%	3%
Collective Agreement with Nehuenco Union	Nehuenco Union	2012	39	59%	4%	41	60%	4%
Contract with Hidroeléctrica Guardia Vieja S.A Union	Inter-Province Hidroeléctrica Guardia Vieja S.A. Union	2012	103	73%*	10%	92	71%	10%
Contract with Hidroeléctrica Aconcagua Union	Sindicato N° 1 Hidroeléctrica Aconcagua	2013	26	18%*	3%	26	20%	3%
Collective Agreement Los Pinos	No	2013	12	71%	1%	11	69%	1%
Collective Agreement Canutillar	No	2012	12	71%	1%	13	68%	1%
Collective Agreement Antilhue	no	2012	12	75%	1%	12	86%	1%
Collective Agreement Candelaria	No	2012	19	83%	2%	19	83%	2%
Contract with Union N° 1 Colbún S.A	Workers' Union Nr. 1 Colbún and Affiliates	2013	135	22%	14%	108	21%	13%
Agreement with Santa María	No	2014	48	69%	5%	48	68%	5%
Agreement with Angostura	No	2014	-	-	-	4	11%	0%
<b>TOTAL</b>			<b>431</b>		<b>43%</b>	<b>399</b>		<b>43%</b>

\* Percentages relating to the total number of employees in the Aconcagua Complex's Payroll

## Organizational Climate

> Colbún-10

2014 was a good year for Colbún in different aspects as a result of the work carried out by the entire human team of our Company. These good results were also reflected in our work climate measurement indicators.

With 90% representation, 844 of 943 workers answered the 2014 Work Climate Survey, which showed 75% general positive satisfaction, i.e., five points above the same measurement in 2012.

The dimensions with highest degree of satisfaction were: work meaning (86%), fairness - integrity - ethics (82%) and working conditions (80%), while the lowest scoring dimensions were: development (64%) and compensation (63%).

Power Station Carena



Candelaria Power Plant



<sup>4</sup> This survey did not include recent Company hires or workers under fixed term contracts.

## 04 / Material Aspect:

# Conciliation of personal and labor lives

> G4-27

<p><b>Why is it material?</b></p> <p>At Colbún, we see our workers as people requiring our support beyond their professional roles in order to perform optimally in their respective jobs. Much of the work carried out at the plants require high levels of concentration and we want them to feel comfortable about their personal lives in carrying out their tasks, hence our special focus on finding instances to include the family.</p>
<p><b>Which stakeholder mentioned this in the survey?</b></p> <p>The conciliation of personal and labor life came up in the internal consultation process and was addressed by the following stakeholders: workers.</p>
<p><b>What is our objective?</b></p> <p>We seek to generate better conditions for each and every Colbún's employee. Along these lines, we want to include our workers' families by bringing them closer to our activities and maintaining a comprehensive perspective in relation to those who are part of our Company.</p>
<p><b>How do we manage?</b></p> <p>We conduct several activities and initiatives aimed at incorporating the workers' families so that they can become familiar with and share Colbún's culture.</p>
<p><b>How do we measure?</b></p> <p>Conciliation benefits and policies (Colbún-11)</p>
<p><b>¿Quién es responsable?</b></p> <p>Organization and People Management</p>

Note: This survey did not include recent Company hires or workers under fixed term contracts.

## The importance of our workers' families

> Colbún-11

Workers being able to share with their families and having them feeling part of our organization has been a major focus of our work. In 2014, we continued with activities we have already been carrying out for several years:

- For the sixth consecutive year, we conducted our “Labor Day with Children” at all Colbún Plants and Santiago.
- We continued with the sixth version of the “Academic Excellence Award” that seeks to recognize the workers' families symbolically and economically, by rewarding outstanding academic performance at both school and university levels.
- We expanded the coverage of our “Cultural Conferences”, hand in hand with the Cultural Network of Universidad Gabriela Mistral, not just for workers and relatives in Santiago, but also in Angostura, Rucúe-Quilleco, Los Pinos, Santa Maria and Aconcagua plants.

**We developed plans and activities to promote good practices with those plants that present opportunities for improvement in the work climate surveys; they included workshops, personalized support and review of the plant structure and organization. We also focused on expanding our practices such as the “Labor Day with Children”, “Cultural Talks” and “Academic Excellence Awards” to our workers' children.**

> Hitos de la gestión de personas 2014

> Aspecto material: Alto desempeño y formación integral

> Aspecto material: Participación de trabajadores e inclusión

> **Aspecto material: Conciliación vida personal y laboral**

> Aspecto material: Salud y seguridad

## 05 / Material Aspect: Health and Safety

> G4-27

<b>Why is it material?</b>
Power generation involves working at plants under risk conditions and it is of the utmost importance to control these factors to preserve the health and safety of those who work and live near the facility. For us, caring for people is a priority and we strive to improve our safety standards.
<b>Which stakeholder mentioned this in the survey?</b>
Health and safety came up during the internal consultation process and was addressed by the following stakeholders: investors, workers, environmental expert, contractors and providers.
<b>What is our objective?</b>
Besides striving for our workers and their families to be in good health, one of Colbún's strategic objectives is the search for and the management of a "zero accident" standard. Therefore, our priority is to provide our employees and contractors with good conditions, where they can develop safely with constant concern for risk prevention. Also, we want our communities to feel safe with regard to the operation of our power plants; to this end, we are disseminating our mechanisms to respond to emergencies, making our neighbors part of those plans.
<b>How do we manage?</b>
We have a "Policy on Safety, Occupational Health, Environment and Quality", certified since 2010 under ISO 14001 and OSHAS 18001 standards. We also maintain "Special Safety Regulations for Contractors and Subcontractors (REECs)", and "Integrated Management System (SIGECS)", to allow our partner companies to seek certification under national or international standards (see chapter on "Contractors and Providers".) We conduct training needs assessments in health and safety, and provide associated training.
<b>How do we measure?</b>
Percentage of employees represented in joint formal safety and health committees that include managers and employees, to help monitor and advice on safety and health programs (G4-LA5) / injury types and rates, occupational diseases, number of days lost, absenteeism and fatalities related to work by region and gender (G4-LA6) / Percentage of workers within the normal health range (Colbún-12).
<b>Who is accountable?</b>
Each Colbún worker must practice self-care; however, the Occupational Health and Safety Management is accountable for generating the processes and managing this aspect in the Company.

### Focus on Safety

In 2013 we detected the need to strengthen the safety culture among all workers involved in plant processes; therefore, in 2014 we developed training to increase the competencies in safety and occupational health for seven of our area supervisors, through diploma programs offered by the Mutual de Seguridad (mutual insurance association).

Moreover, we continued the work associated with the "Zero Fatality Protocols", built on the basis of the identification of the 12 most relevant hazards that could potentially cause serious accidents. After the training conducted in 2013, this work was consolidated in 2014 and will continue in 2015, with the monitoring of controls associated with these protocols. In addition, these protocols were included in the improvement of Risk Matrices and disseminated to contractors.

Angostura Power Plant



- > Hitos de la gestión de personas 2014
- > Aspecto material: Alto desempeño y formación integral
- > Aspecto material: Participación de trabajadores e inclusión
- > Aspecto material: Conciliación vida personal y laboral
- > **Aspecto material: Salud y seguridad**

As for projects developed in 2014 involving a greater degree of safety awareness, (Angostura Project, repairs at the Blanco Plant, repair of joints at Hornitos Plant, installation of transformers at Santa Maria I), we feel reassured knowing that we maintained very low accident rates. The challenge for 2015 will be the development of La Mina Plant, which will contemplate the highest standards from previous projects.

To close 2014, we conducted a ceremony to recognize the work teams and workers who stood out in safety at each plant, as well as the teams relating to pipeline projects at Hornitos Plant and to the installation of filters at Santa Maria I power plant.

**In order to improve the operations and safety standards at Santa Maria I plant, workers and contractors were invited to join an innovation and participation process implemented through a web platform. In this manner, a total of 44 ideas and suggestions were made to improve the standards of the Plant, of which 34 entered the implementation stage.**



Aconcagua Complex

Finally, since January of 2014 and as a reflection of the good results of people safety, Colbún began paying the basic contribution for the administration of the Job-Related Accidents and Occupational Diseases insurance (now 0.95%; before 1.24%).

Santa María Complex



## 2014 Work-related accidents own workers

> G4-LA6

	Number of Fatalities	Number of Injured	Number of Employees with Professional Illnesses	Number of Days Lost
Carena Plant	0	1	0	2
Santiago Headquarters	0	1	0	5
<b>Total Colbún S.A.</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>7</b>

Note: The accident at the Carena Plant involved bruises due to a turbine brake lever and the accident at the Santiago Headquarters was a same-level fall (walking).

## Comparison of annual own workers and contractors' safety indicators

### Colbún – Generation Area

Generation Area	2012	2013	2014	Variation
Accident Rate <sup>5</sup>	0.8%	0.6%	0.5%	-23.3%
Lost Time Accident Rate <sup>6</sup>	14.30	12.80	2.19	-82.9%

## Comparison of annual contractor safety indicators

### Colbún – Projects Area

Projects Area	2012	2013	2014
Frequency Indicator <sup>7</sup>	9.0	3.9	1.21
Seriousness Rate <sup>8</sup>	247.8	143.9	38.73

<sup>5</sup> The accident rate measures the number of job-related accidents over the average number of workers during the same period, multiplied by one hundred.

<sup>6</sup> The lost time accident rate is the addition of the average lost time due to temporary disabilities and the lost time average resulting from permanent disability and death.

<sup>7</sup> The frequency indicator is the multiplication of the number of accidents by 1,000,000 divided by total men-hour for the period.

<sup>8</sup> The seriousness rate is the multiplication of the lost days by 1,000,000 divided by the total men-hour for the period. For fatal accidents, 6,000 days must be considered.

## Participation in Joint Committees Colbún

> G4-LA5

	Number of workers represented	
	2013	2014
Canutillar Plant	17	18*
Biobío Complex (Angostura, Rucué-Quilleco)	56	79
Colbún Complex	77	77
Carena Plant	41	42
Aconcagua Complex	146	133
Antilhue Plant	15	16*
Los Pinos Plant	17	16*
Candelaria Plant	23	23
Nehuenco Complex	66	65
Santa María I Plant	72	69
Santiago Headquarters	353	396
Angostura Project	48	-
La Mina Project	25	25
<b>Total**</b>	<b>956</b>	<b>959</b>

Notas:

\* In facilities with less than 25 workers, Onsite Parity Committees are formed.

\*\* The total represents the annual average of workers



Machicura / Colbún Power Plants





- > Hitos de la gestión de personas 2014
- > Aspecto material: Alto desempeño y formación integral
- > Aspecto material: Participación de trabajadores e inclusión
- > Aspecto material: Conciliación vida personal y laboral
- > **Aspecto material: Salud y seguridad**

Los Pinos



## Healthy Life Program

> Colbún-12

In 2014 we continued the work developed the previous year, where we identified the workers' health levels. We exceeded our goals, with a 91% of workers maintaining the fitness required for optimum performance.

This work consisted in expanding the investigation of risk factors across the organization through a battery of more exhaustive tests, a nutritional assessment and personal counseling to provide tools and strategies to improve health.

## + Energy + Quality of Life

The program seeks to encourage, motivate and generate instances for workers and their families to lead a healthy life.

Our efforts to promote recreational and physical activities convened a total of 577 participants in various instances. Our purpose was to encourage our employees and their families to participate in activities suited to different types of lifestyle and physical fitness, so that everyone could move toward a healthier lifestyle:



- 7 activities in total (5 trekking, 1 cycling and 1 mountain biking).



- 176 people joined our trekking at La Campana National Park.



- 72 participants and representatives of all plants participated in the high-performance challenge mountain bike in Aconcagua.

Trekking La Campana mountain







Marcelina Vielma, trabajadora de la empresa Zublin,  
Contratista Proyecto La Mina



# Chapter — 04

## Contractors and Providers

Stakeholder	Challenge	Highlights / Actions Executed	Page	Progress Status
Contractors and Providers	Include sustainability variables in the La Mina Project bidding process	<ul style="list-style-type: none"> <li>The process with Zublin was closed for civil works and gates, and with Power Machines for the electromechanical equipment. These contracts contemplate the improvements included in the Angostura Project, in connection with the minimum employment conditions for contracting personnel and their bonuses. Additionally, a request is included that calls for the hiring and/or training of 30% of local workforce hired by contractors.</li> </ul>	59	
	Exchange good practices in a systematic manner	<ul style="list-style-type: none"> <li>All our bidding and awarding processes with subcontractors have included environmental principles, in addition to other labor and safety provisions. These guidelines are reflected in the Special Regulation for Contractor and Subcontractor Companies (REECS) and in the Integrated Management System (SIGECS), among other initiatives.</li> </ul>	57	
	Improve safety conditions and culture	<ul style="list-style-type: none"> <li>The total number of contractors and subcontractors trained in health and safety issues amounted to 5,278 (11,426 hours); this means that each contractor or subcontractor worker attended, in average, more than 3 trainings on these matters.</li> </ul>	62-63	
	Continue our work in the field to verify compliance with the sustainability provisions contained in contracts	<ul style="list-style-type: none"> <li>Systematization of practices applied by contract administrators to standardize good practices criteria among the Company plants and transfer them to our vendors.</li> </ul>	57	



Fulfilled



Moderately fulfilled



Pending

**W**e seek **exchange of good practices** with our contractors and providers, promoting high safety, quality, environmental and social standards, mutually supporting each other's growth and development. This will enable us to achieve **excellence throughout our value chain.**

Contractors Santa María Complex



# 01 / Material Aspect: Colbún's culture among our contractors

> G4-27

Why is it material?
Due to the importance Colbún gives to labor, safety and environmental and social care standards in our operations and projects; our contractors and providers cannot be left aside. This way we ensure an excellent management throughout our value chain.
Which stakeholder mentioned this in the survey?
Colbún's culture among our contractors was addressed in our internal consultation by the following stakeholders: contractors and providers.
What is our objective?
We seek to generate long-term trust relationships, where productivity and profitability go hand in hand with adapting to the characteristics of the environment, encouraging world-class labor relations and compliance with environmental and safety standards.
How do we manage?
Through the implementation of the "Providers and Contractors Policy", the "Special Contractors' Regulation" the "Minimum Labor Standards" and thanks to the committed work of our contract administrators. We also support quality, occupational health, safety and environmental management through ongoing training.
How do we measure?
Detail of successful work cases jointly with contractors and suppliers (Colbún-3) / Describe the effort for incorporating sustainable principles and practices throughout the value chain (Colbún – 4) / Contractors and subcontractors who have been trained in health and safety issues (G4-EU18) / Local providers' percentage of expense in sites with significant operations (G4 – EC9).
¿Quién es responsable?
Engineering and Project Division and the Generation Division

## Incorporating sustainable practices to our value chain

> Colbún-4

Our contractors are the individuals or companies contracted directly by Colbún to provide services or to perform material works inside our facilities, such as project construction companies, equipment suppliers, maintenance companies, security, cleaning and catering firms, among others.

We consider our contractors as collaborators and allies who help us achieve our mission. This is why we attempt to improve the standards of our value chain through the exchange of good practices with our contracting companies and providers.

Likewise, all our bidding and awarding processes with subcontractors incorporate environmental principles in addition to other labor and safety provisions. These guidelines are reflected in the Special Regulation for Contractor and Subcontractor Companies (REECS) and in the Integrated Management System (SIGECS), among other initiatives.



### How do you attempt to incorporate contractors and subcontractors to Colbún's culture?

In 2013 we systematized the practices applied by contract administrators to standardize good practices criteria among our various power plants and transfer them to our vendors. However, in the survey to our stakeholders, our contractors and providers raised the need to be more informed and integrated to Colbún's culture, which is the challenge we have ahead of us.

### > Aspecto material: Cultura Colbún en contratistas

- > Casos destacados del trabajo en conjunto con empresas contratistas
- > Apoyo al desarrollo local, a la pequeña y mediana empresa
- > Nuevos contratos de mantenimiento en centrales térmicas con principales proveedores de tecnología (Siemens y GE)
- > Estándares de seguridad en toda nuestra cadena de valor



Contractors Blanco Power Plant

#### Total hours worked by contractors and subcontractors

	2013		2014	
	Hours worked	No. of contractor and subcontractor employees	Hours worked	No. of contractor and subcontractor employees
Projects (construction)	6,223,998	3,378	826,212	439
Power generation plants <sup>1</sup>	1,562,721	983	1,781,578	1,098
<b>Totales</b>	<b>7,786,719</b>	<b>4,361</b>	<b>2,607,791</b>	<b>1,537</b>

**During 2014, we had 1,537 contractors and subcontractors, of which 71% performed duties at our power generation plants.**

<sup>1</sup> The contractors at our power plants under operation include maintenance and administration experts, drivers, cleaning, gardening and cafeteria personnel, and guards, among others.

## 02 / Outstanding cases of work in conjunction with contracting companies

> Colbún-3

- > Aspecto material: Cultura Colbún en contratistas
- > **Casos destacados del trabajo en conjunto con empresas contratistas**
- > Apoyo al desarrollo local, a la pequeña y mediana empresa
- > Nuevos contratos de mantenimiento en centrales térmicas con principales proveedores de tecnología (Siemens y GE)
- > Estándares de seguridad en toda nuestra cadena de valor

### Growth of small companies

At the Carena power plant, the transport and security provider, Juan Ortiz, undertook a significant step forward and grew his company by renewing all the vehicle fleet used to provide the service to our company. This provider has worked with Colbún for 25 years, period in which he was grown and professionalized his business.

### Large project bids

The bid of La Mina Project was one of the relevant commitments for our group of contractors and providers. We closed the process with Zublin for the civil works and the gates, and with Power Machines for the electromechanical equipment. These contracts contemplate the improvements included in Angostura Project in connection with the minimum employment conditions for contracting personnel and their bonuses. Additionally, a request is included that calls for the hiring and/or training of 30% of local workforce hired by contractors.

**“We strive for an equitable treatment and a NON discrimination policy with our contractors based on a philosophy where both parties agree to a contract that provides equal protection for both parties.”**

Eduardo Lauer, Engineering and Project Division Manager.

Angostura Power Plant



## 03 / Support to local development, small and medium-size companies

Within the efforts made in 2014, we set ourselves to support this stakeholder group (small and medium-size companies, PYMEs), which accounts for close to 11% of our contracting companies and providers. Along these lines, we obtained the ProPYME qualification by external auditors, which certifies that payment of 100% of the invoices to the PYMEs is made within a maximum term of 30 days.

### Expenses in foreign, national and local suppliers (thousand of US\$)

#### > G4-EC9

	2013	2014		2013	2014
Expense in foreign suppliers	148	161	Number of foreign providers	84,093	84,537
Expense in suppliers with national coverage	1,368	1,421	Number of providers with national coverage	151,346	182,019
Expense in suppliers with local coverage	1,276	1,252	Number of providers with local coverage	79,953	62,430
<b>Total expense in suppliers</b>	<b>2,792</b>	<b>2,834</b>	<b>Total number of providers</b>	<b>315,648</b>	<b>328,986</b>

Note: The number of purchase orders generated in 2013 amounted to 12,220 and to 14,031 in 2014, which shows a significant increase in the level of transactions with providers at a Company level.



**In 2014, regional providers accounted for 47% of the total, mainly concentrated in the Regions of Biobío and Valparaíso.**

La Mina Project

<sup>2</sup> Entendemos por proveedores con cobertura nacional, los que tienen domicilio en Santiago y despachan a nuestras centrales y proyectos en todas las regiones. Los con cobertura local, por su parte, son los que tienen presencia en regiones.

<sup>3</sup> Se consideran las compras de centrales y proyectos, y se excluyen compras de energía, peajes de transmisión y combustibles de generación.



## 04 / New maintenance contracts in thermoelectric power plants with main technology providers (Siemens and GE)

During 2014 new conditions were agreed to for the long-term maintenance of Nehuenco I (Siemens) and Nehuenco II (GE) power plants, which translated into the subscription of two new contracts. These new contracts have more balanced conditions in terms of the contractors' commitment with the availability of the machines at Nehuenco I and II, and entails proactive work to prevent catastrophic failures.

Nehuenco Complex



- > Aspecto material: Cultura Colbún en contratistas
- > Casos destacados del trabajo en conjunto con empresas contratistas
- > **Apoyo al desarrollo local, a la pequeña y mediana empresa**
- > **Nuevos contratos de mantenimiento en centrales térmicas con principales proveedores de tecnología (Siemens y GE)**
- > Estándares de seguridad en toda nuestra cadena de valor

## 05 / Safety standards throughout our value chain

> G4- EU18

Throughout 2014 we developed onsite work with our small and medium providers and contractors in the field of safety through the Contracting Companies Qualification Program. The 31 PYMEs developing maintenance works at all of our power plants reached the safety standards targeted for this period, which meant a significant reduction in their accident rates and represents a big step forward in the commitment expressed by Colbún to improving the safety conditions of our contractors and providers.

For 2015, our challenge is to obtain certification for our contracting companies and to extend the Contracting Companies Qualification Program to other contractors, such as cleaning, gardening, transportation, surveillance and catering companies.

In addition, this year we focused on consolidating the most relevant standards in the protection of health and safety pursuant to the Integrated Contractor and Subcontractor Management System (SIGECS) and the Special Regulation for Contractor and Subcontractor Companies (REECS). Similarly, we disseminated the Zero Fatality Protocols among our contracting companies. Through these measures we seek to ensure that whoever provides services at our power plants meets all the requirements to perform in a flawless manner.



Antilhue Power Plant

**During 2014, the total number of contractors and subcontractors trained in health and safety issues amounted to 5,278 (11,426 hours), which means that each contractor or subcontractor worker attended in average more than 3 training sessions on these matters.**

### Labor accidents affecting Colbún's contractors and subcontractors, 2014

	Fatalities	Accident rate	Occupational illnesses rate	Lost time accidents
BioBío Complex (Angostura hydroelectric power plant and Rucúe-Quilleco plants)	0	1	0	1
Angostura Project	0	3	0	129
Candelaria Station	0	1	0	3
Nehuenco Complex	0	3	0	20
Santiago Office	0	2	0	31
<b>Total</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>184</b>

Note: No contractors' labor accidents were recorded in the other power plants.

- > Aspecto material: Cultura Colbún en contratistas
- > Casos destacados del trabajo en conjunto con empresas contratistas
- > Apoyo al desarrollo local, a la pequeña y mediana empresa
- > Nuevos contratos de mantenimiento en centrales térmicas con principales proveedores de tecnología (Siemens y GE)
- > **Estándares de seguridad en toda nuestra cadena de valor**

### Contractors and subcontractors' safety indicators

	2013	2014
Frequency Rate	4.6	3.8
Seriousness Rate	147.4	70.6
Lost Time Accidents	38	10
Serious Accidents or Fatalities	0	0

Our challenge for 2015 is to continue improving the safety indicators of our contractors, which means achieving a lower frequency rate.

### Participation of contractors represented in Parity Committees

	No. of contractors represented	
	2013	2014
<b>HYDROELECTRIC POWER PLANTS</b>		
Canutillar Station	39	54
Biobío Complex (Angostura, Rucué-Quilleco)	73	136
Colbún Complex	147	142
Carena Station	34	35
Aconcagua Complex	131	146
<b>THERMOELECTRIC POWER PLANTS</b>		
Antillhue Station	13	20
Los Pinos Station	70	81
Candelaria Station	28	31
Nehuenco Complex	122	82
Santa María Complex	313	349
<b>HEADQUARTERS</b>		
Santiago Office	13	22
<b>PROJECTS / WORKS</b>		
Angostura Project	2.775	259
La Mina Project	38	*
LAT SE Mulchén	328	-
Santa María Works	51	*
San Pedro Project	21	*
Other Works	-	*
<b>Total**</b>	<b>4.196</b>	<b>1.357</b>

Notes:

\* Of the 1,537 contractors who worked with Colbún in 2014, 180 worked less than 30 days in each facility; therefore, they did not participate in the committees.

\*\* The total is the annual average of contractors represented in the parity committees.

Evelina Fernández, Restaurante Rincón del Lago,  
Central Angostura



# Chapter — 05

## Community and Society

Stakeholder	Challenge	Highlights / Actions Executed	Page	Progress Status
Community and Society	Achieve a more fluent communication regarding our social and environmental performance	<ul style="list-style-type: none"> <li>• Public address in Coronel and Concepción power plants.</li> <li>• Our plants were visited by 18,124 members of our communities, including the House of Energy at the Colbún Plant, and the Visitors' Center at the Angostura Plant.</li> <li>• Dissemination of Angostura Emergency Plan.</li> <li>• Dissemination of San Pedro Project. Web page and Facebook Angostura, Biobío.</li> </ul>	69	
	Implement our Community Relations Policy at the plants in operation	<ul style="list-style-type: none"> <li>• Implementation of the program "Taking care of the planet" in Colbún, Yervas Buenas, Codegua and Mostazal, with the participation of more than 2,000 people from the educational community.</li> <li>• Program "Taking care of the neighborhood", in Colbún, designed to promote residential waste environmental management in a community effort.</li> <li>• Reconstruction of the Liceo Marta Donoso (School) in Talca, implementing more than 30 new classrooms, roofed yards, gym, library with close to 10,000 books, three computer labs with state-of-the-art equipment, and an auditorium open to the community.</li> <li>• We furthered our CSR agreements with the municipalities of San Esteban, Los Andes and San Clemente, for the development of projects seeking to improve the quality of life in our respective districts.</li> </ul>	68, 74-75	
	Monitor the commitments we have assumed with the communities	<ul style="list-style-type: none"> <li>• In order to track the commitments undertaken with the communities, in 2014 we recorded all activities/ actions associated with community affairs in the Community Management System, including meetings, visits to power plants, participation in community events, work tables, contract and social programs management.</li> </ul>	66	
	Continue integrating community management into the Company's culture and processes	<ul style="list-style-type: none"> <li>• Induction to workers joining the Company.</li> <li>• Social and environmental incidents are part of Colbún's corporate goals.</li> </ul>	40	



Fulfilled



Moderately fulfilled



Pending

We seek to promote **local development** and maintain trust relationships with people, organizations, authorities and the media as the basis for mutual understanding that enables us to improve the quality of life of our communities and the society in general in a manner that is compatible with the development of Colbún's business. This will in turn allow us to create value and to generate **capital of trust** for Colbún.

## 01 / Relationship with the local communities

**In 2014 we were awarded the “Capital Goods Company” prize. It recognizes Colbún’s Angostura Plant contribution to the growth of the country and the management of the professionals involved in the project. Among other things, the jury evaluated the compliance with the pre-established project execution deadlines, its involvement with the communities and the success of its commissioning.**



Therefore, we have continued to strengthen the relationship with our neighbors and relevant stakeholders through our “Community Relationship Policy”. Two management tools were decisive in the compliance with this objective:

### **Community Thermometer**

We conducted the second mass perception survey among our neighbors and relevant stakeholders. This survey allows identifying the main concerns, topics of interests and desires of the communities where we operate, as well as their perception about our presence and activities. This information enables us to adjust our local relations agenda. It should be noted that in 2014 there was an increase in the positive perception by the communities living in the vicinity of Angostura Hydroelectric Power Plant, in the Biobío Region. However, in the case of Santa María I in Coronel, we witnessed a drop in positive community perception as a result of environmental conflicts that have nothing to do with our operations. In any case, this encourages us to continue strengthening our links with them, reinforcing our local support activities and streamlining the communication about our social-environmental performance.

### **Community Management System**

In order to track the commitments undertaken with the communities, in 2014 we recorded all activities/actions associated with community affairs in the Community Management System, including meetings, visits to power plants, participation in community events, work tables, contract and social programs management.

**The Newén Maqui project developed by Gestión de Comunidades SpA (GeCo) supported and sponsored by Colbún obtained the “Sustainability HUB Award” granted by El Pulso newspaper in the category of Social Entrepreneurship. The project consists of promoting inclusive businesses based on the sustainable production of maqui in the community near our Angostura Power Plant.**




- > Relación con comunidades locales
- > Aspecto material: Información y comunicación con comunidades
  - > Generando Confianza
  - > Aspecto material: Inversión Social
  - > Generando Oportunidades
  - > Generando Futuro

# 02 / Material Aspect: Information and communication with the communities

<b>Why is it material?</b>
We want to keep the neighbors and the organizations that live close to our power plants and projects informed of our operations, so as to maintain and foster trust relationships aimed at creating shared value.
<b>Which stakeholder mentioned this in the survey?</b>
The information and communication with communities was addressed in our internal consultation process by the following stakeholders: community and society, investors, environmental expert and workers.
<b>What is our objective?</b>
We seek to better understand the vision our communities have of themselves, their desires and concerns, as well as those of our company, so as to design projects framed within the pillars of our "Community Relations Policy".
<b>How do we manage?</b>
The processes of community dialogue and survey operate periodically by means of the activation of several communication channels at the sites where we operate.
<b>How do we measure?</b>
Through mechanisms the community is provided with to notify or give their opinion in connection with spillages or high risk events (Colbún -5) / Main channels of communication and dialogue available to the community (Colbún -14)/ Socio-environmental conflicts of the year and how they were addressed (Colbún -15).
<b>Who is accountable?</b>
The Generation and the Sustainable Development Division.

## Community Relations Policy

**OBJETIVO FINAL:**  
Ser y ser reconocidos como una empresa que genera valor compartido sostenible con sus comunidades vecinas

		
Construir y mantener relaciones asociativas y de colaboración con la comunidad	Maximizar el impacto positivo del negocio de Colbún en la comunidad, promoviendo el desarrollo de la economía local	Impulsar colaborativamente el desarrollo de la comunidad por medio de proyectos sostenibles y de impacto social

<b>Energía para la Participación</b> <ul style="list-style-type: none"> <li>&gt; Mapeo de actores relevantes</li> <li>&gt; Levantar las prioridades de la comunidad</li> <li>&gt; Reuniones con autoridades y vecinos</li> <li>&gt; Mesas de trabajo y diálogo</li> <li>&gt; Visitas a centrales, Casa de la Energía y Centro de Visitantes</li> <li>&gt; Participación en actividades de la comunidad</li> <li>&gt; Alianzas con asociaciones gremiales</li> <li>&gt; Trabajo con medios de comunicación locales</li> </ul>	<b>Energía para el Empleo Local</b> <ul style="list-style-type: none"> <li>&gt; Levantamiento de empleabilidad y ocupación (Colbún v/s oferta local)</li> <li>&gt; Capacitación para mano de obra local</li> <li>&gt; Definición de porcentaje mínimo de contratación de mano de obra local</li> </ul>	<b>Energía para la Educación</b> <ul style="list-style-type: none"> <li>&gt; Educación en energía y medio ambiente</li> <li>&gt; Capacitación técnica, en oficios y en habilidades de liderazgo</li> </ul>
<b>Energía para el Liderazgo</b> <ul style="list-style-type: none"> <li>&gt; Capacitación a líderes vecinales</li> <li>&gt; Apoyo en gestión de recursos públicos</li> </ul>	<b>Energía para Proveedores Locales</b> <ul style="list-style-type: none"> <li>&gt; Levantamiento de bienes y servicios (Colbún v/s oferta local)</li> <li>&gt; Capacitación de proveedores locales en estándar Colbún</li> <li>&gt; Contratación de proveedores locales</li> <li>&gt; Políticas de pronto pago</li> <li>&gt; Apoyo financiero (fondos de garantía)</li> </ul>	<b>Energía para la Calidad de Vida</b> <ul style="list-style-type: none"> <li>&gt; Programas deportivos</li> <li>&gt; Infraestructura y equipamiento deportivo</li> <li>&gt; Espacios públicos y áreas verdes</li> <li>&gt; Fomento del turismo</li> </ul>

Power Station Angostura



## 03 / Generating Trust

> Colbún-5, Colbún-14, Colbún-15

Within the framework of our Community Relations Strategy, our commitment to Generating Trust was channeled through several mechanisms of interaction and dialogue with our communities, such as work tables, Corporate Social Responsibility Agreements, guided visits to the power plants, public addresses and others.

The **Angostura Tourism Work Table** approved the marketing strategy developed by Colbún, which included promoting Angostura del Biobío as a tourism destination by means of an advertising campaign on the radio, television, newspapers, magazines and social networks. The webpage [www.angosturadelbiobio.cl](http://www.angosturadelbiobio.cl) and the Facebook page were

created with the same purpose: bringing together the community that enjoys this new tourism destination arisen under the aegis of Angostura power plant. At the closing of 2014, this page had approximately 18,000 followers. The above is aimed at ensuring a good 2015 summer season and meeting one of the commitments undertaken when we built Angostura: creating a tourism pole that would benefit the local community. In connection with the tourism offer, it is worth outlining the Huequecura lookout and natural trail, the Visitors' Center, a botanical garden, 2 public beaches and 3 camping facilities managed by tourism entrepreneurs of Santa Bárbara and Quilaco..

**During the first year of Angostura Power Plant operations, Angostura Park tourism facilities received more than 35,000 visitors.**



Angostura Park tourism facilities

During the first half of 2014, the **Work Table with Fishermen in Coronel** was focused on establishing a work plan with 16 fishermen, harvesters and algae picker unions in Coronel, mainly along three working lines: increasing the productive level, training people in marine related trades and promoting alliances for high education scholarships.

The **Work Table of Southern Coronel** kept working with the 11 neighbors' associations that account for a total of 3,500 inhabitants. This year, emphasis was placed on the ongoing training and the leveraging of public funds. Similarly, we continued with the training programs and the school of leaders.

Additionally, in 2014 the **Work Table Manco Creek of Coronel** was set up by representatives of Manco creek sector, neighbors of Santa María de Coronel Complex who have had a more critical view of our operations. Although controversies still persist, training was done on

environmental issues, including a visit to the power plant so that people could learn operational details. Collaborative budgets were prepared, which brought about ideas for infrastructure, sports and healthy life projects.

In connection with **Corporate Social Responsibility (CSR) Agreements with Municipalities**, we furthered the three cooperation agreements signed with the municipalities of San Esteban, Los Andes and San Clemente during 2013, to develop projects aimed at improving the quality of life at the respective districts. It is worth outlining that we continued to work on and manage the projects relating to the agreements subscribed with the Municipalities of Santa Bárbara, Quilaco and Coronel.





Visitors' center at the Angostura Power Plant

- > Relación con comunidades locales
- > Aspecto material: Información y comunicación con comunidades
- > **Generando Confianza**
- > Aspecto material: Inversión Social
- > Generando Oportunidades
- > Generando Futuro

**During 2014, 18,124 people visited our power plants, including the House of Energy at Colbún's power station and the Visitors' center at the Angostura Power Plant. These centers, which are open to the community, allow our neighbors to learn about the electric industry, who we are and what we do in a didactic and entertaining manner. We will continue progressing toward that direction over the coming years.**

In respect of our efforts to enhance the communication with our neighbors, in 2014 we strongly focused on expanding the information provided around three axes:

### **Second Public Address at Santa María Complex**

In order to inform the community of Coronel about the operational, environmental and social results of Santa María Complex's Unit 1 during its second year of operations, Colbún offered its second public address before more than 200 representatives of social organizations and authorities of Coronel. This year, the Company also conducted a similar activity with opinion leaders, unions, universities and authorities of Concepción. Both instances also served to answer questions and queries of community members, showing not only the good performance of the power plant, but also the areas where operational improvements have been introduced and those where we still have challenges. FOTO



Public Address at Santa María Complex

protocols before and during the river freshets, for the next winter season we will make our best efforts to share and to inform the community over the proper operation of the gates and its safety protocols before freshets in a more fluid manner. FOTO

### **Dissemination of Angostura Emergency Plan**

In response to the concerns raised by the community that lives close to Angostura Power Plant over the opening of the gates resulting from significant freshets of the Biobío River, we agreed to a communications protocol with the local and regional authorities, so as to create coordination instances to handle eventual emergencies. In addition, we were proactive in keeping the community informed on the media, local and regional radios. Lastly, in October we celebrated the safety day with the participation of more than 100 neighbors and local representatives. Although Colbún activated its operational and communication pro-

### **Dissemination of San Pedro Hydroelectric Plant Project**

During the second half of the year several meetings were held to inform the communities of Panguipulli, Los Lagos and Valdivia of the technical adjustments to be implemented in San Pedro project in Los Ríos Region. Those meetings were attended by regional, local and community authorities, and people who live close to San Pedro River and the project, opinion leaders and the media

## Main social environmental conflicts

> Colbún-15

During 2014, we continued in the search of mutually beneficial projects with our neighboring communities. However, there were some issues which challenge us to continue improving:

- Early in 2014, different organizations promoted a referendum in Coronel to have the neighbors decide over the permanency of thermoelectric power plants in the district. Protests around this issue took place in May and in December, which convened between 200 and 300 people. Within this context, Colbún participated in several radio and TV programs to answer questions and doubts and to inform the community on the environmental impacts of the power plant and the measures adopted to mitigate them; we said Santa María I had been the object of more than 90 inspections in two years without receiving fines or sanctions. All plant parameters are below the regulatory limits. The General Controllershship of the Republic disallowed the performance of the referendum.
- In January of 2014, the Superintendence of the Environment summoned a district attorney to Santa María I power plant, within the framework of a sanctioning procedure filed in April of 2013 due to the entry of biomass to the power plant cooling system, as a result of the stranding of shrimps, crabs and other marine species in Lo Rojas fishing bay in Coronel. During 2013 the stranding of these species – which is a natural phenomenon – had been widely covered by the media, generating concern among the people who were not aware of these natural phenomena. At the end of 2013, Colbún implemented a pioneer technology in Chile to prevent the entry of biomass to the power plant in these exceptional situations; in March of 2014 the company invited the community of Coronel and the media to know this new system and to clarify doubts about its operation. As a result of the measures adopted, by mid-year the Superintendence of the Environment acquitted Colbún of the charges.
- In March of 2014, the mayor of Santa Bárbara, Daniel Salamanca, publicly asked the company to provide a definite solution to seven families which access - located on the southern bank of Huequecura river – had been flooded by Colbún in September of 2013. Colbún replaced this road with a new one pursuant to the parameters set in the RCA; however, these seven families filed an action for injunctive relief against the Company. Later, at the end of 2013 the Court of Appeals of Concepción rejected the injunctive relief. Finally, by mid 2014 the Ministry of Public Works denied a request made by the mayor in that regard. However, Colbún has kept on discussing with the local authority to look for a better road alternative.

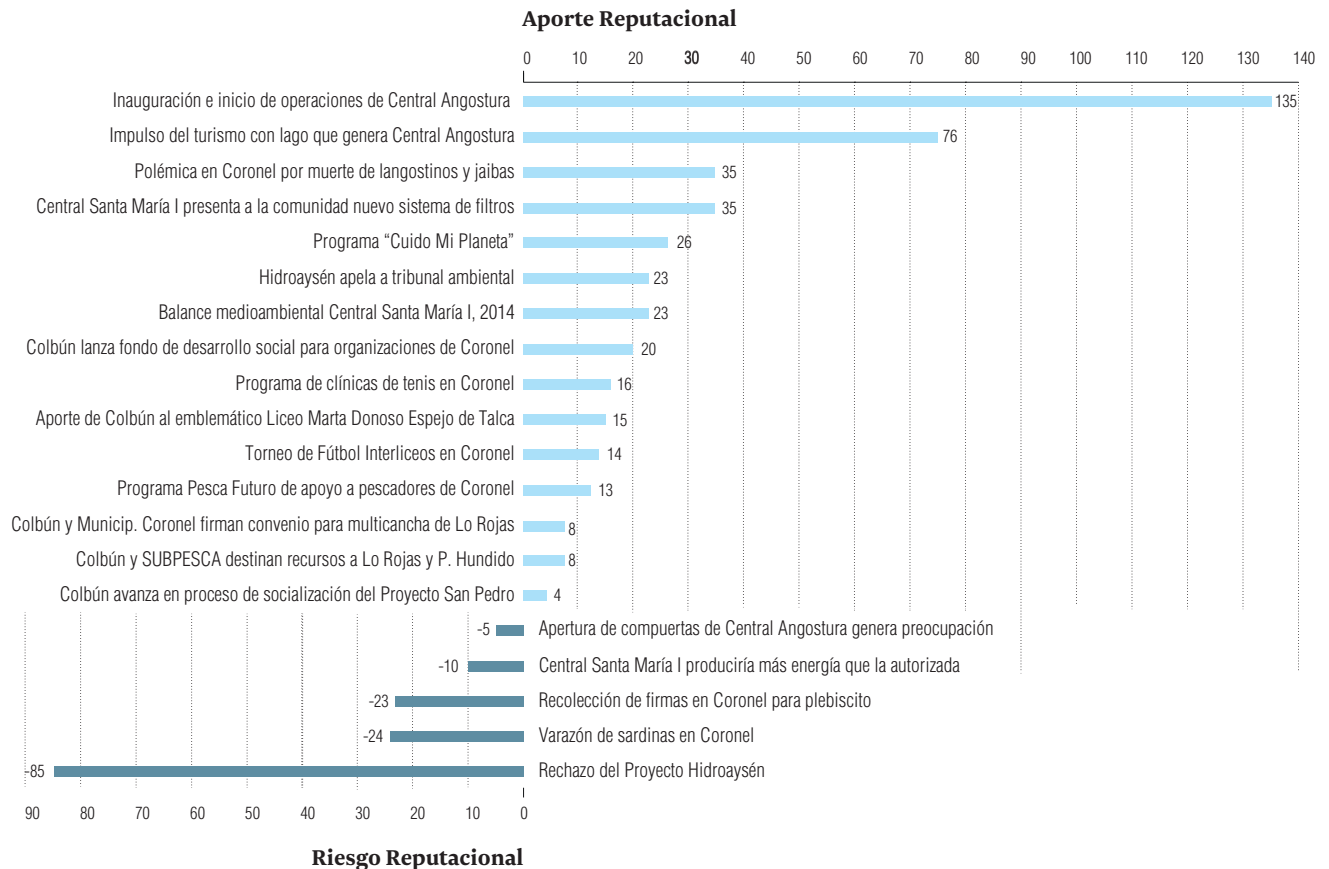


**At Colbún we are promoting a new way to develop and implement the projects, seeking to provide the neighbors and the community with open power plants with strong emphasis on social innovation. The inauguration of Angostura Power Plant represents an achievement we are proud of, as this power plant generates a tourism attraction pole that has benefited the local community and has directly employed more than 70 people of our neighboring communities.**

## Index of Importance on the Media: Contribution and Reputational Risk

20 main milestones, January-December 2014

Colbún Records, Projects and Affiliates. Total Media



## Communication channels and claim instances available to the community

> Colbún- 14

In addition to the dialogue channels mentioned in the chapter "Sustainability and Colbún", we may mention the following channels

### Communication Channel available to the Community

[Open door policy on Fridays, Santa María Complex to address the concerns of neighbors and the community in general](#)

[Public Address at Santa María Complex in Coronel and Concepción](#)

[Safety Day in Angostura Hydroelectric Power Plant](#)

[Participative monitoring of noise sources at Santa María Complex](#)

[Facebook page in Angostura power plant, Biobío](#)

[Dissemination of San Pedro Project's adjustments](#)

[Sustainability Report \(query, contact email, document\)](#)

["More Energy" Bulletin \(contact email, document\)](#)

[Webpage \(communications email\)](#)

[Reception of letters at the power plants](#)

[Mobile phones of the Public Affairs team in the field](#)

## 04 / Material Aspect: Social Investment

> G4- 27

<b>Why is it material?</b>
The development of local communities in the 20 districts where we operate, of which half pertains to the 30% most vulnerable people in the country is a commitment we will seek to deepen year after year.
<b>Which stakeholder mentioned this in the survey?</b>
The information and communication with the communities was addressed in our internal consultation by the following stakeholders: investors, clients and suppliers, environmental expert and workers.
<b>What is our objective?</b>
We want to collaboratively promote community development through innovative, sustainable projects with high social impact, linked to the productive development, education and quality of life improvement. In addition, we seek to promote the development of local economy boosting employment and encouraging vendors to join our value chain.
<b>How do we manage?</b>
At collaborative work tables definition is made of the relevance given to Educational, Entrepreneurial and Quality of Life issues by the people and the local authorities. Based on the above, we jointly look for social investment projects that could be implemented, promoting the management of resources through the application to government funds or the like.
<b>How do we measure?</b>
Results of training, entrepreneurial processes and work tables for productive development (Colbún -17) /Social investment by type of initiative (Colbún -16).
<b>Who is accountable?</b>
Sustainable Development Division Management

### Social investment by type of initiative, 2014

> Colbún-16

Initiative	Investment	No. of Benefited People
GENERATING TRUS	Leadership	1,350
	Participation	18,488
	<b>Total</b>	<b>19,838</b>
GENERATING OPPORTUNITIES	Local Employment	50
	<b>Total</b>	<b>50</b>
GENERATING FUTURE	Education	5,963
	Entrepreneurship	5,174
	Quality of Life	24,748
	<b>Total</b>	<b>35,885</b>
OTHERS	Others	2,805
<b>Grand total</b>		<b>58,578</b>



#### What is Colbún's opinion regarding the possibility of paying taxes in the localities where it operates?

The Ministry of Energy has announced a draft law ("Associativity Law") that seeks to provide an institutional framework regulating the relationship between the energy projects and the communities hosting those projects, by defining permanent contributions that will benefit those communities. At the closing of this Report, we were not aware of the detailed proposal of the Executive; hence Colbún still does not have a definite opinion on this legal initiative.

## 05 / Generating Opportunities

In connection with the achievements in promoting local economy, during 2014 we Generated Opportunities aimed at maximizing local manpower and suppliers.

At Santa María Complex of Coronel, for example, of the 305 workers who are either employed or provide services as permanent contractors, 51% come from Lota and Coronel. In addition, we estimate that local and regional Colbún's purchases linked to that power plant reached \$3,000 million, of which \$576 million relate to 31 suppliers of Lota and Coronel.

In the case of Angostura power plant, close to 70 community members have been retained to work at the tourism project around the reservoir.

**Similarly, with the support of the Work Promotion Office (OMIL) of the Municipality of San Clemente, we worked strongly to identify potential workers for the future La Mina Project, which construction started in December of 2014. A total of 50 workers were trained in trades such as brickwork and confectionery.**

- > Relación con comunidades locales
- > Aspecto material: Información y comunicación con comunidades
- > Generando Confianza
- > **Aspecto material: Inversión Social**
- > **Generando Oportunidades**
- > Generando Futuro

San Clemente Municipality trainee / La Mina Project



## 06 / Generating Future

> Colbún-17

To foster local development by means of socially innovative and sustainable projects, we progressed in the construction of new social infrastructure, and developed entrepreneurship, technical and environmental training programs that will allow us to Generate Future.

### Social infrastructure and education highlights



Reconstruction Marta Donoso Public School

**The reconstruction of the public school Marta Donoso in Talca meant the implementation of more than 30 new classrooms, roofed yards, a gym, a library with close to 10,000 books, three computer science labs with state-of-the art equipment and an auditorium open to the community. These facilities are part of the 13 thousand square meters of the hallmark public school Marta Donoso Espejo, rebuilt thanks to the public – private Alliance between the Ministry of Education, the Municipality of Talca and Colbún, directly benefiting 1,500 students.**

"FORCOM", San Esteban Municipal School



### Complementary Training Program (FORCOM)

Implemented in 2008, in Alliance with the Technology University INACAP, the Complementary Training Program (FORCOM) seeks to promote the entry of high-school students to the labor world, by providing them with employment tools in different areas. In 2014 the program was implemented at 10 schools of 9 municipalities where we operate, benefiting a total of 227 students.

- > Relación con comunidades locales
- > Aspecto material: Información y comunicación con comunidades
- > Generando Confianza
- > Aspecto material: Inversión Social
- > Generando Oportunidades
- > **Generando Futuro**

(Energízate) "Invigorate Yourself" Program



### (Energízate) "Invigorate yourself" program at Coronel

Fostered by the CiCAT from the University of Concepción, the Municipality of Coronel and Colbún, this academic reinforcement plan is a methodological improvement project aimed at bringing science closer to children and teenagers through energy-related scientific subjects, and has benefited close to 1,200 children so far.

"recycling waste" Campaign



### "Taking Care of the Neighborhood" program at Colbún

In the municipality of Colbún, this program promotes the environmental management of residential waste in a collaborative manner. Within this framework, the company organized training sessions, workshops, dissemination activities and implemented competitive funds.

"Taking Care of the Planet" Program



### "Taking Care of the Planet" program

The aim of this program is to create environmental awareness by means of practical and entertaining activities for the community, supporting the environmental certification of the schools. In 2014, we continued implementing the program in Colbún, Yervas Buenas, Codegua and Mostazal, involving more than 2,000 people from the educational community.

Juan Gómez Millas School, Yervas Buenas



### Scholarships

In 2014 we continued to provide six scholarships to members of families that were resettled due to the construction of the Angostura hydroelectric power plant; in addition, we maintained the financial support for the six most outstanding students of our FORCOM program. Lastly, and within the framework of the work table with the fishermen in Coronel, this year the company launched a training scholarship fund for fishermen and their families, benefiting more than 120 people from these organizations.

## Highlights in entrepreneurship and productive development



"Future Fishing" Program in Coronel

### (Pesca Futuro)"Future Fishing" program in Coronel

Within the framework of the work table with the fishermen in Coronel, represented by 16 unions, it is worth outlining that during 2014 six projects were conducted benefiting the first six unions of the work table. These productive projects were undertaken in alliance with the Universidad Católica de la Santísima Concepción and the requirement is that they should respond to a sustainable business model that would benefit all members of each union, incorporating fair trade principles. It should be mentioned that we also worked with the other 10 unions, but their projects are still under development. Also, there are other six fishermen unions in Coronel with whom we have held discussions, but they disagree with the criteria applied by Colbún in its Community Relations policy.



Honey Production, Los Pinos Power Plant

### Competitive Funds for Productive Development

We maintained the competitive funds for Angostura's program "Energy for entrepreneurs", which benefited 128 tourism, agricultural, livestock and beekeeping start-ups. In the case of Santa María I power plant, 11 start-ups were benefited.



Release "Energy for Entrepreneurs"

### "Energy for Entrepreneurs"

Continuing with the agreement with the NGO Acción Emprendedora, the three entrepreneurial centers in the Biobío Region benefited 768 entrepreneurs with business training courses and 125 entrepreneurs received personalized consulting courses and funds to co-finance their projects.

**In collaboration with the consulting firm GeCo, we undertook the second stage of the wild fruit pick up project in areas close to our Angostura power plant. In this stage, we launched a commercial pilot of a new product called "Newén Maqui", which is already on the market. This program benefits 60 families of Santa Bárbara and Quilaco.**



Newén Maqui Product



## Sports highlights



New soccer field, Santa Bárbara

- > Relación con comunidades locales
- > Aspecto material: Información y comunicación con comunidades
- > Generando Confianza
- > Aspecto material: Inversión Social
- > Generando Oportunidades
- > **Generando Futuro**

**Under the framework of the CSR Agreement signed between our Company and the Municipality of Santa Bárbara, this year we repaired and rebuilt the Synthetic Municipal Soccer Field that allows the practice of sports, many times requested by the community.**

### Tennis Clinic in Coronel

In alliance with ESSBÍO Company, Colbún conducted the tennis clinic led by the former captain of Chile's Davis Cup, Horacio de la Peña. In this activity 300 tennis teachers were trained and primary students of 22 schools of the municipality received classes, they also participated in championships.

Jointly with the Football Association of Coronel, we organized the First Football Championship for secondary students of the city, called Jaime Osorio Cartes Cup to the memory of the outstanding former sportsman, professor and director of the Public School of Coronel. Eight schools participated in this activity.







Tennis Clinic in Coronel with Horacio de la Peña

Luis Flores, Regante, Región del Maule



# Chapter — 06

## Environment

Stakeholder	Challenge	Highlights / Actions Executed	Page	Progress Status
Environment	Optimize the use of water in the Aconcagua basin	<ul style="list-style-type: none"> <li>El foco estuvo en evaluar la reducción del consumo de agua en los procesos de las centrales a través de cambios tecnológicos y, por otra parte, identificar mejores formas de disponer el agua utilizada conforme a lo que establece la normativa vigente.</li> </ul>	82	
	Further our collaboration agreement with the Maule South Canal Irrigators and obtain savings in the use of water	<ul style="list-style-type: none"> <li>Within the framework of the work with the Maule South Canal Irrigators, in 2014 we achieved water savings equivalent to 30%. This has been achieved through projects designed to improve efficiency in the use of water for farming purposes, developed with the support of Colbún.</li> </ul>	83	
	Maintain a leading role in the reduction of CO2e emissions	<ul style="list-style-type: none"> <li>We are still the main player in Chile in the reduction of CO2e emissions from hydroelectric projects. At 2014, we have certified 1.9 million carbon bonds before the United Nations.</li> </ul>	85	
	Test the efficiency of the new filter for the intake of cooling water (Santa María I Plant)	<ul style="list-style-type: none"> <li>The filters installed in 2013 yielded 99% reduction in the entry of biomass and 0% entry of fish was recorded</li> </ul>	96	



Fulfilled



Moderately fulfilled



Pending

We seek to generate electric energy balancing the safety, competitiveness and sustainability pillars, minimizing environmental impact, **taking care of our natural resources** and using them adequately to preserve them over time and in such manner that they do not lose their self-purification or regeneration capacity. Our environmental management will also recognize biodiversity, natural habitats and the management of greenhouse gas emissions to provide our activities with **environmental feasibility**

## 01 / Material Aspect: Water resources

> G4-27

<b>Why is it material?</b>
Water shortage is a situation that has persisted these last few years, forcing us to increase our efforts to maintain the productive capacity respecting the importance of water as a fundamental element for the ecosystem and the communities where we operate.
<b>Which stakeholder mentioned this in the survey?</b>
The subject of water resources was addressed in our internal consultation by the following stakeholders: investors, clients and suppliers, workers and environmental expert.
<b>What is our objective?</b>
Colbún has sought to become closer and closer to power generation with high indices of eco-efficiency, considering environmental efficiency criteria in the design and the operation of its projects in addition to the technical and economic criteria.
<b>How do we manage?</b>
The Environmental, Safety and Occupational Health Integrated Management System allow us to continuously improve our environmental performance.
<b>How do we measure?</b>
Energy consumption reduction (G4-EN6) / Average energy efficiency of thermoelectric plants by energy source and regulatory regime (G4-EU11) / Total water intake according to the source (G4-EN8) / Total percentage and volume of recycled and reused water (G4-EN10).
<b>Who is accountable?</b>
Business and Energy Management Division, Engineering and Projects Division, Generation Division, and the Environmental Division which reports to the Sustainable Development Division

### The importance of water resources

> G4-EN8, G4-EN10

Colbún builds and operates its power plants seeking to achieve the best possible environmental standards, in abidance not only by the national standards but also international good practices. Under this philosophy, the efficient use of water is fundamental.

The sustainable use of the resources translates not only in the fact that our hydroelectric power plants exceed by far the standards set by the United Nations (4 W/m<sup>2</sup>) to qualify projects as efficient in terms of the water management and low environmental impact. This is due fundamentally to the high energy density indicators in the reservoirs, which is calculated based on the ratio between their installed capacity and the flooded area, indicator which has improved if we look at the evolution of our power plants over time.

10<sup>W/m<sup>2</sup></sup>

**Colbún Reservoir**  
(commissioned in 1985):

12<sup>W/m<sup>2</sup></sup>

**Machicura Reservoir**  
(commissioned in 1985):

47<sup>W/m<sup>2</sup></sup>

**Angostura Reservoir**  
(commissioned in 2014)

55<sup>W/m<sup>2</sup></sup>

**San Pedro Project**  
(under development)

The amount of superficial water used during 2014 both by our thermoelectric and hydroelectric power plants showed a significant increase from 2013. However, this increase is more apparent than real. Indeed, this is due to the significant underestimation of sea water in 2013 to cool down Santa María Complex's Unit I. This was corrected in 2014 through the implementation of improvements in the monitoring, measurement and control systems. All in all, the water used to cool down Santa María Complex's Unit I is fully returned to its original source, the sea, so, strictly speaking this would not be water consumption. In the case of hydroelectric power plants, the only water used is that of the power plant offices, given that the water used in the generation process is completely returned to the water streams, without any disturbance whatsoever (non-consumptive use). In turn, the lower underground water consumption is due mainly to the lower availability of this resource in the Nehuenco Complex sector.

> **Aspecto material: Recurso hídrico**

- > Eficiencia en el uso de los recursos
- > Aspecto material: Emisiones atmosféricas y cambio climático
- > Aspecto material: Biodiversidad
- > Aspecto material: Incidentes ambientales

Santa María Complex



### Total water intake, according to the source (consumptive use)<sup>1</sup>

Source	Total water intake (m <sup>3</sup> / year)			
	2011	2012	2013	2014
Superficial water *	10.250	127.360.334	233.558.002**	343.341.193
Underground water ***	4.368.025	4.121.869	3.789.543	3.730.196
Water supply from the municipality or other utility companies	189.397	162.252	161.786	125.120
<b>TOTAL</b>	<b>4.567.672</b>	<b>131.644.455</b>	<b>237.509.331</b>	<b>347.196.510</b>

### Use of water for power generation purposes (non-consumptive use)<sup>2</sup>

Source	Use of water for power generation (million m <sup>3</sup> / year)			
	2011	2012	2013	2014
Colbún	12.983	10.613	9.826	13.326
Canutillar	1.288	1.879	1.769	1.735
Carena	301	288	289	285
Rucúe-Quilleco	5.035	4.375	3.984	4.211
Aconcagua	1.172	1.271	1.293	1.110
Angostura	-	-	-	4.848
<b>Total</b>	<b>20.779</b>	<b>18.425</b>	<b>17.161</b>	<b>25.516</b>

### Water shortage in the Aconcagua basin

Within the framework of the long-lasting water shortage faced by the central-southern zone of our country, we have geared our efforts toward optimizing the use of water in two ways. One, seeking to gradually reduce water consumption at the power plants through technology changes, and two, by identifying better ways to dispose of the waste water, in agreement with the applicable standards.

The final goal of these measures is to reduce our reliance on the use of water, so as to minimize the competition with other users of the

basins where we operate. This is especially important in the case of Nehuenco Complex, which is located in a zone of high water demand. Starting in November of 2014, we developed a new automatic well control system provided with high standards that allow the ongoing operation, recording and analysis and the tripping and stoppage of the wells according to the Complex's requirements. The system also allows troubleshooting the wells, facilitating maintenance tasks and generating automatic reports, all of which brings about a significant improvement in the efficient use of water.

<sup>1</sup> The amount of water used does not include the headquarter offices. However, we included all thermoelectric and hydroelectric power plants (the latter for their consumption at the administrative offices).

<sup>2</sup> Water used in hydroelectric power generation is that taken from its source, used in power generation and then fully returned to its water stream (non-consumptive water rights).

**The collaboration agreement subscribed with the Association of Maule South Canal Irrigators brought about water savings by 30% during 2014; this has been achieved through projects designed to improve efficiency in the use of water for farming purposes, developed with the support of Colbún. This has meant additional revenues for the farmers, who receive payments from Colbún for the water saved in irrigation and used in power generation.**

- > **Aspecto material: Recurso hídrico**
- > **Eficiencia en el uso de los recursos**
- > Aspecto material: Emisiones atmosféricas y cambio climático
- > Aspecto material: Biodiversidad
- > Aspecto material: Incidentes ambientales



Colbún Power PLant

## 02 / Efficiency in the use of the resources

> G4-EN6, G4-EU11

is why we generate energy from residual energy by means of state-of-the-art and highly efficient equipment.

Thanks to these efforts, in 2014 we generated additional power by 290 GWh, 30% above from 2013 (222 GWh).

### **San Ignacio Hydroelectric Power Plant (run-of-the-river):**

San Ignacio power plant takes advantage of the residual energy existing at Colbún-Machicura Complex's restitution channel, thus maximizing the use of energy and water of the complex with minimum environmental impact.

### **Chiburgo Hydroelectric Power Plant (run-of-the-river):**

Chiburgo mini-hydro power plant was built in 2007 taking advantage of Colbún's facilities, which provides water for irrigation without disturbing its quality or quantity.

### **San Clemente Hydroelectric Power Plant (run-of-the-river):**

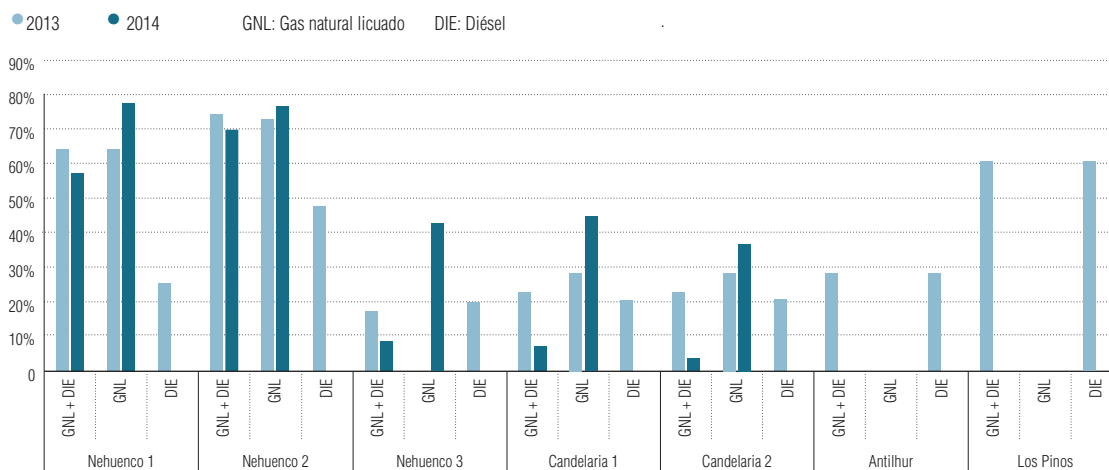
This power station allows using the power losses generated along the Sanatorio Gorge, as it is used to return water to various irrigation channels. This power plant is registered under the United Nations' Clean Development Mechanism, resulting from CO<sub>2</sub> emission reduction from its operation.

**In Los Pinos thermoelectric power plant we achieved efficiencies of 25 to 30% greater than the average of similar power plants, which enables us to generate additional power by 20 to 80 GWh /year with the same resources.**

### Energy savings of the system attributable to Colbún's power plants

Initiatives Name	Description	Place of implementation of the initiative	Unit	2012	2013	2014
				Estimated Savings		
Optimization of the water resource	Development of power plants that use residual energy from water streams	San Ignacio	GWh	130	121	175
		Chiburgo	GWh	68	69	60
		Clemente	GWh	12	15	16
Optimization in the use of fossil fuels	Development of a thermoelectric power plant that shows efficiencies in the order of 25 to 30% greater than the average of similar power plants.	Los Pinos	GWh	56	17	39
<b>Total</b>				<b>266</b>	<b>222</b>	<b>290</b>

### Thermal efficiency at Colbún's power plants (%)<sup>3</sup>



Notes:

- Thermal efficiency is the percentage of primary energy of the fuel transformed in electric power.
- Antihue power plant and Los Pinos power plant do not operate with Liquefied Natural Gas.



## 03 / Material Aspect: Atmospheric emissions and climate change

> G4- 27

### Commitment with Climate Change

Climate change and its implications has been a relevant aspect to Colbún over the last decade. Evidence of the above is that in 2002 we commissioned Chacabuquito power station (29 MW, Valparaíso Region), the first hydroelectric power plant in the world that traded carbon credits, and which was registered under the Clean Development Mechanism (CDM) in 2007.

The main highlights of 2014 were as follows:


- **Reduction of CO<sub>2</sub>e Emissions:** We continue to be the main player in Chile in connection with the reduction of CO<sub>2</sub>e emissions from hydroelectric projects. At 2014, we have certified **1.9 million of carbon credits** (CERs, by its acronym in English) before the United Nations, **totaling more than 2.4 million of CO<sub>2</sub>e tons verified** before the Clean Development Mechanism and other voluntary standards.
- **Best Corporate Carbon Footprint:** Award given by the British-Chilean Chamber of Commerce, which recognized Colbún for the second year in the category “Large Industries”.
- **Carbon Neutral Corporate Offices:** Just as in previous years, we neutralized CO<sub>2</sub> emissions at Colbún’s corporate offices in 2013, in connection with the use of vehicles pertaining to the company, purchase of electric energy, transfer of workers from their homes to the offices, air trips, waste generation and others.
- **Neutralization of CO<sub>2</sub>e Emissions at Public Events:** Colbún supported the neutralization of CO<sub>2</sub> emissions at the meetings held by Acción RSE’s partners, as well as other activities and events.

<b>Why is it material?</b>
The variability of water resources and the sustained drought faced by the central-southern zone of our country brings forward the importance of the thermoelectric component in the energy matrix. This implies maintaining greenhouse gas effect monitoring and management systems as well as equipment to monitor other emissions generated at those power plants.
<b>Which stakeholder mentioned this in the survey?</b>
Atmospheric emissions and climate change were addressed in our internal consultation by the following stakeholders: clients and suppliers, and environmental expert.
<b>What is our objective?</b>
We seek to be at the cutting edge of climate change issues. This includes getting our power plants ready to comply with the requirements set forth in Supreme Decree 13/2011 of the Environmental Ministry that establishes the local contaminant emission standard (PM, NO <sub>x</sub> , SO <sub>2</sub> ) for thermoelectric power plants.
<b>How do we manage?</b>
<p>The main management measure, both for GHG and local contaminants is associated mainly with the use of highly efficient equipment, so as to produce the greatest amount of energy with the least amount of fuel, which translates into fewer emissions.</p> <p>In the specific case of greenhouse gas emissions they are managed through the development of a generation mix balanced between the thermal and renewable component, which allows Colbún to show an emission factor lower than the SIC’s average.</p> <p>Similarly, the local atmospheric emissions are reduced through abatement and/or control equipment. For example, at the Santa María Complex (Coronel), the equipment used to abate particulate material (PM) emissions is an electrostatic precipitator able to reduce the emissions by 99%; whereas for sulfur dioxide (SO<sub>2</sub>) a water desulfurizing unit is used which allows reducing gas emissions by 78%; finally, low NO<sub>x</sub> burners are used to control nitrous oxide emissions (NO<sub>x</sub>). All Santa María Complex emissions are below the standard – which are similar to those applied in Europe -, and in some cases, such as particulate material, this is close to 10 times lower than the regulatory limit.</p>
<b>How do we measure?</b>
Direct greenhouse gas emissions (“Scope 1”) (G4-EN15) / Indirect greenhouse gas emissions in the power generation (“Scope 2”) (G4-EN16) / Other indirect greenhouse gas emissions (“Scope 3”) (G4-EN17) / Intensity of greenhouse gas emissions (G4-EN18) / NO <sub>x</sub> , SO <sub>x</sub> and other significant atmospheric gas emissions by type and weight (G4-EN21)
<b>Who is accountable?</b>
Generation Division, Environmental Management and Sustainability Assistant Management, which report to the Sustainable Development Division

## Colbún's Power Plants Registered by the Clean Development Mechanism

Central	Entrada en operación	MW	Registro MDL	Reducción anual de CO <sub>2</sub> e (hidrología media)	Equivalente en desplazamiento de automóviles
Chacabuquito	2002	29	2007	80,000	20,000
Hornitos	2008	55	2008	118,000	29,500
Quilleco	2007	71	2008	172,000	43,000
San Clemente	2010	5	2011	17,000	4,250
<b>TOTAL</b>		<b>166</b>		<b>387,000</b>	<b>96,750</b>

Colbún has four hydroelectric power plants registered with the Kyoto's Protocol Clean Development Mechanism, which allow achieving an annual average reduction of 387,000 tons of CO<sub>2</sub>e, equivalent to taking more than 96,000 vehicles out of circulation.

$$\frac{387,000}{\text{tonCO}_2\text{e}} = \frac{96,000}{\text{vehículos}}$$


Hornitos Power Plant



## Carbon footprint and other atmospheric emissions

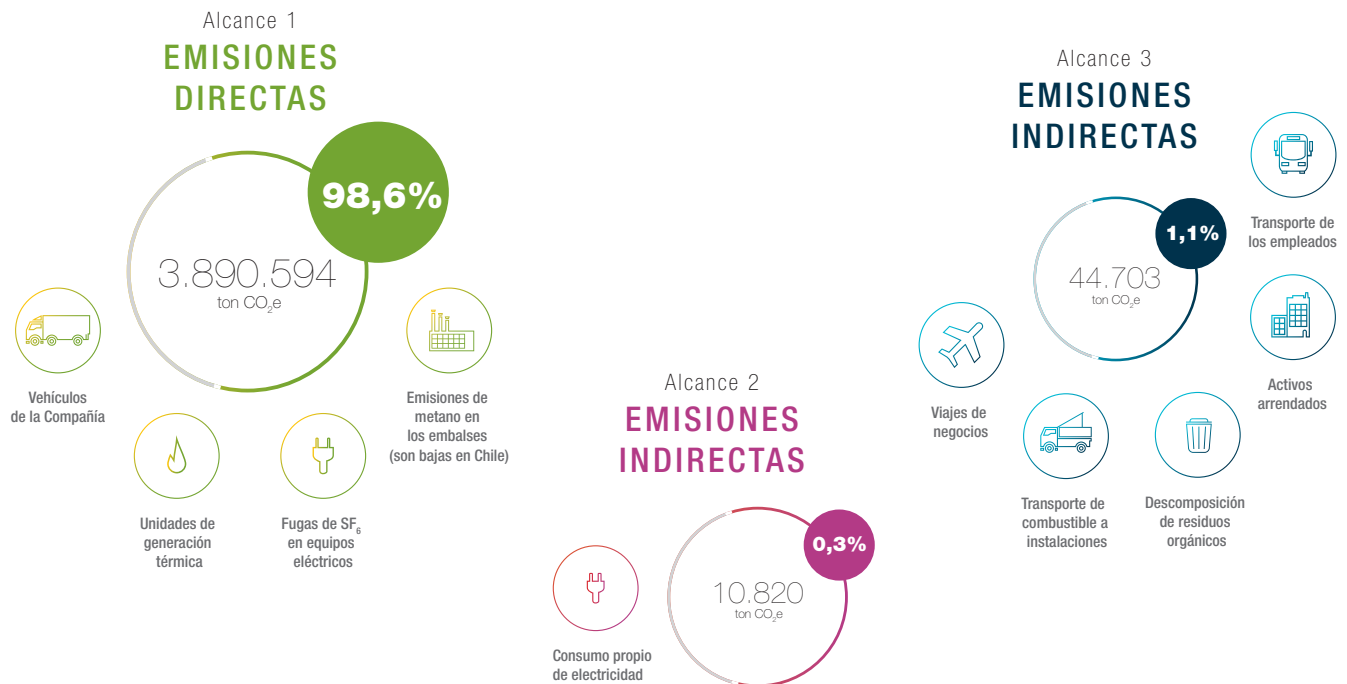
> G4-EN15, G4-EN16, G4-EN17, G4-EN18, G4-EN21

Since 2009 we have measured and publicly reported to the CDP (former Carbon Disclosure Project) our corporate carbon footprint of 2001 and for the following years. In addition, since 2010 our Carbon Footprint is verified by an external entity, which allows corroborating the extent, quality and completeness of the calculations developed, in addition to neutralizing CO<sub>2</sub> emissions of our corporate building in Santiago.

- > Aspecto material: Recurso hídrico
- > Eficiencia en el uso de los recursos
- > **Aspecto material: Emisiones atmosféricas y cambio climático**
- > Aspecto material: Biodiversidad
- > Aspecto material: Incidentes ambientales

### Total Greenhouse Gas Emissions at Colbún, 2013.

> G4-EN15, G4-EN16, G4-EN17



	Scope 1 (ton CO <sub>2</sub> e)	Scope 2 (ton CO <sub>2</sub> e)	Scope 3 (ton CO <sub>2</sub> e)
	Direct emissions	Indirect emissions	Indirect emissions
2012	3,048,858	42,062	21,405
2013	3,890,594	10,820	44,703

#### Notes:

- According to the applicable regulation that establishes May 1 as the deadline to provide an official declaration on atmospheric emissions, both the carbon footprint as well as other atmospheric emissions of our power plants presented hereunder show the results for 2012 and 2013 (i.e., one-year lag), situation that applies for the following indicators EN15, EN16, EN17, EN18 and EN21 of guideline G4.

- For liquid fuels, consideration is made of the emissions associated with land transport from the refinery to the power plant using them; while for the liquefied natural gas no consideration is given to the maritime transport.

The increase in greenhouse gas emissions during 2013 is due mainly to the drought, where the lower availability of hydroelectric power was offset by a higher participation of thermoelectric power plants. In addition, CO<sub>2</sub> emissions were up in 2013 as compared to the previous year, as 2013 was the first full year of operation of Santa María I (unlike 2012, which considered the greenhouse gas emissions from the commercial commissioning of the power plant on August 15, 2012).

The reduction observed in Scope 2 is due to a change in the monitoring methodology for Santa María I, which allows us to better identify the energy consumption in the grid and those relating to our own generation consumption. It should be noted that self-consumption was accounted for in Scope 1 of Colbún's GHG emissions inventory, so, with this new approach we prevented the double-counting of these emissions in our carbon footprint.

The increase in Scope 3 is also due to the full year of operation of Santa María I. The maritime transportation of coal, which accounts for 85% of the emissions under this scope and its commuting inside the power plant, as well as the movement of ashes to the stacking sites are additional and relevant sources of emission.

The increase in emissions is being mitigated now mostly by the commissioning of Angostura power station (316 MW), which allows balancing our mix of hydroelectric and thermoelectric generation, to obtain a greenhouse gas emission factor (tonCO<sub>2</sub>e/MWh) much lower than the average of the Central Interconnected System (SIC).



**As part of our commitment to progress along the measurement of our greenhouse gas emissions and in order to know the impact of our operations throughout our value chain we have been working to measure the carbon footprint associated with the construction of La Mina Hydroelectric Project, since late 2013. This is an unprecedented action in Chile, which will allow deepening the knowledge on the impact of hydroelectric projects also during their construction stage.**

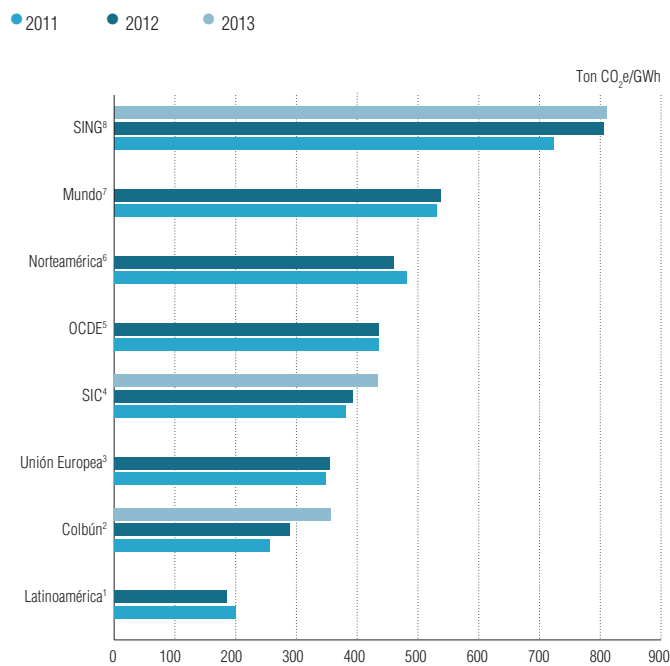
La Mina Project

- > Aspecto material: Recurso hídrico
- > Eficiencia en el uso de los recursos
- > **Aspecto material: Emisiones atmosféricas y cambio climático**
- > Aspecto material: Biodiversidad
- > Aspecto material: Incidentes ambientales

## Emission Factors

The following data show the emission factors of the power industry in some of the main regions around the world over the last 3 years. This factor contemplates direct combustion-related emissions at the power generation units for their respective systems:

### 2011-2013 emission factors



Notes:  
<sup>1,3,5,6,7</sup> Source: Statistics from the International Energy Agency, IEA, updated at 2012.  
<sup>2</sup> Source: 2013 Carbon Footprint Report, Colbún S.A.  
<sup>4,8</sup> Source: Ministry of Energy, 2013

**Colbún’s emission factor as compared to other companies and/or electric power systems shows the development of a balanced energy matrix. The excellent performance of the aggregated Latin American matrix is due to the strong presence of hydroelectricity in most countries of the region.**

Angostura Power Plant





## Intensity of greenhouse gas emissions

> G4-EN18

For 2013, our intensity of greenhouse gas emissions was 0.362 [tCO<sub>2</sub>e/MWh], which represents an increase of 23% from 2012. This increase is due to the greater participation of thermoelectric power generation resulting from the commissioning of Santa María I, added to the drought affecting the Central Interconnected System (SIC).

Calculation of the intensity of GHG emissions		2012	2013
Scope 1 (ton CO <sub>2</sub> )		3,048,858	3,890,594
Scope 2 (ton CO <sub>2</sub> )		42,062	10,820
Scope 3 (ton CO <sub>2</sub> )		21,405	44,703
Net Energy Generated (MWh)		10,605,748	10,910,294
Intensity	Type of emission included in the intensity	GEI	GEI
	Gases included in the intensity	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, SF <sub>6</sub>	CO <sub>2</sub> , CH <sub>4</sub> , N <sub>2</sub> O, SF <sub>6</sub>
	Intensity (emission/denominator)	<b>0,293 ton CO<sub>2</sub>/MWh</b>	<b>0,362 ton CO<sub>2</sub>/MWh</b>

Note: The intensity of emissions describes the behavior of Colbún's GHG emissions per net energy unit generated in all of our facilities (tons of CO<sub>2</sub>e per MWh injected to the grid).

> Aspecto material: Recurso hídrico  
 > Eficiencia en el uso de los recursos  
 > **Aspecto material: Emisiones atmosféricas y cambio climático**  
 > Aspecto material: Biodiversidad  
 > Aspecto material: Incidentes ambientales

## Other atmospheric emissions

> G4-EN21

Atmospheric emissions from Colbún's fixed sources (tons/year)					
Parameter	2010	2011	2012	2013	Fixed source emissions country-wise
NO <sub>x</sub>	1,170	1,579	4,461	4,421	127,465
SO <sub>2</sub>	23	33	954	2,085	157,612
PM	69	48	153	88	34,162

Notes:

- The reduction in particulate material (PM) emissions during 2013 as compared to the previous year is due mainly to the increase in natural gas consumption (57%) in replacement of diesel oil.
- The increase in total SO<sub>2</sub> emissions is due to the rise in coal consumption at Santa María I in 2013. In September of 2012, Santa María power station was commissioned, reaching a coal consumption of approximately 400,000 tons, whereas in 2013, consumption doubled, peaking 950,000 tons. The greater amount of coal used, the higher the SO<sub>2</sub> emissions.
- At a country level, Colbún's fixed source emissions accounted for 3.5% in NO<sub>x</sub>, 1.3% in SO<sub>2</sub>, and 0.26% in particulate material (PM).

According to the statistics of the Record of Contaminant Emissions and Transfers from the Environmental Ministry (RETC MMA), during 2013, a total of 4,467 tons of Particulate Material were emitted in the Biobío Region, 25,205 tons of NO<sub>x</sub> and 24,016 tons of SO<sub>2</sub>, while in the district of Coronel, 454 tons of Particulate Material were emitted, 6,783 tons of NO<sub>x</sub> and 5,829 tons of SO<sub>2</sub>. At the Valparaíso Region, meanwhile, 3,129.9 tons of PM were emitted, 20,217 tons of NO<sub>x</sub> and 37,763 tons of SO<sub>2</sub>, while in the municipality of Quillota, 198 tons of PM were emitted, 2,846 tons of NO<sub>x</sub> and 143 tons of SO<sub>2</sub>.

During 2013, Santa María I emitted a total of 29.5 tons of PM, 3,549 tons of NO<sub>x</sub> and 2,073 tons of SO<sub>2</sub>, while for the same year, Nehuenco Thermoelectric Complex emitted a total of 20.5 tons of PM, 476 tons of NO<sub>x</sub> and 8.5 tons of SO<sub>2</sub>.

When comparing Santa María's I 2013 emissions against the emissions generated by fixed sources existing in the municipality of Coronel, we note that particulate material emissions amounted to 6.4% of the annual emissions of the municipality and only to 0.7% of the emissions of the region, while NO<sub>x</sub> and SO<sub>2</sub> emissions amounted to 52% and 36% of the municipal emissions, respectively.

<sup>3</sup> Source: Record of Contaminant Emissions and Transfers (RETC) Environmental Ministry, 2013. SO<sub>2</sub>, measured as SO<sub>x</sub>.

Similarly, when comparing Nehuenco Thermoelectric Complex's 2013 emissions against the emissions generated by fixed sources existing in the municipality of Quillota, we note that particulate material emissions generated by the Complex amounted to 10.4% of the emissions generated by municipal fixed sources, while NOX and SO<sub>2</sub> emissions amounted to 16.7% and 5.9%, respectively.

The primary air quality standard for particulate material PM<sub>10</sub> provides that the annual air quality standard for breathable particulate material shall be deemed as exceeded when the annual concentration calculated as the arithmetic average of three calendar years is greater than or equal to 50 µg /m<sup>3</sup>N. Per the above, and as seen in the air quality results shown in the following table, for the period 2011-2013, the arithmetic average of annual PM<sub>10</sub> concentrations exceeded the limit established at the quality measurement stations Coronel North and Coronel South. We have noted an increase of particulate material concentrations during the winter, due mainly to the intensive use of firewood for residential heating. It is worth outlining that in Chile, 20% of the primary energy used comes from wooden logs, which is the second most important source of energy after crude oil. Of this percentage, 59% corresponds to residential use of firewood.

#### Annual average of PM<sub>10</sub> concentration at air quality measurement stations (µg/m<sup>3</sup>N)

Zone of interest	Air Quality Station	Year			Average
		2011	2012	2013	
District of Coronel	Coronel North	60	62	60	61
	Coronel South	64	65	58	62
	La Palma	36	35	33	35
District of Quillota	San Pedro	39	42	27	36
	Fire Department	42	40	41	41

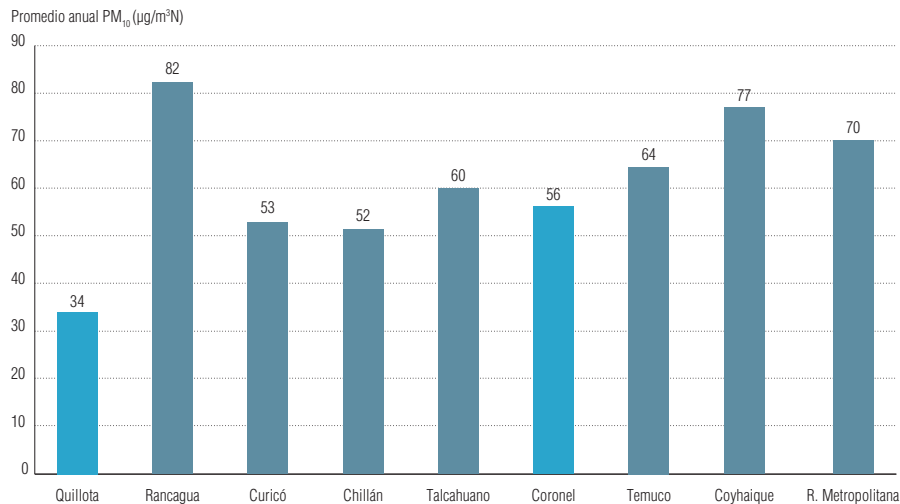
Emissions compensation plan at Cementos Biobío, Santa María Complex





When assessing the air quality of the zones where Santa María I and Nehuenco Complex operate, we note that over the last 3 years the annual concentrations of particulate material have decreased progressively.

### PM<sub>10</sub> Concentration (ug/m<sup>3</sup>N) Air Quality Monitoring Stations, Annual 2013 Average



Santa María Thermoelectric Complex is obligated to offset 100% of its particulate material emissions. In order to fulfill this obligation we submitted a compensation plan for particulate material emissions, which was approved by the Environmental Evaluation Service of the Biobío Region in 2011, through exempt resolution No. 281.

This plan contemplated the replacement of 1,000 firewood stoves with modern low-emission heaters in the district of Coronel, the elimination of low efficiency coal boilers and the implementation of new hot water combined boilers (diesel/liquefied gas) in the hospitals of Coronel and Lota, as well as the installation of filters in industrial processes. It is worth mentioning the installation of a sleeve filter for Cementos

Biobío, financed by Colbún as part of this compensation plan which today allows reducing 450 tons/year of particulate material.

Through the execution of this program, Santa María Complex managed to avoid the emission of 590 tons of particulate material (PM) during 2014. Considering that during such period Santa María I emitted approximately 76 tons of PM, by the implementation of this emission offsetting plan we managed to prevent the emission of 514 tons, which equals to the emission of at least 7 thermoelectric power plants of similar characteristics than Colbún's.

**During 2014, we ranked third in the category “Air” of the national award “RECYCLAPOLIS” for our Particulate Material Emission Compensation Plan in Coronel.**

<sup>4</sup>This number includes particulate material emitted during the on and off switching of Santa María I. In normal operation (under regime), the emissions reach 11 tons.

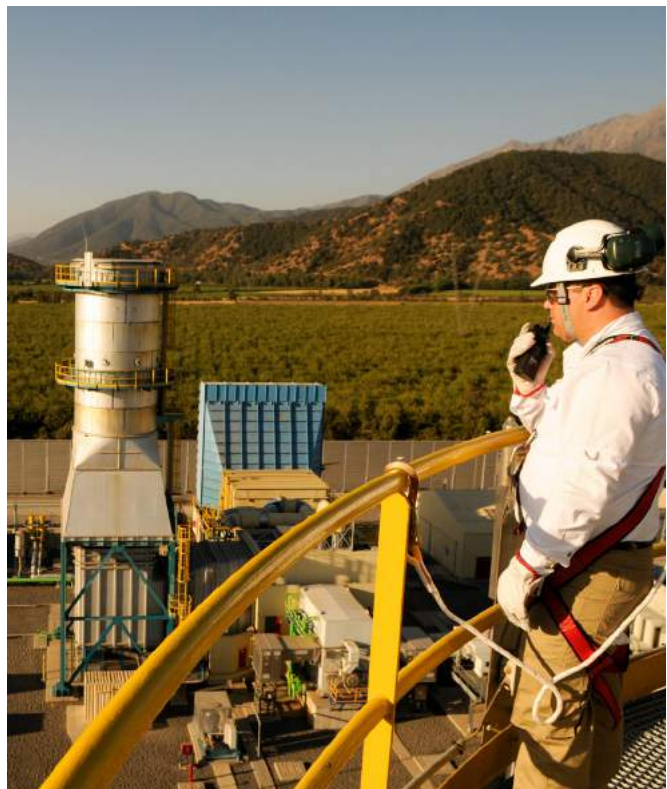


Vegetal curtain, Los Pinos Power Plant



**How are we implementing the new emission standard for thermoelectric power plants (Supreme decree 13/2011 of the Environmental Ministry)?**

In 2014 we continued certifying the Continuous Emission Monitoring Systems (CEMS), achieving the successful execution of 100% of the assays required to validate these systems. Over this period, we completed the CEMS for Nehuenco 1 and 2 of Nehuenco thermoelectric complex and units TG1 and TG2 of the Antihue thermoelectric power station. In addition, certification was made of the gas emission monitoring systems for units TG1 and TG2 of Candelaria thermoelectric power plant and the CEMS for particulate material and gases of Los Pinos thermoelectric power plant.



Candelaria Power Plant

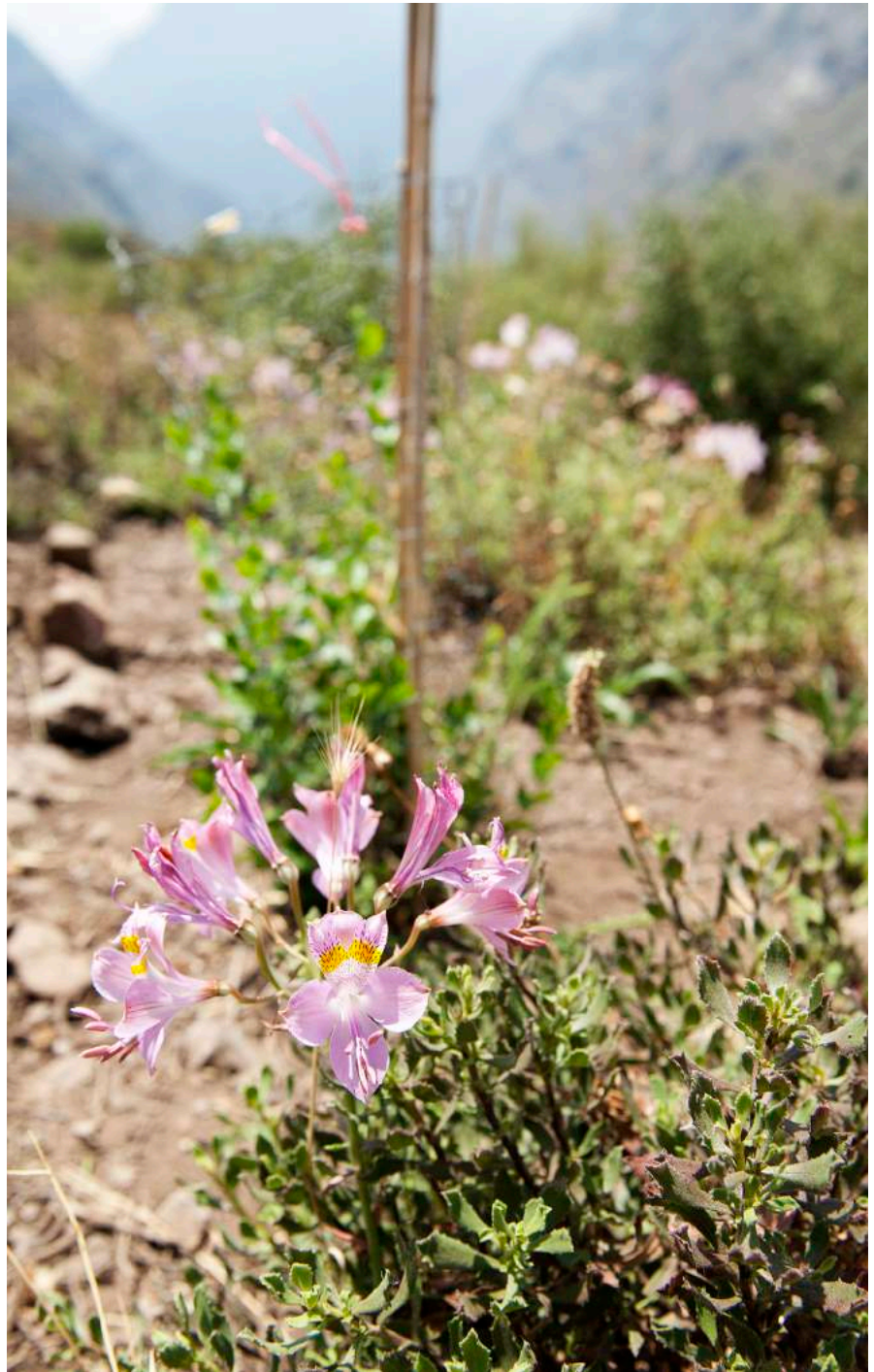
- > Aspecto material: Recurso hídrico
- > Eficiencia en el uso de los recursos
- > Aspecto material: Emisiones atmosféricas y cambio climático
- > **Aspecto material: Biodiversidad**
- > Aspecto material: Incidentes ambientales

# 04 / Material Aspect: Biodiversity

> G4-27

<b>Why is it material?</b>
Jointly with measuring and managing environmental impacts, it is necessary to protect and enhance flora and fauna conditions at the sites where our power plants and generation projects co-exist. Within a context of global climate change, it becomes increasingly important to incorporate biodiversity in the management and follow-up plans, adding value to the knowledge and management of the operation.
<b>Which stakeholder mentioned this in the survey?</b>
Biodiversity was addressed in our internal consultation by the following stakeholders: workers and environmental expert.
<b>What is our objective?</b>
We strive to insert our projects and power plants in the best possible manner within the local context, minimizing their environmental footprint, recognizing the attributes existing in the environment and internalizing the current concerns and threats, looking for a broader and more ecosystem oriented view of our operations.
<b>How do we manage?</b>
Biodiversity is a variable embedded in the design of projects that seeks to achieve geographic integration at the basin, sub-basin or project area level; it is aimed at protecting and enhancing the interaction of living systems. To this end, we conduct the necessary activities to know the species, placing special emphasis on protected species or species under official conservation category, and those located in the zones that are part of the National System of State Protected Wildlife Areas (SNASPE).
<b>How do we measure?</b>
Through the surveillance, follow-up and management plans for land and aquatic biota, measurement and monitoring of physical variables or parameters of the different habitats, forest and vegetation management (Colbún-13)
<b>Who is accountable?</b>
Environmental Management that reports to the Sustainable Development Division.

Aconcagua Complex



# Santa María Complex

> Colbún-13

2 KM



-  Transmission lines
-  Botanical park
-  Reforestation and/or vegetation
-  Air quality measurement
-  Water quality monitoring
-  Nearby city
-  Species rescue and relocation plan
-  Coal-fired thermoelectric station
-  Purchase of emission rights
-  Boiler replacement at hospitals of Coronel and Lota
-  Water temperature monitoring
-  Measurement of atmospheric emissions at the stack (CEMS)
-  Environmental surveillance plan
-  Noise measurement
-  Ash stacking site
-  Mesh filters, sea water intake
-  Green curtain

## Santa María Complex Compensation Plan

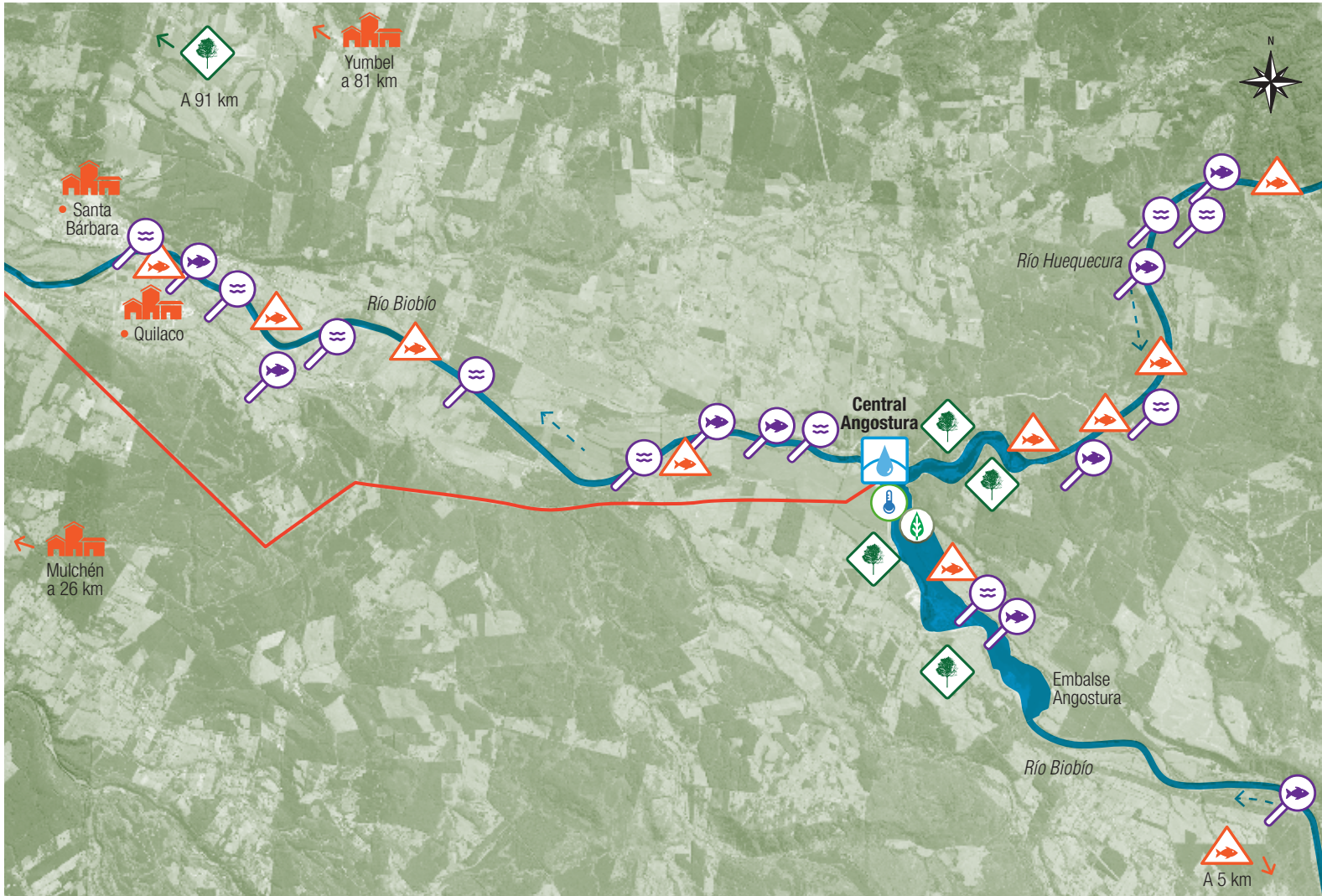
See section “Other atmospheric emissions” in the chapter “Environmental”.




### Air quality

See section “Other atmospheric emissions” in the chapter “Environmental”.

## Performance of the new filter at the intake of cooling water

In 2014, we proved the efficiency of the filters installed in Santa María Complex’s sea water intake, which reduced by 99% the entry of biomass recording 0% fish entry.



-  Transmission lines
-  Direction of the river flow
-  Reforestation and/or vegetation
-  Water quality monitoring
-  Zone of ichthyic fauna under conservation
-  Reservoir hydroelectric power plant
-  Fish sampling
-  Nearby city
-  Water temperature monitoring
-  Chlorophyll monitoring

## Ichthyic fauna management plan (PMAIFI)

This plan is aimed at ensuring the conservation and the protection of native fish with problems of conservation in the area of influence of Angostura power station. During 2014, we continued with the monitoring campaigns defined by this plan, incorporating sectors already studied, sections of Biobío River tributaries (Quilmes, Queuco, Mininco, Lirquén Rivers), sections of Altos del Huequecura and Quillaileo, and stations in the zone of Angostura reservoir. The results of the environmental follow-up plan so far show that the forecasts of PH, water temperature, phytobenthos and zoobenthos for the construction and operation stage do not show significant changes from the baseline and are within the estimated averages for each phase. For ichthyic fauna, there are six fish species in the zone of Huequecura River and ten species in the points associated with Biobío River. The following species should be mentioned *Diplomystes nahuelbutaensis*, *Bullockia maldonadoi*, *Trichomycterus areolatus*, *Percilia*

*irwini*, *Basilichthys australis*, *Galaxias maculatus*, among others. To date the mitigation, reclamation and/or compensation measures (PMAIFI) have proven effective.

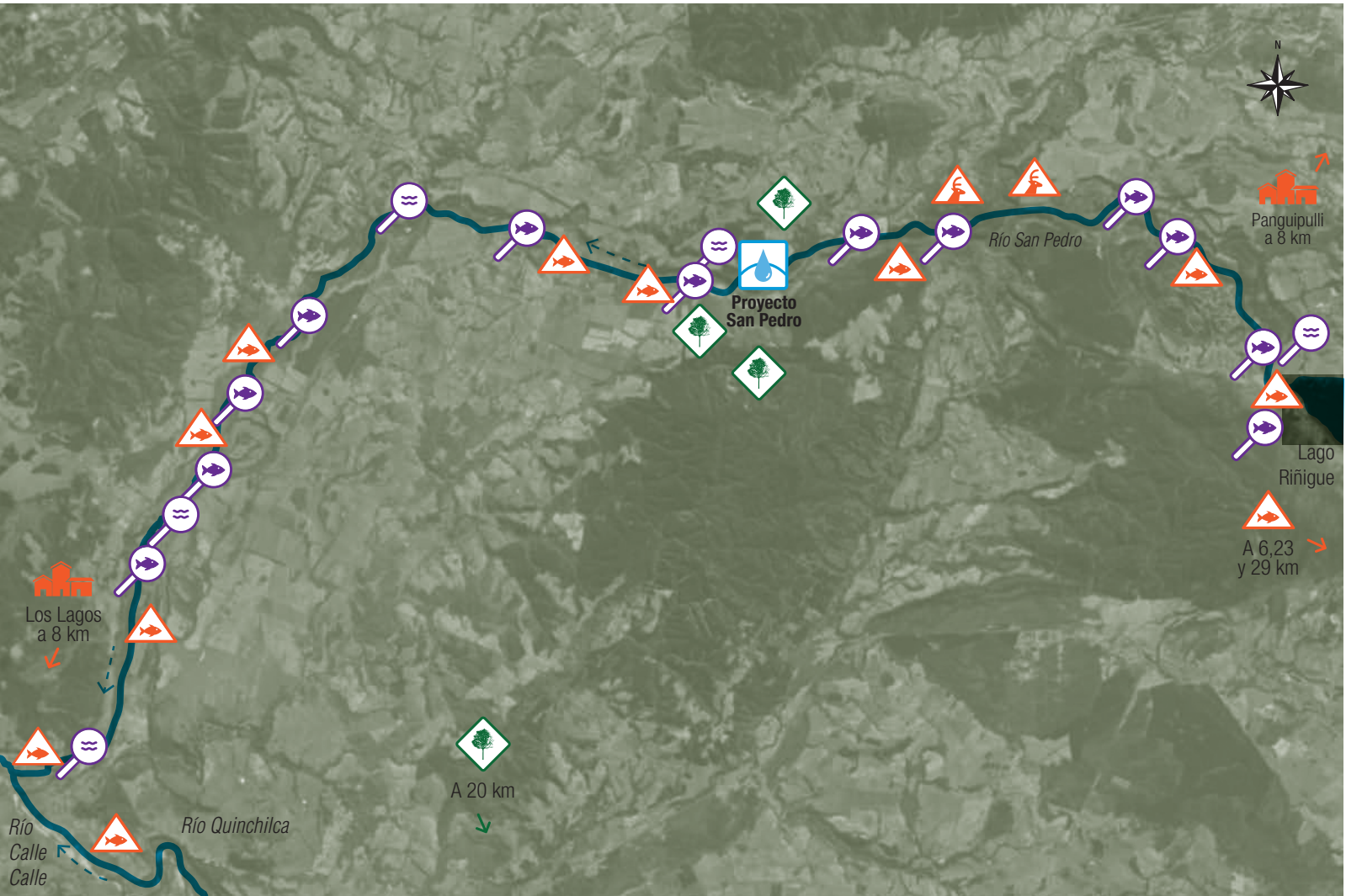
## Water monitoring of the new reservoir

In order to monitor the trophic level of the reservoir (amount of nutrients and organic matter in the water) during the two first years of operation, Angostura is equipped with an online water temperature and chlorophyll A measurement station. The measurements for the first year of operation of the reservoir have yielded temperature and chlorophyll A levels way below eutrophic conditions (high quantity of organic material), showing an exceptional water quality at the reservoir.

## Reforestation and soil enrichment plans

Our Angostura power plant and the Angostura-Mulchén high voltage line generated joint commitments over 163 hectares and 103 hectares to be reforested with native and exotic species, respectively, which in 2014 were replanted, maintained, irrigated and where the testing of species was done (oak and laurel, which will accompany the Quillaileo at the zone of Yumbel). Innovating forestry techniques developed in these plantations have allowed us to obtain very promising results, considering the droughts and the high temperatures of these last years. During the year we also reforested the banks of Angostura reservoir with native species; the purpose of the above is to provide the vegetation with continuity and to protect the fauna.

Finally, we designed the implementation of the soil enrichment plan that will be executed early in 2015, with species under conservation status on 35,8 hectares of degraded forest which sits nearby the reservoir and the lookout.



-  Transmission lines
-  Direction of the river flow
-  Reforestation and/or vegetation
-  Water quality monitoring
-  Zone of ichthyic fauna under conservation category
-  Zone of species under conservation category
-  Fish sampling
-  Nearby city
-  Reservoir hydroelectric power plant

### San Pedro River ichthyic fauna follow-up plan

Since September of 2009 to date, San Pedro Project has implemented a follow-up plan of the native ichthyic fauna and the water quality of San Pedro River. The activities and the monitoring are aimed at analyzing the space and time patterns of ichthyic fauna at a community and population level, giving special emphasis to the project construction zone. Such plan contemplates 15 sampling points and comprises a study area that goes from Riñihue Lake to the confluence of San Pedro and Quinchilca Rivers.

As the project has been temporarily halted, we have updated and collected more baseline information, which has enabled us to know better the natural inter-annual dynamics of San Pedro River's ecosystem. Throughout these years of study, we have noticed the high dynamism of ichthyic fauna in such an important river as the San Pedro. Similarly, within the direct area of influence of the Project (construction area), we proved the high numeric predominance of individuals from ichthyic

species introduced, such as the brown and rainbow trout; and within the global area of influence, we may see native species such as *Galaxias maculatus* and *Percilia irwini*.

### Reforestation plans

In connection with reforestation associated with our activity at San Pedro River basin, we replanted and moved the species to different reforestation sites whenever we noted that their development was limited due to the site conditions.

## 05 / Material Aspect: Environmental incidents

> G4-27

<b>Why is it material?</b>
The environmental protection we are committed to depends on the proper operation of our power plants and on the fact that the new projects are designed and built under the logic of a harmonious integration with their environment.
<b>Which stakeholder mentioned this in the survey?</b>
The subject of environmental incidents was addressed in our internal consultation by the following stakeholders: clients and suppliers, community and society, and environmental expert.
<b>What is our objective?</b>
We seek to be proactive in minimizing the operational risks of our power plants, so as to co-exist in harmony with the environment and our neighboring communities. The social environmental management is part of our corporate objectives.
<b>How do we manage?</b>
Reducing the failures and increasing the control of malfunctions through maintenance plans governed by the SAP-PM administration system. In turn, the communication channels available to the community facilitate the use of environmental concerns reported by third parties as a tool to prevent and detect eventual incidents.
<b>How do we measure?</b>
Total number and magnitude of spills or significant environmental incidents (G4-EN24)
<b>Who is accountable?</b>
Generation Division, Engineering and Project Control Division, and Environmental Management that reports to the Sustainable Development Division



Nehuenco Complex

The main environmental incidents occurred during 2014 are the following::

> G4-EN24

- **Oil spill, Blanco power station**

Early in 2014, Blanco hydroelectric power station underwent major failures (turbine breakdown) which meant its stoppage for the rest of the year and caused the spill of approximately 200 liters of diluted oil in the Aconcagua River stream. In agreement with the Integrated Management and Incident Investigation System, Colbún conducted investigations in the basin and did not find impacts on such River.

- **Levels of sulphate in the water, Nehuenco Complex**

Between February and March of 2014 we detected an increase in the sulphate levels of water used to cool down the Complex and in the discharges to the Aconcagua River. Therefore, we kept the authorities informed of the actions we would implement to fix the situation, which were already executed with good results, although the water quality in the zone continues to deteriorate mainly to the drought affecting the sector.



Carlos Barros, Los Bronces Operation  
Geologist at Anglo American,  
Client de Colbún S.A.





## Chapter — 07

# Clients and Suppliers of Primary Energies

Stakeholder	Challenge	Highlights / Actions Executed	Page	Progress Status
Clients and Suppliers of Primary Energies	Deepen the relationship with our clients, particularly with distribution companies	<ul style="list-style-type: none"><li>• Not a focus in 2014</li></ul>	-	
	Resolve the supply of natural gas in the long term	<ul style="list-style-type: none"><li>• In 2014, Colbún reached an agreement with Metrogas for the supply of LNG until 2019, and an agreement with ENAP for the supply of similar fuel in 2015.</li></ul>	108	



Fulfilled



Moderately fulfilled



Pending

**W**e seek to maintain a permanent, fluent and transparent dialogue with our clients and suppliers of primary energies to facilitate decision-making and promote contract relationships that are of mutual benefit. Also, we are committed to delivering to our clients a safe, competitive and sustainable electric supply. In this manner, we strive to generate transparent and strategic long-term relationships with our clients and suppliers.

**“Much more important than having one more or one less point of market share is to carry out good projects. In the long run, this is what our shareholders expect and our country needs. Rather than pursuing a greater market share at any cost, we want to do good projects (...). Angostura is an example of how to make a hydroelectric project free of conflicts and in harmony with the communities. That's the way we do hydroelectric projects and that is our calling card.”**

Thomas Keller, Chief Executive Officer of Colbún, LaTercera, December 2014.

Angostura Power Plant



> **Aspecto material: Matriz energética y políticas públicas**

> Aspecto material: Confiabilidad y disponibilidad del suministro

> Aspecto material: Proyectos de generación

# 01 / Material Aspect: Energy matrix and public policies

> G4-27

<b>Why is it material?</b>
Regulatory stability is essential for a sector such as power generation, where investment projects have long development, execution and return-on-investment times. Moreover, regulatory changes should be made taking into account the complexities of the power systems and maintaining appropriate incentives for all stakeholders; in particular, regulation should provide clear and transparent rules to help build the confidence of industry players (existing and new).
<b>Which stakeholder mentioned this in the survey?</b>
The energy matrix and public policies came up as a subject in the internal consultation and was addressed by the following stakeholders: investors, clients and suppliers, workers, environmental expert, contractors and providers.
<b>What is our objective?</b>
Regulatory stability has been a valuable characteristic of the Chilean power sector; the above notwithstanding, regulation can always be improved. In this sense, we believe that it is currently important to see an institutional and regulatory evolution enabling the generation of feasibility conditions for the development of projects involving different technologies and types (base, intermittent, backup) in a more complex and dynamic context, in keeping with a more developed society.
<b>How do we manage?</b>
In 2013 we formed the Regulatory Committee responsible for defining a work plan to generate proposals for public policy contents and participation instances wherever Colbún is able to transmit them. Additionally, in 2014, a management responsible for regulatory issues was formed, which tracks down regulatory changes, analyzes them, makes proposals and coordinates Colbún's participation with other Company areas.
<b>How do we measure?</b>
Colbún's vision of the issue of Chile's energy matrix and Colbún's involvement in instances where public policies are debated (Colbún-7).
<b>Who is accountable?</b>
Energy Business and Management Division, Sustainable Development Division and Legal Affairs



Operation center, Colbún S.A.



Nehuenco Complex

## Colbún's view on institutional changes and Chile's energy matrix

> Colbún-7

Between 2007 and 2014, Colbún's system contributed 900 MW of new capacity through the construction of seven new plants of different sizes and technologies: reservoir and run-of-the-river hydroelectric, base thermoelectric and backup plants, and NCRE plants. This development plan represents our vision of the energy matrix that Chile requires for its development: a competitive, safe and sustainable generation matrix, combining renewable and own energies at competitive prices with an efficient and sustainable thermoelectric complement to ensure the stability of the system.

As we have said in the past, the starting point of this matrix should **assign priority to the use of own resources** available in the country. Based on this definition, Chile should develop its **hydroelectric potential**, favoring those projects that best meet the aforementioned criteria of safety, competitiveness and the least possible social and environmental impact, before applying parameters relating to size, type (run-of-the-river or reservoir) or conventionality. Figures to November of 2014 showed that while our country was building at that date 880 MW of hydroelectric projects, Perú had 4,600 MW and Colombia had 4,092 MW. Chile cannot ignore its hydroelectric potential.

However, since hydropower depends heavily on rain, and several of the renewable non-conventional sources are volatile and intermittent, in order to ensure the supply and low cost, thermoelectricity based on coal and/or natural gas is a necessary complement. Chile has recently established emission standards as demanding as those of developed countries, seeking to make this type of installation viable.

In the case of coal, this technology still presents one of the lowest development costs as compared to other energy sources and, therefore, it allows the domestic industry, which is intensive in terms of energy consumption to cut costs to become more competitive in the international markets. Regarding natural gas, Chile has installed capacity not fully utilized after the Argentine gas crisis; therefore, it is a source that can add generation quickly. Colbún has specifically contributed to it through the subscription of new, short and medium-term supply contracts.

Santa María Complex



Parque Eólico Punta Palmeras



> **Aspecto material: Matriz energética y políticas públicas**

> Aspecto material: Confiabilidad y disponibilidad del suministro

> Aspecto material: Proyectos de generación



Regarding Non-Conventional Renewable Energies (NCRE), we at Colbún believe these technologies have many positive attributes, including their social approval, their insertion in adjustable blocks and low or no emissions of greenhouse gases. However, we believe we should be cautious about forcing their penetration, since they also have negative externalities that are not entirely clear and which costs have not been spelled out for the system: intermittence, greater backup capacity and transmission requirements.

Considering that based on the estimates of the National Energy Commission work plan dated October 2014, almost half of the new capacity installed between 2015 and 2029 will come from wind or solar energy, it is essential to rigorously examine the systemic implications and costs of this strategy. Moreover, we believe that setting a capacity limit in order for any given renewable technology to qualify as NCRE has no environmental, economic or technical justification, least when it is imposed upon only one source, such as hydropower. Allowing the development of these technologies requires the development of the transmission networks and adequate legislation enabling the country to have a **robust transmission system**, with the connection and injection facilities for all technologies, regardless of their location.

Having said that, we believe in non-conventional energy sources; we believe in the great potential of solar energy in Chile since our territory has the highest solar radiation worldwide. However, the current state of technology presents some weaknesses: the limited or no capacity to generate at night (where the highest demand for electrical energy occurs) and unknown production variations resulting from changes in luminosity. This limitation could be resolved by means of reservoir hydroelectric power plants able to store water in the day to generate in the hours that solar plants cannot generate.

Regarding **geothermal energy**, which has the virtue of providing continuous renewable energy, its development requires public policies to reduce or share the high exploration risks.

In short, we believe that the energy matrix must evolve on the basis of the above criteria, ensuring above all a safe and high-quality energy supply, complying with stringent environmental standards to ensure that developments are sustainable and respectful of the environment and the communities where the projects are located.

## Participation and public policies

In 2014, and based on a broadly shared diagnosis of the need to move towards a safe, sustainable and reasonably priced energy matrix, President Michelle Bachelet and Energy Minister Máximo Pacheco, proposed an Energy Agenda with objectives linked to legislative bills and participatory processes to define the long-term energy policy and a basin policy with the participation of the public and private sectors and the general community.

At Colbún, we believe that such a participatory process is essential to give legitimacy to the energy matrix and generation projects. This participation process, though, should not become an obstacle to make the decisions required for the development of the energy matrix, based on technical studies and empirical evidence that clearly identify the costs and benefits of each technology in environmental, social, technical and competitive terms. In this sense, the State should play a coordinating role in this participatory process, so as to generate the necessary trust to engage different viewpoints and to finally making the definitions Chile needs for its sustainable economic development.

## Associativity Draft Law

One of the draft laws being currently driven by the Ministry of Energy is the so-called Associativity Law, which purpose, in the words of the authorities, is to create an institutional framework in order for energy projects to become associated with the host communities, thus providing

permanent benefits to those communities. At the closing date of this report, the details of the draft law being prepared by the Executive are not available and, therefore, Colbún does not yet have an evaluation of or a position on this legal initiative.

## Law on power supply bids for regulated clients

After being approved by the Lower Chamber in its third constitutional stage, the new law regulating the bidding system to supply power to regulated clients was passed in early January of 2015. Participation in this process was significant and as a Company, we assumed an active role, which included a presentation by our CEO, Thomas Keller, to the Senate's Mining and Energy Committee.

While there are specific aspects of the project that we believe could have been improved, regarded as a whole, we consider the new law as positive. It addresses a growing problem in the system – the supply of energy to regulated clients with no contract – and creates bidding mechanisms with different terms to meet energy demands without a contract, thus reducing the uncertainties for investors. Another step forward is the incorporation of provisions that will allow new projects to postpone or to cancel energy sales if their initiatives are delayed by processes not attributable to their developers. We believe these measures are positive as they will reduce the risks in the power generation market, encouraging the entry of new players to the market and increasing competition.



**“Even more important than the Associativity Law is the definition of which basins can be used for the production of hydraulic energy under a National Policy on Basins.”**

Luis Felipe Gazitúa, Vice-chairman, Colbún S.A.

## 02 / Material Aspect: **Supply reliability and availability**

> G4-27

<b>Why is it material?</b>
Colbún is a power generation company and, therefore, being able to deliver reliable and safe energy to its customers, in keeping with its commercial commitments and the operation required by the electrical system in general is a matter of the utmost relevance for the Company's sustainability.
<b>Which stakeholder mentioned this in the survey?</b>
Reliability and availability of supply were addressed in the internal consultation y the following stakeholders: investors, clients and suppliers, environmental expert, contractors and providers.
<b>What is our objective?</b>
Our mission is to respond to the country's energy demand by transforming supplies (fuels and water) into electric energy.
<b>How do we manage?</b>
We seek to maintain a renewable vocation with an efficient thermal complement to ensure the ability to supply our clients under variable hydrological scenarios and to limit their exposure to the high volatility of fossil fuel prices.
<b>How do we measure?</b>
Materials by weight or volume (G4-EN1) / Investment in strategic supplies (Colbun-2) / Net energy output broken down by energy source, country and regulatory system (G4-EU2) / Average availability factor of the plant by energy source and by regulatory system (G4-EU30) / Installed capacity, analyzed by energy source and by regulatory regime (G4-EU1) / Number of residential, industrial, institutional and commercial clients (G4-EU3).
<b>Who is accountable?</b>
Generation Division, and Business and Energy Management Division

### **Need for a reliable supply at competitive costs**

> G4-EU1, G4-EU3

Colbún has 20 clients of which 16 are regulated (distributors) and 4 are unregulated or industrial (mining companies, transportation services and water treatment plants).

In order to secure our energy delivery, we have 3,278 MW installed in the Central Interconnected System (SIC) and in 2014 we generated 12,835 GWh. Compared to 2013, this growth in capacity and generation is primarily the result of the commissioning of Angostura Plant in the Biobío Region.



2,962<sup>MW</sup>

Intaled capacity, year 2013

3,278<sup>MW</sup>

Intaled capacity, year 2013

11,253<sup>GWh</sup>

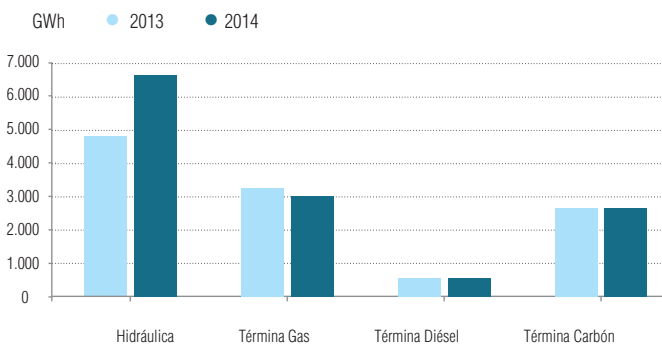
Energy generation, año 2013

12,835<sup>GWh</sup>

Energy generation, año 2013

## Energy generation (GWh)

> G4-EU2



Complejo Neuqueno

## Supply of Primary Energies

In order to fulfill our mission we need to work hand in hand with our suppliers of primary energies. For this reason, we seek to build long-term relationships with companies that are highly recognized in their field for their reliable operation and supply.

**In line with our goal of strengthening the share of natural gas in the energy matrix, in 2014, Colbún signed an agreement with Metrogas that will secure LNG until 2019 and an agreement with ENAP to deliver LNG in 2015 (G4 13).**

## Consumption of fossil fuels

> G4-EN1, Colbún-2

Raw Material	Weight/Volume Unit	Weight or volume used		Cost (million of US\$)		Supplier
		2013	2014	2013	2014	2014
Diesel	Millions of m <sup>3</sup>	0.16	0.12	133.0	101.3	COPEC, ENAP, ENEX, PETROBRAS (Chile)
Natural Gas	Millions of m <sup>3</sup>	643	572	357.6	333.3	METROGAS, ENAP (Chile)
Coal	Millions of tons	955	962	104.5	90.9	Various (Colombia, EE.UU., Australia)



## Ensuring availability and efficiency for our clients

Ensuring the reliability of the generation units and transmission facilities is critical to guarantee the production levels committed with our clients; hence, our policy is to regularly maintain our equipment, according to the vendors' recommendation and based on our experience with failures and accidents along the history of the plants. Other actions taken in 2014 to ensure our supply are, among others, the following:

- We completed the certification of all continuous emission monitoring systems at our thermoelectric power plants;
- We signed a new maintenance contract for the gas turbine at Nehuenco's Unit II with GE; the contract provides for the best availability conditions and guarantees;
- We signed a new contract with Siemens for the maintenance of the gas turbine, steam turbine and ancillary equipment at Nehuenco's Unit I, which includes the service life extension for 100,000 hours;
- A team of experts in the different generation technologies joined the Asset Management Division: hydroelectric plants, coal-fired power plants and gas turbines. This has strengthened Colbún's knowledge and has allowed a more balanced discussion with the various technology suppliers, while contributing innovations that involve a sustained increase in availability.

Complejo Nehuenco



Power Station Colbún





Power Station Quilleco



Power Station Antihue

Availability per hydroelectric plant (%) (G4-EU30)			
Plant	MW	2013	2014
Carena	9	96.09%	95.29%
Los Quilos	39	95.67%	93.50%
Chacabuquito	29	93.31%	94.12%
Juncal	29	95.78%	96.75%
Blanco	60	93.48%	3.03%
Hornitos	55	95.10%	90.70%
Colbún	474	93.54%	97.25%
Machicura	95	95.45%	97.07%
San Ignacio	37	96.74%	97.81%
Chiburgo	19	97.84%	98.81%
San Clemente	6	98.74%	98.77%
Angostura	316	-	95.47%
Rucúe	178	99.51%	96.47%
Quilleco	71	98.78%	97.96%
Canutillar	172	95.68%	91.68%

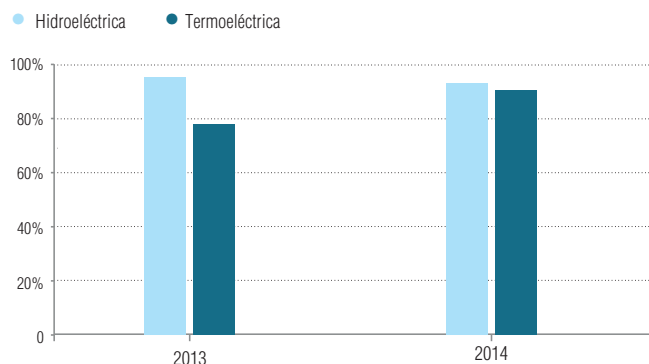
Availability per thermoelectric plant (%)			
Central	MW	2013	2014
Nehuenco I	368	80.89%	91.32%
Nehuenco II	398	58.50%	87.93%
Nehuenco III	108	98.77%	97.26%
Candelaria I	133	95.31%	97.58%
Candelaria II	137	98.13%	98.50%
Antihue I	52	85.73%	96.97%
Antihue II	52	92.47%	84.34%
Los Pinos	100	61.60%	89.55%
Santa María I	342	85.95%	85.53%



**Why was there a reduction in the availability at the Blanco Plant?**

Even though 2014 was a good year in terms of availability, there was an unfortunate catastrophic failure of the Blanco Plant on January 12, 2014, which causes are being discussed with the insurance company. Repairs were done quickly and diligently, and the plant resumed operations on February 18, 2015.

**Reliability of the Colbún hydroelectric and thermoelectric power plants (%)**



Note: Reliability is defined as the percentage of hours in which a unit was generating or available for generation or under scheduled maintenance, as compared to the total number of hours in a given period.

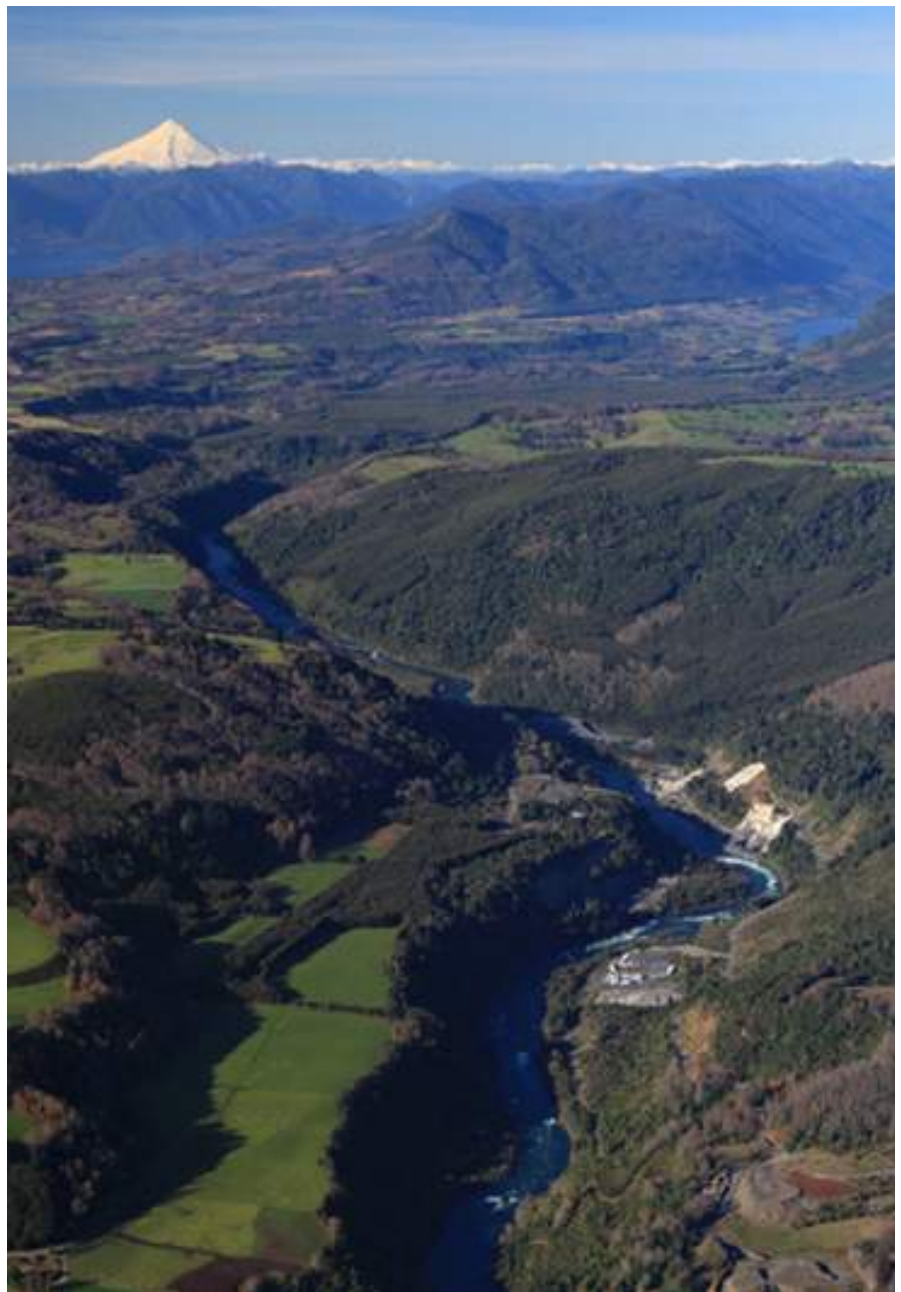
- > Aspecto material: Matriz energética y políticas públicas
- > Aspecto material: Confiabilidad y disponibilidad del suministro
- > **Aspecto material: Proyectos de generación**

## 03 / Material Aspect: **Generation projects**

> G4-27

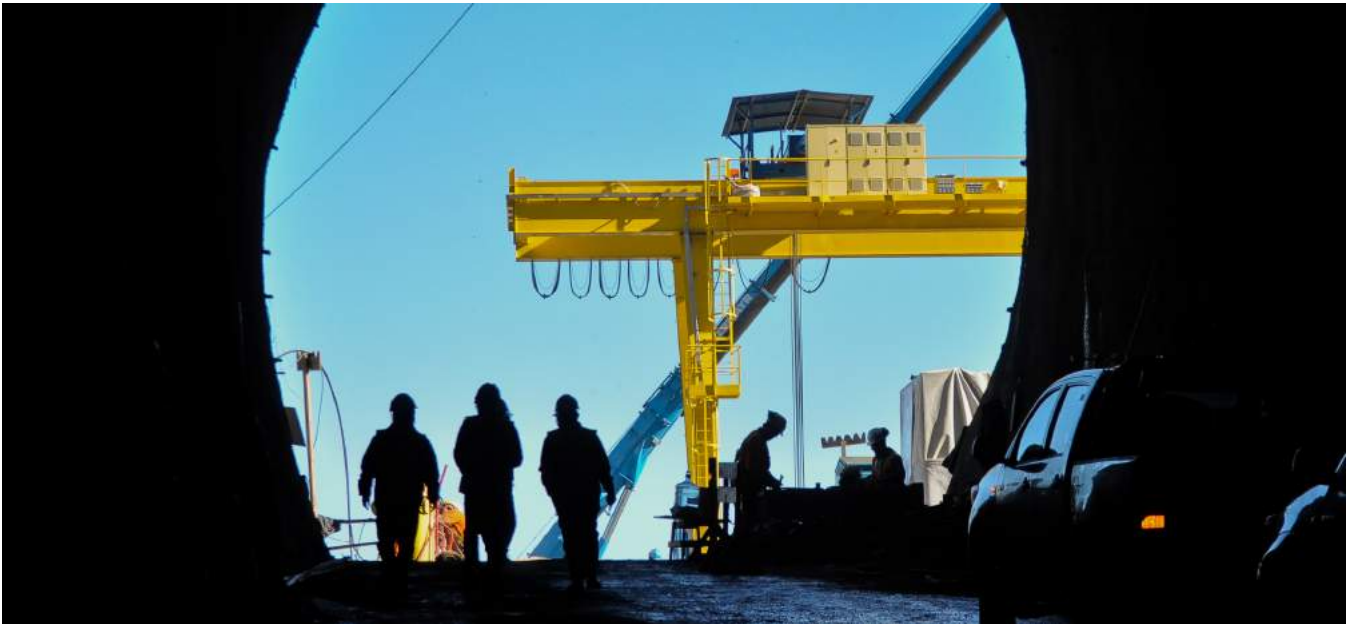
<b>Why is it material?</b>
Currently, one of the main challenges Chile has to face is the availability of energy resources to further its development. Although the National Energy Commission (CNE) has significantly reduced the energy demand growth estimates over the next two decades, conservatively speaking, between 2015 and 2029, Chile will double its power consumption.
<b>Which stakeholder mentioned this in the survey?</b>
Generation projects were addressed in the internal consultation by the following stakeholders: investors, clients and suppliers, workers, environmental expert, contractors and providers.
<b>What is our objective?</b>
Our focus is to add new capacity in order to meet the demand and ensure a competitive, safe and reliable energy supply.
<b>How do we manage?</b>
Colbún is the company that has added the largest amount of capacity to the SIC in the past seven years: with the commissioning of the Angostura Plant (316 MW), we completed the addition of 908 MW to the SIC between 2007 and 2014. Furthermore, the Company is looking for growth options for the next five years, including new hydroelectric developments in the Maule basin, La Mina Plant (34 MW) – for which construction has already begun – San Pedro Plant in Los Lagos Region (approximately 160-170MW), and Unit II of the Santa Maria Complex in Coronel (342 MW), in addition to other projects at various stages of development.
<b>How do we measure?</b>
Projects to meet long-term demand (Colbún-6) / Length of transmission and distribution lines per voltage (G4-EU4)
<b>¿Quién es responsable?</b>
Engineering and Projects Division

San Pedro Project



## Projects to meet the forecasted long-term demand

> Colbún-6



Power Plant Angostura

**“Power generation companies with long-term projects that want to create a future must start today. Colbún is a growing company and that is an important signal to all our stakeholders.” Olivia Heuts, Manager, Strategic Management, Colbún.**

### Projects under development

- **La Mina Hydroelectric Project (34 MW)**

La Mina hydroelectric power plant is a NCRE project located in the municipality of San Clemente, some 110 km east of Talca. The Project contemplates an installed capacity of 34 MW and an annual average generation of 191 GWh. The power will be injected to the Central Interconnected System (SIC) over a 220 kV line at Endesa’s Los Cóndores High Voltage Line. The power plant will use the Maule River waters downstream of the intersection with Puelche River to take them back to Maule River 2 km downstream of the catchment point.

In 2014, the relevant actions undertaken to obtain the permits to build waterworks and to obtain the pending water rights were successfully completed. The design of the free-fall zone was optimized and new tenders were conducted for the construction of the civil works, supply and assembly of hydromechanical and electromechanical equipment, which are forecasted to start in November

## Projects under development

- **San Pedro Hydroelectric Project (approximately 160-170 MW)**

San Pedro Project is located on the San Pedro River, approximately 14 km downstream of the outflow of Riñihue Lake in Los Rios Region. The two districts adjacent to the Project are Panguipulli and Los Lagos.

In 2014, we completed the geological studies needed to define the adjustments required by the project engineering due to the characteristics of the ground where the project is located. The adjustments do not involve changes in the main environmental parameters, and the modifications are expected to be filed with the Environmental Evaluation System in the first half of 2015. In the second half of 2014, Colbún initiated a process to disseminate project studies and adjustments through briefing sessions held with municipalities, communities, neighbors' associations, and regional authorities, among other stakeholders.

On the other hand, we completed and delivered to the municipalities of Los Lagos and Panguipulli important works defined in the Project's RCA, such as the Riñihue Resort and Camping and the Panguipulli Tourism Information Center, which shows the project's commitment with neighboring communities.

- **Santa María II Thermoelectric Project (350 MW)**

Santa María II Project, located in the district of Coronel, Biobío Region, considers an installed capacity of 350 MW.

Currently, Colbún holds an approved environmental permit to develop this second unit in the Complex. The design has been improved by adding new technologies to meet the stringent emission standards in effect starting January 1, 2012. Also, the social and financial aspects of the project are being analyzed in order to timely define construction start-up.

**Colbún holds water rights for a portfolio of hydroelectric projects amounting to approximately 500 MW, all of them at different development stages.**

**“We are optimistic about Santa María II, but we have not yet made a decision. To do so, we need to examine the social and community aspects, because we must be convinced that, as we have done in other cases, we are entering this project through the front door and not behind the community's back.”**

Thomas Keller, Chief Executive Officer, Colbún S.A. (La Tercera, December 2014).



### Why was the Development Management created?

The creation of the Development Management is intended to work systematically in the identification and eventual materialization of business opportunities outside of Chile, in order to maintain a leading position in the power generation industry and diversify our sources of revenue. In addition, our participation in other markets can improve diversification in terms of hydrological conditions, generation technologies and access to fuels. Among the countries being considered for expansion are Perú and Colombia, which have an attractive economic environment and a well-established power sector regulatory framework. This management will be headed by Sebastián Fernández C., who holds a degree in Business Administration from the Universidad de los Andes, and has broad experience in the development, evaluation and analysis of investment projects. Before joining Colbún he served as Vice-President, Business Development at Endesa Chile.

## The relevance of transmission

The power transmission infrastructure is fundamental, both for the reliability of the power supply and for the competition and access to the various generation sources. Demand forecasts indicate that the installed capacity of electricity generation will have to double in the next 15 or 20 years. This represents a challenge to the currently frail transmission network.

### Colbún's own transmission lines per the regulatory system and voltage (km) (G4-EU4)

> G4-EU4

Transmission Assets	Voltage KV	2012 Km	2013 Km	2014 Km
Main	220	46.4	261.9	261.9
	110	67.1	67.1	67.1
	66	12.9	12.9	12.9
Subtransmission	220	550.1	374.5	374.5
	110	12	12	12
	66	71.1	71.1	71.1
Additional		91.3	91.3	91.3
		<b>850.9</b>	<b>890.8</b>	<b>890.8</b>
<b>TOTAL</b>				



#### What was the progress in terms of NCRE projects?

In the first days of 2015, Punta Palmeras Project pertaining to Acciona Energy was inaugurated. The construction of this project began after Colbún reached an agreement with the Spanish firm for the purchase of 100% of the power generated by this plant.

Although Colbún already has NCRE mini-hydro power plants in operation and under construction, in coming years we will continue to seek ways to drive this technology by promoting more efficient and competitive projects for the system. Additionally, we continue studying our involvement in generation projects using other NCRE-type technologies.

> Aspecto material: Matriz energética y políticas públicas

> Aspecto material: Confiabilidad y disponibilidad del suministro

> **Aspecto material: Proyectos de generación**







**GRI**  
Index

# GRI Index

General basic contents	Chapter	Page	Verification by Third Parties
<b>STRATEGY AND ANALYSES</b>			
G4-1	Letter from Thomas Keller	6	Not verified
G4-2	Letter from Thomas Keller and detailed challenges at the beginning of each chapter	6	Not verified
<b>PROFILE OF THE ORGANIZATION</b>			
G4-3	Technical card	2	Not verified
G4-4	Investors	24	Not verified
G4-5	Technical card	2	Not verified
G4-6	Sustainability and Colbún	15	Not verified
G4-7	Investors	24	Not verified
G4-8	Sustainability and Colbún	15	Not verified
G4-9	Sustainability and Colbún / Investors	15, 24	Not verified
G4-10	Sustainability and Colbún	14	Not verified
G4-11	Colbún and its workers	47	Not verified
G4-12	Sustainability and Colbún	10-11	Not verified
G4-13	Investors / Clients and suppliers	24, 110	Not verified
G4-14	Investors	32	Not verified
G4-15	Sustainability and Colbún	17	Not verified
G4-16	Sustainability and Colbún	17	Not verified
<b>MATERIAL ASPECTS AND COVERAGE</b>			
G4-17	Investors	24, 28, 33	Not verified
G4-18	Sustainability and Colbún	10-13	Not verified
G4-19	Sustainability and Colbún	10, 12	Not verified
G4-20	Sustainability and Colbún	10, 13	Not verified
G4-21	Sustainability and Colbún	10, 13	Not verified
G4-22	Technical card	2	Not verified
G4-23	Technical card	2	Not verified
<b>STAKEHOLDERS' INVOLVEMENT</b>			
G4-24	Sustainability and Colbún	18	Not verified
G4-25	Sustainability and Colbún	18	Not verified
G4-26	Sustainability and Colbún	10, 12, 18	Not verified
G4-27	Answered in each Material Aspect throughout the document/ Sustainability and Colbún	10, 32, 37, 46, 49, 50, 59, 74, 82, 87, 97, 101, 105, 109, 113	Not verified
<b>PROFILE OF THE ANNUAL REPORT</b>			
G4-28	Technical card	2	Not verified
G4-29	Technical card	2	Not verified
G4-30	Technical card	2	Not verified
G4-31	Technical card	2	Not verified
G4-33	GRI Index	120	Not verified
<b>GOVERNANCE</b>			
G4-34	Investors	28	Not verified
G4-38	Investors	28	Not verified
<b>ETHICS AND INTEGRITY</b>			
G4-56	Sustainability and Colbún	16, 20	Not verified

NOTE: This Sustainability Report was not checked by third parties, but this is a practice we will review and assess in our next management period.

Material aspects	Indicator	Chapter	Page	Verification by third parties
<b>Sustainable Economic Growth</b>	Direct economic value generated, distributed and retained (G4-EC1)	Investors	32, 33	Not verified
	EBITDA (Colbún-1)	Investors	32	Not verified
<b>Energy Matrix and Public Policies</b>	Colbún's view of Chile's energy matrix and instances of political participation by Colbún in the construction of an energy matrix (Colbún-7)	Clients and suppliers	106	Not verified
<b>Supply availability and reliability</b>	Materials by weight or volume (G4-EN1)	Clients and suppliers	110	Not verified
	Investment in strategic raw materials and main suppliers (Colbún-2)	Clients and suppliers	110	Not verified
	Net energy production broken down by energy source, country and regulatory regime (G4-EU2)	Clients and suppliers	110	Not verified
	Average plant availability factor by energy source and regulatory regime (G4-EU30)	Clients and suppliers	112	Not verified
	Installed capacity analyzed by energy source and regulatory regime (G4-EU1)	Investors / Clients and suppliers	24	Not verified
	Number of residential, industrial, institutional and commercial clients (G4-EU3)	Clients and suppliers	109	
<b>Generation projects</b>	Length of transmission and distribution power lines by voltage (G4-EU4)	Clients and suppliers	116	Not verified
	Projects to meet long-term demand (Colbún-6)	Clients and suppliers	114	Not verified
<b>High performance and comprehensive training</b>	Annual training hours per employee, broken down by gender and job category (G4-LA9)	Colbún and its workers	41	Not verified
	Ongoing skill management and continuous training program promoting workers' employability and helping them manage the end of their professional careers (G4-LA10)	Colbún and its workers	40	Not verified
	Percentage of employees whose professional performance and development is regularly evaluated, broken down by gender and professional category (G4-LA11)	Colbún and its workers	42	Not verified
	Ratio between men's base remuneration as compared to women's, broken down by professional category and by significant fields of activity (G4-LA13)	Colbún and its workers	38	Not verified
	Number and rate of contracting and average turnover broken down by age, gender and work category (G4-LA1)	Colbún and its workers	37	Not verified
	Openings filled in through internal competition (Colbún-8)	Colbún and its workers	37	Not verified
<b>Workers' participation and inclusion</b>	Results of the work climate survey (Colbún-10)	Colbún and its workers	48	Not verified
	Activities to promote dialogue and participation with workers (Colbún-9)	Colbún and its workers	18, 46	Not verified
<b>Conciliation between work and personal life</b>	Conciliation benefits and policies (Colbún-11)	Workers	49	Not verified
<b>Colbún's culture among Contractors</b>	Detail of successful cases of the work developed jointly with contractors and suppliers (Colbún-3)	Contractors and Suppliers	61	Not verified
	Contractor and subcontractor personnel who have been trained in health and safety issues (G4-EU18)	Contractors and Suppliers	64	Not verified
	Describe the effort for incorporating sustainability principles and practices throughout the value chain (Colbún -4)	Contractors and Suppliers	59	Not verified
	Percentage of expense in local suppliers at significant operational sites locales (G4-EC9)	Contractors and Suppliers	62	Not verified

NOTE: This Sustainability Report was not checked by third parties, but this is a practice we will review and assess in our next management period.

Material aspects	Indicator	Chapter	Page	Verification by third parties
<b>Health and safety</b>	Percentage of workers represented in formal safety and health parity committees (management and employees) set up to control and advice on occupational health and safety programs (G4-LA5)	Colbún and its workers	53	Not verified
	Type and rate of injuries, professional illnesses, days lost, absenteeism and number of work-related fatalities by region and gender (G4-LA6)	Colbún and its workers	53	Not verified
	% of workers within a healthy /normal fitness range (Colbún-12)	Colbún and its workers	55	Not verified
<b>Water resource</b>	Reduction of energy consumption (G4-EN6)	Environment	85	Not verified
	Average energy efficiency of thermoelectric plants by energy source and regulatory regime (G4-EU11)	Environment	85	Not verified
	Total water intake by source (G4-EN8)	Environment	82	Not verified
	Total percentage and volume of recycled and reused water (G4-EN10)	Environment	82	Not verified
<b>Emissions and climate change</b>	Direct greenhouse gas emissions (scope 1) (G4-EN15)	Environment	89	Not verified
	Indirect greenhouse gas emissions in power generation (scope 2) (G4-EN16)	Environment	89	Not verified
	Other indirect greenhouse gas emissions (scope 3) (G4-EN17)	Environment	89	Not verified
	Intensity of the greenhouse gas emissions (G4-EN18)	Environment	89	Not verified
	NO <sub>x</sub> , SO <sub>x</sub> and other significant atmospheric gas emissions by type and amount (G4-EN21)	Environment	89	Not verified
<b>Environmental incidents</b>	Total number and magnitude of significant spills (G4-EN24)	Environment	101	Not verified
<b>Biodiversity</b>	Surveillance, follow-up and management plans for land and aquatic biota, measurement and monitoring of physical variables or parameters of the different habitats, forest and vegetation management (Colbún-13).	Environment	98-100	Not verified
<b>Information and communication with the communities</b>	Description of the main communication and dialogue channels available to the community (Colbún-14)	Community and Society	70,73	Not verified
	Mechanisms to allow the community to notify or to query on spills or high-risk incidents (Colbún-5)	Community and Society	70	Not verified
	Description of the main social-environmental conflicts occurred this year and how they were addressed (Colbún-15)	Community and Society	70	Not verified
<b>Social Investment</b>	Results of training, entrepreneurship and work table processes for productive development (Colbún-17)	Community and Society	76	Not verified
	Social investment by type of initiative (Colbún -16)	Community and Society	74	Not verified

NOTE: This Sustainability Report was not checked by third parties, but this is a practice we will review and assess in our next management period.



