

Welcome to your CDP Climate Change Questionnaire 2023

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Colbun S.A. is a Chilean power generation company that has operations in Chile and Peru with a total installed capacity of 4,018 MW.

In Chile, Colbun operates in the National Electric System (SEN, by its Spanish acronym), representing approximately 13% of this system in terms of power generation. SEN represents 99% of the installed capacity of the country, covering from Arica, in the Region of Arica and Parinacota (the most northern region in Chile) to Chiloé, Los Lagos Region.

As of December 2022, Colbun operates in Chile 26 power plants with an installed capacity of 3,443 MW, selling its power generation to 334 customers (utilities) of the SEN. The installed capacity is composed of hydroelectric power plants (reservoir and run-of-the-river), three solar PV power plants and coal-fired, diesel and gas power plants (combined and conventional cycles) as follows:

- Hydroelectric power plants have an installed capacity of 1,627 MW distributed among 17 plants, which correspond to (from north to south): Aconcagua Complex, formed by Los Quilos, Blanco, Juncal, Juncalito, Chacabuquito and Hornitos, located in Valparaíso Region; Carena located in Metropolitan Region; Colbun complex, formed by Colbún, Machicura, San Ignacio, Chiburgo, San Clemente and La Mina, located in Maule Region; Laja Complex formed by Rucúe, Quilleco located in Biobío Region; Angostura, also located in Biobío Region; and Canutillar located in Los Lagos Region. Colbún, Machicura, Canutillar and Angostura power plants have their own reservoirs, whereas the remaining are run-of-the-river hydroelectric power plants.
- Thermal power plants have an installed capacity of 1,586 MW, distributed between Nehuenco Complex, located in Valparaíso Region; Candelaria power plant located in O'Higgins Region; Los Pinos and Santa María power plants, located in Biobío Region.
- Solar (PV) power plants are Diego de Almagro Sur (230MW) located in Antofagasta, Ovejería (9 MW), located in the Metropolitan Region and Machicura (9MW) located in Maule Region.

In Peru, Colbún operates with Fénix Power, a combined-cycle gas-powered plant with an installed capacity of 573 MW which delivers energy to 40 clients connected in the National Electric Interconnected System (SEIN, by its Spanish acronym), representing 6% of this system in terms of power generation.

For the purposes of this report, the risk analysis will be performed by Complex when possible, since the power plants are located in the same area and therefore, are exposed to similar risks/opportunities.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

enero 1, 2022

End date

diciembre 31, 2022

Indicate if you are providing emissions data for past reporting years

No

C0.3

(C0.3) Select the countries/areas in which you operate.

Chile

Peru

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-EU0.7

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

Row 1

Electric utilities value chain

Electricity generation

Other divisions

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	COLBUN:CI

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Director on board	The Board of Directors is the highest governing entity of the Corporate Governance and is responsible for setting up Colbun Climate Strategy . The Board holds monthly meetings and validates and monitors annual corporate objectives, including climate change.
Chief Executive Officer (CEO)	The CEO is in charge of assessing and managing climate-related risks and opportunities and climate change goals. Reports directly to the Board Committee, and also leads the Risk and Sustainable and Regulation Committe.

C1.1b

(C1.1b) Provide further details on the board’s oversight of climate-related issues.

Frequency with which climate-related	Governance mechanisms into	Please explain
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issues are a scheduled agenda item	which climate-related issues are integrated	
Scheduled – all meetings	Reviewing and guiding annual budgets Reviewing and guiding strategy Monitoring progress towards corporate targets Reviewing and guiding the risk management process	Governance mechanisms include: 1) Monthly brief to the Board of climate change goals and emissions reduction achieved by CDM/VCS registered power plants as well of other climate change issues, such as the fulfillment of Colbun's Climate Change Strategy 2) Monthly report to the Board of material risks matrix. This matrix includes climate change risks which are revised periodically. 3) Quarterly report to the Sustainability and Regulation Committee of climate change goals and execution stage of related initiatives that reduce carbon footprint. 4) Reviewing of the annual budget of Colbun, which includes climate change projects which are aligned with Colbun's Climate Change Strategy. 5) Assess and review of more ambitious goals related to environmental issues, such as carbon footprint due to power plants operations, in terms of GHG emissions, inland water consumption, and waste generation.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	The criteria vary among the following: - Work experience in a high-level position related to climate or environmental issues at a governmental entity. - Work experience in a high-level corporate position in climate, environment, or sustainability issues. - Academic studies on climate, environment, or sustainability issues.

		<p>- Public recognition as a leader on climate, environmental, or sustainability issues.</p> <p>As of 2022, three of eight directors meet at least one of the mentioned criteria.</p>
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C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

Integrating climate-related issues into the strategy

Other, please specify

Defining Colbun's general policies and strategy in which climate change is cross-cutting issue

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The CEO reports directly to the Board of Directors of Colbun. The main responsibilities of the CEO are defining general policies of Colbun with the aim of fulfilling the strategic objectives established by the Board and establishing business policies, development strategies and investment plans for the main managements of Colbun, such as the Project and Engineering Management, Energy Management, Finance and Administration Management, Innovation and Business Development Management, Commercial Management, Public Corporate Affairs Management and Environmental Management; with the purpose to enhance the Company's growth.

Position or committee

Risk manager

Climate-related responsibilities of this position

Assessing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The Corporative Risk Manager follows up and controls the material risks of the company, in which are climate change risks and is in charge of coordinating the Risk Committe.

Position or committee

Environment/ Sustainability manager

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Monitoring progress against climate-related corporate targets
Managing climate-related risks and opportunities
Other, please specify
Impementing the Climate Change Strategy

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The Sustainable and Environmental Manager is in charge of implementing, monitoring and reporting to the CEO the climate change strategy. Also, from 2023, is in charge of promoting the TCFD guidelines across the company.

Position or committee

Risk committee

Climate-related responsibilities of this position

Assessing climate-related risks and opportunities

Coverage of responsibilities

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

The Risk Committee meets on a monthly basis and is composed of the General Manager, Senior Executives, and a representative from the Board of Directors attends its meetings. Other Directors may also attend. It's the instance where the risk management is carried out.

Position or committee

Sustainability committee

Climate-related responsibilities of this position

Other, please specify

Oversees the integration of climate change issues at a corporate level

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Quarterly

Please explain

The President, Vice President and some directors regularly participate in the Sustainability and Regulation Committee which is the main coordinating body of the sustainability approach of the business, in which climate change is a main issue, and oversees the integration of social, environmental and governance issues at a corporate level and in the different business areas of the company.

Position or committee

Other C-Suite Officer, please specify

Managers, such as Corporate Affairs, Commercial, Innovation and Planning and Generation are related to climate change issues

Climate-related responsibilities of this position

Other, please specify
Supporting of the Climate Change Strategy

Coverage of responsibilities

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

More frequently than quarterly

Please explain

Managers from other areas of Colbún contribute to implement the Corporate Strategy wich main goal is to double its renewable energy capacity by 2030 (+4,000 MW) which is the key element of the Climate Change Strategy of Colbún.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Climate change related issues are incorporated in annual targets of Colbun. Depending on the performance of targets, as of December of each year, every worker of Colbun is entitled to an incentive according to the fulfillment of the target.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

Other, please specify
other

Performance indicator(s)

Achievement of a climate-related target
Reduction in emissions intensity
Other (please specify)
Achieving of a renewable energy capacity capacity goal

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

Colbun's CEO receives its compensation based on a fixed component and a variable component linked to a "performance bonus". According to the criteria set annually by the Board of Directors for the year 2022, this bonus weighs progress on the environmental footprint, where climate change targets are considered with other ESG issues (10%) ; progress on the company's strategic agenda, which includes the development of renewable projects (24%); customer management (10%); operational management, focusing on the reliability of Colbun's power plants (10%) and progress on innovation indicators, such as the company's digital transformation plan and the development of innovation projects (10%), between other strategic issues.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

Monetary incentives include achieving anual goals taht are in line with the main target of Colbun´s Strategic plan wich is to double its capacity (+4000 MW) with renewable energy projects. The incentives include annual goals to achieve it´s climate change targets, specifically, to reduce its net emission factor by 30% in 2025 and by 40% in 2030, based in 2018.

Entitled to incentive

Other C-Suite Officer

Type of incentive

Monetary reward

Incentive(s)

Other, please specify
Performance bonus based on a fixed component and a variable component.

Performance indicator(s)

Progress towards a climate-related target
Reduction in emissions intensity
Other (please specify)
Achieving of a renewable energy capacity capacity goal

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

Ass the CEO, senior managements receive a compensation based on a fixed component and a variable component linked to a "performance bonus". According to the criteria set annually by the Board of Directors for the year 2022, this bonus weighs progress on the environmental footprint, where climate change targets are considered with other ESG issues (10%) ; progress on the company's strategic agenda, which includes the development of renewable projects (24%); customer management (10%); operational management, focusing on the reliability of Colbun's power plants (10%) and progress on innovation indicators, such as the company's digital transformation plan and the development of innovation projects (10%), between other strategic issues.

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Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Other, please specify

Performance bonus based on a fixed component and a variable component.

Performance indicator(s)

Progress towards a climate-related target

Reduction in emissions intensity

Other (please specify)

Achieving of a renewable energy capacity capacity goal

Incentive plan(s) this incentive is linked to

Both Short-Term and Long-Term Incentive Plan

Further details of incentive(s)

Ass well as the CEO and senior managements, employees receive a compensation based on a fixed component and a variable component linked to a "performance bonus". According to the criteria set annually by the Board of Directors for the year 2022, this bonus weighs progress on the environmental footprint, where climate change targets are considered with other ESG issues (10%) ; progress on the company's strategic agenda, which includes the development of renewable projects (24%);

customer management (10%); operational management, focusing on the reliability of Colbun's power plants (10%) and progress on innovation indicators, such as the company's digital transformation plan and the development of innovation projects (10%), between other strategic issues.

Explain how this incentive contributes to the implementation of your organization’s climate commitments and/or climate transition plan

Monetary incentives include achieving anual goals in line with the main target of Colbun’s Strategic plan wich is to double its capacity (+4000 MW) with renewable energy projects. The incentives include annual goals to achieve it’s climate change targets, specifically, to reduce its net emission factor by 30% in 2025 and by 40% in 2030, based in 2018.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	In Colbun, short-term is associated with the fulfillment of the annual budget of the Company and the efficient use of current assets. This time horizon for assessing climate-related risks and opportunities is aligned with Colbun methodology for assessing risks of the Company.
Medium-term	2	5	In Colbun, medium-term is associated with variables related to financing capacity, hydrological variability, price of commodities, commitments with communities and investors, and overall Colbun’s abilities to compete in the electricity sector. This time horizon for assessing climate-related risks and opportunities is aligned with Colbun methodology for assessing risks of the Company.
Long-term	6	20	In Colbun, long-term is associated with the impact of new developments inside and outside the Company, technological and development costs changes and long-term policies.

			This time horizon for assessing climate-related risks and opportunities is aligned with Colbun corporate risk methodology
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C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

At Colbun it is defined that a potential impact of 10% of the expected EBITDA, in the respective time horizon of analysis, is a substantive financial or strategic impact on business of Colbun. With this guideline, for example, the corporate insurance program seeks to limit possible losses in the event of catastrophic failures through deductibles and self-insurance retentions (SIR).

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Risk and opportunities identification process is the result of a comprehensive and permanent analysis held by several groups/areas throughout Colbun. This analysis covers topics like, for example, operations, assets, regulation, reputation, demand and weather patterns, among others, all assessed in terms of their likelihood of occurrence and their potential effects on the EBITDA.

The Corporate Risk Manager is in charge of designing the methodological implementation of the risk model based on the ISO 31000 standard and also supporting other Colbun areas in the assessment and monitoring of business risks. Improvement of the risks and opportunities management is an integral part of Colbun's business and

decision-making processes.

The Risk Committee monitors the strategic risks and ensures that the Company has effective administration over these. This Committee is formed by the CEO, the Chairman and key executives of the Company, although other representatives of the Board of Directors may attend. The Risk Committee meeting is held every two months, in which environmental topics are treated accurately to define the Company's position. Then, risk/opportunities are ranked by their potential impact on the EBITDA, and the main ones are discussed at a Board level. The above analysis, is supported by new studies that are frequently coming up, with worldwide and local results. A focus on hydrological variations and regulatory changes is in place since they may cause a shock to medium-term and long-term targets of Colbun.

Colbun Risk Model includes risk prioritization, which is the process of determining risk management priorities by comparing the level of risk (in terms of impact and likelihood) against predetermined target risk levels and tolerance thresholds defined by the Risk Committee of Colbun. Risk is viewed not just in terms of financial impact and probability but also subjective criteria such as health and safety impact, reputational impact, environmental impact, social impact, and operational impact.

Risks, are managed with a criterion of cost efficiency, where the Risk Committee decides on the position that should be taken for each one, considering its possible impact and probability and how these are related to appetite and risk tolerance, previously defined by the Board of Directors. The detailed process is the following:

1. Organize the first series of meetings with each business management of Colbun to establish the context of the risk analysis;
2. Organizing the second round of meetings to identify the risks arising from the operations and the industry context.
3. Document the risks identified and evaluate them according to their occurrence probability (P) and severity (S).
4. Evaluation of risks is done considering the following scale: 1= low; 2= medium; 3= high; 4= extreme. Risks are then classified as stated by the product between P and S, which according to a second scale, are classified again as Low, Medium, High and Extreme.
5. Then, a series of mitigation and control actions are proposed and established to bring the initial evaluation to a lower one.
6. Mitigation and control actions are monitored monthly, analyzing a possible change in the initial evaluation of the risks, the effectiveness of the mitigation actions, and new initiatives.
7. In the Risk Committee, a detailed analysis of high and extreme risks is carried out to make relevant decisions regarding the mitigation actions and new controls proposed in the technical round table.

The resulting Risk Matrix of Colbun includes several risks related to climate change involving direct operations, including both physical and transitional such decrease of

water for thermal power plants and regulatory changes related to climate change respectively.

In 2022 it was also performed a study to identify risks and opportunities according to TCFD Guidelines, specifically using two climate change scenarios. This study was led by the Sustainable and Environmental Management and its an on going process.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>Colbun Risk Matrix considers changes in regulation related to climate change a strategic risk. The agreement among various political and social sectors regarding the urgency of action to cope with climate change has prompted several regulatory changes that might have a high impact on Colbun, for example:</p> <p>1) CO2 tax of 5 USD per ton established in 2014 (which came into effect in 2017) turned out to have an economic impact on results. In 2022 Colbun paid 23,412,439 USD for the so-called green taxes. On the one hand CO2 tax could increase as the price of 5 USD per ton is far from the estimated social cost of CO2, which promotes and give the right incentives for GHG reduction investment. On the other hand, the government plan is to implement a gradual increase in the tax up to 40 USD per ton.</p> <p>2) Coal-fired power plants decommissioning: a relevant milestone was the voluntary agreement signed in June 2019 between the Ministry of Energy of Chile and the utilities AES Andes, Colbun, Enel, and Engie, to promote the decarbonization of the Chilean electrical matrix. The plan contemplated in its first stage that by 2024, the eight oldest coal-fired thermoelectric plants in Chile will end their operations (none of which belongs to Colbun). Besides, working groups set up for every five years will discuss and allow the establishment of new closure schedules, looking to a total withdrawal of this type of plants by 2040. The agreement included the creation of an operational state of “strategic reserve” (ERE) that will allow these plants -within a period, to return to operate in case of a structural emergency. Even though Colbun owned only one of the 28 coal-based plants (and one of the newest), Santa María power plant, with an installed capacity of 350 MW, the Company supported the government decarbonization plan. Colbun believes in the need to give regulatory and market signals so</p>

		that the energy matrix decarbonization doesn't affect the security, the efficiency, and the cost of operation of the electric system.
Emerging regulation	Relevant, always included	<p>Colbun's Risk Matrix includes emerging regulation related to climate change as a strategic risk. Several legislative proposals are in discussion and may have an impact on Colbun:</p> <p>1) Climate Change Framework Law: Enacted in 2022. The law establishes carbon neutrality of the country by at least 2050. According to the law, each sector, including the power generation one, will have mitigation and adaptation targets to adress.</p> <p>2) Climate change management instruments: Defined by the Climate Change Law, such as the Long term Strategy and sectoral mitigation and adaptation plans could accelerate the decarbonization process for coal facilities.</p>
Technology	Relevant, always included	<p>New technologies that have arisen and grown due to climate change have caused (and may cause) relevant changes regarding the market structure and its levels of competition. Even more, if these technologies have support from the authority and regulatory organizations.</p> <p>In Colbun Risk Matrix, the risk of not considering new technologies or advances on technologies already used by Colbun it is included as a strategic risk. For example, new technologies related to climate change monitored by Colbun are green hydrogen, storage, water desalinization, distributed generation, and solar and wind technologies that lower the development cost of these power plants. Technological changes such as distributed generation and storage can be disruptive but generate new business opportunities. A potential lag in the integration of technological changes may lead to incomplete or late development of these and lower growth potential, the reason why Colbun explores and develop business opportunities using new technologies.</p>
Legal	Relevant, not included	<p>Climate agreements for the fulfillment of environmental objectives are increasingly relevant to people. In countries such as Japan, Poland, France, and Argentina, lawsuits have been filed against companies that operate thermal power plants because they have failed to comply with the agreements or violate the rights to life, health, and integrity due to climate change.</p> <p>Colbun does not foresee that climate change may entail legal risks because the Company's operational objectives are fully committed to Chile's decarbonization plan (2030), with the NDC (2030), and the Long Term Climate Strategy (2050).</p>

Market	Relevant, always included	<p>Colbun Risk Matrix includes market conditions for energy supplied by Colbun to its customers as a strategic risk. Given the dynamics of the electricity sector and the high level of competition, Colbun must constantly monitor the conditions of the market to offer energy contracts to its customers according to its needs and requests. There is a growing demand for certified renewable energy, for GHG emissions reduction targets fulfillment inside a company.</p> <p>Colbun customers are privileging electricity from renewable sources, proof of this is that during 2022, the Company signed 30 contracts with renewable certification, totaling 111 clients and 6,803 GWh per year committed under this modality.</p>
Reputation	Relevant, always included	<p>Colbun Risk Matrix includes events that could affect Colbun's reputation as a strategic risk.</p> <p>For Colbun, not being seen as a company interested in climate change is a critical risk since this can alienate potential investors or customers or entangle relations with communities and authorities.</p> <p>Having good Corporate Governance is an essential part of the trust and relationship of Colbun with its stakeholders because reputation problems can affect business development and value creation. Therefore, it is required to ensure transparency, excellence regulatory compliance, ethical behavior of all employees and high standards in conflicts of interest management.</p> <p>Colbun performs an annual survey on Reputation and Risks applied to surrounding communities and local opinion leaders, clients, and other stakeholders.</p> <p>Colbun's management reflects in the Reputational Risks Survey that is carried out each year with its stakeholders to detect risks and gaps. On 2022, 92% of clients indicated that Colbun has a good reputation.</p> <p>Colbun also strives to be a good neighbor in every community where we operate. As such, we seek to develop and strengthen cooperation by making the most of our infrastructure, technical expertise and value creation capabilities. In this process, we mitigate our negative impacts through a timely and preventive assessment of our operations, and enhance the positive ones, so that we can deliver social value from our production to the environment.</p>

Acute physical	Relevant, always included	<p>Colbun Risk Matrix considers extreme events related to nature that could affect Colbun's power plants operation as a strategic risk.</p> <p>Extreme events in the facilities of Colbun can cause a decrease in its power plant availability, with an expected loss given by the deductible of the insurances, without counting on the increase of the premiums in the future. For example, the risk of forest fire could be a risk for some of Colbun´s thermal power plants close to forests such as Santa Maria, and can also be detrimental for energy transmission.</p>
Chronic physical	Relevant, always included	<p>Colbun Risk Matrix includes changes in climate chronic conditions such as the decrease and changes in precipitation patterns which can cause a significant drop in energy production that may lead to an increase in the operational costs of power plants. It can also generate drastic changes in the profitability or feasibility of the portfolio of projects being developed by Colbun.</p> <p>As of December 2022, Colbun has a total of 1,627 MW of installed capacity in hydroelectric power generation, whose production depends on the hydrological conditions of the year. In the last ten years, there has been a significant decrease in rainfall patterns in the basins of central and south-central Chile, with a consequent reduction in the generation of hydroelectric energy. A higher gas generation has compensated for this reduction, although significantly more expensive for Colbun.</p>

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical

Changing precipitation patterns and types (rain, hail, snow/ice)

Primary potential financial impact

Increased direct costs

Company-specific description

This risk applies in Chile.

Although in 2022 there was higher rainfall in the central and southern parts of the country, these continue to face water scarcity or what specialists have called a “megadrought” characterized by a persistent decrease in precipitation in most of the basins in the south-central part of the country since 2010.

Changes in precipitation patterns and extreme variability in weather patterns might affect the power generation of Colbun’s reservoirs and run of the river power plants located in Chile.

Colbun has a hydroelectric installed capacity of 1,627 MW distributed among 17 power plants located in different parts of Chile, from the Valparaíso to the Los Lagos Region, representing a 47% of Colbun’s total installed capacity in Chile.

Changes in precipitation patterns might affect hydroelectric power generation in Aconcagua and Maule basins. In these basins, Colbun has two complexes of hydro power plants: 210 MW for Aconcagua Complex, with six run of the river power plants and an installed capacity of 210 MW and Colbun Complex (with two reservoirs and four run of the river power plants with an installed capacity of 662 MW , respectively. Both Complexes represent 24% of Colbun’s total installed capacity in Chile in terms of MW.

These two Complexes are in river basins that have already experimented a decrease in precipitation patterns. According to several studies and simulations for Chile made with climate change models, it is expected a decrease of 20% in cumulative precipitation in the central part of the country by 2050, therefore, Aconcagua Complex and Colbun Complex could be affected by climate change impacts over the short term.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10.000.000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In an average year, power generation is near 1,000 GWh in Aconcagua Complex and 3,250 GWh in Colbun Complex.

A decrease in the energy production on the mentioned facilities would lead to supply that committed energy with Colbun's CCGT capacity, running with liquefied natural gas (LNG). These would face Colbun with higher supply costs (about 100 USD/MWh, according to the average supply cost reported in 2022 financial statements). Thus, per every 100 GWh of lower hydropower generation, the impact on our EBITDA could be about 10,000,000 USD.

Cost of response to risk

3.361.000.000

Description of response and explanation of cost calculation

To manage this risk, Colbun has focused on diversifying its generation matrix and applying water-use efficiency measures in its operations in Chile and Peru.

Colbun has been focusing on growing renewable energy, such as solar and wind power. Colbun's roadmap implies the challenge of doubling its installed capacity in Chile, expecting to add 4,000 MW renewable energy generation capacity by 2030. To reinforce this type of energy in its asset portfolio, Colbun has a Renewable Energies development management focused on studying and developing greenfield projects based on solar and wind technologies without leaving out any other non-conventional renewable energy. In complement, Colbun also has an M&A unit which focuses on studying and executing the acquisition of operating projects in Chile and abroad, including renewable energy projects.

Also, for its project assessments and budget elaboration, Colbun considers very dry hydrological scenarios as to be prepared for the worst precipitation patterns that might happen due to climate change effects in Chile and is permanently making efforts for more efficient water use, minimizing the effects of variability in precipitation patterns and changes in flow regimes. In 2022, projects focused on water-use efficiency continued to be executed in power plants, for administrative use and for community support initiatives.

At power plants, the initiatives focused on using technology such as a reverse osmosis system to reduce water consumption during periods of water shortage and developing a model that optimizes hydraulic generation based on the efficiency of the turbines, managing to increase generation.

Projects focused on efficiency for administrative use in the last two years have been:

change of the landscape of Nehuenco Complex and Los Quilos towards a xerophytic gardens with technical irrigation, the installation of a rainwater harvesting system in La Mina, the setting up of a water production from atmospheric humidity system in Canutillar and reuse of wastewater for irrigation.

In 2022, initiatives to provide drinking water to surrounding communities continued.

The figure mentioned in the cost of the response to risk is an estimated CAPEX for the construction of renewable energy projects for 4,000 MW between 2021 and 2030. Colbun expects that these initiatives will reduce the magnitude of the risk from medium-high to medium.

Comment

No comments.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation
Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

This risk applies in Chile.

Facilities with an installed thermal capacity over 50 MWt pay CO₂ emissions tax of 5 USD per ton. Colbun' thermal power plants (PP) have to pay that tax (Nehuenco Complex 888 MW; Candelaria PP 256 MW; Los Pinos PP 108 MW; Santa María PP 350 MW). On February 24, 2020, amendments to the carbon tax were adopted as part of a broader tax reform. The carbon tax will apply from 2023 onwards to facilities emitting more than 25,000 ton CO₂ and those that release more than 100 tons of particulate matter into the air each year. The amendments also introduced the possibility of using offsets to meet compliance obligations, for which the rules still have to be established.

The carbon tax rate remains at 5 USD, but there is discussion to promote an increase in the price of carbon tax. International and national studies show the necessity of higher carbon price in order to give the right signals and incentives for GHG emissions reductions. Also, the government plan of the current President of Chile stipulates a gradual increase in the tax up to 40 USD per ton.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4.682.487

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In 2022 Colbun CO2 emissions taxed were 4,682,487 tons of CO2, representing a cost of 23,412,435 USD. Therefore, for every dollar the government raises the tax, operating costs will rise by approximately 4,682,487 USD.

Cost of response to risk

12.225.000

Description of response and explanation of cost calculation

Colbun is always seeking new growth opportunities in renewable projects, and that's why the Company has set for the coming decade the objective to implement a growth strategy of renewable energy that will add 4,000 MW of solar (PV) and wind energy.

With the execution of this plan, Colbun expects to reduce its emission factor by 40% in 2030 compared to 2018. This means going from an emission factor of 0.286 tonCO2e per MWh in 2018 to 0.172 tonCO2e per MWh in 2030. To reinforce solar and wind power in its asset portfolio, Colbun has the Renewable Energies Development Management focused on studying and developing greenfield projects based on solar and wind technologies without leaving out any other type of renewable energy. In addition, Colbun has an M&A Department whose focus is studying and executing the acquisition of operating projects in Chile and internationally, including renewable projects.

The figure indicated in the cost of the response to risk is per year and corresponds to an estimation based on last year consultancy and internal budget .

With this management method, the Company considers this risk is reasonably controlled.

Comment

No comments.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased capital expenditures

Company-specific description

This risk applies in Chile.

Climate change is a relevant topic for the State of Chile. In 2022 Chile approved its Climate Change Law, where it commits to achieve carbon neutrality by 2050 or earlier, and in early 2020, Chile was one of the first countries to submit an updated Paris Agreement target to the UNFCCC. The updated Nationally Determined Contribution (2020 NDC) includes a commitment to a GHG emission budget not exceeding 1,100 MtonCO₂e between 2020 and 2030, with a GHG emissions maximum by 2025 and a GHG emissions level of 95 MtonCO₂e by 2030. Also, it proposes that Chile will seek to reach GHG neutrality by 2050 as established in the Framework Law on Climate Change issued in 2022.

The long-term vision for the country will be outlined through a participatory process within Chile's Long-Term Climate Strategy for 2050 framework design. This strategy will define targets for mitigation and adaptation for different sectors of the Chilean economy, among them the generation power sector. These targets will have to be fulfilled by the private sector, including Colbun. GHG emissions of Colbun come foremost from thermal power plants running with gas and coal. For coal facilities, the private sector (including Colbun) and the Ministry of Energy signed an agreement that commits to coal being phased out by 2040. Targets under Chile's Long-Term Climate Strategy towards 2050 could accelerate this process.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

35.000.000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

To fulfill the agreement that commits to the phase-out of coal by 2040, Colbun will have to stop operations of Santa María thermal power plant with an installed capacity of 350 MW, located in Chile. According to the assessment made by Colbun, the closure of Santa María will cost approximately 35,000,000 USD due to the dismantling of the power plant.

Cost of response to risk

3.373.294.000

Description of response and explanation of cost calculation

Colbun is always seeking new growth opportunities in renewable projects and has set the objective to implement a growth strategy of renewable energy that will add up to 4,000 MW of solar and wind capacity by 2030. With the addition of these projects, Colbun expects to reduce its emission factor by 40% in 2030 compared to 2018. This means going from an emission factor of 0.286 tonCO₂e per MWh in 2018 to 0.172 tonCO₂e per MWh in 2030.

To reinforce solar and wind capacity in its asset portfolio, Colbun has established the Renewable Energies Department, which focuses on studying and developing greenfield projects based on solar and wind power without excluding any other type of renewable energy. In complement, Colbun has an M&A Department whose focus is on studying and executing the acquisition of operating projects in Chile and internationally, including renewable projects.

Colbun also has a Regulation Department that oversees all regulations that have or may have a potential impact on the operations of Colbun's facilities. Regulation Department develops studies and prepares reports that are presented to the CEO and key executives, so they can make decisions regarding the regulations that could affect Colbun's operations.

The figure indicated in the cost of the response to risk includes estimated CAPEX for the construction of renewable energy projects with a capacity of 4,000 MW and 2021 budget for Renewable Energies, M&A, and Regulation Departments.

With these, Colbun considers that this risk is reasonably controlled.

Comment

No comments.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased direct costs

Company-specific description

This risk applies in Chile.

Increasing extreme weather events such as drought, forest fires and floods might put at risk Colbun's operations and facilities, such as Santa María thermal power plant and Aconcagua hydroelectric complex, due to their locations. On Colbun's risk matrix, these are considered under the classification of natural disasters, which could cause damages to workers, assets, or local communities.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

20.000.000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The maximum financial implications will be associated with the physical damage portion of the insurance caused by these extreme events, which is not covered. The deductible of Colbun operational insurance for Chile in 2022 was 20,000,000 USD.

Cost of response to risk

20.000.000

Description of response and explanation of cost calculation

To manage this risk, Colbun has invested in infrastructure to prepare the facilities for extreme weather events. In 2022, Colbun invested about 20,000,000 USD in infrastructure improvement to decrease the physical risk of the facilities. With this management method, Colbun considers that this risk is reasonably controlled.

Comment

No comments.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical
Precipitation and/or hydrological variability

Primary potential financial impact

Increased direct costs

Company-specific description

This risk applies in Chile.

Changes in precipitation patterns might affect water availability for cooling in thermal power plants. A decrease in precipitation leads to a reduced recharge of river basins and aquifers.

Valparaíso Region has experienced several years of drought that affects water availability for different sectors. The projections show that if the temperature continuously increases, the effects of climate change will be more severe for this region of Chile.

The largest thermal asset of the Company, Nehuenco Complex, with 854.6 MW of installed capacity, is located in the Valparaíso Region. This combined gas cycle power plant needs water for cooling purposes, supplied by 20 wells that depend on the water availability of the zone.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

18.990.440

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Water scarcity in the central zone of Chile might bring lower water availability for cooling purposes in Colbun's thermal power plants, in particular for the Nahuenco Complex located in the Aconcagua River basin, with an installed capacity of 854.6 MW representing 25% of the total installed capacity of Colbun in Chile.

Water scarcity could affect Colbun's results due to lower energy generation caused by a lack of water availability for the thermal process. To cope with this energy gap, Colbun will have to supply part of its contracts with purchases from the spot market (average price at Quillota Substation was 104 USD/MWh in 2022). Assuming that the spot price is in line with open-cycle gas plants, this over cost could affect a share (8.3% estimated, considering a month out of operation) of the 2,200 GWh expected to be supplied by gas.

Cost of response to risk

Description of response and explanation of cost calculation

In 2017 Colbun built a Reverse Osmosis (RO) plant in Nahuenco Complex to reduce the need for water for the cooling process of the combined cycle and to improve the water quality of the wells.

With the use of the RO plant, the water needs for cooling purposes can be reduced by up to 50%. The plant eliminates the sulfates from the water supplied by the wells, so it isn't necessary to purge so much water in the cooling towers because fewer solids accumulate on them.

Due to the dry conditions, the RO plant has been operating more intensely over the years. In 2022 worked 6 months. Colbun expects the same or more difficult hydrological conditions for next year and estimates a similar intensity of use of the RO plant.

The cost of response is an estimation of operational costs of the RO plant. In addition, as a secondary response to prevent the detention of the operations of the Nehuenco Complex, Colbun is securing external suppliers of water as a backup in case the water scarcity worsens.

Comment

No comments.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

This opportunity applies in Chile.

Climate change regulation in Chile will promote the creation of a national carbon market: with the modification of the carbon tax and the introduction of the Framework Law on Climate Change. Also, it is expected that the closure of article 6.4 of the Paris Agreement agreed at the last COP, will boost the international carbon market.

Chile taxes CO₂ emissions from installations with a thermal capacity higher than 50 megawatts. The tax is 5 USD per ton of CO₂. On February 24, 2020, amendments were introduced to the carbon tax as part of broader tax reform. The carbon tax now applies to facilities emitting 25,000 tons of CO₂ or more and those that release more than 100

tons per year of particulate matter. The amendments also introduced the possibility of using carbon offsets for local projects to meet compliance obligations, for which the rules still have to be established. Changes to green taxes will take effect in 2023. Compensation through the implementation of reduction projects opens the possibility of an offset market nationwide.

Besides, the Framework Law on Climate Change also introduces a possible trading system. Regulated entities could reduce their emissions below limits fixed by the regulator or implement emission reduction projects to earn credits. These could then be sold to other regulated entities for compliance. The government could also allow these entities to implement mitigation projects and use the certified reductions to either achieve the standard or transfer those reductions to third parties. A dedicated registry would track the carbon reductions and their transfers.

The carbon market represents an opportunity to facilitate the development of low-emission technologies. Also, it might benefit companies like Colbun, which has a high renewable power generation portfolio and several projects already registered under a carbon standard and trading offsets in the international market. Colbun has six power plants registered under CDM and VCS, which achieve emissions reduction of over 700,000 tons of CO₂e per year (according to the registered PDDs): Chacabuquito, Hornitos, Quilleco, San Clemente, and La Mina hydropower plants, and Ovejería PV power plant.

Colbun could become a carbon offset seller. Annual emissions reduction could generate between 3,500,000 to 7,000,000 USD of additional income per year for Colbun (considering a minimum carbon price of 5 USD per ton CO₂, given by the tax).

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

3.500.000

Potential financial impact figure – maximum (currency)

7.000.000

Explanation of financial impact figure

Colbun could become a carbon offset seller. Colbun has six power plants registered under CDM and VCS, which together achieve emissions reduction over 700,000 tons of CO₂e per year (according to the registered PDDs): Chacabuquito, Hornitos, Quilleco, San Clemente and La Mina hydropower plants, and Ovejería PV power plant.

Annual emissions reduction of the six power plants registered to issue carbon credits could generate between 3,500,000 to 7,000,000 USD of additional incomes per year (considering current CO₂ price in Chile given by the tax, 5 USD per ton CO₂, and an international price of regulated markets around of 10 USD per ton CO₂).

Cost to realize opportunity

200.000

Strategy to realize opportunity and explanation of cost calculation

Colbun has implemented the following strategy to realize this opportunity:

Since 2010, Colbun counts with a dedicated team responsible for climate change issues that have led the Company to become one of the main players in the Chilean Electric Sector in CDM and VCS registered projects and credit issuance (over 3,336,664 tonCO₂e so far).

In addition, Colbun has defined as part of its Climate Change Strategy the development of a project portfolio that generates Certified Emissions Reductions. For example, Ovejeria was the last renewable project registered under VCS (photovoltaic power plant of 9 MW of installed capacity, average generation of 20.7 GWh per year). The plant can generate emissions reductions of 13,100 tonCO₂e per year.

Colbun expects that this strategy will enhance the magnitude of the opportunity from medium-low to medium-high in a five years timeframe, adding a sizable amount of emission reductions to Colbun's portfolio.

For the execution of this opportunity, the estimated cost is 200,000 USD per year. The calculation considers an estimation for consultancy costs, verification costs (payment for DOEs), and issuance fees of the carbon credits for each of the six registered projects that Colbun has under CDM and VCS standards.

Comment

No comments.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

This opportunity applies in Chile.

Climate change regulation in Chile will promote the creation of a national carbon market: with the modification of the carbon tax and the introduction of the Framework Law on Climate Change. Also, it is expected that the closure of article 6.4 of the Paris Agreement agreed at the last COP, will boost the international carbon market.

Chile taxes CO₂ emissions from installations with a thermal capacity higher than 50 megawatts. The tax is 5 USD per ton of CO₂. On February 24, 2020, amendments were introduced to the carbon tax as part of broader tax reform. The carbon tax now applies to facilities emitting 25,000 tons of CO₂ or more and those that release more than 100 tons per year of particulate matter. The amendments also introduced the possibility of using carbon offsets for local projects to meet compliance obligations, for which the rules still have to be established. Changes to green taxes will take effect in 2023. Compensation through the implementation of reduction projects opens the possibility of an offset market nationwide.

Besides, the Framework Law on Climate Change also introduces a possible trading system. Regulated entities could reduce their emissions below limits fixed by the regulator or implement emission reduction projects to earn credits. These could then be sold to other regulated entities for compliance. The government could also allow these entities to implement mitigation projects and use the certified reductions to either achieve the standard or transfer those reductions to third parties. A dedicated registry would track the carbon reductions and their transfers.

The Ministry of Energy and Ministry of Environment of Chile are leading the work on defining the scope and criteria for carbon offsets, and promoting the transition to a low carbon economy. There is a high probability that changes would enhance renewable energy projects to offer carbon offsets to sectors that cannot implement cost-effective GHG mitigation actions.

Colbun has an opportunity with its actual offer of renewable energy and could have a competitive advantage in the future if the Company successfully implements its growth path on renewable energy from variable sources designed by 2030, expecting to add 4,000 MW of solar and wind capacity.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

12.235.000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Colbun could become a carbon offset seller. Annual emissions reduction resulting from the future growth of Colbun in renewable energy could generate offsets of around 2,447,000 tonCO₂ per year. Considering a carbon offset sale price of 5 USD per tonCO₂ (value given by the current CO₂ tax in Chile), revenues for Colbun could be around 12,235,000 USD per year.

Cost to realize opportunity

2.300.000

Strategy to realize opportunity and explanation of cost calculation

Colbun is always seeking new growth opportunities in renewable energy projects. With this purpose, Colbun has set to implement a growth strategy of renewable energy from variable sources designed by 2030, expecting to add 4,000 MW of solar and wind energy generation.

To reinforce this type of energy in its asset portfolio, Colbun has a Renewable Energies Management focused on studying and developing greenfield projects based on solar and wind technologies without leaving out any other non-conventional renewable energy. In complement, Colbun also has an M&A unit that focuses on studying and executing the acquisition of operating projects in Chile and abroad, including renewable energy projects.

Examples of these practices are the renewable energy projects under development described in Colbun's Annual Report of 2022: Horizonte wind farm project (installed capacity of 778 MW), Inti Pacha PV power plant project (installed capacity of 486 MW) and Jardin Solar PV power plant project (installed capacity of 537 MW).

Colbun expects that the management method described above will enhance the magnitude of the opportunity from medium-high to high in five years or more timeframe.

The cost to realize this opportunity is an estimated CAPEX of selected solar and wind projects, that have the capacity to reduce carbon emissions, that Colbun will develop until 2030.

Comment

No comments.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Ability to diversify business activities

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

This opportunity applies in Chile.

According to the National Green Hydrogen Strategy, Chile is committed to reducing its greenhouse gas emissions to help slow down global climate change, moving towards sustainable development. It is in Chile's wealth of clean energies that the Ministry of Energy see an engine to decarbonize the country's activities, diversify its energy matrix and generate new industries for local development. Chile can produce the clean and renewable fuels that the world requires to avoid climate change. Chile has a unique opportunity to develop a competitive green hydrogen industry that, from electricity produced with low cost renewable resources, forms an energy source for local use and exportation, and promotes a sustainable economy around it.

Colbun sees green hydrogen as a way to aggregate additional value to the portfolio of renewable energy projects that it is developing in Chile.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

In 2021, Colbun worked on promoting a corporate strategy to take advantage of the national potential to produce this emission-free fuel, generating a positive impact for customers and society in general. Thus, in 2022, the Green Hydrogen Management was created to promote this new business opportunity in line with Colbun's growth strategy.

Cost to realize opportunity

200.000

Strategy to realize opportunity and explanation of cost calculation

Colbun sees green hydrogen as a way to add value to the portfolio of renewable energy projects. In 2021, Colbun worked on promoting a corporate strategy to take advantage of the national potential to produce this emission-free fuel, generating a positive impact for customers and society in general. Thus, in 2022, the Green Hydrogen Department was created to promote this new business opportunity in line with Colbun's growth strategy.

Colbun has participated in the various working groups organized by the Ministry of Energy and was one of the first companies to join as a partner of the Chilean Hydrogen Association (H2 Chile). The Company wants to position itself as a relevant player in this new industry, for which it plans to sign development agreements with technology suppliers, partners, and customers. On 2022, Colbun signed an alliance with the Santiago Airport to participate in the first Green Hydrogen project for an airport in Latin America.

Costs calculation includes the annual fee for H2 Chile, execution of the certificate program, and studies on market dynamics, among other studies and consultancies.

Comment

No comments.

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a climate transition plan within two years

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Colbun is committed to reducing its net emissions factor by 30% in 2025 and by 40% in 2030, from 2018 figures and has the goal to become a carbon-neutral company as of 2050.

Also, Colbun is committed to the national Agreement of Decarbonization of the Chilean generation matrix, signed between private companies that owned coal power plants and the Ministry of Energy. Colbun comprises its coal phased out in 2040.

For evaluating its goals and commitments on the road to carbon neutrality, the Company is monitoring and evaluating initiatives such as Science Based Target. Nowadays, this type of initiative does not consider the contribution of compensation instruments for the fulfillment of goals, complement necessary for those sectors that cannot reduce emissions in the short and medium term in a cost-effective way.

Finally, in 2022, Colbun developed a study to implement the TCFD guidelines on the analysis of the main risks of climate change with material impact on the bussiness and opportunities. The risks where assessed considering two climate change scenarios: RCP 8.5 and RCP 2.6. This work confirmed the risks and opportunities allready identified and monitored by Colbun and showed the need to evaluate other risks such as storms tides. This is ongoing work which will be deepen.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 8.5	Country/area		<p>In 2022 Colbun developed a study to assess the TCFD guidelines in the analysis of climate change risks and opportunities.</p> <p>Specifically there were assessed the material impacts of two climate change scenarios, RCP8.5 and RCP2.6 for chronic and acute physical risks such as the decrease and changes in precipitation patterns and increase in the severity and frequency of extreme events, respectively. The risks where assessed mainly by 2050 and through different public climate change platforms, such as "ArClim" from the Environmental Ministry of Chile, and public studies for Chile and Perú.</p> <p>This analysis was qualitative.</p>
Physical climate scenarios Customized publicly available physical scenario	Country/area	Unknown	<p>Internal planning is performed usign the Long Term Economic Operation Model of the Electric System Software (PLP, by its Spanish acronym) an hydrothermal dispatch model with a representation of the transmission network, used to calculating the least cost stochastic operating policy of a hydrothermal system, minimizing the cost of operating an electric system for the entire period, that is, short, medium and long term (few weeks to several years). Besides basic input information, such as energy demand, power plant capacity, the topology of transmission lines, etc., PLP also uses historic water inflow from many Chilean basins. It currently uses 58 historic hydrologies (since 1960), and every year the last hydrology is included. According to the real statistic for inflows, some hydrologies correspond to dry seasons, whereas others are humid. However, Chile has faced a sequence of dry seasons during the last decade. For this reason, Colbun incorporates this</p>

			<p>behavior in different analyses, using different weights on real statistics to provide more reasonable forecasts.</p> <p>Colbun represents the climate-related scenario with different hydrological conditions evaluating its effects on Commercial Policy and climate change goals.</p> <p>Also, Colbun considers climate change transitional scenarios, such as an increase of carbon tax.</p>
Physical climate scenarios RCP 2.6	Country/area		<p>In 2022 Colbun developed a study to assess the TCFD guidelines in the analysis of climate change risks and opportunities.</p> <p>Specifically there were assessed the material impacts of two climate change scenarios, RCP8.5 and RCP2.6 for chronic and acute physical risks such as the decrease and changes in precipitation patterns and increase in the severity and frequency of extreme events, respectively. The risks where assessed mainly by 2050 and through different public climate change platforms, such as "ArClim" from the Environmental Ministry of Chile, and public studies for Chile and Perú.</p> <p>This analysis was qualitative.</p>
Transition scenarios Customized publicly available transition scenario	Company-wide	1.5°C	<p>Transition scenarios where assessed considering climate and sectoral policies, such as the Climate Change Law and the Energy Policy in Chile, between other, aligned to a 1.5°C global temperature rise.</p> <p>This analysis was qualitative.</p>

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

The focal question we have made is how might our identified climate-related risks and opportunities plausibly affect Colbun over the short, medium and long term, and what

should we do and when.

Colbun's physical climate change scenarios are aligned with a rise of 1.5°C (RCP 2.6) and over 3°C (RCP 8.5) in global temperature. The transitional scenario is aligned with a rise of 1.5°C since the Climate Change Law and NDC of Chile, also considers this scenario. In early 2020, Chile was one of the first countries to submit an updated Paris Agreement target to the UNFCCC. The updated Nationally Determined Contribution (2020 NDC) includes a commitment to a GHG emission budget not exceeding 1,100 MtonCO₂e between 2020 and 2030, with a GHG emissions maximum by 2025 and a GHG emissions level of 95 MtonCO₂e by 2030. Also, it proposes that Chile will seek to reach GHG neutrality by 2050 which is established in the Climate Change Law issued in 2022. For the power generation sector, the NDC implies the coal phase-out and adding more renewable energy to the electric system.

Results of the climate-related scenario analysis with respect to the focal questions

The climate change confirmed the risks and opportunities already identified and monitored by Colbun and also showed the need to study other risks related to extreme events such as storm surges.

The material physical risks identified were changes in the rainfall patterns (chronic risk) and increased severity and frequency of extreme events such as droughts in the central and south of Chile. A larger decrease in rainfall patterns might affect negatively the power generation of Colbun's reservoirs and run of the river power plants located in Chile and lead to an increase in operational costs of power plants, due to more thermal generation. Colbun is permanently making efforts for more efficient water use, minimizing the effects of variability in precipitation patterns and changes in flow regimes.

The transitional risk identified was the increase of the carbon tax. Currently in Chile the green tax is 5 USD/tonCO₂ and in the future, it is expected a gradual increase up to 40 USD/tonCO₂, which potential impact is an increase of operational costs.

These results have had an impact on the Company's long-term strategy, which is now focused on building a power generation portfolio more resilient to changes in hydrological conditions. Colbun is always seeking new growth opportunities in renewable projects and has set the objective to implement a growth strategy of renewable energy that will add up to 4,000 MW of solar and wind capacity by 2030. With the execution of these projects, Colbun expects to reduce its emission factor by 2030 and reach carbon neutrality on 2050.

In the near term, Colbun has also focused on executing water-use efficiency projects on the power plants, for administrative use and community support initiatives. At power plants, the initiatives are focused on using technology such as a reverse osmosis system to reduce water consumption during periods of water shortage and developing a model that optimizes hydraulic generation based on the efficiency of the turbines, to increase generation.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>Risks and opportunities related to the growing demand from customers for low carbon emission energy have increased over the last years (as reported in C2.3a Risk 2 and 3, and C2.4a Opportunity 1, 2, and 3). This context drives companies like Colbun to continue growing in renewable energy in its portfolio of projects as part of the business strategy. Colbun has drawn up its roadmap for Chile intending to double its size by 2030, based on renewable energy, which implies building nearly 4,000 MW by 2030 in Chile.</p> <p>In recent years, the power business has faced a relevant transformation scenario, which imposes new challenges for companies in the sector. One example is that customers want a 100% renewable energy supply and are looking for new products and services beyond energy (such as electromobility, energy efficiency, and offsets, among others).</p> <p>Colbun has sought to supply its customers with safe, competitive, and sustainable energy and adopted a commercial approach that has emphasized on achieving close attention and experience with the customers, as well as seeking a platform for the development of products and customized energy services. Placing the customer at the center, Colbun is working on three specific focuses to continue growing in the market, particularly in the unregulated customer segment: products and services that respond to customer's needs, develop a differentiating service channel, close and direct, and incorporate state of the art technologies that support the development of new business models.</p> <p>In 2020 Colbun took significant steps to complement its core business – the supply of reliable, competitive, and sustainable energy - with value-added services to enhance</p>

		<p>the value offered to its customers acquiring Efizity, the leading value-added energy solutions company, allowing the Company to meet the energy needs of its customers, adding value to its operations and making them more competitive in their markets.</p> <p>In 2022, Colbun signed 30 contracts with renewable certification, totaling 111 customers and 6,803 GWh per year committed under this modality</p> <p>Colbun is also assessing the green hydrogen market in Chile in order to participate in it over the next years (as it is reported in C2.4a Opportunity 3).</p>
<p>Supply chain and/or value chain</p>	<p>Yes</p>	<p>Colbun strategy on its supply chain has been influenced by climate risks related to emissions reduction targets for the power generation sector (as reported in C2.3a Risk 3), as supply chain has an effect on Colbun's overall emissions, specially the related one with fossil fuels.</p> <p>Colbun is committed to exchanging best practices with its contractors and suppliers, seeking to promote high safety, quality, environmental and social standards, supporting them in their growth and development. The above is aimed at achieving excellence throughout the value chain of Colbun.</p> <p>Tender and award processes with contracting companies have incorporated environmental principles and safety issues, requesting the suppliers to inform if they quantify its carbon footprint and have in place a mitigation strategy. In 2022 Colbun developed a carbon footprint calculation tool to support its suppliers.</p> <p>Colbun performs permanent monitoring of certain indicators of sustainability to its suppliers, applying an ESG survey for a self-assessment of new contractors in environmental, social, and corporate governance matters.</p>
<p>Investment in R&D</p>	<p>Yes</p>	<p>Climate-related risks and opportunities have influenced the R&D investment strategy of Colbun. Climate risks related to emissions reduction targets for the power generation sector (as it is reported in C2.3a Risk 3), and climate-related opportunities related to low carbon emission technologies and carbon markets (as it is reported in C2.4a Opportunity 1, 2, and 3), set up the scenario for Colbun to consider the development of new business lines. Green hydrogen is one</p>

		<p>of these new lines of business. Green hydrogen will play a key role in the low carbon transition in Chile for the energy sector, as it is considered in the models of the sector for the carbon neutrality of Chile by 2050.</p> <p>Green hydrogen could contribute significantly to the goal of carbon neutrality that Chile has set for 2050. In the case of Colbun, whose roadmap seeks to raise 4,000 MW in projects of solar and wind power by 2030, this technology is attractive for two reasons: it diversifies commercialized forms of energy, and revalues assets in periods of dumping using this energy vector.</p> <p>In 2022, Colbun materialized the implementation of an area focused on this industry at the beginning of 2022. Additionally, in June signed an agreement to participate in a consortium seeking to implement the use of this fuel at the Santiago Airport - and thus become the first in Latin America to operate with Hydrogen - and more recently sealed an alliance with Sumitomo Corporation to develop projects for the production of hydrogen and green ammonia in Antofagasta and Magallanes.</p>
Operations	Yes	<p>Physical climate-related risks (as reported in C2.3a Risk 1, 4, and 5) have posed new challenges to Colbun in its operations exposed to these risks. To secure the operations of facilities, Colbun has had to invest in technologies, such as the reverse osmosis plant built in Nehuenco Complex located in the Region of Valparaíso, Aconcagua river basin. Climate models predict that climate conditions in this area will be drier over the following decades. Nehuenco Complex requires water for cooling purposes for power generation. The supply of it is by wells inside the facility, which are heavily dependent on the recharge of water from the river basin.</p> <p>In order to be less exposed to dry hydrological conditions and be able to supply its energy contracts, Colbun has drawn up its roadmap for Chile, intending to double its size from now until 2030 based on renewable energy from variable sources (wind and solar). This implies building nearly 4,000 MW by 2030 in Chile.</p>

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures Access to capital	<p>Climate-related risks and opportunities have influenced the financial planning of Colbun in terms of capital expenditures, revenues, and direct costs.</p> <p>Colbun will invest until 2030 in the construction of renewable energy projects in Chile and in technologies that will secure water supply for the operation of strategic facilities, such as the Nehuenco Complex. These investments will decrease the exposure of Colbun in Chile to dry hydrological conditions and changes in regulation related to climate change. Colbun will focus on growing in renewable power, such as solar and wind. Colbun’s roadmap implies the challenge of doubling its installed capacity in Chile, expecting to add 4,000 MW of solar and wind power generation capacity by 2030.</p> <p>CO2 tax and dry hydrological conditions have impacted the incomes of Colbun. The inclusion of the carbon tax has decreased profits by more than 20,000,000 USD per year. Besides, dry hydrological conditions in the center and south of Chile have reduced the generation of hydropower facilities, which have lower operational costs (direct costs) in contrast to thermal power plants. Due to the lack of water, Colbun had to supply the energy for its contracts with the operation of thermal gas-powered power plants, decreasing its revenues. The roadmap of Colbun in 4,000 MW of renewable energy project (wind and solar) by 2030 will have a positive impact on the performance of the Company, by decreasing the exposure to dry hydrological conditions.</p> <p>Also the company is focusing in providing energy solutions to its clients, such as energy efficiency assessments and solutions through Colbun by Efizity, supporting the achievement of their climate change goals,</p> <p>In 2021, the Company issued its first green bond in the international credit market for 600,000,000 USD for financing part of its 4,000 MW project pipeline. Investing in green energy projects has enabled Colbun to access lower financing rates.</p>

C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s climate transition?

	Identification of spending/revenue that is aligned with your organization’s climate transition
Row 1	No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Is this a science-based target?

No, and we do not anticipate setting one in the next two years

Target ambition

Year target was set

2020

Target coverage

Country/area/region

Scope(s)

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Intensity metric

Metric tons CO₂e per megawatt hour (MWh)

Base year

2018

Intensity figure in base year for Scope 1 (metric tons CO₂e per unit of activity)

0,286

Intensity figure in base year for Scope 2 (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 1: Purchased goods and services (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 2: Capital goods (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 5: Waste generated in operations (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 6: Business travel (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 7: Employee commuting (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 8: Upstream leased assets (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 10: Processing of sold products (metric tons CO₂e per unit of activity)

Intensity figure in base year for Scope 3, Category 11: Use of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 13: Downstream leased assets (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 14: Franchises (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Category 15: Investments (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (upstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 3, Other (downstream) (metric tons CO2e per unit of activity)

Intensity figure in base year for total Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0,286

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

99

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

% of total base year emissions in Scope 3, Category 1: Purchased goods and services covered by this Scope 3, Category 1: Purchased goods and services intensity figure

% of total base year emissions in Scope 3, Category 2: Capital goods covered by this Scope 3, Category 2: Capital goods intensity figure

% of total base year emissions in Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) covered by this Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) intensity figure

% of total base year emissions in Scope 3, Category 4: Upstream transportation and distribution covered by this Scope 3, Category 4: Upstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 5: Waste generated in operations covered by this Scope 3, Category 5: Waste generated in operations intensity figure

% of total base year emissions in Scope 3, Category 6: Business travel covered by this Scope 3, Category 6: Business travel intensity figure

% of total base year emissions in Scope 3, Category 7: Employee commuting covered by this Scope 3, Category 7: Employee commuting intensity figure

% of total base year emissions in Scope 3, Category 8: Upstream leased assets covered by this Scope 3, Category 8: Upstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 9: Downstream transportation and distribution covered by this Scope 3, Category 9: Downstream transportation and distribution intensity figure

% of total base year emissions in Scope 3, Category 10: Processing of sold products covered by this Scope 3, Category 10: Processing of sold products intensity figure

% of total base year emissions in Scope 3, Category 11: Use of sold products covered by this Scope 3, Category 11: Use of sold products intensity figure

% of total base year emissions in Scope 3, Category 12: End-of-life treatment of sold products covered by this Scope 3, Category 12: End-of-life treatment of sold products intensity figure

% of total base year emissions in Scope 3, Category 13: Downstream leased assets covered by this Scope 3, Category 13: Downstream leased assets intensity figure

% of total base year emissions in Scope 3, Category 14: Franchises covered by this Scope 3, Category 14: Franchises intensity figure

% of total base year emissions in Scope 3, Category 15: Investments covered by this Scope 3, Category 15: Investments intensity figure

% of total base year emissions in Scope 3, Other (upstream) covered by this Scope 3, Other (upstream) intensity figure

% of total base year emissions in Scope 3, Other (downstream) covered by this Scope 3, Other (downstream) intensity figure

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this total Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

87

Target year

2030

Targeted reduction from base year (%)

40

Intensity figure in target year for all selected Scopes (metric tons CO₂e per unit of activity) [auto-calculated]

0,1716

% change anticipated in absolute Scope 1+2 emissions

-25

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO₂e per unit of activity)

0,326

Intensity figure in reporting year for Scope 2 (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 1: Purchased goods and services (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 2: Capital goods (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2) (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 4: Upstream transportation and distribution (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 5: Waste generated in operations (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 6: Business travel (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 7: Employee commuting (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 8: Upstream leased assets (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 9: Downstream transportation and distribution (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 10: Processing of sold products (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 11: Use of sold products (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 12: End-of-life treatment of sold products (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 13: Downstream leased assets (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 14: Franchises (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Category 15: Investments (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (upstream) (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for Scope 3, Other (downstream) (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for total Scope 3 (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO₂e per unit of activity)

0,326

Does this target cover any land-related emissions?

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

% of target achieved relative to base year [auto-calculated]

-34,965034965

Target status in reporting year

Achieved

Please explain target coverage and identify any exclusions

The intensity target is for operations in Chile. Colbun made several assessments to determine the reduction of the intensity target for its Scope 1 emissions due to power generation and the construction of renewable projects that would allow Colbun to

reduce and compensate for its GHG emissions. As a result of this analysis, Colbun set its baseline in the year 2018 and made the followings commitments: Colbun will contribute to achieving national commitments regarding GHG emissions, aiming to be a carbon neutral company by 2050, as well as the country's carbon neutrality target established in the Framework Law on Climate Change. On the road to carbon neutrality, for the next decade, Colbun is committed to reducing the net CO₂ emission factor of the Company in Chile. The goal is to reduce it a 30% by 2025 and 40% by 2030 (compared to 2018 figures). These will contribute in a relevant way to reducing the emission factor of the national electric system. Colbun reaffirms the commitments made in the Decarbonization Agreement. The Company understands the urgency of climate action, which must be in line with an energy transition that contemplates the monitoring of the following variables: reliability in the operation of the electric grid, environmental impacts of decarbonization, and operating cost of the electric grid. With the execution of the growth plan for renewable energy, Colbun expects to reduce its emission factor by 40% in 2030 compared to 2018. This will mean going from an emission factor of 0.286 tonCO₂e per MWh in 2018 to 0.172 tonCO₂e per MWh in 2030. Colbun expects advances in its intensity target when renewable power plants of the strategic plan start their operations. The first power plant of the growth plan started operations in early 2022, Machicura (9MW) and towards the end of year it started operation Diego de Almagro Sur (230 MW), both solar power plants. Also, Colbun is executing energy efficiency diagnoses in its thermal power plants carried out by external consultants, intending to reduce the emission factor of thermal facilities that accounts for 99% of the carbon footprint. Colbun's intensity target for its operation in Chile could be considered an SBT target because is in line with the level of decarbonization required in the country for the fulfillment of national goals committed in the NDC.

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target

In 2022 Colbun has been working on the expansion plan projected to achieve its reduction in the net emission factor. Major achievements have been made: As of December 2022, PV Diego de Almagro solar power plant (230 MW) and PV Solar Machicura solar power plant (9 MW) where in operation. Horizonte wind power plant (778 MW) construction started in December 2021 and reached 47% progress at the end of the first quarter of 2023.

In addition, during 2022 Colbun entered two new projects for environmental assessment: the first, in August, was the Celda Solar solar power plant in the Arica and Parinacota Region, with an installed capacity of up to 420 MW and a battery system of up to 240 MW and five hours of supply; the second, in December, was the Junquillos wind park in the Biobío Region, with a capacity of up to 472 MW. Additionally, we have several renewable projects in earlier stages of development for more than 1,000 MW that the Company is preparing, and that

will allow us to have the best options to support Colbun's growth in the second half of this decade.

Regarding the storage business development, in 2022 we completed the construction of the Diego de Almagro Sur battery project, which, with 8 MW of installed capacity and 32 GWh of energy, is the first energy storage system of its kind in the Atacama Region and the first of Colbun. Also it was performed an energy efficiency study for Sant María Power Plant.

Colbun Chile reduced its emission factor by 12.3% in 2022 compared to the previous year, thanks to the commissioning of new photovoltaic power plants and an increase in hydroelectric generation due to higher rainfall during the year. Notwithstanding, the drought condition in Chile continues, resulting in a greater generation based on fossil fuels to provide stability and security to the system, therefore, as mentioned before, the commissioning of new renewable energy projects will help the company to further reduce the emission factor.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2020

Target coverage

Country/area/region

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Base year

2020

Consumption or production of selected energy carrier in base year (MWh)

6.322.141

% share of low-carbon or renewable energy in base year

49

Target year

2030

% share of low-carbon or renewable energy in target year

79

% share of low-carbon or renewable energy in reporting year

42,7

% of target achieved relative to base year [auto-calculated]

-21

Target status in reporting year

Achieved

Is this target part of an emissions target?

Yes, this is part of Colbun's decarbonization plan for the next years. It is also the contribution of Colbun to the decarbonization of the energy matrix of Chile, as determined in Chilean NDC targets for the Paris agreement.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

This target is part of Colbun's Strategy in Chile for renewable energy by 2030, which will add up to 4,000 MW of renewable energy

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

In 2022 there was a growth in Renewable Energy Generation, with the starting operation of Diego de Almagro Sur (230 MW) and Machicura (9 MW) solar plants, as well as the progress in the construction of the Horizonte wind project - the largest of its kind in Chile and one of the largest in Latin America- which reached 47% progress at the end of the first quarter of 2023.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	2	
To be implemented*	0	0
Implementation commenced*	1	
Implemented*	3	629.000
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

29.000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1
Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3.000.000

Investment required (unit currency – as specified in C0.4)

80.000

Payback period

<1 year

Estimated lifetime of the initiative

21-30 years

Comment

The execution of energy efficiency initiatives in Santa María Power Plant is currently under study. The consultant diagnosis points out that the sizeable potential for energy savings is associated with an improvement in technology and fuel efficiency . The costs presented correspond to the feasibility studies to be performed.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Internal price on carbon	<p>An internal carbon price is used to assess projects and initiatives that could have an impact on GHG emissions reduction of Scope 1 and 2. Due to a more ambitious goal of Colbun’s carbon footprint reduction, at the end of 2019 began the assessment of GHG emissions and the inclusion of Scope 2 in the model of the carbon price.</p> <p>Colbun’s internal carbon price is aligned with the CO2 tax in place in Chile since 2017, which has a value of 5 USD per tonCO2. Over the last years, this price has been used by Colbun. The internal price model will be reviewed, considering that higher values are required to reflect the opportunities related to low carbon initiatives. The Climate Change Department is responsible for reviewing and determining this new internal carbon price, which will apply to assessing new power generation projects, acquisitions, and potential CO2 reduction initiatives. An example of how carbon pricing affects investment decisions is that all renewable energy projects that Colbun is developing and that could be eligible in CDM/VCS are evaluated considering the benefits of the carbon markets in its cash flows and financial assessments.</p>

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Clean Development Mechanism and Verified Carbon Standard

Type of product(s) or service(s)

Other

Other, please specify

Carbon credits issued by facilities that are registered under Clean Development Mechanism and Verified Carbon Standard

Description of product(s) or service(s)

Colbun has six power generation facilities certified to issue carbon credits and can issue approximately 700,000 ton CO₂e per year. These carbon credits are available for customers that want to voluntarily compensate its GHG emissions. Carbon credits are verified under international standards.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify

Clean Development Mechanism and Verified Carbon Standard

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Other, please specify

production stage

Functional unit used

tons of CO₂

Reference product/service or baseline scenario used

The continuing operation of the existing and future power plants, without the electricity generation from our renewable power plants, to meet the actual electricity demand

Life cycle stage(s) covered for the reference product/service or baseline scenario

Other, please specify

production stage

Estimated avoided emissions (metric tons CO₂e per functional unit) compared to reference product/service or baseline scenario

700.000

Explain your calculation of avoided emissions, including any assumptions

The calculation of avoided emissions is based on a baseline emission factor calculated as a combined margin multiplied by the electricity generated by CDM and VCS power plants.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0,2

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Certified renewable energy

Type of product(s) or service(s)

Other

Other, please specify

Third party verification, I-REC, and Green-E

Description of product(s) or service(s)

Certified renewable energy (MWh) withdrawn from the National Electric National Electric System by a client. For the total amount of energy contracted from renewable sources, Colbun gives a certificate, which is supported by a third party verification.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify

Energy (MWh) withdrawn from the National Electric

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Other, please specify

production stage

Functional unit used

MWh

Reference product/service or baseline scenario used

Energy (MWh) withdrawn from the National Electric National Electric System by a client.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO₂e per functional unit) compared to reference product/service or baseline scenario

2.043.000

Explain your calculation of avoided emissions, including any assumptions

The calculation of avoided emissions is based on the baseline emission factor, which was the emission factor of the national grid on 2022, multiplied by the energy withdrawn under renewable energy certificates. The percentage of revenue from low carbon product is confidential information.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

C-EU4.6

(C-EU4.6) Describe your organization’s efforts to reduce methane emissions from your activities.

Methane emissions associated to Colbun’s operations could be mostly generated from reservoirs related to hydropower facilities. These emissions are accounted in Scope 1 and they represent barely a 0.05% of Colbun GHG emissions. Due to this reason, methane emissions are not relevant to Colbun’s operation.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

Change(s) in methodology, boundary, and/or reporting year definition?	
Row 1	No

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

5.420.817

Comment

For the calculation of Scope 1 emissions are considered the operations of Colbun in Chile and Peru. Scope 1 emissions account for the following sources: fossil fuel consumption for power generation, fossil fuel consumption in vehicles owned by Colbun, fugitive emissions of reservoirs and SF6 leakages.

Scope 2 (location-based)

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

9.222

Comment

For the calculation of Scope 2 emissions location-based are considered the operations of Colbun in Chile (8,954 tonCO₂e) and Peru (268 tonCO₂e). Scope 2 emissions account for the purchase of electricity in Chile and Peru for operational purposes in thermal power plants, hydroelectric power plants and in headquarters offices. For the calculation of Scope 2 emissions location-based figure grid average factor is used (Chile and Peru).

Scope 2 (market-based)

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

0

Comment

For the first time, in 2022 Colbun purchased renewable energy certificates (IREC Standard) to reduce its emissions of Scope 2 (electricity consume) in Chile and is in the process of purchasing renewable energy certificates for Fénix.

Scope 3 category 1: Purchased goods and services

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Main goods purchased by Colbun are fossil fuels for power generation purpose. Emissions derived from fossil fuels used for transport are included in the category “Fuel- and energy- related activities (not included in Scope 1 or 2)”. Emissions from the production of other goods and services acquired by Colbun are not considered relevant in the carbon footprint calculation of the Company. This is ratified by the third party verification process done annually by Colbun.

Scope 3 category 2: Capital goods

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

In the reporting year, Colbun has not purchase capital goods relevant for the core business that could have an impact on the carbon footprint of the Company. This is ratified by the third party verification process done annually by Colbun.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

24.377,01

Comment

Due to the magnitude of GHG emissions coming from fuel and energy-related activities, every year Colbun includes this source of emission in its GHG emissions inventory. Monitoring this source allows Colbun to detect improvement opportunities aligned with corporate strategy in terms of climate change.

The sources of GHG emissions included in this category are emissions related to the road transport of diesel fuel and maritime transport of coal to thermal power plants of Colbun. The data used for the calculation of GHG emissions come from:

- (1) For data about maritime transport: purchase data and sampling and analysis certificate of coal purchased.
- (2) For data about road transport: suppliers' statement.
- (3) For emission factor: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.; 2021 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting.
- (4) For GWP: IPCC AR5 - 100 year.

For road transport, emissions are calculated based on the number of trips per year, distance from the distribution center to each thermal facility, and truck fuel yields. For maritime transport, emissions are calculated according to ship IMO number and vessel's name, vessel type, and deadweight in tonnes are obtained from a database. With this data is selected the emission factor. The emissions are calculated using the quantity of coal transported and the distance between ports.

Scope 3 category 4: Upstream transportation and distribution

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

2,35

Comment

This source includes GHG emissions related to road transport of supplies to Colbun's headquarters offices. Sources of data for emissions calculation are:

- (1) For road transport: supplier statement with information about the number of trips per year, distance from the distribution center to headquarter offices, and the vehicle fuel yield.
- (2) For emission factors: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.; 2021 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting.
- (3) For GWP: IPCC Fifth Assessment Report (AR5 - 100 year).

Emissions are calculated based on the number of trips per year, distance from the distribution center to headquarters offices, vehicle fuel yield, and load. Contractors provide this information.

Scope 3 category 5: Waste generated in operations

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

439,37

Comment

This source includes GHG emissions related to the total amount of residues generated by each power plant and headquarters offices. Sources of data for emissions calculation are:

- (1) For waste generation: waste register according to internal procedures of Colbun.
- (2) For emission factors: 2021 Defra Guidelines/DECC's GHG Conversion Factors for Company Reporting.
- (3) For GWP: IPCC Fifth Assessment Report (AR5 - 100 year).

The total amount of waste generated in each power plant is registered through internal procedures established in the environmental management policy of Colbun.

Scope 3 category 6: Business travel

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

530,42

Comment

GHG emissions from business travels include emissions from domestic and international flights. Information needed for GHG emissions calculation, is directly provided by the travel agency in terms of the number of flights per worker and destinations. With this information, the department in charge of the carbon footprint calculation arranges every flight according to three categories based on distance to select the proper emission factor. Sources of data for emission factors are:

- (1) For emission factors: 2021 Defra Guidelines/DECC's GHG Conversion Factors for

Company Reporting.

(2) GWP: IPCC Fifth Assessment Report (AR5 - 100 year).

Monitoring GHG emissions from business travel allows Colbun to detect improvement opportunities aligned with corporate strategy for climate change.

Scope 3 category 7: Employee commuting

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

4.007,82

Comment

This source includes GHG emissions related to employee commuting of Colbun's workers of power plants located in different parts of Chile and Peru and employee commuting of headquarters offices in Santiago.

Emissions from employees commuting in power plants are calculated based on the number of trips per year, traveled distances per trip, and transport fuel yields. This information is provided by the contractors to the power plants administration department.

Emissions from employees commuting of headquarter offices are calculated with an online survey that is conducted every three years. Sources of data for emission factors are:

(1) For emission factor: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.

(2) For GWP: IPCC Fourth Assessment Report (AR5 - 100 year).

Due to the magnitude of GHG emissions coming from employee commuting, Colbun includes this category in its GHG emissions inventory. Monitoring of this source allows Colbun to detect improvement opportunities aligned with corporative strategy in terms of climate change.

Scope 3 category 8: Upstream leased assets

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO₂e)

0

Comment

Colbun leased assets considered in the GHG emissions inventory are light trucks used for transport in power plants. This emission source category is already included in Scope 1 emissions. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 9: Downstream transportation and distribution

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Since Colbun's core business is electricity generation, emissions from transportation and distribution of products sold are not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 10: Processing of sold products

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Since Colbun's core business is electricity generation, emissions from the processing of sold products are not relevant to the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 11: Use of sold products

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Since Colbun's core business is electricity generation, emissions derived from these of goods and services sold by Colbun are considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 12: End of life treatment of sold products

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Since Colbun's core business is electricity generation, emissions derived from the end of life treatment of products sold by Colbun are not considered relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 13: Downstream leased assets

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Colbun does not lease assets to other entities, so this category is considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 14: Franchises

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Colbun does not operate any franchise, so this category is considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3 category 15: Investments

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Colbun does not operate investments (including equity and debt investments and project finance), so this category of emissions of Scope 3 is considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Scope 3: Other (upstream)

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Not applicable to Colbun's response.

Scope 3: Other (downstream)

Base year start

enero 1, 2018

Base year end

diciembre 31, 2018

Base year emissions (metric tons CO2e)

0

Comment

Not applicable to Colbun's response.

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

ISO 14064-1

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

The Greenhouse Gas Protocol: Scope 2 Guidance

The Greenhouse Gas Protocol: Corporate Value Chain (Scope 3) Standard

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO₂e?

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

5.847.489

Comment

Scope 1 emissions include the operations of Colbun in Chile and Peru. Global emissions were 12% higher than last year due to lower hydroelectric generation that had to be compensated with thermal generation.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Colbun is reporting Scope 2 emissions location-based and market-based for Chile and Peru according to GHG Protocol Scope 2 Guidance. In the reporting year Colbun purchase, contractual instruments in Chile, covering all the electricity consumption of its

operating installations and is in process of purchasing them for Peru to also cover all its electricity consumption.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO₂e?

Reporting year

Scope 2, location-based

7.003

Scope 2, market-based (if applicable)

0

Comment

In the reporting year Colbun purchase contractual instruments in Chile, covering all the electricity consumption of its operating installations and is in process of purchasing them for Peru to also cover all its electricity consumption.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not relevant, explanation provided

Please explain

The primary goods purchased by Colbun are fossil fuels for power generation purposes. Emissions derived from fossil fuels used for transport are included in the category "Fuel- and energy-related activities (not included in Scope 1 or 2)". Emissions from the production of other goods and services acquired by Colbun are not considered relevant in the carbon footprint calculation of the Company. This, is ratified by the third-party verification process done annually by Colbun

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

In the reporting year, Colbun didn't acquire capital goods relevant to the core business that could impact Company's carbon footprint. This was ratified by the third-party verification process of the carbon footprint that Colbun does annually.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

16.740

Emissions calculation methodology

Fuel-based method

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Due to the magnitude of GHG emissions coming from fuel and energy-related activities, every year Colbun includes this source of emission in its GHG emissions inventory. In the GHG emissions inventory of 2022, this source represented 57% of the total emissions of Scope 3. Monitoring this source allows Colbun to detect improvement opportunities aligned with corporate strategy in terms of climate change.

The sources of GHG emissions included in this category are emissions related to the road transport of diesel fuel and maritime transport of coal to thermal power plants of Colbun. The data used for the calculation of GHG emissions come from:

- (1) For data about maritime transport: purchase data and sampling and analysis certificate of coal purchased.
- (2) For data about road transport: suppliers' statement.
- (3) For emission factor: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.; 2021 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting.
- (4) For GWP: IPCC AR4 - 100 year.

For road transport, emissions are calculated based on the number of trips per year, distance from the distribution center to each thermal facility, and truck fuel yields. For maritime transport, emissions are calculated according to ship IMO number and vessel's name, vessel type, and deadweight in tonnes are obtained from a database. With this data is selected the emission factor. The emissions are calculated using the quantity of coal transported and the distance between ports.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

1,4

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This source includes GHG emissions related to road transport of supplies to Colbun's headquarters offices. Sources of data for emissions calculation are:

(1) For road transport: supplier statement with information about the number of trips per year, distance from the distribution center to headquarter offices, and the vehicle fuel yield.

(2) For emission factors: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.; 2021 Guidelines to Defra/DECC's GHG Conversion Factors for Company Reporting.

(3) For GWP: IPCC AR4 - 100 year.

Emissions are calculated based on the number of trips per year, distance from the distribution center to headquarters offices, vehicle fuel yield, and load. Contractors provide this information.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

474

Emissions calculation methodology

Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This source includes GHG emissions related to the total amount of residues generated by each power plant and headquarters offices. Sources of data for emissions calculation

are:

- (1) For waste generation: waste register according to internal procedures of Colbun.
- (2) For emission factors: 2021 Defra Guidelines/DECC's GHG Conversion Factors for Company Reporting.
- (3) For GWP: IPCC AR4 - 100 year..

The total amount of waste generated in each power plant is registered through internal procedures established in the environmental management policy of Colbun.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

492

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This source includes GHG emissions related to the total amount of residues generated by each power plant and headquarters offices. Sources of data for emissions calculation are:

- (1) For waste generation: waste register according to internal procedures of Colbun.
- (2) For emission factors: 2021 Defra Guidelines/DECC's GHG Conversion Factors for Company Reporting.
- (3) For GWP: IPCC AR4 - 100 year..

The total amount of waste generated in each power plant is registered through internal procedures established in the environmental management policy of Colbun.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

11.695

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

This source includes GHG emissions related to employee commuting of Colbun's workers of power plants located in different parts of Chile and Peru and employee commuting of headquarters offices in Santiago.

Emissions from employees commuting in power plants are calculated based on the number of trips per year, traveled distances per trip, and transport fuel yields. This information is provided by the contractors to the power plants administration department.

Emissions from employees commuting of headquarter offices are calculated with an online survey that is conducted every three years. Sources of data for emission factors are:

- (1) For emission factor: World Resources Institute (2015). GHG Protocol tool for mobile combustion. Version 2.6.
- (2) For GWP: IPCC AR4 - 100 year..

Due to the magnitude of GHG emissions coming from employee commuting, Colbun includes this category in its GHG emissions inventory. Monitoring of this source allows Colbun to detect improvement opportunities aligned with corporative strategy in terms of climate change.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Colbun leased assets considered in the GHG emissions inventory are light trucks used for transport in power plants. This emission source category is already included in Scope 1 emissions. This is ratified by the third-party verification process done annually by Colbun.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

Since Colbun's core business is electricity generation, emissions from transportation and distribution of products sold are not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Since Colbun's core business is electricity generation, emissions from the processing of sold products are not relevant to the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Since Colbun's core business is electricity generation, emissions derived from the use of goods and services sold by Colbun are considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Since Colbun's core business is electricity generation, emissions derived from the end of life treatment of products sold by Colbun are not considered relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

Colbun does not lease assets to other entities, so this category is considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Colbun does not operate any franchise, so this category is considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

Colbun does not operate investments (including equity and debt investments and project finance), so this category of emissions of Scope 3 is considered not relevant in the carbon footprint calculation. This is ratified by the third-party verification process done annually by Colbun.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable to Colbun's response.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

Not applicable to Colbun's response.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO₂e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0,00297

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO₂e)

5.854.492

Metric denominator

unit total revenue

Metric denominator: Unit total

1.974.000.000

Scope 2 figure used

Location-based

% change from previous year

18

Direction of change

Decreased

Reason(s) for change

Change in revenue

Change in physical operating conditions

Please explain

The 18% decrease in the intensity figure is due to a increase of Colbun's operational revenues, totalling US\$ 1,974 million in 2022 and representing a 37% increase compared to 2021, driven by an increase in generation and higher sales to unregulated customers and in the spot market. Considering the increase in rainfall in the central and southern regions of Chile, as well as the commissioning of a new photovoltaic plant, both hydroelectric and solar power generation rose by 32% and 2400% respectively compared to 2021. In contrast, thermal generation only experienced a 17% increase.

Intensity figure

0,335

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

5.854.492

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

17.476.989

Scope 2 figure used

Location-based

% change from previous year

14

Direction of change

Decreased

Reason(s) for change

Change in physical operating conditions

Please explain

Colbun reduced its emission factor by 14% in 2022 compared to the previous year. This was due to the commissioning of new photovoltaic power plants (Solar Machicura and Diego de Almagro Sur), as well as an increase in hydroelectric generation (+32%) due to higher rainfall during the year in the central and southern parts of the country.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	5.830.239,974	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	4.775,262	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	11.869,357	IPCC Fourth Assessment Report (AR4 - 100 year)
SF6	0	IPCC Fourth Assessment Report (AR4 - 100 year)

C-EU7.1b

(C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions	Gross Scope 1 SF6 emissions	Total gross Scope 1 emissions (metric tons CO2e)	Comment

		(metric tons CH4)	(metric tons SF6)		
Fugitives	0	97,98	0	2.449,55	Emissions included in this category correspond to fugitive emissions of reservoirs (Angostura, Colbún and Machicura reservoirs, all of them located in Chile).
Combustion (Electric utilities)	5.830.239,974	93,026	0	5.844.434,003	Emissions included in this category correspond to CO2e emissions generated by the fossil fuel combustion for power generation in thermal power plants of Colbun located in Chile and in Peru. For this category information of break down by greenhouse gas type is not available.
Combustion (Gas utilities)	0	0	0	0	Not Applicable to Colbun
Combustion (Other)	604,332	0,004	0	605,422	Emissions included in this category correspond to CO2e emissions generated by the combustion of diesel and gasoline by the vehicles owned by Colbun in Chile and in Peru. For this category information of break down by greenhouse gas type is not available.
Emissions not	0	0	0	0	Last year's emissions included in this category correspond to

elsewhere classified					CO2 emissions generated by the use of electric vehicles owned by Colbun in Chile. However, starting this year, emissions from electric vehicle consumption have been included in Scope 2.
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C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Chile	4.292.681
Peru	1.554.808

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Thermal Power Plants	5.844.623
Hydro Power Plants	2.770
Solar Power Plants	0
Headquarter Offices	97

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions,	Comment
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	metric tons CO2e	
Electric utility activities	5.847.489	Emissions included in this category correspond to emissions generated by the fossil fuel combustion for power generation in thermal power plants of Colbun located in Chile and Peru, fugitive emissions of reservoirs (Angostura, Colbun and Machicura reservoirs, all of them located in Chile), and emissions generated by the combustion of diesel and gasoline by the vehicles owned by Colbun in Chile and Peru.

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Not relevant as we do not have any subsidiaries

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption				
Other emissions reduction activities				
Divestment				
Acquisitions				
Mergers				

Change in output	625.436	Increased	12	<p>The gross global emissions (Scope 1 and 2 combined) of Colbun for 2022 was 5.854.492 tonCO₂e. In 2021 gross global emissions were 5.229.056 tonCO₂e. The difference in emissions between 2022 and 2021 is +625.436 tonCO₂e, leading to a 12% increase in emissions of Scope 1 and 2 combined.</p> <p>Emissions of Scope 1 were 5.847.489 tonCO₂e for 2022 and 5.219.566 tonCO₂e for 2021. The change is due to a 31% increase in electric output at Fenix thermal power plant (gas) and an increase of 11% in thermal output in Chilean facilities.</p> <p>Emissions of Scope 2 were: 7.002 tonCO₂e for 2022 and 9.490 ton CO₂e for 2021. The change of -8% is due to marginally lower electric energy consumption in thermal and hydropower plants when the facilities are not generating energy due to maintenance or failures. This energy consumption comes from the electric system.</p>
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 30% but less than or equal to 35%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh

Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	322.480	322.480
Consumption of purchased or acquired electricity		0	23.524	23.524
Consumption of self-generated non-fuel renewable energy		98.621		98.621
Total energy consumption		98.621	346.004	444.625

C8.2b

(C8.2b) Select the applications of your organization’s consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Colbun didn't consume this type of energy.

Other biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Comment

Colbun didn't consume this type of energy.

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

106.425

MWh fuel consumed for self-generation of electricity

106.425

MWh fuel consumed for self-generation of heat

0

Comment

These values were calculated subtracting the net energy generation to the gross energy generation from Colbun's hydroelectric and solar power plants.

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

213.884

MWh fuel consumed for self-generation of electricity

213.884

MWh fuel consumed for self-generation of heat

0

Comment

These values were calculated subtracting the net energy generation to the gross energy generation from Santa María coal power plant.

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

1.613

MWh fuel consumed for self-generation of electricity

1.613

MWh fuel consumed for self-generation of heat

0

Comment

These values were calculated subtracting the net energy generation to the gross energy generation from Los Pinos diesel power plant.

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

216.609

MWh fuel consumed for self-generation of electricity

216.609

MWh fuel consumed for self-generation of heat

0

Comment

These values were calculated subtracting the net energy generation to the gross energy generation from Nehuenco Complex, Candelaria and Fénix power plants.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

22.953

MWh fuel consumed for self-generation of electricity

22.953

MWh fuel consumed for self-generation of heat

0

Comment

These values correspond to the external energy consumed, specifically from the electricity grid, by all Colbun's installations.

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

538.531

MWh fuel consumed for self-generation of electricity

538.531

MWh fuel consumed for self-generation of heat

0

Comment

These values correspond to all the internal and external energy consumed by Colbun's energy power plants (Chile and Perú) and the corporative building.

C-EU8.2d

(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.

Coal – hard

Nameplate capacity (MW)

350

Gross electricity generation (GWh)

2.353

Net electricity generation (GWh)

2.144

Absolute scope 1 emissions (metric tons CO₂e)

2.037.489

Scope 1 emissions intensity (metric tons CO₂e per GWh)

866

Comment

These values correspond to Santa María coal power plant.

Lignite

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not use lignite for energy generation

Oil

Nameplate capacity (MW)

107,7

Gross electricity generation (GWh)

111,4

Net electricity generation (GWh)

111,3

Absolute scope 1 emissions (metric tons CO2e)

74.867

Scope 1 emissions intensity (metric tons CO2e per GWh)

672

Comment

These values correspond to Los Pinos diesel power plant.

Gas

Nameplate capacity (MW)

1.677,3

Gross electricity generation (GWh)

9.398

Net electricity generation (GWh)

9.192

Absolute scope 1 emissions (metric tons CO2e)

3.733.181

Scope 1 emissions intensity (metric tons CO₂e per GWh)

397

Comment

These values correspond to Nehuenco Complex, Candelaria and Fénix power plants.

Sustainable biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Colbún does not use biomass for energy generation

Other biomass

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Colbún does not use biomass for energy generation

Waste (non-biomass)

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not use waste for energy generation

Nuclear

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not use nuclear energy.

Fossil-fuel plants fitted with CCS

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not have power plants with CCS.

Geothermal

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not use geothermal energy for energy generation

Hydropower

Nameplate capacity (MW)

1.627,1

Gross electricity generation (GWh)

5.163

Net electricity generation (GWh)

5.065

Absolute scope 1 emissions (metric tons CO2e)

2.770

Scope 1 emissions intensity (metric tons CO2e per GWh)

0,53

Comment

These values correspond to Colbún's hydroelectric power plants. The emissions come from reservoiris methane emissions and internal transportation.

Wind

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not use, for now, wind energy for energy generation.

Solar

Nameplate capacity (MW)

248

Gross electricity generation (GWh)

452

Net electricity generation (GWh)

452

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

These values correspond to Diego de Almagro Sur, Machicura Solar and Ovejería power plants.

Marine

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO2e)

0

Scope 1 emissions intensity (metric tons CO2e per GWh)

0

Comment

Colbún does not use marine energy for energy generation.

Other renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Colbún does not use other renewal energy for energy generation.

Other non-renewable

Nameplate capacity (MW)

0

Gross electricity generation (GWh)

0

Net electricity generation (GWh)

0

Absolute scope 1 emissions (metric tons CO₂e)

0

Scope 1 emissions intensity (metric tons CO₂e per GWh)

0

Comment

Colbún does not use other non-renewal energy for energy generation.

Total

Nameplate capacity (MW)

4.010

Gross electricity generation (GWh)

17.477

Net electricity generation (GWh)

940

Absolute scope 1 emissions (metric tons CO₂e)

5.847.489

Scope 1 emissions intensity (metric tons CO₂e per GWh)

335

Comment

These values correspond to all the energy consumed by Colbun's power plants.

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Chile

Consumption of purchased electricity (MWh)

22.953

Consumption of self-generated electricity (MWh)

840.446

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

863.399

Country/area

Peru

Consumption of purchased electricity (MWh)

571

Consumption of self-generated electricity (MWh)

94.478

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

95.049

C-EU8.4

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

No

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Waste

Metric value

1.052

Metric numerator

ton of waste generated in Chile and in Peru

Metric denominator (intensity metric only)

% change from previous year

46

Direction of change

Decreased

Please explain

In Chile there was a reduction of approximately 30% of non-hazardous waste , highlighting Nehuenco which, despite its major maintenance, reduced its waste by approximately 58%; the Candelaria plant reduced its waste by 38% and the Colbun complex by approximately 37% and in Fenix's case, waste generation decreased by over 60%, mainly due to the implementation of the project for the connection of the Chilca polyclinic's waste water to the plant's water treatment plant; and higher baseline in 2021 because dismantling and removing some standby transformers in the facility that are no longer used was considered waste in that year. Also, in Fénix there was a significant decrease (76%) in hardazous waste due to the removal in 2021 of oil from the reserve transformers that were dismantled.

Description

Energy usage

Metric value

61.227

Metric numerator

TJ of energy consumption in Chile and in Peru

Metric denominator (intensity metric only)

% change from previous year

13

Direction of change

Increased

Please explain

In 2022, the company's power generation in Chile rose 21% and in Peru 26% compared to 2021, which results in higher energy consumption.

C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

Coal – hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

3.562.000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

1,3

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0,21

Most recent year in which a new power plant using this source was approved for development

2010

Explain your CAPEX calculations, including any assumptions

CAPEX for power plants operating with coal in the reporting year was the actual cost for maintenance of Santa Maria power plant in 2022. For the next five years, Colbun estimates that Coal will represent 0.2% of Colbun's CAPEX.

Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

1.644.000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0,6

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0,11

Most recent year in which a new power plant using this source was approved for development

2004

Explain your CAPEX calculations, including any assumptions

CAPEX for power plants operating with oil in the reporting year was the actual cost for maintenance of these types of facilities on 2022. For the next five years, Colbun estimates that Oil will represent 0.11% of Colbun's CAPEX .

Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

57.540.000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

21

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0,25

Most recent year in which a new power plant using this source was approved for development

2003

Explain your CAPEX calculations, including any assumptions

CAPEX for power plants operating with gas in the reporting year was the actual cost for maintenance and refurbish of these types of facilities on 2022. For the next five years, Colbun estimates that capex s will represent 0,25% of Colbun's CAPEX.

Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Nuclear

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Geothermal

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

10.412.000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

3,8

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0,36

Most recent year in which a new power plant using this source was approved for development

2012

Explain your CAPEX calculations, including any assumptions

CAPEX for hydroelectric power plants in the reporting year was the actual cost for maintenance of the facilities on 2022. For the next five years, Colbun estimates it will represent 0,4% of Colbun's CAPEX.

Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

192.896.000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

70,4

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

88,01

Most recent year in which a new power plant using this source was approved for development

2021

Explain your CAPEX calculations, including any assumptions

CAPEX for wind power plants in the reporting year was the actual investment cost for the Horizonte Project, a wind farm of 778 MW, which construction began in December 2021. For the next five years, Colbun plans to build three new wind farms with an aggregate installed capacity of more than 1,360 MW. This, to reach the goal of adding 4,000 MW of renewable energy by 2030, representing an estimated CAPEX of 88,01%.

Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

7.946.000

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

2,9

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

11,06

Most recent year in which a new power plant using this source was approved for development

2021

Explain your CAPEX calculations, including any assumptions

CAPEX for solar energy in the reporting year was the actual investment cost for 2021 for the construction of Diego de Almagro and Machicura solar power plants. In the next five years, Colbun's plans is to focus on the construction of wind power projects since there are congestions on transmission lines that negatively affect solar power output, which is generally located in the North of Chile. New transmission infrastructure is expected to commence operations after 2026, thus alleviating solar energy curtailment. Colbun has two solar projects in its portfolio, Intipacha, and Jardin Solar, which have all the approved environmental permits and will add 1,016 MW of new capacity. Thus, the estimated CAPEX for the next five years will represent 11,06%.

Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years. In the context of reducing its carbon footprint, Colbun is actively studying alternatives related to CCS in its fossil fuel plants.

Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

In the next five years, Colbun plans to invest in storage batteries for Diego de Almagro solar project. The estimated CAPEX figure for the next five years considers the investment cost for the batteries, which will be operating on 2023. Colbun strategy is to be a key player in the green hydrogen market. The CAPEX estimated for these types of projects is being studied.

Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

Colbun doesn't plan any CAPEX in this type of energy for the reporting and the next five years.

C-EU9.5b

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Energy audits	Colbun has a commercial approach that places special emphasis on achieving close attention and experience with the customers. Colbun is working on three specific focuses to continue growing in the market of the unregulated client segment: products and services that respond to their needs, develop a differentiating service channel, close and direct, and incorporate state-of-the-art technologies that support the development of new business models. In 2020 Colbun took significant steps to complement its core business – the supply of reliable, competitive, and sustainable energy - with value-added services to enhance the value offered to its customers. In September 2020, Colbun acquired Efizity, the leading value-added energy solutions	403.000	13	2023

	<p>company, allowing Colbun to meet the energy needs of its customers, adding value to their operations and making them more competitive in their markets.</p> <p>Regarding products and services, Colbun is developing a portfolio of options for its clients, being one of these options the service of energy management systems for large consumers: implementation and operation consulting of energy management systems under ISO 50001 standards, together with energy management support services, to increase the competitiveness of energy-intensive clients in the industrial and mining sectors. The applicable markets and customer types are large consumers of energy in the industrial and mining sectors of Chile. After the energy performance diagnosis, measures that can save up to 10% of consumption were handed over to the client.</p> <p>The value stated corresponds to an estimation of CAPEX based in 2021,</p>			
Charging networks	<p>One of the services and product options offered by Colbún is the installation, operation, maintenance service, and financing of electric vehicle charging stations at customer's facilities. The applicable markets and customer type could be residential, commercial and municipal. The stated value corresponds to an estimated value based in 2021 CAPEX.</p>	308.000	10	2023
Distributed generation	<p>Regarding products and services, one of these options the access to distributed solar energy, including the construction, operation, maintenance, and financing of solar panels in customer facilities for self-consumption. The applicable markets and customer types could be</p>	500.000	14	2023

	residential and commercial. The stated value corresponds to an estimated value based in last years CAPEX,			
Energy management services	Regarding products and services, Colbun is developing a portfolio of options for its clients, being one of these the service of multi-point energy management. Energy management service for multi-point clients supported by technological tools for information recollection and management, will allow online monitoring and control of energy consumption and optimization of power tariffs, among other benefits. The applicable markets and customer type are corporate companies with facilities distributed throughout Chile. The stated is an estimation based in last year's CAPEX.	2.007.549	63	2023

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Since 2021 Colbun focused its efforts on innovation in low carbon products in the following areas: growth in renewable energies and development of new adjoining business with special focus on green hydrogen, energy storage, and desalination. Colbun sees green hydrogen as a way to add value to a part of the portfolio of renewable energy projects . In 2022, the Company continued promoting and defining a corporate strategy to take advantage of Chile's potential to produce this emission-free fuel, generating a positive impact on customers and society. Colbun was one of the first companies to join as a partner of the Chilean Hydrogen Association (H2 Chile) and has participated in the various working groups organized by the Ministry of Energy. Colbun wants to position itself as a relevant player in this new industry, for which it plans to sign development agreements with technology suppliers, partners, and customers. In 2022 Colbun created a Green

		<p>Hydrogen Management to promote this new business opportunity, in line with Colbun's growth strategy.</p> <p>Also, Colbun added an electric car charging network service to Walmart supermarket customers and at its plants through a platform developed jointly with the company Dhemax; to reduce its waste footprint, the Santa María power plant developed a project to recirculate the slag to the coal claim, transforming it into fly ash. As a result, it is possible to deliver up to 100% of the waste to cement companies in the area most of the time, almost eliminating the entire volume of waste to be deposited at the ash site; At the Biobío Complex, the team designed and implemented a solution that allowed the replacement of the turbine's moving blades without the need for complete disassembly. This reduced the unit's downtime, extended its useful life and improved reliability, among other benefits; an open innovation exercise was carried out in partnership with the Innovation Club and Corfo Local de la Región de Antofagasta to prevent the wooden pallets that package the cables of the Horizonte project from going to the landfill. Finally, the company continued with the innovation and piloting to automates process he cleaning of the pyranometers of PV technology.</p>
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C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)	Average % of total R&D investment planned over the next 5 years	Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan
Other, please specify Green hydrogen	Applied research and development	11			Colbun has invested in studies to acquire knowledge about the market dynamics of green hydrogen in Chile and the rest of the world. Also, has carried along alliances for developing mobility projects fueled by

					green hydrogen and studying potential green hydrogen exports.
Other, please specify Energy Efficiency, renewable energies	Basic academic/theoretical research	10			The innovation management is continuously developing studies and projects to asses new low carbon technologies such as in the areas of electromobility , electrification of process, CCS between others.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Page/ section reference

page 1. See "Alcance 1".

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Independent Audit Report Colbun 2022.pdf

Page/ section reference

Page 1, See "Alcance 2"

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

No verification or assurance of current reporting year

Type of verification or assurance

Not applicable

Attach the statement

Page/ section reference

Not applicable

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

0

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Scope 3: Upstream transportation and distribution

Scope 3: Waste generated in operations

Scope 3: Business travel

Scope 3: Employee commuting

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 Verification letter.pdf

 Independent Audit Report Colbun 2022.pdf

Page/section reference

page 1, See "Alcance 3"

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C0. Introduction	Other, please specify Companies description	ISAE 3410	This information can be reviewed in Colbuns annual report (Chapter 1) which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard. Colbun annual report is available on the website
C1. Governance	Other, please specify Companies risk governance	ISAE 3410	The governance structure and incentives can be reviewed in Colbuns annual report (Chapter 1 and Chapter 4 respectively), which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard. Colbun annual report is available on the website
C2. Risks and opportunities	Other, please specify Risks and opportunities	ISAE 3410	The climate change risks can be reviewed in Colbuns annual report, chapters 5, 6 and annexes and the opportunities can in chapter 1, 6 and annexes. The report was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard. The potential impact figures have not been verified. Colbun annual report is available on the website

C3. Business strategy	Renewable energy products	ISAE 3410	Climate change strategy can be reviewed in Chapter 2 and 6 of Colbuns annual report which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard. Colbun annual report is available on the website
C4. Targets and performance	Year on year emissions intensity figure	ISAE 3410	Targets and performance can be reviewed in chapter 6 of Colbuns annual report which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard.
C5. Emissions performance	Year on year change in emissions (Scope 1)	ISAE 3410	Emissions performance can be reviewed in chapter 6 of Colbuns annual report which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard.
C6. Emissions data	Other, please specify Scope 1, 2 and 3 data	ISAE 3410	Emissions data can be reviewed in chapter 6 of Colbuns annual report, which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard. Carbon footprint was also verified by a third party.
C7. Emissions breakdown	Other, please specify Scope 1, 2 and 3 data	ISAE3410	Emissions breakdown can be reviewed in chapter 6 of Colbuns annual report, which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard.
C8. Energy	Other, please specify Energy consumption	ISAE3410	Energy consumption can be reviewed in Annex 7.5 of Colbuns annual report, which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard.
C11. Carbon pricing	Other, please specify Internal carbon price	ISAE3410	The internal carbon price value can be reviewed in chapter 6 of Colbuns annual report, which was prepared in compliance with GRI guidelines and verified by a third independent party under ISAE3410 standard.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

Chile carbon tax

C11.1c

(C11.1c) Complete the following table for each of the tax systems you are regulated by.

Chile carbon tax

Period start date

enero 1, 2022

Period end date

diciembre 31, 2022

% of total Scope 1 emissions covered by tax

81

Total cost of tax paid

23.412.439

Comment

The CO2 tax paid, was calculated from the data provided by the emissions monitoring and tracking through continuous emissions monitoring systems (CEMS) redundant for the Santa Maria power plant and the two combined cycles of the Nehuenco power plant, with a monitoring rate of around 99%. The CEMSs follow rigorous validation and quality assurance validation and quality assurance protocols information and are tested annually by the supervisory authority. For the backup power plants (Nehuenco III, Los Pinos, and Candelaria) an abbreviated methodology approved by the supervisory authority in Chile called Low-Mass Emission (LME) is used.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Colbun's strategy to comply with the tax is:

1. For CO₂, NO_x, SO₂, and Particulate Matter (PM) emissions monitoring, Colbun has a Continuous Emission Monitoring System (CEMS) installed in all generation units that have to comply with the law. These power plants are Candelaria, Los Pinos, Santa María and Nehuenco Complex.
2. CEMS were submitted to a thorough process of validation. These validations allowed Colbun to get the approval resolutions from the national environmental authority, the Office of the Superintendent of the Environment (SMA, by its Spanish acronym).
3. In complement, Colbun performs an annual validation process for its CEMS, which includes specific tests for main monitoring equipment.
4. For the carbon tax, the national authority on the matter proposes different options for the emissions quantification methodology. For the fulfillment of the law, Colbun follows:

For Colbun's thermal power plants, emissions are monitored through continuous emissions monitoring systems (CEMS) or an abbreviated methodology approved by the supervisory authority in Chile called Low-Mass Emission (LME).

On February 24, 2020, amendments to the carbon tax were adopted, as part of broader tax reform. The carbon tax will apply from 2023 onwards to facilities emitting more than 25,000 tons of CO₂ and those that release more than 100 tons of particulate matter into the air each year. The amendments also introduced the possibility of using offsets to meet compliance obligations, for which the rules still have to be established.

Compensation through the implementation of reduction projects (offsets) opens the possibility that, in the medium term, there will be an offset market nationwide. At Colbun, we positively value the changes made to green taxes, which are on the right track and provide adequate signals for initiatives that effectively reduce significant air emissions.

Carbon markets represent an opportunity to facilitate the development of low-emissions technologies and might benefit companies like Colbun, which has a high renewable power generation portfolio and several projects already operating and trading offsets in the international market. Colbun has six power plants registered under CDM and VCS, which achieve emissions reduction of over 700,000 tons of CO₂e per year (according to the registered PDDs): Chacabuquito, Hornitos, Quilleco, San Clemente, and La Mina hydropower plants, and Ovejería photovoltaic power plant.

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits canceled by your organization in the reporting year.

Project type

Hydro

Type of mitigation activity

Emissions reduction

Project description

These are credits from Hornitos and San Clemente run of the river power plants.

Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

300

Purpose of cancellation

Voluntary offsetting

Are you able to report the vintage of the credits at cancellation?

Yes

Vintage of credits at cancellation

2012

Were these credits issued to or purchased by your organization?

Issued

Credits issued by which carbon-crediting program

CDM (Clean Development Mechanism)

Method(s) the program uses to assess additionality for this project

Investment analysis

Approach(es) by which the selected program requires this project to address reversal risk

No risk of reversal

Potential sources of leakage the selected program requires this project to have assessed

Not assessed

Provide details of other issues the selected program requires projects to address

Compliance with approved methodology.

Comment

On 2022, Colbun offsetted the emissions of all of its main events such as Investors and Client day, 36 Anniversary of the Company, Inauguration of Diego de Almagro solar power plant and other events promoted by the company such as Puerto de Idas Valparaíso and Net Positive with Paul Polman, ex Unilever's CEO.

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Type of internal carbon price

Shadow price

How the price is determined

Alignment with the price of a carbon tax

Objective(s) for implementing this internal carbon price

Change internal behavior

Drive low-carbon investment

Scope(s) covered

Scope 1

Pricing approach used – spatial variance

Uniform

Pricing approach used – temporal variance

Static

Indicate how you expect the price to change over time

Actual price(s) used – minimum (currency as specified in C0.4 per metric ton CO₂e)

5

Actual price(s) used – maximum (currency as specified in C0.4 per metric ton CO₂e)

5

Business decision-making processes this internal carbon price is applied to

Capital expenditure

Mandatory enforcement of this internal carbon price within these business decision-making processes

No

Explain how this internal carbon price has contributed to the implementation of your organization's climate commitments and/or climate transition plan

An internal carbon price is used to assess projects and initiatives that may have an impact on GHG emissions reduction of Scope 1 and 2. Due to a more ambitious goal of Colbun's carbon footprint reduction, at the end of 2019 began the assessment of GHG emissions and the inclusion of Scope 2 in the model of the carbon price. At the beginning of 2020, Colbun's Board of Directors instructed the management to develop an initiative to deepen and improve the Company's environmental footprint, establishing goals, indicators, and initiatives for reducing this footprint. For reducing Colbun's environmental footprint in the coming years specific goals were proposed, which were ratified by the Board of Directors on 2021. In terms of carbon footprint, Colbun is committed to contributing to the fulfillment of national commitments regarding GHG emissions, aiming to be a carbon-neutral Company by 2050, in the context of the goal of the Chilean Framework Law on Climate Change. To fulfill this commitment Colbun will develop several projects, such as energy efficiency on thermal power plants, and fleet electrification, among others, that will be analyzed considering the internal carbon price. Colbun's internal carbon price is aligned with the CO₂ tax of Chile, which has a value of USD 5 per ton of CO₂. This price, has been used by Colbun over the last few years. The internal price model will be reviewed, considering that higher values are required to reflect the opportunities related to low carbon initiatives. The model proposes an increase in the carbon price for the years 2025 to 2030, and a new increase from 2031 onwards. Climate Change Department is responsible for reviewing and determining this new internal carbon price, which is applied for assessing the development of new power generation projects, acquisitions, and CO₂ reduction initiatives of Colbun that are under study. One example of how carbon pricing affects investment decisions, is that all renewable energy projects that Colbun will develop and that could be eligible to be registered in carbon standards are evaluated including the benefits of the carbon markets in its cash flows and financial assessments.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect GHG emissions data at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

60

% of supplier-related Scope 3 emissions as reported in C6.5

98

Rationale for the coverage of your engagement

The engagement strategy is based on capacity building and outreach activities, supporting suppliers to identify and report to Colbun their relevant emission sources in order to include them in the emissions of Scope 3 of Colbun. The main suppliers are the ones who transport key inputs for the power generation process (fossil fuels), workers mobility, travel agencies and some administrative services providers, which deliver key information for Colbun's GHG emission inventory.

Impact of engagement, including measures of success

The success of the engagement activities is measured every year in terms of the easiness and precision of the reported information. Colbun is committed to exchanging best practices with its contractors and suppliers, seeking to promote high safety, quality, environmental and social standards, supporting them in their growth and development. The above is aimed at achieving excellence throughout the value chain of Colbun. Tender and award processes with contracting companies have incorporated environmental principles and safety issues. These guidelines can be found in the Special Regulation for Contractor and Subcontractor Companies (REECS per its acronym in Spanish) and the Integrated Management System (SIGECS per its acronym in Spanish), among other initiatives. Colbun performs permanent monitoring of certain indicators of sustainability to its suppliers, where the ESG survey is applied, for a self-assessment of new contractors in environmental, social, and corporate governance matters.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing

Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

The transformation and challenges of the industry have led Colbun to adopt a commercial approach that has placed special emphasis on achieving close attention and experience with the customers, as well as seeking a platform for the development of products and customized energy services. One of the products that Colbun has developed in recent years is Renewable Energy Certificates, which allows customers to guarantee that their supply comes from renewable sources (verified by an independent auditor). This product includes a seal and a user manual that establishes communication guidelines for customer stakeholders. Colbun also offers international green energy certifications, such as I-REC and Green-e.

During 2022, the Company signed 30 contracts with renewable certification, totaling 111 clients and 6,803 GWh per year committed under this modality. Colbun has the following engagements channels with its customers: New Marketing Department, Salesforce's "Marketing Cloud" platform that establishes international standards regarding the handling of customer data, including the possibility of unsubscribing from mailings, and access links to Salesforce's privacy policy, among others. Colbun also delivers information to all customers (newsletter), allowing them to be updated on issues related to the electricity market, such as regulations, green energy certificates, technological advances, energy solutions, and their consumption and payment behavior. Also, the Company held a private event to deliver green energy certificates to their clients, which guarantees that those companies that join this initiative have a 100% renewable energy supply.

Impact of engagement, including measures of success

A Customer Experience Model was implemented to improve the NPS (Net Promoter Score) indicator to guarantee excellence in customer service. This survey seeks to monitor the state of the longer-term relationship with the customer. It measures the NPS, which weighs the level of net recommendation among interviewees regarding the company. During 2022, the NPS (Net Promoter Score) reached 75 points, an increase of 5 points compared to 2021 and 92% of the clients stated that Colbun is a good partner and that provides a good after-sales service.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

Colbun seeks to support the country's climate goals, which is why the company set its carbon neutrality to 2050, aligned with the country's NDC. To advance in the energy transition, Colbun plans to build up 4,000 MW by 2030 and has committed to the scheduled closure of its coal-fired power plant by 2040. Colbun has publicly committed to reducing its net-emission factor by 30% and 40% by 2025 and 2030, respectively. To ensure that engagement activities are aligned with the climate change strategy, both energy transition objectives (the construction of up to 4,000 MW of renewable energy projects) and carbon footprint objectives (reduction of the net emission factor), are corporate KPI's known by all employees, and its fulfillment affects everyone's variable remuneration, by 10%. Also, Colbun's climate change strategy is public and can be found on the website and in the 2022 integrated report.

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify

Association of Power Generators of Chile

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

Association of Power Generators of Chile, which represents power generation companies operating in Chile is made up of a broad and diverse group of companies that together produce more than 90% of the country's electrical energy. For this, the companies gathered in the association develop, build and operate energy projects in all the technologies present in Chile. Regarding the challenges of climate change, the Association has focused its work in understanding and addressing the implications of the Paris Agreement for the future of the Chilean energy matrix, highlighting the role that the electricity will play in the decarbonization and decontamination of the Chilean economy. In this sense, the Association has worked towards a greater penetration of electricity in other sectors of the Chilean economy through the electrification of consumption in transportation, industry, and homes.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

292.826

Describe the aim of your organization's funding

Colbun participates in various committees of the Association. In the Environmental Committee, Colbun actively participates because is an instance in which environmental and climate change-related issues for the Chilean energy sector are discussed.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify

Corporate Leaders for Climate Action (CLG - Chile)

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

CLG-Chile through the execution of several meetings, workgroups and forums with the presence of national authorities, seeks to promote public debate on climate change

policies, such as NDC, carbon markets, carbon pricing, among other issues, with the goal of support the transition to a low carbon economy.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

9.718

Describe the aim of your organization's funding

Colbun through its participation in Corporate Leaders Group for Climate Action (CLG-Chile) seeks to promote policies and actions to cope with climate change in Chile and support the transition to a low carbon economy. Colbun's CEO is part of the Directory of CLG

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports, incorporating the TCFD recommendations

Status

Complete

Attach the document

 Colbun Integrated Report.pdf

Page/Section reference

Chapter 5 Environmental performance and Annex 7.5

Content elements

Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Colbun reports annually its performance in Climate Change, specifically its carbon footprint and risks. In 2021, the company stabilised its environmental footprint goals and strategy and since then, reports annually its progress.

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Other, please specify Climate Action Program from Acción Empresas	Colbun actively participates in the Climate Change Executive Committee of Acción Empresas, the leaders of ODS 13 "Acción por el Clima" group of the Global Compact. In 2022, Acción Empresas developed a two year Climate Action Program, which Colbun signed, whose objective is to encourage companies to develop and implement concrete and specific actions on climate issues, accelerating the fulfillment of the commitments made by Chile and the business sector.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	<p>Colbun has a public biodiversity strategy with the following goals:</p> <p>(1) Address the impact of our projects on biodiversity, using methodologies that allow us to address biodiversity in a comprehensive manner and applying the mitigation hierarchy in all projects located in areas of environmental value.</p> <p>Target: 100% of projects with net/zero loss as of 2023.</p> <p>(2) Promote knowledge of endemic or endangered species and their habitats in our current and future operations, in line with the Global Compact Principles and the International Union for Conservation of Nature (IUCN), in collaboration with external partners.</p>

		<p>Target: 100% of new projects will include rehabilitation of natural areas as a compensation and mitigation measure when appropriate.</p> <p>(3) Promote biodiversity conservation by protecting or rehabilitating areas of environmental value:</p> <p>Target: Establish on 2023 a conservation area in the preservation forest of the Biobio Region, belonging to the Angostura hydroelectric power plant.</p> <p>(4) Promote sustainable sourcing by procuring materials from sustainably managed forests that are FSC and/or PEFC certified.</p> <p>Target: In 2023, 100% of purchases associated with stationery (tissue and paper) will be FSC or PEFC certified.</p> <p>(5) Promote awareness and understanding of biodiversity among all company employees.</p> <p>Target: Colbun employees shall have opportunities for dissemination related to biodiversity and its protection at least once a year.</p>
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C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to No Net Loss Adoption of the mitigation hierarchy approach Other, please specify Promote awareness of endemic or conservation species, protect or rehabilitate areas of environmental value, promote sustainable sourcing by using materials from certified sustainable forests, and promote awareness of biodiversity.	SDG

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No, but we plan to within the next two years

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity-sensitive areas in the reporting year?

No

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Other, please specify Disposition of native forests and reforestation sites where Colbún is present to local beekeepers, in order to develop community beekeeping and scientific research

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators

	Pressure indicators
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C15.7

(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Content of biodiversity-related policies or commitments Biodiversity strategy Other, please specify Description of the main biodiversity projects: Lake Chapo Lakeshore Conservation, Bird Watching at Angostura Reservoir, and Community Apiculture	page 2, 18-20  1

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C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Sustainable and Environmental Manager	Chief Sustainability Officer (CSO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms