

## Positive impact: we are managing our environmental footprint

Our business is an invitation to commit to a future in which Chile has a diversified and decarbonized energy matrix. We have proposed leading by example, not only by giving the country safe and continuous clean energy but also by operating under operating standards that ensure prevention and a mitigation of our impacts on the environment.

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#### Why is it important?

2021 marked a major milestone in our environmental management since, as we explained in Chapter 2 of this report, we took the first step to **report the financial risks related to climate change.** 

This work was done according to the recommendations of the **Task Force on Climate-Related Financial Disclosures** (TCFD), which proposes a method developed by the Financial Stability Board (FSB) to consistently communicate the financial impact of climate change to stakeholders (especially investors and shareholders).

#### What does Cerro Dominador do?

Defining our strategy to manage the risks involved in climate change is an exercise that first required **identifying our greenhouse gas emissions** in scopes 1, 2 and 3.

So, in 2021 we measured our corporate carbon footprint for the first time, building what today is the first greenhouse gas emissions (GHG) inventory and quantification of the corporate carbon footprint. We followed the GHG Protocol Calculation Tool.

The 2020 GHG inventory considered both the solar complex as well as the offices in Santiago, which enabled us to identify the **company's direct emissions (scope 1) and indirect emissions (scopes 2 and 3)** associated with power consumption, acquired goods and services, waste, cargo carriage, business travel, employee transportation and withdrawal of electricity from the grid to fulfill contracts.

#### **Our emissions**

#### GRI 305-1 305-2 305-3 305-4 305-5 305-7

Our projects are a contribution to the decarbonization of the national energy matrix. We are already supplying clean energy to customers, which means a reduction in carbon dioxide ( $CO_2$ ) emissions.

We forecast the useful life of our operations over a horizon of 30 years. This means a reduction in  $CO_2$  emissions equal to 640 thousand tons. We can thus offset the emissions we generate in the construction stage during which we have no  $CO_2$  emission reduction goals.

In 2021, we measured our Scope 1, Scope 2 and Scope 3 CO<sub>2</sub> emissions using the baseline and the data available for 2020, which is progress compared to our report in 2020 where we provided information only on Scope 2, corresponding

to the consumption of diesel fuel in operations because of vehicle traffic, machinery and equipment operation at the construction site.

We quantified a total of 9 emissions categories. 2 categories concentrate 99.5% of all emissions. The most significant category is "Fuel- and Energy-Related Activities," belonging to scope 3, accounting for 97.02% of the total, equal to 241,120 tons of CO<sub>2</sub>eq. This was caused by the withdrawals of energy made by Cerro Dominador in the name of its customers to fulfill its PPAs. Second are the emissions because of acquired goods and services, representing 2.3% of the total, equal to 5,706 tons of CO<sub>2</sub>eq.

#### OUR 2020 CARBON FOOTPRINT BROKEN DOWN BY CATEGORY AND ACTIVITY

Categoría	Emisiones (ton CO <sub>2</sub> eq)	% del alcance	% del total
1A. Stationary Sources	0	0.00%	0.00%
1B. Mobile emissions	25	41.14%	0.01%
1D. Fugitive emissions - Coolants	23	36.79%	0.01%
1D. Fugitive emissions – Water Treatment	14	22.07%	0.01%
2A. Electricity	5	100.00%	0.00%
3A. Acquired goods and services – water and fuel	5,606	2.26%	2.26%
3A. Acquired goods and services – spare parts	100	0.04%	0.04%
3C. Fuel- and energy-related activities	241,120	97.23%	97.20%
3D. Cargo carriage upstream	867	0.35%	0.35%
3E. Waste treatment and disposal	230	0.09%	0.09%
3F+3G. Transportation of people and business travel	76	0.03%	0.03%

#### 2020 CO, EMISSIONS

61.2 ton CO <sub>2</sub> eq
4,7 ton $CO_2$ eq
131.589 ton $CO_2eq$

#### **Scope 1 and Scope 2 Emissions**

The chart shows the Scopes 1 and 2 emissions by category. Here we see that mobile sources, namely Cerro Dominador vehicles, generate the highest volume of emissions (15 tons of  $CO_2eq$ , 38%). Second is the use of coolants for the climatization of offices at the plants, accounting for 38%, and then the fugitive emissions associated with wastewater treatment at the plant, at 21%. Finally, the consumption of electricity by offices accounts for 7% of the Scope 1 and 2 emissions.

Due to the impacts of Covid-19, the quantity of emissions by offices is distorted. It is expected that these emissions will gain a greater share in the coming years as in-person work goes back to normal.

#### **2020 OPERATING EMISSIONS**



#### **Scope 3 Emissions**

The chart on the Scope 3 emissions excludes the 3C category "Fuel- and energy-related activities." Here we see that the category of acquired goods and services is where a major portion of emissions are concentrated, numbering 5,606 tons of CO<sub>2</sub>eq or 81% of Scope 3 emissions (excluding category 3C). This is due to the consumption of fuel by contractors at the plants (5,497 tons of CO<sub>2</sub>eq) and, to a lesser extent, the purchase of bottled potable water (94 tons of CO<sub>2</sub>eq).

So, emissions associated with making the water supplied by water trucks potable totaled approximately 8.5 tons of CO<sub>2</sub>eq. Making the water consumed in offices (Santiago) potable and the manufacture of the fuel used in vehicles owned by Cerro Dominador represent a lesser proportion. The second category that most contributes to Scope 3 emissions is cargo carriage upstream, at 13% (excluding category 3C). For the time being, this category only includes the carriage of water by water trucks. This number may increase considerably once there is information available on the carriage of spare parts to the photovoltaic power plant and to the concentrated solar power plant.

The third most contaminating category is waste treatment and disposal, accounting for 3% of Scope 3 emissions (excluding category 3C). This is nearly exclusively due to the disposal of waste that can be assimilated to household waste (i.e., municipal waste).

Finally, the categories with the fewest associated emissions are, on the one hand, business travel grouped with personnel transportation and, on the other, the manufacture of spare parts used at the photovoltaic plant and concentrated solar plant.



- Waste treatment and disposal
- People transportation and business travel

The calculations of the intensity of emissions show that Cerro Dominador generated 304 GWh in 2020. That number does not include generation by the concentrated solar power plant because the plant was under construction at the time of the measurement. Therefore, the intensity of emissions is expected to decrease in the coming years once the operation of the CSP plant is included.

This baseline will allow us to compare our annual performance, which we will report in future editions of this sustainability report.

We can say that in our operations, melting salts emits NOX into the atmosphere, but the quantity is marginal because we have an abatement system.

#### SCOPE 3 EMISSIONS BY CATEGORY FOR 2020 (EXCLUDING CATEGORY 3C)

# Ecological impacts

Material topic GRI 103-1 103-2 103-3

#### Why is it important?

Our operations are a contribution to the energy transition of Chile and its struggle against climate change. But our contribution is not limited to producing and injecting 100% renewable energy into the country. We have also proposed operating under high standards of environmental responsibility.

#### What does Cerro Dominador do?

We are convinced that to be sustainable in the long term, it is indispensable that we act according to sustainability criteria that go beyond the requirements in governing laws. We therefore plan and implement our operations responsibly, using the relevant resources conscientiously, such as water, electricity, gas and oil, and mitigating the potential impacts on the ecosystem in our areas of influence.



#### **Energy management**

#### GRI 302-1 302-4 SASB: RR-ST-130 a.1

Chile has committed to becoming carbon-neutral by the year 2050 and energy efficiency is one of the main measures that must be adopted so that our country achieves this goal. Because we produce clean energy, we have the potential to contribute to the attainment of our goal by managing an operation that supplies clean, safe energy to Chile continuously using environmentally responsible processes.

#### ENERGY CONSUMPTION IN 2021(\*)

TOTAL

Electricity	25,106 MWh
Diesel fuel	1,117 m <sup>3</sup>
Liquefied Petroleum Gas	1,187 m <sup>3</sup>

 $(\ensuremath{^*})$  2021 is the period that we will use as the baseline to report our energy consumption and emissions.

Our plants have generated a total of 440.25 GWh. 68.7% was produced at our photovoltaic plant and the remaining 31.3% by the concentrated solar power plant. Energy intensity was 0.587 GJ/MWh in 2021.



#### **Fuel consumption**

The construction phase uses diesel fuel to operate industrial equipment, machinery and vehicles on site. In 2021, diesel fuel consumption totaled 1,117 m3. The variation compared to 2020 was due to the end of the construction phase and consequent start-up of the concentrated solar power plant, which meant a reduction of 48.3%.

Our concentrated solar power plant uses 98% of the diesel fuel consumed. The remaining 2% is used by the photovoltaic plant.



The consumption of this resource fluctuates very little monthly. The monthly average is 93 m<sup>3</sup> for 2021, and the peak was in June, at 137 m<sup>3</sup>. This rise was due to the fact that acceptance testing was performed in that month to be able to provisionally accept the plant. A deep cleaning of the solar field had to be made to do this and to have the necessary reflectivity. A company was hired to provide support in the cleaning, which meant the presence of more trucks and therefore the consumption of more fuel. The salt melting process, mostly within our operation, uses Liquefied Petroleum Gas (LPG). The salts enter the system once, which took place in June 2020, representing a consumption of 1,187 m<sup>3</sup>.



#### **DIESEL FUEL CONSUMPTION (m<sup>3</sup>)**

Our electricity consumption in 2021 totaled

99.244.8 GJ,

coming from the

power grid.

#### **Electricity consumption**

Electricity consumed in the period reported totaled 27,568 MWh, equal to 99,244.8 GJ, where the monthly average was 2,297 MWh and the peak consumption was in April, at 3,747 MWh.

#### **ELECTRICITY CONSUMPTION IN 2021 (MWH)**



#### Water management

#### GRI 303-3 303-4 303-5 SASB: RR-ST-140 a.1, RR-ST-140 a.2

We have promised to progressively decrease the consumption of industrial and potable water in our operations by monitoring use and identifying opportunities to satisfy the needs of our administrative and production areas responsibly. Water taken from surface sources comes from Ferrocarriles Antofagasta.

The water is used in different ways to satisfy the requirements inherent to construction and production. For example, potable water is for the sanitary system and treated water is for cleaning heliostats. None of our operations are located in water-stressed zones, but we are aware of the scarcity of water in the communities in which we operate because of the desert climate and the social issues regarding access to water in the Region of Antofagasta.

#### WATER EXTRACTION BY SOURCE (m<sup>3</sup>)

Source	Use	Consumption (m <sup>3</sup> )	
		2020	2021
Industrial water (Municipality of Sierra Gorda and Aqueduct)	Construction and operation	78,018	113,174
Potable water	For consumption and use by our employees	25,349	10,659
TOTAL	Operations and consumption by employees	103,367	123,833

We mainly consume industrial water, which represents 91.3% of the total.

As a mitigative measure, we have water treatment plants that allow us to reuse a percentage of the water consumed. The remaining percentage is delivered in conditions appropriate for removal and treatment by sanitary companies. 100% of the potable water consumed in camps in 2021 was treated and 70% was reused to wet roads to help reduce the quantity of dust raised.

The water from aqueducts is treated to be reused in the plant. In operations, the water is cooled in air condensers and then recirculated in a closed system.

#### **EXTRACTION OF WATER BY SOURCES (m<sup>3</sup>)**



#### **Consumption of potable water (m<sup>3</sup>)**

In 2021, we saw a reduction of 58% in the consumption of potable water compared to the previous period because the construction phase ended, the number of employees decreased, and the Cerro Dominador concentrated solar power plant began operation. A total of 10,659 m<sup>3</sup> of potable water was consumed in 2021 compared to the 25,349 m3 consumed in 2020. As with last year, monthly water consumption fluctuates very little.

Water is mainly used at the concentrated solar power plant (99.97%) and the remainder at the photovoltaic plant (0.03%).



#### MONTHLY POTABLE WATER CONSUMPTION (m<sup>3</sup>)

#### Industrial water consumption (m<sup>3</sup>)

The consumption of industrial water rose 59.9% after the plant began operation. Consumption totaled 113,174 m3. That number was 70,799 m<sup>3</sup> in 2020. The most intensive consumption was in the months of October, November and December because that is when the plant began to be commissioned and started operation. The solar field was also cleaned for the first time.



#### **Biodiversity management**

#### GRI 304-1

All our projects are in compliance with the environmental commitments stipulated in the Environmental Approvals (RCA) granted by the competent authority. These commitments guide our actions to prevent and mitigate the potential and real environmental impacts on the surroundings in our areas of influence.

The ecosystems where we are present are not protected areas or environmentally preserved areas, so our actions involve care for the landscape, the biodiversity and archeological heritage.

#### **Environmental compliance**

#### GRI 102-11 307-1

We strictly monitor our activities and endeavor to operate according to the laws and the commitments we have assumed to our stakeholders.

We were not fined or penalized for a breach of environmental regulations in 2021, nor have we been the subject of investigation by the corresponding authority.

### Care for archeological heritage

The region where we operate is rich with pre-Hispanic archeological vestiges whose findings are managed and protected by the National Monuments Law.

In our area of influence, three sites of archeological interest have been identified that we have protected by fences to prevent any disturbance. Delimiting those sites within our area of operation has helped restrict access to them and prevent any potential need for an archeological rescue effort. Please note that these sites are protected and inspected by trained professionals to ensure that they are appropriately managed.

# Hazardous waste and materials management

Material topic

GRI 103-1 103-2 103-3 306-3 306-4 306-5 SASB RR-ST-150a.1

#### Why is it important?

An integral part of the stages of construction and operation of our assets is the responsible management of the materials used and of the resulting waste. Transferring good practices to our employees and contractors is an ongoing concern as we have proposed leading by example and delivering an operation to the north of Chile that meets environmental standards that go beyond the requirements in governing laws.

#### What does Cerro Dominador do?

Our commitment to the use of materials and to waste management is realized by a conscientious use of those materials and a responsible disposal. This means using the materials needed for our operating efficiently and disposing of the waste generated according to governing environmental and health regulations.

We have and we fulfill the legal duty to record and report the generation and certified disposal of industrial sludge and waste (both non-hazardous and hazardous) to the competent authority.

#### Waste by type and hazardousness

The hazardous liquid waste we generate consists of oils and lubricants used on sites. Solid hazardous waste is made of wood, plastics and other materials that have come in contact with oils, lubricants or paint.

Non-hazardous waste corresponds to household waste, mainly from meal services and industrial waste that is generated by onsite construction work.

#### **TYPES OF WASTE GENERATED**

	2020	2021
Household waste (tons)	520**	165
Non-hazardous industrial waste (tons)	1,682.5	939
Solid hazardous waste (tons)	5.4	4.9
Liquid hazardous waste (tons)*	25	0.7

\* Oil and lubricant waste, excluding emulsions

\*\* Original values in m3 converted to tons using the waste density calculation standard

Our generation of liquid hazardous waste fell considerably after the completion of construction and start of operation of our concentrated solar power plant. The production of solid hazard waste varied marginally, as shown in the chart.

#### HAZARDOUS WASTE (Kg)



#### TYPES OF HAZARDOUS WASTE (Kg)

		<u> </u>
	2020	2021
Liquid hazardous waste	25,000	700
Solid hazardous waste	5,360	4,900
TOTAL (KG)	30,360	5,600

The monthly and annual trends in industrial waste generated rose 11.6% in 2021 compared to 2020 because of the startup and completion of the construction phase. A reduction of 49.2% was seen in household waste between the same periods, which was caused by the end of the construction stage.

#### INDUSTRIAL WASTE (TONS)

	2020	2021
January	108	156
February	74	338
March	48	221
April	45	241
Мау	89	195
June	21	260
July	36	137
August	71	43
September	39	65
October	46	59
November	175	7
December	90	7
Total	841	1,729

#### HOUSEHOLD WASTE (TONS)

	2020	2021
January	35	45
February	38	35
March	25	55
April	29	25
Мау	25	35
June	18	35
July	27	35
August	21	35
September	22	25
October	30	20
November	29	20
December	27	40
Total	325	405



We have a water treatment plant so that water can be subsequently used.

#### NON-HAZARDOUS LIQUID WASTE MANAGEMENT (m<sup>3</sup>)\*

	2020	2021
Project Wastewater Treatment Plant Sludge**	897.5	171.5

\* Our operations do not generate any solid sludge.

\*\* The figure in 2020 was disaggregated among waste treated at the PV, CSP and IP Plants, but this year, the sludge was treated at just one plant and the IP is no longer operative, so the totals for the period were added up and are compared to the total for the previous period.

#### **Materials We Use**

#### GRI 301-1

We use salt in our processes that enter the system only once. A total of 46,374 tons of salt was used in 2021.

These salts are crucial to the power production process. Our heliostats are mirrors that reflect the sunlight toward a receiver located in a tower that concentrates the energy as if it were a magnifying glass. Once the receiver is preheated, a pump sends molten salt that circulates through panels and is heated to 565°C. These salts are then discharged to water exchangers, generating steam that moves the turbines to produce clean electricity.

#### **SLUDGE IN 2021**

Month	Sludge (m <sup>3</sup> )
January	2.00
February	36.00
March	39.50
April	6.00
Мау	11.50
June	14.00
July	13.00
August	15.00*
September	17.50
October	8.00
November	6.00
December	3.00
TOTAL	171.5

# Progress toward goals and objectives

FOCUS	OBJECTIVES	2023 GOAL	2021 STATUS
1. IMPACT Generate the least   the fight against climate change environmental impact   positively during construction and operation   and operation be a carbon-neutro   operation operation.	Generate the least environmental impact as possible during construction and be a carbon-neutral operation.	Implement at least three environmental contribution programs.	Air condenser system which helps make the use of water at the plant efficient.
		All projects will be built under environmental standards (offices and camps).	We reused potable water from camps and treated it to be used in wetting roads.
		Annually reduce the consumption of resources and GHG emissions.	The first GHG emissions inventory was taken and the 2020 carbon footprint was quantified.
	Disclose the climate risks of our management.	Annual report using the TCFD method.	A climate risk survey workshop was held following the TCFD method.
	Attract green financing.	At least 25% of our financing is green.	In process.