

## 2024 Highlights

1.75 tCO<sub>2</sub>e/tCu

emissions intensity

1,228,924 tCO<sub>2</sub>e

scope 1 emissions

887 tCO<sub>2</sub>e

scope 2 emissions market-based

1,229,811 tCO<sub>2</sub>e

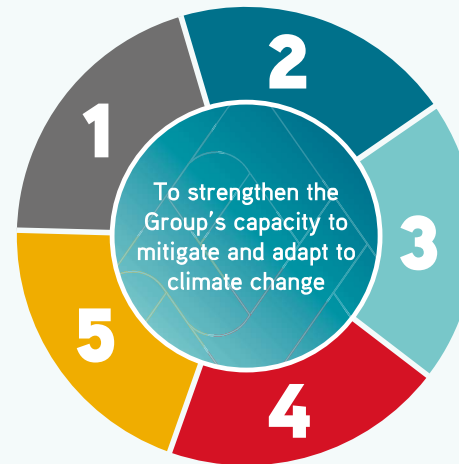
total scope 1 and 2 emissions (market-based)

# Climate resilience

GRI 3-3, 201-2, 305-1, 305-2, 305-3, 305-5, 305-6, 305-7

Contributing to the global goal of decarbonising the economy involves reducing our greenhouse gas (GHG) emissions in the medium and long term through various initiatives aimed at decarbonising our operations and using resources efficiently.

## Our long-term Climate Change Strategy



### Development of climate change resilience

We enhance our adaptability and competitiveness across various climate scenarios, ensuring that our operations are prepared to face the challenges of climate change in the short, medium, and long term.



### Reduction of greenhouse gas (GHG) emissions

We implement concrete actions to reduce our greenhouse gas emissions, aligning with Chile's decarbonisation commitments and science-based targets.



### Efficient use of strategic resources

We ensure the efficient and sustainable use of key resources, such as water and energy, by promoting the transition to renewable sources and leveraging opportunities for innovation and technological advances.



### Management of the environment and biodiversity

We promote environmental management that supports our operational commitments, focusing on the protection and conservation of biodiversity and the natural environment.



### Integration of stakeholders

We promote active participation and collaboration with communities, authorities, and other relevant actors, ensuring transparency and continuous dialogue in our climate change management.

## Climate resilience *continued*

Our Climate Change Strategy establishes a comprehensive framework for timely management of climate-related risks and opportunities throughout the value chain. Through innovation and planning, we are transforming our production processes and managing climate risks based on three criteria: risk control, assurance of investment resource allocation, and the use of an internal carbon price for project approval. The central objective of this strategy is to strengthen the Group's capacity to mitigate and adapt to climate change, based on five pillars and their respective lines of action.

Our Board of Directors is ultimately responsible for Antofagasta Minerals' climate-related objectives and strategy. The Climate Change Committee, formed in 2021, supports the implementation, monitoring, and continuous improvement of the strategy. One of its main objectives is to maximise participation across different areas and levels of the organisation in this challenge.

### Board of Directors

Sustainability and Stakeholder  
Management Committee

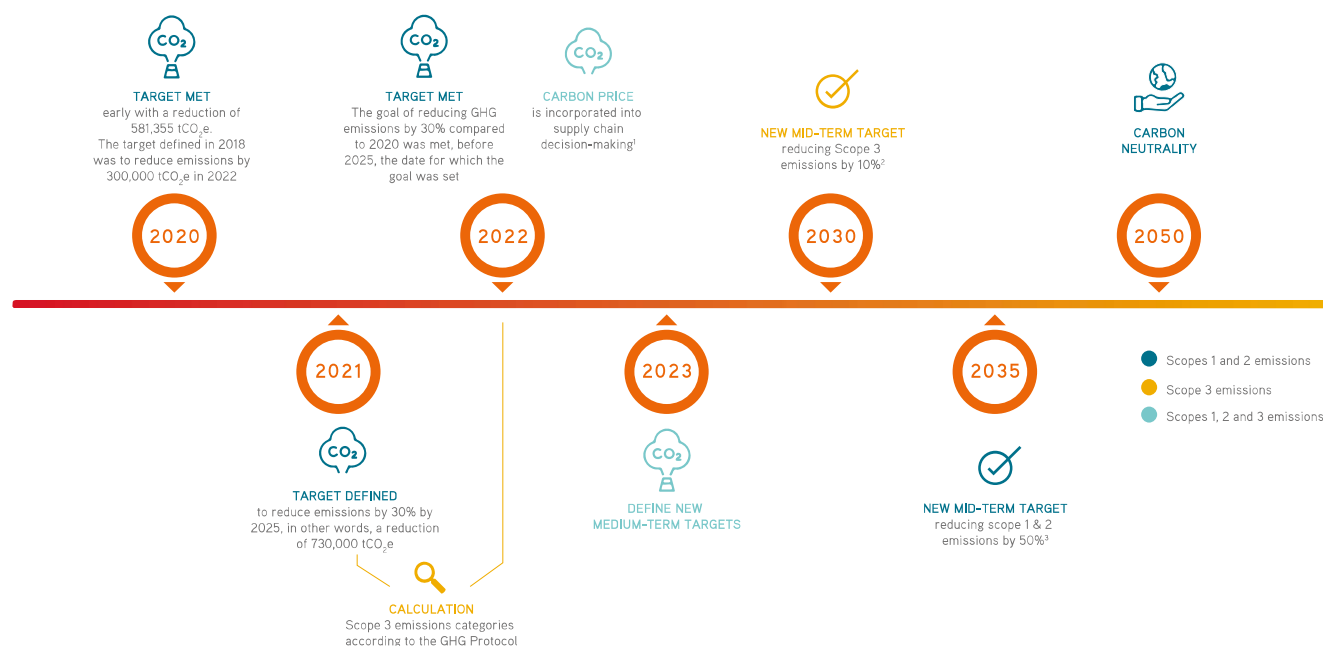
Audit and Risk Committee

CEO and Executive Committee

Climate change is identified as one of the Group's principal risks and the Group aims to develop climate resilience through efforts to strengthen our approach to mitigation and adaptation activities. Its management is part of our Integrated risk management system, through which we constantly monitor progress and new solutions to improve our risk management.

We follow the Task Force on Climate-related Financial Disclosures (TCFD) recommendations to assess physical and transition climate change risks from a financial perspective, prioritising their impact on short-, medium-, and long-term actions. We review the risk appetite assigned to each main risk annually.

Regarding physical risks, we are aware of how these could impact our long-term operations. Extreme rainfall events, higher temperatures, dust events from high winds, and reduced water supply due to drought



1. See our Climate Action Plan on our website for further details.
2. Against 2022 no action scenario projection.
3. Against 2020 baseline.

are a number of the potential effects of climate change. These can impact our operations by causing restrictions or suspensions of our activities, logistics disruptions due to sea swells at ports, and potential infrastructure damage. Addressing these risks requires developing viable solutions within the companies and across the Group.

Adaptation measures that we have implemented to date include the construction of a desalination plant for Los Pelambres, and the use of raw sea water at both Centinela and Antucoya.

To understand the financial impact of transition risks, our climate change case considers the International Energy Agency's "Net Zero Emissions by 2050" scenario (IEA's NZE scenario), an ambitious and widely-recognised scenario that aligns with limiting global warming to 1.5°C and provides a global view and context on a low-carbon transition.

This scenario is aligned with the Group's decarbonisation plan and has been used since 2023 for our climate change scenario analysis. In the IEA's NZE scenario, fossil fuel prices decline due to low demand, and lower costs are offset by the introduction of carbon taxes to encourage the low-carbon transition. In alignment with this scenario, we have quantified the potential financial impact of the introduction of a carbon tax, including an analysis of our decarbonisation plan and identifying opportunities such as changing the energy source, reducing diesel consumption in haul trucks, and replacing it with electric power consumption.

**+** For further information on our TCFD approach, please see page 66 of Antofagasta plc 2024 Annual Report.

Climate resilience *continued*

## Decarbonisation

GRI 3-3

Our mitigation actions focus on reducing greenhouse gas (GHG) emissions as part of our Climate Change Strategy, which is aligned with our decarbonisation goals. We are adopting cleaner technologies and energy sources to minimise our carbon footprint and facilitate more sustainable operations.

We conducted engineering studies for the electrification of our operations at Los Pelambres, Centinela, and Antucoya. We also developed a strategy for offsetting non-mitigable emissions, evaluating various scenarios for the potential purchase of carbon credits, based on a 2024 market analysis.

Our Climate Action Plan directly addresses the second Pillar of the Climate Change Strategy, which focuses on reducing greenhouse gas (GHG) emissions and acts as the roadmap that defines our reduction targets. This plan sets out the actions required to help achieve our long-term goal of carbon neutrality by 2050 (or sooner, if technology permits), aligned with international and national targets.

We published our updated emissions reductions targets in 2024, which include a 50% reduction in Scope 1 and 2 emissions by 2035 (combined basis, from the 2020 baseline), and we have now introduced a 10% reduction in Scope 3 emissions by 2030, set against a “no action” scenario projected from a baseline of 2022.

While we have made progress in decarbonisation, focusing on renewing the mining equipment fleet with low-carbon technologies, our comprehensive approach includes using renewable energy, and efficient energy management, supported by ISO 50001 certification and collaboration with suppliers.

The Group has delivered a substantial reduction in its absolute emissions in recent years, principally linked to a reduction in Scope 2 emissions following the signature of agreements to source renewable power across all operations in 2022. The expectation is that absolute emissions will rise following the introduction of the Centinela Second Concentrator Project, which will ramp up in 2027. However, despite the expected +30% increase in copper production during this time, the continued adoption of modern, low-carbon technologies across our portfolio is expected to help to reduce emissions on an absolute basis.

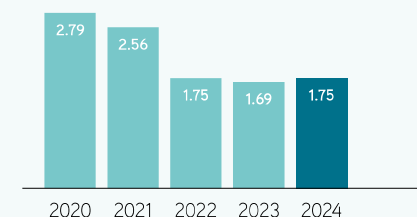
As part of our efforts to reduce our carbon footprint, we have worked on the following:

1. Collaborating with equipment manufacturers to incorporate technological solutions, targeting a reduction in our direct emissions (Scope 1). We focused on replacing diesel fuel in mining haulage trucks and auxiliary equipment, studying low-carbon emission technologies such as dynamic charging solutions, electric batteries, green hydrogen, and e-fuel, and believe that electrification shows the greatest potential for cost-effective solutions in the coming years. Therefore, Antofagasta Minerals has developed an extensive trial programme to support our decarbonisation plan. While prioritising electrification, we remain open to integrating adjustments or exploring other compatible technologies that may become available in the future.
2. All our mining operations have had renewable energy contracts (Scope 2) since April 2022, and prioritise external certification in energy management, such as renewable energy certificates (RENOVA and IREC). Furthermore, our corporate offices have a 99.6% renewable electricity supply. The remaining Scope 2 emissions are due to non-renewable electricity consumption. Our renewable contracts resulted in annual savings of 766,647 tCO<sub>2</sub>e, comparing location-based versus market-based Scope 2 emissions.
3. Including sustainability and carbon footprint reduction into our suppliers' processes (Scope 3).



The Group's Climate Action Plan is available at [www.antofagasta.co.uk](http://www.antofagasta.co.uk)

## Greenhouse gas (GHG) emission reduction

CO<sub>2</sub>e emissions intensity<sup>1,2</sup>1.75 tCO<sub>2</sub>e/tCu

CO<sub>2</sub>e emissions intensity increased by 3.4%.

Scope 1 & Scope 2  
2035 goal

50%

reduction in emissions  
with 2020 as baseline.

Scope 3  
2030 goal

10%

reduction in emissions using  
2022 as a baseline for  
projecting emissions.

1. Scope 1 and 2, Mining division.

2. Tonnes of CO<sub>2</sub> of Scope 1 and 2 per tonne of copper produced using market-based methodology for Scope 2 emissions.

## Climate resilience *continued*

### *Electrification of our operations*

In 2024, we made significant progress in implementing solutions to electrify the transport of both for cargo and personnel at our operations, including developing charging infrastructure. We conducted studies and trials, introducing a 100% electric truck at Centinela in February. This truck was the first of its kind in Chile, and is currently in use transporting materials to Centinela. Our broader programme of initiatives to decarbonise operations includes installing electric charging stations and using electric vehicles, such as pickup trucks, buses, shovels, loaders and a 28-tonne capacity truck.

In collaboration with an OEM, we developed dynamic charging infrastructure for haulage trucks and presented our trolley-assist system at the Electric Mine conference in Australia in May 2024. The trolley system, which reduces fuel consumption and emissions, is being implemented at Los Pelambres. We are working on a flexible approach, integrating pantographs into a test truck manufactured in the United States. The infrastructure for the trolley system, which took nearly 18 months to manufacture, began arriving in December 2024 and included substations, rails, poles, and cabling. This was integrated into the Los Pelambres operations, positively impacting our activities.



Electric auxiliary fleet, Centinela



## Climate resilience *continued*

The fifth Pillar of our Climate Change Strategy, being “Integration of Stakeholders”, is closely connected to the second Pillar, Reduction of Greenhouse Gas Emissions. Collaborating with our suppliers to reduce their emissions will help us more accurately calculate our Scope 3 emissions.

Our calculations indicate that suppliers generate around 60% of our Scope 3 emissions, which are GHG emissions belonging to upstream (suppliers).

A significant milestone has been the Scope 3 traceability working group, where we have participated alongside other mining companies. This is a pioneering national initiative and has been recognised by the ICMM as a potential model for other countries. The project began in August 2023 and included collaboration with suppliers and carbon footprint training to develop their capabilities in managing emissions. It also generated a specific guide to measure Scope 3 in copper production. This guide, called ‘Methodological guidance for measuring and reporting Scope 3 emissions in the copper industry’, and is aligned with ICMM standards, has been fully implemented during 2024.

Due to the complexity of calculating Scope 3 emissions, an emissions estimate for 2024 will be added to the Sustainability Databook during Q3 2025, after the release of this report.

### Operational CO<sub>2</sub>e Emissions (tCO<sub>2</sub>e)<sup>1,2</sup>

GRI 305-1, 305-2, 305-3, 305-4, 305-5, 305-6, 305-7

	Los Pelambres	Centinela	Zaldívar	Antucoya	Corporate Offices (Santiago and London)	Mining division
<b>Scope 1 – Direct emissions</b>						
<b>2024</b>	<b>276,630</b>	<b>543,519</b>	<b>160,011</b>	<b>248,579</b>	<b>185</b>	<b>1,228,924</b>
2023	271,281	551,766	132,813	232,316	210	1,188,386
2022	250,545	529,075	128,440	205,332	189	1,113,581
2021	226,199	439,484	156,500	165,641	124	987,949
<b>Scope 2 – Indirect emissions (market based)<sup>3</sup></b>						
<b>2024</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>887</b>	<b>887</b>
2023	0	0	0	0	16	16
2022	93,142	1,634	0	0	460	95,236
2021	286,848	556,616	0	124,467	894	968,825
<b>Scope 2 – Indirect emissions (location based)</b>						
<b>2024</b>	<b>315,748</b>	<b>309,612</b>	<b>79,413</b>	<b>61,874</b>	<b>887</b>	<b>767,534</b>
2023	276,215	349,926	90,703	75,592	1,011	793,447
2022	306,056	438,788	121,063	94,283	460	960,650
2021	466,381	556,616	163,530	124,467	894	1,311,889

	Los Pelambres	Centinela	Zaldívar	Antucoya	Corporate Offices (Santiago and London)	Mining division
<b>Total emissions (Scope 1 and 2)</b>						
<b>Market based</b>						
<b>2024</b>	<b>276,630</b>	<b>543,519</b>	<b>160,011</b>	<b>248,579</b>	<b>1,072</b>	<b>1,229,811</b>
2023	271,281	551,766	132,813	232,316	226	1,188,402
2022	343,687	530,709	128,440	205,332	649	1,208,817
2021	513,047	996,100	156,500	290,108	1,018	1,956,774
<b>Location based</b>						
<b>2024</b>	<b>592,378</b>	<b>853,131</b>	<b>239,424</b>	<b>310,453</b>	<b>1,072</b>	<b>1,996,458</b>
2023	547,496	901,692	223,516	307,908	1,221	1,981,833
2022	556,601	967,863	249,503	299,615	649	2,074,231
2021	692,580	996,100	320,030	290,108	1,018	2,299,838
<b>Emissions intensity CO<sub>2</sub> tCO<sub>2</sub>e/tCu<sup>4</sup></b>						
<b>Market based</b>						
<b>2024</b>	<b>0.87</b>	<b>2.43</b>	<b>1.99</b>	<b>3.09</b>	<b>-</b>	<b>1.75</b>
2023	0.90	2.28	1.64	2.99	-	1.69
2022	1.25	2.14	1.44	2.59	-	1.75
2021	1.58	3.63	1.78	3.69	-	2.56
<b>Location based</b>						
<b>2024</b>	<b>1.85</b>	<b>3.81</b>	<b>2.98</b>	<b>3.86</b>	<b>-</b>	<b>2.84</b>
2023	1.82	3.73	2.76	3.96	-	2.83
2022	2.02	3.91	2.81	3.78	-	3.21
2021	2.13	3.63	3.64	3.69	-	3.00

1. Tonnes of carbon dioxide equivalent.

2. The calculation methodology follows the guidelines of the Greenhouse Gas Protocol (GHG Protocol), the ICMM Scope 3 Emissions Accounting and Reporting Guide, the Methodological Guidance for Measuring and Reporting Scope 3 Emissions in the Copper Industry, and other internal guides and documents.

3. The corporate office emissions increased due to pending I-RECs for the claiming of renewable energy certificates in the Chilean offices. Market-based value was calculated with the emissions factor of the National Electric System (SEN).

4. Tonnes of CO<sub>2</sub> equivalent per tonne of copper produced.



For further information on GHG emissions and GRI 305-1 to 305-5, please see our 2024 Sustainability Databook.