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GanfengLithium

A share code: 002460 H share code: 01772

# 2024

# Ganfeng Lithium Group Co., Ltd. Climate-related Disclosure Report

Utilize limited lithium resources to create a green,
clean and healthy life for human development and progress

# Content



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# About This Report

This report is the first Climate-Related Disclosure Report (hereinafter referred to as "this Report") of Ganfeng Lithium Group Co., Ltd. (hereinafter referred to as "Ganfeng Lithium," "the Company," or "we"). Ganfeng Lithium acknowledges the material financial or strategic impacts of climate change on the Company. To better address potential risks and opportunities, the Company has identified, assessed, and analyzed climate risks and opportunities. We have identified climate-related risks and opportunities for our business and operations, thereby better controlling risks and seizing opportunities.

This report is prepared in accordance with the requirements outlined in Part D "Climate-related Disclosures" of the Environmental, Social and Governance (ESG) Reporting Guide by The Stock Exchange of Hong Kong Limited (HKEx), the requirements of the International Financial Reporting Sustainability Disclosure Standard S2 - Climate-related Disclosures (IFRS S2) issued by the International Sustainability Standards Board (ISSB) in 2023, the climate-related disclosure requirements in the Self-Regulatory Guidelines No. 17 for Companies Listed on Shenzhen Stock Exchange - Sustainability Report (Trial), and the four pillars (Governance, Strategy, Risk Management, Metrics and Targets) of the Task Force on Climate-related Financial Disclosures (TCFD). It discloses the relevant work of Ganfeng Lithium in responding to climate change and demonstrates the Company's climate resilience in the face of climate change challenges.

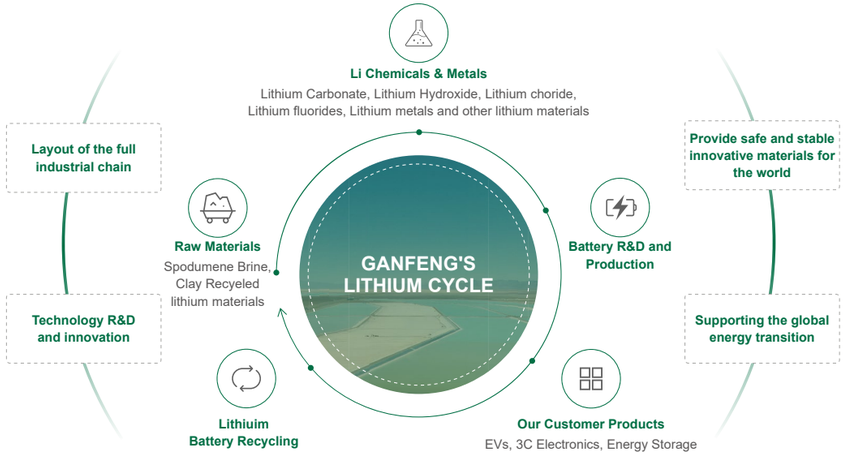
# 01

## About Ganfeng Lithium Group Co., Ltd.

Utilize limited lithium resources to create a green,
clean and healthy life for human development and progress

# Company Profile

Ganfeng Lithium Group Co., Ltd. (A-share stock code: 002460; H-share stock code: 01772) was established in 2000. As the first A+H listed company in China's lithium industry, our business covers all the essential parts of the value chain, including the development of upstream lithium resources, deep processing of midstream lithium salts and smelting of metallic lithium, manufacturing of downstream lithium batteries and comprehensive recycling and utilization of waste batteries. Based on the "technology innovation-driven" strategy, we have created a comprehensive product matrix from basic lithium compounds to high-end battery materials through the world's leading diversified lithium extraction processes, including brine lithium extraction, ore lithium extraction, and recycling-based lithium extraction. We continue to drive technological innovation in the lithium industry.




## We empower the global energy transition with technology innovation as our core engine

**Low-carbon Operations**

We actively practice the low-carbon concept by using advanced technologies such as brine lithium extraction and secondary utilization of lithium slag to improve resource recovery rates and reduce energy consumption and carbon emissions. Meanwhile, we introduce clean energy to replace traditional energy sources, reducing carbon footprints at the source and achieving greener production processes.

**Value Chain Decarbonization**

We proactively engage suppliers to reduce emissions and encourage upstream companies to accelerate the green transition. And we offer customers with low-carbon products and green solutions, such as lithium products with a low carbon footprint and energy storage systems, to help downstream companies achieve decarbonization and sustainability targets.

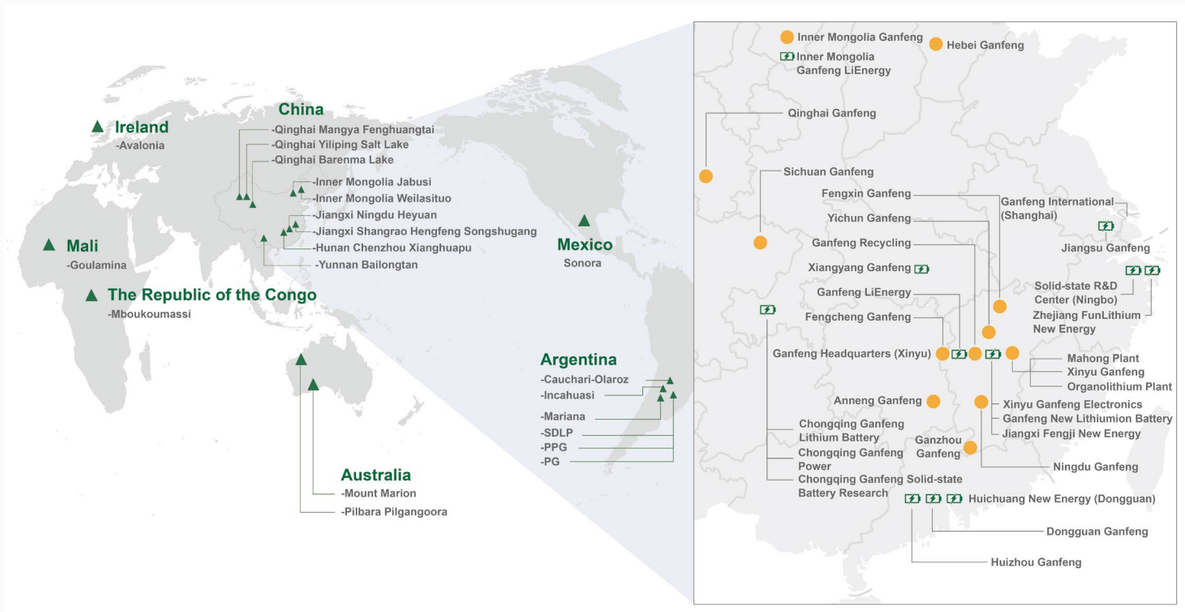
**Enabling Society's Green Transition**

We deliver critical solutions to address climate risks by producing high-performance battery products to drive the development of the renewable energy industry. We also actively recycle retired batteries, reintroducing them into society through circular recycling to achieve efficient use of resources.



# Global Layout

To ensure a stable supply, Ganfeng Lithium continuously engages with multiple suppliers and has achieved diversified resources. We have established local lithium salt production bases near the lithium brine lakes in Argentina, which not only help to reduce supply costs and carbon dioxide emissions during transportation but also provide more employment opportunities for local residents. Additionally, through community partnership initiatives, we invest in infrastructure within resource-rich regions to achieve symbiotic and mutually beneficial growth between industrial development and local socio-economic prosperity.




Ganfeng Lithium's Global Business Layout

# 02

# Climate Governance

**Governance Oversight**

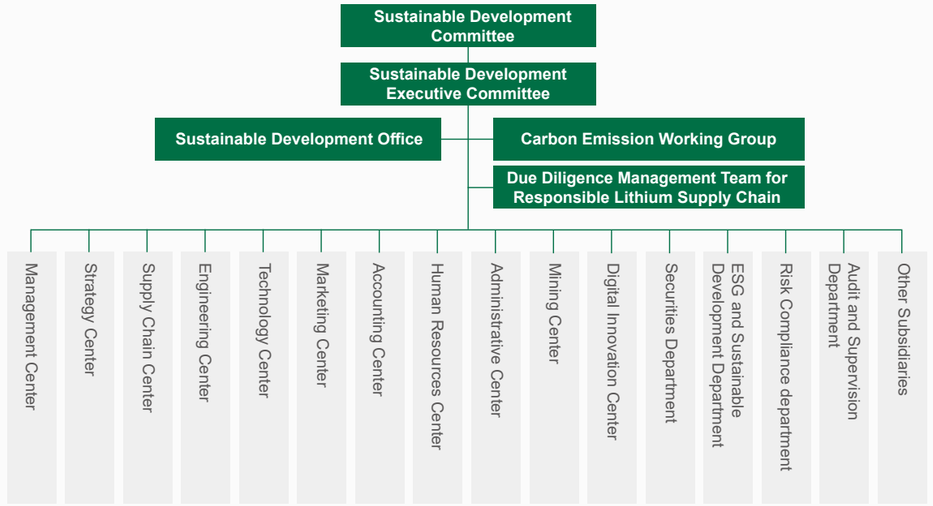
**Management and Executive Departments**

**Remuneration Incentive**

Utilize limited lithium resources to create a green, clean and healthy life for human development and progress

# Climate Governance

The Board of Directors of Ganfeng Lithium acts as the highest authority and decision-making body for the Company's sustainable development management and climate-related issues, fulfilling the responsibilities of deliberation, decision-making, management, and supervision of the Company's sustainable development management policies and ESG strategies. At the board level, the Company has established a Sustainable Development Committee, which is responsible for leading the Company's climate target setting, climate strategy planning, implementing supervision work, and overseeing the regular operation of the climate governance system across all company business segments. The Sustainable Development Office, the Carbon Emission Working Group, and the Due Diligence Management Team for Responsible Lithium Supply Chain are supporting the committee, which collaborate with various functional departments and subsidiaries to address climate-related issues.




Ganfeng Lithium's Climate Change Governance Framework

## Governance Oversight

In 2024, the committee held

1 meeting

Achieving an attendance rate of

100 %

As the Company's ultimate accountable body for climate-related issues, the Board of Directors effectively fulfills its responsibilities in climate management and oversight by establishing the Sustainable Development Committee Work Rules. The Sustainable Development Executive Committee, which is subordinate to the Board, is fully responsible for strategic climate-related deployments. This includes systematically identifying climate risks across the value chain, setting phased performance-linked climate targets, approving low-carbon transformation strategies and annual budgets (including special funds for energy-saving and emission-reduction technological upgrades), overseeing the compliance of significant investments (e.g., carbon emission constraint assessments for photovoltaic infrastructure), and monitoring decarbonization progress and addressing implementation gaps. Through these defined responsibilities and authorities, climate governance is ensured to be deeply embedded into the entire process of strategic decision-making, resource allocation, and operational assessment.

The Sustainable Development Committee consists of three directors and submits annual climate governance report to the Board.



## Management and Executive Departments

Ganfeng Lithium has established a comprehensive climate risk management system. Under the coordination of the Sustainable Development Executive Committee, the Sustainable Development Office implements cross-departmental coordination, the Carbon Emission Working Group drives operational decarbonization, and the Due Diligence Management Team for Responsible Lithium Supply Chain penetrates climate risk management across the value chain. This forms a closed-loop control mechanism for strategy formulation, target implementation, and process monitoring.

**Sustainable Development Office**

### The Company's Central Hub for Climate Risk Management

- Oversees climate risk management and approves daily operational climate-related matters
- Leads in compiling the climate risk and opportunity inventory, coordinates third-party climate scenario analysis and ensures compliant climate information disclosure
- Incorporates climate risks into the enterprise risk registers, implements continuous monitoring, and regularly reports to the Sustainable Development Executive Committee

*Led by the Group President*

**Carbon Emission Working Group**

### The Main Body for Implementing Carbon Neutrality Goals

- Formulates the Company's carbon management development strategy and carbon emission targets, guides and deploys carbon emission management work to promote the Company's energy saving, emission reduction, and optimization and upgrading of carbon assets
- Interprets national carbon emission policies, standardizes the statistics of energy and carbon emission data, coordinates internal and external resources, and ensures the achievement of carbon emission targets
- Executes carbon asset transactions, manages the fulfillment and settlement of carbon quotas, and promotes the implementation of energy-saving and emission-reduction projects in subsidiaries

*Co-led by the Group President (Lead) and the Group Executive Vice President (Deputy)*

**Due Diligence Management Team for Responsible Lithium Supply Chain**

### The Firewall for Climate Risks in the Value Chain

- Is responsible for approving mineral supply chain risk assessment reports, mineral supply chain due diligence policies, low-carbon procurement policies, etc.
- Review the due diligence risk management of the mineral supply chain, with a focus on climate-related risks
- Supervises the design and implementation of due diligence plans and risk management, paying attention to the execution of climate elements (e.g., carbon verification)

*Led by the Group Executive Vice President*

## Remuneration Incentive

Ganfeng Lithium has established a mechanism that links climate change to executive remuneration. The Sustainable Development Committee is responsible for formulating sustainable development goals and plans as well as overseeing the operation of the sustainable development system across all business divisions. The Company has set targets that include energy-saving technological upgrades, emission management, water consumption management, and energy transition. Based on the achievement of these targets and in combination with external ESG ratings, the executive team is subject to performance evaluation and remuneration incentives.

# 03

# Climate Strategy

**Scope of Analysis, Scenarios, and Time Dimensions**

**Physical Risks**

**Transition Risks and Opportunities**

**Financial Impact Assessment**

Utilize limited lithium resources to create a green, clean and healthy life for human development and progress

# Climate Strategy

In 2024, we conducted a comprehensive climate scenario analysis for the first time to better understand and address the potential impacts of climate change. This analysis encompassed a detailed screening and assessment of physical risks, transition risks, and potential opportunities. By applying financial quantification, we were able to more clearly identify the specific impacts of these risks on business operations and assess the Company's resilience under different climate scenarios.

We systematically identified and categorized various climate risks based on the TCFD framework and industry best practices. On this basis, we mapped out a risk matrix and analyzed the potential impacts of these risks on the Company in the short, medium, and long term; we mapped potential opportunities emerging from climate change, especially in low-carbon economic transition and technological innovation.

To ensure the comprehensiveness and accuracy of the analysis, we invited internal experts and external consultants to review key risk items and engaged in extensive communication with stakeholders. Based on these analyses, we developed corresponding climate response plans and incorporated them into the Company's long-term strategic planning. Moving forward, we will continue to enhance climate risk governance and advance the Company's climate resilience, seizing new opportunities for sustainable development while addressing climate change.

## Scope of Analysis, Scenarios, and Time Frame

### Scope of Analysis

In the climate scenario analysis of this report, we have defined the scope of our assessment, focusing on the core business areas of the Company's operations, which include Li Chemicals & Metals, Battery R&D and Production, Lithium Battery Recycling. These businesses are not only the mainstay of the Company's current operations but also a vital part of our future sustainable development strategy. We have assessed not only the direct impact of climate change on our business model and value chain, including the immediate effects on our own operations, but also the potential impact on key upstream and downstream segments of the value chain, such as the stability of raw material supply from upstream sources, energy consumption during the production process, and changes in downstream customer demand for low-carbon products.

### Time Frame and Scenarios

To identify the climate risks and opportunities facing Ganfeng Lithium, we conducted a scenario analysis in accordance with the requirements of international recognized climate disclosure frameworks and the new climate requirements of HKEx, covering the short term (up to 2030), medium term (up to 2040), and long term (up to 2050) to capture the dynamic evolution of the impact of climate change on key assets and business operations.

We have selected the most widely used and up-to-date climate science datasets from the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC) of the United Nations. To contrast these two extreme pathways, we have chosen to analyze a high-carbon scenario (the brown scenario) and a low-carbon scenario (the green scenario). This approach allows us to effectively capture asset value fluctuations, systematically identify the potential impact of key businesses under climate variable fluctuations, and identify potential thresholds for strategic opportunities.



**Table 3-1 Climate scenarios for physical risks**

| Scenario type | Scenario selection | Expected temperature rise | Scenario description | Scenario dataset |
|---|---|---|---|---|
| High-Carbon Scenario/Brown Scenario | Shared Socioeconomic Pathways (SSP5-8.5) from the IPCC Sixth Assessment Report (IPCC AR6) | A very high emission scenario with a temperature rise of 4.4°C | • CO2 emissions will triple by 2100<br>• Following a "business-as-usual" development path, assuming climate policies remain unchanged<br>• Countries around the world compete in development, using significant technological and human capital investments as a path to sustainable development<br>• Countries continue to exploit abundant fossil fuel resources and adopt resource- and energy-intensive lifestyles<br>• The global economy grows rapidly while the global population peaks and then gradually declines in the 21st century | WRI Aqueduct[1]<br>ISIMIP3b[2]<br>Fathom -Global 2.0[3]<br>IBTrACs[4]<br>NASA[5] |
| Low-Carbon Scenario/Green Scenario | IPCC AR6 SSP1-2.6 | A low-emission scenario with a temperature rise below 2°C | • Keeping the temperature rise below 2°C by 2100, consistent with existing commitments under the Paris Agreement<br>• Countries around the world develop more sustainably, emphasizing environmental protection and reducing inequality between nations<br>• Investments in education and health accelerate the transformation of population structures<br>• Consumption is oriented towards reducing resource use and energy consumption | |

**Table 3-2 Climate scenarios for transition risks and opportunities**

| Scenario type | Scenario selection | Expected temperature rise | Scenario description | Scenario dataset |
|---|---|---|---|---|
| High-Carbon Scenario/"Business-As-Usual" Scenario | IEA STEPS (Stated Policies Scenario) | By 2100, the temperature will rise 2.4°C *(with a 50% probability)* | • The STEPS scenario explores existing policies and announced proposed policies without considering additional policy implementation<br>• The STEPS scenario is the most representative "business-as-usual" pathway up to 2050 | IEA World Energy Outlook 2024[6] |
| Low-Carbon Scenario/ Accelerated Transition Scenario | IEA NZE (Net Zero Emissions by 2050 Scenario) | By 2100, the temperature will rise 1.4°C *(with a 50% probability)* | • The NZE scenario aligns with the climate ambition goals of the Paris Agreement, aiming to limit global warming to 1.5°C through stringent climate policies and innovation, achieving net-zero carbon dioxide emissions by 2050<br>• This scenario assumes that the corresponding ambitious climate policies can also be implemented and enforced | |

[1] World Resources Institute (WRI) Aqueduct Floods: https://www.wri.org/applications/aqueduct/floods/
[2] ISIMIP3: https://www.isimip.org/protocol/
[3] Fathom-Global 2.0: https://www.fathom.global/product/global-flood-map/
[4] IBTrACS: https://www.ncei.noaa.gov/products/international-best-track-archive
[5] NASA (National Aeronautics and Space Administration) Landslide Susceptibility Map: https://earthobservatory.nasa.gov/images/89937/a-global-view-of-landslide-susceptibility
[6] World Energy Outlook 2024: https://www.iea.org/reports/world-energy-outlook-2024

# Physical Risks

## Risk Types and Indicators

We focus on the potential impacts of both acute and chronic risks brought by climate change on our business operations, with a particular assessment of nine types of physical risks, including extreme heat, extreme cold, river flooding, coastal flooding, extreme precipitation flooding, typhoons, wildfires, landslides caused by precipitation, and water stress and drought. In the assessment of physical risks, we used the following indicators:

**Table 3-3: Physical risk types and indicators**

| Type | Physical risk | Scenario indicator (unit) |
|---|---|---|
| Acute | Extreme Heat | Warm Spell Duration Index (WSDI) (days) |
| | Extreme Cold | Cold Spell Duration Index (CSDI) (days) |
| | River Flooding | River Flooding Inundation Depth (meters) |
| | Extreme Precipitation Flooding | Pluvial Flooding Inundation Depth (meters) |
| | Coastal Flooding | Coastal Flood Inundation Depth (meters) |
| | Typhoon | Maximum Wind Speed of Tropical Cyclones (km/h) |
| | Landslides Induced by Precipitation | Rainfall Induced-Landslide Index (days) |
| | Wildfire | Forest Fire Danger Index (days) |
| Chronic | Water Stress and Drought | Water Stress Index |

## Results and Countermeasures

This physical scenario analysis encompasses a total of 40 assets, including offices, salt mines, salt lakes, and lithium chemical plants across three business divisions of Ganfeng Lithium: Lithium Chemical Business Division, Lithium Battery Business Division, and Overseas Business Division. It identifies the potential primary physical risks faced by these assets under the baseline, 2030, and 2050 timeframes in both the SSP1-2.6 (the low-carbon scenario) and SSP5-8.5 (the high-carbon scenario). Interviews were conducted with each business division to confirm the impact of each physical risk on Ganfeng Lithium. Among the assessed physical risks, Ganfeng Lithium's assets face three major risks, namely extreme heat, wildfires, water stress and drought. According to the results of the scenario analysis, the risks of extreme heat, wildfires, water stress and drought show an upward trend over time, while the risk of extreme cold is decreasing, and the risks of flooding and landslides remain low. The detailed results are shown in the following table:





**Table 3-4 Physical risk assessment results**

| Risk type | Potential risk | Risk level | | | | | Impacted business areas | Countermeasures |
|---|---|---|---|---|---|---|---|---|
| | | Baseline | SSP1-2.6 | | SSP5-8.5 | | | |
| | | | 2030 | 2050 | 2030 | 2050 | | |
| Extreme heat | *The impact of extreme heat is widespread across the three business divisions of Ganfeng Lithium, with the average risk level for the Lithium Battery Division's assets rising to "medium" and the Overseas Business Division's assets rising to "high" by 2050.*<br>• It is anticipated that extreme heat will affect the development of lithium resources and raw materials (ores, brines, clays), increase the risk of equipment failure, and elevate health risks for employees, thereby impacting overall production efficiency.<br>• Extreme heat can cause road asphalt to expand and create potholes, leading to additional transportation time and costs.<br>• Extreme heat may trigger large-scale power rationing or outages, potentially causing partial shutdowns of assets, affecting the operational efficiency and revenue of the assets. | Limited | Low | Low | Low | Medium | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | **Engineering Measures**<br>• **Use of High-Temperature Resistant Materials** - Select materials with good high-temperature resistance for manufacturing equipment to enhance their heat resistance. For instance, high-temperature insulation materials, anti-corrosion coatings, and other measures can be used to protect equipment from the effects of high temperatures.<br>• **Energy Storage or Renewable Energy Deployment** - Deploy energy storage devices, such as water cooling (storing cold water at night and releasing it during the day); and deploy solar power generation to support some of the operational energy consumption, reduce electricity costs, and mitigate the vulnerability to energy-related risks.<br>• **Enhance and Improve Corporate Cooling and Direct Lithium Extraction (DLE) Technology** - Ganfeng Lithium can increase investment in its cooling systems to maintain the optimal temperature for the lithium extraction process and use high-temperature resistant materials and equipment to reduce the likelihood of maintenance and operational interruptions. At the same time, implement direct lithium extraction (DLE) technology to reduce reliance on water and ensure operation under high temperatures.<br>**Management Measures**<br>• **Equipment Maintenance** - Regularly inspect and maintain equipment, check operational status, temperature, humidity, and other parameters to identify and resolve issues promptly. Perform cleaning, tightening, lubrication, and other maintenance tasks to ensure the long-term stable operation of the equipment.<br>• **Adjust Outdoor Work Schedules** - Implement reasonable work arrangements when temperatures exceed local high-temperature work standards, rotate work shifts, reduce working time under high temperatures (for example, take a 15-minute break every 45 minutes of work, or avoid working during mid-day hours), and increase labor during cooler periods to compensate for the impact of work stoppages during high-temperature periods. |
| Water stress and drought | *Water stress and drought primarily affect overseas assets, with an estimated significant increase in water stress risk to an "extremely high" risk level for a total of three overseas assets located in Argentina and the United Kingdom.*<br>• Prolonged drought reduces the availability of water and increases water prices, leading to higher operational costs.<br>• Severe water scarcity may affect the efficiency of cooling and production equipment, resulting in decreased revenue. | Low | Low | Low | Low | Low | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | **Management Measures**<br>• **Enhance Water Resource Management System** - Establish real-time monitoring systems and enhance technologies for water resource management to optimize water use and predict future water requirements.<br>• **Seek Alternative Water Sources** - Develop water recycling and reuse systems as well as rainwater collection systems to reduce dependence on water resources. The project site utilizes 100% non-potable low-salinity brine, ensuring production to the greatest extent without occupying residents' water usage.<br>• **Strengthen Local Cooperation** - Cooperate with local communities or government organizations to jointly develop shared water management strategies and improve the availability of water resources.<br>• **Develop Water Conservation Measures** - Provide employees with training on water-saving techniques and the importance of sustainable water use and regularly inspect and maintain infrastructure to prevent water leaks from pipes. |
| Wildfires | *Wildfires primarily affect overseas assets.*<br>• Wildfires may cause damage to buildings, infrastructure, and equipment, increasing additional maintenance costs and potentially leading to a reduction in asset value.<br>• Wildfires may threaten the safety of personnel at and near the location of the assets, affecting the normal operation of the assets and resulting in decreased revenue. | Limited | Limited | Limited | Limited | Low | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | **Management measures**<br>• **Regular Risk Assessment and Planning** - Conduct regular reviews of wildfire risks, identify areas near assets that are prone to wildfires and areas within assets that are susceptible to wildfire impacts and contain flammable materials, and develop detailed wildfire emergency response plans, including evacuation procedures, emergency supplies, and emergency contacts.<br>• **Enhance Fire Prevention Infrastructure** - Establish firebreaks around assets to prevent the spread of fire or smoke into the assets, and regularly inspect fire-fighting equipment, such as fire extinguishers, fire hydrants, and sprinkler systems.<br>• **Reduce Fire Hazards** - Regularly clear dry vegetation and flammable materials around the area to reduce wildfire risks, and plant fire-resistant plants to enhance the resilience of the surrounding ecosystem.<br>• **Financial Preparedness** - Purchase appropriate fire insurance to mitigate potential economic losses, and set aside emergency funds to deal with losses and maintenance costs caused by fires.<br>• **Strengthen Employee Training** - Regularly conduct fire safety training and evacuation drills for employees to raise their safety awareness and capabilities, and ensure that employees are familiar with evacuation procedures. |
| Extreme cold, floods, typhoons, landslides | • Extreme weather may cause equipment damage or failure; natural disasters may cause damage to or even collapse of factory buildings.<br>• When extreme weather poses a threat to personal safety, companies may need to suspend operations, resulting in economic losses. | Limited | Limited | Limited | Limited | Limited | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | **Engineering Measures**<br>• **Reinforcement of Factory Buildings** - Strengthen factories against winds by inspecting and reinforcing the connections of roofs, doors, and windows. Regularly trim dead branches and overgrown branches of trees around factories in coastal areas.<br>• **Stormwater and Sewage Diversion Projects** - Conduct comprehensive inspections and cleaning of the factory's drainage system, such as sewers and drainage wells, to ensure smooth water drainage. Set up flood barriers or sandbags around buildings like factories and warehouses to prevent backflow of rainwater or install floodgates and other facilities to prevent waterlogging. Install pumps in areas prone to water accumulation and equip them with backup power supplies to ensure that the equipment is not submerged for extended periods.<br>**Management Measures**<br>• **Establish Emergency Response Mechanisms** - The Company establishes corresponding emergency response organizations to respond to emergencies quickly, focus on abnormal weather conditions at the earliest opportunity, follow government professional commands, deploy in advance, and prepare emergency supplies in advance for urgent use.<br>• **Develop Emergency Plans** - Develop emergency plans for natural disasters such as typhoons and heavy rains, including emergency transfer plans for hazardous chemicals and measures for leak treatment. Regularly organize relevant personnel for drills.<br>• **Implement Duty System** - Determine the duty leadership list and duty schedule in advance. Ensure that it covers the heads of key departments such as engineering, safety, and logistics.<br>• **Warehouse Management** - Reinforce the entrance of warehouses storing hazardous chemicals like lithium metal with sandbags and install real-time monitoring systems to monitor environmental parameters such as temperature, humidity, and water levels inside the warehouse. |

## Transition Risks and Opportunities

In the process of transitioning to a low-carbon economy, Ganfeng Lithium navigates multifaceted transition risks and opportunities. Key challenges stem from evolving policies and regulations, technological innovation, shifts in market preferences, and reputational dynamics. As a company covering lithium resource development, deep processing of lithium salt products, smelting of lithium, manufacturing of lithium batteries, and recycling of lithium batteries, Ganfeng Lithium focuses on the impact of policy support and stricter regulation on the Company's operations, the impact of technological iteration on product competitiveness, and changes in market demand for green products. At the same time, the energy transformation driven by China's “carbon peaking” and “carbon neutrality” goals has accelerated industry shifts and opened structural opportunities for the Company. Breakthroughs in lithium battery recycling technology can improve resource recycling efficiency, and large-scale application of green electricity reduces carbon footprint barriers. Additionally, the explosive growth in demand for new energy markets further consolidates the advantages of industrial chain collaboration. We systematically evaluate the compound impact of policy pressure, technological substitution, and market restructuring from a full-value-chain perspective to provide quantitative support for strategic resilience.

### Risk Types and Indicators

Through benchmarking with peers and referencing Ganfeng Lithium's historical catalog of climate-related risks and opportunities, the following 10 climate-related risks and opportunities have been identified for assessment and analysis of transition risks and opportunities under the selected high-carbon/low-carbon scenarios and different time frames (2030-2050).

**Table 3-5 Transition risk and opportunity indicators**

| Type | Transition risk/opportunity driver | Scenario indicator |
|---|---|---|
| Transition risk | Policies and Regulations | Global carbon pricing, carbon intensity per unit GDP |
| | Technology | Global low-carbon investment amount |
| | Market | Global energy (electricity and fuel oil) prices |
| | Reputation | Global industrial emission intensity |
| Transition opportunity | Resource Efficiency | Global energy efficiency optimization investment amount |
| | Energy | Global total installed capacity of clean energy |
| | Market | Global storage market demand for lithium, supply of recycled lithium |
| | Products and Services | Global transportation sector electrification ratio and other battery energy storage demand |

## Results and Countermeasures

The following table provides a detailed description of the qualitative assessment results for the overall transition risks and opportunities of Ganfeng Lithium, as well as the corresponding countermeasures.

**Table 3-6 Transition risk assessment result**

| Risk type | Potential impact | Risk level | | | Impacted business areas | Countermeasures |
|---|---|---|---|---|---|---|
| | | 2030 | 2040 | 2050 | | |
| Policies and regulations<br>*Carbon pricing mechanism* | • Carbon tax policies in lithium resource countries such as Australia and Argentina (e.g., Argentina's 2018 carbon tax and Ireland's tiered tax rate) increase the cost of upstream mining, necessitating responses to challenges posed by cross-national carbon price differences on supply chain resilience.<br>• The strengthening of global carbon pricing instruments (such as ETS, carbon taxes) directly raises the cost of carbon emissions. China's "3060" goal drives the expansion of national and local carbon markets, which may cover high-energy-consuming industries like lithium chemicals in the future, intensifying the pressure of compliance costs across the entire chain.<br>• China's "1+N" policy framework accelerates the extension of the carbon market from the power sector to multiple industries, potentially affecting Ganfeng Lithium's upstream operations and, through the supply chain, impacting operational costs. | Limited | Medium | High | Lithium Resources, Lithium Chemicals, Battery Manufacturing | • Establish a dynamic response mechanism for climate regulations, coordinating internal and external resources and business departments to promote energy efficiency improvements and the construction of carbon footprint management systems.<br>• Continuously monitor national and regional policies, identify policy hotspots, and incorporate climate change factors into strategic decision-making in a timely manner. |
| Policies and regulations<br>*Climate-related laws and regulations* | • The nation's 'twin goals of carbon peaking and carbon neutrality' and the industrial energy efficiency improvement action plans require key industries to enhance energy efficiency levels. Ganfeng Lithium's high-energy-consuming businesses, such as lithium chemicals and battery manufacturing, will face stricter policy regulation and energy efficiency enhancement requirements.<br>• The countries hosting Ganfeng Lithium's overseas mineral resources (e.g., Australia, Argentina, Ireland) have all implemented climate regulations. For instance, Australia's Safeguard Mechanism sets emission reduction requirements for high-emission facilities, which may increase operational costs and compliance pressures of upstream operations.<br>• The EU's new Battery Regulation (Regulation 2023/1542) requires battery companies to disclose their carbon footprint, increase the use of recycled materials, and establish battery passports, etc. Ganfeng Lithium needs to invest in new technologies and management systems to meet these requirements, which may increase operational costs.<br>• The Hong Kong Stock Exchange and domestic exchanges, referring to the IFRS S2 standard, require companies to strengthen climate-related information disclosure. As an A+H share listed company, Ganfeng Lithium must ensure that the disclosure content complies with the latest standards; otherwise, the Company may face reputational damage and compliance risks. | Low | High | High | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | |
| Technology<br>*Low-carbon technology research and development and investment* | • In the mining and smelting stages, it is necessary to adopt electric mining vehicles, intelligent management systems, low-carbon lithium extraction technologies, and membrane separation technologies to achieve a low-carbon transition. These technological improvements will significantly increase capital expenditures.<br>• Lithium chemical production requires the introduction of low-carbon technologies such as electrolytic smelting technology optimization and waste heat recovery systems. The development and application of these technologies will increase Ganfeng Lithium's research and development investment and capital expenditures.<br>• In the lithium battery sector, there is a need to focus on low-carbon battery manufacturing processes and the development of solid-state batteries, which involve technological investments in low-carbon cathode materials and energy-saving production equipment. The research, development, and application of these technologies will exert considerable pressure on capital expenditures.<br>• The research and application of low-carbon technologies require substantial financial investment. If the technologies do not achieve the expected benefits as scheduled or if market acceptance is insufficient, this may lead to lower investment returns, increasing financial risks. | High | High | High | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | • Establish an annual low-carbon technology research and development (R&D) special budget, focusing on the iterative upgrades of proven technologies such as efficient brine lithium extraction, efficient wet process technology, high-capacity long-cycle energy storage batteries, and high-energy-density, high-safety power batteries. Concurrently, explore the commercial application of solid-state batteries to ensure the sustainability of technology investment.<br>• Set up an internal economic evaluation system for technology R&D investment, conduct full-cycle feasibility studies on prospective projects, and leverage the collaborative innovation advantages of Ganfeng Lithium's full lithium ecosystem chain. Link the technical demands of the raw material end with those of the application end to form a closed-loop R&D mechanism. |
| Market<br>*Energy market supply* | • Ganfeng Lithium relies on diesel-powered heavy machinery and thermal energy demands in its mining and extraction processes; fluctuations in fuel prices will directly affect energy expenditures in the upstream segments.<br>• The manufacturing and recycling segments primarily depend on electricity-driven equipment and high-temperature processing techniques; fluctuations in electricity prices will significantly impact the costs of these two segments. | Low | Medium | Medium | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | • Develop a strategy for the deployment of renewable energy, actively deploy distributed energy storage, and couple it with intelligent energy efficiency management systems to optimize the flexibility of electrical energy.<br>• Focus on green fuels, promote the verification of technologies such as hydrogen energy/biomass energy, and reduce dependence on coal and diesel.<br>• Advance the comprehensive electrification process in production and transportation segments to achieve a more efficient and environmentally friendly operational model. |
| Reputation<br>*Stakeholder concerns* | • As an A+H listed company, Ganfeng Lithium's performance on ESG issues, especially climate action, is highly scrutinized by regulatory authorities, investors, and customers. Proactive emission reduction actions and products with low carbon intensity help enhance the company's image and market competitiveness.<br>• Ganfeng Lithium's main downstream customers are industrial enterprises with increasingly stringent requirements for suppliers' low-carbon transitions. Ganfeng must continue to reduce the carbon dioxide emission intensity of its industrial processes to meet the high standards of stakeholders regarding emission reduction and climate risk management.<br>• With the growing demand for green transformation, Ganfeng Lithium's supply chain will also face higher low-carbon requirements. Failure to effectively promote the low-carbon transition of the supply chain could affect the Company's reputation and lead to a decline in market competitiveness. | Limited | Low | Medium | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | • Align with the latest international climate disclosure standards, upgrade the climate scenario analysis and risk management, proactively respond to global investors' demands for climate information disclosure, and enhance the transparency of the Company's climate-related information disclosure.<br>• Actively promote the setting of climate goals and track the implementation of internal climate actions in response to the national 3060 dual carbon goals and the global 1.5°C net-zero target. |

**Table 3-7 Transition opportunity assessment result**

| Opportunity type | Potential impact | Opportunity level | | | Impacted business areas | Countermeasures |
|---|---|---|---|---|---|---|
| | | 2030 | 2040 | 2050 | | |
| Resource Efficiency<br>*Production and operational efficiency* | • By optimizing water resource management in the Salt Lake extraction and lithium extraction processes and introducing recycling and wastewater treatment technologies, Ganfeng Lithium can significantly improve water resource utilization efficiency, reduce dependence on local water resources, decrease environmental impact, and simultaneously lower operational costs.<br>• Introducing high-efficiency equipment and optimizing production processes enhances heat recovery efficiency in the lithium chemical and smelting stages, reducing energy consumption and operational costs while also strengthening market competitiveness.<br>• Improving battery recycling rates and optimizing recycling processes allows Ganfeng Lithium to reduce reliance on virgin lithium resources and achieve closed-loop resource utilization.<br>• Through investment in new technologies to optimize energy and water consumption, Ganfeng Lithium achieves enhanced energy efficiency and cost savings. | High | Medium | Limited | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | • Actively promote energy efficiency optimization projects in various project companies, including the application of waste heat recovery technology, replacement of high-efficiency equipment, and electrification upgrades of mine transportation.<br>• Systematically promote the recycling technology of water resources in Salt Lake lithium extraction, including membrane water treatment and dynamic reinjection of brine processes.<br>• Use lithium phosphate to replace lithium carbonate, significantly reducing the consumption of sodium carbonate. |
| Energy<br>*Renewable Energy Utilization* | • Deploy self-owned renewable energy power generation (such as distributed photovoltaic and wind power) to reduce dependence on fossil fuels, decrease the need for externally purchased electricity, address the risks associated with energy price volatility, and lower operational costs.<br>• Increase the electrification ratio of vehicles such as mining trucks and transport vehicles, use new energy logistics vehicles, and develop green transportation tools, which can reduce the consumption of fossil fuels and further reduce operational costs through the low-cost operation of electric vehicles. | Low | Medium | Medium | Lithium Resources, Lithium Chemicals, Battery Manufacturing, Battery Recycling | • Advance the construction of renewable energy power generation facilities in stages, and lay out a clean energy supply network in production bases that match resource endowments, including distributed photovoltaic power stations, on-site wind power, and integrated photovoltaic plus energy storage projects.<br>• Accelerate the electrification transformation of production and logistics processes, promote the replacement of high-energy-consuming equipment with renewable energy sources in various scenarios, including the introduction of new energy logistics vehicles. |
| Market<br>*Demand of batteries* | • The global shift towards a low-carbon economy has accelerated the electrification process across various industries, and the rapid development of the new energy sector has driven market demand for batteries. With the swift growth of the electric vehicle market, the demand for lithium batteries, as a core component, has significantly increased.<br>• Lithium, being a key material for batteries, will see its demand rise alongside the growing demand for batteries. | High | Medium | Medium | Lithium Resources, Lithium Chemicals, Battery Manufacturing | • Leveraging Ganfeng Lithium's global leading position in metal lithium production capacity, we continue to strengthen the research and development and manufacturing capabilities of power battery technology, especially in the field of electric vehicles, and expand the advanced production capacity of high-nickel ternary and solid-state batteries in stages to meet market demands.<br>• Keeping pace with the development opportunities in the energy storage market, we persistently develop energy storage system products that are high in safety, efficiency, and longevity. We actively explore the energy storage market, covering user-side and commercial and industrial applications, and extend our products to overseas markets. |
| Market<br>*Battery Recycling Market* | • The finite nature of lithium resources has spurred the development of recycling technologies, enhancing resource utilization and reducing reliance on mining. Our country has introduced a series of policies, such as the "Action Plan for Improving the New Energy Vehicle Power Battery Recycling and Utilization System," to promote the development of the battery recycling industry; the EU Battery Regulation sets mandatory recycling targets. For instance, planning to achieve a 50% lithium recycling rate by the end of 2027 and 80% by the end of 2031. With technological advancements and improved cost-effectiveness, the battery recycling industry is poised for growth opportunities. | High | High | High | Battery Recycling | • Promote the construction of battery recycling capacity, continuously improve the vertical integration capability of "retired batteries - black powder lithium extraction - recycled materials," and through technological innovation, continuously enhance the comprehensive recovery rate of lithium.<br>• Align with domestic and international battery recycling-related policies and regulatory requirements, build a policy-guided recycled lithium salt supply system for battery recycling, and specifically enhance the capacity and technical standards of recycled materials. |
| Products and services<br>*Innovation in energy storage products* | • As lithium battery technology advances and matures, its improvements in energy density, charging speed, and safety are bringing revolutionary changes to emerging markets such as freight and aviation. Battery manufacturing will benefit from the increased level of electrification in the transportation sector, further expanding market opportunities in areas such as private vehicles, public transportation, freight, shipping, and air transport.<br>• With the maturation of energy storage technology, in addition to traditional grid energy storage, niche markets such as home energy storage, industrial energy storage, and communication base station energy storage are also growing rapidly. | Medium | High | High | Battery Manufacturing | • Promote the research and development and capacity layout of high-energy-density batteries and look ahead to various logistics and transportation scenarios to support the low-carbon transition in the transportation sector.<br>• Accelerate the iteration of household energy storage products, strengthen the penetration of commercial and industrial energy storage solutions, including the development and promotion of integrated photovoltaic and energy storage solutions. |


## Financial Impact Assessment

Based on the climate risk assessment results, Ganfeng Lithium has further identified key risks and opportunities that have significant financial impacts for quantitative analysis. The climate variables with high risks/opportunities are translated into quantifiable indicators that can inform decision-making. This approach not only meets HKEx's requirements for the quantification of climate-related risks and opportunities as outlined in the new climate-related disclosure requirements but also identifies the sensitivity of key financial performance to these risks/opportunities. It provides data support for assessing the magnitude of risk exposure and the Company's ability to seize opportunities, further offering decision support for the allocation of corporate resources.

### Scenario selection

**The Stated Policies Scenario** (STEPS)
**Net Zero Emissions by 2050 Scenario** (NZE)

### Scope of assessment

**Scope of Assessment:** Ganfeng Lithium
**Time Frame:** 2030, 2040, 2050

### Financial transmission path

**Battery Demand Drives Revenue Growth (Opportunity)**

The accelerated global transition to low carbon is driving an increase in the penetration rate of renewable energy and electric vehicles and the expansion of energy storage capacity. Leveraging the wave of electrification, Ganfeng Lithium benefits from the growth in the installation of power batteries and the explosion of the energy storage market through the release of its lithium hydroxide/lithium carbonate production capacity and the iteration of battery technology. It is anticipated that the overall business revenue has significant growth potential.

**Low-Carbon Related Investments Increase Capital Expenditure (Risk)**

To achieve a low-carbon transition, Ganfeng Lithium systematically advances investments and implementations of low-carbon projects such as the low-carbon transformation of process equipment, the construction of closed-loop clean production, and intelligent energy efficiency management. The related capital expenditures[7] are expected to increase year by year in line with the global low-carbon trend.

[7] The quantification assessment primarily focuses on equipment upgrades, electrification and intelligent transformation, and energy efficiency enhancement projects; therefore, the assessment results have certain limitations.

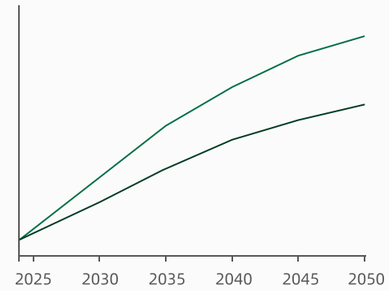




### Battery Demand Drives Revenue Growth (Opportunity)

According to IEA's "Global Critical Minerals Outlook 2024" and the "Batteries and the Energy Transition" report, In the STEPS, the annual demand for electric vehicle (EV) batteries worldwide is expected to reach 7,000 GWh. The global additional installed capacity of energy storage batteries is projected to reach 760 GW. In the NZE Scenario, these figures will increase to 11,000 GWh and 3 TW, respectively.

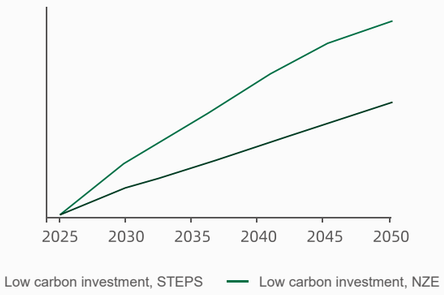
With the significant increase in battery deployment in electric vehicles and grid energy storage, the demand for lithium resources from the global electric vehicle and clean energy industries will grow substantially. In the NZE scenario, by 2040, the demand for lithium is expected to increase by 8.7 times, reaching approximately 14 million metric tons, with 91% being used for clean energy. In conjunction with Ganfeng Lithium's industrial layout, and given the opportunities for market development, we have predicted Ganfeng's revenue potential by 2050 under different scenarios.




Revenue forecast for Ganfeng Lithium

### Low-Carbon Related Investments Increase Capital Expenditure (Risk)

Based on Ganfeng Lithium's historical investment in low-carbon projects, which include iterations of production-side process equipment such as the energy efficiency upgrades to evaporation systems, electrification of mining vehicles, the creation of a circular economy closed loop (e.g. flue gas desulfurization from kilns, waste heat recovery), and digital energy efficiency management (e.g. intelligent power distribution, smart warehousing), it is estimated that the investments in this category will continue to grow as a percentage of revenue. We have predicted the development trend of Ganfeng Lithium's capital expenditure on low-carbon technology applications up to 2050, based on the IEA's trend forecast for low-carbon investments.




Low-carbon investment forecast for Ganfeng Lithium

# 04

# Climate Risk Management

**Climate Risk Management Mechanism**

**Climate Risk Response**

Utilize limited lithium resources to create a green,
clean and healthy life for human development and progress

# Climate Risk Management

Ganfeng Lithium considers climate change a crucial element of the Company's sustainable development strategy and integrates climate change into its long-term strategic planning. We have established a comprehensive risk management mechanism to monitor the Company's operational status, risks, and the implementation of response measures. On this basis, following the new climate regulations of HKEx and TCFD framework, we systematically advance climate risk management across the entire lithium industry chain, forming a closed-loop mechanism that covers risk identification, assessment, quantification, response execution, and continuous optimization. We further integrate the results of climate scenario analysis into strategic decisions such as capacity planning, process upgrades, and international market layout. Under the existing climate governance framework of the Company, we coordinate the planning of climate risk management and the implementation of low-carbon transition strategies to ensure dynamic coordination between risk prevention and control and the Company's long-term value creation goals, continuously enhancing the Company's climate resilience.

## Climate Risk Management Mechanism

Ganfeng Lithium incorporates climate-related factors into its risk management procedures, conducting climate risk management based on the existing enterprise risk management mechanism. The climate risk management mechanism mainly includes the following four steps:

**Risk and Opportunity Identification**

- Conduct peer benchmarking and gap analysis, combined with interviews with key internal stakeholders, to systematically identify climate-related risks and opportunities at various stages of the value chain.

**Scenario Analysis and Quantification of Financial Impact**

- Conduct scenario analysis to qualitatively analyze climate-related risks and opportunities that have a significant impact on business strategy and operations, assessing the magnitude of climate-related risks and opportunities based on the degree of risk impact and the likelihood of occurrence.
- For key risks/opportunities, sort out the pathways through which climate factors impact business processes such as procurement, production, and sales, develop quantitative models, and perform financial quantification.

**Risk Response**

- Review existing risk management work plans and assess their effectiveness, updating and improving risk response measures and action plans.
- Regularly review risk management measures for adjustments and optimizations.

**Risk Integration and Monitoring**

- Establish monitoring and early warning mechanisms, set key climate-related indicators and targets, and periodically monitor progress and target achievement.
- Integrate climate risks into the Company's comprehensive risk management system.

Climate-related risk management processes

### Risks and Opportunities Identification

During the risk identification phase, business departments collect policy and regulatory changes, customer ESG audit requirements, and industry technological substitution trends on a quarterly basis to generate a preliminary risk database. The Risk Compliance Department supplements control blind spots through peer benchmarking, and the Sustainable Development Office coordinates and integrates these inputs. Starting from physical risks and transition risks, and with the assistance of external third-party experts, a list of climate-related risks and opportunities is formed and submitted to the Sustainable Development Committee for review of priority levels, with final approval by the Board of Directors on the annual control focus.

### Scenario Analysis and Quantification of Financial Impact

With support from external experts, Ganfeng Lithium uses external data platforms and tools to conduct scenario analysis on identified climate risks and opportunities. Based on the Company's internal risk assessment system, these risks and opportunities are evaluated based on their severity and likelihood of occurrence. The analysis includes the time frame, the scope (including business operation and the value chain), financial impact, etc. Risks are then ranked according to the results of the risk assessment and responses are formulated accordingly.

In the financial quantification analysis phase, quantitative models are established for key risks and opportunities. The finance department and relevant business departments conduct compliance checks on the model assumptions. The analysis results are reviewed by a quarterly inter-departmental joint meeting and, after being submitted to the Sustainable Development Committee and the Board of Directors, are transformed into resource allocation plans.

### Risk Response

The Company conducts risk identification and assessment annually, analyzes the causes of significant risks, establishes early warning mechanisms and continuous monitoring, and formulates emergency plans with dynamic adjustments to control measures. Based on the results of the risk assessment, Ganfeng Lithium will adopt different response strategies according to the level and nature of the risks, including risk reduction, risk acceptance, risk avoidance, and risk sharing.

### Risk Integration and Monitoring

The Company incorporates climate change-related factors into its risk management procedures and conducts climate change-related risk management based on the "Risk Identification and Assessment Control Form" developed in accordance with IATF 16949 and ISO 14001 standards. Among the Company's overall risk management system, ESG risks are listed as one of the six major risks, including climate-related risks. Like other types of risks identified by Ganfeng Lithium, climate risks are incorporated into the risk monitoring system, which is deeply integrated with the EHS management system. Key indicators such as reduction of exhaust emissions, water consumption, water recycling, carbon emissions, coal consumption, and the proportion of sustainable electricity are set. Business departments report data weekly, and the Sustainable Development Office compiles a quarterly comprehensive report, regularly assessing and reporting on the execution and effectiveness of risk response measures and submitting improvement recommendations to the Board of Directors to help mitigate and adapt to climate change.

# Climate Risk Response

As an active advocate of low-carbon transformation in the lithium industry, Ganfeng Lithium drives climate action through internal decarbonization and industry ecosystem collaboration. At the corporate operations level, a green production system is systematically constructed across energy structure transformation, enhancement of energy efficiency management, and transportation system upgrades. At the industrial collaboration level, vertical integration capabilities are leveraged to promote technological iteration and model innovations. Initiatives such as solid-state battery development and resource recycling contribute to the low-carbon process of the new energy industry. This response framework, spanning "self-operations-industrial linkage," not only enhances the Company's climate risk management efficiency but also provides a referable practice sample for the industry's carbon-neutral path through technological innovation.

## Green Emission Reduction

Ganfeng Lithium addresses climate risks in its operational processes by promoting low-carbon practices using clean energy, green transportation, and energy-saving retrofits. The following measures reflect the Company's exploration of transforming climate risk management into tangible technological actions:

### Renewable Energy Projects Aid Carbon Emission Reduction and Climate Change Response

Ganfeng Lithium's Mariana Salt Lake project in Argentina officially commenced on February 12, 2025. Located in Salta Province, Argentina, the project has a total lithium resource of approximately 812,000 metric tons of LCE (Lithium Carbonate Equivalent), with an annual production capacity of 20,000 metric tons of lithium chloride in the first phase.


The Mariana Project's Self-Built Photovoltaic Power Station

To effectively reduce carbon emissions, the Company has laid out renewable energy solutions, constructing a photo-voltaic power station with an installed capacity of 120 MW surrounding the project, coupled with a 288 MWh energy storage system using the Company's self-developed and self-produced battery products. This integrated energy solution not only ensures that the Mariana project operates entirely on renewable energy but also provides an uninterrupted power supply for 24 hours. This initiative significantly reduces dependence on traditional power supplies through the full use of self-produced photovoltaic electricity and improves the electricity usage efficiency with the energy storage system. Optimizing the use of peak and valley electricity price differences significantly reduces electricity costs. At the same time, the project greatly reduces carbon emissions during its operational period, effectively addressing the risk of power outages due to extreme weather. This enhances the stability of the power supply and reflects the Company's active exploration of climate change response.

### Green Transportation Contributes to Achieving a Green Closed Loop of the Product's Entire Value Chain


The Electric Loader at the Factory Operation Site

Ganfeng Lithium has significantly reduced carbon emissions by extensively promoting the use of electric vehicles. During the reporting period, the Mahong factory significantly reduced diesel consumption by approximately 486,864 liters, equivalent to 1,265.85 tons of carbon dioxide emissions. Furthermore, electric forklifts and electric shovels are widely used in internal logistics and transportation within the factory. Each electric forklift reduces carbon dioxide emissions by about 53.95 tons per year, and each electric shovel reduces emissions by about 220.53 tons annually. These electric vehicles are equipped with high-performance power batteries manufactured by Ganfeng Lithium's battery division, enhancing transportation efficiency and creating a green closed-loop across the value chain, from raw materials to finished products.

### Energy Efficiency Improvement through Energy Saving and Consumption Reduction

Ganfeng Lithium actively addresses climate risks while advancing the Company's transition to a low-carbon model and reducing energy dependence through a series of energy-saving technology projects. In 2024, the Company extensively adopted MVR (Mechanical Vapor Recompression) technology across several ongoing projects, reducing steam consumption for evaporating one ton of water from 0.45 tons to 0.1 tons. This significantly improves steam utilization and reduces carbon emissions.

Furthermore, Fengcheng Ganfeng introduced a lithium bromide absorption chiller unit, utilizing steam condensate and waste heat from air compressors as heat sources to achieve energy-saving goals. The Company also recovers waste heat from air compressors to supply hot water to employee dormitories, further reducing energy consumption.



## Promoting Low-Carbon Transition of the Industry Chain

Ganfeng Lithium promotes the low-carbon development of the new energy industry through innovative technology and collaboration within the industry chain. The lithium chemical board continuously improves the comprehensive utilization rate of lithium resources. It builds a resource recycling system by innovating clean lithium extraction processes, providing low-carbon raw material security for the lithium industry chain. The lithium battery sector focuses on developing high-safety, long-life battery technologies to enhance the environmental performance of electric vehicles and optimize battery structural design to reduce material consumption and production energy consumption. In addition, the battery recycling sector establishes a lithium resource recycling system, driving upstream and downstream to reduce resource waste together, providing practical references for the industry's green upgrade.

### Lithium Chemicals Business Division

In terms of research and development direction, in 2024, the Company's lithium chemicals segment successfully developed brine extraction lithium technology. Compared to the traditional salt field evaporation lithium extraction technology, brine extraction lithium technology has significant advantages in reducing carbon footprint, decreasing water resource consumption, and improving extraction efficiency.

Traditional salt field evaporation lithium extraction technology relies on prolonged natural evaporation, making it less efficient, and often requires additional energy input in the subsequent lithium extraction process. In contrast, brine extraction lithium technology offers higher efficiency and selectivity and is capable of completing lithium extraction in a shorter time, thus reducing energy consumption. Moreover, extraction technology can further reduce energy consumption by optimizing the extraction agent and process conditions, thereby reducing carbon emissions.

Brine extraction lithium technology separates lithium ions directly from brine through chemical methods such as solvent extraction, without the need for large-scale evaporation concentration, significantly reducing the use of water resources. Additionally, the extraction process can further reduce the waste of water resources by recycling the extraction agent.

Brine extraction lithium technology reduces reliance on natural evaporation ponds, decreases dependence on climate conditions, and simultaneously reduces land occupation and the issue of soil salinization. Furthermore, this technology minimizes the impact on the ecological environment by optimizing the process and solvent system, reducing the use and discharge of chemical reagents.

### Lithium Battery Business Division

CTP Integrated Battery

Ganfeng Lithium's new generation of pouch-type CTP (Cell to Pack) integrated batteries, equipped with high-quality lithium iron phosphate cells, have an energy density of 190Wh/kg and support ultra-high rate discharge of over 10 C. By improving the energy storage efficiency per unit, these batteries reduce the material consumption throughout the entire life cycle of electric vehicles. The batteries feature an integrated design of conductive, insulating, and heat-resistant materials, along with a quadruple insulation protection system, ensuring there's no risk of thermal runaway in extreme testing environments. Their 74% packing efficiency and 50% reduction in module material significantly reduce carbon emissions from aluminium processing during the production phase, increase production efficiency by 30%, and further reduce the energy consumption intensity of manufacturing. The detachable protective armor and wide temperature range performance can broaden the battery's applicable scenarios and extend its service life, delaying the stage of disposal. Additionally, the lightweight structure can help reduce the overall weight of the vehicle, indirectly reducing energy consumption during driving.

### Battery Recycling Business Division

Ganfeng Lithium has positioned itself in the field of battery recycling and has currently established a comprehensive recycling and treatment capacity of 234,000 tons of retired lithium-ion batteries and metal waste, becoming one of the largest enterprises in China for recycling lithium iron phosphate batteries and waste materials. Through technological innovation, Ganfeng Lithium has broken through five sets of technologies, including the collaborative transformation of multi-source lithium-containing waste, comprehensive lithium recovery, preparation of battery-grade lithium iron phosphate from lithium extraction residues, and high-value transformation of secondary lithium resources. This has enabled the efficient extraction of valuable metals and lithium compounds from waste batteries and their reuse in battery raw materials or lithium salt product manufacturing.

Additionally, Ganfeng Lithium has engaged in in-depth cooperation with battery manufacturers, vehicle manufacturers, and other industry chain partners to ensure a stable supply of waste batteries and lithium-containing waste. This cooperative model not only guarantees the sufficiency of recycled raw materials but also enhances battery recycling technology, expands recycling and reuse capacity, and provides strong support for dealing with the retirement cycle of lithium batteries in society. Furthermore, Ganfeng is creating a circular industry cluster, and has built five engineering demonstrations, forming a green and high-end circular integrated technology system for multi-source lithium waste and a comprehensive solution for high-end circular lithium resources. Relying on Jiangxi Province's national ecological civilization pilot zone, integrated demonstration bases have been established in Xinyu and Yichun, national lithium industry bases, supporting the secure supply of China's strategic lithium resources and the green transformation and upgrading of lithium industry clusters.

Ganfeng Lithium's battery recycling business achieves efficient resource utilization and whole-chain pollution control through technological innovation and industry chain collaboration, reducing carbon emissions and minimizing environmental impact. These measures not only promote the sustainable development of the lithium industry but also support the green transformation of the global new energy industry, demonstrating essential value in the circular economy and climate risk response.

# 05

## Metrics and Targets

Utilize limited lithium resources to create a green,
clean and healthy life for human development and progress

# Metrics and Targets

In response to the Paris Agreement and the national dual carbon goals, Ganfeng Lithium established carbon reduction targets for its lithium chemical business in 2020 based on the unit of lithium carbonate equivalent: compared to the base year of 2019, Ganfeng Lithium aims to reduce exhaust emissions per ton of product by 5%, carbon emissions per ton of product by 10%, water consumption per ton of product by 20%, coal consumption per ton of product by 6%, and to improve water recycling per ton of product by 20%, and increase the proportion of renewable electricity to 25% by 2025. In line with the Group's business development and strategic planning, Ganfeng Lithium is systematically reviewing its climate targets.

**Table 5-1 Climate and Environmental Goals Setting and Achievement in the Current Year**

| | 2019 | 2024 | The achievement of the target by 2024 |
|---|---|---|---|
| Exhaust Gas | | | |
| NOx Emission per Ton of LCE (Exhaust Gas) | 3.48 kg | 1.76 kg | Completed |
| $SO_2$ Emission per Ton of LCE (Exhaust Gas) | 0.83 kg | 0.55 kg | Completed |
| Particulate Matter Emission per Ton of LCE | 0.52 kg | 0.20 kg | Completed |
| Water Usage | | | |
| Water Consumption per Ton of LCE | 38.3 t | 10.40 t | Completed |
| Water Recycling Rate | 72% | 92.63% | Completed |
| Energy Consumption and Carbon Emissions | | | |
| $CO_2$ Emissions per Ton of Product | 9.58 t | 7.08 t | Completed |
| Coal Consumption per Ton of Product | 3.09 t | 0.84 t | Completed |
| Proportion of Renewable Electricity | - | 19% | 77% Completed |

In 2024, Ganfeng Lithium established carbon emission accounting management regulations that include Scope 1 and Scope 2. In accordance with ISO 14064 standards and GHG Protocol requirements, we completed the inventory of Scope 1 and 2 emissions and collected Scope 3 data. At the same time, we monitor, track, analyze, and assess climate-related indicators and performance, and disclose our targets and indicators on a regular basis.



**Table 5-2 Performance of Key Climate and Environmental Indicators**

| Indicator | Unit | 2024 | | | 2023 | | 2022 |
|---|---|---|---|---|---|---|---|
| | | Lithium Chemical Business Division | Lithium Battery Business Division | Overseas Business Division | Lithium Chemical Business Division | Lithium Battery Business Division | The Group |
| **Total Greenhouse Gas (GHG) Emissions and Intensity** | | | | | | | |
| Scope 1 GHG Emissions | 10 kt of $CO_2$ equivalent | 32.60 | 1.09 | 8.65 | 34.51 | 0.76 | 38.93 |
| Scope 2 GHG Emissions | 10 kt of $CO_2$ equivalent | 57.91 | 28.56 | 0.46 | 40.37 | 24.40 | 47.20 |
| GHG Emission Intensity (per unit of product) | tons of $CO_2$ equivalent per ton of LCE | 7.08 | - | - | 7.18 | - | 8.86 |
| GHG Emission Intensity (per unit of product) | tons of $CO_2$ equivalent per 10,000 units | - | 1.67 | - | - | 2.30 | - |
| GHG Emission Intensity (per unit of product) | tons of $CO_2$ equivalent per MWh | - | 21.00 | - | - | 17.65 | - |
| **Direct and Indirect Energy (such as Electricity, Gas, or Oil) Consumption and Intensity by Type** | | | | | | | |
| Indirect Energy Consumption | | | | | | | |
| Purchased Electricity | MWh | 743,727 | 436,168 | 66,514 | 576,725 | 389,738 | 530,005 |
| Of which, Green Electricity Purchased | MWh | 140,870 | 95,645 | 45,717 | 254,811 | 119,545 | 100 |
| Purchased Steam | GJ | 2,387,202 | 783,157 | - | 2,154,963 | 817,793 | 3,694,902 |
| Total Indirect Energy Consumption | MWh | 1,406,497 | 653,591 | 66,514 | 1,175,017 | 616,776 | 1,555,837 |
| **Direct Energy Consumption** | | | | | | | |
| Coal Consumption | tons | 107,798 | - | - | 122,394 | - | 107,689 |
| Diesel Fuel | liters | 134,111 | 56,157 | 14,756,812 | 141,978 | 83,451 | 895,847 |
| Gasoline | liters | 3,547 | 16,627 | - | 3,024 | 19,317 | 1,848 |
| Liquefied Petroleum Gas (LPG) Consumption | tons | - | - | 32.43 | 0.95 | - | - |
| Natural Gas Consumption | $m^3$ | 24,665,679 | 5,415,810 | 15,218,807 | 15,530,400 | 3,686,117 | 16,158,700 |
| Self-generated Renewable Energy Consumption | MWh | 3,996 | 4,300 | 17,856,270 | 4,135 | 2,770 | 4,192 |
| Direct Energy Consumption | MWh | 872,776 | 57,891 | 18,154,055 | 868,634 | 39,771 | 796,932 |
| **Total Energy Consumption** | | | | | | | |
| Comprehensive Energy Consumption | MWh | 2,279,273 | 711,483 | 18,220,569 | 2,043,651 | 656,548 | 2,352,769 |
| Comprehensive Energy Consumption Intensity (per unit of product) | MWh/ton of LCE | 17.37 | - | - | 19.60 | - | 24.20 |
| Comprehensive Energy Consumption Intensity (per unit of product) | MWh/10,000 units | - | 4.25 | - | - | 4.87 | - |
| Comprehensive Energy Consumption Intensity (per unit of product) | MWh/MWh | - | 49.68 | - | - | 49.05 | - |
| **Clean Energy Consumption** | | | | | | | |
| Clean Energy Consumption by Energy Type: Solar Energy | MWh | 144,865 | 99,945 | 17,901,987 | 258,946 | 122,315 | 4,292 |
| Clean Energy Consumption by Energy Type: Natural Gas | $m^3$ | 24,665,679 | 5,415,810 | 15,218,807 | 15,530,400 | 3,686,117 | 16,158,700 |
| **Water Consumption** | | | | | | | |
| Total Water Withdrawal (by Source of Withdrawal) | $m^3$ | 2,410,832 | 1,396,126 | 147,572,177 | 2,230,736 | 1,145,335 | - |
| Total Water Consumption (calculated as Water Withdrawal minus Water Discharge) | $m^3$ | 1,352,224 | 1,027,864 | 145,142,662 | 1,135,676 | 820,463 | - |

# 06

# Appendix

Utilize limited lithium resources to create a green,
clean and healthy life for human development and progress

# Appendix

## Index of the "Climate-related Disclosures" section in Part D of the Hong Kong Stock Exchange (HKEx) "Environmental, Social, and Governance (ESG) Reporting Guidelines"

| Level | | Content | Chapter Location |
|---|---|---|---|
| Governance | / | The governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of climate-related risks and opportunities. | Oversight by the Governance Layer<br>Remuneration Incentive |
| | | Management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities. | Management and Executive Departments<br>Remuneration Incentive |
| Strategy | Climate-related Risks and Opportunities | Describe Climate-related Risks and Opportunities That Could Reasonably be Expected to Affect the Issuer's Cash Flows, Its Access to Finance or Cost of Capital Over the Short, Medium or Long Term. | Scope of Analysis, Scenarios, and Time Dimensions,<br>Physical Risks,<br>Transition Risks and Opportunities |
| | | explain, for each climate-related risk the issuer has identified, whether the issuer considers the risk to be a climate-related physical risk or climate-related transition risk. | Physical Risks,<br>Transition Risks and Opportunities |
| | | specify, for each climate-related risk and opportunity the issuer has identified, over which time horizons – short, medium or long term – the effects of each climate-related risk and opportunity could reasonably be expected to occur. | Scope of Analysis, Scenarios, and Time Dimensions,<br>Physical Risks,<br>Transition Risks and Opportunities |
| | | explain how the issuer defines 'short term', 'medium term' and 'long term' and how these definitions are linked to the planning horizons used by the issuer for strategic decision-making. | Scope of Analysis, Scenarios, and Time Dimensions,<br>Physical Risks,<br>Transition Risks and Opportunities |
| | Business Model and Value Chain | a description of the current and anticipated effects of climate-related risks and opportunities on the issuer's business model and value chain. | Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | | description of where in the issuer's business model and value chain climate related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets). | Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | Strategy and Decision-Making | information about how the issuer has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the issuer plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation. | Climate Risk Management |
| Strategy | Financial Position, Financial Performance, and Cash Flows<br>(Current Financial Effect) | how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period. | Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | | the climate-related risks and opportunities identified in paragraph 24(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements. | Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | | how the issuer expects its financial position to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities, taking into consideration:<br>i. its investment and disposal plans; and<br>ii. its planned sources of funding to implement its strategy. | Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | | How the issuer expects its financial performance and cash flows to change over the short, medium and long term, given its strategy to manage climate-related risks and opportunities. | Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | Climate Resilience | the issuer's assessment of its climate resilience as at the reporting date, which shall enable an understanding of:<br>i. the implications, if any, of the issuer's assessment for its strategy and business model, including how the issuer would need to respond to the effects identified in the climate-related scenario analysis;<br>ii. the significant areas of uncertainty considered in the issuer's assessment of its climate resilience; and<br>iii. the issuer's capacity to adjust, or adapt its strategy and business model to climate change over the short, medium or long term. | Scope of Analysis, Scenarios, and Time Dimensions,<br>Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |
| | | how and when the climate-related scenario analysis was carried out, including:<br>i. information about the inputs used, including:<br>(1) which climate-related scenarios the issuer used for the analysis and the sources of such scenarios;<br>(2) whether the analysis included a diverse range of climate-related scenarios;<br>(3) whether the climate-related scenarios used for the analysis are associated with climate-related transition risks or climate-related physical risks;<br>(4) whether the issuer used, among its scenarios, a climate-related scenario aligned with the latest international agreement on climate change;<br>(5) why the issuer decided that its chosen climate-related scenarios are relevant to assessing its resilience to climate-related changes, developments or uncertainties;<br>(6) time horizons the issuer used in the analysis; and<br>(7) what scope of operations the issuer used in the analysis (for example, the operation, locations and business units used in the analysis)<br>ii. the key assumptions the issuer made in the analysis; and<br>iii. the reporting period in which the climate-related scenario analysis was carried out | Scope of Analysis, Scenarios, and Time Dimensions,<br>Physical Risks,<br>Transition Risks and Opportunities,<br>Financial Impact Assessment |

| Level | | Content | Chapter Location |
|---|---|---|---|
| Risk Management | / | The processes and related policies it uses to identify, assess, prioritize and monitor climate-related risks, including information about:<br>i. the inputs and parameters the issuer uses (for example, information about data sources and the scope of operations covered in the processes);<br>ii. whether and how the issuer uses climate-related scenario analysis to inform its identification of climate-related risks;<br>iii. how the issuer assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the issuer considers qualitative factors, quantitative thresholds or other criteria);<br>iv. whether and how the issuer prioritizes climate-related risks relative to other types of risks;<br>v. how the issuer monitors climate-related risks; and<br>vi. whether and how the issuer has changed the processes it uses compared with the previous reporting period. | Climate Risk Management |
| | | The processes the issuer uses to identify, assess, prioritize and monitor climate related opportunities (including information about whether and how the issuer uses climate-related scenario analysis to inform its identification of climate-related opportunities) | Climate Risk Management |
| | | The extent to which, and how, the processes for identifying, assessing, prioritizing and monitoring climate-related risks and opportunities are integrated into and inform the issuer's overall risk management process | Climate Risk Management |
| Metrics and Targets | Greenhouse Gas Emission | An issuer shall disclose its absolute gross greenhouse gas emissions generated during the reporting period, expressed as metric tons of $CO_2$ equivalent, classified as:<br>(a) Scope 1 greenhouse gas emissions;<br>(b) Scope 2 greenhouse gas emissions; and<br>(c) Scope 3 greenhouse gas emissions | Metrics and Targets |
| | | Measure its greenhouse gas emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless required by a jurisdictional authority or another exchange on which the issuer is listed to use a different method for measuring greenhouse gas emissions. | Metrics and Targets |
| | | Disclose the approach it uses to measure its greenhouse gas emissions including:<br>i. the measurement approach, inputs and assumptions the issuer uses to measure its greenhouse gas emissions;<br>ii. the reason why the issuer has chosen the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions; and<br>iii. any changes the issuer made to the measurement approach, inputs and assumptions during the reporting period and the reasons for those changes; | Metrics and Targets |
| | | For Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 28(b), disclose its location-based Scope 2 greenhouse gas emissions, and provide information about any contractual instruments that is necessary to enable an understanding of the issuer's Scope 2 greenhouse gas emissions; and | Metrics and Targets |
| | | For Scope 3 greenhouse gas emissions disclosed in accordance with paragraph 28(c), disclose the categories included within the issuer's measure of Scope 3 greenhouse gas emissions, in accordance with the Scope 3 categories described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011). | Metrics and Targets |

| Level | | Content | Chapter Location |
|---|---|---|---|
| Metrics and Targets | Climate Related Transition Risk[8] | An issuer shall disclose the amount and percentage of assets or business activities vulnerable to climate-related transition risks. | / |
| | Climate Related Physical Risk[9] | An issuer shall disclose the amount and percentage of assets or business activities vulnerable to climate-related physical risks. | / |
| | Climate Related Opportunity | An issuer shall disclose the amount and percentage of assets or business activities aligned with climate-related opportunities. | Financial Impact Assessment |
| | Capital Deployment | An issuer shall disclose the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities. | Financial Impact Assessment |
| | Internal Carbon Pricing[10] | An explanation of whether and how the issuer is applying a carbon price in decision making (for example, investment decisions, transfer pricing, and scenario analysis); and | / |
| | | The price of each metric tonne of greenhouse gas emissions the issuer uses to assess the costs of its greenhouse gas emissions; | / |
| | Remuneration | An issuer shall disclose whether and how climate-related considerations are factored into remuneration policy, or an appropriate negative statement. This may form part of the disclosure under paragraph 19(a)(iv). | Remuneration Incentive |
| | Industry-based Metrics | An issuer is encouraged to disclose industry-based metrics that are associated with one or more particular business models, activities or other common features that characterize participation in an industry. | Metrics and Targets |
| | Climate Related Targets | An issuer shall disclose (a) the qualitative and quantitative climate-related targets the issuer has set to monitor progress towards achieving its strategic goals; and (b) any targets the issuer is required to meet by law or regulation, including any greenhouse gas emissions targets. For each target, the issuer shall disclose:<br>(a) the metric used to set the target;<br>(b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives);<br>(c) the part of the issuer to which the target applies (for example, whether the target applies to the issuer in its entirety or only a part of the issuer, such as a specific business unit or geographic region);<br>(d) the period over which the target applies;<br>(e) the base period from which progress is measured;<br>(f) milestones or interim targets (if any);<br>(g) if the target is quantitative, whether the target is an absolute target or an intensity target; and<br>(h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target. | Metrics and Targets |
| | | An issuer shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target, including:<br>(a) whether the target and the methodology for setting the target has been validated by a third party;<br>(b) the issuer's processes for reviewing the target;<br>(c) the metrics used to monitor progress towards reaching the target; and<br>(d) any revisions to the target and an explanation for those revisions. | Metrics and Targets |

[8] The Company currently does not have statistics on the amount and percentage of assets or business activities that are vulnerable to climate-related transition risks.

[9] The Company currently does not have statistics on the amount and percentage of assets or business activities that are vulnerable to climate-related physical risks.

[10] The Company has not yet implemented an internal carbon pricing mechanism, primarily because the reduction of emissions is progressing well through the establishment and breakdown of emission reduction targets, and the setting of an internal carbon pricing mechanism is not a necessary step currently.

| Level | | Content | Chapter Location |
|---|---|---|---|
| Metrics and Targets | Climate Related Targets | An issuer shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the issuer's performance. | Metrics and Targets |
| | | For each greenhouse gas emissions target disclosed in accordance with paragraphs 37 to 39, an issuer shall disclose:<br>(a) which greenhouse gases are covered by the target;<br>(b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target;<br>(c) whether the target is a gross greenhouse gas emissions target or a net greenhouse gas emissions target. If the issuer discloses a net greenhouse gas emissions target, the issuer is also required to separately disclose its associated gross greenhouse gas emissions target;<br>(d) whether the target was derived using a sectoral decarbonization approach; and<br>(e) the issuer's planned use of carbon credits to offset greenhouse gas emissions to achieve any net greenhouse gas emissions target. In explaining its planned use of carbon credits, the issuer shall disclose:<br>(i) the extent to which, and how, achieving any net greenhouse gas emissions target relies on the use of carbon credits;<br>(ii) which third-party scheme(s) will verify or certify the carbon credits;<br>(iii) the type of carbon credit, including whether the underlying offset will be nature-based or based on technological carbon removals, and whether the underlying offset is achieved through carbon reduction or removal; and<br>(iv) any other factors necessary to enable an understanding of the credibility and integrity of the carbon credits the issuer plans to use (for example, assumptions regarding the permanence of the carbon offset). | Metrics and Targets |
| | Applicability of Cross-industry Metrics and Industry-based Metrics | In preparing disclosures to meet the requirements in paragraphs 21 to 26 and 37 to 38, an issuer shall refer to and consider the applicability of cross-industry metrics (see paragraphs 28 to 35) and (ii) industry-based metrics (see paragraph 36). | Metrics and Targets |

Utilize limited lithium resources to create
a green, clean and healthy life for
human development and progress

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