



Ardenmagni

Ardemagni
DITH
China Steel Corporation

We take care

from the **steelmaking**
to the **final application** of our **products**,
the most **advanced technologies**
maximising **efficiency**

Our Commitment for the Environment

Ardemagni and its Shareholders, CSC and DITH, take care through the whole production cycle and beyond, from steelmaking to the final applications of the product.

How we do this?

1

New technologies

Developing new technologies to improve our steel so that the motors in the final product are more efficient and consume less energy (short term goal)

2

New materials

Developing new materials like wind power related materials and top-grade electrical sheets, in order to expand our business into eco-friendly downstream industries (mid-term goal)

3

Low-carbon transition

Engaging in low-carbon transition in collaboration with industry chains in order to reduce the carbon footprint of our products (mid-term goal)

4

Renewable energy

Developing a diverse range of renewable energy in relation to low-carbon transition (mid-term goal)

5

Engagement and development

Engaging in energy conservation and carbon reduction, developing carbon rights and participating in the carbon market (mid-term goal)

6

Climate resilience

Strengthening climate resilience to increase competitiveness as countries respond to climate change (mid-term goal)



Ardemagni's Carbon Footprint

According to GHG protocol Ardemagni had his emissions measured by ClimatePartner, a leading solution provider for corporate climate action.

Thus, in addition to calculating our carbon footprint we want to set reduction targets and implement CO₂ reductions.

Scope 1

0,0%

direct emissions

CO₂ tons direct emissions from a company's owned or controlled sources

Scope 2

0,1%

indirect emissions

CO₂ tons indirect emissions from purchased or acquired energy

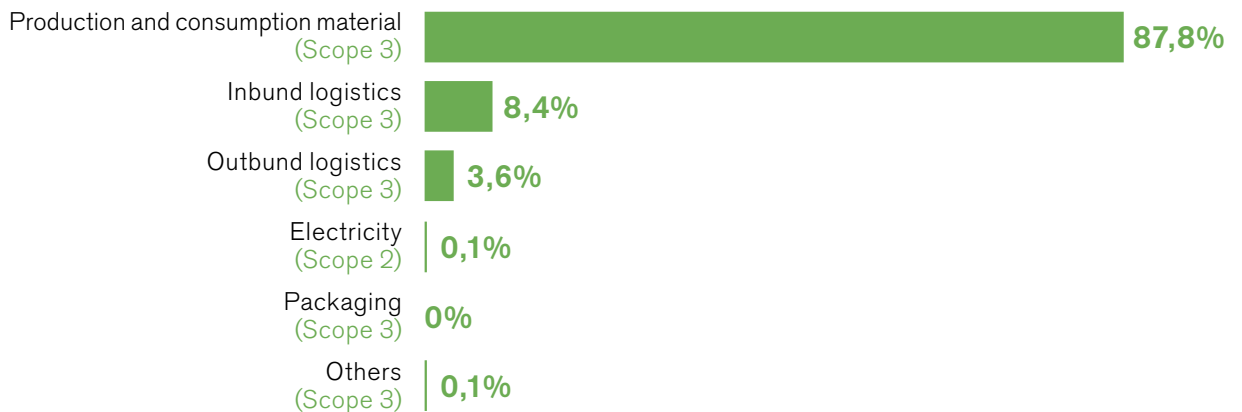
Scope 3

99,9%

indirect value chain emissions

CO₂ tons indirect emissions that occur in the company's value chain

Ardemagni's main emission sources





Starting in 2024 Ardemagni will have **a rooftop photovoltaic system**, that will produce 1.086 kWh energy (+73% more than what is consumed by the plant): in this way Ardemagni saves 1.384 barrels of oil (203 tons of oil/year) and reduces the polluting emissions (-63% = 489 tons/year CO₂ = annual CO₂ absorption of 40.000 trees).

In this way, we will achieve two goals: to bring Scope 1+2 almost to 0% and to produce e distribute green energy.

CO₂ reduction strategies in Cina Steel Corporation

In terms of CO₂ emissions, the product manufacturing processes operated by Ardemagni have a negligible impact compared to the production of the magnetic steel supplied by the steel mill.

Therefore, the environmental policy of our shareholder CSC is crucial for evaluating Ardemagni's real carbon footprint. In this regard, we are proud to be able to illustrate CSC's environmental policies, which are perfectly aligned with international standards for certifications and targets.

Policy and Commitment

In 2021, CSC set short-, medium- and long-term carbon emission reduction targets, with the long-term goal of achieving carbon neutrality by 2050.

CSC has preliminarily formulated a set of strategies and mapped out its path towards carbon neutrality, hoping to realise a sustainable society by guiding Taiwanese companies with its actions and helping the government achieve the goal of carbon neutrality.

Therefore, CSC enhances its value by continuing to reduce its greenhouse gas emissions and addresses risks and opportunities in the low-carbon transition path.

To pursue these goals CSC has long implemented various sustainable development policies, submitting its data to national and international monitoring bodies.

CSC was recognised by the World Steel Association (worldsteel) as **Steel Sustainability Champion 2024**

CSC participated in the **Carbon Disclosure Project (CDP) Climate Change Questionnaire in 2023** and was given **A-** (Leadership level) in the "Climate Change" module.

Since 2020 CSC provides information based on the **Task Force on Climate-related Financial Disclosures (TCFD)** framework, so that stakeholders can fully understand the efforts made by CSC in formulating controls and countermeasures to address climate change. This concept is also disseminated to CSC managers and employees at all levels.

Furthermore, in response to net zero emissions, CSC established the **Task Force on Energy Saving & Carbon Reduction and Carbon Neutrality** in February 2021, for which the Chairman of the Board of Directors is responsible. The Task Force meets once a quarter and periodically reports its progress to the Board of Directors. In particular, it formulates and promotes carbon reduction initiatives in six areas:

1 Improving energy efficiency

2 Injection of hydrogen-rich gas into blast furnaces

3 Increased use of steel scrap

4 Carbon capture, utilization and storage (CCUS) through co-production between steel and petrochemical plants

5 Use of Hot Briquetted Iron (HBI)

6 Renewable energy production and utilization

Co-production between steel and petrochemical plants involves the integration of resources from the two sectors. While raw material costs in the petrochemical industry can be reduced through this joint effort, this model helps to significantly reduce carbon emissions and expand the scope of CSC's district energy resources, demonstrating the practice of circular economy and progressing toward zero carbon emissions.



Low Carbon Transition Plan

CSC has set short-, medium- and long-term carbon reduction targets. With the long-term goal of achieving carbon neutrality by 2050, CSC has preliminarily formulated a number of strategies and charted its path towards carbon neutrality.

In the short term, we mainly plan to increase the use of renewable energy and step up efforts to improve energy efficiency.

Concerning the medium- and long-term pathway to carbon neutrality, CSC will achieve the goal of reducing carbon emissions in 2030 by 25% compared to 2018 through 'the application of reduced iron to the BF', 'the injection of hydrogen-rich gas into the BF', 'co-production between steel and petrochemical plants' and 'increased use of scrap'.

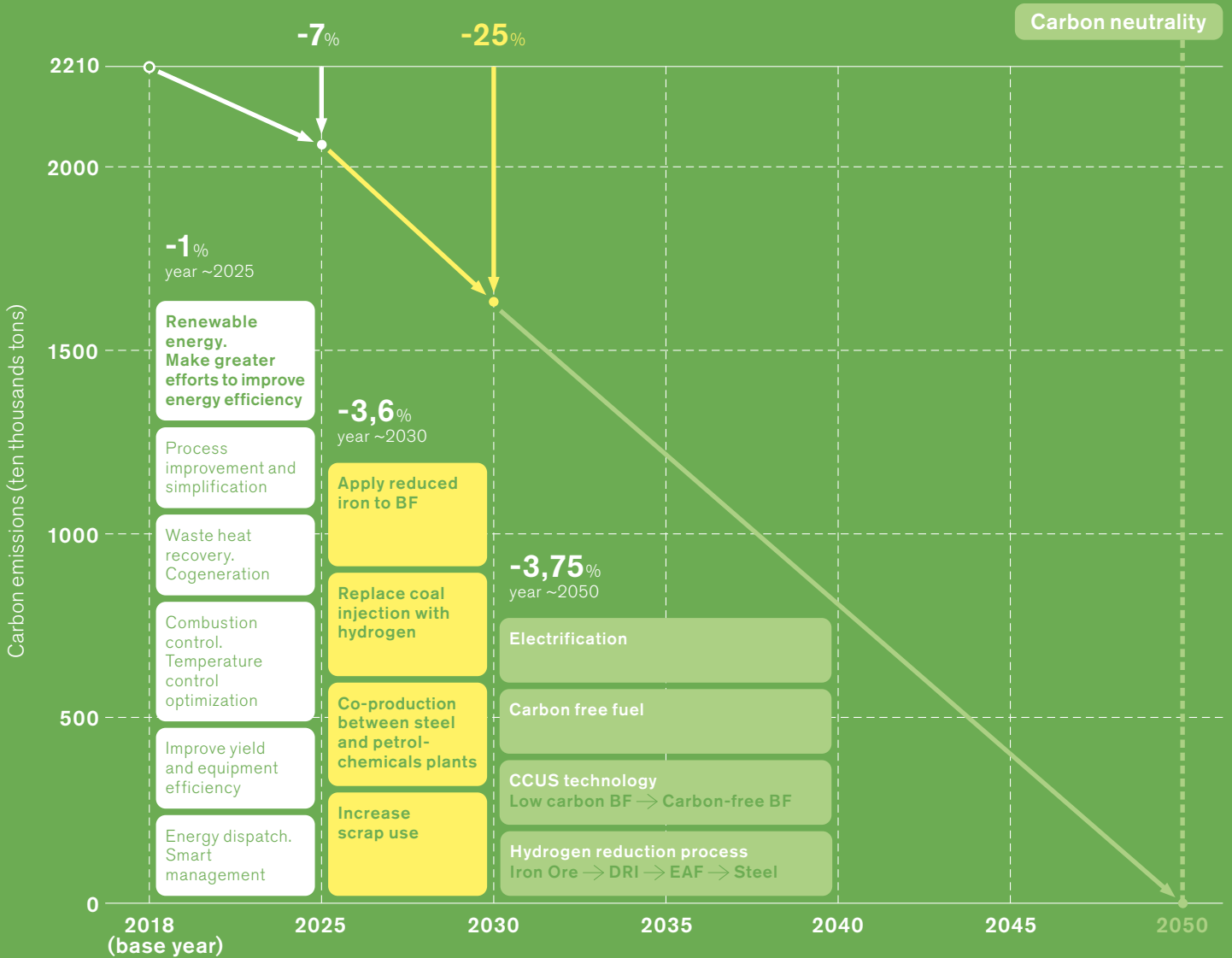
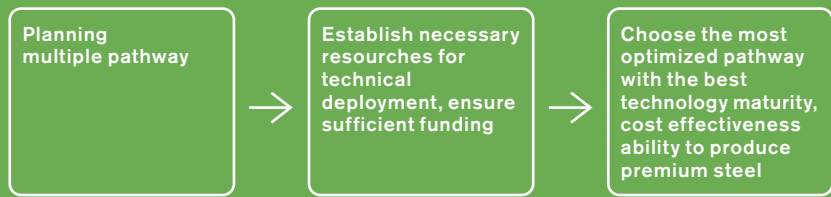
Finally, there are 4 pathways to net zero emissions after 2030, namely: electrification, carbon-free fuels, CCS and full hydrogen fusion, with carbon reduction tasks in 10 aspects.

CSC will achieve its carbon neutral target by 2050, demonstrating its commitment to environmental protection and sustainable development.



China Steel Corporation's carbon capture and storage facility

CSC Path Planning for Carbon Reduction and Carbon Neutral



Action Plan

Product carbon footprint inventory

In order to improve its own carbon management and respond to the EU's carbon border adjustment mechanism, CSC not only compiled the carbon footprint inventory of 23 major product categories, and passed external verification by BSI (British Standards Institution) but also established the **Product Carbon Emission Intensity Actuarial System** under the structure and data of the existing system framework. CSC is able to calculate the carbon emission of each process, each product, each steel coil, and each purchase order based on the process path of each product, raw materials and fuel input, product output, and the corresponding carbon emission factor.

In addition, since **CBAM** (EU Carbon Border Adjustment Mechanism) declarations are according to CN (Combined Nomenclature) code, CSC follows the CBAM guidelines when calculating the weighted average of each product according to their weight using the system described above. The process overview, average composition, and carbon emissions of product categories that need to be reported for each CN code are then calculated.

At the same time, in response to the new carbon tariffs and trend of net-zero emissions, CSC continues to compile its **GHG inventory** and carry out verification, identify emission hot spots, and actively implement carbon reduction projects to reduce carbon emissions.

CSC assist customers in compiling their inventory and carrying out carbon reduction work, and actively developing high-performance green steel products that can help users reduce carbon emissions, including high-strength steel for automotives, high-energy-efficiency electrical sheets, and process-saving steels. CSC is located at the most upstream of the industry chain and will take the lead in the low carbonization of steel. By providing low-carbon steel to customers, customers can continue to produce low-carbon end products and jointly improve the low carbon competitiveness of the overall industry chain.

Carbon credits management and GHG offset project

CSC has formulated the "Carbon Trading and Management Regulations" in accordance with EPA's rules and regulations as well as international practices, with the relevant operations incorporated into ISO 14001 Environmental Management Systems. Meanwhile, applications for GHG offset credits are submitted by the Environmental Protection Department at CSC to the competent authority.

At the end of 2023, CSC has 4.5021 million tonnes of CO₂ eq. in GHG offset credit balance.

Pathway to Carbon Neutrality and Carbon Reduction Strategy Planning

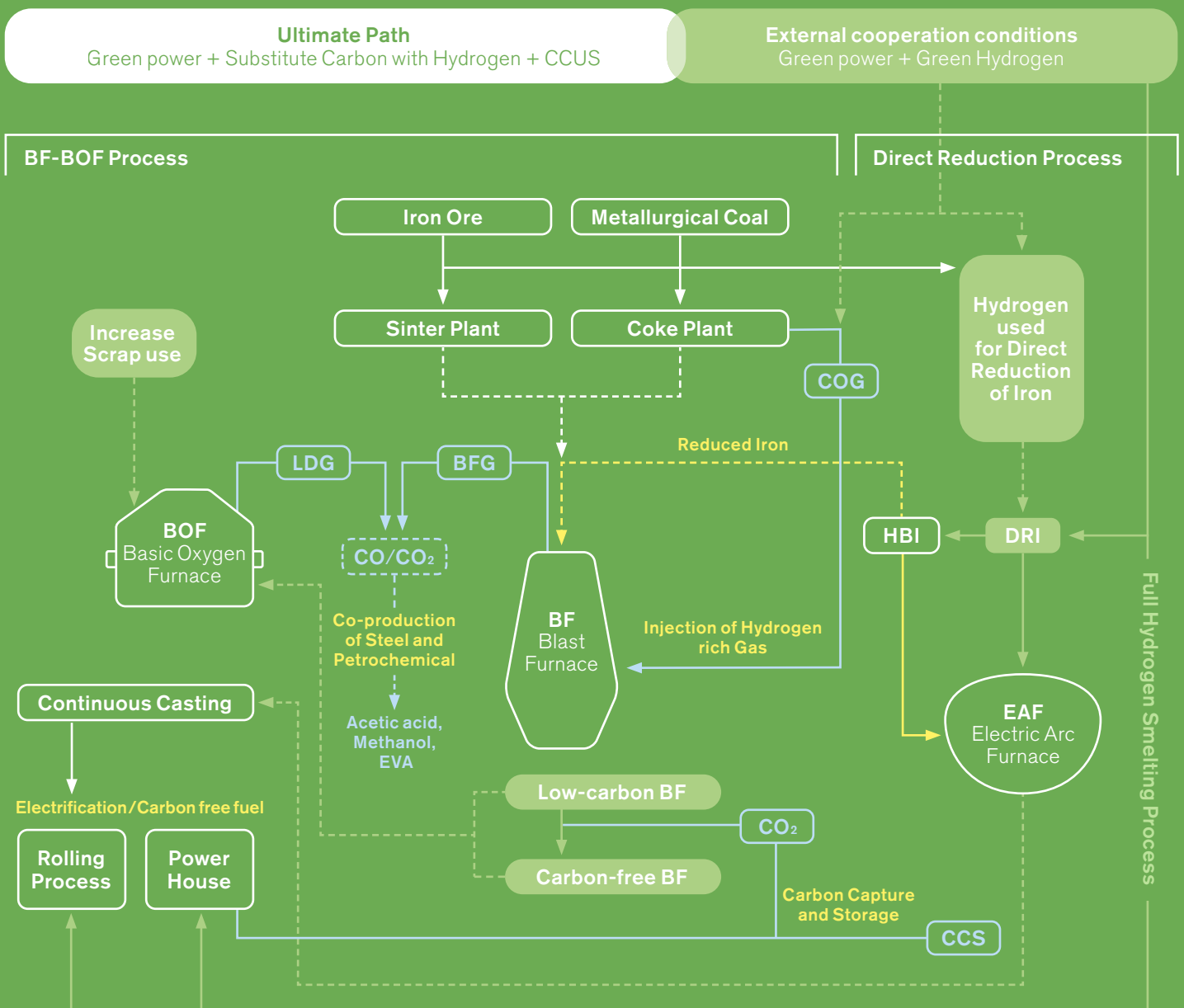
CSC has also developed a two-step pathway to ensure the achievement of carbon neutrality.

However, CSC currently encounters a number of challenges in some of its strategies, such as the lack of mature technologies and hydrogen resources, and the need to renew equipment. Therefore, CSC will face challenges in three areas - technology, resources and cost - that are similar to those of other mills around the world.

For this reason, CSC will actively engage in research and development operations, reviewing and adjusting the progress of each strategy on an ongoing basis.

Innovative Green Process:

Mid to Long term Two Stage Carbon Neutral Path Planning



Product environmental footprint – life Cycle assessment (LCA)

High-functional steel materials upgrade the properties of steel materials and are able to enhance carbon reduction benefits in the industry chain and the life cycle of steel products application-wise.

Therefore, CSC has been striving to develop production techniques for high-functional steel materials. Having a long-standing cooperation with the Industrial Technology Research Institute of Taiwan (ITRI), CSC rigorously applies the “Life Cycle Assessment” method to quantify carbon reduction benefits generated from high-functional steel materials.

Premium electrical steel can significantly increase the efficiency of electricity consumption in motors:
Carbon Reduction Benefit per tonne of Advanced Electrical Steel:
4.33 tonnes CO₂/tonne steel



Ardemagni



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STRENGTH BEYOND BORDERS



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