

## Report Summary: Corporate Pollution and Carbon Reduction Index Evaluation for Listed A-share Iron and Steel Companies 2022

China is the world's top iron and steel producer. According to the statistics published by the World Steel Association in 2022, China's crude steel production exceeds 1 billion tons in 2021, accounting for about 53% of the global total production<sup>1</sup>. As the end demand in China has long been dominated by common steel, and the rapid urbanization and industrialization following the reform and opening up have led to a limited amount of steel scrap; consequently, the conventional BF-BOF route is still prevailing in China's iron and steel industry. On the one hand, this so-called "long process" of iron and steelmaking emits large amounts of atmospheric pollutants and greenhouse gases; more importantly, some enterprises within the industry have historically been slack in environmental management, making the iron and steel industry a long-standing major emitter of pollutant and waste.

Over the past eight years, with the implementation of the *Action Plan on Air Pollution Prevention and Control* and the enactment of 'the strictest ever' environmental protection law, China's iron and steel industry has seen a continuous improvement in emission standards, environmental compliance and a significant reduction in the intensity of atmospheric pollutant emissions. Despite this, recent data released by the China Metallurgical Industry Planning and Research Institute shows that the iron and steel industry still accounts for 12.1%, 16.4%, and 22.3% of the national industrial emissions of particulate matter, sulfur dioxide, and nitrogen oxides<sup>2</sup>. According to the *China Steel Industry Energy Conservation and Low Carbon Development Report (2020)* released by the Metallurgical Industry Energy Conservation Committee of the China Energy Conservation Association and the China Metallurgical Industry Planning and Research Institute<sup>3</sup>, the iron and steel industry accounts for 11% of China's energy consumption and 15% of China's total carbon emissions, making it the second largest carbon emitter after the power industry.

As China announced the 'dual carbon' target, eco-environmental protection in the 14th Five-Year Plan period has entered a new historical stage where carbon reduction comes as a priority. As the iron and steel industry is one of the key sectors in terms of atmospheric pollutants and carbon dioxide emissions, in the 14th and 15th Five-Year Plan periods, the key to high-quality development in the iron and steel industry should be to achieve the reduction of pollution and carbon emissions and green-oriented transition through coordinated control.

Accordingly, the Ministry of Ecology and Environment, the Ministry of Industry and Information Technology, the National Development and Reform Commission and other seven

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<sup>1</sup> <https://worldsteel.org/steel-topics/statistics/> (The URL links for this report summary were last accessed on September 27<sup>th</sup> 2022)

<sup>2</sup> [https://mp.weixin.qq.com/s/vfadLR4v0IDpuduu9\\_T4iQ](https://mp.weixin.qq.com/s/vfadLR4v0IDpuduu9_T4iQ)

<sup>3</sup> [http://www.mpi1972.com/xwzx/yndt/202012/t20201224\\_94730.html](http://www.mpi1972.com/xwzx/yndt/202012/t20201224_94730.html)

ministries and commissions jointly issued the *Implementation plan for Coordinated Control of Pollution and Carbon Emissions Reduction* in June 2022<sup>4</sup>, which clearly requires “promoting air-pollution treatment, energy conservation and carbon reduction in key industries, driving ultra-low emission transformation in steel, cement, coking chemical industry and boilers, exploring the pilot project for coordinated control of air pollutants and greenhouse gas emissions, transformation, and upgrading”; the plan also specifically refers to the goal of increasing the proportion of the so-called “short-process” steelmaking with electric furnaces to more than 15 % and 20 % by 2025 and 2030 respectively.

In addition to domestic policy constraints, the EU’s Carbon Border Adjustment Mechanism (CBAM) and the U.S. Clean Competition Act (CCA) have, to varying degrees, raised the “carbon barrier” for iron and steel products. This calls for China’s iron and steel industry, especially the listed companies, to actively explore the coordinated control of pollution and carbon emission, starting from a stable operation and pollutant emission compliance, improving greenhouse gas emission accounting and management capabilities, actively setting emission reduction targets, exploring efficient emission reduction methods, and achieving green-oriented transition through technological upgrading and diversified financing to adapt to changes in domestic policies and international market circumstances.

To guide enterprises in the iron and steel industry, especially listed companies in actively responding to new policies listed above and accelerating their green-oriented transition, the Institute of Public and Environmental Affairs (IPE) developed the Corporate Pollution and Carbon Reduction Index. The Index employed the Dynamic Environmental Performance Assessment (DEPA) which is based on IPE’s own research and database, and the Corporate Climate Action Transparency Index (CATI) developed under the technical guidance of the Chinese Research Academy of Environmental Sciences. The Index also took the “Corporate Environment and Climate Index (CECI)” funded by the SEE Foundation Zhujiang Branch, and the methodology for evaluating the environmental performance of Chinese listed companies jointly developed with The Paper as a reference.

In conducting the evaluation, IPE turned to Lvse Jiangnan Public Environment Concerned Centre (PECC, hereinafter referred to as Lvse Jiangnan), who has worked with partner organizations in recent years in conducting on-site investigation into key industries, including some of the listed companies in the iron and steel industry or their major subsidiaries and other affiliated companies that are covered in this evaluation. Based on the Corporate Pollution and Carbon Reduction Index and Lvse Jiangnan’s investigation, IPE and Lvse Jiangnan jointly evaluated 30 A-share listed companies in terms of their environmental performance, climate action and stakeholder communication. The evaluation is primarily based on the listed companies’ publicly disclosed annual reports, ESG reports, sustainability reports and other regular reports, information released through public channels such as official websites, and

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<sup>4</sup> [https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202206/t20220617\\_985879.html](https://www.mee.gov.cn/xxgk2018/xxgk/xxgk03/202206/t20220617_985879.html)

data released by credible sources and collected by IPE's Blue Map database. The evaluation also took into account the findings of on-site investigation conducted by Lvse Jiangnan and other environmental organizations.

In the evaluation, we see that with the Blue Sky Protection Campaign and the nationwide battle to prevent and control pollution, a number of listed iron and steel companies has improved their overall environmental performance significantly. In spite of this, the emissions-intensive industry still has much room for improvement in terms of ultra-low emission transformation and whole-process pollution prevention. At the same time, as the largest carbon-emitting industry in the manufacturing sector, listed iron and steel enterprises have started to plan for 'dual carbon' action, but the emission reduction approach for the whole industry is yet to be clarified, and the polarization is relatively obvious: leading enterprises, represented by Baosteel, have set GHG emission reduction and carbon neutrality targets for the entire value chains, exploring multiple ways to reduce emissions. However, most companies have yet to set GHG reduction targets and track their progress based on GHG emissions accounting. Moreover, they need to explore coordinated approaches of pollution and carbon reduction, including increasing the proportion of short-process steelmaking, improving energy efficiency, and substituting raw (fuel) materials.

We hope that this evaluation will not only objectively reflect the performance of the participating listed companies in eco-environmental protection and climate action, including their progress in synergizing the reduction of pollution and carbon emissions, but also help listed iron and steel companies identify their gaps and best practices, and provide a reference for investors and transition financing. We also hope that the evaluation will help multiple stakeholders form a consensus on the roadmap for green transformation and low-carbon development in the iron and steel industry, motivate companies to improve their governance and management mechanisms, clarify their emission through accounting, set scientific emissions reduction targets, efficiently carry out energy conservation and emission reduction measures, and build trust with stakeholders through public disclosure.

To promote coordinated control of pollution and carbon reduction, effectively integrate development, conservation and climate goals, and contribute to the Blue Sky Protection Campaign, 'dual carbon' action and global climate governance, we call for:

- Companies in the iron and steel industry, especially listed companies to:
  - Stable emission of pollutants, continuously improve environmental compliance, carry out environmental information disclosure in accordance with the laws and regulations, and build trust with stakeholders;
  - Carry out credible monitoring, reporting and verification (MRV) and carbon data disclosure; set scientific reduction, carbon peaking and carbon neutrality targets, and continuously track the progress of the targets;
  - On the basis of continuously promoting ultra-low emission transformation, synergize GHG and pollutant emission reduction by increasing the proportion of

- electric furnace steelmaking, improving energy efficiency and substituting raw (fuel) materials; and simultaneously enhance R&D efforts, capital investment and large-scale promotion of breakthrough technologies such as non-blast furnace ironmaking, hydrogen metallurgy and negative carbon technology;
- Drive upstream and downstream partners across the value chain to accelerate low-carbon transformation;
  - Policy makers and regulators:
    - Vigorously optimize the recycling channels of steel scrap, improve the recycling rate, and simultaneously increase the proportion of electric furnace steelmaking;
    - Further urge the elimination of backward production facilities, optimize and upgrade the industrial structure, and promote the high-quality development of the iron and steel industry;
    - Coordinate the green and low-carbon development of various industries and reduce unjustified steel consumption demand;
    - Complete the framework and standards for environmental information and carbon data disclosure for listed companies in China and facilitate their implementation;
  - Investors:
    - Focus on the performance of listed steel companies in terms of pollution and carbon reduction.
    - Incentivize companies to carry out environmental information and carbon disclosure through green investment and transition financing.
    - Enhance the research of transition finance of the iron and steel industry, develop investment and financing solutions, and develop diversified financing mechanisms and instruments to support the green-oriented transition of the steel industry.

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