2025 Climate Performance Assessment of China Steel Corporation

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Key Takeaways

Despite increasing climate disclosures, China Steel Corporation (CSC) remains heavily reliant on carbon-intensive infrastructure, with limited investment in transformative decarbonization technologies. As carbon costs surge and global standards tighten, CSC faces mounting financial and transition risks. Accelerated action, clearer capital alignment, and a credible 1.5°C-aligned roadmap are urgently needed to maintain competitiveness and investor confidence.

1. Introduction: The Strategic Imperative of Climate Performance

China Steel Corporation (CSC), Taiwan's second-largest industrial carbon emitter, is at the center of the nation's carbon neutrality efforts. With the 2024 implementation of a carbon fee system under the Climate Change Response Act, CSC faces growing financial risk. In 2024 alone, its emissions would have incurred over NT$5.6 billion in carbon fees—exceeding its pre-tax earnings. As carbon pricing is set to rise, based on CSC's current reduction targets, its carbon fee burden could soar to over NT$10 billion annually by 2030. This looming cost threatens profitability and highlights the urgent need for effective emission reductions. Meanwhile, global investors and financial institutions are tightening climate risk evaluations, requiring clear decarbonization plans from high-emitting firms. In the steel industry, emerging net-zero technologies and shifting global standards are accelerating structural change. Evaluating CSC's climate performance is thus vital for assessing its financial resilience, investment appeal, and long-term competitiveness. This report draws on international frameworks and CSC's own disclosures to assess its progress and provide recommendations for a credible net-zero transition.

2. Tracking CSC's Climate Disclosure and Progress of Implementation

Despite signaling intent to explore low-carbon technologies, China Steel Corporation (CSC) remains heavily reliant on its existing blast furnace system, with insufficient investment in breakthrough decarbonization solutions. Its current

flagship decarbonization projects focus primarily on marginal improvements, such as adding low-carbon materials like hot briquetted iron (HBI), but recent disclosures show limited follow-up plans beyond small-scale testing. While some short-term reductions were demonstrated—1.5 tons of CO_2e reduced per ton of HBI added—there are no direct reduction technology plans in 2024.

Major R&D investments have focused on carbon capture and utilization (CCUS) and hydrogen-enriched blast furnace injection, totaling over NT$300 million in recent years. However, these technologies offer only limited emissions cuts—CCUS is expected to reduce emissions by just 15% by 2040, and hydrogen injection provides lower carbon reduction efficiency compared to DRI (Direct Reduced Iron) pathways. Without shifting toward H_2-DRI or NG-DRI technologies, CSC risks falling short of its 2030 and 2050 climate goals.

Furthermore, recent blast furnaces relining, and coke ovens upgrade may lock in carbon-intensive infrastructure for decades. With typical lifespans of 15 years for blast furnaces and up to 20 years for coke ovens, CSC risks creating stranded assets—undermining both its own decarbonization roadmap and Taiwan's national climate targets.

3. Climate Performance Benchmarking Results

TPI Assessment of CSC: Carbon Management Progress Amid Insufficient Capital Alignment

In TPI's 2024 assessment, China Steel Corporation reached Management Quality Level 5, indicating progress in recognizing climate risks and partially aligning decarbonization goals with actions. However, CSC still lacks clarity in capital allocation for its transition strategy. While some companies like ArcelorMittal and POSCO also achieved Level 5, most—including CSC—failed to commit to phasing out carbon-intensive assets or to aligning future capital expenditures with long-term decarbonization targets. On the carbon performance front, TPI's sectoral decarbonization analysis shows CSC's short- and mid-term intensity targets fall significantly short of pathways consistent with 1.5°C, below 2°C, or national

pledges. These findings suggest that while CSC has made governance strides, its overall carbon performance remains misaligned with global climate objectives.

For more details, visit Transition Pathway Initiative.

Climate Action 100+ on CSC: Capital Disclosure Progress, but Misalignment Persists

Compared to peers like Thyssenkrupp, Nippon Steel, and POSCO, CSC performed relatively well in disclosing short-term targets (up to 2027), while mid-term targets (2028–2035), decarbonization strategies, and climate governance disclosures were on par with industry averages. However, CSC was still rated insufficient in "Climate Policy Engagement" and "Just Transition." According to the Rocky Mountain Institute (RMI), CSC remained 15–36% above the carbon intensity target, indicating substantial gaps between its current decarbonization pathway and the Paris Agreement. Despite progress in transparency, CSC's climate actions still fail to meet the ambition needed for global climate alignment.

For more details, visit Climate Action 100+.

4. Call to Action: Driving Accelerated Change

For Investors and Shareholders

1. **Enhance Climate Accountability:** Require companies to disclose capital expenditure breakdowns, clearly distinguishing the proportion allocated to high-carbon versus low-carbon projects. Demand a detailed transition roadmap aligned with the 1.5°C trajectory, including phase-out timelines for high-carbon assets. For low-carbon investment disclosures, request specific implementation schedules and expected mitigation outcomes for technologies such as hydrogen and CCUS.
2. **Integrate Climate Performance into Financial Decision-Making:** Incorporate climate performance metrics into investment screening, lending decisions, and post-financing supervision to assess the viability of decarbonization

plans and low-carbon business development. Investors should require companies to disclose internal financial strategies for climate risk management, such as the adoption of internal carbon pricing.

3. **Strengthen Climate Engagement Strategies:** Propose shareholder resolutions aimed at enhancing corporate climate performance and disclosure, ensuring stronger commitments to transition goals. Where necessary, adopt active engagement to recommend adjustments to corporate transition plans.

For China Steel Corporation Management

1. **Develop a 1.5°C-Aligned Transition Pathway:** CSC should establish phased carbon reduction targets in line with the 1.5°C scenario. This includes setting clear timelines for the phase-out or conversion of high-carbon assets, particularly existing blast furnaces.
2. **Reallocate Capital to Accelerate Low-Carbon Investment:** CSC must commit to allocating a significant share of capital expenditures toward low-carbon technologies and clean energy by 2030. Disclosure practices should be aligned early with emerging international standards, such as those issued by the ISSB.
3. **Ensure a Just Transition and Strengthen Social Dialogue:** CSC should conduct comprehensive impact assessments on workers, supply chains, and communities resulting from transition measures. Given the central role of labor in CSC’ s operations, the company should establish mechanisms for employee re-skilling, job transition support, community engagement, and compensation frameworks to mitigate resistance and maintain social trust.

For Government Authorities

1. **Ministry of Economic Affairs:** On the production side, the Ministry should monitor the impact of revisions to the *Statute for Industrial Innovation* on corporate R&D and investment in low-carbon technologies. If outcomes fall short of expectations, more ambitious policy instruments—such as Germany' s *Carbon Contracts for Difference (CCfD)*—should be considered to incentivize private capital investment and enhance access to financing for net-zero technology deployment. On the demand side, the Ministry should collaborate with the Public Construction Commission, National Land Management Agency, and the Ministry of Environment to establish clear standards for low-carbon steel (and cement), drawing on international green procurement initiatives such as the *Industrial Deep Decarbonization Initiative (IDDI)*. A detailed implementation timeline, enforcement mechanisms, and oversight framework should be promptly announced to provide market certainty.
2. **Ministry of Environment :** CSC should be required to incorporate Just Transition planning into their emission reduction strategies. This includes ensuring that employees are well-informed and granted meaningful participation rights throughout the transition process.
3. **Financial Supervisory Commission :** Continue to update the *Sustainable Economic Activity Recognition Guidelines* and strengthen the *Suggested Components for Transition Plans* by tightening technical screening standards and developing sector-specific assessment indicators for the iron and steel industry. The Commission should also equip financial institutions with tools to evaluate the quality and credibility of corporate transition plans, thereby supporting more effective green and transition finance decision-making.