

# QUICK TAKE: TRANSITION ASIA RESPONDS TO NIPPON STEEL'S ELECTRIC ARC FURNACE INVESTMENT ANNOUNCEMENT

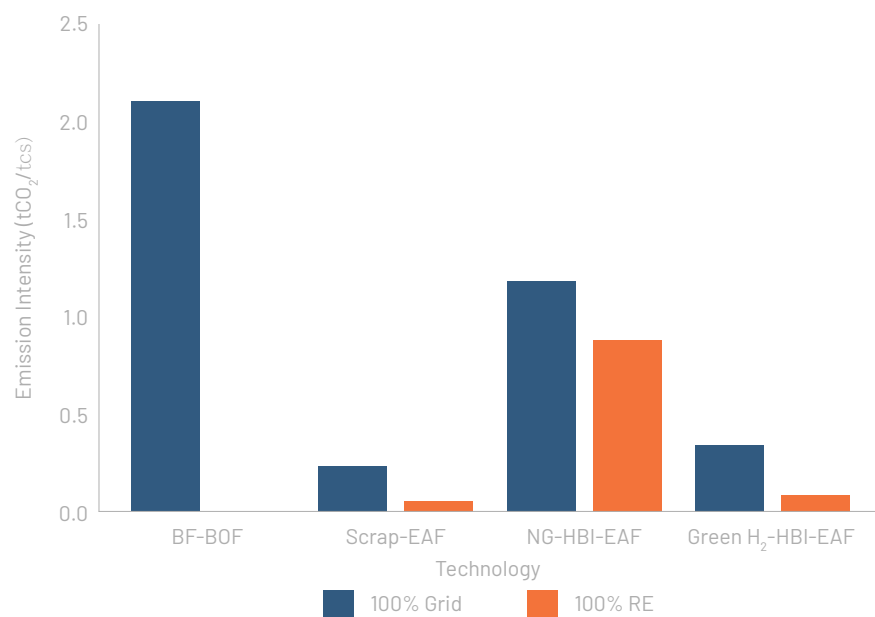
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Transition Asia welcomes [Nippon Steel's announcement on 30 May 2025](#) to invest JPY 868.7 billion (USD 6.08 billion) in expanding its electric arc furnace (EAF) capacity in Japan. The investment includes:

- Construction of a new EAF at Kyushu Works (Yawata Area) with a production capacity of 2 million tonnes per year
- Installation of an additional EAF at Setouchi Works (Hirohata Area), expanding capacity by 0.5 million tonnes per year
- Modification and restart of an EAF at Yamaguchi Works (Shunan) with a capacity of 0.4 million tonnes per year

According to our research, EAF-based steel production emits significantly less carbon than conventional blast furnace methods—and emissions can be reduced even further if the furnaces are powered by 100% renewable electricity (See below figure). However, additional disclosure is needed to determine the announcement's emissions reduction impact — particularly the energy sources powering these furnaces and the proportion of scrap and/or HBI (hot briquetted iron) they will use, which will have vast implications on the emission reduction impact. The carbon intensity of EAF operations varies significantly depending on whether they run on:

*Figure. Carbon Intensity per tonne by Technology*



Source: TA Analysis

We look forward to Nippon Steel outlining plans for renewable energy procurement and increased low-carbon inputs to fully realise the positive potential impact of these investments.

Lastly, Nippon Steel states in its press release that the clear catalyst for these investments was the Japanese government's generous subsidy under the "2025-2029 Energy and Manufacturing Process Transformation Support Business (Business I (Steel))", which will provide JPY 251.4 billion (USD 1.76 billion) in support. The importance of supportive government policies to provide incentives to BF-based steelmakers, in addition to EAF-based steelmakers cannot be stressed enough. Incentives must be provided for both the conversion and decommissioning of BF steelmaking assets, in addition to the expansion of existing EAF facilities.

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Founded in 2021, Transition Asia is a non-profit think tank dedicated to accelerating decarbonisation in Asia's materials and heavy industries to achieve the 1.5°C climate goal. Our multidisciplinary team combines diverse perspectives, experience and expertise, underpinned by a strong research foundation in Asia and a nuanced understanding of the region. Using analytical models and in-depth assessments, we evaluate and monitor corporations' decarbonisation efforts and actions. By engaging with stakeholders across sectors—including corporates, investors, policymakers and civil society organisations—we facilitate informed and impactful discussions that drive sustainable, low-carbon transitions aligned with a 1.5°C future.

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