



InfluenceMap

The Japanese and South Korean Steel Sectors & Climate Policy

How the East Asian Steelmakers perform on climate policy engagement

April 2022

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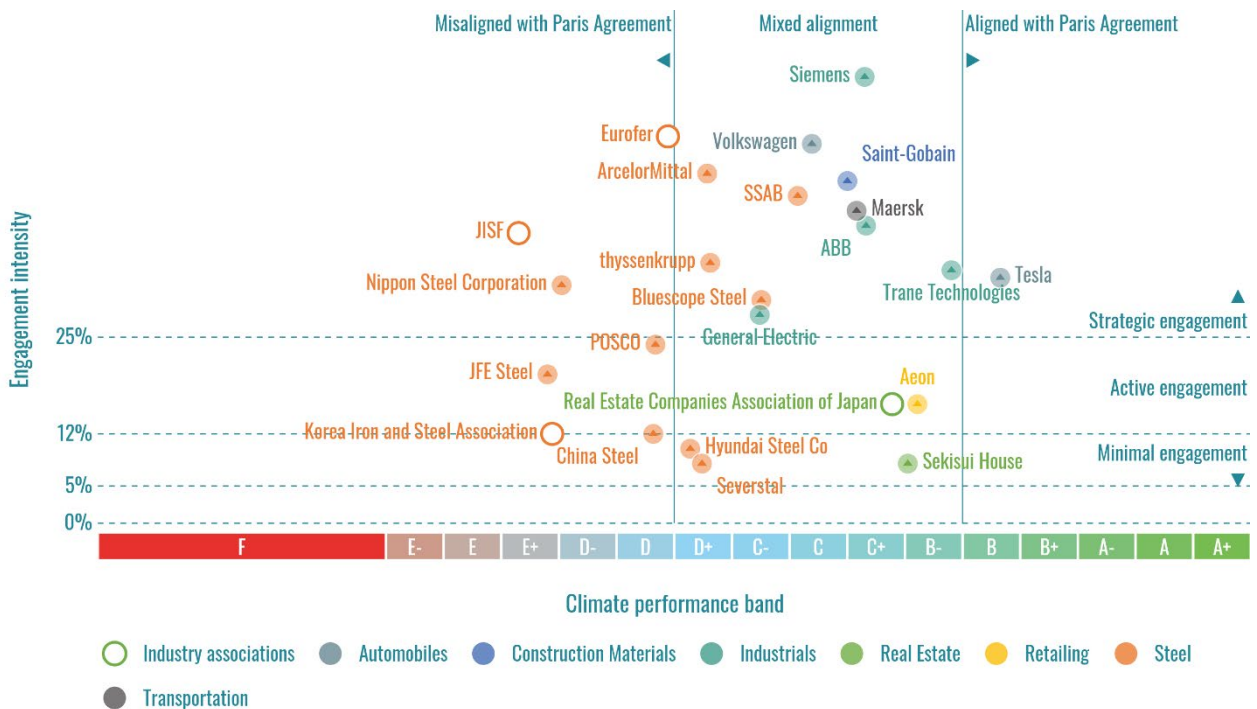
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Executive Summary

- This report analyzes the climate policy engagement of the Japanese and South Korean steel sectors. The analysis covers two of the largest steel companies from each country - Nippon Steel and JFE Steel from Japan, POSCO and Hyundai Steel from South Korea - and their key industry groups - the Japan Iron and Steel Federation (JISF) and the Korea Iron and Steel Association (KOSA).
- InfluenceMap research finds that Japanese and Korean companies and industry associations demonstrate the most obstructive climate policy engagement out of the global CA100+ steel companies and their industry associations. Among all the global steel entities assessed in this report, the Japan Iron and Steel Federation takes the most negative positions on climate policy.
- The analysis also finds that many companies in the steel value chain, including construction materials, real estate, and automotive companies, demonstrate more positive climate policy engagement than their steel sector suppliers (see Image 1 below). This suggests that the Japanese and Korean steel sectors' climate policy positions are increasingly misaligned with that of their current and potential customers globally. As requirements for reporting on and reducing Scope 3 (value chain) emissions proliferate, key sectors in the steel value chain such as real estate, construction, transport, and machinery are expected to increasingly track their Scope 3 emissions and attempt to drive decarbonization through the steel value chain. Accordingly, companies that resist progressive climate policy may lose competitiveness in a highly globalized and price-sensitive industry.

Image 1: Global Steel Sector and Steel Value Chain - Climate Policy Engagement



Findings

- This report contains data from InfluenceMap's online platform which tracks, assesses, and scores over 350 companies and 150 industry associations on their engagement with climate change policy against Paris-aligned benchmarks.
- **Japan:** InfluenceMap analysis against Paris Agreement benchmarks indicates that Nippon Steel and JFE Steel promote the same negative positions towards various strands of climate and energy policy in Japan, both directly and indirectly through industry associations. The steel sector opposes the introduction of carbon taxes and an emissions trading scheme (ETS) currently under consideration by the government of Japan. Nippon Steel takes a negative position on the energy mix, emphasizing the technical and financial challenges of a shift to renewables, while supporting nuclear energy and fossil fuel thermal power. Nippon Steel scores a D- and JFE Steel and JISF scores an E+ on InfluenceMap's system, indicating strong misalignment with the goals of the Paris Agreement.
- **South Korea:** InfluenceMap analysis indicates that the steel companies in South Korea also take similar positions in opposing meaningful climate policy in the country. POSCO scores a D and Hyundai Steel a D+ on InfluenceMap's system. While both companies have relatively positive top-line messaging on the need for climate action, they demonstrate more negative engagement with specific climate policy issues such as the Korea Emissions Trading Scheme (K-ETS), the European Union's Carbon Border Adjustment Mechanism (EU CBAM), and carbon tax. The Korea Iron and Steel Association (KOSA) shows highly negative engagement with all these policies, and also directly opposed raised ambition for South Korea's 2030 Nationally Determined Contribution (NDC) GHG emissions reduction target. This raises concern that Korean steel companies may be channeling their most negative climate policy engagements via their industry associations.

Conclusions

- **Shareholders concerned with the climate performance of these companies should be concerned by their opposition to government measures on climate change, given the primary role of government policies in driving an urgent climate transition.** The negative climate policy engagement by the steel sector in Japan and South Korea likely indicates a lack of commitment by senior management in steel companies to drive a Paris-aligned transition throughout the organization. These negative views are channeled into policies through various avenues, such as strong links to powerful industry associations and membership in government committees.

- **Investors should engage closely with the companies and industry associations noted in this report to understand whether such negative climate policy engagement is consistent with the national 2050 climate targets and top-line messaging from the same organizations.** Leading Korean steelmakers POSCO and Hyundai Steel have both supported the South Korean government's 2050 carbon neutrality target, while KOSA released a '2050 Carbon Neutrality Joint Declaration' with sign-on from all its member companies, stating commitment to the decarbonization of the steel sector; yet they continue to oppose meaningful climate regulation. And although JISF stated support for the Japanese government's 2050 carbon neutrality commitment, Nippon Steel and JFE Steel have questioned Japan's official 2050 carbon neutrality targets and have continuously opposed various policies needed to achieve those goals.

The Global Steel Sector and Climate Change

A. Background

Investor expectations, formalized by investor-representative groups such as the *PRI*, *IIGCC*, and *Ceres*, require companies to adopt Paris-aligned climate lobbying positions, and to implement enhanced governance and disclosure processes to ensure industry associations' alignment to these positions. The *Global Standard on Responsible Climate Lobbying*, launched in March 2022, builds on these expectations and provides a framework for assessing direct and indirect corporate lobbying against the 1.5°C goal of the Paris Agreement. Investor groups AIGCC, IIGCC, Ceres, and IGCC also released the *Investor Expectations of Steel Companies* in 2018, which lays out expected standards for the steel sector, including expectations for lobbying on climate policy by the company and its industry associations.

Engagement with companies over their climate policy advocacy is an integral part of the *Climate Action 100+* (CA100+) investor initiative, which now has over 617 investor signatories with a total of \$65 trillion in assets under management. As a research partner to CA100+, InfluenceMap maintains a global system for tracking, assessing, and scoring companies on their engagement with climate change against Paris-aligned benchmarks, currently covering around 350 companies along with 150 of their key industry associations.

InfluenceMap refers to the UN's *Guide for Responsible Corporate Engagement in Climate Policy* as a guide for what constitutes engagement. This can include advertising, social media, public relations, sponsoring research, direct contact with regulators and elected officials, funding of campaigns and political parties, and participation in policy advisory committees. A detailed description of InfluenceMap's scoring methodology can be found in *Appendix B* of this document, and on our website [here](#).

B. Climate Policy Engagement by the Steel Sector

Global Steel Companies

Table 1 below shows how Japanese and Korean steel sector companies' corporate climate policy engagement compares to other global steel companies assessed in InfluenceMap's database as part of the CA100+ investor engagement process. Details of our metrics can be found on our [website](#). The online profiles of companies can be viewed by clicking on their name in the table.

Table 1: Comparison of global steel companies' climate policy engagement

Company	Headquarter Region	Performance Band	Organization Score	Relationship Score	Engagement Intensity
SSAB	Europe	C	67%	49%	43%
BlueScope Steel	Oceania	C-	62%	51%	30%
ArcelorMittal	Europe	D+	57%	48%	46%
Thyssenkrupp	Europe	D+	54%	52%	34%
Severstal	Europe	D+	51%	61%	8%
Global Sector Average	-	D+	51%	50%	26%
Hyundai Steel	Asia	D+	54%	45%	9%
China Steel	Asia	D	47%	61%	11%
POSCO	Asia	D	52%	42%	23%
Nippon Steel	Asia	D-	35%	46%	32%
JFE Steel	Asia	E+	35%	44%	20%

- Japanese and South Korean steel sector companies rank in the bottom three worst performing companies among the global steel companies that are part of the CA100+ investor engagement process.

- **Japan:** Nippon Steel and JFE Steel rank extremely negatively on their direct engagement, as evidenced by their lowest score among the global steel sector (Table 1). The two companies take highly negative positions on Japanese policy, such as carbon pricing (carbon tax and emissions trading scheme (ETS)) and emissions reductions under NDCs. Nippon Steel has also opposed significant transition of the energy mix under the Basic Energy Plan. The higher Relationship Score indicates that they are members of industry associations which take more positive positions than these companies. In Japan, Nippon Steel and JFE Steel are members of cross-sectoral groups whose scores have recently improved, partially due to more positive top-line messaging on 2050 carbon neutrality since the target's announced in October 2020. The low score for JISF (Table 2) below indicates that the Japanese steel sector remains highly oppositional within Japanese cross-sector groups.

- **South Korea:** POSCO and Hyundai Steel have Organization Scores around the sector average, but below-average Relationship Scores, indicating the negative positioning of their industry associations compared to the companies' direct policy engagements. Both companies have engaged negatively with the EU CBAM, while POSCO has engaged with policymakers to weaken the K-ETS. The overall ranking of both companies is lowered by poor performance in Relationship Scores, due to their prominent role in industry associations with highly negative engagement on climate policy, such as KOSA and the Korea Chamber of Commerce and Industry (see Table 2 below).

- **Europe and Australia:** Steel companies in Europe and Australia currently lead the sector globally on climate policy engagement. Nevertheless, with the highest grade being a C by SSAB, Table 1 indicates that the climate policy engagement of all steel companies globally is misaligned with achieving the goals of the Paris Agreement. European and Australian steel companies appear to be engaging increasingly positively on GHG emissions targets and energy transition, but continue to engage negatively on emissions trading scheme policies and carbon taxes.

SSAB is close to establishing a position as a sector leader on climate policy engagement, distinguishing itself in its support for the transition of the energy mix in relation to steel production, for example by *strongly supporting* only fossil fuel-free hydrogen production and infrastructure in the EU. However, the company has engaged with *mixed positions* on the EU ETS and appears to support the European Carbon Border Adjustment mechanism (EU CBAM) with *major exceptions*. ArcelorMittal, Europe's biggest steel company, has also lobbied to weaken the ambition of the EU ETS. In November 2021 both ArcelorMittal and thyssenkrupp *opposed* most of the proposed reforms to the EU ETS under the EU Fit-for-55 package. Thyssenkrupp has also opposed the EU CBAM and in a November 2021 EU consultation response, the company *advocated for* exemptions for the steel industry from the policy. BlueScope Steel has *advocated for* increased green hydrogen and renewable energy production in Australia, but *appeared to advocate for* the free allocation of emissions allowances in the New Zealand Emissions Trading Scheme in its 2021 Sustainability Report, which would lower the ambition of the policy.

Steel Industry Associations

Table 2 below shows how Japanese and Korean steel sector industry associations' climate policy engagement compares to other regions' steel sector associations assessed in InfluenceMap's database.

Table 2: Comparison of steel sector industry associations' policy engagement

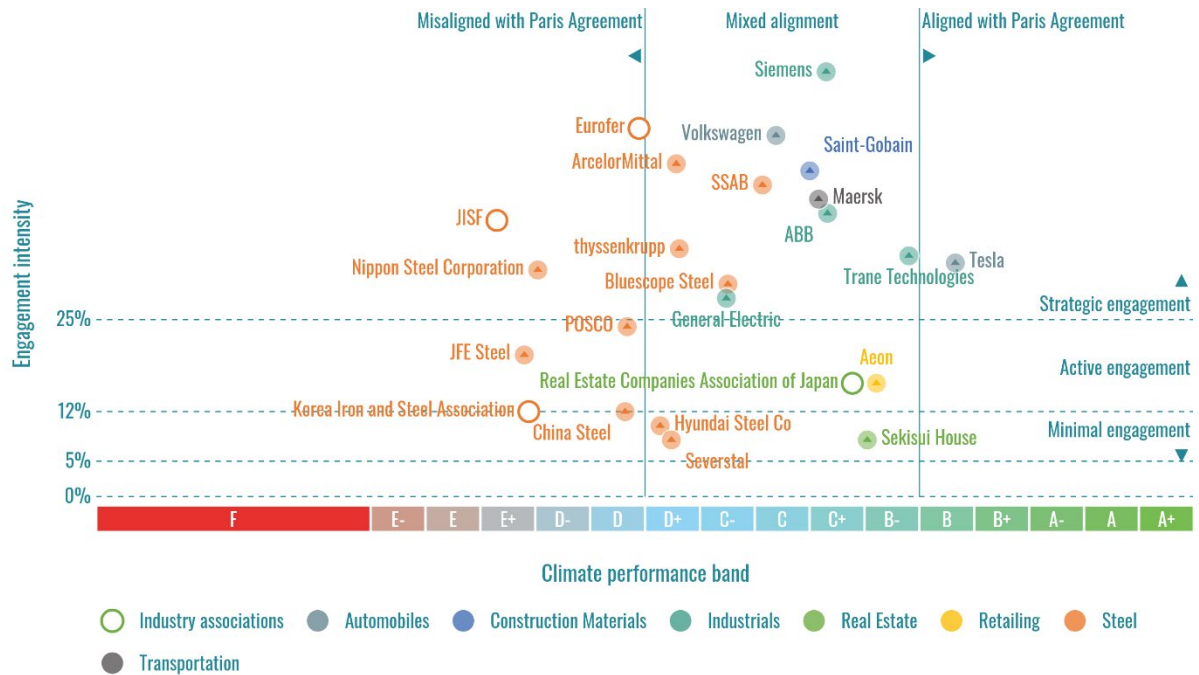
Industry Associations	Performance band	Organization Score	Engagement Intensity
<i>World Steel Association (worldsteel)</i>	C	62%	17%
<i>Eurofer (European Steel Association)</i>	D	49%	51%
<i>America Iron and Steel Institute (AISI)</i>	D	45%	20%
<i>Korea Iron and Steel Association (KOSA)</i>	E+	40%	12%
<i>Japan Iron and Steel Federation (JISF)</i>	E+	37%	39%

- KOSA and JISF rank in the bottom two most negative industry associations compared to other global steel industry associations. JISF displays highly strategic negative engagement, due to its active role in several Japanese government committees, such as carbon pricing (tax and ETS included), energy mix under the Basic Energy Plan, and emissions reductions under NDCs. KOSA has more limited but still highly negative engagement with climate policy, and it has targeted its engagement to influence particular policies such as the updated 2030 NDC GHG emissions reduction target, K-ETS reforms, and the introduction of the EU CBAM.
- KOSA and JISF's negative advocacy regarding emissions trading schemes and the EU CBAM appears to be aligned with other global steel industry associations' positions on these policies. In particular, Eurofer (the European Steel Association) takes highly negative stances on the EU ETS and EU CBAM. The association has *opposed* reforms to the EU ETS to strengthen mechanisms to increase emissions reductions from ETS sectors. It also has *opposed* the reduction of the free allocation of emissions allowances, suggesting that this should continue at the current level alongside a CBAM until at least 2030, a position which is misaligned with the EU Commission.
- The World Steel Association does not engage on specific regional policies, and therefore its score is relatively high due to its positive top-level messaging around decarbonization of the steel industry, compared to country-based industry associations that have engaged negatively with specific climate regulations in their jurisdiction.

Steel Value Chain

Requirements for reporting on and reducing Scope 3 emissions are becoming increasingly stringent, including the March 2022 proposal by the US Securities and Exchange Commission (SEC) to require public companies to disclose Scope 3 emissions¹. As a supplier of raw materials for industry, the global steel sector is highly exposed to the decarbonization demands of other sectors. The *OECD notes* that construction, transport and machinery combined make up 70% of steel demand globally.

Image 1: Global Steel Sector and Steel Value Chain - Climate Policy Engagement Landscape



- The global steel sector's climate policy engagement is more negative than many of its current and potential customers in the steel value chain. Of the steel companies assessed, Japanese and Korean companies appear to be most misaligned with steel sector customers, raising concerns that they are not adequately prepared to meet the Scope 3 decarbonization demands of the steel supply chain.
- In Korea, over 35% of steel is made for export to global customers, and POSCO is the world's largest seller of automotive steel sheets, supplying raw materials to fifteen global automakers including Volkswagen, Ford, and Daimler, all of which have strict supplier sustainability frameworks.² Image 1 shows that POSCO demonstrates significantly more negative climate policy engagement than its major customers in the automotive industry.

¹ The US SEC requires Scope 3 reporting if material or if the company has an emissions target that includes Scope 3 emissions.

² *The South Korean Steel Industry and Carbon Neutrality, Solutions for Our Climate, 2021.*

- In Japan, an increasing number of general contractors, real estate developers and owners have set Scope 3 emission targets through the SBT certification system. The Real Estate Companies Association of Japan (RECAJ)'s sectoral plan to achieve carbon neutrality by 2050 aims to reduce emissions from the entire supply chain, including construction materials such as cement and steel. Image 1 above illustrates that RECAJ, Sekisui House (a residential developer) and Aeon (major retailer & real estate owner) have more positive positions on climate policies than steel suppliers.

C. Japan and Korea Steel Sector Climate Policy Engagement Trends

The following section provides an overview of climate policy engagement trends by the steel sectors in Japan and Korea. Detailed country analysis is available in the *Japan Country Section* and *Korea Country Section* of this briefing. Table 3 below shows a comparison of the climate policy positions of steel sector entities in Japan and South Korea.

Table 3: Climate policy positions of the steel sector in Japan and South Korea

Company/ Industry Association	InfluenceMap Score (A - F)	2050 Carbon Neutrality Target	2030 GHG Emissions Reduction Target	Carbon Tax (inc. EU CBAM)	Emissions Trading Scheme (ETS)	Decarbonizing the steel sector	Power Generation Mix
NIPPON STEEL	D-	Mixed Engagement	Negative Engagement	Negative Engagement	Negative Engagement	Mixed Engagement	Negative Engagement
JFE	E+	Negative Engagement	Negative Engagement	Negative Engagement	Negative Engagement	Mixed Engagement	Mixed Engagement
一般社団法人 日本鉄鋼連盟 The Japan Iron and Steel Federation	E+	Negative Engagement	Negative Engagement	Negative Engagement	Negative Engagement	Mixed Engagement	Negative Engagement
POSCO	D	Positive Engagement	Undisclosed Engagement	Negative Engagement	Negative Engagement	Mixed Engagement	Mixed Engagement
HYUNDAI STEEL	D+	Positive Engagement	Mixed Engagement	Negative Engagement	Mixed Engagement	Mixed Engagement	Mixed Engagement
한국철강협회 Korea Iron & Steel Association	E+	Mixed Engagement	Negative Engagement	Negative Engagement	Negative Engagement	Mixed Engagement	Undisclosed Engagement

KEY

■ NEGATIVE ENGAGEMENT
 ■ MIXED ENGAGEMENT
 ■ POSITIVE ENGAGEMENT
 ■ UNDISCLOSED ENGAGEMENT

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Summary: Key policy engagement trends

- **The steel sectors in Japan and Korea appear to use similar narratives when opposing ambitious climate policy:** The steel sectors in both countries frequently refer to high cost thresholds for innovation and new technology required for decarbonizing the steel sector, as a reason for delaying and opposing regulation. Concerns regarding impacts on international competitiveness and steel production levels are cited by both KOSA and JISF to oppose the EU CBAM and higher NDC GHG emissions reduction targets in both countries.

- **Japanese steel companies' direct and indirect engagements are highly misaligned with achieving the goals of the Paris Agreement:** Nippon Steel, JFE Steel and JISF are similarly opposed to Japan's the 2030 GHG emissions reduction target and domestic carbon pricing policies as shown in Table 3. While both Nippon Steel and JFE Steel have questioned 2050 carbon neutrality, Nippon Steel has also made more statements explicitly supporting the target, contributing to a mixed position compared to the negative position of JFE Steel in Table 3. Nippon Steel and JISF have also actively opposed the decarbonization of the power generation mix compared to JFE Steel, citing concerns over costs and reliability of renewables to advocate for a mix of renewables, nuclear power, and fossil fuels in the energy mix. The Japanese sector shows mixed support decarbonizing the steel sector, supporting government investment and R&D of new technologies, while being unclear on the role of regulations.
- **South Korean steel companies' direct and indirect engagement are at odds with their support for 2050 carbon neutrality targets:** Despite active and positive top-line messaging on the urgent need for climate action, as shown in Table 3, POSCO and Hyundai Steel demonstrate highly negative engagement with key climate policies such as K-ETS and the EU CBAM. Meanwhile, KOSA demonstrates more negative policy positions on each issue area than each of its direct members. POSCO Chairman Choi Jeong-woo is the Chair of KOSA, while Hyundai Steel's CEO is the Part-time Vice President of KOSA.
- **The role of industry associations appears to differ by country:** Nippon Steel and JFE Steel work closely with JISF to present a consistently negative narrative as a sector when lobbying on diverse aspects of Japanese climate policy. By contrast, POSCO and Hyundai Steel take more positive high-level positions than KOSA on long-term policy issues, such as supporting South Korea's 2050 carbon neutrality target and decarbonization of the steel sector. However, their negative engagement with specific short-term policies such as the K-ETS and EU CBAM is more closely aligned with KOSA. This raises concern that the Korean steel companies may be channeling their most negative policy positions through KOSA, despite their positive top-line messaging on climate.
- **The Japanese steel sector is actively opposed to all forms of carbon pricing, while the Korean steel sector takes a negative but comparatively softer stance:** Japan's steel sector has engaged proactively to discredit the principle of carbon pricing, arguing that such measures will hinder innovation and prevent the transition of the steel industry. The South Korean steel sector, by contrast, is less vocally opposed to carbon pricing measures in principle but has negatively engaged with individual regulations such as the K-ETS and the EU CBAM, in an attempt to weaken their climate ambition.
- **The steel sector in Japan and Korea has directly engaged with domestic policymakers to oppose or gain exemption from the proposed EU CBAM:** In both countries, steelmakers emphasize concerns around impact on economic growth and domestic production levels, as well as concerns about trade relations, to oppose the proposed EU CBAM.

Climate Policy Engagement by the Steel Sectors: Japan

A. Background: Corporate climate policy engagement in Japan

Industrial policy in Japan (including energy and climate-motivated policy targeting industry such as vehicle emissions standards) is formulated by close cooperation between industry, the bureaucracy and the ruling political party (which has been the LDP for most of the post WWII-era) with relatively little input from non-governmental or civil society representatives³. Japan has an active energy policy based on “3E+S”, emphasizing Energy security, Economic efficiency and Environmental protection without compromising Safety. The Ministry of Economy Trade and Industry (METI) has the main remit on energy strategy and has traditionally worked closely with the powerful business federation Keidanren, which in turn is influenced strongly by Japan's energy intensive sectors (electric power, steel, cement, chemicals etc.)⁴.

In 2020-2021, Japan announced a carbon neutrality target by 2050 and set an interim 2030 target of 46-50% GHG emissions reduction compared with 2013 levels. The most recent 6th Basic Energy Plan, finalized in October 2021, saw the doubling of the share of renewables in power generation to 36-38% and decreasing the share of coal to 19% by 2030. The improved targets were likely implemented in response to a growing voice of Japanese businesses demanding greater climate policy ambition. For instance, the Japan Climate Leaders Partnership (JCLP), an industry coalition comprised of over 200 companies (as of March 2022), including blue-chip Japanese corporates Aeon, Ricoh, and Toda Corporation, advocated for *a greater than 50% GHG emissions reduction target by 2030*, and a share of *50% renewables by 2030*. The steel sector, on the other hand, has consistently advocated against ambitious 2030 GHG and renewable targets and has continued to criticize them after they were adopted by the government in 2021, as demonstrated in this report.

The Japanese government is expected to formulate the regulatory measures on carbon pricing in the summer of 2022 following consultations with expert panels at the METI and the Ministry of Environment (MoE). As an active participant in the consultations, the steel sector has strongly opposed regulatory measures such as a tax on carbon and emissions trading scheme, advocating instead for voluntary measures. The steel sector is also participating in various ministerial committees that will feed into the upcoming 2022 Clean Energy Strategy, likely to contain concrete policies to achieve targets from the Basic Energy Plan and the development of innovative technologies such as hydrogen and ammonia.

³ *Japan's energy policy formulation process, post-Fukushima nuclear accident*, Ritsumeikan University, Vol 67, issue 5.6, 2019.

⁴ *Basic framework of Japan's climate change policy network*, The Japanese association for Environmental Sociology, Keiichi Sato, 2014.

B. Analysis Results: Japanese steel sector engagement on climate policy

InfluenceMap analysis demonstrates that the Japanese steel industry appears to share the same negative positions on key climate and energy related policies. Table 4 below lists InfluenceMap’s metrics for Nippon Steel, JFE Steel and the Japan Iron and Steel Federation (JISF). JFE Steel and JISF score E+ and Nippon Steel scores D-, indicating highly obstructive climate policy engagement by all three entities.

Table 4: Overview of InfluenceMap’s assessment of climate policy engagement by Nippon Steel, JFE Steel and the Japan Iron and Steel Federation (JISF)

	JFE Steel	Nippon Steel	Japan Iron and Steel Federation (JISF)	
Performance Band	E+	D-	E+	Performance Band (A+ to F) is a full measure of an entity’s climate policy engagement, accounting for both its own engagement and that of its industry associations. A+ indicates full support for Paris-aligned climate policy, with grades from D to F indicating increasingly obstructive climate policy engagement.
Organization Score	35%	35%	37%	Organization Score (0 to 100) expresses how supportive or obstructive the entity is towards climate policy aligned with the Paris Agreement, with scores under 50 indicating “internal” misalignment between the Paris Agreement and the company’s detailed climate policy engagement.
Relationship Score	44%	46%	N/A	Relationship Score (0 to 100) expresses how supportive or obstructive the company’s industry associations are towards climate policy aligned with the Paris Agreement, with scores under 50 indicating “external” misalignment between the Paris Agreement and the detailed climate policy engagement of the company’s industry associations.
Engagement Intensity	20%	31%	39%	Engagement Intensity (0 to 100) is a measure of the level of policy engagement by the entity, with scores above 12 indicating active engagement, and scores above 25 indicating highly active or strategic engagement.

Nippon Steel

Nippon Steel’s low Organization Score indicates obstructive engagement on key climate policy strands, such as carbon tax and ETS, energy mix and national emissions reduction plans, further summarized in the next section. Nippon Steel’s high Engagement Intensity indicates that the company is strategic in its direct policy engagement, as shown in Table 4. Similar Organization Scores between Nippon Steel and JISF indicate that the two entities share very similar positions on climate policies, likely due to shared leadership and close involvement in JISF activities by Nippon Steel. Notably, Nippon Steel President, Eiji Hashimoto, is the Chairman of JISF and frequently makes remarks in a dual role in government committees and the media. Table 5 below introduces Nippon Steel representatives who participate in key government committees and their affiliations to industry associations.

Nippon Steel’s direct engagement is more negative than the positions taken by many of its industry associations, as evidenced in the higher Relationship Score. International association worldsteel and the cross-sector federation Keidanren perform better on their climate policy engagement than the Japanese steel sector. Keidanren remains negative on many strands of climate policy, but its overall score has recently improved, partially due to more positive top-level messaging on the 2050 carbon neutrality targets announced in October 2020, while the Japanese steel sector has remained largely negative. Key Industry Associations and their policy positions are summarized in [Appendix A](#). The full list of Nippon Steel’s industry association memberships can be viewed on its online profile [here](#).

Table 5: Nippon Steel’s Industry Associations and Participation in Government Committees

Representative	Affiliation (Company & Industry Group)	Government Committee (& key dates if applicable)	Committee Japanese name
Eiji Hashimoto	Nippon Steel President	METI Basic Policy Subcommittee (responsible for the Basic Energy Plan)	経済産業省 基本政策分科会
	Japan Iron and Steel Federation (JISF) Chairman Keidanren Vice Chairman	METI Industrial Structure Council Manufacturing Industry Subcommittee (February 2022)	産業構造審議会 製造産業分科会
Shuhei Onoyama	Nippon Steel Representative Director and Executive Vice President	METI Hydrogen/Fuel Cell Strategy Council (February 2021, March 2021)	経済産業省 水素・燃料電池戦略協議会
Akio Migita	Nippon Steel Representative Director and Executive Vice President Keidanren Global Environment Department, Environment and Safety Committee Chairman	MoE Central Environment Council Global Environment Subcommittee	環境省 中央環境審議会 地球環境部会
Kimiko Saito	Nippon Steel Advisor Nippon Steel Research Institute (NSRI) Senior Fellow	METI Carbon Recycling Technology Roadmap Study Group (April 2019, June 2019, June 2021)	経済産業省 カーボンリサイクル技術ロードマップ検討会

Kosei Shindo	Nippon Steel Chairman Keidanren Advisor	MLIT Social Infrastructure Development Council (Council Chair)	国土交通省 社会資本整備審議会
Seiji Nomura	Nippon Steel Fellow	METI Methanation Promotion Public-Private Council	経済産業省 メタネーション 推進官民協議会
Masaaki Izumiyama	Nippon Steel Environment Manager JISF Global Environment Committee Chair	METI Industrial Structure Council, Steel Working Group	経済産業省 産業構造審議会 産業技術環境分科会 地球環 境小委員会 鉄鋼ワーキング グループ

JFE Steel

JFE Steel's low Organization Score indicates obstructive engagement on key climate policy strands, such as carbon tax and ETS, and the national emissions reduction plans, further summarized in the next section. JFE Steel's Engagement Intensity suggests that the company has active direct policy engagement. InfluenceMap research (Table 4) indicates active indirect engagement through its industry groups such as the Japan Iron and Steel Federation (JISF). JFE is a member of various industry groups that are relatively more positive on climate policies than the company itself, demonstrated by its higher Relationship Score.

JFE Steel has appeared to take negative positions on decarbonizing the power sector, however with relatively less engagement in this area compared to Nippon Steel. JFE Steel's position on the energy transition appears to be more negative than the position taken by the parent holding company, JFE Holdings.

Similar to Nippon Steel above, JFE Steel shares a similar Organization Score with JISF, which indicates that the two entities share very similar positions on climate policies, likely due to shared leadership and close involvement in JISF activities. Table 6 below introduces JFE Steel representatives' memberships in industry associations and key government committees.

JFE Steel is also a member of Worldsteel and the cross-sector federation Keidanren, which perform better on their climate policy engagement than the Japanese steel sector. Key Industry Associations and their policy positions are summarized in [Appendix A](#). The full list of JFE Steel's industry association memberships can be viewed on its online profile [here](#).

Table 6: JFE Steel's Industry Associations and Participation in Government Committees

Representative	Affiliation (Company & Industry Group)	Government Committee (& key dates if applicable)	Committee Japanese name
Yoshihisa Kitano	JFE Steel President and Representative Director Japan Iron and Steel Federation (JISF) Vice Chairman, Representative Director	METI Industrial Structure Council, Trade and Commerce Subcommittee	経済産業省 産業構造審議 会 通商・貿易分科会

Hiroyuki Tezuka JFE Steel , Specialist Chief Supervisor (Global Environment) JISF , Energy Technology Committee, Chairman Keidanren , Environment and Safety Committee, International Environmental Strategy Working Group, Chair Task Force on Climate-related Financial Disclosures (TCFD) Consortium , Information Disclosure Working Group, Chair	MoE Subcommittee on Carbon Pricing	環境省 カーボンプライシングの活用に関する小委員会
	METI Study Group on Economic Methods to Achieve Carbon Neutrality (Carbon Pricing)	経済産業省 カーボンニュートラル実現のための経済的手法等のあり方に関する研究会
	METI Energy Conservation Subcommittee	経済産業省 省エネルギー小委員会
	METI Study Group on Finance for Environmental Innovation	経済産業省 環境イノベーションに向けたファイナンスのあり方研究会
	FSA Sustainable Finance Committee	金融庁 サステナブルファイナンス有識者会議
Hiroyuki Ogawa JFE Steel Vice President JISF Environmental Energy Policy Committee, Vice Chairman	METI-MoE joint committee on Global Warming Countermeasures (developing NDCs and the national Global Warming Countermeasures Plan)	経済産業省 環境省 地球温暖化対策検討ワーキンググループ 合同会合
Yoshiki Fujii JFE Steel , Special Supervisor (Environmental Disaster Prevention / Energy)	METI Methanation Promotion Public-Private Council	経済産業省 メタネーション推進官民協議会
Eiji Hayashida JFE Holdings , former President and CEO	METI SDGs Management / ESG Investment Study Group (2018 – 2019)	経済産業省 SDGs 経営/ESG 投資研究会

C. Japanese steel sector positions by policy strands

2050 Carbon Neutrality Target and Climate Science

Despite top-level support for the national 2050 carbon neutrality target and requests to the government for financial and technical support to achieve it, Nippon Steel, JFE Steel and JISF have frequently questioned the feasibility of the target after its announcement in October 2020. JISF has also made statements that appeared to question the climate science of the IPCC process.

- **Nippon Steel President and Japan Iron and Steel Federation (JISF) Chairman Eiji Hashimoto** *agreed* with carbon neutrality by 2050 as the ‘direction and vision that Japan should take’ and that it is ‘an extremely high goal that cannot be achieved with current technology alone’, calling for financial support in METI’s Basic Policy Subcommittee in November 2020.
- However, **Nippon Steel President and JISF Chairman** was *quoted* by Asahi Shimbun in January 2021 as saying that ‘there is no prospect’ of realizing Japan’s goal of zero GHG emissions by 2050. Furthermore, in

February 2021 Asahi Shimbun reported a **JISF executive** *stating* that ‘No one in the industry really thinks that we can achieve zero by 2050.’

- **JFE Steel and JISF executive** *raised concerns* that setting the 2050 carbon neutrality target ‘in a linear manner’ may hinder innovation in a METI-MoE Global Warming Countermeasures Working Group in December 2020. **Nippon Steel** also *called* on the government to set the 2050 carbon neutrality target ‘as a basic principle rather than a legal objective,’ citing concerns over ‘many uncertainties’ in the MoE Global Environment Subcommittee in January 2021.
- **JISF and JFE Steel** have appeared to question the science of the IPCC, *stating* that the Long-Term Strategy Under the Paris Agreement as a Growth Strategy ‘gives the impression that science equals the IPCC report’ in a METI-MoE Global Warming Countermeasures Working Group joint meeting in August 2021. Similarly, **JISF** *requested* that the strategy be revised to be ‘based on the science of Japan’ in an opinion statement published on JISF’s website in October 2021.
- Commenting on achieving 2050 carbon neutrality, **Nippon Steel President and JISF Chairman** *emphasized* concern over ‘greenflation,’ referring to cost increases due to accelerated investment towards decarbonization and declining fossil fuel production, in a statement on Keidanren’s website in January 2022.

Japan’s 2030 GHG emissions reduction target

Overall, Nippon Steel, JFE Steel and JISF have been unsupportive of Japan’s 2030 GHG emission reduction target, which was revised in April 2021 ahead of COP26. Citing concerns about the ‘back casting’ approach to setting the target, the sector has questioned its feasibility and called for greater flexibility and autonomy for the industry. JISF also frequently emphasizes the need for behavioral change and public understanding of the ‘burden’ of GHG emission reduction targets and decarbonization policies.

- **Nippon Steel** showed an *unclear position* on the 2030 NDC GHG emissions reduction target, by accepting it as the government’s intent to lead international efforts toward decarbonization, while stressing that further studies are needed to determine how it can be achieved in the MoE Global Environmental Subcommittee in April 2021. Yet later in May 2021, Nippon Steel President Hashimoto *appeared to question* the suitability of a uniform 46% target for all sectors, suggesting that it would be ‘irresponsible’ to adopt it in his company, as reported by Nikkei.
- **JFE Steel and JISF Executive** *appeared to criticize* the government’s ‘top-down’ approach in setting ‘ambitious’ 2030 target, preferring voluntary targets set by industry through ‘accumulation’ based on the best-available technology (BAT), in a METI-MoE Global Warming Countermeasures Working Group in August 2021. He emphasized difficulties ‘for individual industry groups and companies to respond practically if they are asked to harmonize their goals with those of the nation.’

- In a **JISF** statement on the draft Plan for Global Warming Countermeasures submitted to the Japanese government in October 2021, the association *argued* that the feasibility of the ‘extremely ambitious’ medium-term target of 46% emissions reduction by FY2030 was not sufficiently verified, and that the plan should be made flexible so that it could be changed or, in some cases, targets could be revised ‘downward.’ Similarly, another opinion statement submitted to the Japanese government in the same month *appeared to criticize* the 2030 NDC GHG emissions reduction target underlying the 6th Basic Energy Plan, as being ‘set without any basis of [technology pathway] accumulation’.
- **JFE Steel and JISF Executive** *stated* at the METI-MoE joint Global Warming Countermeasures Study Working Group in July 2021, that ‘without the correct understanding and consent of the people’ regarding the ‘huge cost burden’ involved in achieving carbon neutrality in 2050 and reducing carbon emissions by 46% by 2030, these goals will not be achieved. Similarly, in October 2021, a **JISF** statement on the draft Plan for Global Warming Countermeasures *suggested* that it is necessary to ‘encourage behavior change’ among people. In a message on JISF’s website in January 2022, **Nippon Steel President and JISF Chairman** *stated* that regarding the increased costs involved in realizing zero carbon steel, it is ‘necessary to foster public understanding and build a mechanism to bear the burden on society as a whole.’

Carbon tax and Emissions Trading Scheme (ETS) in Japan, and the EU Carbon Border Adjustment Mechanism (EU CBAM)

Nippon Steel, JFE Steel and JISF actively opposed domestic carbon prices in the form of taxes and ETS in the ongoing consultations held by the MoE and METI, which are expected to result in a new policy proposal in the summer of 2022. JISF and JFE Steel also criticized the EU CBAM, appearing to call on the Japanese government to urge the EU and the US to exempt the Japanese steel industry from any potential CBAM.

- In a statement on JISF’s website in January 2022, **Nippon Steel President and JISF Chairman Eiji Hashimoto** *stated* that ‘carbon taxes and emissions trading schemes hinder innovation by depriving resources for technological development and capital investment,’ do not contribute to carbon neutrality, and ‘will have a great impact on the international competitiveness of the industry.’ He *repeated* the argument in the METI subcommittee on Industrial Structure in February 2022 and added that the EU ETS scheme ‘has not been effective in reducing greenhouse gas emissions.’
- **JFE Steel and JISF Executive** *cited* **Nippon Steel** Research Institute data to explain industrial exemptions from carbon taxes and ETS in Europe, seemingly to request similar exemptions for industry in Japan in the MoE Subcommittee on Carbon Pricing in May 2021. He also raised concerns of carbon leakage from the EU due by the ETS, suggesting there is a similar risk for Japan.
- **JFE Steel and JISF Executive** *argued* that the high energy costs paid by Japanese industries equate to a sufficient price on carbon, and should be recognized by the EU and US CBAM at the MoE Subcommittee on Carbon Pricing in February 2021. He said that EU or US refusal to recognize this would be ‘nothing but

the failure of the Japanese government's international understanding activities, quantitative domestic carbon price policies, and the presentation of environmental policies.'

Japanese renewable energy Feed-in-Tariff

Nippon Steel, JFE Steel and JISF strongly oppose the renewable Feed-In-Tariff (FIT) as a factor behind high electricity costs in Japan, citing it as a reason why renewable energy expansion in Japan should be moderated. The entities have also advocated for industry exemptions from renewable levies. This argument was raised during the revision of the 6th Basic Energy Plan initially released in the summer 2021 and finalized in October, which aims to double the share of renewable energy from today by 2030. The cost of FIT levies has also been used to argue against the introduction of carbon pricing regulations, which have been under discussion since early 2021 and are expected to be finalized in the summer 2022.

- **Nippon Steel President and JISF Chairman** Eiji Hashimoto *stated* on JISF's website in January 2022 that 'Japan's industrial electricity prices, which are outstandingly high internationally, are an extremely big problem in energy policy' and citing increases in the FIT purchase price under the 6th Basic Energy Plan, requested a 'drastic review of the electricity rate system.' He has also *cited* the industrial exemption from renewable levies in Germany, the EU and China to request similar measures in Japan in the METI Basic Policy Committee in November 2020.
- **JISF statement on the 6th Basic Energy Plan** in October 2021 appeared to *criticize* the 2030 renewable target, as a result of which 'the FIT system will increase the burden on the people' and requested to 'curb the burden of industrial electricity rates.'
- **Executive at JFE Steel and JISF** *argued* that for industries 'for which there is no alternative technology for the time being, the impact of carbon pricing, including FIT, is not only a matter of contributing to growth but also a matter of business survival,' and questioned the need for such policies in the MoE Subcommittee on Carbon Pricing in July 2021.

Japan's energy mix

Nippon Steel and JISF often take a negative position on transitioning the energy mix, citing concerns over cost and reliability of renewables in order to advocate for a mix of renewables, nuclear power, and fossil fuels. JFE Steel's direct engagement appears to be relatively limited and more mixed, suggesting the need to move away from fossil fuels while emphasizing the '3E+S' principles. The policy engagement summarized below accompanied the October 2021 revision of the 6th Basic Energy Plan, which outlined the target power generation mix in 2030 and set the direction to 2050. The upcoming 2022 Clean Energy Strategy is expected to spell out more concrete policies to achieve the targets from the Basic Energy Plan, drawing from past and ongoing discussions at various ministerial committees attended by the steel sector.

- **Nippon Steel President and JISF Chairman** Eiji Hashimoto *argued* that ‘electricity costs are high worldwide, and it will be even higher if the introduction of renewable energy (towards carbon neutrality) increases. Considering how to compensate for the cost increase, there is only nuclear power,’ Nikkei reported in May 2021.
- **Nippon Steel President and JISF Chairman** *called for* ‘an optimal solution’ whereby renewable energy, nuclear power, and thermal power ‘mutually complement each other’ in the METI Basic Policy Subcommittee in December 2020. Similarly in March 2021, he *advocated for* ‘maximum use of existing nuclear power that has been confirmed to be safe’, and said ‘the use of certain fossil fuel energy is also essential.’
- **Nippon Steel President and JISF Chairman** Hashimoto appeared to *support* the expansion of offshore wind power generation in the METI Basic Policy Subcommittee in November 2020. However, in the same government committee in April 2021, he *stated* that for the power sector ‘S + 3E is an absolute requirement’, in addition to supporting the maximized use of nuclear energy due to ‘many geographical restrictions on the introduction of renewable energy’ in Japan. In the following meeting in the same committee and month, Hashimoto also *requested* that hydrogen and ammonia be used ‘in large quantities’ in power generation, without specifying a position on their decarbonization. In the same committee in July 2021, Hashimoto *questioned* whether costs of solar power and demand for fossil fuels will decrease in the future, and requested a ‘realistic mix for 2030’ that considers ‘multiple scenarios’ in the 6th Basic Energy Plan draft.
- **JFE Steel and JISF executive** *stated* in the METI-MoE working group in August 2021, that the Long-Term Strategy Under the Paris Agreement as a Growth Strategy ‘should show the determination to resolutely overcome the very difficult problem of moving away from [...] fossil fuels,’ while emphasizing the importance of S + 3E. Subsequently, **JISF’s statement on the 6th Basic Energy Plan** in October 2021 *expressed ‘concern’* that ‘due to being heavily influenced’ by the 2030 GHG emissions reduction target, discussions of S + 3E principles governing the 2030 energy mix, were ‘skewed toward environmental compatibility and particularly focused on increasing the renewable energy ratio’ at the expense of economic efficiency and stable supply.

Decarbonization technology and hydrogen in steelmaking

Nippon Steel, JFE Steel, and JISF consistently emphasize high hurdles in technological development to request financial support from the government for hydrogen reduction, green electricity, and other innovations to decarbonize steel production. It has also argued that the Japanese steel sector is already highly efficient and has limited room for CO₂ reduction and energy saving with existing technology, stressing the need for R&D but not taking a clear position on the role of regulations. The upcoming 2022 Clean Energy Strategy is expected to spell out more concrete policies to achieve the targets from the Basic Energy Plan, as well as innovative

technologies such as hydrogen and ammonia, drawing from past and ongoing discussions at various ministerial committees attended by the steel sector.

- **JISF official and the environment division director of Nippon Steel** *argued* that it was necessary to promote low-carbon technology for blast-furnace steelmaking ‘for the time being,’ but recognized that ‘new ultra-innovative technology’ would be required to achieve the long-term target of the Paris Agreement. He listed the establishment of hydrogen infrastructure and ‘low-cost and stable supply’ as prerequisites for hydrogen reduction steelmaking technology in the METI Industrial Structure Council Steel Working Group in February 2021.
- **Nippon Steel President and JISF Chairman** *requested* capital investment for equipment conversion to new steel production technology that does not emit CO₂, and stated that the industry would proceed with developing technology ‘on the premise that stable and cost-competitive green power will be supplied’ in the METI Basic Policy Subcommittee in August 2021.
- However, a **JISF official and the environment division director of Nippon Steel** *stated* that regarding hydrogen-reduction ironmaking, ‘there is no foundation even now with the high hurdles that humankind is facing,’ while another **JISF official and JFE Steel specialty chief** stated that ‘the things we can change are very few,’ as reported by Asahi Shimbun in February 2021.
- **JISF official and JFE Steel specialty chief** *argued* that energy efficiency of the Japanese steel industry is the highest in the world and ‘there is little room for energy saving’ in the METI Energy Conservation Subcommittee in March 2021. He called for more ‘investment’ and ‘introduction of new technologies’ to achieve further reduction in energy use and CO₂ emissions.

Climate Policy Engagement by the Steel Sectors: South Korea

A. Background: Corporate climate policy engagement in South Korea

In South Korea, ‘third-party lobbying activity’, referring to lobbying conducted by a paid lobbyist on behalf of a third party, is banned by law. However, companies engage in the policymaking process using a variety of methods, both directly and indirectly through industry associations. As of 2021, InfluenceMap has found evidence of all the forms of engagement listed in the UN Guide above, except for the corporate funding of campaigns, which is forbidden by law in South Korea.

In December 2020, South Korea announced a 2050 carbon neutrality target. In October 2021, the South Korean government announced a *more ambitious NDC target* to cut greenhouse gas emissions in 2030 by 40% or more from 2018 levels, having signaled this move with a draft target announcement in August 2021.

In October 2021, the South Korean government published two policy roadmaps (*Carbon Neutrality Scenarios*) for the country’s transition to carbon neutrality, to outline potential scenarios for policymaking towards the 2050 carbon neutrality target. The first roadmap would abolish all fossil fuel power production including coal, LNG and oil, and aim for a zero-emissions power sector. The second roadmap would phase out coal-fired power generation but retain LNG as a power source with increased investment in Carbon Capture and Storage (CCS). The Carbon Neutrality Scenarios plan for emissions by the Korean industry sector (steel, chemicals, and oil refining) to reduce carbon emissions by 80.4% in 2050, compared to 2018 levels.

The most recent Ministry of Trade, Industry and Energy and Korea Energy *Agency joint survey of greenhouse gas emissions by industrial sector*, released in May 2021, found Primary Metal Manufacturing to be responsible for 38.3% of total GHG emissions in South Korea. POSCO and Hyundai Steel are South Korea’s two largest steel companies, accounting for *over 90%* of the country’s steel production capacity. Both companies frequently invited to attend and contribute to policy forums and meetings by the Ministry of Trade, Industry and Energy (MoTIE), the Ministry of Environment (MoE), and the Ministry of Science and ICT (MoSIT). Both companies and KOSA are members of the *Green Steel Committee* under the MoTIE. POSCO and Hyundai Steel are both mandatory participants in the Korea Emissions Trading Scheme (K-ETS). The K-ETS was established in 2015 and has gone through three ‘re-allocation phases’, designed to progressively phase down the free allocation of emissions permits and increase the number of industries and proportion of total GHG emissions covered by the ETS.

B. Analysis Results: Steel Sector Climate Policy Engagement in Korea

InfluenceMap analysis finds that the steel sector in Korea maintains high-level support for carbon neutrality, but has engaged on a detailed level with policies to undermine their ambition and effectiveness. Table 7 below lists InfluenceMap metrics for POSCO, Hyundai Steel, and the Korea Iron and Steel Association (KOSA), all of which demonstrate climate policy engagement that is misaligned with the goals of the Paris Agreement.

Table 7 below lists InfluenceMap's metrics for POSCO, Hyundai Steel and KOSA. POSCO and Hyundai Steel score D and D+ respectively, while KOSA scores E+, indicating negative climate policy engagement by the companies and highly obstructive engagement by KOSA.

Table 7: Overview of InfluenceMap's assessment of POSCO, Hyundai Steel and Korea Iron and Steel Association (KOSA)

	<i>POSCO</i>	<i>Hyundai Steel</i>	<i>Korea Iron and Steel Association (KOSA)</i>	
Performance Band	D	D+	E+	Performance Band (A+ to F) is a full measure of a company's climate policy engagement, accounting for both its own engagement and that of its industry associations. A+ indicates full support for Paris-aligned climate policy, with grades from D to F indicating increasingly obstructive climate policy engagement.
Organization Score	52%	54%	40%	Organization Score (0 to 100) expresses how supportive or obstructive the company is towards climate policy aligned with the Paris Agreement, with scores under 50 indicating "internal" misalignment between the Paris Agreement and the company's detailed climate policy engagement.
Relationship Score	42%	45%	N/A	Relationship Score (0 to 100) expresses how supportive or obstructive the company's industry associations are towards climate policy aligned with the Paris Agreement, with scores under 50 indicating "external" misalignment between the Paris Agreement and the detailed climate policy engagement of the company's industry associations.
Engagement Intensity	23%	9%	12%	Engagement Intensity (0 to 100) is a measure of the level of policy engagement by the company, with scores above 12 indicating active engagement, and scores above 25 indicating highly active or strategic engagement.

- POSCO displays the most active policy engagement, with positive top-line messaging around climate action that is combined with more negative positions taken on detailed climate legislation, resulting in a 'D' grade that shows an overall obstructive position on climate policy. POSCO's Relationship Score is relatively low due to its strong links with highly negative industry associations such as KOSA and the Korea Chamber of Commerce and Industry (KCCI). POSCO's Chairman Choi Jeong-woo is also Chairman of KOSA, indicating that POSCO has a strong relationship with KOSA and likely high levels of influence over KOSA's policy positions.
- Hyundai Steel has moderate levels of engagement with climate policy in Korea and appears to have slightly more positive direct engagement relative to POSCO and KOSA. Its overall 'D+' letter grade can be attributed to its lower Relationship Score. The CEO of Hyundai Steel, An Tong-il, is the Part-time Vice President of KOSA. The executive director of Hyundai Steel Co, Lee Myong-goo, is a member of the Environment & Climate Committee of Korea Chamber of Commerce and Industry (KCCI), the largest industry association in South Korea which has actively opposed climate change regulations in the country.
- KOSA displays highly negative climate policy engagement in South Korea, scoring an 'E+' grade. Its policy engagement appears to be targeted around key policy moments such as the introduction of South Korea's new 2030 GHG emissions reduction targets, new K-ETS allocation phases, and the EU CBAM. KOSA is currently a member of the MoTIE's '*Carbon Neutral Industrial Transition Promotion Committee*' and the '*Green Steel Committee*'.
- POSCO and Hyundai Steel take more positive high-level positions than KOSA on long-term policy issues, such as supporting South Korea's 2050 carbon neutrality target and decarbonization of the steel sector. However, their negative engagement with specific short-term policies such as the K-ETS and EU CBAM is more closely aligned with KOSA. This raises concern that the Korean steel companies may be channeling their most negative policy positions through KOSA, despite their positive top-line messaging on climate. Key Industry Associations and their policy positions are summarized in Appendix A. The full list of the companies' industry association memberships can be viewed on their online profiles for POSCO [here](#), and Hyundai Steel [here](#).

C. Korean steel sector positions by policy strands

2050 Carbon Neutrality Target & Korea Green New Deal

The steel sector in Korea generally accepts the need for urgent climate action and expresses top-line support for overarching policies such as the Korea Green New Deal. KOSA has caveated support for carbon neutrality by voicing concerns over technological challenges and often does not specify the need for urgent and drastic

action. Such messaging appears to pave the way for KOSA taking a more negative stance on specific short-term regulations or policies.

- **POSCO** has actively supported the government's 2050 carbon neutrality target, and in December 2020 released a statement *supporting* the South Korean government's revised 2050 carbon neutrality target and the Green New Deal. In a September 2021 press release on its website, POSCO appeared to *support* emissions reductions in line with a 1.5°C target as recommended by the *2018 IPCC Special Report*.
- **Hyundai Steel** *announced* via its 2021 Integrated Report in June 2021 that it had joined the MoTIE's Green Steel Committee as a commitment to help achieve 2050 carbon neutrality targets.
- In February 2021, **KOSA's** corporate members signed a *2050 Carbon Neutrality Joint Declaration*, stating their broad support for South Korea's 2050 carbon neutrality target and the net zero transition for the steel industry.
- **KOSA's** November 2021 'Steel Paper' publication *stated* that while the Korean steel sector would strive to become an 'active leader' in carbon neutrality, it was also a 'challenging matter' and did not specify whether it supported near-term action to achieve IPCC-demanded emissions reductions.

South Korea's 2030 GHG emissions reduction target

KOSA has taken strong positions to oppose the 2030 GHG emissions reduction target in South Korea, while POSCO and Hyundai Steel remained largely silent about this issue despite their vocal support for longer-term targets. KOSA has emphasized production levels and stability of electricity supply as some of the concerns surrounding ambitious short-term targets.

- In October 2021, **KOSA's** head of the Department of Climate, Environment and Safety *stated an unsupportive position* on the ambitious revision of the 2030 national GHG emissions reduction targets and the 2050 carbon neutrality scenario of South Korea. The association cited difficulties in meeting the targets and suggested that such regulations would also impede the stability of electricity supply and the energy transition.
- **KOSA**, at a Carbon Neutral Policy Evaluation forum organized by the Korea Economic Federation in October 2021, *stated* not only that it would be infeasible to reduce GHG emissions by 40% compared to 2018, but also warned that this could lead to lower steel production volumes, and argued that the production setback would cause knock-on employment reduction in the shipbuilding and automotive industries.
- **KOSA** *expressed* its concerns about the feasibility of reducing GHG emissions and decarbonizing the steel sector in the short term in its November 2021 Steel Paper.

Korea Emissions Trading Scheme (K-ETS)

InfluenceMap analysis finds POSCO and KOSA to be actively engaged with the K-ETS, with most of their advocacy focused on reforms that would negatively affect the ambition and effectiveness of the scheme. The steel industry in Korea has employed a coordinated message on the K-ETS in recent years, calling for increased free allocations for the steel sector by emphasizing the risks of the K-ETS affecting the Korean steel industry's international competitiveness. The steel sector has advocated for various reforms to the emissions reduction counting system that would have a negative impact on the effectiveness of the scheme, including the inclusion of international offsets as a domestic emissions reduction, and the exclusion of indirect emissions in emissions counting. In February 2022, the South Korean government *announced* a revision to include corporate emissions reductions in operations outside of Korea in domestic emissions reduction counting.

- **POSCO** Research Institute's Managing Director *did not support* the introduction of product benchmarks to the K-ETS at the 'Newsis Climate Change Forum' in June 2021, citing lack of evidence on their effectiveness and concerns about competitiveness.
- **POSCO** *called for further free allocations* and subsidies for the steel sector in its 2021 CDP Climate Change response, citing the importance of recognizing 'vulnerability' of 'trade-exposed sector' such as steel to international competition from other steel companies globally.
- In June 2020, **KOSA** and eleven other Korean industry associations submitted a *joint proposal* on the K-ETS ahead of the Phase Three Allocation Plan (2021-2025) announcement. The proposal called for additional allowances to be released to the market to lower the carbon price, stating concern about 'weakening the international competitiveness of key industries' in Korea due to the 'burden of purchasing emissions allowances'. The proposal also specifically called for free allowances for the domestic manufacturing industry, warning that paid allowances could 'adversely affect the economy and employment'.
- **KOSA** *advocated* for the exclusion of indirect emissions of the steel industry from the K-ETS to 'alleviate' the emissions reduction burden in its November 2021 Steel Paper. It also advocated for a higher emissions allowance quota to account for the need to develop 'innovative technologies'.
- **POSCO** appeared to advocate for offsets to be included as emissions reductions in the K-ETS, via a *press release* in its Corporate Newsroom in April 2021.

Carbon tax in Korea and the EU Carbon Border Adjustment Mechanism (EU CBAM)

The steel sector in Korea is broadly unsupportive of both domestic and cross-border carbon taxation mechanisms, and employs a coordinated message to emphasize the risks to growth and trade caused by carbon pricing policies. POSCO and Hyundai Steel have both raised concerns of 'double taxation/regulation' to oppose a South Korean carbon tax and EU CBAM.

- **POSCO** stated in its 2021 CDP disclosure that it *opposes* the introduction of a carbon tax in South Korea, citing the double regulatory burden of a tax on carbon in addition to the emissions trading scheme.
- **POSCO** has also taken a somewhat negative stance on the introduction of the EU CBAM. POSCO Research Institute's Chief Researcher *did not support* the EU CBAM at the South Korean National Assembly's December 2021 Steel Forum, citing doubts on the EU CBAM's 'effectiveness to solve climate problems and economic growth'.
- In July 2021, **Hyundai Steel** met with the Vice Minister of MoTIE, and directly *requested* for government help to gain South Korean steel companies' exemption from the EU CBAM, expressing concerns that the policy would constitute a 'double taxation' on steel companies.
- **KOSA** *opposed* the EU CBAM in its monthly Steel Paper in December 2021, claiming that the regulation would be an economic and administrative burden on the Korean steel industry and that it may cause trade conflicts and have a 'negative impact on Korea's steel trade environment'.

South Korea's energy mix

The South Korean steel industry has positively advocated for increased green hydrogen production, with POSCO taking a more active stance on this than KOSA. There appears to be limited detailed engagement by steel companies regarding South Korea's electricity generation mix, although POSCO appears to take some positions that go against IPCC guidance, especially around LNG in the energy mix. The 2018 *IPCC Special Report* explains that under most 1.5°C-consistent decarbonization pathways, the share of primary energy provided by fossil gas would decline by 13% to 62% dependent on deployment of CCS.

- **POSCO's** 2020 Climate Action Report appears to suggest that the company *supports an increased role for green hydrogen* in the energy mix.
- In October 2021, **Hyundai Steel** *supported* the idea of promoting a 'hydrogen economy' through hydrogen-based technologies, however, the company did not refer to the need to decarbonize hydrogen production.
- In January 2022, **POSCO** Chairman Choi Jeong-woo stated *support* for a long-term transition to renewable energy, but also appeared to support the expansion of LNG Exploration and production (E&P) and infrastructure without conditions around CCS or methane abatement.

Decarbonization technology and hydrogen in steelmaking

POSCO and Hyundai Steel have both acknowledged the need for carbon neutrality in the steel sector by 2050. The industry emphasizes the need for technological development to request government investments and

financial support. Evidence suggests that the Korean steel sector advocates for such investment-based policy as an alternative to other climate regulations.

- **POSCO** attended a February 2021 Environmental Policy Forum hosted by the MoE, and *directly advocated* for government investment in infrastructure to support a stable supply of green hydrogen and renewable energy as an essential component of its decarbonization goal.
- In March 2022, **Hyundai Steel** appeared to *advocate* for a transition from blast furnace to electric furnace steel production, and called for government policy to ‘alleviate the corporate burden’ in the early stages of the transition.
- **Hyundai Steel** attended a meeting with the MoSIT in December 2021, and *requested* government support for ‘technology development in the pre-commercial stage’ as well as support for developing carbon capture technologies for the steel industry.
- **KOSA** *stated* in its November 2021 Steel Paper that ‘green infrastructure at the government level’ that could supply ‘green electricity and green hydrogen at an economical price’ would be a prerequisite for steel sector carbon neutrality.

Appendix A: Industry Associations

The Appendix Table below gives an overview of *Nippon Steel*, *JFE Steel*, *POSCO* and *Hyundai Steel*'s key industry association memberships with examples of recent climate policy engagement. Detailed profiles for all industry associations can be explored via the "Details of Relationship Score" tab on each company's online profile, accessible through the hyperlinks.

Evidence of Nippon Steel, JFE Steel, POSCO and Hyundai Steel's key industry association membership

Industry Association	Performance Band	Examples of recent climate policy engagement
Japan		
<i>Japan Iron and Steel Federation (JISF)</i>	E+	<p>Nippon Steel President Eiji Hashimoto is Chairman of JISF</p> <p>JFE Steel President and Representative Director, Yoshisa Kato Is Vice Chairman and Representative Director of JISF</p> <ul style="list-style-type: none"> February 2022: Eiji Hashimoto <i>stated</i> that the 'additional burden of carbon pricing, such as the carbon tax, deprives the resources of technological development and capital investment' and 'does not meet the purpose of reducing CO2' at a METI consultation. October 2021: JISF statement on the draft Plan for Global Warming Countermeasures, <i>argued</i> that the feasibility of the 'extremely ambitious' medium-term target of 46% emissions reduction by FY2030 was not sufficiently verified, and requested flexibilities so that in some cases the targets could be revised 'downward.' October 2021: JISF and JFE Steel have appeared to question the science of the IPCC, <i>stating</i> that the Long-Term Strategy Under the Paris Agreement as a Growth Strategy 'gives the impression that science equals the IPCC report' in a METI-MoE joint meeting in August 2021. Similarly, JISF <i>requested</i> strategy revisions 'based on the science of Japan' in an opinion statement published on JISF's website in October 2021. March 2021: Eiji Hashimoto <i>called for</i> 'an optimal solution' whereby renewable energy, nuclear power, and thermal power 'mutually complement each other' in December 2020 and similarly in March 2021 he <i>said</i> 'the use of certain fossil fuel energy is also essential.'
<i>Japan Business Federation (Keidanren)</i>	D	<p>Nippon Steel President Eiji Hashimoto is the Vice Chairman of Keidanren</p> <p>JFE Steel Specialist Chief Supervisor for Global Environment is the Chair of Keidanren's International Environmental Strategy Working Group</p> <ul style="list-style-type: none"> March 2022: Keidanren's Plan for Overseas Expansion of Strategic Infrastructure has <i>called</i> on the government of Japan to cooperate with other governments in developing their national carbon neutrality roadmaps In order to create export opportunities for Japanese "energy transition technology", including high efficiency coal, ammonia blending in thermal coal, and LNG. October 2021: Keidanren's public comment on the draft 6th Basic Energy Plan <i>appeared to criticize</i> the rapid reduction of fossil fuels – LNG in particular – proposed for the power sector under the plan. And while <i>appearing to support</i>

		<p>renewables, it stressed the technical challenges and the high economic burden of the Feed-In-Tariff.</p> <ul style="list-style-type: none"> ● April 2021: Keidanren <i>advocated against</i> carbon taxes and ETS, promoting a voluntary credit market instead in the METI study group on carbon pricing. ● January 2021: Keidanren <i>requested</i> the government to set the 2050 carbon neutrality goal as a “basic principle” rather than a “legal objective” in the MoE Earth and Environment committee.
<p><i>Japan Chamber of Commerce and Industry (JCCI)</i></p>	E	<p>Nippon Steel Honorary Chairman Akio Mimura is the Chairman of JCCI</p> <ul style="list-style-type: none"> ● February 2021: JCCI <i>opposed</i> the introduction of carbon taxes at a METI committee meeting. ● February 2021: JCCI <i>suggested</i> to moderate the share of renewables in the energy mix and advocated for nuclear, LNG and coal with CCUS to ensure low cost and secure supply at METI's Basic Policy committee. ● March 2020: JCCI has <i>urged</i> the Vietnamese government to "quickly" complete the construction of LNG infrastructure in the country, including Import terminals, storage facilities and pipelines.
<p>South Korea</p>		
<p><i>Korea Iron and Steel Association (KOSA)</i></p>	E+	<p>POSCO CEO Choi Jeong-woo is the Chairman of KOSA</p> <p>Hyundai Steel CEO An Tong-il is the Part-time Vice President of KOSA</p> <ul style="list-style-type: none"> ● December 2021: KOSA <i>opposed</i> the EU CBAM in its monthly Steel paper, claiming that the regulation would cause economic and administrative burden on steel export companies in the world. ● November 2021: In its Iron and Steel paper, KOSA appeared to <i>advocate</i> for lower ambition for the K-ETS, suggesting reforms to reduce burden on industry and allocate additional emissions allowances to the steel sector. ● November 2021: Byun Young-man, the Vice Chairman of KOSA, stated <i>support</i> for decarbonization of the steel industry through hydrogen-reduced steel technology. He also advocated for active fundraising at the government level and expansion of tax deductions on new and less carbon-intensive technologies for carbon neutrality in the steel sector. ● October 2021: Yonhap News reported that KOSA's Head of Climate, Environment and Safety <i>did not support</i> the upward revision of the 2030 National GHG emissions reduction target and the 2050 carbon neutrality scenario, citing difficulties in meeting targets and suggesting that such regulations would impede energy transition. ● October 2021: Chosun Ilbo reported on a statement released by KOSA which <i>opposed</i> an GHG emissions reduction target of 35% or higher, citing concerns that it would affect steel industry production.
<p><i>Korea Chamber of Commerce and Industry (KCCI)</i></p>	E+	<p>Hyundai Steel Executive Director Lee Myong-goo is a member of the Environment & Climate Committee of KCCI</p> <p>POSCO is a direct member and participant in the KCCI's Net Zero Research Association</p> <ul style="list-style-type: none"> ● November 2021: KCCI Chairman Chey Tae-won spoke at the 2nd Carbon-Neutral Industry Committee, and <i>expressed concern</i> about the 'greatly increased burden' of the increased 2030 NDC GHG emissions reduction target, and argued that the government should reconsider a 'regulatory-focused perspective' for climate policy.

		<ul style="list-style-type: none"> ● October 2021: An <i>opinion statement</i> published by five Korean industry groups including KCCI stated that the revised NDC target of a 40% emissions reduction target by 2030 should be reconsidered ‘in consideration of the reality in Korea’, citing concerns about the ‘survival’ of the manufacturing industries. ● August 2021: Yonhap News reported that five Korean industry groups including the KCCI had published an <i>opinion statement</i> expressing ‘concern’ that South Korea’s proposed NDC revision of a 35% emissions reduction target by 2030 would have a ‘direct impact on industrial competitiveness and exports’ for Korean companies. ● August 2021: Chosun Ilbo reported that the same five industry groups <i>attended a meeting</i> with Hwang Su-seong, Director of the Industrial Policy Bureau of the Ministry of Trade, Industry and Energy, submitting the opinion that the upward revision of the 2030 emissions reduction target had ‘insufficient rational basis’ and expressing concern that the increased target would lead to a rise in raw material prices and electricity rates. ● July 2021: A KCCI <i>opinion piece</i> on the European Union’s Carbon Border Adjustment Mechanism (EU CBAM), published in the Maeil Business Newspaper, called for the South Korean government to introduce countermeasures to protect Korean ‘industrial competitiveness’ while acknowledging the need for ‘participating in the response to the global climate crisis’.
International Associations		
World Steel Association (worldsteel)	C	<p>POSCO CEO Choi Jeong-woo is on the Executive Board of Directors</p> <p>Nippon Steel President Eiji Hashimoto is on the Executive Committee</p> <p>JFE Steel President and CEO Yoshihisa Kitano is on the Executive Committee</p> <p>Hyundai Steel is a direct member of worldsteel</p> <ul style="list-style-type: none"> ● September 2021: On its corporate website, accessed by InfluenceMap in September 2021, worldsteel was <i>supportive</i> of progressive fuel economy standards for vehicles. ● May 2021: In a climate change policy paper, worldsteel <i>advocated</i> for governments to create a “a supportive and enabling framework” which “ensures that policies reward proactive efforts,” but stressed that it must be technology neutral. ● May 2021: In a 2021 position paper, worldsteel <i>advocated</i> for government policies to support breakthrough technologies such as hydrogen and electrolysis as alternatives to coal in the steelmaking process, but was in favor of technology neutral policy. This paper did not explicitly rule out the use of fossil fuels in the production of hydrogen to decarbonize the steel industry.
American Petroleum Institute (API)	F	<p>POSCO and JFE Steel are direct members of API</p> <ul style="list-style-type: none"> ● March 2022: API CEO Mike Sommers called for the removal of regulatory barriers through a <i>press release</i> addressing the US Energy Secretary and supported increased US production of oil and gas ‘now and in the future’. ● March 2022: API CEO Mike Sommers spoke on Fox Business and <i>called for</i> an end to the leasing ban for federal waters and federal lands. ● Feb 2022: API submitted <i>comments</i> to the EPA’s methane regulation proposal which sought to weaken its ambition, including contesting the applicability of new methane standards to existing sources and the EPA’S ability to approve more ambitious state-level methane emissions reduction plans. ● September 2021: In September 2021, API coordinated with other oil and gas industry groups to send a joint letter to the Committee on Environment and Public Works <i>opposing</i> the Methane Emissions Reduction Act of 2021, which would introduce a tax on methane emissions from oil and gas operations as part of the US reconciliation package.

Appendix B: Scoring Methodology

- A detailed overview of the information contained in this Appendix, covering InfluenceMap’s methodology and scoring rules, is available *on our website*.
- InfluenceMap defines "policy engagement" based on the UN *Guide for Responsible Corporate Engagement in Climate Policy* (2013), which defines a range of corporate activities as engagement, such as advertising, social media, public relations, and direct contact with regulators and elected officials.
- InfluenceMap’s system considers existing, evolving, and likely future climate-related policy measures proposed by mandated bodies. “Mandated bodies” are defined here as various levels of government or government-authorized bodies responsible for or supporting efforts to implement Nationally Determined Contributions (NDCs) in their regions. InfluenceMap’s system also captures high-level corporate communications that influence the broader public narrative concerning these policies (e.g. concerning the role of different low-carbon technologies).
- Each company’s engagement activities on climate-related policy are assessed using publicly accessible data sources to gather reliable and representative evidence. These data sources include organizational website disclosures and social media channels, top management statements, financial disclosures and investor communications, regulatory consultation comments, and reliable media reporting.
- This research process can collect hundreds of items of evidence pertaining to a company's engagement with climate-related policy. This evidence is analyzed against Paris Agreement-aligned Governmental Policy and Science-Based Policy benchmarks (drawn from *IPCC analysis* of achieving 1.5°C-aligned emission reductions) to provide a robust assessment of whether a company’s climate policy engagement activities are aligned with the Paris Agreement’s goals.
- InfluenceMap’s system also considers a company’s ‘indirect’ climate policy engagement via industry associations. InfluenceMap’s database contains over 150 key industry groups globally, similarly scored on their climate policy engagement. The relationships between the companies and these industry associations are also tracked, enabling an aggregate analysis of each company’s ‘indirect’ climate policy engagement via its industry associations.
- Metrics describing each company’s overall climate policy engagement (direct and indirect) are produced by InfluenceMap’s proprietary platform, with weightings to adjust for factors such as time (e.g. with more recent evidence heavily weighted in the final scores). InfluenceMap's system is updated continuously as new information becomes available. The results are freely available and in the public domain, along with all the primary evidence used in the analysis.