



# **NORDIC FINANCE UNMASKED**

**Exposing Nordic Financial  
Institutions' Metallurgical Coal  
& Steel Holdings**



# Nordic Finance Unmasked – Exposing Nordic Financial Institutions' Metallurgical Coal & Steel Holdings

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Image: Karan Bhatia on Unsplash

# Executive summary

This brief examines the investments of the 20 largest Nordic pension funds and 10 largest Nordic banks in the top 50 expanding metallurgical coal companies and the largest steel-producing companies as of July 2023.

Despite policies adopted by Nordic financial institutions to phase out thermal coal in line with the Paris Climate Agreement, similar actions are missing for metallurgical coal, used in steelmaking, to achieve climate goals. The policy analysis of this brief reveals that most Nordic investors lack a metallurgical coal policy.

Coal-based steelmaking is risking to blow the remaining carbon budget and the next half decade will be crucial for steel decarbonisation, with over 70% of current coal-based capacity reaching the end of their lifespan by 2030. Institutional investors need to ensure that misguided investment decisions do not lead to a carbon lock-in for decades to come and work actively with the whole iron and steel value chain to ensure that bottlenecks for decarbonisation are solved and financial flows directed towards near-zero emission technologies.

## Key recommendations for institutional investors

- ▶ **Investors should exclude companies involved in new metallurgical coal projects, including new mines, expansions of existing ones, and related infrastructure.**
- ▶ **Investors should adopt an effective shareholder engagement strategy towards the steel sector that includes credible and science-based demands for steel companies and a time-bound escalation strategy with deadlines for each demand and actions such as letters, voting and shareholder proposals implemented if no progress is made.**

By adopting these strategies, Nordic financial institutions can significantly contribute to global decarbonisation efforts and ensure their investment portfolios are resilient and sustainable in the long term. Excluding metallurgical coal developers and ensuring coal-based steel production is phased down would protect the long term value of Nordic diversified investors, avoid stranded asset risks and increase the positive climate impact of investors through real-world emissions reductions achieved with shareholder engagement.

## In total, these Nordic financial institutions had invested in metallurgical coal and steel, as of July 2023<sup>[1]</sup>

- ▶ **US\$4.1 billion in the 50 largest metallurgical coal developers.**
- ▶ **US\$3.8 billion in the 100 largest steel producing companies.<sup>[2]</sup>**
- ▶ **The share of the Norway Government Pension Fund, also known as the Oil Fund, is significant, making up 82 % of the metallurgical coal and 47 % of the steel investments.**

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[1] Note that the results of the brief do not reflect the most recent holdings of the financial institutions and that their holdings might have changed.

[2] Adjusters were used to calculate steel data. Therefore, metallurgical and steel numbers must be compared carefully. See more details about the methodology page 23.





Image: Jason Wong on Usplash

# Introduction

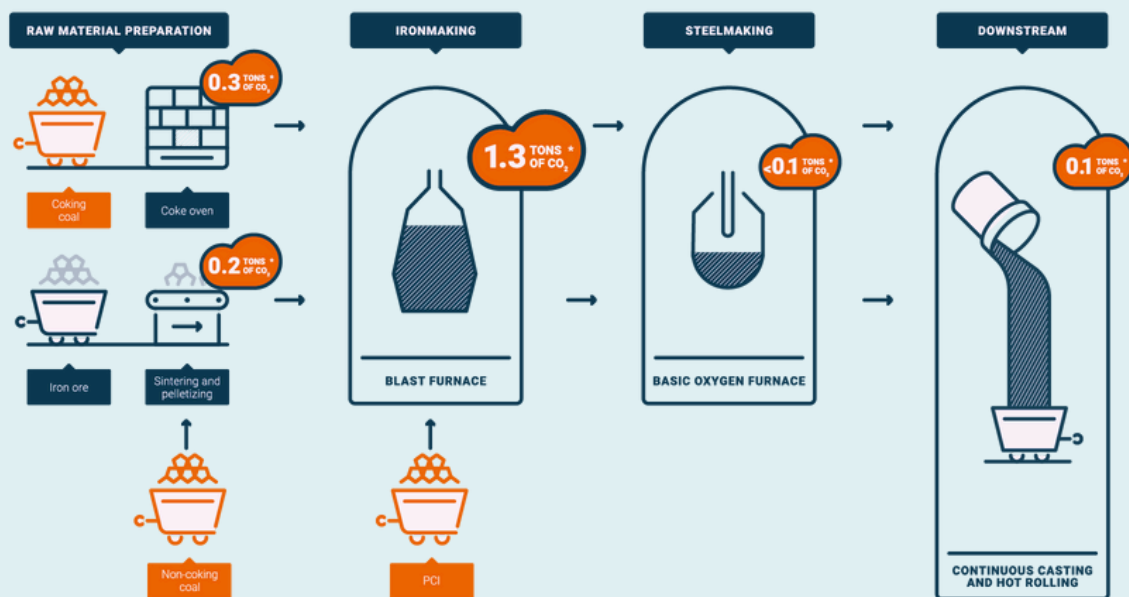
The new IEA Net Zero Roadmap[1] warns that the window on limiting global warming to 1.5°C is closing. A fast shift away from fossil fuels and adoption of new technologies are needed in all sectors of industry in order to keep global warming below catastrophic levels. The decarbonisation of the most carbon intensive commodity – steel – is especially crucial.[2] Demand for steel is expected to rise as we transform our energy and transport infrastructure and built environment.[3] The steel sector is responsible for up to 9% of global greenhouse gas (GHG) emissions[4] and 11% of global carbon dioxide (CO<sub>2</sub>) emissions[5] and needs to cut emissions by more than 90% by 2050 to be net-zero aligned.[6] This is largely due to the use of coal – specifically metallurgical coal – to produce steel.

## 1.1 Metallurgical coal in steelmaking

Metallurgical (met) coal is an umbrella term referring to different types of coal used in steelmaking, whereas thermal coal is used in power generation. Three grades of metallurgical coal are used in steelmaking: coking coal, pulverised coal injection (PCI coal) and non-coking coal. Coking coal is heated in high temperatures to produce coke that is then fed into blast furnaces.[7] PCI coal is a grade of non-coking bituminous coal that can be injected into blast furnaces to substitute more expensive coking coal and can also be used for thermal power generation.[8] Non-coking coal grades are similarly hard to separate from thermal coal grades and they can be used both for heating and special ironmaking technologies in steel production.[9]

The steel sector's substantial climate impact is driven by fossil fuel consumption and high emissions from chemical processes. In steel manufacturing the majority of emissions come from the blast furnaces where coke is being burned to melt the iron ore and to produce a chemical reaction which binds carbon from coke to oxygen in iron ore resulting in large CO<sub>2</sub> emissions and reduced iron. The molten iron is then processed usually in a basic oxygen furnace where scrap steel and alloys are added and oxygen is blown to lower the carbon content and produce crude steel. This primary steelmaking way that makes up for 72% of steel production is called the BF-BOF route.[10]

**Figure 1 – Metallurgical coal use in steelmaking**



\*per ton of steel - Sources: IEA; Material Economics, Industrial Transformation 2050 - Graphic design: guenole.fr ©2023

Source: Reclaim Finance (2023), [Metallurgical Coal Financing – Time to Call It Off](#)

## 1.2 Alternatives to coal-based steelmaking challenged by the new coal pipeline

Decarbonising steel production is possible through shifting away from the coal-based route (BF-BOF route) towards scrap-based electric arc furnaces (EAF route) [11] and by utilising new techniques for reducing the iron ore such as direct reduction with green hydrogen.[12] A fast scale up of both technologies are needed if we are to stay within the carbon budget for 1.5°C. Steel recycling and near-zero emissions technologies need to be coupled with a circular economy approach, where steel use is minimised by measures such as weight reduction, alternative materials, extending lifetime and repairing. If the financial industry continues to allow “business as usual” practices to continue, coal-based steelmaking could consume up to 23% of the world's remaining carbon budget by 2050.[13]

According to the IEA's Net Zero Roadmap, existing metallurgical coal mines can cover the current demand until 2050 and no new coal mines are needed.[14] Despite this, mining companies around the world are currently planning 138 new mines or extensions accounting for a total capacity of 406 Mtpa (million tons per annum).[15] If realised, these projects would lead to a 24,1% increase in metallurgical coal production[16] and subsequently coal-based steel production which would produce significant emissions and jeopardise the ongoing efforts to mitigate climate change.

### **1.3 Financial institutions' missing metallurgical coal policies**

Since the Paris Climate Agreement, Nordic financial institutions have been adopting policies to restrict their support to the thermal coal industry and accelerate thermal coal phase-out. With new fossil-free steel production technologies entering commercial scale production and current metallurgical coal reserves covering the diminishing demand for coal, it is time that financial institutions cut their ties with coal altogether, whether it is used for energy production or steelmaking. The financial sector has already started to blacklist thermal coal and the next step is to do the same for the metallurgical coal used in steelmaking. Investors need to exclude companies developing new metallurgical coal projects. This includes the development of new metallurgical coal mines, the expansion of existing ones, and all related infrastructure.

### **1.4 Investors' effective engagement is needed for steel sector at a crossroads**

In addition to the phase-out of metallurgical coal, financial institutions have an important role to play in steering the steel industry towards near-zero emissions. Even though steel decarbonisation is technically feasible there exists several obstacles. Steel manufacturing is capital intensive and requires vast investments in order to transition away from fossil fuels and towards new technological innovations. The IEA has estimated that the development, commercialization and deployment of clean technologies could cost up to 60 USD per tonne of CO<sub>2</sub> for steel.[17] However, it must be noted that near-zero technologies (H<sub>2</sub>-DRI & molten oxide electrolysis) [18] are projected to be the most cost-effective steel production methods by 2050. [19]

Windows for investments open rarely and bad investments can lead to risky "lock in" where companies use their existing dirty technology until the end of their lifespan – which for steel plants is generally around 40 years.[20] Blast furnaces operate in high temperatures and require refurbishing, where production is halted for several months and the refractory material between the furnace walls and the hot content is repaired or replaced.[21] This process is called a relining and the productive period (so called campaign) between relinings is between 15 and 20 years.[22]

The next half decade will be crucial for steel decarbonisation, since more than 70% of existing coal-fired blast furnaces, accounting for 2.2 Gt of CO<sub>2</sub> emissions, will reach the end of their lifetime by 2030.[23] The reinvestments will either lead to a carbon lock-in or transform the sector and financial institutions need to make sure that the steel companies at crossroads take the right decision in order to minimise the risk of stranded assets and reduce their financed emissions.



Financial institutions need to ramp up their stewardship aimed at accelerating decarbonisation and reducing real-world emissions. Institutional investors need to engage with steel companies and not settle for mere dialogue, but quickly escalate by letters, voting, filing shareholder proposals and ultimately divesting if engagement does not lead to results.

The Nordics are leading the way when it comes to steel decarbonisation, with the Swedish flagship HYBRIT project[24] and many startups such as H2 Green Steel and Blastr planning greenfield projects in the area.[25] The Nordic financial sector is also slowly acknowledging its role in industrial decarbonisation, but a lot remains to be done. Most of the Nordic investors and banks are lacking policies for steel and metallurgical coal, not engaging with the sector to accelerate its transition in a meaningful way and lacking transparent data about their steel and metallurgical coal exposure. Making sure that financial support and investments in steel follow the 1.5°C pathway would support Nordic financial institutions to meet their net-zero goals and reduce risks and stranded assets linked to the steel sector.

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[1] IEA (2023), [Net Zero Roadmap](#)

[2] LeadIt (2021), [Fostering industry transition through green public procurement](#)

[3] WEF (2022), [Net-Zero Industry Tracker 2022 Edition](#)

[4] World Steel Association, [Climate change and the production of iron and steel](#), *Note that the sector's emissions might vary depending on the boundary and year used.*

[5] GEM (2022), [Steel Climate Impact: An International Benchmarking of Energy and CO2 Intensities](#)

[6] IEA (2021), [Net Zero by 2050](#)

[7] Blast furnace is a vertical furnace in which iron is produced by blowing extremely hot air through a mixture of iron ore, coke, and limestone.

[8] Minerals Council of Australia (2021), [Best in Class: Australia's Bulk Commodity Giants](#)

[9] Banktrack (2023), [Still Bankrolling Coal \(for Steel\)](#)

[10] Worldsteel Association (2023), [Sustainability Indicators 2023 report](#)

[11] The scrap-EAF route makes up for 21% of current steel production and uses high-current electric arcs to melt scrap into liquid steel. In addition to scrap, other feedstocks such as pig iron (produced in a blast furnace) or direct-reduced iron can be used.

[12] The DRI-EAF route makes up for 7% of current steel production. Direct reduction uses hydrogen or natural gas derived carbon to reduce the iron ore that is then fed into an electric arc furnace to produce steel. If hydrogen is produced by electrolysis using renewable electricity and the EAFs run with renewable electricity, the process is fossil-free.

[13] SteelWatch (2023), [Sunsetting Coal in Steel Production](#)

[14] IEA (2021), [Net Zero by 2050](#)

[15] Global Energy Monitor, [Global Coal Mine Tracker](#)

[16] Reclaim Finance (2023), [Metallurgical Coal Financing – Time to Call It Off](#)

[17] IEA (2021), [Net Zero by 2050](#)

[18] Molten oxide electrolysis (MOE) has the lowest CO2 abatement cost, but low technology readiness and is expected to be available on commercial scale only between 2030 and 2035. Agora Industry & Wuppertal Institut (2023), [15 insights on the global steel transformation](#)

[19] BloombergNEF (2023), [Green Steel Demand is Rising Faster Than Production Can Ramp Up](#)

[20] UNIDO (2022), [Steel and cement can drive decade of action on climate change](#)

[21] Vogl, Olsson, Nykvist (2021), [Phasing out the blast furnace to meet global climate targets](#)

[22] Ibid.

[23] Agora Industry (2021), [Global Steel at a Crossroads](#)

[24] HYBRIT is a joint project of mining company LKAB, energy company Vattenfall and steel company SSAB to develop a fossil-free value chain for iron and steel production, where LKAB produces sponge iron from fossil-free iron ore pellets, Vattenfall produces fossil-free energy and SSAB fossil-free steel.

[25] Reuters (2024), [Sweden's H2 Green Steel raises \\$5.2 bln in new funding](#). S&P Global (2023), [Booming green steel demand fuels Blastr's €6B hydrogen-powered plant in Finland](#).

The background of the slide is a photograph of an industrial facility, possibly a power plant or refinery, featuring multiple levels of metal walkways, railings, and structural beams. A warm light source is visible on the left side. A large, solid blue diagonal shape covers the right half of the image, serving as a background for the text.

## **2. Recommendations for institutional investors**

**1 The first priority of institutional investors when it comes to metallurgical coal must be to stop expansion. This involves:**

- Committing to no longer hold companies in portfolio that have plans to develop, or are developing, metallurgical coal projects. This includes no longer investing in companies that do not have a detailed asset-by-asset and mine-by-mine closure (not selling) timetable aligned with a 1.5°C scenario, and a just and sustainable transition plan for workers, local communities, and the environment.
- Financial institutions should also require companies in their portfolio to commit to reducing the methane intensity of coal mines. Until metallurgical coal mines are closed, financial institutions should engage with metallurgical coal producing companies and demand they mitigate the methane emissions of their operating mines. The potential for methane mitigation is higher in underground mines, but all means to reduce overall methane emissions should be implemented, including in surface mines.

**2 To address coal-based steelmaking, institutional investors need to adopt an effective strategy for stewardship. This involves asking steel companies:**

- To halt the construction of new coal-fired blast furnaces and the expansion of capacity of existing blast furnaces immediately in the OECD countries and in 2027 in the rest of the world.
- To commit not to reline existing blast furnaces that reach the end of their lifetime.
- To adopt and publish robust climate strategies, with a commitment to a 2050 net zero objective aligned to a 1.5°C pathway. Most importantly, this includes:[1]
  - Short- and medium-term GHG emissions reduction targets on Scopes 1, 2 and 3, expressed in both absolute and intensity terms, encompassing all activities.
  - A detailed asset-by-asset transition timetable aligned with a 1.5°C scenario, and a just and sustainable transition plan for workers, local communities, and the environment.
  - Disclosure of short- and medium-term capex plans disaggregated between coal and other fossil fuel-based projects and sustainable technologies.
- To invest in sustainable alternatives to coal-based steelmaking, including Electric Arc Furnaces (EAF) powered with sustainable energy sources and hydrogen-based Direct Reduced Iron (DRI).

**3 Commit to increasing finance for fossil-free technologies, like green HDRI, and key enabling sectors, like sustainable energy and green hydrogen for steelmaking.**

More detailed recommendations for companies' climate commitments can be found [here](#).

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[1] See the full list of expectations: Reclaim Finance (2024), [Corporate Climate Transition plans – What to look for](#) and Reclaim Finance (2023), [Decarbonising the Steel Sector](#)

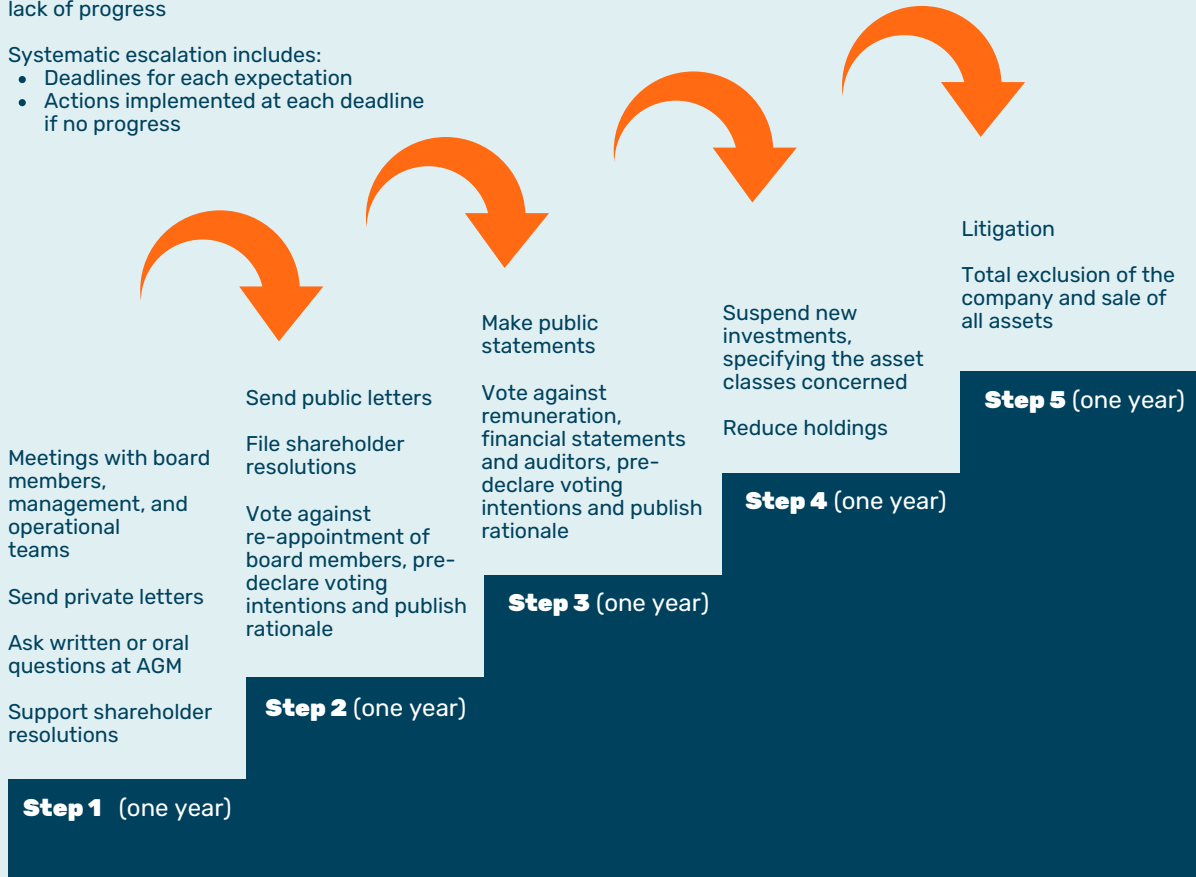


## Figure 2 - Recommendation for a systematic escalation strategy

A credible engagement requires a systematic escalation strategy in case of lack of progress

Systematic escalation includes:

- Deadlines for each expectation
- Actions implemented at each deadline if no progress



Example of a systematic escalation strategy

Source: [Assessing the climate strategies of steel companies - Reclaim Finance](#)

To find out more on effective shareholder engagement, read Reclaim Finance's guide [Climate stewardship: A guide for effective engagement and voting practices](#) and ACCR's Investor handbook: [Engaging with the steel sector](#).

The background image shows a complex industrial structure, likely a steel mill or coal processing plant, with multiple levels of walkways, railings, and structural beams. A large, solid blue diagonal shape covers the right side of the image, serving as a background for the text.

# **3. The Billions Flowing to Metallurgical Coal Expansion**

As of July 2023, Nordic investors analysed in this brief invested US\$4.1 billion in metallurgical coal developers. The biggest investor is the Norway Government Pension Fund, making up for 82 % of the metallurgical coal investments with its US\$3.3 billion worth of share and bond holding. Other investors with significant investments in metallurgical coal developers include PFA Pension, Seventh Swedish National Pension (AP7), Fourth Swedish National Pension Fund (AP4), AMF Pension and the Third Swedish National Pension Fund (AP3).

The Nordic investors hold shares in the Anglo-Swiss company Glencore, which has just bought 77% of the metallurgical coal activities of Canadian group Teck Resources[1] and BHP Mitsubishi Alliance, a joint venture of the Australian mining company and the Japanese conglomerate. The aforementioned companies are planning new metallurgical coal projects mainly in Australia. Many of these companies have been linked to various violations of human rights, Indigenous sovereignty, and environmental regulations.[2]

While many of the Nordic financial institutions are not very exposed to metallurgical coal developers, adopting coal policies that include a red line for metallurgical coal expansion would help to set a new norm in the financial sector and support a global coal phase-out in the long run. Clear policies for metallurgical coal would also prevent the risk that these companies enter the investment portfolios of financial institutions at any point in the future. In addition, the line between thermal and metallurgical coal is often not clear and there is evidence that coal companies have been using the lack of metallurgical coal policies to get around thermal coal exclusions.[3] With climate change spiralling to dangerous levels, any exposure to companies expanding fossil fuel production is unacceptable and not aligned with financial institutions' climate commitments. Investors should adopt a zero tolerance for the expansion of fossil fuel production, including metallurgical coal.

For a more in-depth view on metallurgical coal, read Reclaim Finance's report [\*\*Metallurgical Coal Financing - Time to Call it off\*\*](#)

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[1] Bloomberg (2023), [Glencore Wins Teck Coal Unit, Paving Way for Its Own Split](#)

[2] Ej Atlas (2021), [Elk Valley Coal Mines Selenium Pollution](#); Oxfam (2023), [A Toxic Legacy: Glencore's Footprint in Colombia and Peru](#); Banktrack (2023), [Still bankrolling coal \(for steel\)](#); Business & Human Rights Resource Center (2023), [Transition Minerals Tracker – 2022 Analysis](#); The Guardian (2022), [BHP proposal to extend Queensland coalmine until 2116 'delusional', activists say](#); Mongabay (2023), [Glencore's coal expansion plans face shareholder and Indigenous opposition](#); The Narwhal (2023), [Glencore's record questioned amid Teck coal mine takeover](#)

[3] Market Forces (2022), [Whitehaven Coal found producing far more thermal coal than environmental assessment estimates](#)




**Table 1 - Investor support to metallurgical coal developers, as of July 2023**

Bank/Pension fund	Country of headquarters	Thermal coal policy	Met coal policy	Total investments (in mln US\$)	Top companies invested in
Danske Bank	Denmark	Yes	No	28.212	BHP Group, Mitsubishi Corp, Nippon Steel <sup>[4]</sup>
Jyske Bank	Denmark	No	No	1.738	Mitsubishi Corp, Nippon Steel
Nykredit	Denmark	Yes	No	35.003	Glencore, Mitsubishi Corp, BHP
DNB	Norway	Yes	No	52.298	BHP, Nippon Steel, Mitsubishi Corp
SpareBank 1 SR-Bank	Norway	Yes	No	- <sup>[5]</sup>	-
Handelsbanken	Sweden	Yes	No	5.368	BHP, Glencore, NipponSteel
SEB	Sweden	Yes	No	1.371	Nippon Steel
Swedbank	Sweden	Yes	Yes	3.091	Nippon Steel
Nordea	Finland	Yes	Yes	22.238	Nippon Steel, Mitsubishi Corp
OP Financial Group	Finland	Yes	No	23.525	Glencore, Mitsubishi Corp, Teck Resources
Government Pension Fund	Norway	Yes	No	3,333.264	BHP, Mitsubishi Corp, Teck resources
Alecta	Sweden	Yes	No	- <sup>[6]</sup>	-
ATP	Denmark	Yes	No	8.304	Mitsubishi Corp
PFA Pension	Denmark	Yes	No	158.044	BHP Group, Mitsubishi Corp, Glencore
Seventh AP Fund (AP7)	Sweden	Yes	No	138.053	Glencore, Mitsubishi, Nippon Steel
Keva	Finland	No	No	- <sup>[7]</sup>	-
Ilmarinen	Finland	Yes	No	- <sup>[8]</sup>	-
Varma	Finland	Yes	No	- <sup>[9]</sup>	-
AMF Pension	Sweden	Yes	No	72.206	Teck Resources
Third AP Fund (AP3)	Sweden	Yes	No	66.962	BHP, Mitsubishi Corp, Teck resources,
Fourth AP Fund (AP4)	Sweden	Yes	No	86.747	BHP, Glencore, Mitsubishi Corp
PensionDanmark	Denmark	Yes	No	3.127	BHP
First AP Fund (AP1)	Sweden	Yes	No	15.753	Mitsubishi Corp, Teck resources, Nippon Steel,
Sampension	Denmark	Yes	Yes	10.270	Glencore, Mitsubishi
Second AP Fund (AP2)	Sweden	Yes	No	3.409	Mitsubishi Corp
Industriens Pension	Denmark	Yes	No	- <sup>[10]</sup>	-
Elo	Finland	Yes	No	- <sup>[11]</sup>	-
PKA	Denmark	Yes	No	13.426	BHP, Nippon Steel
AkademikerPension	Denmark	Yes	No	- <sup>[12]</sup>	-
Lægernes Pension	Denmark	Yes	No	0.588	BHP, Nippon Steel

[4] Nippon Steel is categorised both as a metallurgical coal and steel producer, which leads to some overlap in the investment amounts.

[5]–[12] No transactions were found in the research.

The background of the slide is a photograph of an industrial steel mill. It shows multiple levels of walkways with metal railings, structural beams, and a bright light source in the upper left. A large, solid blue diagonal shape covers the right side of the image, serving as a background for the text.

## **4. Steel sector's coal problem demands forceful stewardship**

As of July 2023, Nordic investors analysed in this brief owned US\$3.8 billion in the largest steel producing companies. The biggest investor is the Norway Government Pension Fund, making up for 47 % of the steel investments with its US\$1.8 billion worth of share and bond holding. Other investors with significant investments in the steel sector include Nordea, SEB, Seventh Swedish National Pension Fund (AP7), Swedbank and Handelsbanken.

The Nordic investors hold shares in secondary steel producers<sup>[1]</sup> without coal-based capacity such as Nucor and Steel Dynamics and companies that have plans to shift away from coal-based steel production such as SSAB. But many of the investee companies also rely heavily on coal-based production and are planning new coal-based capacity such as ArcelorMittal, Nippon Steel and Tata Steel.<sup>[2]</sup>

All three companies mentioned above lack credible climate commitments that would include absolute short-term and interim emission reduction targets for all assets and rely partly or completely on technologies with limited decarbonisation potential. <sup>[3]</sup> Nippon Steel and Tata Steel have carbon intensities above the global average<sup>[4]</sup> and ArcelorMittal has opted for a two-speed decarbonisation by investing in low-emission technologies in Europe and Canada while building new coal-based production in India together with Nippon Steel.<sup>[5]</sup> ArcelorMittal and Nippon Steel have been ranked among the 25 most influential companies blocking climate policy action globally.<sup>[6]</sup> On human rights and pollution violations ArcelorMittal's track record is disastrous<sup>[7]</sup> and Tata Steel has been challenged in the Netherlands for their air pollution and related negative public health impact on local residents.<sup>[8]</sup>

Financial institutions can have a crucial role in making sure that the coming reinvestments of the steel sector are Paris-compatible and do not lock us in polluting technologies for decades to come. This is an opportunity to protect the long term value of Nordic diversified investors, avoid stranded asset risks and increase the positive climate impact of investors when successful engagement leads to meaningful real-world emissions reductions. Even when the share of financed emissions or the size of shareholding is not substantial, Nordic investors should consider engagement with the steel sector due to its emission intensity and overall relevance to our society's transition. If Nordic investors choose to engage with steel companies, they need to present credible and science-based demands to the companies and a time-bound escalation strategy with deadlines for each demand and actions such as letters, voting and shareholder proposals implemented if no progress is made. The engagement needs to be rightly timed in accordance with reinvestment cycles of the steel companies, such as upcoming blast furnace relinings.

For a more in-depth view on steel decarbonisation, read Reclaim Finance's report [\*\*Steeling Our Future\*\*](#)



[1] Secondary production refers to steel production from recycled materials, as opposed to virgin raw materials.

[2] GEM, [Global Steel Plant Tracker](#)

[3] Reclaim Finance (2023), [Assessing the Credibility of ArcelorMittal's Decarbonisation Strategy](#); Transition Asia (2022), [Nippon Steel Emission Pathway Analysis](#); SteelWatch (2024), [Too Little, Too Late – Corporate Climate Assessment of Nippon Steel 2024](#); ACCR (2024), [Forging Pathways – Insights on the Green Steel Transformation](#)

[4] ACCR (2024), [Forging Pathways – Insights on the Green Steel Transformation](#)

[5] Reclaim Finance (2023), [Assessing the Credibility of ArcelorMittal's Decarbonisation Strategy](#)

[6] InfluenceMap (2022), [Corporate Climate Policy Footprint](#)

[7] Fair Steel Coalition (2024), [The Real Cost of Steel](#)

[8] Ej Atlas (2023), [Tata Steel creates pollution and public health concerns in IJmuiden, The Netherlands](#)

**Table 2 - Investor support to largest steel producers, as of July 2023**

Bank	Country of headquarters	Total investments (in mln US\$)	Top companies invested in	Share of coal based routes in the company's capacity	Company developing new coal based capacity
Danske Bank	Denmark	73.000	Nucor Corp Steel Dynamics SSAB <sup>[9]</sup>	0% 0% 69%	No No No
Jyske Bank	Denmark	2.810	Steel Dynamics Nucor Corp BlueScope Steel	0% 0% 46%	No No No
Nykredit	Denmark	100.147	ArcelorMittal Nucor Corp Steel Dynamics	71% 0% 0%	Yes No No
DNB	Norway	48.688	Nucor Corp Steel Dynamics Nippon Steel <sup>[10]</sup>	0% 0% 73%	No No Yes
SpareBank 1 SR-Bank	Norway	- <sup>[11]</sup>	-	-	-
Handelsbanken	Sweden	144.654	SSAB Nucor Corp China Steel	69% 0% 100%	No No Yes
SEB	Sweden	259.568	Nucor Corp Steel Dynamics SSAB	0% 0% 69%	No No No
Swedbank	Sweden	163.922	Nucor Corp Steel Dynamics SSAB	0% 0% 69%	No No No
Nordea	Finland	613.039	Nucor Corp Steel Dynamics SSAB	0% 0% 69%	No No No
OP Financial Group	Finland	39.885	SSAB Novolipetsk Steel Magnitogorsk Iron & Steel Works	69% 75% 85%	No No No
Government Pension Fund	Norway	1,751.335	ArcelorMittal China Steel Tata Steel	71% 100% 84%	Yes Yes Yes
Alecta	Sweden	- <sup>[12]</sup>	-	-	-
ATP	Denmark	35.785	Nucor Corp Steel Dynamics Cleveland-Cliffs	0% 0% 84%	No No No
PFA Pension	Denmark	54.928	ArcelorMittal Nucor Corp Steel Dynamics	71% 0% 0%	Yes No No

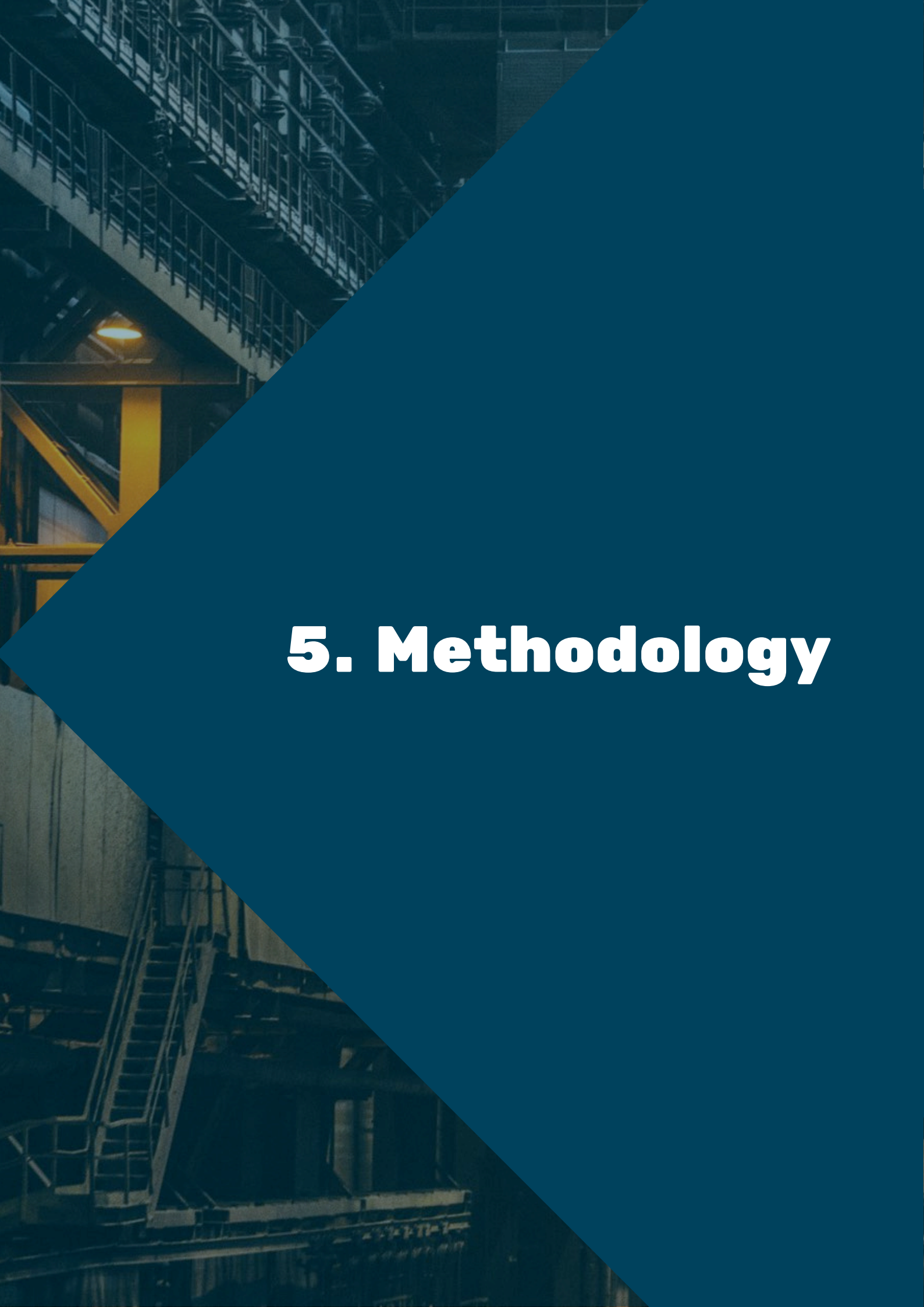
## Steel sector's coal problem demands forceful stewardship

Seventh AP Fund (AP7)	Sweden	258.454	Nucor Corp SSAB China Steel	0% 69% 100%	No No Yes
Keva	Finland	-[13]	-	-	-
Ilmarinen	Finland	27.711	SSAB Thyssenkrupp	69% 99%	No No
Varma	Finland	-[14]	-	-	-
AMF Pension	Sweden	55.454	SSAB Nucor Corp Steel Dynamics	69% 0% 0%	No No No
Third AP Fund (AP3)	Sweden	72.181	SSAB Nippon Steel Steel Dynamics	69% 0% 0%	No No No
Fourth AP Fund (AP4)	Sweden	20.607	Steel Dynamics Nucor Corp SSAB	0% 0% 69%	No No No
PensionDanmark	Denmark	5.112	Cleveland-Cliffs SSAB Commercial Metals	84% 69% 0%	No No No
First AP Fund (AP1)	Sweden	20.116	Nucor Corp Steel Dynamics ArcelorMittal	0% 0% 71%	No No Yes
Sampension	Denmark	18.277	Steel Dynamics Nucor Corp China Steel	0% 0% 100%	No No Yes
Second AP Fund (AP2)	Sweden	22.075	China Steel Metalurgica Gerdau Thyssenkrupp	100% 52% 99%	Yes Yes No
Industriens Pension	Denmark	-[15]	-	-	-
Elo	Finland	5.514	Nucor Corp Steel Dynamics Cleveland-Cliffs	0% 0% 84%	No No No
PKA	Denmark	21.097	Thyssenkrupp Commercial Metals United States Steel	99% 0% 79%	No No No
AkademikerPension	Denmark	14.105	Nucor Corp Cleveland-Cliffs United States Steel	0% 84% 79%	No No No
Lægernes Pension	Denmark	6.136	Thyssenkrupp ArcelorMittal Nucor Corp	99% 71% 0%	No Yes No

[9] SSAB will transform to fossil-free steelmaking around 2030. [SSAB presents plan to strengthen its position towards 2030.](#)

[10] Nippon Steel is in the process of [acquiring United States Steel](#), meaning that United States Steel will also be [categorised as developing new coal-based capacity](#) when the acquisition is final.

[11]–[15] No transactions were found in this research.



# **5. Methodology**



## 5.1 Company analysis

This brief analyses the financial support provided to the 100 companies with the largest operating steel production capacity and the financial support going to the 50 companies with the largest planned metallurgical coal production capacity – hereafter referred to as “metallurgical coal developers”. To select these companies, the May 2023 version of the Global Steel Plant Tracker and the Global Coal Mine Tracker developed by Global Energy Monitor has been used.

*“The Global Steel Plant Tracker (GSPT) provides information on global crude iron and steel production plants, and includes every plant currently operating with a capacity of five hundred thousand tonnes per year (ttpa) or more of crude iron or steel.”*

*“The Global Coal Mine Tracker (GCMT) is a worldwide dataset of coal mines and proposed projects. The tracker provides asset-level details on ownership structure, development stage and status, coal type, production, workforce size, reserves and resources, methane emissions, geolocation, and over 30 other categories.”*

### 5.1.1 Parent company unpivoting and processing

For each asset, regardless of its status, the Global Steel Plant Tracker and the Global Coal Mine Tracker detail many data points, including the holding parent companies and the nominal crude steel production capacity (hereafter referred to as crude steel production capacity) or coal production capacity. In addition, the steel database also goes into further detail where applicable and when information is available, including the steel production per technology of an asset (including basic oxygen furnace and electric arc furnace) and iron production per technology (including blast furnace and direct reduction of iron). Finally, the database details each steel plant’s specific equipment based on the best publicly available data.

The independent research organisation Profundo, which also handled the financial research for this brief, was mandated to process Global Energy Monitor in order to:

- Split the steel production capacity of each asset in the database between the different parent companies, assuming each parent company receives a share of the production capacity equal to its ownership in the asset.
- split the coal production capacity of each mine in the database – either planned or existing – between the different parent companies, assuming each parent company receives a share of the production capacity equal to its ownership in the asset
- Research each Asset - Parent Company - Ultimate Parent Company ownership chain to identify the highest parent company of corporate type.

In addition to this process, affiliation to the parent company of each of the ten largest steel producers’ subsidiaries present in the database (identified using Bloomberg data) has been checked.

This process aims to ensure that companies included in this report do not overlap with one another or belong to the same entity, and that the capacities indicated are the best reflection of reality based on available data. However, it is acknowledged

that some ownership relationships or plant information may be missing due to the lack of transparency of companies, which may cause a splintering of production capacity among a higher number of companies and lead to an underestimation of parent companies' capacity.

It is noted that, depending on available information, Global Monitor Energy provides either the coal production capacity or the latest coal production figure. In the report, this metric is referred to as "production capacity". This approximation has no impact on proposed assets, for which only production capacity information is available. It may however impact figures of operating assets in a conservative way, as an asset's production figure is by construction inferior or equal to the asset's production capacity.

### **5.1.2 Identification of steel companies with the largest operating capacities**

The Global Steel Plant Tracker offers the possibility of differentiating steel plants based on their equipment, their steel production per technology, and their related ironmaking technology. The association of an ironmaking technology and of a steelmaking technology defines a production route. On the basis of Global Energy Monitor data, production capacity associated with the four main following routes was identified: BF-BOF, scrap-based EAF, DRI-EAF, and BF-EAF.

The two first routes (BF-BOF and scrap-based EAF) are included because they are responsible for the large majority of current production. The third (DRI-EAF) is included as it is growing in importance and holds the largest potential to decarbonise primary steel production, providing that DRI production directly uses hydrogen made in electrolyzers powered by sustainable electricity. The last route (BF-EAF) is less significant than the first two production routes but is included since it involves the use of highly polluting blast furnaces.

As mapped in the following table, production capacity for each route has been determined as sets of combinations of:

- A value of the "Main production process" datapoint, which provides information on the ironmaking technology used in the steel plant, and
- A steelmaking technology-specific steel capacity datapoint.

### **5.1.3 Identification of metallurgical coal companies with the largest development plans**

The Global Coal Mine Tracker offers the possibility to differentiate between mines producing thermal coal, mines producing metallurgical coal, and mines producing both, although proportions are not provided for the latest mines. It can also differentiate assets based on their status: Proposed, Shelved, Operating, Mothballed, Cancelled, Closed.

In order to identify metallurgical coal companies with the largest development plans:

- Metallurgical coal companies were identified: mines extracting solely thermal coal and mines missing coal type information were removed from the database. The assumption that no metallurgical coal will be sourced from mines lacking information tends to render this assessment more conservative. Therefore, remaining in scope for this report were mines

producing either metallurgical coal or a mix of metallurgical and thermal coal. For the latter, in the absence of further information, all production capacity was assumed to relate to metallurgical coal.

- Largest metallurgical coal developers were identified: companies were ranked according to their total planned coal production capacity, based on their “Proposed” assets.

As a result of this specific focus on the 50 largest developers of metallurgical coal mines, 80% of the global planned metallurgical coal production capacity is covered in this report. Note that production and production capacity figures indicated in Global Energy Monitor’s database rely on companies’ information, whose definition of metallurgical coal can vary from solely coking coal to also include coal for pulverised coal injections (PCI) and non-coking coal. Hereafter, production capacity associated with assets at the “Proposed” stage are referred to as “planned production capacity”.

## 5.2 Financial analysis

This brief covers the metallurgical coal and steel investments of the 10 largest Nordic banks as per the 2023 ranking of The Banker[1] and the 20 largest Nordic pension funds as per Thinking Ahead Institute’s 2023 Willis Tower Wilson ranking.[2] The top 10 Nordic banks were analysed only for their investment activities.

Financial research for this brief was conducted by the independent research organisation Profundo B.V using financial databases, including Bloomberg, Refinitiv and IJGlobal. Reclaim Finance conducted data verification.

Investments in bonds and shares of the selected companies were identified through Refinitiv, Thomson EMAXX and Bloomberg at the most recently available filing date (July 2023). Pure green instruments were removed from the dataset and not taken into account in the analysis.

For metallurgical coal developers, the transactions were considered in full and not weighted based on the proportion of the issuer’s operations devoted to metallurgical coal. Adjusters were not used to fully measure financial flows allocated to the companies responsible for the largest metallurgical coal development plans, as even in cases where not all transactions are in direct support of metallurgical coal-related activities (especially in the case of highly diversified holdings), companies can still allocate financial resources from non earmarked transactions.

For steel companies, the transactions were weighted based on the proportion of the borrower or issuer’s operations devoted to steel production using adjusters; they were calculated using revenues, operations or capital expenditures, on the basis of available data. To identify the practices of leading companies in the steel sector, the



100 companies included in the scope of this report were selected on the basis of crude steel production capacity, regardless of the production route used. The breakdown of the crude steel production capacity per production route was then used to assess the climate impact and the transition stage of the practices of each of these biggest steel producers.

For more detailed explanations on the financial research used in this report, please consult Profundo's methodology document for steel companies and metallurgical coal developers. The financial institutions explicitly mentioned in the report have been contacted by Reclaim Finance and were given the possibility of accessing and reviewing the financial data concerning them before publication of this report. Data were amended when justified, according to this review phase. The consultation period took place over May 2024.

### **5.3 Methodological Limitations and Risks**

Because of methodology differences, the metallurgical coal and steel financial numbers must be compared carefully, taking into account the methodology developed above.

Some companies may be involved in both metallurgical expansion and steel production, leading to transactions appearing in both metallurgical coal and steel financial numbers.

The financial research was conducted in July 2023. The results do not reflect the most recent holdings of the financial institutions, and their holdings might have changed.

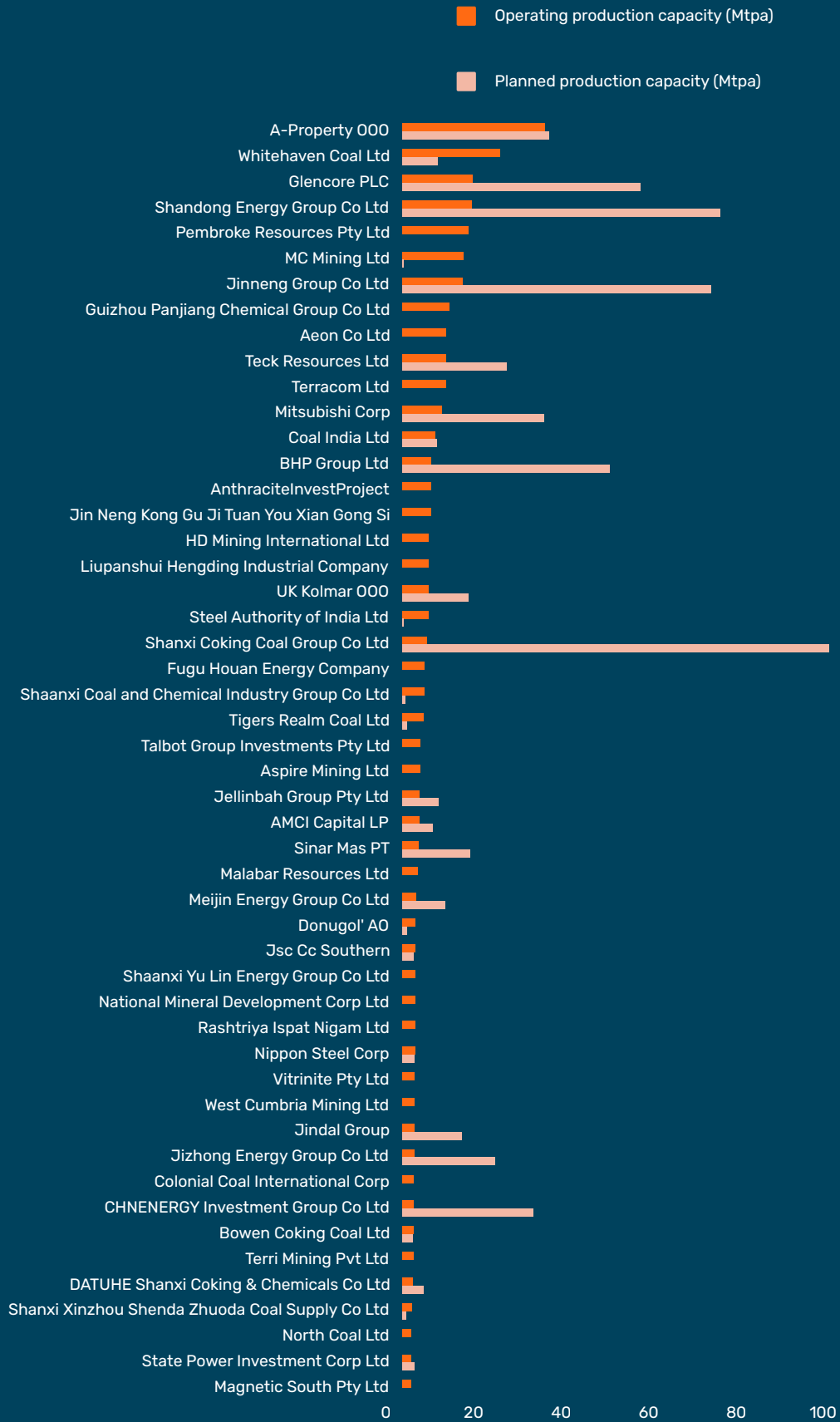
### **5.4 Policy analysis**

This report evaluated the metallurgical and thermal coal policies of the top 10 Nordic banks and the top 20 Nordic pension funds. The focus is on metallurgical coal expansion: how policies consider metallurgical coal projects and companies involved in metallurgical coal mining expansion. Only financing restriction policies were considered. Engagement policies and enhanced due diligence were not included in the report. The policy analysis has been conducted by Reclaim Finance and based on the methodology used in the [Coal Policy Tracker](#). Financial institutions explicitly mentioned in the report have been contacted by Reclaim Finance with questions about existing policies and to ensure no commitments were missed. The consultation period took place in May 2024.

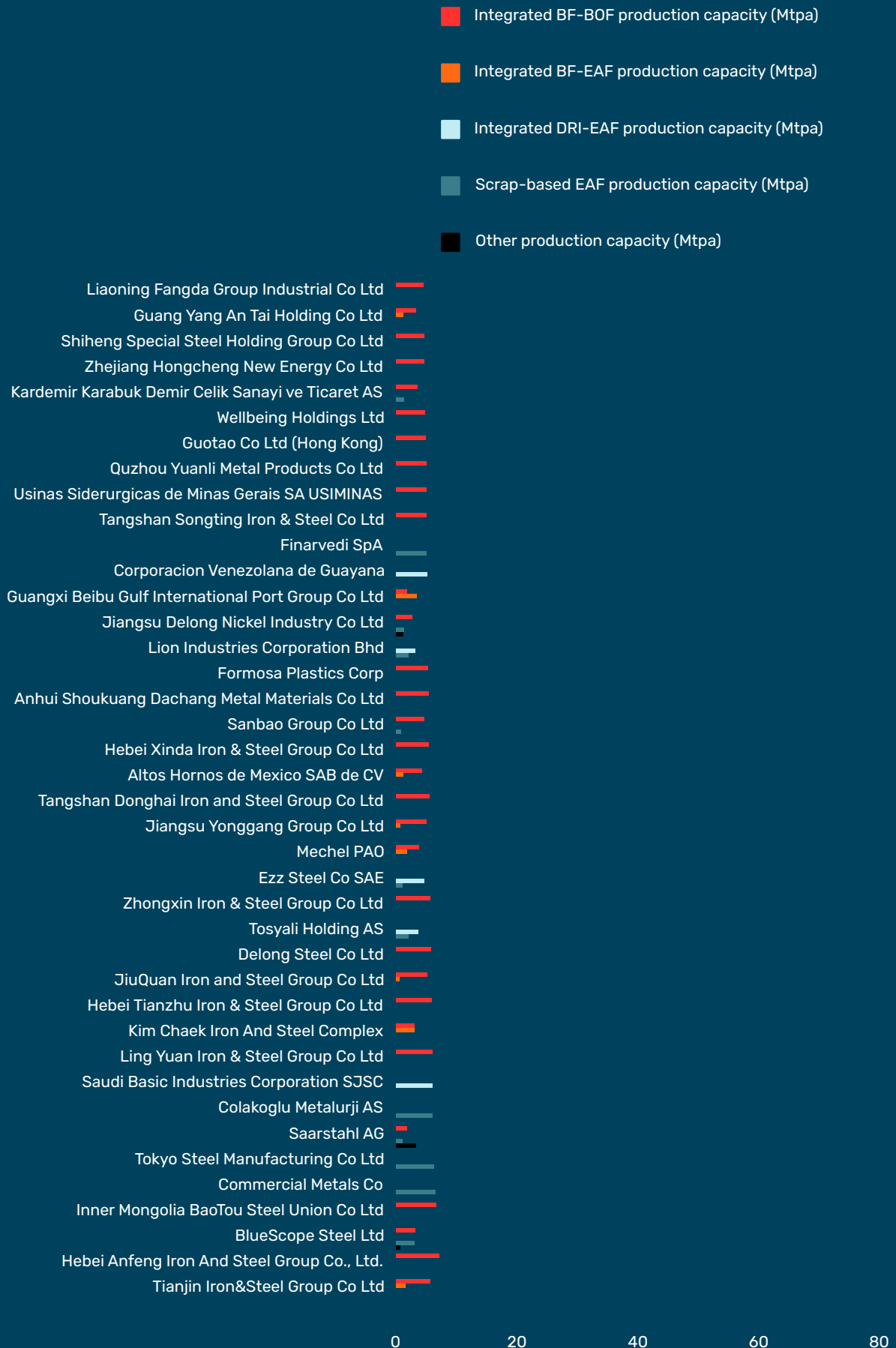
The image features a dark, industrial background with a prominent blue diagonal overlay. The background shows a complex structure of metal walkways, railings, and pipes, illuminated by a single warm light source. The blue overlay is a solid, medium-blue color that cuts across the image from the top-left to the bottom-right. The word "Appendix" is written in a bold, white, sans-serif font, centered within the blue area.

# Appendix

**Figure 2 – Top 50 metallurgical coal developers ranked by planned production capacity**



**Figure 3 – Steelmaking production capacity of the top 100 companies (1/2)**





**Figure 3 - Steelmaking production capacity of the top 100 companies (2/2)**

