

TCFD analysis and report for the 2022 financial year



1. INTRODUCTION

This report comprises EKN's second status report on climate-related risks and opportunities according to the recommendations from the Task Force on Climate-related Financial Disclosures (TCFD). The first [pilot report](#) was published last year.

By analysing and reporting according to the TCFD's recommendations, EKN aims to:

1. Increase understanding of EKN's vulnerability to climate-related financial risks and how the organisation can be strengthened by maximising opportunities in the green transition.
2. Ensure that the credit assessment of transactions takes climate-related financial risks and opportunities into consideration.
3. Measure and decrease the climate impact of EKN's guarantee portfolio in the end use of export products to be in line with the 1.5°C goal of the Paris Agreement.
4. Contribute to a more transparent financial market and describe to stakeholders how climate-related risks and opportunities are managed in the organisation.

2. AN EXPORT FINANCE SYSTEM THAT CONTRIBUTES TO THE CLIMATE TRANSITION

In 2020, the Swedish government tasked EKN to review how the Swedish export finance system can support the climate transition and reduce GHG emissions. That same year, EKN and AB Svensk Exportkredit (SEK) submitted a [report](#) to the government containing conclusions and proposals.

The report describes how EKN's guarantees and SEK's loans can be aligned with the goals of the Paris Agreement by ceasing to support exports for the exploration and extraction of fossil fuels, by providing stimuli to transactions that promote the climate transition and by considering lock-in effects as well as transition opportunities in export transactions.

One of the proposals was to develop the reporting and to strengthen the analysis of climate-related risks and opportunities in accordance with the TCFD.

3. HOW MUCH PROGRESS HAS EKN MADE IN ITS ANALYSIS AND REPORTING OF CLIMATE-RELATED RISKS AND OPPORTUNITIES?

The following activities were carried out in 2022 for the purpose of analysing and reporting climate-related risks and opportunities:

- Update of the governing documents to clarify the Board and management's responsibility in connection with climate-related risks and opportunities.
- First time stress testing the guarantee portfolio under various climate-related scenarios.
- Review of EKN's exposures to sectors with high greenhouse gas emissions and challenges with regard to the transition to climate neutrality.
- Issue of the first green credit guarantee.

	TCFD's recommendation	Current situation	Status	Section
Governance	a) Describe the board's oversight of climate-related risks and opportunities	The Board's overall responsibility connected to climate-related risks and opportunities has been clarified.	●	4.1
	b) Describe management's role in assessing and managing climate-related risks and opportunities	Management's role connected to climate-related risks and opportunities has been clarified.	●	4.1
Strategy	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term	Climate-related financial risks and opportunities at EKN derive from repayment risk with counterparties. EKN's exposure to climate-related risks has been analysed based on country, industry and specific counterparties that were evaluated.	●	4.2
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning	The effect on EKN's operations, strategy and financial planning have been evaluated based on the completed analyses. Green guarantees enable EKN to support the climate transition and to increase climate-related opportunities in the portfolio.	●	4.2
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Scenario analyses under two different climate scenarios have been conducted for counterparties representing 75 per cent of the guarantee portfolio. EKN's resilience to climate-related financial risks is assessed as satisfactory.	●	4.2
Risk management	a) Describe the organisation's processes for identifying and assessing climate-related risks.	EKN's risk assessment process classifies companies based on credit risk. The process takes environmental and climate-related factors into consideration.	●	4.3
	b) Describe the organisation's processes for managing climate-related risks.	Climate-related risks are managed to a certain extent within the framework of the current risk management processes, including the credit risk model.	●	4.3
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	EKN's process for assessing a company's ability to serve its debt covers environmental and social risks. However, the credit risk model is not specifically designed for this purpose and is only one component of the organisation's overall risk management.	●	4.3
Metrics and targets	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	Proposals for climate-related commitments have been developed but will be established in connection with developing a joint climate strategy for EKN and SEK.	●	4.4 (see also 4.2)
	b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	Emissions from own operations have been mapped. EKN's climate impact is almost exclusively indirect, that is, it arises from the end-user activities where export products are used. EKN's exposure in four high-emitting sectors has been analysed.	●	4.4
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	Targets connected to the strategy are not yet established, but will be set together with SEK.	●	4.4 (see also 4.2)

● Fulfilled ● Partially fulfilled ● Not fulfilled

Figure 1: Summary and status of EKN's analysis and report pursuant to the TCFD's recommendations.

4. TCFD – A FRAMEWORK FOR ANALYSING CLIMATE-RELATED RISKS AND OPPORTUNITIES

Climate-related risks and opportunities are explained from a double materiality perspective. This means, for one, that EKN's guarantees have an impact on the global climate (impact out). The climate impact includes GHG emissions from guaranteed projects and operations, in Sweden as well as in countries that import Swedish products.

It also means that climate change and the climate transition have a financial impact on EKN (climate-related financial risks), for example, through the physical impact of water shortages on a hydropower plant or the impact of the introduction of carbon tariffs on a buyer's financial position.

Guarantees directed to climate transition and climate adaptation projects have a positive impact, for example, new solar and wind power projects of efficiency enhancements that lead to reduced emissions at an existing pulp mill.

4.1 Governance – The role of the Board and management

In 2022, the responsibility of EKN's Board and management in connection with climate-related risks and opportunities has been clarified through the revision of the relevant governing documents. The Board establishes policies and guidelines, including the sustainability and credit policies. The management group is responsible for analysing and managing all of the overall organisational risks, including climate-related risks and opportunities.

Responsibility for climate-related issues is expressed in EKN's sustainability policy. The policy has been updated to include, in addition to how EKN's operations impact the environment, how a changed climate can impact EKN's operations. The climate-related financial risks that EKN is exposed to are expressed as a credit risk and are managed within the framework of EKN's credit policy and the ordinary risk management process.

4.2 Strategy – the impact of climate-related risks and opportunities on EKN's strategy and resilience

The climate transition and climate change entail a financial impact for EKN that derives from repayment risks with the counterparties, who are either buyers or guarantors. Accordingly, EKN's climate-related financial risks comprise counterparty risks. Some counterparties are expected to benefit from the climate transition, and in these transactions, the climate transition is viewed as an opportunity to mitigate risk.

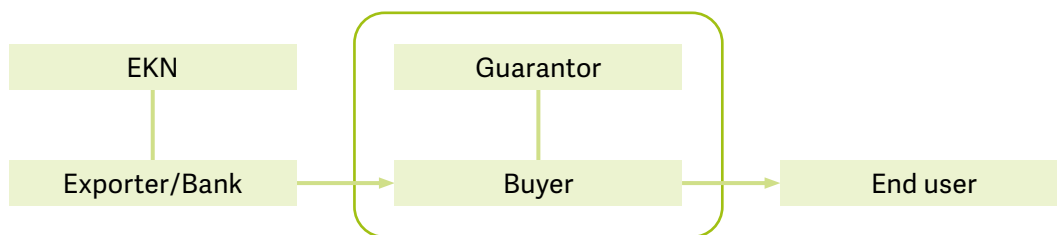


Figure 2: Involved parties in an EKN-guaranteed export transaction, with counterparty risk marked.

There are two categories of climate-related financial risk: transition risks and physical risks. Transition risks comprise the risks that businesses are exposed to as a result of regulatory changes, technological developments and demand. These may include changes in carbon emission prices, climate tariffs or lower demand for products with a high carbon footprint.

Physical risks are divided into acute and chronic physical risks. Acute risks pertain to exposure to extreme natural phenomena such as droughts, cyclones, floods, storms, landslides and fires. Chronic risks refer to climate changes that take place over an extended period of time, such as temperature change, rising sea levels and water scarcity.

Launching so-called green guarantees is one example of how EKN can support the climate transition and increase climate-related opportunities in the portfolio. The share of green transactions that meet the climate requirements in the EU Taxonomy comprises nine per cent of EKN's guarantee portfolio. The Taxonomy contains a list of economic activities that contribute to reaching the EU's climate goals in line with the Paris Agreement. The goal is, over time, to increase the number of and share of green transactions in the portfolio.

New green transactions that support the climate transition	2022	2021	2020	2019
No. of transactions	4	5	0	1
Guarantee volume (SEK million)	8,077	14,573	0	2,968
– of which, Green credit guarantees (launched 2021)	24	0	—	—
– other transactions that comply with the EU Taxonomy	8,053	14,573	0	2,968
Green transactions as a share of EKN's total guarantee portfolio (on 31 Dec)	9%	7%	1%	2%

4.2.1 Stress tests under two climate scenarios

Stress testing entails evaluating risks in EKN’s guarantee portfolio based on future climate scenarios. The results of the stress tests are used to understand EKN’s financial vulnerability in terms of the climate transition and climate change and, based on this, to adjust risk policies and assessments where necessary.

EKN has selected two climate scenarios prepared by the International Energy Agency (IEA): the Net Zero Emissions by 2050 Scenario (NZE); and the Stated Policies Scenario (STEPS). The NZE illustrates the risks and opportunities that will arise as countries around the world implement the Paris Agreement. While transition risks are high in this scenario, physical risks are lower. In STEPS, while the world is heading toward a higher degree of warming with greater physical climate risks, the consequent transition risks are lower.

	Net Zero Emissions by 2050 Scenario (NZE)	Stated Policies Scenario (STEPS)
Description	A pathway to net zero emissions in the energy sector by 2050 and emission reductions in other sectors due to ambitious climate policies and innovation.	A future development which is based on climate policies that are either in place or have been announced.
Expected temperature increase	1.5°C in the long term (with 50% probability)	2.7°C by 2100 (with 50% probability)
Main risk, by type	Transition risks	Physical risks

A considerable portion of EKN’s portfolio comprises sovereign risks. The payment risk in these transactions is guaranteed by each country’s ministry of finance. The underlying transactions pertain to areas such as energy, defence and infrastructure, but it is the climate-related financial risks that could impact the state’s payment capacity that are analysed. The climate scenarios downgrade several of the sovereign risks, in particular in the long term. Agriculture-dependent countries, for example, Ethiopia, Kenya and Pakistan, are exposed to physical risks in terms of increased risk both of droughts and of floods. Whereas the oil-dependence of countries such as Angola and Iraq means they are vulnerable to transition risks.

In addition to vulnerable countries, there are sectors with exposure to transition risks. EKN uses the Carbon Asset Risk Framework¹ to define these sectors. In each climate scenario, the risk classifications of counterparties in vulnerable sectors are adjusted in terms of expectations of new regulations, technological developments, changes in consumer behaviour and refinancing risk.

¹ The Carbon Asset Risk Framework has been developed by the World Resources Institute and the UNEP Finance Initiative to guide financial institutions in the evaluation of their exposures to climate-related transition risks.

4.2.2 Impact on EKN's financial position

EKN has subjected the guarantee portfolio to stress testing by making assumptions for countries, sectors and individual counterparties on the basis of the two climate scenarios. The risk classifications of counterparties representing 75 per cent of the guarantee portfolio have been revised, while others have remained unchanged.

The impact on EKN's financial position is best expressed through changes in provisions for expected losses. The following table presents changes in EKN's risk provisions in the two scenarios and over different time horizons:

Climate scenario	Net Zero Emissions by 2050 Scenario (NZE)			Stated Policies Scenario (STEPS)		
	Short term <3 years	Medium term, 3–10 years	Long term >10 years	Short term <3 years	Medium term, 3–10 years	Long term >10 years
Change in EKN's risk provision	<5%	<5%	5-10%	<5%	<5%	5–10%

The assumptions entail an increase in EKN's risk provisions in the short and medium term of less than five per cent, and in the long term by between five and ten per cent. This would correspond to an increase in provisions of up to SEK 1 billion in the long term. The main risk driver comprises the deterioration of sovereign risks.

Compared with EKN's total provisions of SEK 14 billion and equity of SEK 25 billion, the increase in EKN's risk provisions under the two climate scenarios is limited. The changes would have been more substantial if high risk provisions were not already in place for a number of vulnerable exposures, such as Russia. Overall, EKN's resilience to climate-related financial risks is satisfactory. However, uncertainty increases due to difficult-to-assess physical climate risks and exposures to a number of vulnerable countries.

4.3 Risk management – processes for identifying and managing climate-related risks

4.3.1 Identifying, assessing and managing end users with significant climate impact

Environmental and sustainability screening is incorporated in EKN's transaction assessments. All transactions are screened to identify those with high risk for impacting the environment, including climate change, and human rights, which are then subjected to in-depth examination.

Regarding climate, the screening identifies transactions where the export product is destined for end use within industries and operations where EKN has restrictions. One example is the entire value chain for coal, transactions for new oil-fired power plants and the extraction of oil and gas.² The screening also sorts out transactions where the policy does not have any hard restrictions, but that have a potentially high impact on the climate and that require further review to see if they are acceptable for EKN.

For new projects and operations, the review focuses on analysing how high GHG emissions are expected to be during the life cycle of the project or operation, in accordance with the OECD's guidelines for export credit agencies, and whether there are transition plans to reduce these emissions during the coming years.

The transaction is given a classification of A, B or C based on the risk of negative impacts related to environmental or social factors. In 2022, one transaction with a potentially high climate impact received the highest risk classification A. In cases where EKN does not issue a guarantee, for example due to high climate impact, EKN tries to influence other export credit agencies to follow suit and international regulations with the aim of creating competitive neutrality.

New A transactions where GHG emissions comprise the main risk area	2022	2021	2020	2019
No. of transactions	1	3	22	19
Offered guarantee volume (SEK million)	6	129	876	3,139

² EKN's approach to fossil fuels is set out in Appendix 1 of EKN's [Sustainability Policy](#).

4.3.2 Identify, assess and manage climate-related financial risks and opportunities in credit assessment

The climate-related financial risk that applies to EKN is credit risk, meaning climate-related factors that impact counterparties' repayment ability. Climate risks are included in EKN's credit risk assessments as part of the credit assessment model. The model has three components: industry, operations and financial profile. Each industry is assessed based on transition risks according to the credit rating agency S&P Global. Higher climate risk may entail a higher guarantee premium.

The credit analysis can be further adjusted if the counterparty, in addition to the overall industry risk, is directly exposed to climate-related, environmental or social risks that can impact repayment ability.

EKN's credit analysis method will be developed with clearer guidance regarding credit-impacted sustainability and climate-related risks and opportunities.

The goal is to include climate-related financial risks in the credit risk assessment of new transactions in a more systematic way, in particular for large transactions with long maturities.

For example, method development will include physical climate impact as a factor in the credit analysis of projects in areas with high physical impacts, such as hydropower projects in drought areas or infrastructure projects in areas prone to landslides and flooding.

4.4 Metrics and targets – EKN's climate impact

EKN's climate impact derives almost exclusively from the guarantee portfolio, and the counterparties and activities that EKN participates in and makes possible by issuing guarantees. EKN is committed to adapting its operations and restructuring financial flows to support reaching the Paris Agreement's 1.5°C goal. In line with Sweden's climate goals, EKN's guarantee portfolio is to reach net zero emissions by 2045.

EKN works together with SEK to develop short- and medium-term climate targets, to measure climate impact and to contribute to the climate transition. The targets and strategies will guide us toward an increased contribution to the climate transition through a higher share of transactions aligned with the Paris Agreement’s 1.5°C goal and reduced GHG emissions from the guarantee portfolio.

EKN’s climate impact can be reduced by continuing to decrease the share of transactions with a high climate impact and by promoting the transition in the transactions included in EKN’s portfolio. EKN will concurrently continue efforts to engage in dialogue with other export credit agencies and other financial actors to promote climate transition in the sector.

4.4.1 EKN’s GHG emissions from offices and business travel

EKN’s emissions from its own operations are reported every year in a public report. Emissions stem primarily from office heating via district heating (Scope 2) and business travel (Scope 3), which amounted to 5.1 tons and 213.9 tons of CO2 respectively in 2021. Electricity consumption at offices is supplied with renewable energy.

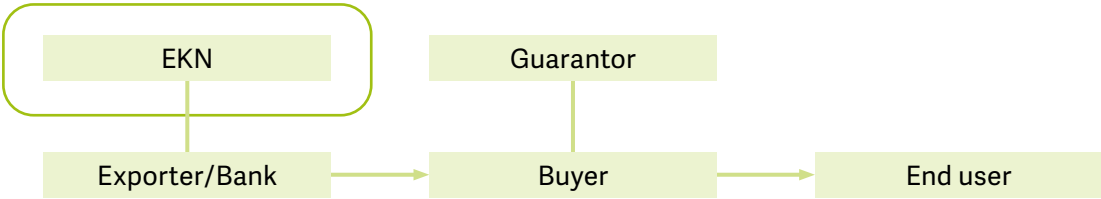


Figure 3: Involved parties in an EKN-guaranteed export transaction, with EKN’s own emissions marked.

Of total emissions from business travel, over 95 per cent came from flights. Emissions in 2022 were significantly up on the pandemic years of 2020 and 2021, but down compared with prior to the 2019 pandemic. During the year, EKN has clarified the climate targets for business travel with the aim of reducing emissions. The overall objective is as follows:

- **Reduce carbon emissions from business travel every year.**

The pandemic years when emissions were naturally very low have been taken into account. This results in the following objectives:

- CO₂ 2023 < CO₂ 2019
- CO₂ 2024 < CO₂ 2023
- CO₂ 2025 < CO₂ 2024

EKN will achieve the goal through clearer guidelines:

- The purpose of each business trip is to be realised in the most cost-effective and climate-friendly way possible.
- Air travel under 500 kilometres should be avoided.
- The share of rail travel should increase for journeys of less than 500 kilometres.
- Employees are to be informed of the rules and guidelines, and encouraged to use digital meetings.

Carbon footprint of offices and business travel in tons of CO₂	2022	2021	2020	2019
Total GHG emissions	219.0	39.1	148.9	266.4
Direct GHG emissions (Scope 1)	—	—	—	—
Energy consumption (Scope 2)	5.1	4.5	5.5	8.5
Business travel (Scope 3)	213.9	34.6	143.4	257.9
Emissions per employee (workforce for the year)	1.5	0.3	1.1	2.0

Table 2: EKN’s GHG emissions from own operations.

4.4.2 Climate impact from EKN’s guarantee portfolio

EKN’s climate impact almost exclusively comprises GHG emissions from the underlying projects and activities to which EKN provides guarantees. In this section, we review EKN’s exposure within four sectors with high emissions that are assessed as most affected by the climate transition: energy, transport, pulp and paper, and mining. These sectors all face challenges in the transition to climate neutrality.

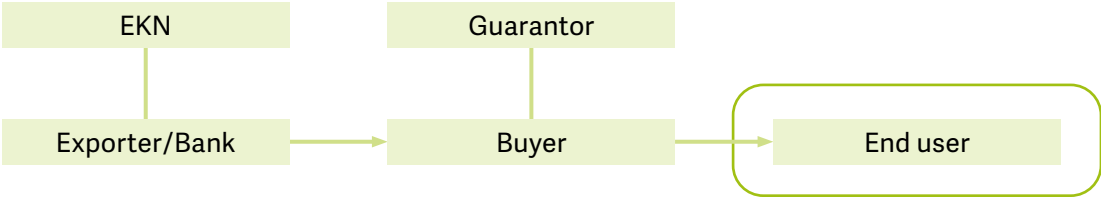


Figure 4: Involved parties in an EKN-guaranteed export transaction, with end users’ emissions marked.

While the two largest sectors in EKN’s portfolio are telecoms and defence, they are not included in the following report. The telecoms sector has a low climate impact and has the potential to enable the transition of other high-emitting sectors. The defence sector is generally associated with high GHG emissions. While methods for estimating emissions from military equipment use are being developed, these are hampered by the secrecy surrounding activities.

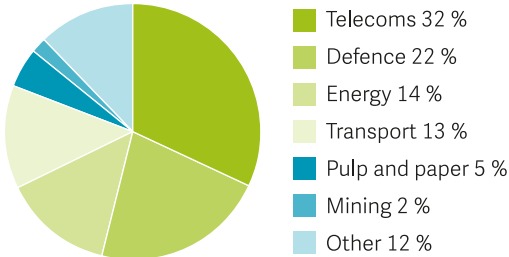


Figure 5: Sector breakdown of EKN’s guarantee portfolio, as of 31 Dec 2022. The category Other includes, for example, trade, medical devices, food and media.

The energy sector

The energy sector accounts for a majority of the world’s GHG emissions. To reach the goals of the Paris Agreement, a change in this sector is essential. From an international perspective, the share of exports to fossil energy projects of the Swedish export industry is relatively small. This is reflected in EKN’s low fossil fuel exposure compared with many other countries’ export finance systems.

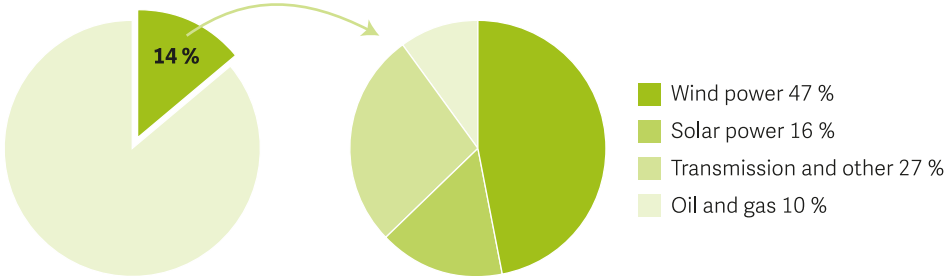


Figure 6: The energy sector’s share of EKN’s guarantee portfolio (left) and the distribution of energy types (right), as of 31 Dec 2022.

The graph illustrates EKN’s energy sector exposure and the distribution of different types of energy. Renewable energy, primarily wind power, accounts for more than 60 per cent of the exposure. This is followed by transmission with just over one quarter.

While fossil-fuel-related transactions comprise a declining portion of the portfolio, these are the most risk-filled sectors with the greatest climate impact. Oil and gas account for 11 per cent of EKN’s energy sector exposure, and just under 2 per cent of EKN’s total guarantee volume. These pertain mainly to transactions for fossil fuel extraction and production that were taken prior to the 2018 decision to end such support. Payments in these transactions continue until 2031 at the latest.

Transport sector

The transport sector is the world's second largest source of GHG emissions. Emissions from the transport sector are once again rising following a temporary decline during the pandemic. Today, commercial solutions exist in terms of electrification, automation and connectivity as well as biofuels. Alignment with the Paris Agreement's 1.5°C goal requires rapid electrification of road vehicles and increased use of low-emission fuels as well as policies that stimulate more sustainable modes of travel and transport.

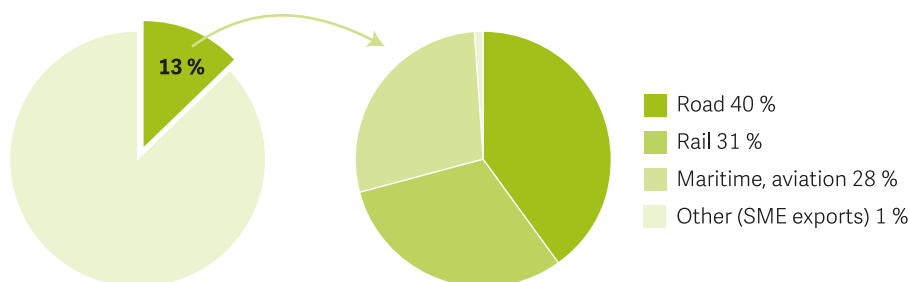


Figure 7: The transport sector's share of EKN's guarantee portfolio (left) and the distribution of modes of transport (right), as of 31 Dec 2022.

The graphs above illustrate EKN's transport sector exposure as well as the distribution of different modes of transport. Railway projects comprise a few large projects where the government in the buyer country guarantees payments. These include railways both with and without electrification.

Road transport encompasses buses, trucks and cars. The majority pertains to fossil fuel vehicles but the share of low-emission and electrified vehicles is increasing. The shipping sector mostly pertains to working capital financing for one Swedish shipping company.

Pulp and paper sector

The pulp and paper sector currently accounts for 2 per cent of global industrial GHG emissions. The sector is in a growth phase leading to increased emissions and generally has high potential for efficiency gains. According to the IEA, energy efficiency investments are needed with the main measures aimed at increasing the share of pulp and paper produced from recycled material and at implementing the best available technologies in production. The pulp and paper sector needs to phase out fossil fuels and replace them with sustainable alternatives with low GHG emissions.

The graph below illustrates EKN's exposure to the pulp and paper sector. EKN's portfolio includes transactions for new and existing pulp and paper mills, which generally have high GHG emissions. Many of these include plantations for the supply of raw materials and some sites include small fossil fuel gas power plants.

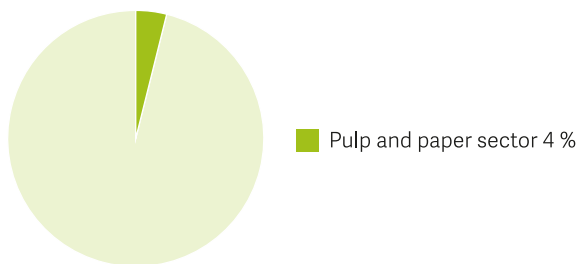


Figure 8: The pulp and paper sector's share of EKN's guarantee portfolio, as of 31 Dec 2022.

The equipment provided by Swedish exporters generally meets the best available technology rule and helps to increase mill efficiency. Despite this, the total emissions of the projects are often high and require investments in the transition for the entire project. The opportunity to influence that EKN has can be used to, together with other financiers, influence the projects to increase production efficiency and minimise forestry emissions in the supply of raw materials.

The mining sector

The mining sector currently accounts for between 4 and 7 per cent of global GHG emissions. The emissions partly derive from direct emissions from the fossil fuel power supply of the mines, but the majority comes from methane gas emissions across the entire value chain. The mining sector is expected to grow globally as demand increases for metals, such as steel, copper and rare earth elements, which are necessary for the climate change transition of other sectors.

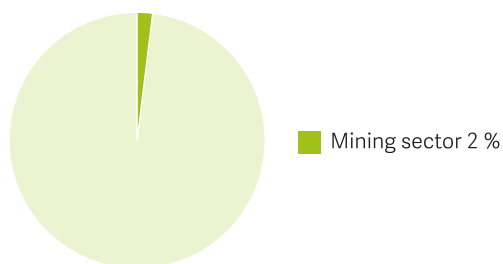


Figure 9: The mining sector's share of EKN's guarantee portfolio, as of 31 Dec 2022.

Reducing mining sector GHG emissions requires collaboration between stakeholders throughout the value chain, from extraction to use and recycling. Improved systems for recycling materials and metals are a key factor in reducing emissions from the entire sector. The transition factors that mining projects can unilaterally implement to reduce direct emissions include increased use of renewable energy, electrification of machinery and other energy efficiency measures. Where export financing is crucial to mining projects, EKN can support these types of measures by setting requirements.

