



35%

Target Reduction in absolute Scope 1 & Scope 2 Emissions by 2030

 $837kt^{CO_2-e}$ 

Scope 1 GHG Emissions in FY25

Scope 2 GHG Emissions in FY25

 $1,157kt^{CO_2-e}$ 

Scope 3 GHG Emissions in FY25

# Climate Change











# Our Approach

Northern Star's continued alignment with the Task Force on Climate-related Financial Disclosures (TCFD) has assisted us to understand and build resilience in our business in relation to the physical and transitional risks posed by climate change.

As part of our risk mitigation strategy, Northern Star has continued to focus on:

- assessing and reducing our greenhouse gas (GHG) emissions footprint;
- analysing the physical and transitional risks and opportunities of climate change on our Operations, and ensuring control measures are incorporated into our business practices;
- quantifying potential financial implications of climate change on our business through
- maintaining our strong climate change governance processes.

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

between 1 July 2021 and 30 June 2025, where 1 July 2021 represents business as usual baseline levels.1

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

between 1 July 2021 and 30 June 2026, where 1 July 2021 represents business as usual baseline levels.

Demonstrate tangible, sustainable Scope 1 and

between 1 July 2021 and 30 June 2027, where 1 July 2021 represents business as usual baseline levels.1

Demonstrate tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of

between 1 July 2021 and 30 June 2028, where 1 July 2021 represents business as usual baseline levels.

As disclosed in our 2017-FY24 Sustainability Reports and ESR Disclosure Suite, the Company has completed scenario analysis studies. These determined that a proactive effort scenario, which limits the average global temperature increase to below 2°C, would be most advantageous for reducing the impacts of climate change on our business and the planet. Progressing on from these findings, we announced an ambition to achieve Net Zero by 2050 and our planned pathway to achieve our target to reduce Scope 1 and Scope 2 Emissions by 35% by 2030.

Please note that total numbers in charts and tables within the ESR Disclosure Suite may differ due to rounding.

# **Northern Star's position on Climate Change**

We accept the science of climate change as reported by the Intergovernmental Panel on Climate Change.

We are committed to the Paris Agreement and a net-zero carbon future, on a 1.5°C pathway.

We acknowledge the invitation made to the private sector by the United Nations to scale up efforts and support actions to reduce emissions and/or build resilience and decrease vulnerability to adverse effects of climate change. We understand the importance of understanding and adapting to climate change related risks.

Our Climate Change Policy commits Northern Star to developing and implementing a climate change strategy that:

- focusses our activities in reducing Scope 1 and Scope 2 Emissions;
- aligns our operations with the 1.5°C Ambition;
- use our influencing capability to reduce Scope 3 Emissions; and
- contributes to the 1.5°C Ambition beyond our business by influencing government and funding business relevant projects to help remove or avoid emissions.

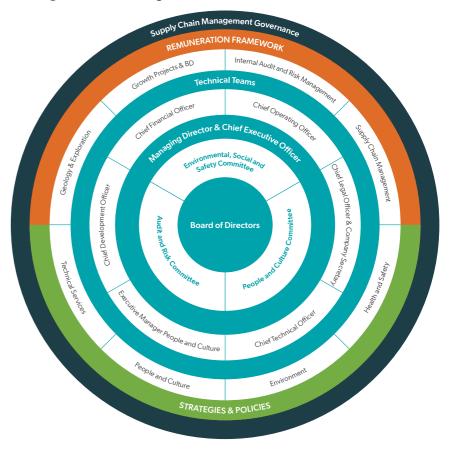
# Climate Change Governance

Northern Star's Board has oversight of the physical and transitional risks posed by climate change assisted by the ESS Committee's oversight of environmental and social performance risks, and climate change related risks and the Audit & Risk Committee's oversight of the Company-wide risk management framework.

The Company's climate change related governance structure is shown in Figure 1. Climate change related matters are considered quarterly by the Board through its ESS Committee meetings.

Northern Star's Chief Technical Officer who reports to the Managing Director & CEO is responsible for developing and implementing the Company's clean energy transition projects. The Company's Chief Legal Officer & Company Secretary has climate change related disclosure responsibilities within her portfolio.

Figure 1 Climate Change Governance



Includes 50 kt CO<sub>2</sub>-e by 30 June 2024, 50 kt CO<sub>2</sub>-e by 30 June 2025, 50 kt CO<sub>2</sub>-e by 30 June 2026, 50 kt CO<sub>2</sub>-e by 30 June 2027, and 50 kt CO<sub>2</sub>-e by 30 June 2028



# Restatements of Information

The following items are restated from our FY24 ESR Disclosure Suite:

- FY24 and FY23 data is restated for inclusion of the Pilbara Operations
- Updates to anticipated commissioning timeline provided for Northern Star's planned pathways targeting 35% emissions reduction by 2030

# Our planned pathway to achieve our target to reduce Scope 1 and Scope 2 emissions by

Northern Star's clean energy transition continued to be an important focus in FY25. Prioritising the reduction of electricity generated from sources such as diesel and gas, we scoped, planned, designed and commissioned projects to implement solar, wind and battery electric storage systems on our grid-connected and islanded mine sites. This approach continues to be recognised as having the biggest impact on our current Scope 1 and Scope 2 emissions, while providing a secure supply of power at lower overall costs.

Northern Star is on track to meet our goal to reduce 35% of our Scope 1 and Scope 2 Emissions by 2030; a reduction in greenhouse gas emissions from our baseline (1 July 2020) of 931k t CO<sub>2</sub>-e down to approximately 605k t CO<sub>2</sub>-e.

# Climate Change Commitment

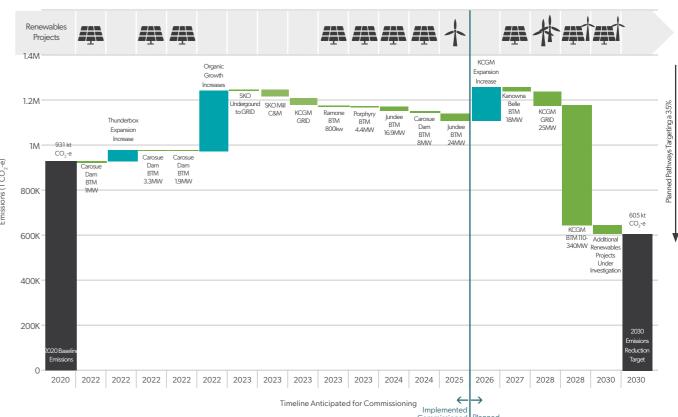
Northern Star remains committed to the Paris Agreement and a Net Zero carbon future, on a 1.5°C pathway.

Since announcing our Net Zero Ambition on 22 July 2021, we have outlined our decarbonisation pathway for achieving our 2030 Emissions Reduction Targets of 35% reduction in Scope 1 and Scope 2 Emissions on the way to achieving our ambition of Net Zero operational Emissions by 2050. The 1 July 2020 baseline (931k t CO<sub>2</sub>-e) for the 35% reduction target was set to give tangible measurable objectives, and will be re-set in 2030 to take into account the Hemi Development Project. Information about the assumptions behind figure 4 is provided on page 39.

We have continued to:

- Engage with investors on our decarbonisation strategy.
- Work on Emissions Reduction projects and future modelling programs.
- Improve our Scope 3 accounting.
- Map our existing climate-related financial disclosures, data and processes against the incoming AASB S2
- Integrate our climate change risks and opportunities into our operational and strategic risk registers.
- Commence a refresh of our existing climate-change related scenario analysis modelling and financial quantitative analyses of material physical and transition risks and opportunities in line with AASB S2 requirements and incorporating our new assets.

Figure 2 Northern Star's Planned and Implemented Pathways targeting 35% Emissions Reduction by 2030<sup>2</sup>



The decarbonisation projects depicted in Figure 2 above, are based on the key assumptions outlined in Appendix E on page 39 of this disclosure. Note that the KCGM 2028 commissioning timing assumes that the KCGM renewable project involves the Western Australian Environmental Protection Authority determining that Northern Star's referral of the KCGM renewables project (forming part of the Eastern Goldfields Power Project) to the EPA under section 38 of the Environmental Protection Act 1986 does not require assessment. If assessment is required by the EPA, the expected timeline will be 2-3 years longer before commissioning could occur. Northern Star expects to gain more certainty about the environmental approvals timeline in early

At 30 June 2025 Northern Star has reduced Carbon Emissions (Scope 1 & Scope 2) by 108,297 t CO<sub>2</sub>-e as per Table 1 (externally verified). An additional ~27,700 t CO<sub>2</sub>-e has also been potentially reduced, but Northern Star has not included it in stated reductions at this time as it is still subject to external verification processes.

<sup>&</sup>lt;sup>2</sup> This pathway does not yet include potential emissions reduction projects that may be associated with the Hemi Development Project.

Northern Star continues to be committed to achieving our ambition of Net Zero by 2050. This is a challenging ambition. Much of the technology required to economically achieve high levels of renewable energy penetration is in the early stages of development and has yet to become commercially available and economically viable. In addition, Northern Star's life of assets do not currently extend to 2050.

Understanding this, Northern Star has assessed a wide range of technologies and remains actively engaged in a number of workstreams with proponents that are most likely to facilitate the transition to Net Zero. Our approach continues to focus on four key areas:

## **Maximum Green Power**

On remote sites with self-generated electricity, stability and reliability of electricity supply can become a concern as the penetration of renewable energy increases.

While there is no risk to reliability of Northern Star's electricity supply at current levels of renewable energy penetration, achieving 'engines off' (where the gas and diesel generators are completely offline) will require increased use of energy storage systems. This may be achieved by scaling up existing technology (specifically lithium-ion batteries) or the introduction of alternative battery storage chemistry-types (for example vanadium redox or graphene) that can provide steady long-term storage.

Northern Star is actively engaged with proponents of these technologies, assessing the suitability, availability, scalability, and cost of these opportunities.

## **Transition to a Green Fleet**

Our diesel fleet contributes a significant portion of our Scope 1 emissions. While clean solutions for stationary diesel fleet exist and are available, the transition of mobile fleet from diesel to clean energy continues to be a challenge. Responding to this industry-wide challenge, OEM's have developed plans, pathways, prototypes and demonstration models.

Northern Star is collaborating with a number of OEMs in these projects, providing mine-specific information to ensure that the final solution is suitable for our needs. In FY25 Northern Star initiated detailed modelling for a clean energy fleet by the OEM's as well as independently developing our own. The modelling work is intended to quantify the capacity of renewable energy generation that will be required to meet demand form the future fleet.

Despite participating in the OEM projects, we remain open to all feasible solutions, in order to ensure our final choice is the most appropriate and cost-effective technology available.

# **Energy Efficiency Opportunities**

Renewable energy generation capacity is already providing an important proportion of Northern Star's electricity demand. As demand increases, it must be balanced with renewable energy capacity.

While it is always possible to scale up renewable energy assets, Northern Star is seeking to understand the demand-side drivers and dynamics. Benchmarking of the appropriate metrics enables us to identify and understand fundamental shifts in energy usage and efficiency in our operations.

In FY25 we have made progress in ensuring this power utilisation and generation data is accessible and valuable in our decision making. We expect to complete the process in FY26 and begin investigating energy efficiency on a site-by-site basis.

# **Emerging technologies**

Northern Star actively considers all forms of low-carbon technologies and has investigated a number of carbon abatement projects in FY25 (such as human-induced regeneration). Cost and benefit are always important considerations when we assess options, with some solutions still appearing cost-prohibitive (for instance drop-in biofuels).

Other technologies such as green hydrogen are impeded by our particular constraints (namely, our constrained access to the large volumes of high-quality water needed).

# Progressing Our Decarbonisation Pathway

In FY25 Northern Star continued to progress towards our target of 35% reduction in Scope 1 and Scope 2 emissions (from a 1 July 2020 baseline of 931k t  $CO_2$ -e) by 2030 by transitioning from diesel or gas-generated electricity to renewable energy.

The commissioning of the solar and BESS components of the Jundee project were finalised and the wind component was commissioned successfully (see highlights).

Northern Star's Decarbonisation Pathway is continuously updated to ensure feasible capacity and timelines are current. The forecast timeline for execution of the Pogo solar project and the Pogo green grid PPA have moved, due to uncertainty of approvals and delays in United States Federal funding.

Northern Star continues to investigate other feasible projects and prioritising them on the basis of their abatement impact, the risk and opportunity they present, their economic viability, timeline to energisation, operational integration, and the amount of carbon reduction they are expected to achieve.





# Highlight – Jundee Wind, Solar and BESS project

On 16th June 2023 Northern Star entered into a 15 year Power Purchase Agreement (PPA) with Zenith Energy for supply of electricity to the Jundee Operations. The PPA included the provision of 24 MW of wind, 16MW of solar energy and a 12 MW/13.4 MWh BESS.

The Jundee project was successfully executed, with solar and BESS energised in late FY24 and the last wind turbine commissioned on 15th October 2024.

The operation of the Jundee wind/solar/BESS system has resulted in an average of 43% renewable energy in the generation since being commissioned in mid-February 2025, with a maximum weekly penetration of 57%. This is an abatement of approximately 18,000 t CO<sub>2</sub>-e during the period since commissioning. The project is on-track to deliver the forecast abatement of over 50,000 t CO<sub>2</sub>-e/annum.

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# Highlight – Carosue Dam Solar Project

On 21st February 2024 Northern Star entered into a Power Purchase Agreement (PPA) with Pacific Energy for supply of electricity to the Carosue Operations incorporating 8 MW of solar generation.

The solar generation facility achieved commercial operation on 13th March 2025. It consisted of the single-axis tracking system and is integrated into the existing gas power station network (operated by Pacific Energy). The new 8MW plant has taken the total RE penetration at CDO from 6.5% to 13.8% and has reduced carbon emissions by over 8,000t CO<sub>2</sub>-e per annum.

# Highlight – Porphyry Solar Project

The Porphyry hybrid power station has been operating for almost 18 months. The Aggreko system consists of 4.4 MWp of fixed-tilt solar panels and Aggreko's Y. Cube containerised BESS units, with a total capacity of 3 MW. In FY25 it demonstrated a maximum monthly renewable energy penetration of over 25%.

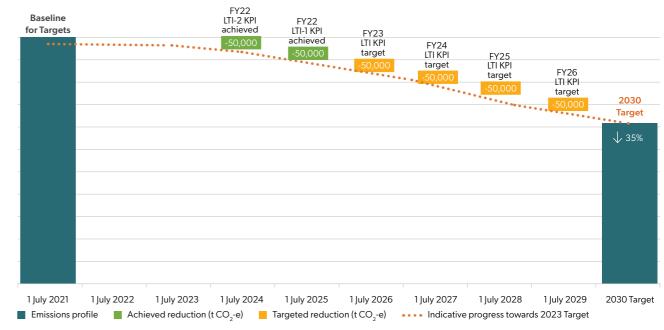


# **Emissions Reductions Achieved So Far**

Northern Star is pleased to report that our FY22 key performance indicator of demonstrating tangible, sustainable Scope 1 and Scope 2 carbon Emissions Reductions of 100k t  $CO_2$ -e between 1 July 2021 and 30 June 2025 (where 1 July 2021 represents business as usual baseline levels) was measured as at 30 June 2025 and achieved as detailed in Table 1.

Note that our remuneration-related key performance indicators are measured relative to a 1 July 2021 business as usual baseline. In contrast, our commitment to achieve a 35% reduction in Scope 1 and 2 Emissions is measured relative to our 1 July 2020 baseline of  $931ktCO_2$ -e for Scope 1 and 2 Emissions.

Figure 3 Scope 1 & 2 Emissions Reduction Remuneration-Related Key Performance Indicators



This KPI in FY25 has been achieved through the delivery of the following projects and their anticipated impact during FY24 and FY25.

## FY24:

- The KCGM Operations purchases power from the South West Interconnected System (SWIS) electricity grid, for the purposes of operating the Fimiston processing facility. Emissions from these activities are classed as Scope 2 emissions under the NGER Act. Northern Star acquired the KCGM Operations from Newmont in 2020, and the Newmont power business from Newmont in 2021. Northern Star was a party to a power supply agreement whereby excess power supplies contracted by Boddington Gold Mine from the Bluewater coal fired power generators, were supplied to KCGM Operations. In January 2022 Northern Star gave notice to Newmont Boddington Gold to exit the agreement with effect on 25th July 2022 and instead received supply at the lower CO<sub>2</sub>-e rate per unit of electricity provided by the SWIS average.
- The connection of our South Kalgoorlie Operations underground operations to the SWIS grid;
- The operation of our Carosue Dam solar array (Stages 1, 2A and 2B) providing renewable energy to offset the use of power generated through our onsite liquid natural gas/diesel power station.
- The construction and commissioning of our Jundee Solar Stage 1 array providing renewable energy to offset the use of power generated through our onsite natural gas power station.

# FY25:

- The Porphyry solar array was installed, commissioned and achieved operational verification during FY25.
- The Carosue Dam solar array (Stage 3) was successfully installed and commissioned, achieving commercial operation on 13 March 2025.
- The Jundee wind project was successfully installed and commissioned, and all turbines achieved full commercial operation by 15 October 2024.

Table 1 Projects at 30 June 2025 and their impact on Scope 1 and 2 Carbon Emissions Reductions

Production Centre	Operation	Project	Abatement (t CO <sub>2</sub> -e/annum)
	Carosue Dam Operations	CDO Solar Stage 1	872
		CDO Solar Stage 2	3,216
		CDO Solar Stage 2B	1,879
Kalgoorlie Production Centre		CDO Solar Stage 3	9,693
		Porphyry Solar	5,236
	South Kalgoorlie Operations	UG to SWIS Grid	385
	KCGM Operations	SWIS Greening FY23	38,782
V 11D 1 11 C 1		Jundee Solar Stage 1	13,952
Yandal Production Centre	Jundee Operations	Jundee Wind	34,282
TOTAL	TOTAL		

# Climate Change Related Disclosures -IFRS & ASRS Alignment

Northern Star's alignment with SASB, TCFD, and GRI Standards has positioned us well to report against the International Sustainability Standards Board's IFRS S1 and S2 Standards. Key areas of focus across our disclosures include: materiality, governance, strategy, risks and opportunities, consideration of our value chain, risk management, metrics and targets, and continuous improvement.

We have implemented external assurance processes for GRI on our data and disclosures since FY22. We commenced with Limited Assurance on selected metrics. Since that time, we have also increased the level of assurance applied, such as our step up to Reasonable Assurance on our Scope 1 and Scope 2 emissions since FY24.

Northern Star is also preparing for the implementation of the Australian Sustainability Reporting Standards (ASRS), as they become a feature of the Australian reporting landscape. Our annual voluntary ESR Disclosure Suite will support our future ASRS Sustainability Reporting as part of our annual reporting processes, including an audited climate change related mandatory report within our future Annual Reports.

# TCFD Alignment

Northern Star is committed to understanding how both the physical impacts of climate change and the transition to low carbon operations might continue to affect our business. We understand the importance of continuing our alignment with the TCFD recommendations, and the need for Northern Star to progress its commitment to a low-carbon economy in advancing our Emissions Reduction projects.

> We continue to utilise both in-house and external capabilities to model our sites' power and energy demand, wind efficiency and timing, and solar efficiency and timing. Through this work, we continue to progress and optimise our renewables programs in line with our planned pathway in Figure 2.

Figure 4 Our Phased Alignment with TCFD Recommendations

# **Metrics and Targets**

The metrics and targets are used to assess and manage relevant climate-related risks and opportunities where such information is material

# **FY25 Commitments** Satisifed:

Ongoing disclosure of progress against targets. Demonstrating a tangible and sustainable reduction in our Scope 1 and 2 greenhouse gas emissions in line with our FY22 remuneration key performance indicator

# **Planned Action** (1-5 years):

Ongoing disclosure of progress against targets, and consideration of future metrics and targets

# **Risk Management**

How the organisation identifies, assesses, and manages climate-ralated risks

# **FY25 Commitments** Satisifed:

Integration of climate related risks in our enterprise risk and assurance system CGR. and ongoing review of risks and controls in accordance with our Risk Management Standard

# **Planned Action** (1-5 years):

Ongoing reviews of climate-related risks and controls

# Strategy

Actual and potential impacts of climaterelated risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material

# **FY25 Commitments** Satisfied:

Development of more detailed forward looking emissions modelling scenarios, in conjunction with external resources to incorporate into long term planning

# **Planned Action** (1-5 years):

Integrate implications of scenario analysis into long term strategic planning

# Governance

The organisation's governance around climate-related risks and opportunities

# **FY25 Commitments** Satisfied:

Continued oversight of meeting TCFD recommendations

# **Planned Action** (1-5 years):

Ongoing oversight of governance in relation to climate-related risks and opportunities



# Scenario Analysis and Financial Quantification Refresh

Northern Star completed initial financial quantification of its climate-related risks and opportunities in FY23, based on the climate-related risks and opportunities identified as part of the scenario analysis conducted in 2020.

To ensure we can meet the mandatory reporting requirements of AASB S2 Climate-related Disclosures in FY26 we are revisiting this modelling to assess the financial impacts of our priority climate-related risks:

- Water security
- Extreme temperature
- Extreme rainfall and flooding
- Emissions management

This will involve reassessing the variables that contribute to the model, both site specific and climatic. The newly acquired Pilbara Operations will be included as well.

The refresh will include the same four scenarios from the previous work:

- NGFS Divergent Net Zero
- NGFS Below 2°C
- IPCC SSP2 RCP4.5
- IPCC SSP5 RCP8.5

These scenarios represent a wide range of possible futures and provide Northern Star with a diverse range of possible impacts to test our Operations against.

Scenario analysis is required to be completed with respect to a low (1.5°C) and high (2.5°C or higher) temperature scenario, which is met by the NGFS Divergent Net Zero and IPCC SSP5 – RCP8.5 scenarios.



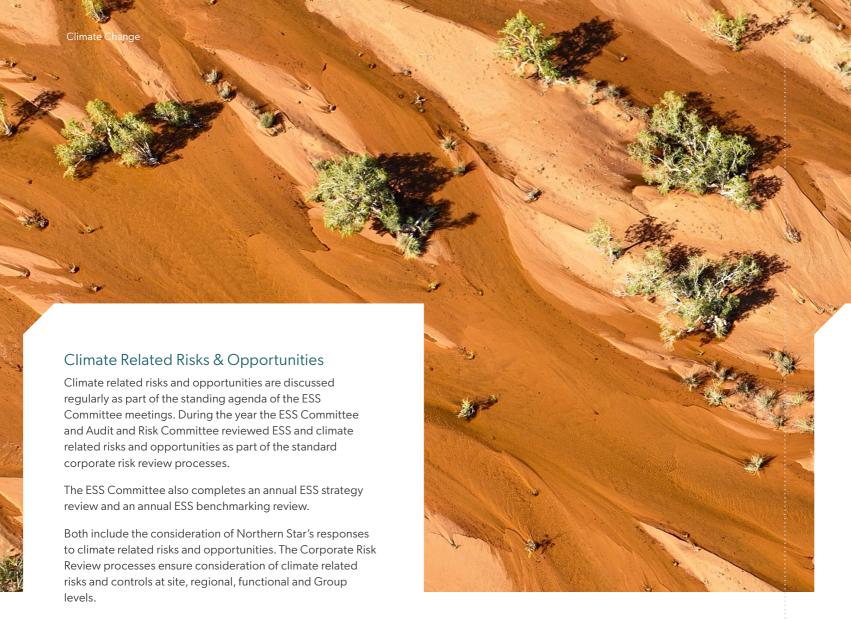


Figure 5 below demonstrates the relationships within Northern Star's business between climate change related risks and opportunities.

Figure 5 Climate Change Related Risks, Opportunities and Financial Impact

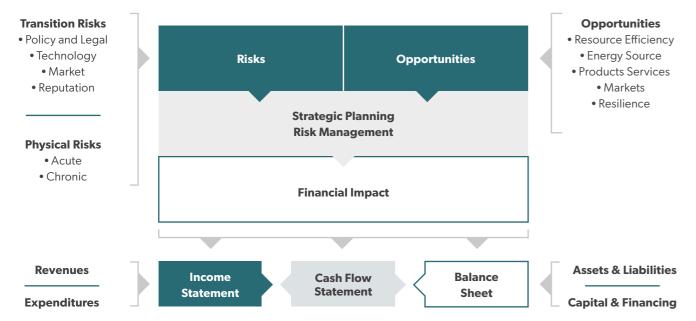


 Table 2
 Northern Star's Highest Residual Climate Change Related Risks

High Residual Climate Change Related Risks	How We Manage the Risk		
Hotter average conditions and/or increased frequency of extreme temperature (hot or cold) days or heatwaves	<ul> <li>Extreme temperatures and hot working conditions are captured in our critical risk standards, site-based management plans and critical risk assessments.</li> <li>Working in adverse temperature guidelines includes regular hydration testing of workforce.</li> <li>Onsite buildings, mobile plant and vehicles fitted with enclosed cabins for heating and air conditioning provisions.</li> </ul>		
Flooding caused by more frequent and higher intensity storm events <sup>3</sup>	<ul> <li>Flooding is captured in our critical risk standards, site-based management plans and critical risk assessments.</li> <li>Risk assessments for new developments and potential mergers or acquisitions considered current and future flooding risks.</li> <li>Surface water management infrastructure, water pond and weather monitoring.</li> </ul>		
Tailings dam integrity impacted by more frequent and higher intensity storm events	<ul> <li>Tailings management standard, independent expert design and Engineer of Record for each facility ensures appropriate design and management.</li> <li>Annual third-party audits of active facilities.</li> <li>Risk assessments for new developments, expansions, and potential mergers or acquisitions consider failure analysis and/or high rainfall events.</li> </ul>		
Increased frequency and severity of storms, including cyclonic events	Severe storm events are captured in our critical risk standards, site-based management plans and critical risk assessments.		
Stakeholder activism (divestment, corporate litigation) from lack of climate action	<ul> <li>Net zero ambition with clear 2030 targets and decarbonisation pathway.</li> <li>Progress is reported annually through our GRI aligned ESR disclosures.</li> <li>Continued engagement with stakeholders through Investor Relations function.</li> </ul>		

**Table 3** Key examples of Northern Star's Climate Related Opportunities

Climate Change Related Opportunities (Key Relevant Examples)			
Products & Services	Low emissions mining		
Energy Sources	Diversification of energy sources     Energy price volatility resilience		
Resource Efficiency	Electrification of selected operations     Increased operating efficiency		
Resilience	Improved social licence to operate     Reinforcing assets to increase resilience to physical impacts		
Markets	Action and disclosure to increase stakeholder confidence     Incorporating climate change criteria in decision making		

Refer to the scenario findings in Appendix B: Financial Quantification Modelling.

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# **Energy Production, Consumption & Efficiency**

Energy production at our Operations comprises electricity physically produced on our sites, in accordance with the definition set out in the NGER Act 2017.

Power stations located at our Carosue Dam, Jundee and Thunderbox sites use a combination of gas and diesel to generate power through turbines and generator sets.

In FY25 our net energy consumption increased from 15.3M GJ to 16.2M GJ. Increases in net energy consumption are attributable to increases at our Thunderbox Operations & Bronzewing Operations (365K MJ), KCGM Operations (656K MJ) and Carosue Dam Operations (148K MJ). These increases were offset by energy consumption reductions at Jundee and Pogo Operations.

Net energy consumed on our Operations comprises all energy consumed by our facilities, including site produced, grid purchased electricity and fuels burnt, less any power

A number of factors can influence the overall energy consumption on our sites, including but not limited to: production throughput and grades, ore composition, development and construction activities, depth of operations, open pit versus underground operations, demand on underground ventilation systems, and workforce size.

Carbon Footprint

Northern Star's carbon footprint for FY25 combines our Scope 1, Scope 2 and Scope 3 Emissions totalling 2.46M t CO<sub>2</sub>-e as depicted in Figure 8 on page 19, overleaf.

The proportional contribution of emissions from our three Production Centres to our total emissions is provided in our Climate Change Performance Metrics on page 23 and 24.

Figure 6 Net Energy Consumption by Production Centre, Exploration and Other

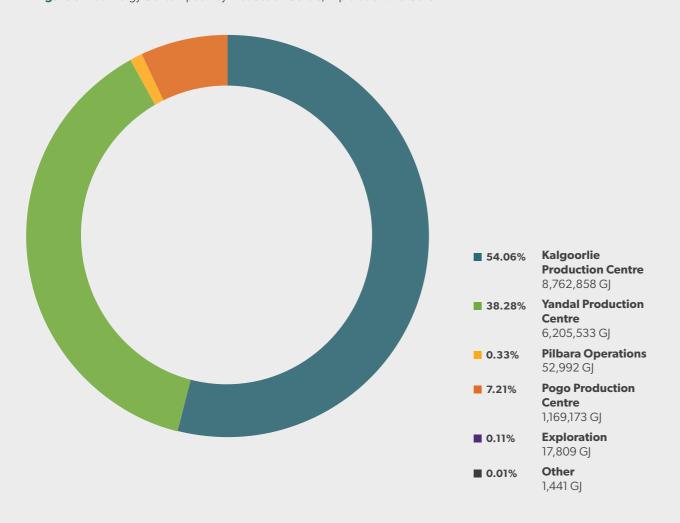
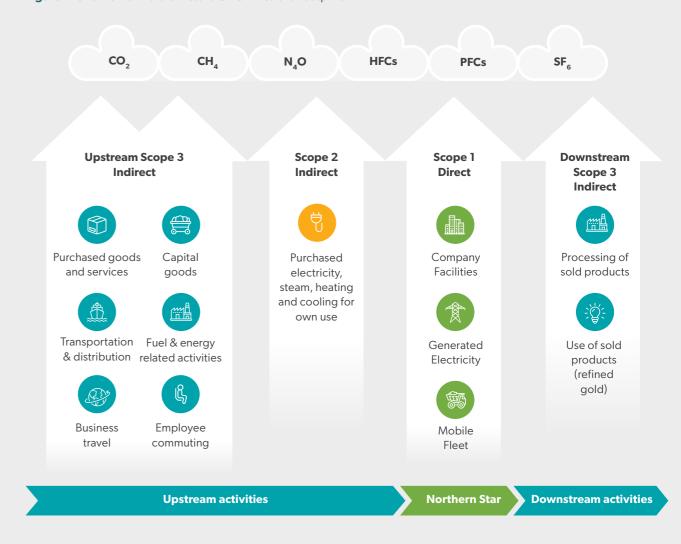


Figure 7 Overview of Northern Star's GHG Emissions Footprint



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# Scope 1 Emissions

In FY25, our total Scope 1 GHG Emissions experienced a slight increase from 792k t CO<sub>2</sub>-e in FY24 to 837k t CO<sub>2</sub>-e. Diesel combustion is the highest contributor to our Scope 1 emissions, accountable for just over 601k t CO<sub>2</sub>-e of our 837k t CO<sub>2</sub>-e of emissions in FY25.

Scope 1 GHG Emissions are calculated in accordance with the Australian Government methodology required by the National Greenhouse and Energy Reporting (NGER) Act (2007).

Emissions associated with our Pogo Operations in Alaska are calculated using the same method to ensure consistency in our emissions reporting.

# Scope 2 Emissions

In FY25, our total Scope 2 GHG Emissions remained relatively steady with only a small increase from  $448ktCO_2$ -e in FY24 to  $468ktCO_2$ -e.

Scope 2 GHG Emissions are calculated in accordance with the Australian Government methodology required by the National Greenhouse and Energy Reporting (NGER) Act (2007)

Emissions associated with our Pogo Operations in Alaska are calculated using the same method to ensure consistency in our emissions reporting.

# Scope 3 Emissions

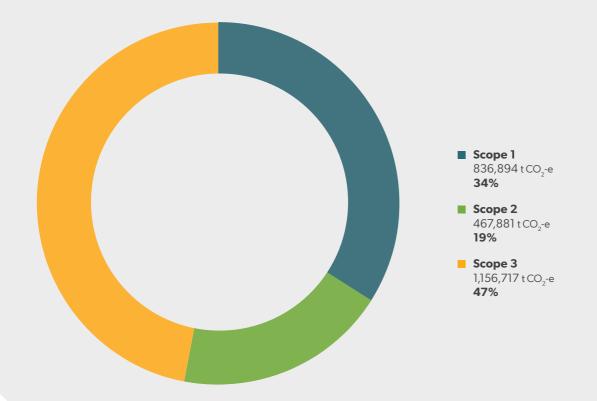
Northern Star has continued to evolve our measurement and analysis of our Scope 3 Emissions in line with the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and supported by the Greenbase environmental accounting team.

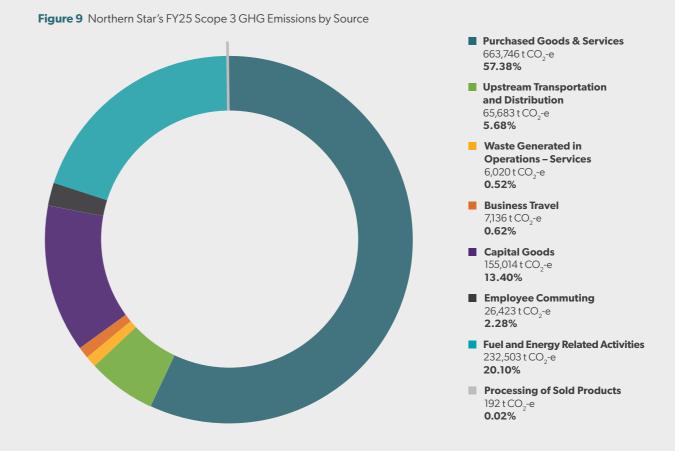
In FY25 we elected to assess all of our suppliers based on a supplier spend methodology. We also continued to calculate the Scope 3 emissions from our directly chartered flights and buses to and from our Operations and utilising our business travel reports. As in previous years, the highest areas of contribution to our Scope 3 emissions are from purchased goods and services, fuel and energy related activities, capital goods and upstream transportation and distribution.

In FY25 we have seen an increase in our overall Scope 3 emissions from 667k t CO<sub>2</sub>-e to 1.16M t CO<sub>2</sub>-e, which is due primarily due to temporary increases in purchased and capital goods as a result of our growth and development projects, as well as increases in employee commuting and upstream transportation and distribution.

More information on our Scope 3 methodology is provided in Appendix D.

Figure 8 Northern Star's FY25 GHG Emissions Profile (Scope 1, 2 and 3)

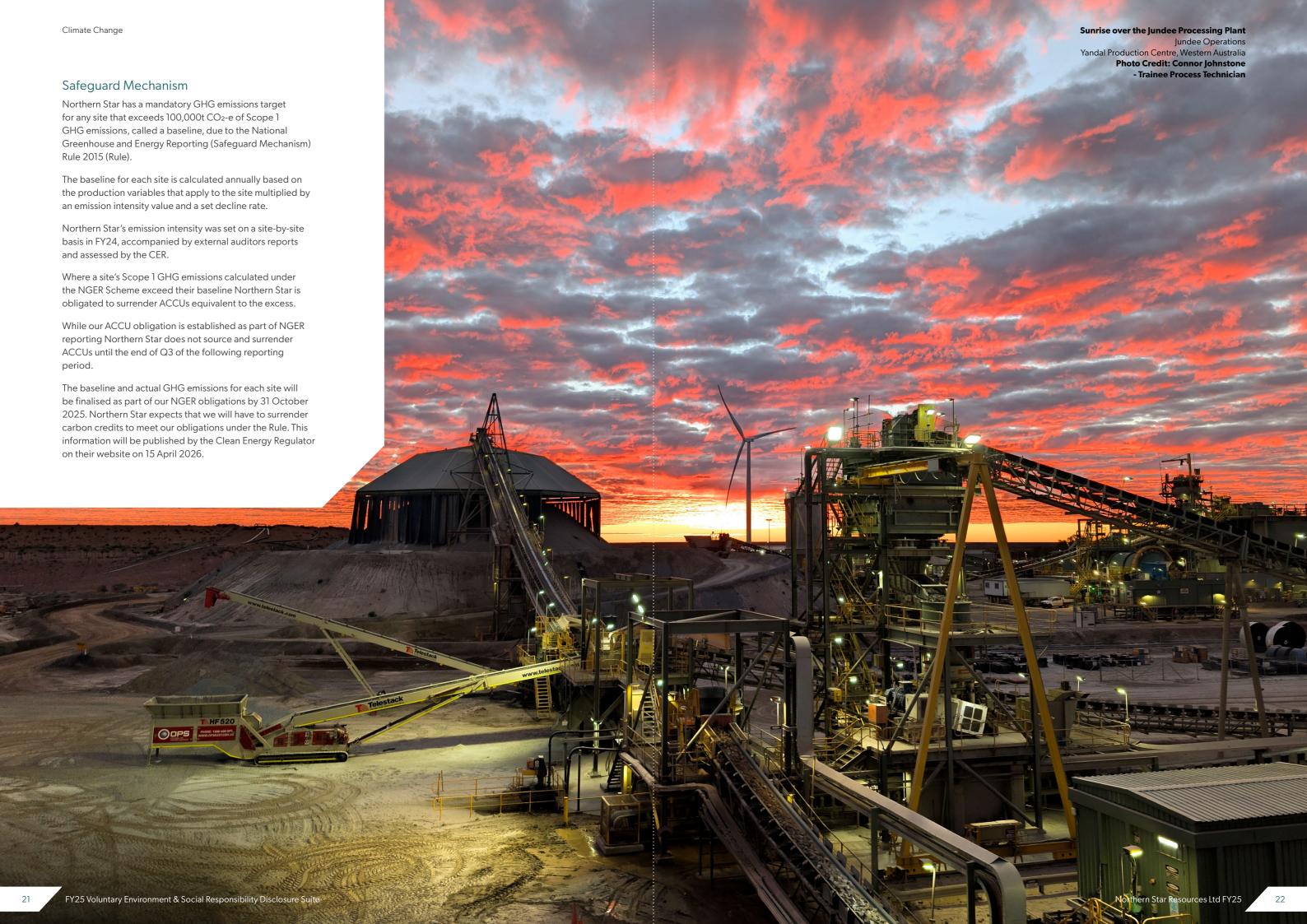




# Scope 1 and 2 Emissions Intensity

During FY25, emissions intensity (total emissions generated per tonne of ore processed) remained steady at 0.046 t CO<sub>2</sub>-e.

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# Climate Change Performance Metrics

		FY25	FY24	FY23
	Energy Produced			
	Carosue Dam Operations (GJ)	107,634	517,329	579,882
Kalgoorlie Production Centre	Kalgoorlie Operations (GJ)	-	-	49,664
	KCGM Operations (GJ)	-	-	-
Pilbara Operations	Hemi Development Project (GJ)	-	=	=
	Jundee Operations (GJ)	802,870	703,741	707,178
Yandal Production Centre	Bronzewing Operations (GJ)	-	-	-
	Thunderbox Operations (GJ)	820,954	735,863	629,598
Pogo Production Centre	Pogo Operations (GJ)	-	-	-
	Total (GJ)	1,731,457	1,956,933	1,966,322
	Net Energy Consumed			
	Carosue Dam Operations (GJ)	2,396,846	2,248,787	2,479,457
Kalgoorlie Production Centre	Kalgoorlie Operations (GJ)	937,474	876,320	972,856
	KCGM Operations (GJ)	5,428,538	4,772,721	4,791,641
Pilbara Operations	Hemi Development Project (GJ)	52,992	61,361	55,191
	Jundee Operations (GJ)	2,259,324	2,577,416	2,651,864
Yandal Production Centre	Bronzewing Operations (GJ)	667,714	583,784	401,102
	Thunderbox Operations (GJ)	3,278,495	2,997,911	2,745,340
Pogo Production Centre	Pogo Operations (GJ)	1,169,173	1,174,618	1,168,708
Exploration	Tanami (GJ)*	17,809	13,072	13,165
Other	Perth Corporate (GJ)	965	913	730
Other	West Perth Corporate (GJ)	476	414	-
	Total (GJ)	16,209,806	15,307,317	15,280,053

 $<sup>^{\</sup>star}$  Subject to sale. See ASX Announcement dated 16 July 2025 at www.nsrltd.com

# Climate Change Performance Metrics

		FY25	FY24	FY23
	Scope 1 Emissions			
	Carosue Dam Operations (t CO <sub>2</sub> -e)	145,809	137,244	151,888
Kalgoorlie Production Centre	Kalgoorlie Operations (t CO <sub>2</sub> -e)	24,956	23,412	32,869
	KCGM Operations (t CO <sub>2</sub> -e)	271,054	229,822	228,801
Pilbara Operations	Hemi Development Project (t CO <sub>2</sub> -e)	3,695	4,280	3,877
	Jundee Operations (t CO <sub>2</sub> -e)	115,914	144,622	148,143
Yandal Production Centre	Bronzewing Operations (t CO <sub>2</sub> -e)	45,962	40,173	27,305
	Thunderbox Operations (t CO <sub>2</sub> -e)	190,322	174,100	160,147
Pogo Production Centre	Pogo Operations (t CO <sub>2</sub> -e)	37,935	37,826	39,243
Exploration	Tanami (t CO <sub>2</sub> -e)*	1,248	918	924
	Total (t CO <sub>2</sub> -e)	836,894	792,397	793,197
	Scope 2 Emissions			
Kalgoorlie Production Centre	Kalgoorlie Operations (t CO <sub>2</sub> -e)	80,481	69,836	62,280
	KCGM Operations (t CO <sub>2</sub> -e)	225,445	221,540	211,889
Pilbara Operations	Hemi Development Project (t CO <sub>2</sub> -e)	-	-	-
Pogo Production Centre	Pogo Operations (t CO <sub>2</sub> -e)	161,750	156,350	138,808
Othor	Perth Corporate (t CO <sub>2</sub> -e)	137	134	103
Other	West Perth Corporate (t CO <sub>2</sub> -e)	67.4	60.9	-
	Total (t CO <sub>2</sub> -e)	467,881	447,922	413,081
	Scope 3 Emissions			
	Purchased Goods & Services (t CO <sub>2</sub> -e)	663,746	342,119	345,235
	Capital Goods (t CO <sub>2</sub> -e)	155,014	52,525	22,659
	Fuel & Energy Related activities (t CO <sub>2</sub> -e)	232,503	205,913	208,594
Upstream	Upstream Transportation & Distribution (t CO <sub>2</sub> -e)	65,683	43,217	37,180
	Waste Generated in Operations (t CO <sub>2</sub> -e)	6,020	5,721	4,783
	Business Travel (t CO <sub>2</sub> -e)	7,136	5,167	2,294
	Employee Commuting (t CO <sub>2</sub> -e)	26,423	12,457	11,499
Downstream	Processing of Sold Products (t CO <sub>2</sub> -e)	192	191	184
	Total (t CO <sub>2</sub> -e)	1,156,717	667,309	632,428
	Scope 1, 2 and 3 Emissions			
Total Scope 1, 2 & 3 Emissions (t CO <sub>2</sub> -e)		2,461,492	1,907,628	1,838,706
Total Scope 1 & 2 Emissions Intensity (t Co	otal Scope 1 & 2 Emissions Intensity (t CO <sub>2</sub> -e / t ore processed)			0.045

# Appendix A: Scenario Analysis Process

# **Climate-related scenario analysis**

Northern Star's business may be affected by both the physical impacts of climate change and the transition to a low carbon economy with the most significant effects likely to play out over the medium to long term.

Both physical and transitional risk are affected by a wide range of factors – including public policy, technology, and market change - that are hard to forecast accurately. Scenarios help Northern Star consider how these variables may plausibly impact the company's operations over time.

During CY2020, to build our capacity in relation to climate-related strategy, we conducted scenario workshops together with our external consultants, requiring and enabling critical strategic thinking and the testing of business-as-usual assumptions underpinning Northern Star's business strategy. Since that time, we have continued to progress our TCFD journey.

This is evidenced by the disclosure of scenario analysis information and disclosing plausible ways in which climate-related factors could affect our operations on a geographical basis. We disclosed the potential high-level impacts on our operations, and we confirmed our aspirations to consider the benefits of quantitative modelling of key climate risks to estimate financial impacts on our operations. We have continued to develop our planned pathways to 2030, completed financial quantification modelling, commenced construction of new renewables projects, and integrated our climate-related risks and opportunities into our operational and strategic risk registers.

Scenario analysis is a strategic planning and risk management tool which allowed Northern Star to:

- assess the potential financial effect of climate-related change on Northern Star's Operations;
- test whether our business strategy is flexible and adequately accommodates these climate-related risks and opportunities; and
- test how resilient that strategy is, and where necessary
  identify options for increasing our strategic and
  business resiliency to plausible climate-related risks and
  opportunities, by adjusting strategic and financial plans,
  under a given set of assumptions, according to a range of
  plausible but challenging hypothetical future constructs.

Key for Northern Star was to use the scenario analysis to improve our critical strategic thinking – to test whether current business as usual assumptions are the correct assumptions on which to base a business strategy which is resilient to climate-related change. By resilient, we mean whether our business strategy can tolerate disruptions or adapt to changes or uncertainties in the business environment that might affect Northern Star's performance, and to remain effective under most situations and conditions.

Commencing this scenario analysis work back in CY2020, allowed us time to develop and improve on that capability, to ensure Northern Star may better identify and disclose how its strategy may need to change and develop to accommodate potential climate-related risks and opportunities.

## **Scenario Selection**

In line with the Paris Agreement to reduce greenhouse gas emissions and accelerate the transition to a lower carbon economy ("holding the increase in the global average temperature to well below 2°C above preindustrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels"), consistent with the TCFD Recommendations and in order to provide comparable information, Northern Star has used a 2°C scenario (a pathway and an emissions trajectory consistent with limiting the average global temperature increase to a temperature range around 2°C above pre-industrial levels with a certain probability). The 2°C scenario was selected as it has greater data availability than the 1.5°C scenario.

Two other scenarios most relevant to Northern Star have also been used; a 2-3°C scenario and a >4°C scenario. These scenarios were selected to be included as they were commonly used by our peers, which increases the comparability of results for our external Stakeholders. These two scenarios illuminate our future exposure to climate-related physical and transitional risks and opportunities in relation to gold production and demand for gold up to 2050.

The temperature scenarios were rounded out with the inclusion of Shared Socio-Economic Pathways (SSP) to develop three robust scenarios of the future that could be used to understand the resilience of our operations and business strategy, to 2030 and 2050. The 2°C scenario was combined with SSP1 as it has a narrative that aligns most closely to a low emissions trajectory. The >4°C scenario was combined with SSP5 as it is the only possible option for this temperature scenario. Finally, the 2-3°C scenario was combined with SSP3 as it provided divergence in economic growth and ensured we were testing our business with three distinct scenarios.

# **Scenarios and their impacts**

Northern Star drew on TCFD recommendations as well as internal priorities established through workshops to define criteria for the development of three scenarios concerning future likely global emissions levels and socioeconomic conditions (Table 5).

Executives including the CEO, CFO and COO and other senior management who were previously involved in the multi-disciplinary workshops in CY2019 to validate physical and transitional risks, reconvened twice during CY2020 in workshops facilitated by our external consultants.

The outcomes of the workshops and follow up meetings were consensus on the quantity and choice of scenarios, and an agreed prediction of how Northern Star's operations

would be likely to respond to each scenario. There was discussion of how our strategy could adapt in response to each scenario. Options were grouped into 'no regret' options (which could be beneficial under all three scenarios) and 'watch and wait' options (that would be more relevant to some but not all three scenarios).

In addition, throughout CY2020 the ESS Committee of the Board discussed climate risk outlook in Australia and trends in regulator, investor, and financier expectations, following direct engagement with our investors and proxy advisors.

Updates and progress in relation to climate related risks, opportunities and strategy remain a feature of our ESS Committee and Board discussions.

The selected scenarios focused particularly on transition risk, to complement the results of Northern Star's initial physical climate risk assessment conducted in CY2019. Multiple factors influencing gold mining and demand for gold were considered within each scenario. All scenarios present significant challenges and opportunities, but the sources of these differ considerably across each scenario.

Figure 10 Key Scenario Parameters

# TCFD Criteria

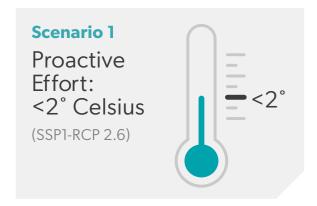
- Provide diversity of potential future climate states
- Explore relevant transition and physical climaterelated risks and opportunities
- Represent plausible outcomes
- Include challenging futures that significantly diverge from business as usual
- Include a low emissions scenario (2°C or less)

# **Northern Star's Criteria**

- Include a scenario that tests resilience to international trade challenges
- Be relevant to Northern Star operations and the gold sector
- Data underpinning scenarios to come from credible sources
- Align with industry best practice
- Demonstrate leadership



Figure 11 Northern Star's Alternative Climate Change Scenario Narratives

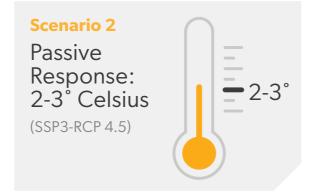


## **Scenario 1**

Environmental degradation and accumulating impacts from climate-related events lead to increased environmental awareness and concern. An increased focus on managing climate change risk and capturing opportunity influences investors, business, governments, and public opinion. This drives more sustainable policy, practices, and investments, both in terms of environmental and social outcomes.

As the world embraces the scale of the transformation required, large investments are made into research and development, facilitating innovation, and helping to commercialise low emissions technology more rapidly. Consumption patterns shift as the population becomes less materialistic and may impact the retail demand for gold. Gold's role as a portfolio diversifier and hedge in times of uncertainty remains, with limited potential for growth. However, there would be increased opportunities for sustainable gold for environmental and medical technologies.

There is a strong focus on reducing emissions, minimising environmental footprints, and improving rehabilitation practices in the mining sector. Investors become increasingly selective, backing companies with clear and transparent pathways towards decarbonisation and increasing engagement with the outliers. There may be consolidation of mining sector companies in these conditions, as newer and smaller entrants find it more difficult to compete in the face of relatively stable gold demand and high public and investor expectations.



## Scenario 2

Financial crises in major economies reinforce and spread distrust in globalisation. Protectionist and national security issues slowly take priority over environmental protection. Demand for local goods increases, putting upward pressure on inflation. In the longer term, more stringent regulation comes into play, including climate policy, to safeguard national resources. The mining sector becomes affected by decreased globalisation and policy which aims to protect upstream supply chains and retain a greater share of returns in Australia.

In this economic environment, there may be greater turnover of existing gold assets as holders liquidate their investment to cash as economic conditions become more challenging. Stunted per capita wealth may reduce retail demand for newly produced gold and, as technology investment is reduced, the potential and breadth of gold applications may be lower in this scenario. However, global population growth is high (particularly in Asia), becoming the main driver of jewellery and technology demand. Additionally, in an environment of greater uncertainty and with inflationary pressures, gold is likely to be increasingly sought for hedging purposes. Central banks may diversify their monetary reserves, accumulating gold. Overall, these diverging pressures may contribute to a larger range of gold prices as volatility increases.

In addition to growing regulatory red tape and climate impacts, there is a widespread push for producers to lower costs and hedge output. Lower tendency to extend life of mine to minimise the risk exposure due to gold price volatility. Increased geopolitical tensions may increase international shipping costs. Companies are evaluated on their contribution to local GDP and their compliance with regulation.

# **Scenario 3** Regressive Action: >4° Celsius (SSP5-RCP 8.5)

# Scenario 3

Connections across a greater portion of the population in developed and emerging economies through the digital revolution increasingly facilitate access to education and enable discourse and collaboration. In this highly globalised society, investments in health and education are favoured to support human capital and drive innovation and economic growth. With equality and comfort pursued at all costs and no environmental focus, there is a global exploitation of fossil fuel resources and a widespread adoption of resource and energy intensive lifestyles. Regulation is minimised so as not to shackle progress.

The retail market and technology applications become increasing sources of gold demand, particularly as the global population and economic growth thrive. With increases in wealth and with inflationary pressures present in the economy, there may be an increase in demand for gold as a store of value. While the gold price may be relatively lower in this scenario, it may be more stable due to global integration and focus on growth.

In this free-for-all world, large companies take over and maximise new developments. The burden of adaptation and safety measures is increasing, with implications for existing mining companies' reputation, while also presenting barriers to entry for new market entrants. A focus is placed on automation and digitisation to enhance safety and convenience and compete with peers.



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Table 5 Summary of impacts on key supply and demand factors for gold as a commodity, by scenario

		Scenario 1 Proactive effort	Scenario 2 Passive response	Scenario 3 Regressive action
	Energy mix and use	Rapid electrification of energy systems, including in the transport sector.	Fossil fuel dependency persists, although Australia increasingly focuses on harnessing local sources of energy, including renewables.	Exploitation of fossil fuel resources continues, and growth enables widespread adoption of resource and energy-intensive lifestyles.
	Technology	Innovation focuses on renewable energy and environmental technologies. Digitalisation of mining enables process optimisation.	Investment constraints hinder advancements. Innovation focuses on short-term cost minimisation.	Innovation and automation prioritise production, convenience, and safety.
Mining	Environmental protection	Stakeholder pressure drives a gradual shift toward improving environmental conditions, beyond impact mitigation.	Resources are extracted at lowest cost, resulting in environmental degradation. Climate policy is limited or delayed.	Environmental problems are managed rather than mitigated. Control measures become more extreme over time and may include geo-engineering.
	Policy	Policy mandates deep decarbonisation, impacting asset values and operational costs. New developments need to be designed for net zero emissions.	Countries become increasingly nationalistic, and policy prioritises domestic interests and concerns ahead of the global commons.	Policy supports human capital development and economic growth. Institutional barriers are gradually removed, and regulation minimised.
	Mining company characteristics	Successful companies invest in sustainability innovation and resource efficiency to meet ambitious emission reduction targets.	Volatile conditions keep average life of mine shorter. Physical climate impacts impose greater production costs.	Leading companies capitalise on innovation. Costs of adaptation and high safety standards gradually rise, leading to industry consolidation.
	Demand profile	Applications for gold in medicine and environmental technologies grow. There may be emerging demand from retail buyers of gold products for sustainably mined gold with reduced demand for gold per capita, due in part to repair and reuse of electronic products.	Gold is sought for hedging purposes. As physical climate impacts increase and livelihoods are affected, gold demand in Asia may begin to stall.	High demand for gold as a store of value and status signifier, and for use in hi-tech consumer applications.
Gold	Recycled gold	Electronic waste is increasingly repurposed as part of circular economy practices. This does not noticeably impact key gold producers.	There may be greater turnover of existing gold assets as holders liquidate their investment to cash as economic conditions become more challenging.	Recycled gold is only likely to grow in demand if technology improvements do not deliver enough newly mined gold.
	Price volatility	Moderate	High	Moderate
	Labour retention	Companies with sustainable reputations can attract motivated and high-quality staff.	Teams may be trimmed to reduce costs, but job security concerns minimise staff turnover.	Increased practices in poaching of key staff by larger competitors.
	Investors	Investors prefer companies with credible pathways towards decarbonisation.	Investors prefer blue chip gold producers, limiting investments in gold explorers/juniors.	Investors back companies with the largest gold reserves.

# What the scenarios each mean for Northern Star and its business strategy

In Scenario 1, the Proactive Effort scenario, Northern Star's underground mining expertise may be more valued, due to its lower environmental impacts. Our Tier 1 assets and continued work on transparent climate-related disclosure and action may enhance our reputation as a sustainable gold miner. However, as we recognise, our current lack of emissions reduction targets and plans consistent with Paris Agreement goals would detract from this.

The Proactive Effort scenario would involve the most challenging transition period compared to the other two scenarios. However, it is the scenario which is most aligned with Northern Star's Sustainability Vision and is likely to be most advantageous for both our business and the planet.

In Scenario 2, the Passive Response scenario, our existing focus on increasing and maintaining performance of the existing fleet and machinery positions us well for cost minimisation, while our gold processing plant expansion strategy places us at an advantageous position to capitalise on periods of higher gold demand and prices. However, cost and regulatory pressures could become more challenging over time and highly price volatility could make new expansions less compelling.

In Scenario 3, the Regressive Action scenario, there is potential for higher consolidation in the mining sector as demand grows, expansion is easier, and globalisation is high. Northern Star has increasing opportunity to capitalise on our distinctive expertise in underground mining.

The physical impacts of climate change are of higher concern under scenarios 2 and 3, either due to our potentially limited ability to adapt due to higher overall costs (Passive Response) or through increasing uncertainty linked with global ability to manage growing impacts and safety concerns related to operating at higher temperatures (Regressive Action).

All scenarios would require some adaptation to the physical impacts of climate change. However, the burden and cost of adaptation would be greatest in Scenario 3, the Regressive Action scenario, to 2050, and beyond.

Opportunities to enhance Northern Star's resilience were identified, including "no regrets options", representing actions that are beneficial across all scenarios, and "watch and wait options", which are actions that are advantageous under only one or two scenarios.

# Opportunities out of the scenario analysis

Understanding the potential effects climate change may have on our business allows Northern Star to identify opportunities as well as potential risks.

We are taking actions to address the risks and leverage potential opportunities in three key focus areas.

- Understanding our energy mix and altering this mix where available. Implementation of renewable energy opportunities like modular, transportable power hybrids for short-life operations.
- Leveraging energy efficiencies across our Business such as the existing practice of regularly changing out operational fleet.
- Water usage and recycling opportunities for our Australian assets, including the installation of a thickeners.



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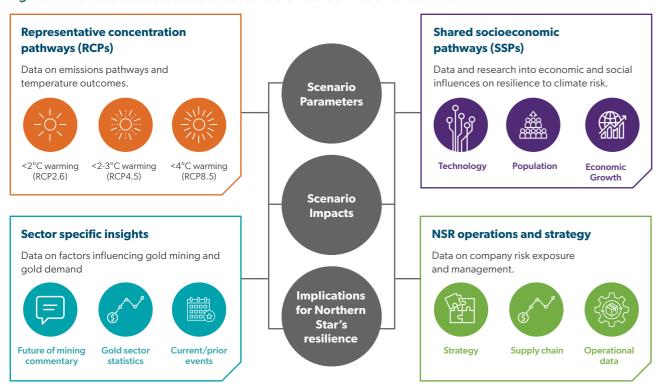
Northern Star Resources Ltd FY25

# **Development of the Scenarios: methodological approach and data sources**

The three scenarios used by Northern Star were anchored by global greenhouse gas emissions levels (Representative Concentration Pathways (RCPs)), which provide emissions constraints and physical outcomes, and Shared Socio-Economic Pathways (SSPs), which provide social and economic context for climate related actions. The use and choice of RCP-SSP combinations drew on international research undertaken for the IPCC 6th Assessment Report. Additional data was drawn from sector-specific research and expertise, and from Northern Star's internal operations and insights.

Figure 12 summarises the contribution made by each of these inputs and Table 6 outlines some key parameters stemming from the chosen IPCC pathways.

Figure 12 Information sources used to construct Northern Star's climate-driven scenarios



**Table 6** Key scenario parameters

		Scenario 1 Proactive effort	Scenario 2 Passive response	Scenario 3 Regressive action
	Representative concentration pathway	RCP 2.6	RCP 4.5	RCP 8.5
Reference	Socio-economic path-way	SSP1	SSP3	SSP5
Point	Basis for use	Investigates a <2°C pathway aligned with the Paris Agreement goal and TCFD requirements.	Explores mid-range emissions and warming broadly aligned with countries' current emission pledges, in context of depressed GDP growth and geopolitical challenges	Investigates a pathway consistent with worst- case climate change outcomes
	Global temperature increase (2100)	<2°C	2-3°C	>4°C
	Australian temperature increase (2050)	~1°C	~1.5°C	~2°C
Key Parameters	Projected Australian GDP (2050)	~5 trillion	~2.8 trillion	~8.8 trillion
	Projected global population (2050)	8.5 billion	9.9 billion	8.6 billion
	Projected Australian	36.6 million	28.5 million	44.2 million



# Appendix B: Financial Quantification Modelling

In FY23 Northern Star engaged Foresight Consulting Group (FCG) to assist with the development of a climate risk financial quantification model, designed to assist the business to better understand potential financial impacts that climate change related risks could have on the Company's operational effectiveness and financial position.

FCG indicated that Northern Star's quantitative climate risk model represented a step forward within the mining industry in FY23 for assessing the potential financial impacts of climate change, with approaches until then being mostly limited to qualitative scenario-based climate risk and opportunity assessments.

With increasing expectations from stakeholders for more detailed disclosures, and as Northern Star sought ways to better understand and manage climate change related risks, the quantitative climate risk model provided a valuable tool for understanding and providing greater transparency on potential climate change related financial impacts on Northern Star.

More importantly, it also provided our leadership and management teams with useful climate risk intelligence to help guide our response to the challenges of transitioning to a Net Zero economy and our changing climate. The quantitative climate risk model was developed over four stages:

- The model logic was developed including the causal and mathematical relationships between risks and opportunities and their potential financial impacts.
- Climate scenarios were selected that represent the range of potential future climate states.

- Data was collected for Northern Star's assets and the climate scenarios including climate parameter and carbon price projections.
- The quantitative climate risk model was developed, and the financial impact modelled using the data collected.

The modelling work was undertaken on four priority climate-related risks that were identified as part of Northern Star's ongoing climate-related risk and opportunity assessment processes. These four risks comprised:

- Physical Risk: Water Security
- Physical Risk: Extreme Temperature
- Physical Risk: Extreme Rainfall and Flooding
- Transitional Risk: Emission Management

The development of the model was an extensive process involving engagement of key personnel throughout Northern Star, data gathering and validation both internally and externally, development of mining value chain mapping applicable to all Operations, development and testing of the model logic, and integration of business, financial and climate scenario processes.

 Table 7
 Scenarios modelled in the Northern Star Climate-Related Risk Financial Quantification

# High emissions RCP & 5

- Used to assess the potential impacts of unmitigated climate change
- High atmospheric concentration of GHGs aligned to global warming of between 3°C and 5.4°C by 2100

# Moderate emissions below 2°C & RCP 4.5

- Used to assess the impacts of moderate transition to a low carbon economy and moderate degree of climate change
- Policies are introduced immediately and become more stringent with time with net zero emissions achieved by 2070.
   Aligned to a 50% chance of keeping global warming below 2°C

# Low emissions divergent Net Zero

- Used to assess the impacts of rapid transition to a low carbon economy
- Divergent policies introduced across sectors with a quick phaseout of fossil fuels and net zero achieved by 2050 at high costs. Aligned to a global warming of 1.5°C



# **Scenario Alignment**

The quantitative model assessed risks for two transition scenarios and two physical scenarios. These were the Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCPs) and the Network for Greening the Financial System (NGFS) scenarios.

For the purpose of modelling financial impacts in totality (physical and transition combined) NGFS and IPCC RCP scenario were aligned.

- Divergent Net Zero is a transition scenario developed by the NGFS. The scenario reaches Net Zero by 2050 but with higher costs due to divergent policies introduced across sectors and a quicker phase out of fossil fuels. The modelling indicates that this scenario would have a negative financial impact on the business by 2050 due to the scenario requiring sudden and early cessation of diesel use, significant and very high carbon price imposition, and the difficulty of being able to source technologies and equipment in the short term. This scenario has a low probability and was used to stress test a theoretical worst case for Northern Star.
- Below 2°C and RCP 4.5 are the scenarios most closely aligned to Northern Star's ambition for Net Zero by 2050, our decarbonisation pathway and our alignment with the intent of the Paris Agreement. These scenarios both had an overall positive impact on our financial models.
- RCP 8.5 is the least desirable climate scenario where global temperatures increase significantly due to ineffective or delayed actions to combat greenhouse gas emissions reductions and sequestration of carbon. This scenario only had a very minor negative impact on the business by 2050 due largely to the existing resilience built into our Operations.

# **Scenario Findings**

Emissions management was found to have the most material financial impact across Northern Star's assets. The model demonstrated that with the implementation of Northern Star's planned pathways targeting 35% Emissions Reduction in Scope 1 and 2 Emissions by 2030, the financial risk is not only mitigated but is estimated to have a considerable positive financial benefit through costs savings made from decarbonisation intervention measures.

Physical risks were estimated to have a relatively lesser financial impact across Northern Star's assets, with potential impact being most prominent when ore processing is disrupted, as opposed to interruptions to physical mining activities. This is predominately due to the existing mine planning and engineering controls that Northern Star already has in place, which mitigate the potential financial impact.

Extreme rainfall and flooding were found to be the most financially significant physical risk, with potential financial impacts arising due to disruptions to the supply of critical reagents and ore to the processing plants. While these interruptions would typically be acute in nature (and may or may not occur within the life of an asset), they could result in deferred revenue under certain conditions.

Northern Star will continue to work through the recommendations arising from the financial quantification modelling, with the model now being integrated into our business processes for ongoing financial climate-risk related strategy and planning.



# Appendix C: Scope 1 & 2 Methodology

# **Reportable Boundaries**

Reportable operations and associated reporting boundaries for the FY25 ESR Disclosure Suite – Climate Change module have been determined in accordance with the operational control concept outlined by the Australian National Greenhouse and Energy Reporting (NGER) Scheme and associated legislation.

The National Greenhouse and Energy Reporting Act 2007 (NGER Act) defines operational control as the control of activities that make up a facility rather than control over a geographic area or physical location. More specifically, operational control is considered if a person or entity has the authority to introduce and implement operating policies, health and safety policies and/or environmental policies.

To this end, facilities under Northern Star ownership during FY25 were assessed to determine operational control and those meeting the requirements have been included in this disclosure.

# **GHG Emissions Methodology**

Greenbase provide facility datasheets to assist with data collection.

Scope 1 and 2 GHG emissions for the voluntary FY25 ESR Disclosure Suite have been calculated according to Australian NGER legislation for all facilities including Pogo despite its location. NGER reporting thresholds have been

Emission factors and global warming potentials (GWP) are sourced from the NGER Measurement Determination, as amended for the FY.

Grid electricity factors for KCGM (Transalta) and Pogo (GVEA) were sourced from site and used instead of the relevant grid factors provided in the NGER Measurement Determination.

Scope 3 emissions have been calculated according to the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. For more details, refer to Appendix

Emissions intensity calculated using Scope 1 and 2 emissions (t CO<sub>2</sub>-e) divided by:

- gold sold (Troy oz)
- ore processed (dry tonnes)
- ore mined (dry tonnes)

Emissions-limiting regulations relevant to Australia include the Safeguard Mechanism.

## **GHG Emissions Exclusions**

No applicable emissions-limiting regulations were identified

# **GHG Emissions Data Sources**

Scope 1 emissions sources include:

- Combustion of fuels (e.g. diesel, jet kerosene, LPG, LNG, PNG, ULP, heating oil) by mobile and stationary vehicles and equipment including generators
- Oils and greases
- SF6 in switchgear

Scope 2 emissions sources include:

• Electricity purchased

Data is collected monthly by the site environmental teams but collated on a quarterly basis.

Invoices for material fuel sources are tracked via Northern Star invoicing system and supplier transaction reports.

# Appendix D: Scope 3 Methodology

Northern Star has continued to evolve our measurement and analysis of our Scope 3 Emissions in line with the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and supported by the Greenbase environmental accounting team.

In FY25 we undertook a further review of our supply chain incorporating our Pilbara Operations and analysing our suppliers in further detail.

All suppliers to Northern Star during FY25 were assessed for materiality by spend and supplier categories. Supplier activities that were already being captured under our existing Scope 1 and 2 processes were excluded from the Scope 3 assessment to avoid duplication.

In FY25 we elected to assess all of our suppliers based on a supplier spend methodology. We also continued to calculate the Scope 3 emissions from our directly chartered flights and buses to and from our operations, and our business travel reports.

Of the fifteen Scope 3 categories listed in the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard, the following were considered applicable to Northern Star and included in our FY25 assessment:

- Purchased goods and services
- Capital goods
- Fuel and energy related activities
- Upstream transportation and distribution
- Waste generated in operations
- Business travel
- Employee commuting
- Processing of sold products

The following categories were assessed as not applicable to Northern Star's current Operations during FY25:

- Upstream leased assets no currently leased upstream assets not already considered in Scope 1 or 2 Emissions
- Downstream transport Where Northern Star transports
  the doré to the Perth Mint the GHG Emissions are
  captured under the Upstream Transportation and
  Distribution category. Where the Perth Mint collects
  and transports the doré directly we aspire to include the
  GHG Emissions in future disclosures.
- Use of Sold Products Northern Star sells doré, an
  intermediate product, which has many potential
  downstream applications each of which have a different
  GHG emissions profile. As per the GHG Protocol
  Technical Guidance for Calculating Scope 3 Emissions
  we are unable to reasonably estimate the downstream
  emissions associated with various possible end uses.

- End of life treatment of sold products gold requires no end-of-life treatment as it does not have an expiration date, and requires no special treatment being inert and non-allergenic.
- Downstream leased assets no currently leased downstream assets not already considered in Scope 1 or 2 Emissions
- Franchises no franchises.
- Investments no investments not already considered in Scope 1 or 2 Emissions

# **Emission Calculation Methodology**

In FY25 Northern Star has elected to apply spend data calculation to our suppliers due to low levels of data submissions over previous years from a large proportion of our suppliers.

We also continued to calculate the Scope 3 Emissions from our directly chartered flights and buses to and from our operations, and our business travel reports.

Refer to Table 8 for further information on our approach and calculation methodologies applied.

# **Scope 3 Emissions Reduction Targets**

While Northern Star does not have a Scope 3 Emissions Reduction target, we continue to be focused on being able to assess and understand our Scope 3 Emissions sources so that we may be in a position to develop a baseline and target in the future.

We anticipate that our suppliers will also be pursuing their own decarbonisation plans and may collaborate with Northern Star on targets that align with our own commitments to reducing our emissions. These supplier specific targets should also assist in contributing to a reduction in our overall Scope 3 Emissions and allow us to consider additional opportunities.

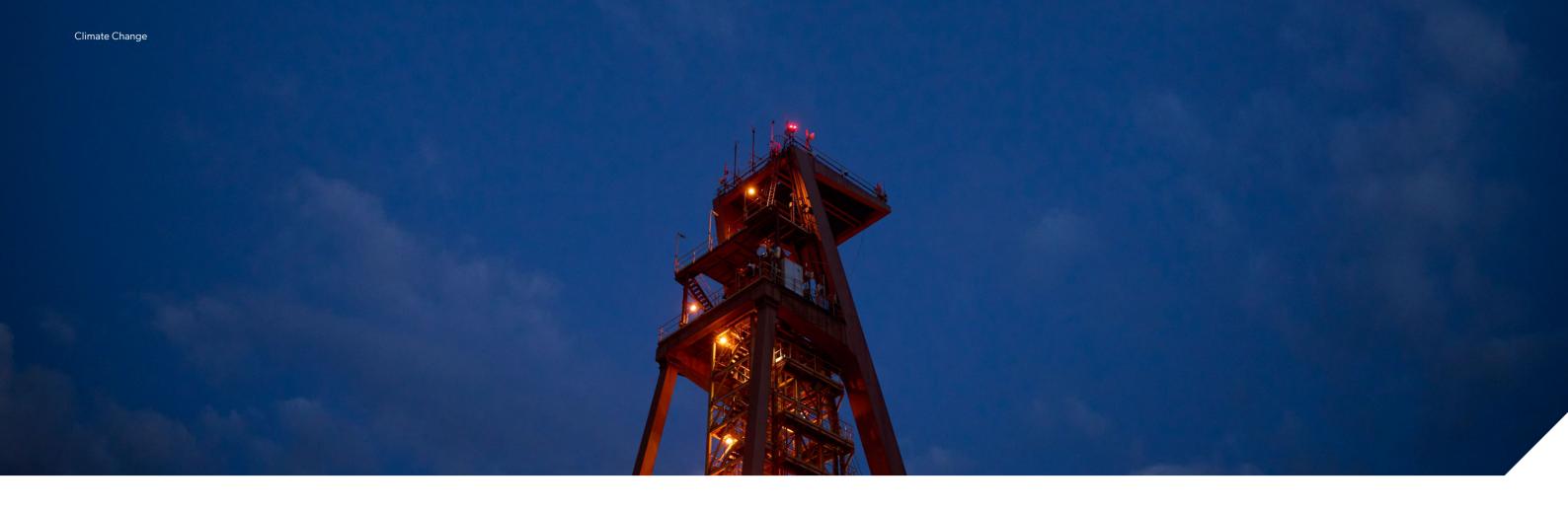
 Table 8 Scope 3 Supplier Methodologies

Scope 3 Category <sup>13</sup>	Calculation methodology options in accordance with the GHG Protocol	Our approach in preference order and factors utilised
Category 1: Purchased	Supplier specific method	Not utilised
Goods and Services	Hybrid Method	Not utilised
	Average Data Method	Not utilised
Category 2: Capital Goods	Spend Based Method	1. Spend data – total spend and generic emission factor (US EPA Factors)
Category 3: Fuel and Energy Related Activities	Supplier specific method	NGER data – actual fuel consumed by Northern Star (NGA Factors)
Related Activities	Average Data Method	Not utilised
	Fuel based method	Not utilised
Category 4: Upstream Transportation and	Distance based method	Not utilised
Distribution	Spend based method	Spend data – total spend and generic emission factor (US EPA Factors)
	Supplier specific method	Not utilised
Category 5: Waste Generated in Operations	Waste type specific method	1. ESG data – total waste generated by Northern Star (NGA Factors & UK Factors)
	Average data method	Not utilised
	Fuel based method	Not utilised
Category 6: Business Travel	Distance based method	1. AMEX & InFlight extracts – passenger flights and emissions factors (US EPA factors included in the generated reports)  2. Pilbara Operations utilised a combined business travel and employee commuting report for FY25 (and restated FY23 and FY24), where data was allocated to Categories 6 and 7 based on an individual assessment of the nature of each travel instance.
Category 7: Employee Commuting	Spend based method	Not utilised
	Site specific method	Not utilised
Category 8: Processing of Sold Products	Average data method	Not utilised
	Spend based method	Spend data – total spend and generic emission factor (US EPA Factors)

# Appendix E: Assumptions Used to Support Net Zero Ambition and Scope 1 and 2 Emissions Reduction

- Renewable energy technology cost assumptions utilise:
  - reports commissioned by the Australian Energy Market Operator (Aurecon – 2024) and CSIRO (GenCost 2023-24);
  - o specialist industry advisors; and
  - o commercial offerings from technology providers.
- Renewable energy projects installed on Northern Star sites are to be registered for the purpose of generating green products, for the benefit of or use by Northern Star.
- Grid emission intensity factors published by the Australian Clean Energy Regulator for grid supplied sites.
- Northern Star's wholly owned subsidiary GKL Properties
   Pty Ltd has been assessed for eligibility for Human
   Induced Regeneration projects.
- Renewable energy resources modelling uses a combination of publicly available data (weather satellites) and site-specific measurements.
- Scope 1 Emissions reductions based on modelled reduction in fossil fuel requirements from renewable energy projects (Wind, Solar and Battery Energy Storage Systems) installed at Northern Star Operations using original equipment manufacturer (OEM) performance curves.
- Scope 2 Emissions will be reduced through a combination of grid greening and contracting/ partnering for electricity from renewable generators.
- The KCGM 2028 commissioning timing assumes that the KCGM renewable project involves the Western Australian Environmental Protection Authority determining that Northern star's referral of the KCGM renewables project (forming part of the Eastern Goldfields Power Project) to the EPA under section 38 of the Environmental Protection Act 1986 does not require assessment. If assessment is required by the EPA, the expected timeline will be 2-3 years longer before commissioning could occur. Northern Star expects to gain more certainty about the environmental approvals timeline in early 2026.
- Northern Star's planned & implemented pathways targeting 35% Emissions Reduction by 2030, as described in Figure 2, does not yet include potential emissions reduction projects that may be associated with the Hemi Development Project.





# **About This Disclosure**

Northern Star has reported in accordance with the GRI Standards for the period 1 July 2024 to 30 June 2025. This disclosure supports the Northern Star Annual Report FY25 in relation to environment and social responsibility.

Management has sought independent, third-party assurance by Bureau Veritas of all data relating to GRI core and material disclosures in this disclosure. These disclosures are identified in our GRI, SASB and UN SDG Alignment Index. Where partial assurance is received, or a topic note assured, that information has been included in the Index.

A copy of the assurance statement is provided on Northern Star's website at: <a href="Environment & Social Responsibility">Environment & Social Responsibility (ESR)</a>
<a href="Reporting">Reporting</a>

This clarifies the level of assurance provided by Bureau Veritas in relation to our disclosures.

This disclosure was reviewed and approved by Northern Star's Board of Directors and published on 21 August 2025. Monetary amounts in this Report are reported in Australian dollars unless otherwise stated.

# Disclaimer

This disclosure contains forward-looking statements, including statements of current intention and expectation. These forward-looking statements are based on information available at the date of this disclosure.

While these forward-looking statements discuss Northern Star's expectations at the date of this disclosure, they are not guarantees or predictions of future performance, and by their nature, are subject to significant uncertainties, many of which are beyond Northern Star's control. Actual results and developments may differ materially from those expressed in this disclosure and Northern Star cautions readers against reliance on any forward-looking statements or guidance. There are also limitations with respect to scenario analysis, and it is difficult to predict which, if any, of the scenarios might eventuate. Scenario analysis is not an indication of probable outcomes and relies on assumptions that may or may not prove to be correct or eventuate. Except as required by applicable laws or regulations, Northern Star does not undertake to publicly update or review any forward-looking statements, whether as a result of new information or future events.

# FY25 ESR Disclosure Suite

This disclosure, and our supplementary website disclosures, form part of a suite of documents that provide information and updates on Northern Star's FY25 environment and social responsibility disclosures and should be read as a supporting accompaniment to the Northern Star Resources Ltd Annual Report FY25, Modern Slavery Statement FY25 and Corporate Governance Statement FY25.

Throughout the ESR Disclosure Suite there are links to supporting information on our website which the reader is encouraged to view. The Northern Star website contains significant additional supporting information including our annual ESR Performance Data Tables, GRI Index and references to our previous disclosures.

# Assumptions

Nil

# Feedback

We welcome feedback and invite readers to send any comments or enquiries about this disclosure to us at <a href="mailto:esgperformance@nsrltd.com">esgperformance@nsrltd.com</a>

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# Glossary

## **ABN**

Australian Business Number

#### **ASX**

Australian Securities Exchange, trading as ASX

# ASX Corporate Governance Council Principles and Recommendations

Principles and Recommendations (4th edition) of the ASX Corporate Governance Council on the corporate governance practices to be adopted by ASX listed entities and which are designed to promote investor confidence and to assist listed entities to meet shareholder expectations

#### Au

The chemical symbol for gold

# **Audit & Risk Committee (ARC)**

The Audit and Risk Committee, a subcommittee of the Board

# B or bn

Billion

# BESS

Battery Energy Storage System

## Board

**Board of Directors** 

## **BTM**

Behind the Meter

# **CMP**

Contract Management Plan

# $CO_2$

Carbon dioxide

## CO<sub>2</sub>-e

The universal unit of measurement to indicate the global warming potential of each greenhouse gas, expressed in terms of the global warming potential of one unit of carbon dioxide. This unit is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis

# Company

Northern Star Resources Ltd ABN 43 092 832 892

## contractor(s)

Individuals who are employed by other companies, or, other companies, who provide services to the Group to support its Operations

## **Corporations Act**

Corporations Act 2001 (Cth)

# **Decarbonisation Pathway**

Refer to figure 2 for our current planned pathway targeting 35% Implemented & Planned Emissions Reduction by 2030

# Director

A director of the Company duly appointed under the Corporations Act

# **Emissions Reduction**

The mitigation or abatement of greenhouse gas or airborne contaminant emissions

# employees

Total number of employees of the Group including permanent, fixed term and part-time. Does not include contractors

# ESG

Environment, Social & Governance

## **ESR**

**Environment and Social Responsibility** 

## **ESS Committee**

Environmental, Social & Safety Committee a sub-committee of the Board

## FY

Financial Year ending 30 June

## **GHG**

The seven greenhouse gases listed in the Kyoto Protocol—carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); nitrogen trifluoride (NF<sub>3</sub>); perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>)

## GRI

Global Reporting Initiative

#### Group

Northern Star Resources Ltd and all of its wholly owned subsidiaries

## **IPCC**

Intergovernmental Panel on Climate Change

# K or k

Thousand

# KCGM

KCGM means Kalgoorlie
Consolidated Gold Mines Pty Ltd,
a wholly owned subsidiary of the
Company, which operates the Super
Pit, and Mt Charlotte and Fimiston
underground Operations and Fimiston
Processing Plant in Kalgoorlie,
Western Australia

# Kg or kg

Kilogram

## kl

kilolitre; one thousand litres

# Key Management Personnel or KMP

Defined in the Australian Accounting Standards as those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity

## KPI

**Key Performance Indicator** 

## **Limited Assurance**

Audit and assurance undertaken by an external auditor on whether the data or statements made in Northern Star's disclosures have been prepared in accordance with GRI

#### M or m

Million

#### MW

megawatt; one million watts

### **Net Zero**

Net Zero refers to achieving a balance between the amount of operational Scope 1 and Scope 2 GHG in Master Glossary Emissions produced and those removed

## **Net Zero Ambition**

Net Zero Ambition is our ambition to achieve Net Zero by 2050, as expressed in our Climate Change Policy available on our website

#### **NGA Factors**

Australian National Greenhouse Accounts Factors

# **NGER and NGER Scheme**

National Greenhouse and Energy Reporting scheme established under the National Greenhouse and Energy Reporting Act 2007 of the Commonwealth of Australia

## **NGFS**

Network for Greening the Financial System

# NSMS

Northern Star Mining Services Pty Ltd, a wholly owned subsidiary of the Company, dedicated to underground mining Operations

# Officer

An officer of the Company defined under the Corporations Act

# Oz

Ounce

## **Paris Agreement**

Paris Agreement refers to the legally binding international treaty on climate change which was adopted by 196 Parties at the 21st session of the United Nations Conference of the Parties, in Paris on 12 December 2015, and entered into force on 4 November 2016

#### PPA

Power Purchase Agreement

# RCP Representative Concentration Pathway

Greenhouse gas concentration trajectories which provide Emissions constraints and physical outcomes in Climate Change Scenario Analysis

#### RE

renewable energy

### **SASB**

Sustainability Accounting Standards Board

# **Scope 1 Emissions**

Emissions released to the atmosphere as a direct result of an activity, or series of activities at a facility level

# **Scope 2 Emissions**

Emissions released to the atmosphere from the indirect consumption of an energy commodity

## **Scope 3 Emissions**

Indirect greenhouse gas Emissions other than Scope 2 Emissions that are generated in the wider economy. They occur as a consequence of the activities of a facility, but from sources not owned or controlled by that facility's business

# shareholder

A shareholder of Northern Star Resources Ltd

## stakeholders

An individual, group or organisation that is impacted by the Company, or has an impact on the Company. Examples of stakeholders are investors, employees, suppliers and local communities

## STARR Core Values

Northern Star's Core Values of Safety, Teamwork, Accountability, Respect and Results

#### Tort

Tonnes; one thousand kilograms

#### **TCFD**

Task Force on Climate-related Financial Disclosures

## **TNFD**

The Taskforce on Nature-related Financial Disclosures

## **UN SDGs**

The United Nations Sustainable Development Goals

#### **US or USA**

United States of America

#### WA

Western Australia

## \$

Australian dollars, unless the context states otherwise. All A\$ to \$US currency conversions used in this ESR Disclosure Suite are at \$0.6482

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# **Contact Information**

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General Enquiries <u>info@nsrltd.com</u>

Media Officermediaofficer@nsrltd.comCompany Secretarycompliance@nsrltd.com

ASX Code N

**Share Registry** Automic Group

# Additional Website ESR Disclosures:

Environment & Social Responsibility Approach

People & Culture at Northern Star

Safety & Critical Risk Control at Northern Star

Community Engagement & Support at Northern Star

Supply Chain Management at Northern Star

 ${\bf Environmental\ Management\ at\ Northern\ Star}$ 

Climate Change at Northern Star

Water Security at Northern Star

Waste & Tailings Management at Northern Star

FY25 Performance Data Tables

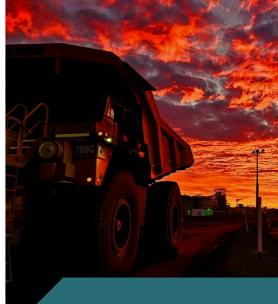
FY25 GRI, SASB and UN SDG Alignment Index

FY25 Tailings Storage Summary

FY25 Biodiversity Values

FY25 Stakeholder Engagement Summary

Cover Image: **Anna Tetley - Environmental Advisor** Jundee Operations Yandal Production Centre, Western Australia



Sunset on the go line
Thunderbox Operations
Yandal Production Centre
Western Australia
Photo Credit: Kaiya-Marie Ruffles
- Dump Truck Operator