Climate Action 100+

Global Investors Driving Business Transition

Net Zero Standard for Diversified Mining

Investor foreword

A transition to net zero is underway. All but a handful of nations agreed to pursue efforts to limit warming to 1.5°C in the Paris Agreement, and the transition must accelerate to achieve this goal – the climate impacts we are seeing today only underline its importance.

The resources diversified miners provide are a vital and substantial component of the global economy and will be pivotal in its decarbonisation. This *Net Zero Standard for Diversified Mining* will help investors to assess how mining companies are navigating this complex transition.

As economies scale up clean energy technologies and grid capacity, miners will need to provide key materials at unprecedented rates. To date, many such transition materials have only been extracted at low volumes. Miners will therefore have to deploy capital to accelerate production while also pre-empting and avoiding potential negative social and environmental consequences.

Concurrently, the mining sector and its value chains will also need to decarbonise. For some commodities, this means reducing production. In net zero scenarios, coal production declines towards zero, with thermal coal declining faster than metallurgical coal. Other commodities, such as iron ore and bauxite (or alumina) – necessary inputs for making steel and aluminium – will still be needed in a low-carbon world. However, the downstream processing of these commodities often dominates miners' indirect (scope 3) emissions, and these value chains must also be decarbonised to achieve net zero.

The Standard, documented in these pages, incorporates the comprehensive range of considerations specific to this sector, and provides a rigorous framework that is adaptable to the varied value chains, individual aims and strategies of diversified miners.

Investors often have exposure not only to the mining sector, but to many other sectors that are underpinned and enabled by mining. For example, the autos, property, steel and manufacturing sectors are highly dependent on the commodities produced by miners. By focusing on the strategic role of mining in the net zero transition, investors can boost the resilience of their overall portfolio.

Investors who use the forthcoming assessments of mining company public disclosures against the Standard will be rewarded with clear and comparable insights into how miners are managing the net-zero transition. These assessments, coupled with the context and guidance outlined in the supporting resource, *Investor Expectations for Diversified Mining*, are designed to support investor engagement with mining companies in line with the goals of the global Climate Action 100+ investor initiative, and bring impactful insight and understanding to these dialogues.

This standard has been shaped by institutional investors and refined with input from mining companies, sector experts and other stakeholders. It provides an ambitious but credible framework for investors and mining companies to ensure this critical sector supports a just and orderly transition to net-zero, and it raises the bar at a crucial time in this essential global economic transformation.

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How to use this document

This document, *Net Zero Standard for Diversified Mining*, sets out metrics that diversified mining companies engaged with under Climate Action 100+ will be assessed against, and the scoring methodology that will be used. These metrics are additional to the Climate Action 100+ Net Zero Company Benchmark, and this document shows how the new metrics relate to the indicators and sub-indicators of the Net Zero Company Benchmark. The accompanying document, *Investor Expectations for Diversified Mining*, places the metrics presented here in the context of supporting background and rationale.

Disclaimer

Contents

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SECTION 1:
THE STANDARD

Definitions of transition materials

In this Net-Zero Standard, transition materials (TM) are sub-divided into 'key' and 'other':

Key transition materials (KTMs)

- Lithium
- Copper
- Graphite
- Tellurium
- Nickel
- Cobalt
- Neodymium

Other transition materials (OTMs)

- Aluminium (alumina and bauxite)
- Arsenic
- Boron
- Cadmium
- Chromium
- Gallium
- Germanium
- Hafnium
- Indium
- Iridium
- Lead
- Magnesium
- Manganese
- Molybdenum
- Niobium
- Platinum Group Metals
- Rare Earth Elements (all)
- Selenium
- Silicon
- Silver
- Tantalum
- Tellurium
- Tin
- Titanium
- Tungsten
- Vanadium
- Yttrium
- Zinc
- Zirconium

Informing these definitions are the following **eligibility criteria:**

1. % transition-related demand in 2022
2. % overall primary demand growth between 2022 and 2030
3. Absolute expected increase in market size between 2022 and 2030

Investors selected these criteria in part because they desire to grasp the size of the commercial opportunity but also because they want to invest in and support companies producing materials that will accelerate the transition.

Investors wish to ensure commodities classified as KTMs are mined responsibly; accelerated transition material mining must not incur unacceptable costs in terms of environmental and social impact, or carbon emissions. The Standard sets out two additional *do no significant harm* (DNSH) lenses to assess the production of KTMs.

1. **The social and environmental impact.** This screening is evaluated at a mine-level by testing for mine certifications from an independent body such as IRMA, TSM or The Copper Mark and consistent with indicator 9.iii.a.
2. **The emissions intensity of production.** The emissions intensity of production for each commodity can be assessed to ensure harmful human and environmental impact (Just Transition 'in').

Net Zero Standard for Diversified Mining metric list

Exhibit 2 presents the proposed metrics that will be used to make assessments of leading mining companies. Consistent with the structure established in the Net Zero Standard for Oil & Gas, all metrics are shown under the appropriate CA100+ Company Benchmark indicator reflecting changes following the recent (Version 2.0) consultation.

The metrics are also classified by type depending on whether they aim to capture disclosure or assess the alignment of disclosure against a benchmark. Metrics relating to climate solutions are categorised and scored separately (for further details on scoring see Section 2).

Not all metrics are relevant to all companies. For example, if a company does not have a coal business, it does not need to set targets relating to coal. Exhibit 1 highlights the metrics that are contingent on the nature of the mining company, as assessed in indicator 0.

Exhibit 1: Summary of contingencies attached to the Net Zero Standard for Diversified Mining metrics

Applies if:	Contingency	Topic(s)	Indicators/metrics
0.1 = Yes	Applies to companies that produce thermal coal	Thermal coal decarbonisation Thermal coal capex Production disclosure	5.v.a-g 6.ii.b 10.iv.b
0.2 = Yes	Applies to companies that produce met coal	Met coal decarbonisation Met coal capex Production disclosure	5.vi.a-g 6.ii.c 10.iv.c
0.1 or 0.2 = Yes	Applies to companies that produce coal (whether thermal, met, or both)	Methane emissions reductions Coal capex Commitment to Just Transition Mine closures Operational emissions disclosure	5.iv.a-d 6.ii.a,d-f 9.i.a-b 9.ii.a-b 10.ii.g-h
0.3 = Yes	Applies to companies producing key transition materials	Transition materials production Transition materials capex	5.ii.a,c,e-g 6.iv.a,c
0.4 = Yes	Applies to companies producing other transition materials	Transition materials production Transition materials capex	5.ii.b,d 6.iv.b
0.3 or 0.4 = Yes	Applies to companies producing materials needed for the energy transition (transition materials)	Commitment to Just Transition Mine closures Responsible mining	9.i.a-b 9.ii.b 9.iii.a-c
0.5 = Yes	Applies to companies that produce iron ore	Scope 3 cat. 10 decarbonisation	5.viii.a 5.viii.c
0.6 = Yes	Applies to companies that produce alumina/bauxite	Scope 3 cat. 10 decarbonisation	5.viii.b 5.viii.d
0.5 or 0.6 = Yes	Applies to companies that produce iron ore and/or alumina/bauxite	Scope 3 cat. 10 decarbonisation	5.viii.e-h

Exhibit 2: Net Zero Standard for Diversified Mining – Indicator List

CA100+ v2.0 Indicators[1] New NZS Mining metrics

CA100+ indicator/net zero standard metric		Metric type	Contingency
0.1	Does the company produce thermal coal	Does not affect the score, only which indicators are assessed	
0.2	Does the company produce met coal		
0.3	Does the company produce key transition materials (KTMs) as defined here		
0.4	Does the company produce other transition materials (OTMs) as defined here		
0.5	Does the company produce iron ore		
0.6	Does the company produce alumina/bauxite		

1	**Net-zero GHG emissions by 2050 (or sooner) ambition**		
1.1	The company has set an ambition to achieve net zero GHG emissions by 2050 or sooner		
1.1 a	The company has made a qualitative net zero GHG emissions ambition statement that explicitly includes at least 95% of its Scope 1 and 2 emissions	Disclosure	
1.1 b	The company's net-zero GHG emissions ambition covers the most relevant Scope 3 GHG emissions categories for the company's sector (where applicable)	Disclosure	

2	**Long-term (2036-2050) GHG reduction target(s)**		
2.1	The company has set a target for reducing its GHG emissions by between 2036 and 2050	Disclosure	
2.2	The long-term (2036 to 2050) GHG reduction target covers at least 95% of Scope 1 & 2 emissions and the most relevant Scope 3 emissions (where applicable)		
2.2a	The company has specified that this target covers at least 95% of its total Scope 1 and 2 emissions	Disclosure	
2.2b	The company's Scope 3 GHG reduction target covers at least the most relevant Scope 3 emissions categories for its sector and the company has published the methodology used to establish its Scope 3 target (where applicable).	Disclosure	
2.i.a	Has the company provided the LT emissions target in terms of both absolute emissions and emissions intensity, stated either as a point or narrow range (<10% of base year value)	Disclosure	
2.i.b	*[Not operational]* Is the reduction in absolute emissions implied by the LT target in line with or below the relevant net zero pathway	Alignment	
2.3	The company's last disclosed carbon intensity OR its short-term or medium- term targeted carbon intensity OR the company's expected carbon intensity derived from their long-term GHG target is aligned with or below the relevant sector trajectory needed to achieve the Paris Agreement goal of limiting global temperature increase to 1.5° Celsius with low or no overshoot in 2050	Alignment	

1 Climate Action 100+, "Climate Action 100+ Net Zero Company Benchmark 2.0," March 2023. [Online]. Available: https://www.climateaction100.org/wp-content/uploads/2023/03/Climate-Action-100-Net-Zero-Company-Benchmark-Framework-2.0..pdf

CA100+ indicator/net zero standard metric			Metric type	Contingency
3	**Medium-term (2027 to 2035) GHG reduction target(s)**			
3.1	The company has set a target for reducing its GHG emissions by between 2027 and 2035		Disclosure	
3.2	The medium-term (2027 to 2035) GHG reduction target covers at least 95% of Scope 1 & 2 emissions and the most relevant Scope 3 emissions (where applicable)			
3.2a	The company has specified that its medium-term GHG reduction target covers at least 95% of its total Scope 1 and 2 emissions		Disclosure	
3.2b	The company's medium-term Scope 3 GHG reduction target covers at least the most relevant Scope 3 emissions categories for its sector and the company has published the methodology used to establish its Scope 3 target (where applicable)		Disclosure	
3.i.a		Has the company provided the MT emissions target in terms of both absolute emissions and emissions intensity, stated either as a point or narrow range (<10% of base year value)	Disclosure	
3.i.b		*[Not operational]* Is the reduction in absolute emissions implied by the MT target in-line or below the relevant net zero pathway	Alignment	
3.3	The company's last disclosed carbon intensity OR its short-term targeted carbon intensity target OR the company's expected carbon intensity derived from its medium-term GHG reduction target is aligned with or below the relevant sector trajectory needed to achieve the Paris Agreement goal of limiting global temperature increase to 1.5° Celsius with low or no overshoot in 2035. This is equivalent to IPCC's Special Report on the 1.5° Celsius pathway P1 or the IEA's Net Zero Emissions by 2050 Scenario.		Alignment	
3.4	[BETA] If the company has only set an intensity GHG reduction target, it has converted it into corresponding projected absolute emissions reductions			

4	**Short-term (2023-2028) GHG reduction targets**			
4.1	The company has set a short-term target for reducing its GHG emissions in the period between 2023 and 2026		Disclosure	
4.2	The short-term (up to 2026) GHG reduction target covers at least 95% of Scope 1 & 2 emissions and the most relevant Scope 3 emissions (where applicable)		Disclosure	
4.2a	The company has specified that this target covers at least 95% of its total Scope 1 and 2 emissions		Disclosure	
4.2b	The company's short-term Scope 3 GHG reduction target covers at least the most relevant Scope 3 emissions categories for its sector and the company has published the methodology used to establish its Scope 3 target (where applicable).		Disclosure	
4.i.a		Has the company provided the ST emissions target in terms of both absolute emissions and emissions intensity, stated either as a point or narrow range (<10% of base year value)	Disclosure	
4.i.b		*[Not operational]* Is the reduction in absolute emissions implied by the ST target in-line or below the relevant net zero pathway	Alignment	
4.3	The company's last disclosed carbon intensity OR the company's expected carbon intensity derived from its short-term GHG reduction target is aligned with or below the trajectory for its respective sector to achieve the Paris Agreement goal of limiting global temperature increase to 1.5°C with low or no overshoot in 2026. This is equivalent to IPCC's Special Report on the 1.5° Celsius pathway P1 or the IEA's Net Zero Emissions by 2050 Scenario.		Alignment	

CA100+ indicator/net zero standard metric			Metric type	Contingency
5	**Decarbonisation strategy**			
5.1	The company has a decarbonisation strategy that explains how it intends to meet its medium- and long-term GHG reduction targets			
5.1a	The company identifies the set of actions it intends to take to achieve its GHG reduction targets over the targeted timeframes. These actions clearly refer to the main sources of the company's GHG emissions, including Scope 3 emissions (where applicable)		Disclosure	
5.1b	The company quantifies the contribution of individual decarbonisation levers to achieving its medium- and long-term GHG reduction targets, including Scope 3 emissions where applicable (e.g. changing technology or product mix, supply chain measures)		Disclosure	
5.1c	If the company chooses to employ offsetting and negative emissions technologies to meet its medium- and long-term GHG reduction targets, it discloses the quantity of offsets, type of offsets, offset certification and the negative emissions technologies it is planning to use		Disclosure	
5.1d	[BETA] The company discloses the abatement measures it intends to use that are technologically feasible under current economic conditions and quantifies the contribution of these measures to achieving its medium- and long-term GHG reduction targets.		Disclosure	
5.i.a	i) Contribution of measures	Has the company disclosed the contribution of measures that account for over 50% of the emissions reduction implied by its main LT target [where companies have set separate scope 1 & 2 and scope 3 targets the reduction will be looked at on an aggregate basis, but typically scope 3 will account for the majority of the reduction]	Disclosure	
5.i.b		Has the company disclosed the contribution of measures that account for over 75% of the emissions reduction implied by its main MT target [where companies have set separate scope 1 & 2 and scope 3 targets the reduction will be looked at on an aggregate basis, but typically scope 3 will account for the majority of the reduction]	Disclosure	
5.i.c		Has the company disclosed the contribution of measures that account for over 90% of the emissions reduction implied by its main ST target [where companies have set separate scope 1 & 2 and scope 3 targets the reduction will be assessed on an aggregate basis, but typically scope 3 will account for the majority of the reduction]	Disclosure	
5.2	The company's decarbonisation strategy specifies the role of climate solutions (i.e., technologies and products that will enable the economy to decarbonise)		Disclosure	
5.2a	The company discloses the revenue OR production it already generates from climate solutions and discloses its share in overall sales		Solutions	
5.2b	The company has set a target to increase revenue OR production from climate solutions in its overall sales		Solutions	
5.ii.a	ii) Transition materials	Has the company disclosed production of each KTM it produced in the last financial year (in units of mass)	Solutions	0.3 = Yes
5.ii.b		Has the company disclosed production of each OTM it produced in the last financial year (in units of mass)	Solutions	0.4 = Yes
5.ii.c		Has the company disclosed revenue for each KTM it produced in the last financial year	Solutions	0.3 = Yes
5.ii.d		Has the company disclosed revenue for OTMs it produced in the last financial year (either per commodity or as aggregated; if the latter, materials outside OTM scope should not be included)	Solutions	0.4 = Yes
5.ii.e		Has the company published disclosure establishing that, for each KTM it produces, all production is from mine sites certified by an independent responsible mining standard (in line with JT indicator 9.iii.a)	Solutions	0.3 = Yes
5.ii.f		[IF 5.iii.a = Yes] Has the company disclosed the emissions intensity of production of each KTM (with a mass of production denominator), OR absolute scope 1 & 2 emissions and production for each KTM (disclosure should include all parts of mining and processing undertaken using a comprehensive emissions accounting boundary)	Solutions	0.3 = Yes
5.ii.g		Has the company disclosed forward-looking guidance, with a timeline (minimum 5 years ahead), for the production of each KTM it produces (or will produce)	Solutions	0.3 = Yes

CA100+ indicator/net zero standard metric			Metric type	Contingency
5.iii.a	iii) Operational emissions (scope 1 & 2) incl. electricity	Does the company disclose a target to reduce its operational emissions (scopes 1 & 2) to net zero by 2050 or earlier, including short- and medium-term targets	Disclosure	
5.iii.b		*[Not operational currently]* Is the operational emissions target aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050)	Alignment	
5.iii.c		Does the company disclose its strategy for reaching net zero operational emissions and interim targets that includes the quantification of major components, and specifying the contributions of neutralising measures (including CCS), reductions in electricity and methane emissions (see 5.iii.d and 5.iv) where relevant	Disclosure	
5.iii.d		Does the company disclose separate targets to reduce its operational electricity emissions (scope 2)	Disclosure	
5.iii.e		Is the electricity emissions target aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050)	Disclosure	
5.iii.f		Is the strategy to reduce emissions from electricity use clearly stated and quantified in terms of underlying contributions (at least on a MT horizon)	Disclosure	
5.iv.a	iv) Methane	Has the company committed to increase the coverage and quality of methane reporting across all coal assets, including after mine closure, using best available techniques and including external verification	Disclosure	0.1 or 0.2 = Yes
5.iv.b		[IF 5.iv.a = Yes] Does the company disclose targets to reduce methane emissions	Disclosure	0.1 or 0.2 = Yes
5.iv.c		*[Not currently operational]* [IF 5.iv.a. = Yes] Is the methane target aligned with a 1.5°C pathway (on either an intensity or absolute basis)	Alignment	0.1 or 0.2 = Yes
5.iv.d		[IF 5.iv.a = Yes] Has the company set out a strategy to reduce its methane emissions that addresses methane emissions pre-, during- and post-mining, AND prioritises abatement of highest emitting coal mines	Disclosure	0.1 or 0.2 = Yes

CA100+ indicator/net zero standard metric			Metric type	Contingency
5.v.a	v) Thermal coal production	Does the company disclose scope 3 cat. 11 emissions targets specifically for its thermal coal activities that include short, medium and long-term components	Disclosure	0.1 = Yes
5.v.b		Is the thermal coal target aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050)	Alignment	0.1 = Yes
5.v.c		Does the company disclose planned thermal coal production factored into its short, medium and long-term targets (expressed in units [Mt or TJ] and either a % or absolute change from a stated base year value)	Disclosure	0.1 = Yes
5.v.d		Are the LT production plans for thermal coal consistent with the IEA NZE (-91% between 2021 and 2050)	Alignment	0.1 = Yes
5.v.e		Are the MT production plans for thermal coal consistent with the IEA NZE (-50% between 2021-30)	Alignment	0.1 = Yes
5.v.f		If any of 5.v.b,d,e are No, has the company given a reason	Disclosure	0.1 = Yes
5.v.g		Does the company disclose the proportion of its thermal coal production going to facilities with publicly disclosed CCS plans	Disclosure	0.2 = Yes
5.vi.a	vi) Met coal production	Does the company disclose scope 3 cat. 11 emissions targets specifically for its metallurgical coal activities that include short, medium and long-term components	Disclosure	0.2 = Yes
5.vi.b		Is the metallurgical coal target aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050)	Alignment	0.2 = Yes
5.vi.c		Does the company disclose planned metallurgical coal production factored into its short, medium and long-term targets (expressed in units [Mt or TJ] and either a % or absolute change from a stated base year value)	Disclosure	0.2 = Yes
5.vi.d		Are the LT production plans for metallurgical coal consistent with the IEA NZE (-88% between 2021 and 2050)	Alignment	0.2 = Yes
5.vi.e		Are the MT production plans for metallurgical coal consistent with the IEA NZE (-30% between 2021-30)	Alignment	0.2 = Yes
5.vi.f		If any of 5.vi.b,d,e are No, has the company given a reason	Disclosure	0.2 = Yes
5.vi.g		Does the company disclose the proportion of its metallurgical coal production going to facilities with publicly disclosed CCS plans	Disclosure	0.2 = Yes

CA100+ indicator/net zero standard metric			Metric type	Contingency
5.1c	The company provides details on the role and type of offsets and negative emissions technologies in its decarbonisation strategy.		Disclosure	
5.vii.a	vii) Neutralising measures	Has the company indicated the contribution (in % or tCO_2) of point-source carbon capture and geological storage (excluding EOR) to its long-term target AND (if relevant) have any contributions of other value chain actors been set out	Disclosure	
5.vii.b		Has the company indicated the contribution (in % or tCO_2) of carbon dioxide removal measures (BECCS, DACCS, NbS) to its long-term target that it intends to pay for or operate	Disclosure	
5.vii.c		Has the company indicated the contribution (in % or tCO_2) of point-source carbon capture and geological storage (excluding EOR) to its medium-term target AND (if relevant) have any contributions of other value chain actors been set out	Disclosure	
5.vii.d		Has the company indicated the contribution (in % or tCO_2) of carbon dioxide removal measures (BECCS, DACCS, NbS) to its medium-term target that it intends to pay for or operate	Disclosure	
5.vii.e		Has the company indicated the contribution (in % or tCO_2) of point-source carbon capture and geological storage (excluding EOR) to its short-term target AND (if relevant) have any contributions of other value chain actors been set out	Disclosure	
5.vii.f		Has the company indicated the contribution (in % or tCO_2) of carbon dioxide removal measures (BECCS, DACCS, NbS) to its short-term target that it intends to pay for or operate	Disclosure	
5.vii.g		Is the total contribution of neutralising measures to the emissions reductions implied by the short, medium and long-term targets less than 50% in each case	Alignment	
5.vii.h		Has the company published information setting out the feasibility of neutralising measures it is planning to use to deliver its emissions reduction targets. This should include: information on technical feasibility and integrity AND forward-looking guidance on expected investment AND indicative timelines to each being operational	Disclosure	
5.viii.a	viii) Scope 3 cat. 10	Does the company have a target to reduce its scope 3 cat. 10 emissions from iron ore [IF no AND 5.viii.g is yes, this question is "Not Relevant"]	Disclosure	0.5 = Yes
5.viii.b		Does the company have a target to reduce its scope 3 cat. 10 emissions from bauxite/alumina [IF no AND 5.viii.g is yes, this question is "Not Relevant"]	Alignment	0.6 = Yes
5.viii.c		*[Not currently operational]* [IF 5.viii.a=Yes] Is the scope 3 cat. 10 emissions target for iron ore aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050)	Disclosure	0.5 = Yes
5.viii.d		*[Not currently operational]* [IF 5.viii.b=Yes] Is the scope 3 cat. 10 emissions target for bauxite/alumina aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050)	Disclosure	0.6 = Yes
5.viii.e		Does the company disclose the current proportion of direct iron ore AND (separately, where relevant) bauxite/alumina sales to customers with externally verified net zero targets that are consistent with 1.5°C	Disclosure	0.5 or 0.6 = Yes
5.viii.f		Does the company disclose the current proportion of direct iron ore AND (separately, where relevant) bauxite/alumina sales to customers based in countries with a national target to reach net zero AND break out the proportion of these that target net zero by 2050	Disclosure	0.5 or 0.6 = Yes
5.viii.g		In the interests of enhancing the broader adoption of net zero, has the company disclosed a target for the number of customers it has engaged with regarding making net zero commitments and/or would expect to make new net-zero commitments consistent with 1.5°C over the next financial year and the proportion of its production (in Mt) these commitments might cover	Disclosure	0.5 or 0.6 = Yes
5.viii.h		Does the company state its strategy for delivering the target set out in 5.viii.a/b or 5.viii.g	Disclosure	0.5 or 0.6 = Yes
5.ix.a	ix) Shipping (scope 3 cat. 4 and 9)	Does the company have a target to reduce its shipping emissions (an element of scope 3 cat. 4 & 9)	Disclosure	
5.ix.b		Is the shipping emissions target aligned with a 1.5°C pathway (where alignment is determined using cumulative benchmark divergence over 2019-2050	Alignment	
5.ix.c		Does the company disclose a strategy to bring shipping emissions down in line with its stated targets	Disclosure	

CA100+ indicator/net zero standard metric			Metric type	Contingency
6	**Capital alignment**			
6.1	The company is working to decarbonise its capital expenditures		Disclosure	
6.1a	The company explicitly states that it has phased out or is planning to phase out capital expenditure in new unabated carbon intensive assets or products by a specified year		Disclosure	
6.1b	The company discloses the stated value of its capital expenditures that is going towards carbon intensive assets or products.		Disclosure	
6.2	The company explains how it intends to invest in climate solutions (i.e., technologies and products that will enable the economy to decarbonise)		Disclosure	
6.2a	The company discloses the stated value of capital expenditure allocated towards climate solutions in the last reporting year		Disclosure	
6.2b	The company discloses the stated value of capital expenditure that it intends to allocate towards climate solutions in the future		Disclosure	
6.i.a	i) Total	Has the company disclosed total group capex in both the last financial year and a forward-looking budget (minimum 3 years ahead) specifying the number of years included	Disclosure	
6.ii.a	ii) Coal capex	Has the company made a commitment to not invest in any new coal capacity (including new mines, mine extensions and mine acquisitions)	Disclosure	0.1 or 0.2 = Yes
6.ii.b		Has the company disclosed thermal coal capex in the last financial year and a forward-looking budget (minimum 3 years ahead)	Disclosure	0.1 = Yes
6.ii.c		Has the company disclosed met coal capex in the last financial year and a forward-looking budget (minimum 3 years ahead)	Disclosure	0.2 = Yes
6.ii.d		If the company has not made a commitment to stop investing in new coal capacity (6.ii.a), has the company disclosed capex in new mines in the last financial year and forward-looking guidance	Disclosure	0.1 or 0.2 = Yes
6.ii.e		Has the company clearly disclosed, where relevant, the contribution of asset transfer/ divestments to both thermal AND met coal production declines	Disclosure	0.1 or 0.2 = Yes
6.ii.f		Has the company established sales conditions that require that purchasers of coal assets have: a) commitment to follow an IEA NZE 1.5°C-aligned production pathway; AND b) financial means to cover decommissioning and rehabilitation; AND c) commitment to adhere to just transition principles	Disclosure	0.1 or 0.2 = Yes
6.iii.a	iii) Emissions reduction	Has the company disclosed committed decarbonisation investment, AND quantitatively detailed components, AND linked this to emissions reductions over a specified period	Disclosure	
6.iv.a	iv) Transition materials	Has the company disclosed total investment (organic capex plus acquisitions) in production of KTMs in the last financial year (on a per-commodity basis)	Solutions	0.3 = Yes
6.iv.b		Has the company disclosed total investment (organic capex plus acquisitions) in production of OTMs in the last financial year (either per commodity or as aggregated; if the latter, materials outside of the OTM scope should not be included)	Solutions	0.4 = Yes
6.iv.c		Has the company disclosed forward-looking guidance for total investment (organic capex plus acquisitions) in production of KTMs (on a per-commodity basis; minimum 5 years ahead)	Solutions	0.3 = Yes

7	Climate policy engagement		
7.1	The company commits to conducting its policy engagement activities in accordance with the goals of the Paris Agreement.	Disclosure	
7.1a	The company has a specific public commitment/position statement to conduct all of its lobbying in line with the goals of the Paris Agreement	Disclosure	
7.1b	The company commits to advocate for Paris-aligned lobbying within the trade associations of which it is a member	Disclosure	
7.1c	The company's public commitment/position statement to conduct all of its own lobbying in line with the goals of the Paris Agreement specifies the goal of restricting global temperature rise to 1.5°C above pre-industrial levels	Disclosure	
7.2	The company reviews its own and its trade associations' climate policy engagement positions/activities	Disclosure	
7.2a	The company publishes a review of its climate policy positions' alignment with the Paris Agreement goals and discloses how it has advocated for these positions through its own climate policy engagement activities	Disclosure	
7.2b	The company publishes a review of its trade associations' climate positions / alignment with the Paris Agreement and discloses what actions it took as a result.	Disclosure	

CA100+ indicator/net zero standard metric			Metric type	Contingency
8	**Climate governance**			
8.1	The company's board has clear oversight of climate change		Disclosure	
8.1a	The company discloses evidence of board or board committee oversight of the management of climate change risks		Disclosure	
8.1b	The company has named a position at the board level with responsibility for climate change		Disclosure	
8.2	The company's executive remuneration scheme incorporates climate change performance elements		Disclosure	
8.2a	The company's CEO and/or at least one other senior executive's remuneration arrangements specifically incorporate climate change performance as a KPI determining performance-linked compensation (reference to 'ESG' or 'sustainability performance' are insufficient)		Disclosure	
8.2b	The company's CEO and/or at least one other senior executive's remuneration arrangements incorporate progress towards achieving the company's GHG reduction targets as a Key Performance Indicator determining performance-linked compensation.		Disclosure	
8.3	The Board has sufficient capabilities/competencies to assess and manage climate-related risks and opportunities		Disclosure	
8.3a	The company has assessed its board competencies with respect to managing climate risks and discloses the results of the assessment		Disclosure	
8.3b	The company provides details on the criteria it uses to assess the board competencies with respect to managing climate risks and opportunities and the measures it is taking to enhance these competencies		Disclosure	
9	**Just transition**			
9.1	The company has committed to the principles of a Just Transition			
9.1a	The company has committed to decarbonise in line with defined Just Transition principles, recognising the social impacts of its decarbonisation efforts		Disclosure	
9.i.a	i) Commitment	As relevant, has the company committed to manage both its phaseout of coal mining (the transition out) and/or its efforts to increase transition material mining (the transition in) in line with defined just transition principles	Disclosure	0.1, 0.2, 0.3 or 0.4 = Yes
9.i.b		Has the company disclosed an annual budget commitment to implement any just transition plans that it has published	Disclosure	0.1, 0.2, 0.3 or 0.4 = Yes
9.1b	The company has committed to retain, retrain, redeploy and/or compensate workers affected by its decarbonisation efforts.		Disclosure	
9.1c	The company has committed that new projects associated with its decarbonisation efforts are developed in consultation with affected communities and seek their consent.		Disclosure	
9.2	The company has disclosed how it is planning for and monitoring progress towards a Just Transition.		Disclosure	
9.2a	The company has developed a Just Transition plan for how it aims to support workers and communities negatively affected by its decarbonisation efforts		Disclosure	
9.ii.a	ii) Mine closures	Has the company committed to communicate relevant decisions about the operation of mines or facilities that will have a material impact on workers, contractors, communities, and local authorities as soon as possible	Disclosure	0.1 or 0.2 = Yes
9.ii.b		Does the company publish mine closure and environmental rehabilitation commitments and provisioning as part of its just transition plan for new TM mines and coal mines facing early closure dates	Disclosure	0.1, 0.2, 0.3 or 0.4 = Yes
9.2b	The company's Just Transition plan was developed in consultation with workers, communities and other key stakeholders affected by its decarbonisation efforts.		Disclosure	
9.2c	The company discloses the quantified Key Performance Indicators it uses to track its progress towards the objectives of its Just Transition plan.		Disclosure	
9.iii.a	iii) Accelerating TM mining	Has the company committed to achieve independent responsible mining certification for all mines and has disclosed a timeline to do so	Disclosure	0.3 or 0.4 = Yes
9.iii.b		Has the company committed to address allegations of human and labour rights abuses and to mitigate the risk of future abuses occurring	Disclosure	0.3 or 0.4 = Yes
9.iii.c		Has the company committed to respect the internationally recognised human rights of Indigenous Peoples, including to obtain free, prior, and informed consent before new mines or other projects are developed	Disclosure	0.3 or 0.4 = Yes

10	TCFD disclosure			
10.1	The company has publicly committed to implement the recommendations of the Task Force on Climate related Financial Disclosures (TCFD)		Disclosure	
10.1a	The company explicitly commits to align its disclosures with the TCFD recommendations OR it is listed as a supporter on the TCFD website		Disclosure	
10.1b	The company explicitly sign-posts TCFD aligned disclosures in its annual reporting or publishes them in a TCFD report		Disclosure	
10.2	The company employs climate-scenario planning to test its strategic and operational resilience		Disclosure	
10.2a	The company has conducted a climate-related scenario analysis including quantitative elements and disclosed its results		Disclosure	
10.2b	The quantitative scenario analysis explicitly includes a 1.5° Celsius scenario, covers the entire company, discloses key assumptions and variables used, and reports on the key risks and opportunities identified		Disclosure	
10.i.a	Compre-hensive, aligned emissions disclosure	Has the company disclosed total scope 1, scope 2 and scope 3 emissions for the last reported financial year	Disclosure	
10.i.b		Has the company clearly disclosed (i.e. within the same table) the impact of, AND methodology behind, any adjustments for double counting (between category 10 and 11 for example) on 10.i.a where relevant	Disclosure	
10.i.c		Has the company clearly disclosed the impact of any acquisitions, divestment or other changes in reporting boundary on 10.i.a (even where the impact is zero)	Disclosure	
10.i.d		Has the company disclosed total emissions data (10.i.a) on both equity and operational accounting boundaries	Disclosure	
10.i.e		Is the emissions data independently and externally verified	Disclosure	
10.ii.a	Operational emissions disclosure	Has the company disclosed operational emissions intensity in the last reported financial year for individual products that in aggregate account for >80% of its total operational emissions	Disclosure	
10.ii.b		[IF 10.iia = Yes] Has the company disclosed how its operational emissions intensity for these products (10.ii.a) compares to the industry	Disclosure	
10.ii.c		Has the company disclosed energy-use related scope 1 emissions intensity using an energy consumed denominator for the last reported financial year (e.g. $MtCO_2e/PJ$)	Disclosure	
10.ii.d		Has the company disclosed total scope 2 emissions intensity using an energy consumed denominator for the last reported financial year (e.g. $MtCO_2e/GWh$)	Disclosure	
10.ii.e		Has the company disclosed any contribution of offsets to net total operational emissions OR stated its emissions disclosure does not reflect the use of offsets	Disclosure	
10.ii.f		Has the company disclosed absolute scope 2 using both location-based and market-based methods (excluding any use of renewable energy credits such as RECs or REGOs)	Disclosure	
10.ii.g		Has the company disclosed total methane emissions on an absolute basis (in metric tonnes) and intensity basis (in tCH_4 per Mt of total coal production)	Disclosure	0.1 or 0.2 = Yes
10.ii.h		Has the company disclosed mine-by-mine methane emissions on an absolute basis (in metric tonnes) and intensity basis (in tCH_4 per Mt of total coal production)	Disclosure	0.1 or 0.2 = Yes
10.iii.a	Scope 3 emissions disclosure	Has the company disclosed a breakdown of scope 3 emissions by category	Disclosure	
10.iii.b		Has the company disclosed independently and externally verified total shipping emissions	Disclosure	
10.iii.c		Has the company disclosed scope 3 cat 10 emissions, separating out iron ore and aluminium where relevant	Disclosure	
10.iii.d		Has the company disclosed scope 3 cat 11 emissions, separating out oil, gas, thermal and met coal where relevant	Disclosure	
10.iii.e		Has the company disclosed scope 3 cat 15 emissions, with a description of sources if scope 3 cat. 15 is material (>5% of total scope 3)	Disclosure	
10.iv.a	Production disclosure	Has the company disclosed total CuEq production across all commodities in the last financial year, on a comprehensive boundary aligned with that used for emissions disclosure and using a stated methodology	Disclosure	
10.iv.b		Has the company disclosed thermal coal production (in Mt) AND sales AND profits in the last financial year	Disclosure	0.1 = Yes
10.iv.c		Has the company disclosed total met coal production (in Mt) AND sales AND profits in the last financial year	Disclosure	0.1 = Yes
10.v.a	Energy consumption disclosure	Has the company disclosed total energy consumption in the last financial year on a footprint consistent with emissions disclosure	Disclosure	
10.v.b		Has the company disclosed total electricity consumption in the last financial year on a footprint consistent with emissions disclosure	Disclosure	

11	Historical GHG emissions reductions [beta]		
11.1	The company's emission intensity is decreasing	Disclosure	
11.1a	The company's GHG emissions intensity has decreased in the past year relative to the previous year	Disclosure	
11.1b	The company's GHG emissions intensity decreased over the past three years	Disclosure	
11.1c	The company has reduced its GHG emissions intensity at a rate faster than that projected by a credible 1.5°C pathway for its sector over the past 3 years	Alignment	
11.2	The company discloses the factors that have led to changes in its historical emissions trajectory	Disclosure	
11.2a	The company has quantified the main actions that have driven any Scope 1 and 2 emissions changes, specifying the impact of any large "one-off" items (e.g., divestments, acquisitions, and mergers)	Disclosure	
11.2b	The company has quantified the main actions that have driven any Scope 3 emissions changes, specifying the impact of any large "one-off" items (e.g., divestments, acquisitions, and mergers)	Disclosure	
11.2c	The company discloses details on the carbon credits it retired in the previous year	Disclosure	

SECTION 2:
SCORING METHODOLOGY

Classifying metrics by type ("bucketing")

The Standard comprises of 100 metrics which align with the 11 indicators of CA100+ Net Zero Company Benchmark. Once metrics have been allocated to the appropriate CA100+ Company Benchmark indicator, they are sorted into one of the following four buckets:

Disclosure	Good disclosure enables investors to make informed judgments about transition risks and opportunities. Therefore, the Standard aims to recognise (and ultimately encourage) good disclosure from mining companies.
Alignment assessments	Investors who have committed to decarbonising their portfolios and understanding their transition risks, also want to test whether diversified mining companies have transition strategies aligned with net zero. These alignment assessments focus on forward-looking commitments and cover topics like reliance on neutralization, coal production, operational emissions, and methane (see Exhibit 3). Alignment here is defined in relation to scenarios and pathways compatible with limiting warming to 1.5°C.
Divergence of companywide emission targets with sector pathway	The Standard uses a cumulative benchmark divergence (CBD) to calculate the degree to which the companywide emissions target is aligned with a sectoral decarbonisation emission pathway between now and 2050. This additional assessment complements the simple binary approach used by the existing CA100+ Company Benchmark and provides a comprehensive measure of performance across the entire pathway. Further details of this approach are set out in IIGCC's Investor Expectations of Corporate Transition Plans and a dedicated methodology paper available to IIGCC members.
Climate Solutions	Investors increasingly recognise that the pace of decarbonisation will be constrained without accelerating investment in "climate solutions" (defined here as low-carbon technologies, infrastructure, or other activities which help displace fossil fuels). NZIF encourages investors to set a <10-year goal for allocating investment to climate solutions. The Standard provides definitions of 'key' and 'other' transition materials that are needed for the energy transition. The Standard also looks at both inputs (capex) and outputs (low carbon revenue and transition metal production). In some cases, production can be benchmarked against the relevant growth rates established in a 1.5°C scenario such as the IEA NZE[2].

2 Not all companies can or will want to diversify and so, consistent with both the principle of maximum strategic flexibility embedded in the Standard and the structure of the NZIF (which requires investors to set separate goals for climate solutions), a climate solutions strategy is considered optional. If a company indicates (either through lack of any relevant disclosure or an explicit statement) that it is not intending to diversify this does not undermine its ability to score highly on disclosure and alignment assessments. Whether a company intends to diversify into transition metals is captured by indicator 0.3.

Alignment Assessments included in the Assessment Methodology

The Standard has placeholders for 18 “alignment” assessments aimed to test the disclosures against a net zero (NZ) scenario (typically from the IEA NZE). Four of these are part of the CA100+ Net Zero Company Benchmark. 12/18 of these indicators are operational currently with research underway to develop methodologies for the remainder. Exhibit 3 compiles a full list of the alignment indicators, both operational and to be developed.

Exhibit 3: Proposed Alignment Assessments

Indicator	Metrics		Methodology Status
LT Target	2.i	Absolute emissions target compared against NZ pathway	In development
	2.3	Emissions intensity target compared against NZ pathway	**Operational**
MT Target	3.i	Absolute emissions target compared against NZ pathway	In development
	3.3	Emissions intensity target compared against NZ pathway	**Operational**
ST Target	4.i	Absolute emissions target compared against NZ pathway	In development
	4.3	Emissions intensity target compared against NZ pathway	**Operational**
Strategy	5.i	Operational emissions targets compared against NZ pathway*	In development
	5.iv	Methane targets compared against NZ pathway	In development
	5.v	Thermal coal emissions target compared against NZ pathway*	**Operational**
	5.v	LT thermal coal production targets compared against NZ pathway	**Operational**
	5.v	MT thermal coal production targets compared against NZ pathway	**Operational**
	5.vi	Met coal emissions target compared against NZ pathway*	**Operational**
	5.vi	LT met coal production targets compared against NZ pathway	**Operational**
	5.vi	MT met coal production targets compared against NZ pathway	**Operational**
	5.vii	Contribution of neutralising measures is <50% of S-, M-, & LT targets	**Operational**
	5.viii	Scope 3 cat. 10 target compared against NZ pathway*	In development
	5.ix	Shipping emissions target compared against NZ pathway*	**Operational**
Historical Emissions	11.1	Historical emissions intensity compared against NZ pathway	**Operational**

* Alignment to be determined using cumulative benchmark divergence

Aggregating metrics into sub-indicator and indicator and colour coding

Metrics are scored either as a binary "Yes" or "No". Converting these scores into percentages ("Yes" = 100%, "No" = 0%) allows them to be aggregated at a (i) sub-indicator, (ii) indicator, and (iii) company level using the arithmetic mean for each sub-total. The percentage scores are then colour coded using the scheme set out in Exhibit 4a to allow investors to quickly locate the major outperforming and underperforming areas.

The divergence of the companywide emission pathway from the sector decarbonisation pathway at short, medium, and long-term time intervals and then across the whole pathway is expressed as a percentage. This percentage is colour coded with figures below 0% (indicating alignment) shown in green and figures above 100% shown in red (see Exhibit 4b).

Exhibit 4: Proposed colour coding and boundaries

a) Disclosure, alignment and solutions

Binary metric value	Aggregated sub-ind/ind buckets	Format
No	0-19.9%	
	20.0-39.9%	
	40.0-59.9%	
	60-79.9%	
	80-99.9%	
Yes	100%	
Not assessed	Not assessed	
Not relevant	Not relevant	

b) Divergence of company wide emissions targets

Percentage value	Aggregated sub-ind/ind buckets	Format
<0%	Aligned	
0-19.9%		
20.0-39.9%		
40.0-59.9%		
60-79.9%		
80-99.9%		
100%+		

Presenting/communicating aggregate results

The final output can be displayed as a scorecard that shows aggregated scores by CA100+ Company Benchmark indicator and by data type (see Exhibit 5).

Exhibit 5: Aggregated scores by CA100+ Company Benchmark indicator and by data type

Indicators		Disclosure	Alignment assessments	Divergence of Companywide Emissions Target (Lower is better)	Climate Solutions
Total Company score →		**70%**	**25%**	**37%**	**61%**
↓ CA100+ Company Benchmark indicators					
1	Net-Zero Ambition	**100%**			
2	LT GHG Reduction Target(s)	**100%**	**100%**	**Aligned**	
3	MT GHG Reduction Target(s)	**100%**	**0%**	**45%**	
4	ST GHG Reduction Target(s)	**100%**	**0%**	**36%**	
5	Decarbonisation Strategy	**34%**	**24%**		**22%**
6	Capital Allocation	**13%**			**100%**
7	Climate Policy Engagement	**100%**			
8	Climate Governance	**100%**			
9	Just Transition	**14%**			
10	TCFD Disclosure	**70%**			
11	Historical GHG Emissions Reductions*	**43%**	**0%**		

*BETA indicator

Similar to how the CA100+ Company Benchmark is displayed currently, investors that wish to investigate a particular area of outperformance or underperformance are able to click on a particular indicator to access the supporting sub-indicators and metrics. Exhibit 6 highlights the supporting sub-indicators for the strategy metric.

Exhibit 6: Supporting sub-indicators for the decarbonisation strategy indicator

Indicator		Disclosure	Alignment Assessments	Divergence of Companywide Emissions Target	Climate Solutions
5	**Decarbonisation strategy**	**34%**	**24%**		**22%**
5.1	Strategy to meet LT and MT targets	**0%**			
5.2	Specifies role of climate solutions	**75%**			**0%**
5.i	Contribution of measures	**33%**			
5.ii	Transition materials				**43%**
5.iii	Operational emissions (scope 1 & 2) incl. electricity	**60%**	**0%**		
5.iv	Methane	**0%**	**0%**		
5.v	Thermal coal production	**25%**	**33%**		
5.vi	Met coal production	**25%**	**0%**		
5.vii	Neutralising measures	**29%**	**33%**		
5.viii	Scope 3 cat. 10	**43%**	**100%**		
5.ix	Shipping emissions (scope 3 cat. 4&9)	**50%**	**0%**		

Climate Action 100+

Global Investors Driving Business Transition