



Second-Party Opinion Report

Key Performance Indicators,
Sustainability Performance Targets
and Use of Proceeds of Seatrium
Limited for a Sustainable Finance
Framework

PREPARED FOR

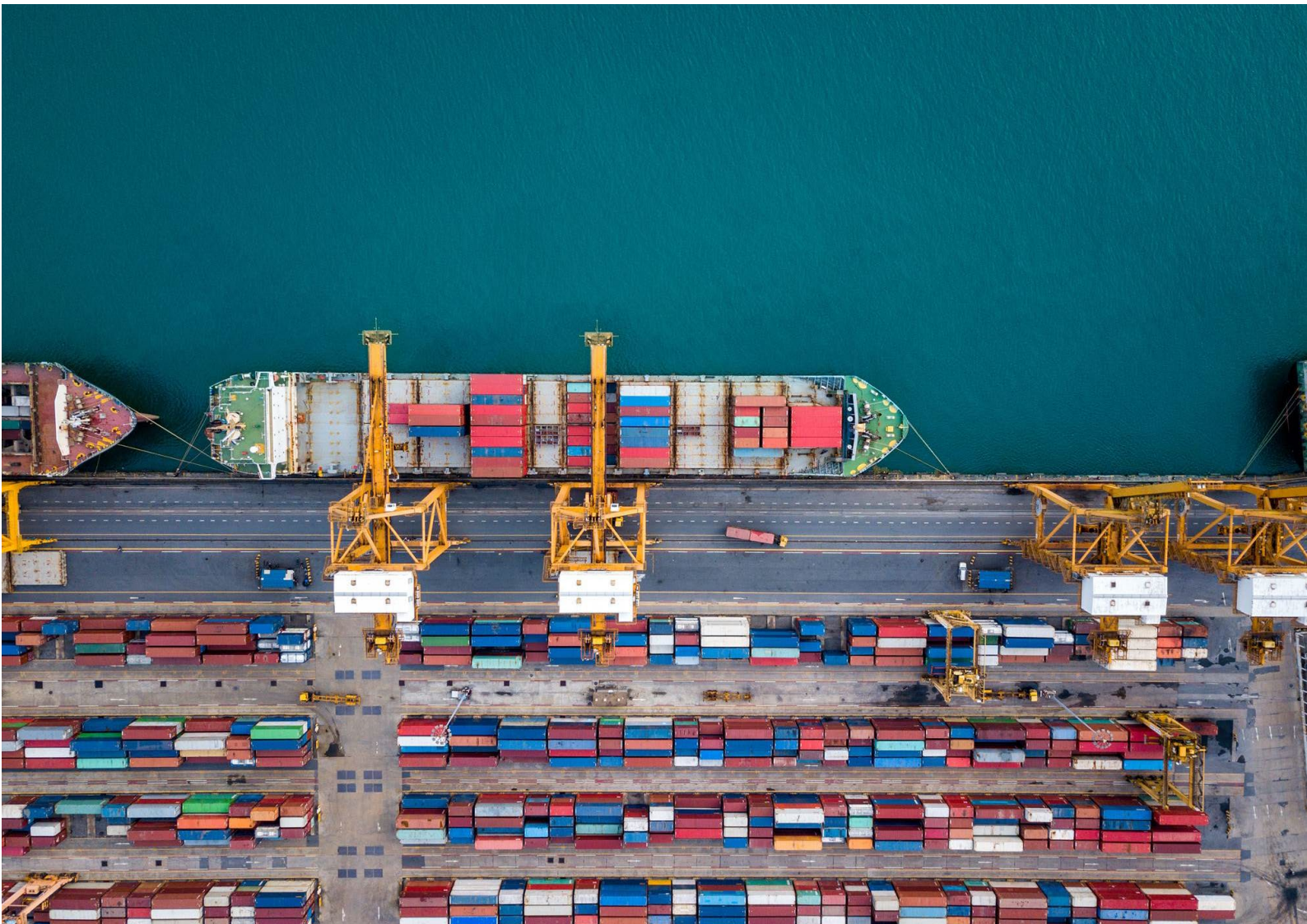
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Second-Party Opinion Report

Key Performance Indicators, Sustainability Performance Targets and
Use of Proceeds of Seatrium Limited For a Sustainable Finance
Framework



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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
ABG	Automatise Bevel Grinding
AI	Artificial Intelligence
APLMA	Asia Pacific Loan Market Association
ASMI	Association of Singapore Marine Industries
BAU	Business-as-usual
BCA	Building and Construction Authority
bn	billion
CCUS	Carbon Capture, Utilisation and Storage
CEO	Chief Executive Officer
CSR	Corporate Social Responsibility
CSRC	Corporate Social Responsibility Committee
CSV	Clean and Sustainable Vessels
EEDI	Energy Efficiency Design Index
EEOI	Energy Efficiency Operational Indicator
EPC	Engineering, Procurement and Construction
ERM	Environmental Resources Management
ESG	Environmental, Social and Governance
FLNG	Floating Liquefied Natural Gas
FOWT	Floating Offshore Wind Turbine
FX	Foreign Exchange
FY	Financial Year
GBP	Green Bond Principles
GFF	Green Finance Framework
GHG	Greenhouse Gas
GLP	Green Loan Principles
GW	Giga-Watt
HSE	Health, Safety and Environment
HVAC	High Voltage Alternating Current
HVDC	High Voltage Direct Current
IAF	Integrated Assurance Framework
ICMA	The International Capital Market Association
ICP	Internal Carbon Price
IMDA	Infocom Media Development Authority

Acronyms	Description
IMO	International Maritime Organisation
IoT	Internet of Things
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
KPI	Key Performance Indicator
LEED	Leadership in Energy and Environmental Design
LMA	Loan Market Association
LNG	Liquefied natural gas
LSTA	Loan Syndications and Trading Association
MARPOL	The International Convention for the Prevention of Pollution from Ships
ML	Machine Learning
MOM	Ministry of Manpower
MSCI	MSCI Inc
MWh	Mega-Watt hour
MWp	Mega-watt peak
R&D	Research and Development
REC	Renewable Energy Certificates
SASB	Sustainability Accounting Standards Board
SDG	Sustainable Development Goals
Seatrium	Seatrium Limited
SEMS	Smart Energy Management System
SFF	Sustainable Finance Framework
SFFC	Sustainable Financing Framework Working Committee
SGX	Singapore Exchange
SLB	Sustainability-Linked Bond
SLBP	Sustainability Linked Bond Principles
SLFF	Sustainability-Linked Finance Framework
SLL	Sustainability-Linked Loan
SLLP	Sustainability-Linked Loan Principles
SPO	Second-Party Opinion
SPT	Sustainability Performance Target

Acronyms	Description
TCFD	Task Force on Climate-related Financial Disclosures
tCO ₂ e	Tonnes of carbon dioxide equivalent
UN	United Nations

Acronyms	Description
UoP	Use of Proceeds
VOCs	Volatile organic compounds
WSH	Workplace Safety and Health
WTIV	Wind Turbine Installation Vessel

1. EXECUTIVE SUMMARY

1.1 SCOPE OF WORK

Environmental Resources Management (S) Pte Ltd (ERM) was engaged by Seatrium Limited ("Seatrium", together with its subsidiaries, the "Group") to provide an independent second-party opinion (SPO). This evaluation was conducted in the context of sustainable financing agreements, including Sustainability-Linked Bonds (SLBs), Sustainability-Linked Loans (SLLs), Green Bonds, and/or Green Loans.

Seatrium was formed in 2023 through the merger between two marine & offshore engineering companies – Sembcorp Marine and Keppel Offshore & Marine. Headquartered in Singapore, Seatrium has over 60 years of track record in the design and construction of rigs, floaters, offshore platforms, and specialised vessels, as well as in the repair, upgrading and conversion of different ship types. Seatrium operates shipyards, engineering & technology centres and facilities in Singapore, Brazil, China, India, Indonesia, Japan, Malaysia, the Philippines, Norway, the United Arab Emirates, the United Kingdom, and the United States. Its key business segments include Oil & Gas Newbuilds and Conversions, Offshore Renewables, Repairs & Upgrades, and New Energies, with a growing focus on sustainable solutions to advance the global energy transition and maritime decarbonisation.

Recently, Seatrium developed a Sustainable Finance Framework (SFF), which encompasses the Sustainability-Linked Finance Framework (SLFF) and the Green Finance Framework (GFF), aimed at supporting its general corporate funding. To ensure the quality and sustainability performance of the framework, ERM was appointed to review the Key Performance Indicators (KPIs), Sustainability Performance Targets (SPTs), and the Green Use of Proceeds (UoP). ERM's role was to provide an independent Second-Party Opinion (SPO) by evaluating these core elements based on the available information and their professional expertise. The core elements for the SLFF were assessed against the Asia Pacific Loan Market Authorization/Loan Market Association/Loan Syndications and Trading Association Sustainability-Linked Loan Principles (February 2023) (SLLP), as well as the International Capital Market Association Sustainability-Linked Bond Principles (June 2023) (SLBP), namely: Selection of KPIs; Calibration of SPTs; Loan/Bond Characteristics; Reporting; and Verification.

The core elements for the GFF were assessed against the Asia Pacific Loan Market Authorization/Loan Market Association/Loan Syndications and Trading Association Green Loan Principles (February 2023) (GLP), and the International Capital Market Association Green Bond Principles (June 2021) (GBP) namely: Use of Proceeds; Process for Project Evaluation and Selection; Management of Proceeds; and Reporting.

The assessment included desktop research and engagements with Seatrium. To formulate a sound opinion, ERM completed the assessment in two key phases.

External Review

To assess the material Environmental, Social, and Governance (ESG) topics, metrics, and Key Performance Indicators (KPIs) for the sector, ERM conducted a comprehensive desktop analysis. This analysis included a review of relevant and publicly disclosed documents from Seatrium, alongside external standards such as:

- Climate Bonds Initiative: Climate Bonds Taxonomy and Climate Bonds Standard V4.2;

- International Capital Market Association (ICMA): Illustrative KPI Registry 2023;
- S&P Global: ESG Materiality Mapping for Transportation Infrastructure and Engineering & Construction;
- Sustainability Accounting Standards Board (SASB): Industry Standard for Engineering & Construction Services; and
- International Maritime Organisation (IMO): Sustainability Goals and Strategies.

Additionally, ERM reviewed publicly available information from comparable companies in the Shipbuilding & Maintenance, and Energy Services & EPC sectors. This review aimed to assess and benchmark Seatrium's Sustainability Performance Targets (SPTs) to ensure their relevance and comparability with industry peers.

Engagement with Seatrium

ERM engaged with Seatrium's representatives responsible for overseeing activities and monitoring performances relating to the Sustainability Performance Targets (SPTs), Key Performance Indicators (KPIs), as well as the Green Use of Proceeds (UoP). ERM scheduled a series of calls with Seatrium's representatives to gain a deeper understanding of Seatrium's Sustainable Finance Framework (SFF), including the rationale behind the proposed KPIs and SPTs, processes and strategies in achieving these SPTs, as well as procedures for project evaluation and selection criteria for the Green UoP. Additionally, ERM requested follow-up information and documentation, which Seatrium provided through email correspondences.

Seatrium's representatives confirmed their understanding that it is their responsibility to provide ERM with all relevant information that is complete, accurate, and up to date. This document serves as the Second-Party Opinion (SPO) Report, encompassing ERM's detailed analysis, opinions, and recommendations.

1.2 LIMITATIONS OF THE ENGAGEMENT

- The SPO Report evaluates the rationale (i.e., relevance, materiality) of the selected KPIs; the ambition of the SPTs, and their alignment with Seatrium's overall sustainability objective. It also assesses the credibility of Seatrium's strategy to achieve the SPTs, the relevance and reliability of selected baselines, the criteria for Green UoP, and the credibility of Seatrium's strategy for project evaluation and selection. Furthermore, the report considers external benchmarks or frameworks referenced. However, the SPO does not include quantitative measurements, calculations, or predictions regarding Seatrium's future performance in achieving the SPTs or UoP. Understanding the SPO in this context is crucial.
- The SPO Report reflects the current industry standards, but it does not warrant alignment with future relevant industry standards.
- The desktop review of relevant targets was limited by the nature and availability of industry-specific targets.
- The analysis within the SPO is confined to the timeline of the SPO development and is based on data obtained during the engagement sessions between ERM and Seatrium. Any data outside of this timeline is not within the scope of this SPO.

1.3 KEY FINDINGS

1.3.1 SUSTAINABILITY-LINKED FINANCE FRAMEWORK

ERM is of the opinion that the Seatrium's SPTs align with the Sustainability Linked Bond Principles (June 2023) (SLBP) and the Sustainability Linked Loan Principles (February 2023) (SLLP). This assessment is based on the following:

1. Selection of KPIs:

The selected KPIs are assessed to be adequate, and material based on international frameworks and standards of the relevant sectors and industry peers. The proposed KPIs were also assessed to be in alignment with Seatrium's overall sustainability strategies. The KPIs are measurable and quantifiable on a consistent methodological basis, with the KPIs benchmarked to external frameworks and standards.

Overall, ERM considers KPI 1 and KPI 2 to be *strong* in its alignment and KPI 3 to be *very strong*. It is understood that the proposed KPIs cannot, in and of themselves, be representative of the overall Borrower's sustainability strategies and cover all material topics and targets in the maritime industry. In the future, the Borrower may wish to develop other KPIs relating to other material topics such as Employment Practices, Biodiversity and Environmental Impacts, as well as Physical Climate Risks.

Calibration of SPTs:

Seatrium has proposed 3 SPTs, namely:

- SPT 1 – 30% reduction of Scope 1 and Scope 2 emissions by 2030 from 2008 baseline;
- SPT 2 – Doubling (i.e., 100% increase in) revenue from renewable energy solutions by 2030 from 2023 baseline; and
- SPT 3 – Workplace Injury Rate below Singapore National Benchmark – Marine (3-year rolling average).

While Seatrium has clear strategies on achieving SPT 1, SPT 2 and SPT 3, it was noted that the achievement of SPT 1 and SPT 2 may be affected by external factors such as energy security, affordable access, and rate of renewable energy deployment, as well as geopolitical tensions. Based on ERM's assessment, the credibility of the strategies implemented to achieve SPT 1 and 2 are considered to be *strong*, while the credibility of the strategies for SPT 3 is considered to be *very strong*.

ERM considers SPT 1, SPT 2 and SPT 3 to be *strongly* ambitious.

- 2. Loan/Bond Characteristics:** Coupon/redemption prices, interest rate rebates and/or penalties are subjected to Seatrium's performance in achieving its SPT(s) for the SPT year. Seatrium has included a fallback mechanism which defines the conditions under which Seatrium may be allowed to update and/or calibrate the SPT to maintain alignment with its business and sustainability commitments over the life of the loan/bond.
- 3. Reporting:** Seatrium has committed to reporting its annual performance against the SPTs for each KPI, after the completion of the necessary assurance, until the Target Observation Date. The information will be disclosed in Seatrium's annual Sustainability Report, its corporate website or bilateral disclosures to the Lenders in the case of SLLs.
- 4. Verification:** ERM understands that Seatrium is committed to report on the performance against each SPT for each KPI annually in its Sustainability Report, which will be subjected to external assurance. The verification of the performance of the KPIs, along with the Assurance Provider's verification report, will be made publicly available on Seatrium's website.

1.3.2 GREEN FINANCE FRAMEWORK

ERM considers Seatrium's Green Finance Framework to be in alignment with the core principles in the Green Loan Principles (February 2023) (GLP), and the Green Bond Principles (June 2021) (GBP). This assessment is based on the following:

- 1. Use of Proceeds:** ERM considers the use of proceeds to be aligned with core green/environmental issues to the maritime industry. The use of proceeds is also in alignment with IMO GHG Strategies and UN SDGs, especially SDGs No. 7, 9, 11, 12, 13 and 14. The proceeds can also be considered impactful in supporting the decarbonisation of the industry, reducing GHG emissions and being more resource efficient through the development and provision of services such as renewable energy, greening of fleets, pollution control, etc.
- 2. Process for Project Evaluation and Selection:** ERM notes Seatrium's effective use of a cross-departmental Sustainable Financing Framework Working Committee for project evaluation and monitoring. Seatrium would also conduct comprehensive environmental and social risk assessments as part of the evaluation and selection process.
- 3. Management of Proceeds:** Seatrium will track the use of proceeds using the Green Finance Register, earmarked under its general funding accounts. ERM considers the Green Finance Register to be sufficient in promoting and maintaining a level of transparency given that it includes core details relating to Green Financing Instrument, amount of allocated proceeds and amount of unallocated proceeds. ERM also considers Seatrium's approach to the management of proceeds to be aligned with market practices.
- 4. Reporting:** Seatrium has committed to conduct both Allocation and Impact Reporting within a year from the issuance date and annually thereafter until the proceeds from any Green Financing Instrument have been fully allocated, or until the Green Finance Instrument is no longer outstanding. ERM notes that Seatrium is committed to align with ICMA Harmonized Framework for Impact Reporting where applicable. The report will be published on its website as a standalone Green Financing report.
- 5. Verification:** Seatrium will engage a third-party reviewer to perform an annual assessment/limited assurance on the alignment and tracking of funds in line with its Green Finance Framework criteria. The verification report will be made publicly available on Seatrium's website in the case of a bond, or to Lenders directly in case of a loan.

Overall, ERM also considers Seatrium to be well-positioned to implement the Green Finance Framework and mitigate relevant green/environmental risks associated with the framework.

2. SUSTAINABILITY-LINKED FINANCE FRAMEWORK

2.1 SELECTION OF THE KPIs AND SPTs INCLUDED IN THIS SPO REPORT

Seatrium has selected the following Key Performance Indicators (KPIs) related to measuring sustainability improvements and performance of the Group:

- KPI 1: Scope 1 and Scope 2 Greenhouse Gases (GHG) emissions;
- KPI 2: Growth of renewable energy solutions (Revenue S\$ millions); and
- KPI 3: Average Workplace Injury Rate (3-year rolling average) in relation to the Singapore National Benchmark for the Marine industry (3-year rolling average).

Targets and the current performance for the SPTs have been summarised by Seatrium and are presented in Table 2-1.

TABLE 2-1 KPIs AND SPTs PROPOSED BY SEATRIUM FOR THE SUSTAINABILITY-LINKED FINANCE FRAMEWORK

Seatrium's KPIs and SPTs for Sustainability-Linked Financing				
KPI 1	Metric	Baseline Performance (2008)	Current Performance (As of FY2023)	SPT
				2030
Scope 1 and Scope 2 Greenhouse Gases (GHG) emissions	Total GHG Emissions (tCO ₂ e)	255,462* tCO ₂ e	182,653* tCO ₂ e (-28%)	178,823 (-30%)
Reporting Period				1 Jan 2024 - 31 Dec 2030

Other Notes

- *Definitions and boundaries of the KPI and SPT*
 - GHG emissions: Tonnes of carbon dioxide equivalent (tCO₂e), excluding the use of carbon credits.
 - Carbon Emissions (tCO₂e) = Scope 1 + Scope 2 GHG Emissions, excludes any use of carbon credits.
 - The boundaries of Seatrium's reported Scope 1 & 2 emissions currently comprise its shipyards operating in Singapore, Indonesia, the Philippines, China, USA, and Brazil, excluding joint ventures.
 - The 2008 baseline was utilised to align with Seatrium's public commitments on reducing GHG emissions and IMO's 2018 GHG Strategy and represents the consolidated figures from Sembcorp Marine and Keppel Offshore & Marine in 2008 (noting that Seatrium was established in 2023).
- *Strategy*
 - Seatrium aims to reduce its Scope 1 and Scope 2 emissions through a combination of renewable energy pathways, energy efficiency measures and new business operation models.
 - Strategies includes improve energy efficiency, optimise production and capacity, increase use of renewable energy (includes installing of solar panels, purchasing renewable electricity, and acquiring renewable energy certificates), and switch to sustainable fuel).
- *Methodology*
 - GHG emissions (measured in tCO₂e) will be calculated using methodologies consistent with the Greenhouse Gas (GHG) Protocol Corporate Accounting and Reporting Standard¹ with reference to the additional guidance provided in the GHG Protocol: Scope 2 Guidance²
 - This KPI will cover Scope 1 and 2 emissions from the following activities:
 - **Scope 1 Emissions:** Direct emissions from owned or controlled sources, primarily from the use of fuels at Seatrium's worksites, including LPG, CNG, and acetylene.
 - **Scope 2 Emissions:** Indirect GHG emissions which consists of purchased grid electricity consumed in Seatrium's yards. Seatrium adopts a market-based approach where the Scope 2 emissions include reduction in emissions from the purchase of Renewable Energy Certificates (RECs) by its Brazilian yards.

¹ Corporate Standard | GHG Protocol

² Scope 2 Guidance | GHG Protocol

- The Corporate Social Responsibility Committee (CSRC) supported by the Group's Sustainability Secretariat and Sustainability Working Committees (consisting of representatives from various business units in Seatrium's global operations) will be responsible for managing and accounting Scope 1 and 2 emissions.
- Seatrium tracks and monitors its Scope 1 and Scope 2 emissions using an emissions data collection software. The Scope 1 and Scope 2 emissions data from its divisions are collected and presented to the CSRC, followed by the Board for review every quarter. In the event of any anomalies, clarifications would be raised to the respective divisions and follow-up actions would be taken to reduce emissions in order to reach its GHG emission reduction targets.
- Seatrium would obtain external assurance in accordance with the Greenhouse Gas Protocol covering Scope 1 and 2 emissions which would be publicly disclosed in its annual sustainability report.
- As mentioned by Seatrium's Management Representatives, there are plans to include external verification of Seatrium's protocols, processes and controls related to the collection and consolidation of emissions data based on Seatrium's emissions data collection software.

KPI 2	Metric	Baseline Performance (2023) (S\$ million)	Current Performance (As of FY2023) (S\$ million)	SPT						
				2024	2025	2026	2027	2028	2029	2030
Growth in revenue from renewable energy solutions from 2023 baseline (%)	% of growth	687	687	10%	25%	40%	55%	70%	85%	100%
Revenue from renewable energy solutions (S\$ million)				756	859	962	1,065	1,168	1,271	1,374
Reporting Period				1 Jan – 31 Dec 2024	1 Jan – 31 Dec 2025	1 Jan – 31 Dec 2026	1 Jan – 31 Dec 2027	1 Jan – 31 Dec 2028	1 Jan – 31 Dec 2029	1 Jan – 31 Dec 2030

Other Notes

- Definitions and boundaries of the KPI and SPTs
 - Revenue refers to the revenue by the Group as of the reporting date.
 - Specifically, the definition of revenue from renewable energy solutions refer to the portion of the Group's revenue that is attributed to activities aligned with the "Renewable Energy" category under the Eligible Green Projects, as outlined in the SFF.
 - No LNG-related projects will be included towards the achievement of KPI 2.
 - The KPI aims to achieve a doubling of revenue (i.e., 100% increase) from renewable energy solutions in 2030 from 2023 baseline.
- Strategy
 - Seatrium has a strong track record in substation and wind turbine installation vessels. It intends to capture value from floating wind in the future, which includes opportunities from floating substation and improving designs, piloting, and commercialisation of floating wind foundations.
 - With reference to Seatrium's Annual Report 2023, the Group has a strong record of existing and ongoing offshore renewable projects, as well as a strong pipeline in related offshore wind projects.
 - With offshore wind capacity expected to grow cumulatively to c.800GW by 2040, as well as increasing market demands, Seatrium aims to capture value and opportunities in floating wind and add value in the floating substation and floating wind foundation. It is well positioned for opportunities in the energy transition through the following strategies:
 - Create franchise in series-build fixed offshore wind substations.
 - Expand footprint in emerging Brazil offshore wind market.
 - Build repeatable high-spec wind turbine installation vessels, with our proprietary designs.
 - Commercialise in-house floating wind solutions.
- Methodology
 - The revenue from renewable energy solutions will be reviewed by Seatrium's finance department and externally verified by an independent third-party.
 - Seatrium's Sustainable Financing Framework Working Committee (consisting of representatives from Seatrium's

Sustainability, Treasury, and Finance teams) will be responsible for screening its revenue based on the project criteria for "Renewable Energy" under the Eligible Green Projects, as outlined in the SFF. An independent third-party will be responsible to verify this screening. Thereafter, the eligible revenue and orders relating to renewable energy solutions will attribute to the achievement of KPI 2.

KPI 3	Metric	Baseline Performance	Current Performance (for FY2023) (3-year rolling)	SPT						
				2024	2025	2026	2027	2028	2029	2030
Average Workplace Injury Rate (3-year rolling average) in relation to the Singapore National Benchmark for the Marine Industry	Number of injuries per 100,000 workers (Workplace Injury Rate)	N/A	235.4	Seatrium Group WIR (3-year rolling average) < Singapore National Benchmark for Marine Industry (3-year rolling average) after a haircut. % Haircut below						
% Haircut				25%	26%	27%	28%	29%	30%	30%
Reporting Period				1 Jan – 31 Dec 2024	1 Jan – 31 Dec 2025	1 Jan – 31 Dec 2026	1 Jan – 31 Dec 2027	1 Jan – 31 Dec 2028	1 Jan – 31 Dec 2029	1 Jan – 31 Dec 2030

Other Notes

- Definitions and boundaries of the KPI and SPTs
 - In accordance with the Ministry of Manpower (MOM), Workplace Injury Rate (WIR) is defined as the total number of fatal and non-fatal workplace injuries per 100,000 workers.
 - The Seatrium performance against the SPT will be based on a three-year rolling average for each given year and is calculated based on the simple average of the WIR figure for that year and the past two years. For example, Seatrium Group's performance against KPI 2 for the year 2024 will be calculated based on the simple average of Seatrium's WIR for 2022, 2023 and 2024.
 - The SPT is established in relation to the national statistics of Singapore for the Marine sector, which is published annually by MOM in the Workplace Safety and Health Report³. Similarly, the three-year rolling average is also applied to Singapore's National Statistics for the Marine Sector. A haircut from the three-year rolling average is then applied before establishing the SPT.
 - KPI 3 covers all operations globally under Seatrium's control during the year, including contractors and subcontractors working within Seatrium's premises.
- Strategy
 - Seatrium aims to achieve the SPTs through the adoption of three main strategies which are:
 - Health, Safety and Environment (HSE) Policy and Framework:** Seatrium's HSE framework is championed by the Board and Senior Leadership Team, employees, contractors, and stakeholders. The CSRC steers the HSE policies and framework, and the Group HSE Committee, together with various sub-committees at the yards, is responsible for developing the relevant procedures and controls and deploying the HSE strategies and work plans.
 - Training Centre & Courses:** Seatrium Academy uses a competency-based, technology-driven development framework that aligns with business needs to build engineering and operational excellence within its workforce. HSE comprised of 44% of its course offering in FY 2023. These courses prioritise employee safety awareness and mindsets, prevent accidents, encourage proactive behaviours, and promote mental well-being for a healthier work environment.
 - HSE Technology:** Seatrium leverages technology and innovation to drive higher HSE standards in its operations. In 2023, Seatrium organised WSH Innovation Conventions for employees to present solutions developed to improve safety and health standards at its workplaces.
- Methodology
 - The Total WIR is calculated based on the following equation:
 - $$\text{Total Workplace Injury Rate} = \frac{(\text{Number of fatal + non-fatal workplace injuries})}{(\text{No. of employed persons})} \times 100,000$$
 - Using 2023 as an example, the 3-year rolling average figure for the Singapore National Benchmark – Marine is calculated by averaging the annual figures between 2021 to 2023 figures. $(509 + 488 + 489) / 3 = 495.3$. The benchmark figure

³ [wsh-national-stats-2023.pdf \(mom.gov.sg\)](https://wsh-national-stats-2023.pdf(mom.gov.sg))

which is after applying a 25% haircut would be $371.5 = 495.3 \times (1 - 25\%)$.

2.2 ASSESSMENT OF KPIs AND SPTs

TABLE 2-2 SUMMARY OF SPT ASSESSMENT BASED ON CRITERIA

SPT		Criteria			
		Alignment	Credibility	Ambitiousness	
SPT 1 – 30% reduction of Scope 1 and Scope 2 emissions by 2030 from 2008 baseline		Strong	Strong	Strong	
SPT 2 – Doubling revenue from renewable energy solutions (\$ million) by 2030 from 2023 baseline		Strong	Strong	Strong	
SPT 3 – Workplace Injury Rate below Singapore National Benchmark – Marine		Very Strong	Very Strong	Strong	
Criteria	Definition	Very Strong	Strong	Moderate	Not Aligned
Alignment	SPT addresses material topics. Metric is relevant to the topic based on sector best practice.	Strongly focused on an issue that is tied to core business as included in material topics.	Focused on an issue that is tied to core business as included in material topics.	Relates to an issue tied to core business but not included in material topics.	Not clear how the topic relates to the business model.
Credible	SPT provides a clear path to impact based on external context, frameworks, or benchmarks. Clear process for measuring progress and delivering performance.	<ul style="list-style-type: none">Impact-focused and quantifiable on a consistent methodological basis.Clear application of external frameworks or benchmarks.Clear ownership for SPT achievement across the business.Rooted in the company's ability to influence.	<ul style="list-style-type: none">Impact-focused and quantifiable.Informed application of external frameworks or benchmarks.Display ownership for SPT achievement across the business.	<ul style="list-style-type: none">Quantifiable but not specific.Informed by external frameworks or benchmarks.Some attempt to explain theory of change and some evidence of accountability for delivery.	<ul style="list-style-type: none">Process focused with arbitrary ambition and ambiguous link to company-change process.No evidence of reference to external frameworks or benchmarks.Unclear accountability for delivery.
Ambitious	SPT is sufficiently visionary to drive meaningful change in business.	Stretch target which will strongly support systemic or industry change.	Stretch target which will support systemic or industry change.	Somewhat stretching target but lagging behind peers.	Incremental target, in line with SPTs already adopted internally by the borrower.

2.2.1 SELECTION OF KPIS

2.2.1.1 ALIGNMENT AND MATERIALITY

2.2.1.1.1 Materiality and Relevance to Seatrium's Business Strategy

Seatrium's business centres around three main sustainability pillars⁴ which are:

- Operating a Responsible Business;
- Engineering a Sustainable Future; as well as
- Caring for Our People and Communities.

These pillars provide an overarching framework for Seatrium in ensuring sustainability through its business operations as the Group aims to build a cleaner and greener future. With the establishment of its Sustainability Vision 2030⁵, Seatrium has also adopted relevant targets under each of the three sustainability pillars.

ERM considers the KPIS established to be aligned with Seatrium's sustainability pillars as well as its Sustainability Vision 2030.

KPI 1: Engineering a Sustainable Future

KPI 1 directly supports the "*Engineering a Sustainable Future*" pillar. Seatrium has set ambitious targets to reduce Scope 1 and Scope 2 greenhouse gas (GHG) emissions and to adopt a net-zero emissions pathway by 2050. This KPI underpins Seatrium's long-term goal of achieving net-zero emissions by 2050.

KPI 2: Operating a Responsible Business

KPI 2 is closely aligned with the "*Operating a Responsible Business*" pillar. This KPI reflects Seatrium's commitment to ethical and responsible business practices, ensuring that its operations adhere to high standards of sustainability and corporate governance.

KPI 3: Caring for Our People and Communities

KPI 3 is directly related to the "*Caring for Our People and Communities*" pillar. It focuses on the well-being and safety of Seatrium's workforce and the communities in which it operates. Furthermore, KPI 3 supports Seatrium's Vision Zero goal for workplace safety, aiming for zero incidences of workplace injuries or fatalities.

In addition, Seatrium conducted a comprehensive materiality assessment, facilitated by an independent consultant, to identify priority material topics. The assessment highlighted "*Environmental Sustainability*" and "*Workplace Safety and Health*" as critical focus areas for the Group. ERM considers KPI 1 and KPI 2 to significantly contribute to "*Environmental Sustainability*", while KPI 3 is directly aligned with "*Workplace Safety and Health*".

⁴ [Seatrium-Our Framework](#)

⁵ [Seatrium-Our Approach](#)

2.2.1.1.2 Materiality and Relevance to Marine & Offshore Sector

Given the nature of its business operations, Seatrrium references several international frameworks and standards during its materiality assessment, including:

- International Capital Market Association (ICMA)'s Illustrative KPI Registry 2023⁶;
- S&P Global – ESG Materiality Mapping for Engineering and Construction; and
- Sustainability Accounting Standards Board (SASB)'s Industry Standard for Engineering & Construction Services; and Wind Technology & Project Developers, were referenced during the materiality assessment.

In addition, peer benchmarking was also conducted against peers in the relevant industrial sectors – Shipbuilding & Maintenance Sector, and Engineering & Construction Sector.

Based on ERM's assessment, the top three material sustainability themes that were identified across the relevant industrial sectors were:

- 1. Workplace Health & Safety** – Ensuring the well-being of employees by identifying and mitigating risks, complying with regulations, providing health & safety training, and fostering a culture of safety and preparedness.
- 2. Climate Change (GHG emissions and Energy)** – Addressing greenhouse gas (GHG) emissions and reduction strategies, climate adaptation and resilience, and effective energy management.
- 3. Employment Practices** – Promoting fair labour practices, diversity and inclusion, employee well-being, and ethical treatment within the workplace to ensure sustainable and socially responsible business operations.

Both KPI 1 and KPI 2 directly relates to the topic of "*Climate Change*" which was identified to be one of the top recurring material topics across the relevant sectors as well as Seatrrium's peers. By achieving KPI 1, Seatrrium directly addresses the critical and urgent need to reduce GHG emissions to mitigate the impacts of climate change. In addition, through KPI 2, Seatrrium is able to promote and support the development of renewable energy solutions, which is crucial in reducing GHG emissions and combating climate change.

Ensuring an effective Health & Safety Management and promoting a culture in safety across its business operations by utilising technology, facilitating open communications, providing regular training opportunities, as well as reviewing and improving safety systems are the fundamental strategies adopted by Seatrrium to achieve KPI 3. Hence, ERM considers KPI 3 to be aligned with the topic of "*Workplace Health & Safety*", which was identified as one of the top material sustainability themes across the relevant sectors as well as industry peers.

⁶ [Illustrative-KPIs-Registry-June-2023-220623.xlsx \(live.com\)](#)

2.2.1.1.3 Alignment with UN SDGs

Of the 17 United Nations (UN) Sustainable Development Goals (SDGs), the proposed KPIs are considered to be aligned with the following SDGs:

- **KPI 1:** Aligned with *SDG 12 – Responsible Consumption and Production* (specifically Target 12.2) and *SDG 13 – Climate Action* (specifically Target 13.2). Reducing GHG emissions is one of the key strategies required to combat climate change and to mitigate its impacts. Furthermore, by implementing GHG reduction strategies, it promotes sustainable business growth which balances economic advancement with environmental preservation.
- **KPI 2:** Aligned with *SDG 7 – Affordable and Clean Energy* (specifically Target 7.2 and Target 7.3). By promoting and supporting the development of renewable energy solution projects, Seatrium is able to directly contribute to promote and enhance the availability of clean and renewable energy. KPI 2 is also considered to support *SDG 13 – Climate Action*, as KPI 2 supports the overall increase renewable energy capacity, which would assist in mitigating climate change and its impacts.
- **KPI 3:** Aligned with *SDG 8 – Decent work and economic growth* (specifically Target 8.5 and Target 8.8). Through KPI 3, Seatrium would strive to promote a safe and secure working environment for all its employ, which is one of the key targets under *SDG 8* to promote sustained, inclusive and sustainable economic growth, with full and productive employment and decent work for all.

2.2.1.1.4 Alignment with International and National Frameworks and Targets

IMO GHG Strategy and Paris Agreement

KPI 1 is directly aligned with the 2023 IMO GHG Strategy⁷ which aims to establish the framework and ambition of the maritime shipping industry in relation to GHG emission reduction. Under the GHG strategy, IMO has set indicative targets to reduce the total annual GHG emissions by at least 20%, striving for 30%, by 2030, compared to 2008 baseline. The targets set under KPI 1 is aligned to that of the GHG emission reduction targets established by IMO. While SPT 1 are aligned with the 2023 IMO GHG Strategy, ERM notes that the IMO GHG strategy is focused on the international shipping and may not be directly applicable to Seatrium's operations.

Nonetheless, ERM considers KPI to contribute to the 2015 Paris Agreement⁸, which aims to limit the increase in the global average temperature to well below 2°C and to pursue efforts to limit the temperature increase to 1.5°C. To limit global warming to 1.5°C, GHG emissions must peak before 2025 and decline 43% by 2030. Hence, ERM considers KPI 1 to support the Paris Agreement and its efforts to minimise the impacts of climate change.

In addition, KPI 2 is considered to have support the Paris Agreement to a certain extent, as the promotion and development of projects relating to renewable energy solutions would contribute to the reduction in GHG emissions and mitigate the impacts of climate change. Furthermore, with reference to World Energy Transitions Outlook⁹ published by International Renewable Energy Agency (IRENA), a 1.5°C-compatible pathway would require global energy consumption to reduce by 6% from 2020 levels and the share of renewables in the global energy mix to

⁷ [2023 IMO Strategy on Reduction of GHG Emissions from Ships](#)

⁸ [parisagreement_publication.pdf \(unfccc.int\)](#)

⁹ [World Energy Transitions Outlook 2023 \(irena.org\)](#)

increase by 77% by 2050. Hence, ERM considers KPI 2 to support global efforts to achieve the 1.5°C Paris Climate Goal.

Singapore's Green Plan 2030

In February 2021, the Singapore Government unveiled the Singapore Green Plan 2030¹⁰, a nationwide movement to advance the national agenda on sustainable development. It outlines green targets for the next 10 years, strengthening Singapore's commitments under the UN's 2030 Sustainable Development Agenda and Paris Agreement, and positioning Singapore to achieve its long-term net-zero emissions aspiration by 2050.

As the reduction of Scope 1 and Scope 2 emissions would support Singapore's overall agenda in achieving net-zero emission by 2050, as well as GHG emissions reduction targets set under the "Energy Reset" pillar of the Singapore Green Plan, KPI 1 is considered to be aligned with Singapore's decarbonisation strategies.

KPI 2 is assessed to be aligned with the "Energy Reset" pillar of the Singapore Green Plan, which focuses on using cleaner energy sources across all sectors. This includes promoting green energy through maximising solar panel deployment, developing hydrogen as a major decarbonisation pathway.

Singapore Ministry of Manpower Workplace Safety and Health 2028 Vision

The Ministry of Manpower (MOM) has established the Workplace Safety and Health (WSH) 2028 Tripartite Strategies Committee to recommend a set of 10-year WSH strategies¹¹ in aims to realise its WSH 2028 vision. The Tripartite Committee comprised of representatives from the Government, industry, unions and partner organisations, which identified four strategic outcomes to track progress towards the WSH 2028 Vision. One of the strategic outcomes is "Sustained Reduction in Workplace Injury Rates", in which targets to reduce fatal injury rate by 30% from a 3-year average of 1.4 per 100,000 workers in 2018 to below 1.0 per 100,000 workers by 2028 and major injury rate by 30% from a 3-year average of 17.2 per 100,000 workers in 2018 to below 12.0 per 100,000 workers by 2028 have been established. As such, ERM considers KPI 3 to be directly aligned with and contributes to the WSH 2028 Vision as well as the 10-year WSH strategies.

¹⁰ [Singapore Green Plan 2030](#)

¹¹ [wsh2028-report.pdf \(mom.gov.sg\)](#)

2.2.1.1.5 Overall Assessment

With reference to Seatrium's Business and Sustainability Strategy, the proposed KPIs were identified to be aligned with Seatrium's Sustainability Pillars. KPI 1 and KPI 2 were identified to be aligned with "*Engineering A Sustainable Future*", while KPI 3 relates to "*Caring for Our People and Communities*". In addition, based on Seatrium's materiality assessment, the proposed KPIs also relates to Seatrium's material topic "*Environmental Sustainability*", and "*Workplace Safety and Health*". Hence, ERM is in the opinion that the proposed KPIs are relevant and material to Seatrium's overall sustainability performance.

Based on the assessment, ERM notes that all three proposed KPIs are aligned and contributes to the sustainability themes that have been identified to be material across the relevant sectors (i.e., Maritime, Engineering & Construction, as well as Wind Technology & Project Developers), as well as Seatrium's peers in the Shipbuilding & Maintenance industry, as well as the Engineering & Construction industry. Specifically, KPI 1 and KPI 2 aligns with "*Climate Change – GHG emissions and Energy*", while KPI 3 aligns with "*Workplace Health and Safety*".

In relation to international frameworks, KPI 1 and KPI 2 were assessed to contribute and support the 2023 IMO GHG Strategy and the Paris Agreement. On the national level, KPI 1 and KPI 2 also contribute to Singapore's Green Plan and the nation's overall agenda to achieve net-zero by 2050. KPI 3 was also identified to be aligned with the Ministry of Manpower Workplace Safety and Health 2028 Vision, as well as the strategic outcomes established under the ten-year WSH plan.

Moreover, the proposed KPIs were assessed to contribute to the UN SDGs such as *SDG 7 – Affordable and Clean Energy*, *SDG 8 – Decent work and economic growth*, *SDG 12 – Responsible Consumption and Production* and *SDG 13 – Climate Action*.

Although KPI 1 is material and sufficient in scope, ERM notes that Scope 1 and Scope 2 emissions only accounted for 22% of Seatrium's overall GHG emissions in 2023, while Scope 3 emissions accounted for 78%. Hence, only including Scope 1 and Scope 2 emissions in KPI 1 may not be fully representative in relation to Seatrium's total emissions. As such, to enhance its alignment, ERM recommends Seatrium to consider establishing Scope 3 reduction strategies. It was also noted that none of the peers have set targets on reducing Scope 3 emissions by 2030 but have set targets to achieve net zero by 2050, which is similar to the target set by Seatrium. Furthermore, while KPI 2 supports the various material topics identified, as well as international and national frameworks, ERM is in the opinion that establishing targets to grow its revenue from renewable energy solutions would translate to indirect impacts to core material topics such as Climate Change and GHG emission reduction.

Based on the above, ERM considers the alignment of KPI 1 and KPI 2 to be '*Strongly*' aligned, while KPI 3 is considered to be '*Very Strongly*' aligned.

2.2.1.1.6 Limitations and Recommendations

While ERM acknowledges that the selected KPI is highly relevant and material, it is also important to note that there are other ESG topics identified by international frameworks and standards, as well as the relevant industry sectors and peers, which are considered to be material and could be addressed in the future and beyond this SFF.

Other ESG topics which Seatrium can consider addressing in the future includes:

1. Employment Practices;
2. Biodiversity and Environmental Impacts; and
3. Physical Climate Risks.

2.2.1.1.7 KPIs Characteristics

In its assessment of the KPIs characteristics, ERM considers: i) whether clear and consistent methodologies are used, and whether the KPIs are measurable or quantifiable; ii) whether the definitions are referenced to external sources, and whether the methodologies can be benchmarked to an external reference.

Methodology – Measurable and Quantifiable on a Consistent Methodological Basis

Regarding KPI 1, the Scope 1 and Scope 2 absolute carbon emissions by Seatrium will be calculated using methodologies that are consistent with the GHG Protocol Corporate Accounting and Reporting Standard. As the GHG Protocol methodology is a comprehensive international standardized framework for accounting and reporting GHG emissions, ERM of the opinion that the selected KPI 1 is measurable and quantifiable on a consistent methodological basis.

KPI 2 is calculated based on revenue from renewable solutions. Given that is an externally verified figure, KPI 2 is considered to be measurable and quantifiable on a consistent methodological basis.

Similarly, for KPI 3, the Total WIR is calculated based on a formula which is consistent and aligned with the methods defined in the Guidance on Workplace Safety and Health (WSH) Reporting¹² published by the WSH Council.

Ability of KPIs to be Benchmarked.

KPI 1 refers to the reduction in Scope 1 and Scope 2 carbon emissions which is measured in tonnes of carbon dioxide equivalent (tCO₂e). Public disclosure of GHG emission data of comparable industry peers were available and used for benchmarking. Hence a direct comparison between the companies' performances and targets set under the KPI could be made accurately.

KPI 2 refers to the growth in revenue from renewable energy solutions. While KPI 2 is quantifiable and applicable for benchmarking, there are limited information on whether industry peers have set similar targets. As such, direct comparison proves to be challenging due to the lack of publicly disclosed targets by peers in this regard.

KPI 3 uses the Singapore National Benchmark for Workplace Injury Rate – Marine to measure the quality of its workplace health and safety practices. The national benchmark allows for a direct comparison with the average performance across the companies in the marine industry that are based in Singapore.

¹² [Guidance on Workplace Safety and Health \(WSH\) Reporting - WSH Council](#)

2.2.2 CALIBRATION OF SPTs

Seatrium has set the following SPTs for its KPIs:

- SPT 1: 30% reduction of Scope 1 and Scope 2 emissions by 2030 from 2008 baseline.
- SPT 2: Doubling revenue from renewable energy solutions in 2030 from 2023 baseline.
- SPT 3: Workplace Injury Rate below Singapore National Benchmark – Marine.

2.2.2.1 CREDIBILITY OF STRATEGY TO ACHIEVE SPTs

2.2.2.1.1 KPI 1 – 30% reduction of Scope 1 and Scope 2 emissions by 2030 from 2008 baseline (Rating: Strong)

Seatrium has adopted a multi-pronged strategy in its approach to achieve the SPTs under KPI 1, which involves a combination of renewable energy pathways, energy efficiency measures and new business operation models, as detailed in the following:

1. Improve Energy Efficiency

- Seatrium has developed an in-house ESG Reporting Platform, which utilises digital platforms to aggregate ESG data and data automation to streamline ESG reporting process. This aims to improve efficiency and productivity through data optimisation via digitalisation.
- Such data platforms also serve as a foundation for Internet of Things (IoT) application tools and Artificial Intelligence (AI) / Machine Learning (ML) algorithms to support Seatrium's energy optimisation. The Smart Energy Management System (SEMS) utilises real-time data collected relating to energy generating supplies, site energy demand, and energy market pricing, to provide operational advisory aimed at enhancing market participation, as well as improving the overall reliability and efficiency of the yard.

2. Optimise Production and Capacity

- Product serialisation, construction modularisation and standardisation are part of Seatrium's strategy under Production and Capacity Optimisation. In efforts to streamline and enhance operational efficiency, especially post-merger, Seatrium is looking to optimise non-essential assets and outsource certain operational activities, which would allow the Group to better focus on its key operations and business segments.
- Consequentially, Scope 1 and Scope 2 emissions would significantly reduce through Seatrium's divestment and outsourcing activities.

3. Increase Use of Renewable Energy

- Seatrium aims to integrate and increase its use of renewable energy throughout its operations (including Solar, Wind, Hydro) in efforts to reduce its Scope 1 and Scope 2 GHG emissions.
- With reference to Seatrium's Sustainability Report 2023¹³, solar panels have been installed at Batangas Yard (Indonesia) and Nantong Yard (China) in 2019 to increase the use of renewable energy in its operations. Furthermore, in 2023, it was reported that additional solar panels had been installed in Tuas Boulevard Yard (Singapore) to expand the solar energy capacity of the yard from 8.5 MWp to 10.5 MWp. The solar panels installed at Seatrium's yard was reported to have generated a total of 12,155 MWh of electricity. The Aracruz Yard and Angra Yard (Brazil) was reported to tap on renewable electricity sources

¹³ [Seatrium_SR2023.pdf](#)

(i.e., Hydropower) through the purchase of Renewable Energy Certificates (RECs), which consequently increases Seatrium's share of renewable energy in its energy mix. Based on Seatrium's Sustainability Report 2023, it was reported that in 2023, that the use of renewable energy accounted for approximately 9% of its total energy mix (including fuel consumption and electricity consumption).

- As part of its strategy to reduce scope 2 emissions (purchased electricity), Seatrium adopts market-based approach in which the reduction in Scope 2 emissions will include the purchase of RECs.

4. Switch to Sustainable Fuel

- Seatrium is currently exploring the use of biodiesel and biomethane in its operations. As outlined in its Sustainability Report 2023, Seatrium hosted its first edition of its Decarbonisation Forum on 5 December 2023, attended by key thought leaders and industry stakeholders. The discussions at the forum were centred around fossil fuel alternatives including biofuels, blue/green ammonia, and hydrogen. The forum explored the roles of these fuels and opportunities on the journey towards net-zero emissions.

Seatrium's Sustainability Office is responsible for managing and accounting for Scope 1 and Scope 2 emissions of their respective yard. The GHG reduction initiatives and performance are overseen by the Corporate Social Responsibility Committee and driven by the Senior Leadership Team, which is chaired by the CEO of Seatrium. ERM notes that Seatrium has developed and established a definitive decarbonisation plan to reduce its scope 1 and 2 emissions by 30% in 2030 (compared against 2008 baseline), which outlines the projected GHG reduction through each of the above-mentioned strategies.

Seatrium has also identified external factors such as energy security, affordable access, and rate of renewable energy deployment, as well as geopolitical tensions, which may influence its ability to achieve SPT 1 to be beyond the Group's control. In addition, the purchase of RECs may also be subjected to market availability and volatility, which could potentially affect Seatrium's ability to achieve SPT 1.

Nonetheless, while such factors are beyond its control, Seatrium's CSRC, supported by the Group's Sustainability Secretariat and Sustainability Working Committees (consisting of representatives from various business units in Seatrium's global operations), will continue to closely monitor and track GHG emission performance. Together with strategic guidance and oversight provided at the Board level, Seatrium will work with the respective functional teams across its global operations to develop individual and specific carbon initiative actions plans in efforts to ensure the GHG reduction targets set under KPI 1 are met. Furthermore, based on Seatrium's 2023 Sustainability Report, it was also reported that the Group will initiate the implementation of an Internal Carbon Price (ICP) from 2024 to further drive the Group's Scope 1 and Scope 2 emission reduction targets.

To strengthen its credibility to achieve SPT 1 (which focuses on Scope 1 and Scope 2 GHG emissions), ERM recommends Seatrium to consider implementing measures to control and monitor its Scope 3 emissions, especially with regards to its outsourcing strategies under "Optimise Production and Capacity" which may result in an increase in Scope 3 emissions.

Overall, ERM considers the credibility of the strategy for achieving SPT 1 to be '**Strong**'.

2.2.2.1.2 SPT 2 – Doubling revenue from renewable energy solutions by 2030 from 2023 baseline (Rating: Strong)

SPT 2 aims to grow Seatrium's revenue from renewable energy solutions (that is eligible under the Renewable Energy Use of Proceeds category of the Sustainable Finance Framework) by 100% in 2030 from 2023 baseline. This includes projects relating to onshore and offshore wind power, as well as hydrogen. SPT 2 will also include associated assets dedicated and used for purpose of supporting renewable energy generation facilities. No LNG-related projects will be included under SPT 2.

Seatrium is strategically positioned to spearhead efforts towards a low-carbon future within the maritime industry through one of its key business segments – Offshore Renewables and New Energies.

Through its Offshore Renewables arm, Seatrium focuses on providing products and services in the entire Offshore Wind value chain, including wind turbine installation vessels, wind farm foundations, fixed/floating offshore High Voltage Alternating Current (HVAC) substations and High-Voltage Direct Current (HVDC) substations/converter platforms, offshore installation, commissioning, and maintenance.

Seatrium has a strong track record in substation and wind turbine installation vessel (25% of its FY2023 revenue was from renewables and cleaner/green solutions), and it intends to capture value from floating wind in the future. Such opportunities include floating substation and improving designs, piloting, and commercialisation of floating wind foundations. With reference to Seatrium's Annual Report 2023¹⁴, ongoing and new offshore renewable projects includes but not limited to the following:

Ongoing Projects:

- Sailaway of DolWin epsilon, a 900MW HVDC Offshore Converter Platform for TenneT TSO B.V.'s (TenneT), for the next phase of works before deployment at the DolWin5 offshore grid connection;
- Steel-cutting of the Greater Changhua 2b and 4 Offshore Wind Farms for = Ørsted's Offshore Substation project;
- Steel-cutting of the Empire Wind 1 Offshore Substation project for Empire Offshore Wind LLC;
- Development of 1.4GW Sofia HVDC Offshore Converter Platform for RWE Renewables;
- Development of Revolution Wind Offshore Substations for Ørsted; and
- Commencement of block assembly in dry dock of Wind Turbine Installation Vessel (WTIV) for Maersk Supply Service's Sturgeon.

New Contracts:

- Engineering, procurement, construction, transportation, installation, and commissioning of two 2GW HVDC Offshore Converter Platforms for TenneT, part of a consortium project with GE Renewable Energy's Grid Solutions for the IJmuiden Ver Beta and IJmuiden Ver Gamma Offshore Wind Farms in the Netherlands;

¹⁴ [Seatrium_AR2023.pdf](#)

- Engineering, procurement, construction, offshore hook-up and commissioning of Empire Offshore Wind's Offshore Substation for the Empire Wind 1 Offshore Wind Farm located south of Long Island in the U.S.;
- Engineering, procurement, construction, testing and commissioning of Ørsted's Offshore Substation for the Greater Changhua 2b and 4 Offshore Wind Farms in Taiwan; and
- Engineering, procurement, construction, transportation, installation, and commissioning of one 2GW HVDC electrical transmission system for the NWBE Offshore Wind Farm in the Netherlands.

Seatrium is currently working on five HVDC Offshore Converter Platforms, creating a franchise for series-built opportunities in HVDC solutions to achieve greater synergies from project repeatability.

Moving forward, Seatrium also aims to adopt the following strategies to achieve KPI 2:

- Expand footprint in emerging Brazil offshore wind market;
- Build repeatable high-spec wind turbine installation vessels, with proprietary designs; and
- Commercialise in-house floating wind solutions.

With reference to the Global Energy Transformation paper¹⁵ published by the International Renewable Energy Agency, the offshore wind market is expected to grow significantly over the next three decades, with the cumulative installed offshore wind capacity projected to increase ten times from 23 GW in 2018 to 228 GW in 2030 and nearing 1,000 GW in 2050. Such growth in the demand for offshore wind capacity is spurred by emerging regulatory frameworks and policies amidst the urgent need on a global scale to accelerate global energy transition. The projected growth in offshore wind market, coupled with Seatrium's global presence (especially in Europe, US, Brazil, and Asia)¹⁶, sets Seatrium in a promising position to take advantage of the opportunities presented by an emerging and fast-growing market.

Similarly to SPT 1, Seatrium has also identified external factors such as energy security, affordable access, and rate of renewable energy deployment, as well as geopolitical tensions, which may influence its ability to achieve SPT 2 to be beyond the Group's control.

Overall, ERM considers the credibility of the strategy for achieving SPT 2 to be '*Strong*' due to Seatrium's global presence, strong track record, and the growth trajectory of offshore wind market.

¹⁵ [Future of Wind – A Global Energy Transformation paper \(irena.org\)](https://www.irena.org/publications/2019/Future-of-Wind-A-Global-Energy-Transformation-Paper)

¹⁶ [Investor Day 2024 \(seatrium.com\)](https://www.seatrium.com/investor-day-2024)

2.2.2.1.3 SPT 3 – Workplace Injury Rate below Singapore National Benchmark – Marine (Rating: Very Strong)

SPT 3 aims to establish targets in relation to Seatrium maintaining and achieving an annual Workplace Injury Rate (WIR) that is well below the Singapore's National Statistics for the Marine Sector, which is published annually by MOM in the Workplace Safety and Health Report. The SPT is set based on applying a 30% reduction on the three-year rolling average of the National Statistics.

Seatrium's approach to HSE management is guided by Seatrium's Journey Zero Strategy, which outlines actionable items with the aims to reduce workplace fatalities to zero through four strategic pillars:

1. **Harnessing Technologies**

- Seatrium leverages technology and innovation to drive higher HSE standards in our operations. In 2023, two Singapore yards organised WSH Innovation Conventions for employees to present solutions invented to improve safety and health standards at the workplace.
- With reference from the 2023 Sustainability Report, some of the technology and innovations includes:
 - Dust Net Canopy Covers which are designed to minimise time, manpower, and material handling hazards during installation. The incorporated winch system also eliminates manual labour and improves overall safety, as well as productivity.
 - Automate Bevel Grinding (ABG88) machine eliminates the use of manual manpower and thus, reduces workers' risk of exposure to safety and health hazards during the bevelling process.
- Seatrium has also developed an online POWER reporting app to encourage everyone and anyone to speak up if they encounter any unsafe behaviours and situations. Reporting through the app can be made anonymously. Such initiatives are conducted with the aim to enhance Seatrium's safety systems and processes through the active involvement, feedback and input of its employees.

2. **Forefront Ownership**

- Seatrium's HSE framework is championed by the Board and Senior Leadership Team, employees, contractors, and stakeholders. The CSRC steers the HSE policies and framework, and the Group HSE Committee, together with various sub-committees at the yards, is responsible for developing the relevant procedures and controls and deploying the HSE strategies and work plans.
- HSE targets are embedded in the annual performance appraisal and remuneration of Seatrium's management and its operating entities via a balanced scorecard system.
- As reported in the 2023 Sustainability Report, Seatrium's HSE management systems are routinely audited by both independent certification agencies and companies as well as internal audit teams. Since 2020, 10 out of 13 operational yards, which covers 95% of Seatrium's workforce in operations have been certified to ISO 45001 Occupational Health and Safety Management System.

- Since 2023, Seatrium has also imposed requirements for its resident contractors to minimally have a BizSAFE Level 4 (second highest) certification before they can undertake work at Seatrium's yards.
- Safety measures and update on internal workplace accidents and occupational diseases are communicated through Vessel Safety Coordination Meetings, Monthly Workplace Safety & Health (WSH) Committee and daily toolbox meetings. Weekly management inspections are also reportedly to be conducted with Seatrium's clients to promote good housekeeping practices. Weekly safety review meetings are chaired by the Senior Vice President (Operations) for the respective yards while monthly safety reviews are conducted by Chief Operating Officer as well as Seatrium's Senior Leadership Team.

3. Culture of Care

- Seatrium's Total WSH Service Centre framework focuses on Safety & Occupational Health, Physical Health, Infectious Disease, Mental Health. In Seatrium, it is mandatory for all workers, including contract workers, to be covered by work injury compensation insurance prior to starting work. In-house medical centres are also located in all its shipyards. Across the Group, Seatrium's contractors partner clinics to provide contract workers with access to medical care.
- Regular workforce engagements such as mass and toolbox briefings are reported to be carried out across Seatrium's yards which includes topics on mental well-being at the workplace.
- Dormitories housing migrant workers are also equipped with gyms and sports facilities to promote healthy lifestyles. Seatrium's conduct regular dormitory visits and inspections to ensure acceptable living conditions for its workforce.

4. Industry Outreach

- Seatrium works closely with its stakeholders to collectively raise HSE standards, promote safety and health at work, embrace best practices to uphold Industry Standards, including Codes of Practice and WSH Guidelines. Representatives from Seatrium are members in the WSH Council's WSH (Marine Industries) Committee and Association of Singapore Marine Industries (ASMI) WSH Committee.

In addition, Seatrium Academy uses a competency-based, technology-driven development framework that aligns with business needs to build engineering and operational excellence within its workforce. HSE comprised of 44% of its course offering in FY 2023. These courses prioritise employee safety awareness and mindsets, prevent accidents, encourage proactive behaviours, and promote mental well-being for a healthier work environment. In 2023, Seatrium invested more than S\$30 million in enhancing HSE-related infrastructure and systems as well as building HSE capabilities across the Group.

With regards to performance monitoring, Seatrium monitors its HSE performance with a combination of leading and lagging indicators, benchmarked against performance targets. These indicators are used as a guide to assess the effectiveness of the HSE initiatives implemented. In 2023, the Group achieved zero workplace fatalities across its global operations, while clocking 134.7 million man-hours.

With reference to the Sustainability Report, all work-related incidents are jointly investigated by Seatrium's operational and HSE teams. The investigations include an account of the events

leading up to the incident, how it occurred and post-incident actions, as well as a root cause analysis. Thereafter, corrective and preventive action plans are developed, and implemented to prevent recurrence.

Based on Seatrium's commitment in ensuring and creating a safe and healthy environment for its employees, as well as the well-rounded approach it has towards Health & Safety, ERM considers the credibility of the strategy for achieving SPT 3 to be '*Very Strong*'.

2.2.2.1.4 Clear Baseline Definition, and Verification Period

The baseline for SPT 1 refers to the GHG emissions (Scope 1 and Scope 2) in tCO₂e in 2008. The 2008 baseline was utilised to align with Seatrium's public commitments on reducing its GHG emissions and IMO's 2018 GHG Strategy, and noting that Seatrium was established in 2023, the baseline figure represents the consolidated figures from Sembcorp Marine and Keppel Offshore & Marine in 2008

For SPT 2, the baseline refers to Seatrium's annual revenue from renewable energy solutions (in S\$ million) for the year 2023.

No baseline was set for SPT 3 since the WIR based on Singapore's National Benchmark for Marine Industry is independent of the performance from previous years.

For all the KPIs, the verification will occur annually. The reporting period will be between 1 January to 31 December of each relevant year.

As mentioned in the SFF, the SPTs and/or the historic values of KPIs may be subjected to recalculation based on specific circumstances, such as changes in the calculation methodology or significant changes in Seatrium's corporate structure (i.e., acquisition, divestiture, mergers, insourcing or outsourcing), provided that the rationale for such change will be disclosed in the annual reporting on the KPIs; and an external verifier confirms that the proposed revision is in line with or more ambitious than the initial level of ambition of the SPT(s).

2.2.2.2 AMBITIOUSNESS

To determine the ambitiousness of the SPTs, ERM considers: i) whether the SPT represent a material improvement beyond the business-as-usual (BAU) trajectory, ii) how the SPT compare to historical performance over the last 3 years, iii) whether the SPT is comparable to targets set by peers or external reference, and iv) whether the SPT reference science, if applicable.

ERM conducted the benchmarking with reference to peers in the Shipbuilding & Maintenance or Energy Services & Engineering, Procurement and Construction (EPC) sectors.

2.2.2.2.1 SPT 1 – 30% reduction of Scope 1 and Scope 2 emissions by 2030 from 2008 baseline (Rating: Strong)

TABLE 2-3 SPTs UNDER KPI 1

KPI Description	Metric	Historical Performance				SPT
		2008 (Baseline)	2021	2022	2023	2030
To reduce Scope 1 and Scope 2 emissions (excludes the use of carbon credits)	Absolute carbon emissions (tCO ₂ e)	255,462*	212,235*	191,045*	182,653*	178,823
		N.A.	-17%	-25%	-28%	-30%

* Figures in 2008, 2021, and 2022 represented a combined GHG Scope 1 & 2 for both Sembcorp Marine and Keppel Offshore & Marine for the years before the merger.

ERM was able to use the following benchmarks to assess the ambitiousness of the SPT under KPI 1: material improvements that goes beyond BAU and historical performance, comparison against targets set by industry peers and reference to science.

ERM notes that the SPT presents a material improvement against BAU and historical performance. This SPT is evaluated in the context of Seatrrium's anticipated business growth, with a target of achieving a 50% revenue growth from 2023 by 2028. Under the BAU pathway, this would mean a significant increase in Scope 1 and Scope 2 emissions. To achieve a 30% reduction coupled with business growth, Seatrrium would have to reduce emissions significantly from its projected 2030 BAU emission levels.¹⁷ Based on its Sustainability Vision 2030, Seatrrium has aimed to reduce its Scope 1 and Scope 2 carbon emissions by 40% from 2008 baseline on a net emission basis by 2030. While the SPT presents a 30% reduction instead, ERM considers this SPT to be more ambitious than the goal set under the Sustainability Vision 2030 given that the reduction in carbon emissions is calculated on a basis that excludes the use of carbon credits. Furthermore, ERM acknowledges that reducing absolute carbon emissions might get progressively more challenging over the years and Seatrrium would have to adopt strategies which are more advance or complex in implementation to reduce its absolute carbon emissions in line with the proposed trajectory.

Based on a comparison against reduction targets from industry peers, SPT 1 appears to be at least on par. For example, one of its industry peers aims to reduce Scope 1 and Scope 2 emissions by 28% by 2030 from 2018 baseline while another aims to reduce Scope 1 and Scope 2 GHG emissions by 50% by 2030 from 2017 baseline. Seatrrium appears to be more ambitious given that it uses a 2008 baseline, which does not present the peak or close to the peak emissions compared to the two peers. However, the SPT pales in comparison with the targets set by one of its industry peers in the Engineering & Construction sector, which aims to achieve net zero for Scope 1 and Scope 2 by 2030. Furthermore, when assessed using scientific scenario, the target is slightly below the target set by the IPCC, where global net anthropogenic CO₂ emissions need to decline by about 45% from 2010 levels by 2030 to limit global warming to 1.5°C.

¹⁷ Calculated based on Seatrrium's proprietary information.

ERM notes that this KPI does not include Scope 3 emissions, which accounts for about 78% of its carbon emissions. It was mentioned by Seatrrium that action plans for Scope 3 are scheduled to be developed in 2025 given that it has just started accounting for its Scope 3 emissions following the merger in 2023. It was also noted that none of the peers have set targets on reducing Scope 3 emissions by 2030 but have set targets to achieve net zero by 2050, which is similar to the target set by Seatrrium.

Overall, ERM acknowledges that SPT 1 represents a material improvement from the BAU scenario, historical performance and with its Sustainability Vision 2030. When compared with its peers and the target set by the IPCC, Seatrrium is considered to be at least or on par. Hence, ERM considers the ambitiousness of SPT 1 to be '**Strong**'. Nonetheless, while Scope 3 is not within the boundaries of KPI 1, Seatrrium can consider looking into setting Scope 3 reduction targets in future SFF since it accounts for most of its emissions (based on its Sustainability Report 2023, Scope 3 emissions accounts for 78% of its total carbon emissions). Seatrrium may also consider achieving its net-zero targets before 2050 to show stronger ambition.

2.2.2.2.2 SPT 2 – Doubling revenue from renewable energy solutions by 2030 from 2023 baseline (Rating: Strong)

TABLE 2-4 SPTs UNDER KPI 2

Metric	Historical Performance			SPT						
	2021	2022	2023 (Baseline)	2024	2025	2026	2027	2028	2029	2030
Annual revenue from renewable energy solutions (S\$ million)	138	113	687	756	859	962	1,065	1,168	1,271	1,374
Percentage increase from 2023 (%)	N.A.	N.A.	N.A.	10%	25%	40%	55%	70%	85%	100%

Regarding the SPTs under KPI 2, an assessment against its historical performance was undertaken. SPT 2 was set with the intention of doubling its revenue from renewable energy solutions by 2030.

Based on Table 2-4, ERM notes a non-linear trajectory through the SPT years. Seatrrium aims to increase 10% (from 2023) in 2024, increase 25% (from 2023) in 2025 until doubling the revenue from renewable energy solutions (from 2023) in 2030. ERM considers the trajectory to be appropriate and reflective of the potential increase in demand for renewable energy solutions in the maritime industry especially in the later years as technologies and equipment become more advanced.

While most industry peers have set intentions to grow their innovation and technological capabilities to support the decarbonisation of the maritime industry, there were limited information on whether these peers have set targets pegged to their revenue. Of the six peers compared in the assessment, one industry peer has publicly set similar targets. The industry peer aims to have two-thirds of its total revenue generated from projects relating to renewable

and transitional energy solutions by 2030, indicating a proportionate increase from 59.8% in 2023 to 66.7% in 2030 (representing an approximate increase of 6% in 2030 from a 2023 baseline).

The lack of specific targets relating to percentage revenue growth from renewable projects may be attributed to the uncertainties surrounding renewable and transitional energy technologies and development, such as rapidly evolving markets, emerging regulatory legislations and government initiatives, which may serve as a hinderance for companies to commit to establishing targets pertaining to renewable and transitional energy projects.

Based on publicly available information, Seatrium appears to be ambitious given that the targets are directly linked to its business operations. It also illustrates Seatrium's proactiveness in supporting its clients in their sustainability endeavours to align with IMO targets and enabling maritime decarbonisation through renewable energy solutions projects.

Overall, ERM acknowledges that the targets set by Seatrium under KPI 2 represent a material improvement from historical performance. Seatrium is committed to significantly increase its revenue from renewable energy solutions by 2030, in which significant investments, development and collaborations will have to be made in order to achieve SPT 2. Hence, ERM considers the ambitiousness of SPT 2 to be '*Strong*'.

2.2.2.2.3 SPT 3 – Workplace Injury Rate below Singapore National Benchmark – Marine (Rating: Strong)

TABLE 2-5 SPTs UNDER KPI 3

Metric	Historical Performance			SPT						
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<u>Benchmark</u>										
Singapore National Benchmark – Marine (3-year rolling average) after a 25% hair cut	360.8	350.9	371.5	To be published by Singapore's Ministry of Manpower (MOM)						
Seatrium Group WIR (3-year rolling average)	240.5	244.5	235.4	Seatrium Group WIR (3-year rolling average) < Singapore National Benchmark – Marine (3-year rolling average) after a haircut. % Haircut below						
% Haircut	N.A.	N.A.	N.A.	25%	26%	27%	28%	29%		30%

Regarding the SPTs under KPI 3, an assessment against its historical performance was undertaken. ERM acknowledges Seatrium's ambition in performing better than the Singapore National Benchmark – Marine by setting a haircut. The haircut is set to increase linearly from 25% in 2024 to 30% by 2029/2030, representing a year-on-year improvement in targets.

However, based on Table 2-5, ERM notes that for the past 3 years, Seatrium's 3-year rolling WIR has been consistently well above the benchmark. Nonetheless, given the expected significant growth in business, ERM acknowledges that there will be more "man-hours" and hence the exposure to more risks of workplace injuries and fatalities.

Furthermore, it was noted that Seatrium have pegged its targets to the Singapore's National Workplace Safety and Health statistics, which attained a workplace fatalities rate of 0.0 in 2023 (from 8.2 per 100,000 workers in 2022) for the Marine Sector. However, it was noted that the workplace major injury rate within the Marine Industry rose to 35.3 major injuries per 100,000 workers in 2023 from 24.6 in 2022. In addition, based on the Workplace Health and Safety 2028 Report¹⁸ published by the Ministry of Manpower, the Singapore Government has announced a more ambitious target of achieving and sustaining a workplace fatal injury rate at less than 1.0 per 100,000 workers by 2028 (which was only achieved by four countries – United Kingdom, Netherlands, Sweden and Germany). Achieving this would make Singapore's workplaces one of the safest in the world. This, coupled with the fact that SPT 3 includes Seatrium's operations globally, further strengthens Seatrium's commitment towards ensuring a safe workplace for all personnel working within its premises, as well as its ambition on staying ahead of an already aggressive national target.

While industry peers have strategies, procedures and targets in place for workplace health and safety, it should be noted that there was no readily available information that these companies have set targets with reference to the Singapore National Benchmark – Marine.

Overall, Seatrium is ambitious in terms of its commitment in achieving WIR below Singapore national benchmark with targets set to increase gradually from 25% to 30% across the SPT years. While it has limited improvement from its current performance, ERM acknowledges that to achieve the targets in conjunction with the significant increase in exposure to workplace health and safety risks (due to an increase in business operations) would require considerable amount of effort and consistency. Furthermore, it was noted that none of its industry peers have publicly announced any similar targets. As such, ERM considers the ambitiousness of SPT 3 to be '*Strong*'.

2.2.2.3 CONCLUSION

Seatrium has shared clear strategies on how to achieve the SPTs selected. Strategies for achieving SPT 3 is considered to be '*Very Strong*' in its credibility due to Seatrium's comprehensive approach towards H&S management and fostering a culture of health and safety across its global operations. ERM notes that for SPT 1, the purchase of RECs will be subjected to market volatility and availability. In addition, Seatrium's Scope 3 emissions may increase due to its outsourcing of activities. It was also noted that SPT 1 and SPT 2 are subjected to external factors such as energy security, affordable access, rate of renewable energy deployment and geopolitical tensions. Hence, additional measures will have to be implemented to address and mitigate such factors. Thus, ERM considers the credibility for achieving SPT 1 and SPT 2 to be '*Strong*'.

ERM assessed the SPT 1, SPT 2 and SPT 3 to be '*Strong*' in their ambitiousness level as it shows material improvement against its historical performance and appears to be on par with the companies used for benchmarking.

¹⁸ [wsh2028-report.pdf \(mom.gov.sg\)](https://www.mom.gov.sg/wsh2028-report.pdf)

2.2.3 LOAN/BOND CHARACTERISTICS

Seatrium and the Lenders have had meaningful discussions, including but not limited to the following topics:

- Seatrium's rationale for selecting the SPTs/KPIs (i.e., materiality);
- Seatrium's rationale for setting the targets;
- How the client intends to reach such SPTs;
- Reporting period and timeline; and
- Annual independent and external performance verification process.

The key feature of sustainability linked loans and sustainability linked bonds is that specific economic outcomes are linked to whether the selected predefined SPTs are met. It was mentioned that both sustainability-linked financing will have the relevant instrument pricing adjustments for each instrument upon either the meeting or not meeting of KPIs and/or SPTs. This may include coupon and/or margin adjustments.

For SLBs, the exact financial mechanism and subsequent impacts of the achievement/failure to reach pre-defined SPTs will be detailed fully in the documentation of each specific financial transaction. The exact variation mechanism will be described in the relevant documentation of each SLB. If the SPTs cannot be calculated, the fallback mechanisms will take into effect.

For SLLs and/or other sustainability-linked instruments, Seatrium will agree with the Lender(s) on the resulted economic outcome based on the company's performance against the KPIs/SPTs. Seatrium will set out the relevant KPI, SPT, as well as financial implications in the event of its failure to achieve or achieve the SPT in the documentation of the financial instrument.

ERM notes that Seatrium has included a fallback mechanism which defines the conditions under which Seatrium may be allowed to update and/or calibrate the SPT to maintain alignment with its business and sustainability commitments over the life of the loan/bond. Conditions include changes in the calculation methodology or significant changes in Seatrium's corporate structure (i.e., acquisition, divestiture, mergers, insourcing or outsourcing). Any such changes will be communicated as soon as reasonably practicable by Seatrium in accordance with the terms and conditions of the SLBs and SLLs.

2.2.4 REPORTING

The calculation methodology has been determined based on the respective SPT and the nature of the relevant borrower. The details of the respective methodologies are stated under each KPI in "Other Notes."

Seatrium is committed to disclosing the progress of the selected KPIs and performance against the SPTs annually on the relevant Test Date, and the reporting period is per calendar year. ERM understands that Seatrium will include the disclosure in its Sustainability Report or any other documentation it deems suitable and will be publicly available on its website.

During reporting, details around the underlying methodology and/or assumptions should be provided, where known, including any changes to the listed methodology in the notes of each KPI in the SPO.

ERM recommends the borrower to develop a methodology statement for each SPT. The statement should include, but is not limited to the following:

- Assumptions and definitions to set clear boundaries;
- The approach to monitoring and measuring performance (i.e., approach and timeline of data collection and management); and
- The approach and timeline for disclosing and reporting progress (i.e., what information will be reported, and will information be publicly disclosed on the company website and/or sustainability report or will performance data be shared privately with the lenders).

2.2.5 VERIFICATION

ERM understands that Seatrium has confirmed their intention to have external verifiers review their SPT performance during each test date. Seatrium has defined the external verifier/Assurance Provider as any qualified provider of third-party assurance or attestation services appointed by Seatrium, who will provide a verification assurance report in the form of a "Limited Assurance" or better.

The verification of the performance of the KPI, along with the Assurance Provider's verification report, will be made publicly available on Seatrium's website.

2.3 CONCLUSION AND KEY RECOMMENDATIONS

ERM is of the opinion that Seatrium's Sustainability Performance Targets align with the Sustainability Linked Loan Principles (February 2023) and Sustainability Linked Bond Principles (June 2023). This assessment is based on the following aspects below.

2.3.1 SELECTION OF KPIs

ERM considers the KPIs to be adequate based on the materiality for the industry, alignment with Seatrium's overall business and sustainability strategy. The KPIs are measurable and quantifiable on a consistent methodological basis. While KPI 1 and KPI 3 are able to be benchmarked to external frameworks and standards, benchmarking for KPI 2 appears to be challenging due to the lack of publicly disclosed targets by peers.

2.3.2 CALIBRATION OF SPTs

In its assessment of the SPTs, ERM considers the SPTs based on the following criteria: i) credibility of strategy to achieve the SPT, and ii) ambition level of SPT. The rating scale for the SPT assessment range from 'Not Aligned' to 'Very Strong'.

ERM notes that the proposed KPIs are aligned with the material topics identified by international standards and frameworks, as well as by peers in similar industry. In addition, the proposed KPIs were noted to be aligned with and contribute to UN SDGs such as *SDG 7 – Affordable and Clean Energy*, *SDG 8 – Decent work and economic growth*, *SDG 12 – Responsible Consumption and Production* and *SDG 13 – Climate Action*. However, ERM is in the opinion that establishing targets to grow its revenue from renewable energy solutions would translate to indirect impacts to core material topics such as Climate Change and GHG emission reduction. Furthermore, as Scope 3 emissions attributes to majority of Seatrium's GHG emissions, ERM recommends Seatrium to consider establishing targets to reduce its Scope 3 emissions. As such, ERM considers the alignment of KPI 1 and KPI 2 to be *Strongly* aligned, while KPI 3 is considered to be *Very Strongly* aligned.

Seatrium has shared clear strategies on how to achieve the SPTs selected. Strategies for achieving SPT 3 is considered to be *Very Strong* in its credibility due to Seatrium's comprehensive approach towards H&S management and fostering a culture of health and safety across its global operations. ERM notes that for SPT 1, the purchase of RECs will be subjected to market volatility and availability. In addition, Seatrium's Scope 3 emissions may increase due to its outsourcing of activities. It was also noted that SPT 1 and SPT 2 are subjected to external factors such as energy security, affordable access, rate of renewable energy deployment and geopolitical tensions. Hence, additional measures will have to be implemented to address and mitigate such factors. Thus, ERM considers the credibility for achieving SPT 1 and SPT 2 to be *Strong*.

ERM assessed the SPT 1 and SPT 2 to be *strongly* ambitious as it shows material improvement against its historical performance and appears to be on par with the companies used for benchmarking. While SPT 3 falls slightly short when compared against its historical performance, SPT 3 was rated to be *Strong* in its ambitiousness given that Seatrium presents itself as having a higher level of commitment in ensuring workplace health and safety as compared to its industry peers.

2.3.3 LOAN CHARACTERISTICS

The key feature of sustainability linked loans is that specific economic outcomes are linked to whether the selected predefined SPTs are met. It is understood that the Lenders and Seatrium

have discussed and agreed on the associated economic outcomes for different SPT performance scenarios, including what constitutes a breach, and what may give rise to a default. Seatrium has included a fallback mechanism which defines the conditions under which Seatrium may be allowed to update and/or calibrate the SPT to maintain alignment with its business and sustainability commitments over the life of the loan/bond.

For SLBs, the exact variation mechanism will be described in the relevant documentation of each SLB. If the SPTs cannot be calculated, the fallback mechanisms will take into effect. For SLLs and/or other sustainability-linked instruments, Seatrium will agree with the Lender(s) on the resulted economic outcome based on the company's performance against the KPIs/SPTs.

2.3.4 REPORTING

Seatrium has committed to reporting its annual performance against the SPTs for each KPIs, after the completion of the necessary assurance, until the Target Observation Date. The information will be disclosed in Seatrium's annual Sustainability Report, or its corporate website.

ERM recommends the Borrower to develop a methodology statement for each SPT. The statement should include, but is not limited to the following:

- Assumptions and definitions to set clear boundaries.
- The approach to monitoring and measuring performance (i.e., approach and timeline of data collection and management).
- The approach and timeline for disclosing and reporting progress (i.e., what information will be reported, and will information be publicly disclosed on the company website and/or sustainability report or will performance data be shared privately with the lenders).

2.3.5 VERIFICATION

ERM understands that Seatrium has confirmed their intention to have external verifiers review their SPT performance during each test date. Seatrium has defined the external verifier/Assurance Provider as any qualified provider of third-party assurance or attestation services appointed by Seatrium, who will provide a verification assurance report in the form of a "Limited Assurance" or better.

The verification of the performance of the KPI, along with the Assurance Provider's verification report, will be made publicly available on Seatrium's website.

3. GREEN FINANCE FRAMEWORK

Seatrium has established a Green Finance Framework (GFF) to support its green/environmental commitments and set out how it intends to raise Green Bonds, Loans and other debt-related instruments (collectively termed as Green Financing Instruments) with this Framework.

The Green Financing Instruments will fund Eligible Green Projects. These Projects should conform to the green finance principles listed below:

- International Capital Market Association (ICMA) Green Bond Principles (GBP), June 2021; and
- Asia Pacific Loan Market Authorization (APLMA)/Loan Market Association (LMA)/Loan Syndications and Trading Association (LSTA) Green Loan Principles (GLP), February 2023.

In line with the Green Bond and Green Loan Principles, Seatrium's Green Financing Framework is presented through the following key pillars:

1. Use of Proceeds;
2. Process for Project Evaluation and Selection;
3. Management of Proceeds; and
4. Reporting.

3.1 ASSESSMENT ON THE ISSUER/BORROWER

3.1.1 CURRENT GREEN/ENVIRONMENTAL PERFORMANCE

Since its incorporation through a merger between Sembcorp Marine and Keppel Offshore & Marine in 2023, Seatrium has made commitments to integrate considerations for environmental issues into its business operations. Such commitments were formalised and published through its annual Sustainability Reports¹⁹. Seatrium adopts GRI standards as its main reporting framework and complies with SGX guidelines for its sustainability report. It also discloses against relevant indicators in the SASB framework and supports the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD), aligning its climate-related disclosures with those recommended by the TCFD. Seatrium unveiled its Sustainability Vision 2030²⁰ in December 2023, which aims to address the ESG aspects with economic growth and enabling its customers to achieve their sustainability goals.

Seatrium is also committed to upholding the highest standards of corporate governance and ensuring compliance with relevant laws and regulations. It has a zero-tolerance policy towards fraud, bribery and corruption. As a representation of its standard of corporate governance, in 2023, Seatrium achieved A rating in the MSCI ESG ratings, and continued to be a constituent in the SG ESG Leaders Index, ESG Transparency Index and FTSE4Good Index Series.¹³ Seatrium has also received the ISO 37001 Anti-Bribery Management System Certification.

Based on the Sustainability Report for 2023¹³, some notable achievements by Seatrium relating to green/environmental causes and issues are as follows:

- Renewables and cleaner/green solutions account for S\$1.83 billion of the Group's revenue.

¹⁹ [Seatrium-Sustainability Reports](#)

²⁰ [Seatrium-Our Approach](#)

- Achieved 39% of its annual net orderbook from renewables and cleaner/green projects.
- In March 2023, Seatrrium and consortium partner, GE Renewable Energy's Grid Solutions, secured a landmark framework cooperation agreement to build the biggest and most advanced HVDC electrical transmission system for TenneT. The framework agreement currently entails the supply of 2GW HVDC offshore converter platform for three windfarm projects. These projects are part of the TenneT 2GW programme in the Dutch and German North Sea, which will supply clean energy to up to 35 million households. This agreement marks Seatrrium's second partnership with TenneT, following the successful sailaway of DolWin epsilon in October 2023.
- On 20 November 2023, Seatrrium delivered the world's second converted FLNG vessel, Gimi LNG, to Gimi MS Corporation, a subsidiary of Golar LNG Limited. In 2020, Seatrrium commissioned a study on Golar Hilli Episeyo (sister ship of Gimi FLNG), the world's first converted FLNG vessel, to assess what the savings of the converted and new built FLNG vessel would be across its end of life, through repurposing or shipbuilding and maintenance of the FLNG vessel. Findings show that converting an LNG tanker into a FLNG vessel achieves 39% new steel savings and 33% emissions savings. This is equivalent to taking around 13,500 cars off the road for a year.
- In July 2023, Seatrrium Benoi Yard in Singapore worked on the Platform Support Vessel Fortescue Green Pioneer to convert the vessel to ammonia dual operation. The work includes the installation of fuel delivery system, sensors and safety mechanisms as well as double-walled pipes to prevent leakages. FFI Green Pioneer is equipped with a nitrogen purging and Ammonia treatment system to meet the local air standards. The vessel is Singapore flagged and the gas-fuelled ammonia system is approved by Det Norske Veritas (DNV). This is the first vessel in the world to be approved to use dual-fuel ammonia and diesel within the Port of Singapore.

Upon review of Seatrrium's efforts in conducting green/environmental commitments, ERM acknowledges its commitment to actively promote green solutions in the maritime industry and comply with regulations and provisions. ERM considers Seatrrium to be *well-positioned* to implement the Green Finance Framework.

3.1.2 MECHANISMS TO ADDRESS COMMON GREEN/ENVIRONMENTAL RISKS ASSOCIATED WITH THE PROJECTS

ERM recognises that the eligible assets outlined in the Green Finance Framework pose potential environmental and social risks²¹. ERM highlights the following policies and procedures that Seatrrium has taken to manage and mitigate any potential risks.

- Seatrrium has a sustainability governance structure which involves the Board of Directors, the Corporate Social Responsibility (CSR) Committee, the Senior Leadership Team, the Group's Sustainability Secretariat, and the Sustainability Working Committees.²² Overall, the Board exercises oversight over the Group's sustainability strategies and programmes and is responsible for the Group's sustainability performance and reporting. All directors are also

²¹ Environmental and social risks associated with the eligible project may include, but are not limited to, ecological degradation, economic and social displacement due to project development / construction, environmental degradation from associated upstream activities such as natural gas extraction or methane leakage, etc. Risks in this section also cover risks towards Seatrrium, lender, and green financing in general.

²² [Seatrrium-Our Framework](#)

required to attend sustainability training and participate in regular stakeholder engagement by means of townhalls, business, and corporate social responsibility events.

- Seatrium has established and formalised an Enterprise Risk Management (ERM) Framework to ensure a robust system is in place to identify, assess, prioritise, and monitor sustainability-related risks and opportunities arising from its operations. Seatrium's risk management process is continuous and iterative. Working in conjunction with the Sustainability Secretariat, the Group's Risk Management Office systematically identifies sustainability-related risks and opportunities, assesses their likelihood and impact on the business, and implements mitigating controls, considering the risk appetite and cost-benefit trade-offs. The information is maintained in the Integrated Assurance Framework (IAF) register that is reviewed and updated regularly.

Based on the measures and policies listed above, ERM is of the opinion that Seatrium is *well-positioned* to mitigate relevant environmental risks associated with the Green Finance Framework.

3.2 ASSESSMENT ON GREEN FINANCE FRAMEWORK

3.2.1 GREEN USE OF PROCEEDS

ERM assessed the impact of the use of proceeds based on how aligned and impactful they are to the environment. Table 3-1 exhibits the very strong-to-weak scale used to provide an assessment for each green performance indicator. ERM's opinions on the six project categories under eligible green projects are presented in Table 3-2. References were made to external frameworks such as SASB – Engineering & Construction Services, SASB – Marine Transportation, UN SDGs, Paris Agreement, ICMA Materiality Matrix, the Climate Bond Taxonomy where applicable.

TABLE 3-1 DEFINITIONS OF CRITERIA FOR ENVIRONEMNTAL/GREEN IMPACT INDICATOR ASSESSMENT

Criteria	Definition	Very Strong	Strong	Moderate	Not Aligned
Alignment	<i>The use of proceeds is relevant to current green issues and relevant to business operations and customer segmentation</i>	<ul style="list-style-type: none"> • Relevant to the current green issue which is significant nationally and internationally. • Focused on an issue that is tied to core business and customer segmentation 	<ul style="list-style-type: none"> • Relevant to the current green issue which is significant and nation-wide. • Focused on an issue that is tied to core business and customer segmentation 	<ul style="list-style-type: none"> • Relevant to the current green issue which is significant in certain geographical coverage. • Focused on an issue that is not much tied to core business and customer segmentation 	<ul style="list-style-type: none"> • Irrelevant to the current green issue • Not focused on an issue that is tied to core business and customer segmentation
Impactfulness	<i>The use of proceeds provides a clear path to the quantifiable impacts within a period</i>	<ul style="list-style-type: none"> • The impact can be leveraged directly within an immediate timeframe. • The outcome is quantifiable, with a clear process of progress monitoring 	<ul style="list-style-type: none"> • The impact can be leveraged directly within a certain timeframe. • The outcome is quantifiable, with a process of progress monitoring 	<ul style="list-style-type: none"> • The impact will come into effect indirectly/ in a limited amount. • The outcome is quantifiable, yet the progress monitoring remains unclear 	<ul style="list-style-type: none"> • The use of proceeds and the expected impact do not match. • The outcome has no clear path to be quantified

TABLE 3-2 ASSESSMENT ON GREEN USE OF PROCEEDS

Project Category and Eligibility Criteria	Alignment	Impactfulness
<p>Renewable Energy</p> <p>Investment and expenditure in relation to development, construction, installation, and operation of renewable energy generation projects, assets, and installations, including direct & virtual long-term power purchase agreements (PPAs) and on-site renewable energy generation:</p> <ul style="list-style-type: none"> Solar photovoltaic power; Onshore and offshore wind power; and Research and/or development and pilot initiatives relating to hydrogen/ammonia/electro-fuels (such as e-methanol, e-methane) production as well as related infrastructure such as storage, distribution and transportation that aims to facilitate the buildup of a hydrogen/ammonia supply chain. <p>Investment and expenditure in relation to design, construction and maintenance of renewable energy technologies and associated assets wholly dedicated and used for purpose of supporting renewable energy generation facilities, for example the development, manufacturing, or purchase of vessels (boats, barges, ships) fully dedicated to the construction or other services of marine renewables, such as wind turbine installation vessels. For the avoidance of doubt, the above criteria can be extended to existing vessels that are dedicated to offshore renewable energy generation and</p>	<p>Very Strong</p> <p>Alignment to green issues in the industry:</p> <p><u>Climate Impacts and GHG Emissions</u></p> <p>Promoting the use of renewable energy is one of the key adaptation strategies required for industries and countries to reduce its fossil fuel consumption and GHG emissions. Such investment and expenditure into renewable energy also helps to limit global warming to 1.5°C (to prevent severe and irreversible climate change impacts) under the Paris Agreement and align to IMO GHG reduction targets.</p> <p>Alignment with Sustainable Finance Standards:</p> <p>Under the Green Bond Principles and Green Loan Principles, renewable energy (including production, transmission, appliances and products) is listed as an eligible green project.</p> <p>Alignment to UN SDGs:</p> <p><u>UN SDG 7 - Affordable and Clean Energy</u></p> <p>Alignment with Target 7.2: By 2030, increase substantially the share of renewable energy in the global energy mix.</p> <p><u>UN SDG 13 - Climate Action</u></p> <p>Supports the overarching goal as increasing the supply and use of renewable energy would effectively contribute to national and industry efforts in combating climate change.</p>	<p>Strong</p> <p>Impacts:</p> <p>Renewable energy plays a critical role in combating climate change and achieving a low-carbon economy. Such impacts would include:</p> <ul style="list-style-type: none"> Reducing GHG Emissions and mitigating air pollution; Reduce dependency on traditional energy sources (i.e., fossil fuels) and promote sustainable development; and Supports the decarbonisation of hard to abate sectors such as the shipping industry. <p>Specifically for the marine and offshore industry, where GHG emissions and air pollutions pose as significant environmental issues, Seatrium's products and solutions can serve as a catalyst for maritime companies to decarbonise and mitigate air pollution arising from their operations.</p> <p>Proceeds towards research and/or development and pilot initiatives relating to hydrogen/ammonia/electro-fuels production can help to support the innovation of more efficient and cost-effective production and utilisation methods, which could in turn enhance the competitiveness of hydrogen and ammonia fuels against traditional fuels. R&D efforts towards related infrastructure is also crucial for the widespread adoption of hydrogen, ammonia and electro-fuels.</p> <p>Quantifiable and Measurable:</p> <p>The impacts from such investments are quantifiable and can be measured through metrics such as renewable energy capacity, renewable energy</p>

Project Category and Eligibility Criteria	Alignment	Impactfulness
transmission activities as well as other activities.	Alignment with core business of Seatrium: Renewable energy projects are directly aligned to Seatrium's core business segment - Offshore Renewable & New Energies, which focuses on renewable solutions such as Wind Turbine Installation Vessels (WTIVs), Floating Offshore Wind Turbines (FOWTs), Floating Wind-HVDC and HVAC stations.	generated, proportion of renewable energy consumption against total energy usage.
Clean Transportation Investment and expenditure in relation to design, construction, and maintenance of clean and sustainable vessels (CSV) such as: <ul style="list-style-type: none"> • LNG Fuelled Vessels; • LNG Dual Fuelled Vessels; • Methanol Dual Fuelled Vessels; and • Hydrogen and Ammonia Fuelled Vessels. This includes vessels whose Energy Efficiency Design Index (EEDI) values has achieved or are designed to achieve at least 10% below IMO's EEDI requirements applicable on 1 April 2022 OR vessels that have zero direct (tailpipe) CO ₂ emissions. Investment and expenditure in low carbon transport infrastructure such as Electric Vehicles including passenger cars and light commercial vehicles, and infrastructure such as electric charging stations and low carbon fuelling stations.	Strong Alignment to green issues in the industry: <u>GHG Emissions and Air Quality</u> Due to the industry's reliance on heavy fuel oil, it is imperative for the marine industry to adopt cleaner-burning fuels. Furthermore, investments towards innovative sustainable technologies and alternative low-carbon fuels are essential for the shipping industry to achieve the targets set under the 2023 IMO GHG strategy, which cannot be met using conventional fossil fuels. Alignment with Sustainable Finance Standards: Under the Green Bond Principles and Green Loan Principles, clean transportation is listed as an eligible green project. Alignment to UN SDGs: <u>UN SDG 7 - Affordable and Clean Energy</u> Alignment with Target 7.1: By 2030, ensure universal access to affordable, reliable and modern energy services. Alignment with Target 7.a: By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner	Strong <u>Clean and Sustainable Vessels (CSV):</u> Impacts: Projects under "Clean Transportation" will support the decarbonisation of the shipping industry by reducing the reliance on traditional fossil fuel through the promotion of alternative low-carbon fuels. However, there are associated impacts/drawbacks from the use of alternative fuels as follows: <ul style="list-style-type: none"> • <u>Liquified Natural Gas (LNG)</u> While LNG is considered a cleaner alternative to conventional fossil fuels as it produces significantly less GHG emissions and air pollutants (SO_x, NO_x, and particulates), the use of LNG may result in methane leakage and adverse environmental impacts from natural gas extractions. Nonetheless, it serves as an important transitional strategy in anticipation of technological advancements and the development of cleaner alternatives. • <u>Hydrogen and hydrogen-based fuels</u> Hydrogen, Ammonia and Methanol are promising low-carbon fuels, which have the potential to be long-term decarbonisation strategies for the marine shipping industry, provided that the production of such alternative fuels is derived from renewable energy and sustainable feedstock. Nonetheless, by supporting and providing the

Project Category and Eligibility Criteria	Alignment	Impactfulness
	<p>fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.</p> <p><u>UN SDG 9 - Industry, Innovation and Infrastructure</u></p> <p>Alignment with Target 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries acting in accordance with their respective capabilities.</p> <p><u>UN SDG 13 - Climate Action</u></p> <p>Supports the overarching goal as the promotion of clean fuels and low-carbon infrastructure would aid in the reduction of GHG emissions to mitigate climate change impacts.</p> <p>Alignment with core business of Seatrrium:</p> <p>The design, construction, and maintenance of clean and sustainable vessels is aligned with Seatrrium's core business services such as Specialised Shipbuilding, Repairs & Upgrades, as well as Technology & New Product Development, which focuses on low-carbon energy transition.</p> <p>While investment and expenditure in low carbon transport infrastructure such as Electric Vehicles including passenger cars and light commercial vehicles, and infrastructure such as electric charging stations and low carbon fuelling stations would support global decarbonisation strategies and mitigating air pollution, there is limited relevance to Seatrrium's core business and sustainability strategy, as well as the marine industry.</p>	<p>means for vessels to adopt such alternative fuels will undoubtedly reduce GHG emissions (achieving the GHG targets set by IMO) and support the transition towards a low-carbon economy.</p> <p>Quantifiable and Measurable:</p> <p>The impacts from such investments are quantifiable and can be measured through metrics such as GHG emissions, Energy Efficiency Design Index (EEDI) as well as the number of clean and sustainable vessels financed.</p> <p><u>Low Carbon Transport Infrastructure:</u></p> <p>Impacts:</p> <p>Proceeds towards low carbon transport infrastructure such as Electric Vehicles including passenger cars and light commercial vehicles, and infrastructure such as electric charging stations and low carbon fuelling stations will be support the reduction of GHG emissions and air pollution, as well as sustainable urban development. EVs and associated infrastructure can contribute significantly towards the transition to a sustainable and low-carbon future. Furthermore, projects under "Clean Transportation" can support the country in achieving its policies and targets relating to clean transportation (i.e., SG Green Plan), where applicable.</p> <p>Quantifiable and Measurable:</p> <p>The impacts from such investments are quantifiable and can be measured through metrics such as GHG emissions, number of low carbon transport infrastructure financed and number of EV charging points across vehicle types.</p>

Project Category and Eligibility Criteria	Alignment	Impactfulness
<p>Energy Efficiency</p> <p>Investment and expenditure related to reduction of energy consumption in the shipyards and terminals, including but not limited to:</p> <ul style="list-style-type: none"> • Energy efficient products and appliances (e.g. LED roll-out, HVAC systems renovation and improvement); and • Identifying real time energy usage through remote heating and cooling control. <p>Investment and expenditure related to improvement in vessel fuel efficiency, including but not limited to vessel optimisation technologies such as:</p> <ul style="list-style-type: none"> • New and improved propellers, bulbous bows, shore power enablement. 	<p>Very Strong</p> <p>Alignment to green issues in the industry:</p> <p><u>GHG Emissions and Air Quality</u></p> <p>Due to the industry's reliance on heavy fuel oil, it is imperative for the marine industry to adopt more fuel-efficient engines to reduce its GHG emissions and reduce air pollution. Fuel efficiency has also been identified to be one of the key strategies to address climate transition risk for the maritime industry.</p> <p>Furthermore, investments towards enhancing energy efficiency for ships is key to reduce the carbon intensity of international shipping and to meet the targets set under the 2023 IMO GHG strategy.</p> <p>Alignment with Sustainable Finance Standards:</p> <p>Under the Green Bond Principles and Green Loan Principles, projects relating to energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products) are listed as eligible green projects.</p> <p>Alignment to UN SDGs:</p> <p><u>UN SDG 7 - Affordable and Clean Energy</u></p> <p>Alignment with Target 7.3: By 2030, double the global rate of improvement in energy efficiency.</p> <p>Alignment with core business of Seatrrium:</p> <p>Projects relating to "Energy Efficiency", specifically vessel fuel efficiency, is aligned with Seatrrium's core business services such as Specialised Shipbuilding, and Repairs & Upgrades. Reducing energy consumption in shipyards and terminals is also aligned with Seatrrium's sustainability pillar - Engineering a Sustainable Future which focuses on sustainable business operations.</p>	<p>Very Strong</p> <p>Impacts:</p> <p>The use of proceeds in energy efficiency plays an important role in ensuring long-term sustainability in the maritime industry and serves as a mitigation measure against the rising cost of heavy fuel oils. Reducing energy consumption is essential to meet the emission reduction targets that are aligned with international frameworks such as IMO and the Paris Agreement.</p> <p>Quantifiable and Measurable:</p> <p>The impacts from such investments are quantifiable and can be measured through metrics such as the reduction in GHG emission and energy savings.</p>

Project Category and Eligibility Criteria	Alignment	Impactfulness
<p>Green Buildings and Facilities</p> <p>Investments and expenditure in construction, acquisition, operation, and renovation of new and existing buildings in the shipyards and terminals, meeting eligible internationally and/or nationally recognised certification including but not limited to:</p> <ul style="list-style-type: none"> • BCA-IMDA Green Mark Gold^{PLUS} or better; • LEED Gold or better; or • BREEAM Excellent or better. <p>Building or facility renovation that achieve a minimum 30% improvement in energy use and/or carbon emissions compared to a mandated local or regional baseline or code.</p>	<p>Strong</p> <p>Alignment to green issue in the industry:</p> <p><u>Climate Impact and GHG Emissions</u></p> <p>Greening of the buildings in the shipyards and terminals ultimately contributes to a reduction in carbon emissions and increase resources efficiency, which is a core environmental issue in the maritime industry.</p> <p>Alignment with Sustainable Finance Standards:</p> <p>Under the Green Bond Principles and Green Loan Principles, projects relating to green buildings that meet regional, national or certifications for environmental performance are listed as eligible green projects.</p> <p>Alignment to UN SDGs:</p> <p><u>UN SDG 7 - Affordable and Clean Energy</u></p> <p>Alignment with Target 7.3: By 2030, double the global rate of improvement in energy efficiency.</p> <p><u>UN SDG 11 - Sustainable Cities and Communities</u></p> <p>Alignment with Target 11.6: By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.</p> <p>Alignment to core business of Seatrium:</p> <p>While greening of the buildings and facilities is a strategy in reducing Seatrium's carbon emissions and promotes energy efficiency, ERM notes that it may not be such a core component in its business services as compared to other services.</p>	<p>Very Strong</p> <p>Impacts:</p> <p>The use of proceeds in green buildings and facilities can provide a positive impact on the environment from the reduction in carbon emissions, enabling better resource efficiency (i.e., Sustainable Construction: Designing and constructing shipyard buildings and facilities with sustainability in mind, using energy-efficient designs and sustainable materials).</p> <p>Quantifiable and Measurable:</p> <p>The impacts from this investment are quantifiable and can be measured through metrics such as the level of Green Building certification attained, amount of GHG avoided annually or over the building's lifetime.</p>

Project Category and Eligibility Criteria	Alignment	Impactfulness
<p>Pollution Prevention and Control</p> <p>Investments, expenditure, and operation of the following, either onboard vessels or at its sites of operations including but not limited to:</p> <ul style="list-style-type: none"> • Water treatment facilities (i.e., Ballast Water Treatment); • Wastewater treatment facilities; • Materials recovery and recycling facilities; and • Exhaust gas scrubber. <p>Investment and expenditure in relation to technologies aimed at lifecycle GHG emissions savings, including but not limited to:</p> <ul style="list-style-type: none"> • Developing and expanding the usage of paint and varnish with less air pollution such as VOCs <p>The proceeds under this category will go toward ensuring that vessels and yard operations will comply to environmental regulations ahead of the enforcement date to encourage early adoption rather than sole compliance.</p>	<p>Very Strong</p> <p>Alignment to green issue in the industry:</p> <p><u>Pollution Prevention</u></p> <p>The use of proceeds is relevant in addressing environmental issues that arises from ships and/or shipyard operations in terms of reduction of air emissions, greenhouse gas control, waste reduction, waste recycling etc. to protect the marine environment and human health.</p> <p>Alignment with Sustainable Finance Standards:</p> <p>Under the Green Bond Principles and Green Loan Principles, projects relating to pollution prevention and control (including reduction of air emissions, waste reduction, and waste recycling) are listed as eligible green projects.</p> <p>Alignment to UN SDGs:</p> <p><u>UN SDG 12 - Responsible Consumption and Production</u></p> <p>Alignment with Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources.</p> <p><u>UN SDG 14 - Life below water</u></p> <p>Alignment with Target 14.1: By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.</p> <p>Alignment to core business of Seatrrium:</p> <p>Pollution prevention and control is one of Seatrrium's environmental objectives. Seatrrium is committed to safeguarding the oceans and its biodiversity, as well as adopting safer and smarter yard processes to minimise negative impacts to the environment. Seatrrium also aims to work together with its customers to incorporate</p>	<p>Very Strong</p> <p>Impacts:</p> <p>The impact of proceeds on Pollution Control and Prevention supports its clients/shipbuilding activities to be aligned with the regulations and Annexes stipulated in The International Convention for the Prevention of Pollution from Ships (MARPOL) by the International Maritime Organization (IMO), Ballast Water Management Convention etc. It also promotes resource efficiency in its operations. On top of ensuring compliance with regulatory requirements, it pushes for early adoption of environmental measures across vessels and yard operations.</p> <p>Furthermore, it indirectly results in social benefits such as improved health and safety conditions for shipyard workers.</p> <p>Quantifiable and Measurable:</p> <p>The improvement in pollution control and prevention measures are quantifiable and can be measured through metrics such as monitoring/ audits (i.e., air emissions audits), and resource consumption indicators and comparison with historical data (i.e., volume of water generated and recycled).</p>

Project Category and Eligibility Criteria	Alignment	Impactfulness
	nature-inclusive considerations into the product designs.	
Carbon Capture, Utilisation and Storage (CCUS) Investment and expenditure in carbon capture utilisation and/or storage projects whereby carbon emissions are captured for further use or permanently sequestered. For the avoidance of doubt, CCUS projects that lead to fossil fuel lock-in will be excluded.	<p>Very Strong</p> <p>Alignment to green issue in the industry: <u>Climate Impact</u> Investment and expenditure in carbon capture utilisation and/or storage projects helps in addressing one of the core issues in the maritime industry – Decarbonisation. Seatrrium's use of proceed in this area would provide an important decarbonisation strategy for clients in the maritime industry (i.e., cargo vessels etc.). Advancement and investment in CCUS would allow this technology to be more readily adopted by clients in the maritime sector.</p> <p>Alignment with Sustainable Finance Standards: While not listed under the Green Bond Principles and Green Loan Principles, CCUS can be considered as eligible green assets given that it helps to address the core issue of climate change.</p> <p>Alignment to UN SDGs: <u>UN SDG 12 - Responsible Consumption and Production</u> Supports Target 12.1: Implement the 10-Year Framework of Programmes on Sustainable Consumption and Production Patterns, all countries acting, with developed countries taking the lead, considering the development and capabilities of developing countries.</p> <p>Alignment with Target 12.2: By 2030, achieve the sustainable management and efficient use of natural resources.</p>	<p>Strong</p> <p>Impacts: CCUS can play a role, particularly in capturing emissions from existing ships and hard-to-electrify processes, together with other strategies. It enables vessels to align itself with the IMO GHG Target and overall reduce the GHG emissions in the maritime sector to align with the IPCC Paris Agreement Goals through various applications such as:</p> <ul style="list-style-type: none"> • Onboard carbon capture: Installing CCUS systems directly on ships can capture CO₂ emission directly from its engines and exhaust systems, thereby reducing the carbon emissions of maritime operations. • Onsite carbon capture: Installing CCUS facilities at major ports to capture CO₂ emissions from ships during loading and unloading operations. This can also include emissions from port equipment and vehicles. • Utilisation: Converting captured CO₂ into synthetic fuels such as methanol and methane, which can be used to power vessels, creating a closed-loop system. • Storage and Transportation: Captured CO₂ can be transported via pipelines or specialised vessels to be stored in geological storage sites such as depleted oil and gas reservoirs, deep saline aquifers for long-term sequestration. Effective storage and transportation solutions are crucial in effectively isolating CO₂ from the atmosphere. <p>However, measuring the impacts from CCUS may not be possible within an immediate timeframe.</p>

Project Category and Eligibility Criteria	Alignment	Impactfulness
	<p>Alignment to core business of Seatrrium:</p> <p>This investment is closely tied to Seatrrium’s core business products as Offshore Renewables, New Energies, and CCS are interlinked. This allows Seatrrium to cater to the end-to-end requirements of the future low-carbon economy and repurposing its existing product portfolio, skills and capabilities and engineering innovative and sustainable solutions for the maritime sector.</p>	<p>Quantifiable and Measurable:</p> <p>The impact from the increase in CCUS is quantifiable and can be measured through metrics such as monitoring the tonnes of CO₂ captured, installed CCS capacity.</p>

ERM acknowledges that Seatrrium has listed the exclusion criteria in which Seatrrium would not engage or finance in. The exclusion list represents clear guidelines and commitment against financing projects that are associated directly or indirectly with fossil-fuel activities. It has also stated the exclusion of activities that may threaten international security such as military contracting and weapons.

The Green Finance Framework considers the possibility of refinancing, in whole or in part, projects that meet the eligibility criteria as stated above. Seatrrium has established a 36-month lookback period for refinanced projects, which ERM considers to be aligned with market standards. Seatrrium has also stated an intention to fully allocate proceeds within a 24-month period or between drawdown and maturity, whichever is shorter. This is considered to be aligned with good market practices.

3.2.2 PROJECT SELECTION AND EVALUATION PROCESS

The Sustainable Financing Framework Working Committee (SFFC) is responsible for the assessment and selection of Eligible Projects. The committee consists of members from the Sustainability, Treasury and Finance teams. ERM acknowledges that the working group includes a range of departments with diverse expertise and sustainability attributes. The process also includes a final review and approval by the Chief Sustainability Officer. The SFFC will also undertake regular monitoring of the asset pool to ensure the eligibility of Green Projects with the criteria and replace any ineligible projects with new eligible ones. This highlights continuous monitoring and project evaluation to ensure proceeds are allocated to eligible green projects.

Furthermore, ERM recognises that Seatrrium would conduct comprehensive environmental and social risk assessment of assets to identify, analyse, evaluate, and treat material issues related to projects to minimise any adverse impacts of its operations.

As such, ERM considers the evaluation and selection process to be sufficient to identify the eligible green projects.

3.2.3 MANAGEMENT OF PROCEEDS

ERM acknowledges that Seatrrium will track the use of proceeds using the Green Finance Register, earmarked under its general funding accounts. ERM considers the Green Finance Register to be sufficient in promoting and maintaining a level of transparency given that it includes core details such as:

- Green Financing Instrument (Bond/Loan etc.) details: pricing date, maturity date, principal amount of proceeds, coupon, ISIN number, etc.;
- Amount of Allocated Proceeds: The Eligible Green Projects List, including for each Eligible Green Project, the Eligible Green Project category, project description, project location, total loan amount, the Bank's loan amount, amount disbursed, settled currency, etc.; and
- Amount of Unallocated Proceeds.

ERM considers Seatrrium's approach to the management of proceeds is aligned with market practices. Seatrrium is committed to ensuring that the level of allocation for the Eligible Green Project Portfolio matches or exceeds the balance of net proceeds from its outstanding Green Finance Instruments. In the event of any divestment or if the project is no longer eligible based on the criteria listed, Seatrrium is committed to reallocate the funds to one or more other Eligible Green Projects as soon as reasonably practicable. Any unallocated proceeds will be placed into a segregated account to await for future deployment at Seatrrium's discretion in cash or cash equivalent instruments. Seatrrium will keep track of the proceeds in an internal register.

ERM also acknowledges that Seatrrium will ensure that the same capital investment will not be listed twice in the allocation of net proceeds to prevent double counting. This is done through an internal register.

3.2.4 REPORTING

Seatrrium has committed to report on the allocation of net proceeds, associated output and impact indicators within a year from the issuance date and annually thereafter until the proceeds from any Green Financing Instrument have been fully allocated, or until the Green Finance Instrument is no longer outstanding.

ERM acknowledges that Seatrium will conduct two types of reporting, namely Allocation and Impact Reporting. Reporting will be undertaken at least at the category level for the Use of Proceeds Instruments to the Eligible Green Project Portfolio and on an aggregated basis for all Seatrium's Green Financing Instruments that are outstanding. The report will be published on its website as a standalone Green Financing report.

For the allocation reporting, the indicators that will be reported include the List of Eligible Green Projects, the Total amount of proceeds allocated to eligible projects, the Balance of unallocated proceeds, the Amount or the percentage of new financing and refinancing, and examples of projects financed. ERM considers the indicators that will be reported in Seatrium's allocation report to be appropriate in terms of transparency and the clarity of proceeds usage.

For impact reporting, Seatrium has clearly defined potential impact indicators for all project categories under the green use of proceeds, with reference was taken from the ICMA Harmonised Framework for Impact Reporting²³ where applicable. ERM considers that the examples of impact reporting indicators provided in the Framework are sufficient and relevant to each of the Green Project Category. It was also noted that calculation methodologies and key assumptions will be disclosed. Seatrium may consider the following as possible additional indicators for impact reporting:

- **Renewable Energy:** Proportion of renewable energy consumption against total energy usage (%);
- **Clean Transportation:** Life Cycle Assessment to account for the GHG emissions from manufacturing, usage and disposal;
- **Energy Efficiency:** Percentage reduction in energy consumption (%); and
- **Green Buildings and Facilities:** Annual reduction in water consumption and amount of waste minimised, reused or recycled (%).

3.2.5 VERIFICATION

Seatrium will engage a third-party reviewer to perform an annual assessment/limited assurance on the alignment and tracking of funds in line with its Green Finance Framework criteria. The verification report will be made publicly available on Seatrium's website in the case of a bond, or to Lenders directly in case of a loan.

²³ [Harmonised-Framework-for-Impact-Reporting-Green-Bonds June-2022-280622.pdf \(icmagroup.org\)](https://www.icmagroup.org/standards/impact/Harmonised-Framework-for-Impact-Reporting-Green-Bonds-June-2022-280622.pdf)

3.3 CONCLUSION AND KEY RECOMMENDATIONS

Overall, ERM is in the opinion that Seatrrium's Green Finance Framework aligns with the core components of the Green Bond Principles (June 2021) and Green Loan Principles (February 2023).

3.3.1 ASSESSMENT OF THE ISSUER/BORROWER

ERM acknowledges Seatrrium's commitment to actively address the ESG aspects with economic growth and enabling its customers to achieve their sustainability goals. Seatrrium is also committed to uphold the highest standards of corporate governance and comply with regulations and provisions. ERM considers Seatrrium to be *well-positioned* to implement the Green Finance Framework.

Based on the measures and policies established by Seatrrium, ERM is of the opinion that Seatrrium is *well-positioned* to mitigate relevant green/environmental risks associated with the Green Finance Framework.

3.3.2 ASSESSMENT ON GREEN FINANCING FRAMEWORK

3.3.2.1 GREEN USE OF PROCEEDS

Overall, ERM considers the use of proceeds to be aligned with core green/environmental issues to the maritime industry. The use of proceeds is also in alignment with IMO GHG Strategies and UN SDGs, especially SDGs No. 7, 9, 11, 12, 13 and 14. The proceeds can also be considered impactful in supporting the industry towards decarbonisation, reducing GHG emissions and being more resource efficient through the development and provision of services such as renewable energy, greening of fleets, pollution control etc.

With reference to the Climate Bond Taxonomy, ERM recommends Seatrrium to consider the following as best practice:

- **Renewable Energy:** Additional screening should be considered for determining whether assets are eligible under hydrogen energy generation.
- **Energy Efficiency:** Seatrrium is recommended to establish a percentage reduction in energy consumption associated with the proposed technologies to ensure use of proceeds under this category would significantly improve the energy efficiency of shipyards, terminals and/or vessels.
- **Carbon Capture, Utilisation and Storage (CCUS):** Under the Climate Bond Taxonomy CCUS may be considered eligible assets only if the carbon capture & storage can capture 100% of GHG emissions. In this regard, caution should be taken when investing in such assets.

3.3.2.2 PROJECT SELECTION AND EVALUATION PROCESS

ERM notes Seatrrium's effective use of a cross-departmental Sustainability Committee for project evaluation and monitoring. Seatrrium would also conduct comprehensive environmental and social risk assessments as part of the evaluation and selection process.

3.3.2.3 MANAGEMENT OF PROCEEDS

Seatrrium will track the use of proceeds using the Green Finance Register, earmarked under its general funding accounts. ERM considers the Green Finance Register to be sufficient in promoting

and maintaining a level of transparency given that it includes core details relating to Green Financing Instrument, amount of allocated proceeds and amount of unallocated proceeds. ERM also considers Seatrium's approach to the management of proceeds is aligned with market practices.

3.3.2.4 REPORTING

Seatrium has committed to conduct both Allocation and Impact Reporting within a year from the issuance date and annually thereafter until the proceeds from any Green Financing Instrument have been fully allocated, or until the Green Finance Instrument is no longer outstanding. ERM notes that Seatrium is committed to align with ICMA Harmonized Framework for Impact Reporting²³ where applicable. The report will be published on its website as a standalone Green Financing report.

3.3.2.5 VERIFICATION

As recommended in the GBP and GLP, Seatrium has committed to perform an annual assessment/limited assurance on the alignment and tracking of funds in line with its Green Finance Framework criteria. The verification will be done by a third-party reviewer, and the verification report will be made publicly available on Seatrium's website in the case of a bond, or to Lenders directly in case of a loan.



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