moving energy

NAVIGATING A SUSTAINABLE FUTURE TOGETHER

Climate-related Financial Disclosures Report 2024

What's Inside

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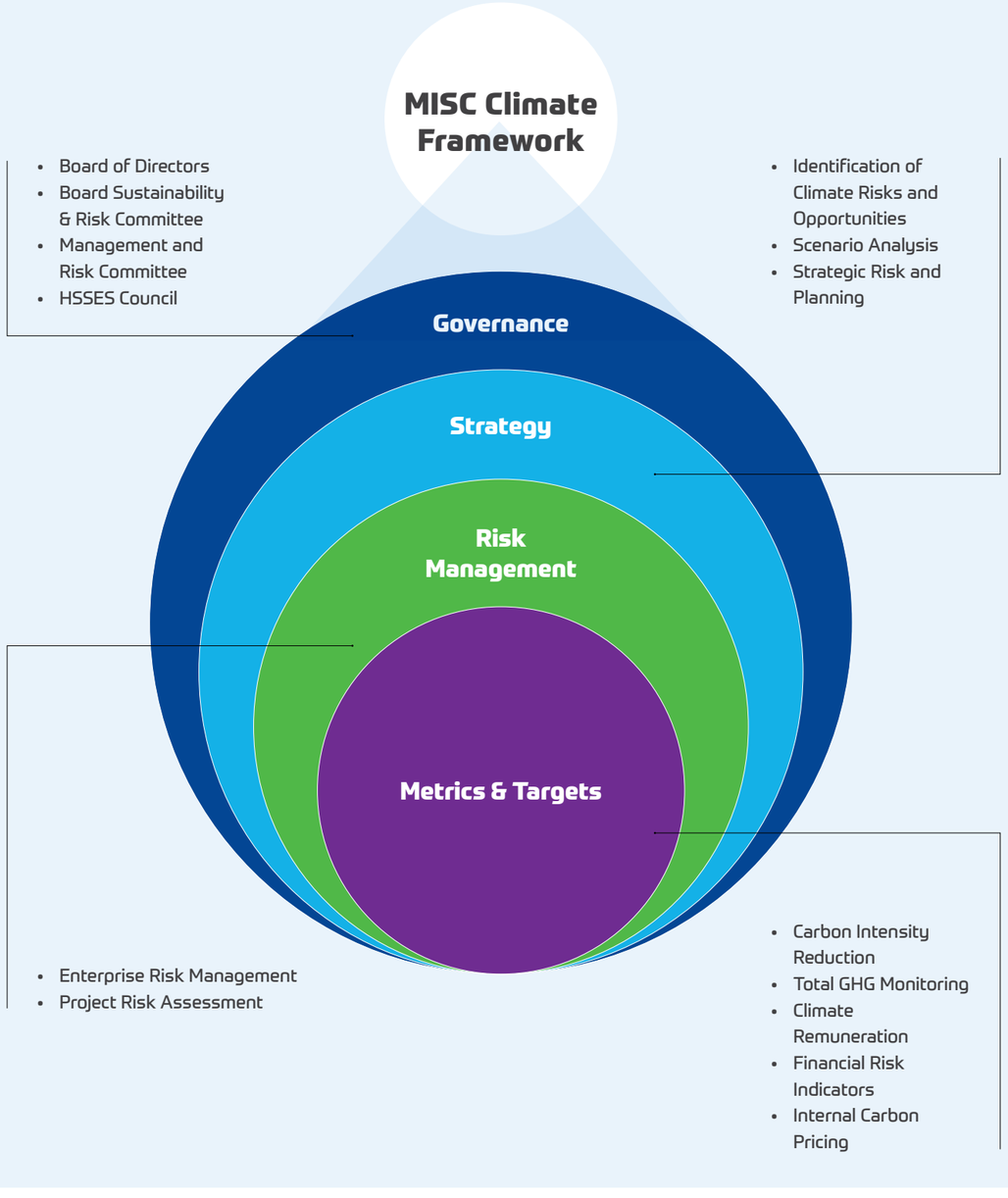
CLIMATE-RELATED FINANCIAL DISCLOSURES

MISC is a leading global provider of energy-related maritime solutions, committed to integrating sustainability at the core of its business strategy. This Climate-related Financial Disclosures Report marks the organisation's fourth annual publication, reinforcing our dedication to transparency, accountability and proactive climate action in response to the evolving energy landscape.

Decarbonisation remains a fundamental pillar of MISC's long-term vision. We have established ambitious climate targets, including a Net-Zero greenhouse gas (GHG) emissions goal by 2050 and a 50% reduction in GHG intensity from our shipping operations by 2030. As part of this commitment, the MISC 2030 Ambition outlines our approach to identifying and managing climate-related risks and opportunities, with a particular emphasis on New Energy Solutions to drive industry-wide progress.

This report provides a comprehensive assessment of how climate change scenarios may impact MISC's operations and presents our strategic roadmap for mitigating risks and capitalising on emerging opportunities. It broadly aligns with the International Financial Reporting Standards (IFRS) S2 Climate-related Disclosures, issued by the International Sustainability Standards Board (ISSB), ensuring that MISC adheres to globally recognised best practices. The report is structured around the four core pillars of climate-related financial disclosures: Governance, Strategy, Risk Management and Metrics & Targets.

To further enhance the depth and accuracy of our sustainability reporting, we have quantified and disclosed material climate-related risks. Looking ahead, MISC remains committed to continuous improvement, striving for full alignment with the ISSB Standards in future disclosures as we navigate the transition towards a more sustainable maritime industry.



GOVERNANCE

MISC has established a Board of Directors (the Board) and a Management-level governance framework to oversee, evaluate and manage climate-related matters. This structured approach ensures that our climate strategy receives the appropriate level of attention from both the Board and Executive Leadership.

Board of Directors

Directs the company's strategic plan, oversees conduct and performance and identifies principal risks, including climate-related ones, while ensuring the implementation of appropriate systems to manage these risks. These risk management strategies include responsibility for succession planning and continuous development, the implementation of an investor relations programme and the review of the adequacy and integrity of internal control systems.

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Board Sustainability & Risk Committee

Reviews the adequacy and effectiveness of MISC's Risk Management Framework and ongoing activities in identifying, monitoring and mitigating risks (including climate-related risks) and the determination of MISC's sustainability strategy and governance structure in alignment with MISC's business strategy.

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Management Risk Committee

Ensure all business risks, including climate-related ones, are prudently identified, evaluated and managed following acceptable international standards, principles and guidelines on risk management.

HSSES Council[1]

Stewards and provides oversight on all HSSES matters, including the management of climate-related risks and opportunities such as GHG performance.

[1] *Chaired by MISC's President & Group CEO (PGCEO). The members comprise Executive Leadership from each division and the Managing Directors/CEOs of MISC Group.*

Board Level Governance

The Board is ultimately accountable for overseeing and directing the Group's sustainability agenda and ensures that climate-related risks and opportunities are integrated into corporate decision-making. The Board is responsible for endorsing climate transition strategies, including climate commitments, decarbonisation pathways and adaptation measures to enhance the Group's long-term resilience.

To support this mandate, the Board Sustainability and Risk Committee (BSRC) plays a critical role in governing climate-related risks and opportunities, operating under formal Terms of Reference. The BSRC is tasked with assessing and refining the Group's risk profile, overseeing sustainability strategy and governance structures and ensuring alignment between climate risk management and MISC's enterprise risk management (ERM) framework.

By embedding climate considerations into corporate governance, the Board ensures that sustainability-related financial and non-financial risks are reflected in business planning, investment decisions and risk management processes. This includes oversight of budgets, business plans, capital expenditures (CAPEX), acquisitions and divestitures. Every quarter, the Board—through the BSRC—reviews GHG performance and progress against established climate targets, ensuring accountability in the Group's climate transition strategy.

Management Level Governance

The management of climate-related risks and opportunities within MISC are overseen by two cross-functional management-level committees: the Health, Safety, Security, Environment & Sustainability (HSSES) Council and the Management Risk Committee (MRC). These committees ensure that sustainability is considered as part of enterprise-wide decision-making, aligning climate governance with MISC's risk management framework, operational strategy and corporate planning.

The HSSES Council provides strategic oversight and leadership on climate-related and broader environmental, social and governance (ESG) matters. Chaired by MISC's PGCEO and comprising the Executive Leadership Team (ELT)—which, from January 2025, includes the Chief Strategy & Sustainability Officer (CSSO)—the Council plays a central role in guiding the Group's climate agenda.

It is responsible for overseeing policies, strategic initiatives, management systems, performance monitoring, data governance and progress against climate-related targets. By functioning as a key advisory body to the BSRCs and the Board, the HSSES Council ensures that MISC's climate strategy is integrated into business operations, supporting the Group's Net-Zero GHG ambitions and long-term resilience.

Complementing this oversight, the MRC meets quarterly to assess and review key business risks, ensuring that adequate and effective mitigation strategies are in place. Climate-related risks are evaluated based on their financial and operational impact, with material risks being escalated for further deliberation by the BSRC. By integrating climate risk considerations into MISC's risk register, the MRC enhances the organisation's ability to respond to emerging challenges in a structured and strategic manner.

Furthermore, climate-related risks associated with investment opportunities undergo additional scrutiny from the Project Risk Assessments Sub-Committee (PRASC) before being reviewed by the BSRC and ultimately the Board. This structured approach ensures that climate risk management is embedded in capital allocation, investment strategy and financial planning.

STRATEGY

Sustainable business development is at the core of MISC's role in the maritime, shipping and energy sectors, reinforcing the organisation's commitment to advancing new energy solutions.

As the global energy transition accelerates, the industry faces critical challenges, including the availability and affordability of technology and alternative fuels, as well as the capacity-building and capability development required to support this transformation. While these challenges present complexities, they also unlock new opportunities for innovation, collaboration and value creation.

To this end, MISC has made bold commitments in alignment with the International Maritime Organization's (IMO) climate objectives, ensuring synergy with its maritime and shipping value chain partners. MISC is actively pursuing the decarbonisation of its fleet, progressively transitioning to low-, ultra-low- and zero-emission vessels. These efforts are aimed at reducing GHG intensity in shipping operations by 50% by 2030 and achieving Net-Zero GHG emissions by 2050, including reductions across its value chain emissions.

These commitments underpin MISC's short- and medium-term growth strategies, supporting a dual-growth approach that enables the organisation to maintain its presence in traditional markets while proactively addressing climate-related risks and opportunities. This strategy ensures business continuity and resilience, allowing MISC to secure stable cash flows through long-term contracts with premium clients, safeguard financial sustainability, deliver consistent returns to shareholders and maintain access to capital for the transition towards a more sustainable and climate-resilient business model.

Time Horizons

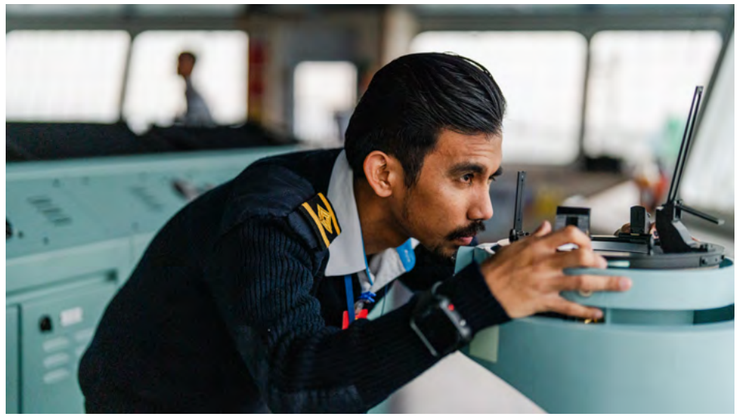
MISC has established short-, medium- and long-term time horizons to align with global decarbonisation goals and effectively manage climate-related risks and opportunities. These structured timeframes enable the organisation to assess risks in line with the commitments made by its ecosystem partners, including the IMO and other global and local regulators. By integrating climate considerations into its business planning cycles, MISC ensures that climate risk and opportunity management remain agile, forward-looking and strategically embedded within its transformation plans, allowing for regular review, adjustment and alignment with evolving regulatory and industry developments.

MISC's planning cycles are structured to adapt to the evolving industrial and regulatory landscape, ensuring the organisation can respond strategically to emerging challenges and opportunities. This approach enables MISC to implement long-term, sustainable changes that create value for its stakeholders across the maritime, shipping and energy sectors. By maintaining flexibility within its planning framework, MISC ensures that climate-related risks and opportunities are continuously assessed, integrated and aligned with its broader business transformation strategies.

To strengthen its management of climate-related uncertainties, MISC is committed to progressively improving its sustainable business practices. This includes proactively identifying and addressing climate-related risks and opportunities that could materially impact its financial performance, operational resilience and strategic direction. By embedding climate risk considerations into corporate decision-making, MISC ensures that its sustainability efforts remain robust, forward-looking and adaptable to external shifts in policy, regulation and market expectations.

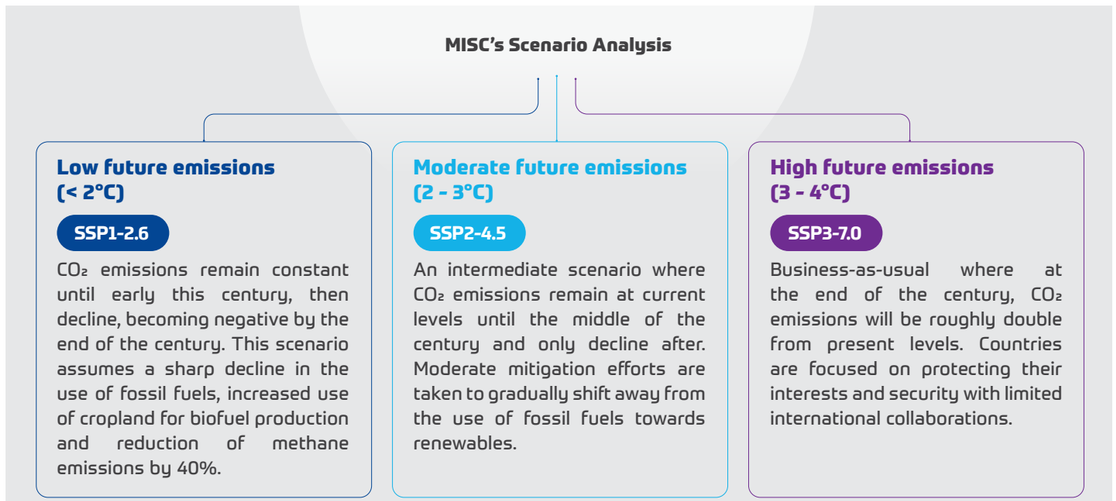
In managing these risks, MISC continues to enhance its business processes to mitigate potential disruptions stemming from regulatory changes, market transitions to low-carbon assets and the physical impacts of climate change. At the same time, the organisation recognises the opportunities arising from the global energy transition, including the development of ultra-low- and zero-carbon vessels, advancements in renewable energy technologies and access to new markets driven by sustainability-focused investments and demand. By capitalising on these opportunities, MISC is well-positioned to support the long-term decarbonisation of the maritime industry while ensuring its own financial sustainability and competitive edge.

Time Horizons	Rationale on Material Financial Impact
Short-term (within the next 2-3 years)	Any climate-related risks and opportunities that have or are expected to have material financial impacts, including: • current and emerging climate legislation and market transition to low-carbon assets • achieving IMO targets, which are reducing emissions by at least 20% and striving for 30% by 2030
Medium-term (by 2030)	Any climate-related risks and opportunities that have or are expected to have material financial impacts, including: • achieving IMO GHG emissions targets for 2030 (by at least 20%, striving for 30%) and 2040 (by at least 70%, striving for 80%) • the development of economically sustainable deep-sea vessels with ultra-low or zero carbon emissions by 2030 to fulfil IMO 2050 Net-Zero goals and achieve MISC's Net-Zero GHG emissions target by 2050 and manage vessel lifespans
Long-term (by 2050)	Any climate-related risks and opportunities that have or are expected to have material financial impacts in addressing the energy transition and global movement towards Net-Zero GHG emissions by 2050, including MISC's 2050 target



Climate Scenarios

MISC has identified three climate scenarios – a low, medium and high carbon dioxide (CO_2) concentration in 2100 from pre-industrial levels while considering the trajectory in 2050:



These scenarios were sourced from the:

Intergovernmental Panel on Climate Change (IPCC)	Intergovernmental Panel on Climate Change (IPCC)	International Energy Agency (IEA)	The International Renewable Energy Agency (IRENA)

MISC Scenario Analysis (°C)	Scenario	Projection of temperature rise from 2080 to 2100 (°C)	
		Mean	Range
< 2 (Low emissions)	SSP1-2.6	1.8	1.3 - 2.4
2–3 (Moderate emissions)	SSP2-4.5	2.7	2.1 - 3.5
3–4 (High emissions)	SSP3-7.0	3.6	2.8 - 4.6

To understand and connect the political, business and social responses to climate change and associated global carbon budgets, shared socioeconomic pathways (SSP) and the expected physical and transitional climate-related impacts, the climate analysis and scenarios were derived based on the following driving forces:

Driving Forces	Low Emissions Scenario (< 2°C)	Moderate Emissions Scenario (2–3°C)	High Emissions Scenario (3–4°C)
Environmental	• Sea level rise and higher sea surface temperatures are affecting coastal communities • Increase in wind speed and wave power in the Southern Hemisphere	• Climate-related risks are significantly affecting lower latitudes infrastructure and communities • Larger winter ocean waves and increase in wave heights	• Extreme sea level rise and intense impacts on ports and coastal infrastructure • Warmer sea surface with extreme heatwaves and intense tropical cyclones
Political & Legal	• Extensive international collaboration • Clear policies to support Net-Zero transition • Well-established carbon pricing • Industry environmental standards	• Growing international collaboration • Clear policies to support Net-Zero transition • Well-defined industry environmental standards • Moderate implementation of carbon pricing	• Large differences across regions and countries on environmental standards and policies • Continuing government incentives for the oil and gas sector in some countries • Carbon pricing is not widely adopted
Technological	• Collaborations between different industries and financial backing encourage the adoption of carbon capture, utilisation and storage (CCUS) • Extensive investment in CCUS technology to bridge the transition towards a Net-Zero carbon economy • Utilisation of e-fuels in international shipping • Significant investor interest in the hydrogen economy	• Rapid technological development and extensive adoption of carbon-neutral fuels • Governments across the globe invest in CCUS • Leverage natural sources to offset remaining emissions • Supply of renewable energy is growing faster than electricity demand	• Focus is on process efficiency and a slower transition towards technological advancement. • Lack of funding and incentives to deploy CCUS on a large scale • Limited CO_2 storage availability raises energy transition costs • Lower transition to renewables
Economic	• Decrease in total energy supply is predicted due to strong implementation of policies and efficiency measures • Rapid transformation towards electrification and renewables as a large part of global energy systems • Significant global annual investment into the renewable energy sector	• Slight increase in total energy supply is predicted • Increased electrification with a moderate shift towards renewables with a focus on transitionary fuels • Utilisation of bioenergy as a potential alternative to replace traditional biomass • Strengthened policy commitments to limit fossil fuel usage to balance Net-Zero ambitions	• Decrease in total energy supply for advanced economies, while this increases for emerging and developing economies • Slower transformation towards renewables with a preference for traditional sources of energy such as coal, oil and gas in emerging and developing economies • Continued investment into upstream oil and gas
Reputation & Social	• Significant stakeholder pressure to reduce emissions across the value chain • Increased regulatory requirements for reporting and disclosing performance and targets • Creation of a new economic and employment opportunities	• Widespread social awareness about climate change which influences purchasing and consumption decisions • Shortage of skills in adaptation to climate change with many displaced workers	• Some pressure and urgency placed on companies for climate action • Unequal spread of job gains and losses between sectors and countries

Identifying Climate-related Risks and Opportunities

Climate change is a global challenge with far-reaching implications for communities, industries and businesses, including MISC. Recognising its widespread impact, MISC integrates climate-related risks and opportunities into its strategic decision-making, ensuring that sustainability considerations are embedded across its operations and value chain. Acknowledging the interconnected nature of the maritime and energy sectors, MISC actively engages with key stakeholders, including customers, suppliers and regulatory bodies, to develop collaborative and forward-thinking approaches to climate resilience. By fostering strong partnerships and aligning with industry best practices, MISC aims to drive collective action that supports sustainable growth, operational adaptation and long-term decarbonisation objectives.

As MISC transitions to a lower-emissions economy, it has identified nine key climate-related risks and opportunities, spanning physical and transitional impacts across short-, medium- and long-term horizons. These are assessed through key driving forces, including regulatory, market, technological, reputation and social and environmental factors, ensuring strategic resilience and adaptability in the evolving energy landscape.

The risks are categorised as:

Physical risks created by a changing climate

Transitional risks created by the world's transition to a low-carbon economy

These risks could materially impact MISC's business and key stakeholders, with financial implications depending on the pace and trajectory of the transition. The expected timeframe reflects the broader global urgency of climate challenges and their evolving impact on industries.

Both physical and transitional risks are reviewed and assessed in terms of likelihood and severity:

The likelihood of the climate issue impacting MISC's business objectives

The severity/financial impact of climate risks on MISC's business objectives

Overview of MISC Group Climate-related Risks and Opportunities

Physical
- Increase in extreme wind and precipitation (acute)
- Sea level rise (chronic)

Regulatory
- Increasing environment/carbon policies and legislation

Technology
- Development of new technologies for low-carbon solutions
- Training for the right expertise and skills required to manage new assets

Market
- Market interest shift towards a low-carbon economy
- Changing capital providers trends
- Shift in customer expectations

Reputation and Social
- Talent retention and attraction
- Being perceived as advanced or laggard in climate change action/failure to comply with regulation

DRIVING FORCES AND THEIR TIME HORIZONS

Risks are modelled across set time horizons that remain stable across each climate scenario.

Risk Category	Driving Forces	Risk	Time Horizons
Physical	Acute	Extreme weather	ML Medium - long term
	Chronic	Sea level rise	ML Medium - long term
Transitional	Regulatory	Increasing environmental/carbon regulations	SM Short - medium term
	Technological	Development of new technologies for low-carbon solutions	SM Short - medium term
		Training in the right expertise and skills to manage new assets	SM Short - medium term
	Market	Shift in customer and market expectations toward a low-carbon economy	ML Medium - long term
		Changing capital providers' trends	ML Medium - long term
	Reputational & Social	Being perceived as advanced/laggard in climate change	SL Short - long term
		Talent attraction	SL Short - long term

<2° SCENARIO

In this scenario, the goal is to limit global warming to well below 2° Celsius above pre-industrial levels by the end of the 21st century. Ambitious targets and stringent climate policies are applied at the global level which includes limiting GHG emissions, promoting renewable energy, enhancing energy efficiency and addressing deforestation. Countries are extensively collaborating on a global scale to share technologies, finance and expertise to meet the stringent emission reduction targets. Governments are establishing and enforcing regulations, incentives and penalties to push businesses and industries toward a low-carbon economy.

The energy sector is rapidly transitioning towards renewable sources, driven by the adoption of advanced technologies for energy storage and grid management. The decline in fossil fuel usage is causing traditional energy sectors to contract. Businesses are increasingly embracing sustainable and circular practices, reducing emissions and integrating renewable energy into their operations. The clean energy industry, encompassing renewable energy, energy efficiency and carbon capture technologies, is witnessing substantial growth and opportunity. Innovations in clean technologies, such as carbon capture and storage, advanced energy storage and sustainable agriculture, are advancing significantly.

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			ML	• Elevated maintenance costs and expenses due to operational delays or disruptions caused by extreme weather events • Rise in personal injury and asset damage cases resulting from extreme weather, leading to higher insurance premiums • Potential damage to structures and equipment exposed to external weather and elevated costs for upgrading building sites and yard infrastructures • Increased compliance costs as extreme weather can lead to increased risk of spills or leaks	• Explore digitalisation to minimise dependency on physical assets, optimise operations and minimise maintenance costs • Increase in demand for marine and heavy engineering maintenance and repair services due to extreme weather conditions • Provision of specialised asset design services that can withstand extreme weather conditions • Expand exploration of alternative shipping routes and logistics strategies to circumvent regions most affected by weather changes to ensure supply chain resilience

Identifying Climate-related Risks and Opportunities

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			ML	• Coastal erosion at shipping ports and hubs, potentially disrupting operations • Increase in frequency of regular or extensive maintenance at jetty and shipyard structures to ensure safety and operational continuity	• Enhance port infrastructure and implementation of advanced forecasting systems to reduce operational risk • Reduced cost of business from less maintenance dredging at shipyard structures
			SM	• Higher capital and operating costs incurred due to compliance with IMO's Energy Efficiency Existing Ship Index (EEXI), Carbon Intensity Indicator (CII) regulations and enforcement of carbon tax • Encounter potential premature asset write-downs of ship asset renewals or refurbishments, to meet specified emissions standards • Reduced competitive advantage for less efficient assets due to regulations or customer requirements	• Increase in demand for cleaner sources of energy such as LNG, driven by government policies • Capitalise on opportunities to provide low-cost and low-emission services to meet customer needs • Acquire new revenue streams from low-and zero-emission solutions across the Group • Generation of carbon credits from investments into zero-emission assets and solutions
			SM	• Investment to research new technologies to meet low-carbon economy requirements • Adaptation and innovation, including operational and logistical changes to handle new fuel types • Incur reskilling costs for the workforce to manage new low-and zero-carbon technologies • Technology adoption risks where the solutions deployed may not meet business demands and regulations	• Cost savings from retrofitting existing vessels with green technologies to increase energy efficiency measures and avoid penalties • Expansion into clean energy segments and services such as transporting bioenergy and bio-based products and other zero-emission fuels • Early detection of safety hazards and optimisation of operational processes using advanced monitoring systems, remote sensing technologies and real-time data analytics • Increased revenue streams from the adoption of cleaner liquefaction and regasification technologies, integration of renewable energy sources and exploration of energy storage applications
			SM	• Cost of upskilling the workforce in sustainability practices and managing new technology • Increased requirements for digital literacy and necessary skills for using advanced technologies, data analytics and automation	• Provision of maritime education programmes and specialised training modules to develop skills required to manage new technology, data analytics, understand zero-emission fuels, environmental compliance and best practices
			ML	• Long-term decline in the use of oil and gas products and increased use of renewable energy, substantially impacting transported volumes, revenues and overall business model • Increased customer preference for carbon-neutral transportation options • Higher volume of renewable energy equipment and storage facilities for zero-emission fuels at ports, necessitating an overhaul in handling and storage capabilities	• Expansion and diversification of fleet offerings to meet customer demand in parallel value chains such as waste-to-energy, carbon capture and storage (CCS) and alternative fuels • Provision of innovative and sustainable solutions in ship management, engineering, procurement and consultancy • Expansion of service offerings for integrated maritime services, especially for zero-emissions fuel handling and storage facilities at ports
			ML	• Increased barriers to gain access to finance due to commitments to green financing • Adjustments in capital flows and a pivot by investors to align the energy sector with a favourable economic and environmental trajectory	• New funding opportunities for low-emissions assets and businesses by demonstrating collective commitment towards emissions reduction across the sector

Identifying Climate-related Risks and Opportunities

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			SL	• Pressure to ensure accurate and timely information about sustainability performance including emissions reduction initiatives, safety measures and environmental stewardship efforts to maintain stakeholder confidence and demonstrate progress	• Explore partnerships with counterparts in the energy and chemical sectors based on shared commitments to reduce emissions • Engage in close collaborations with suppliers and partners to ensure stringent adherence to environmental standards and initiatives to reduce emissions
			SL	• Ensure the job security of employees who are directly dependent on the oil and gas sector • Experience loss of talent as professionals may seek out opportunities with companies that are in low-carbon sectors	• Increased commitment to community engagement, local employment support and sustainability initiatives • Demonstrating a strong commitment to reducing value chain emissions and providing sustainable services

2-3° SCENARIO

In this scenario, GHG emissions are expected to peak around 2040 before gradually declining, with the global average temperature projected to rise by 2-3°C by 2100. Governments are likely to adopt moderate climate policies to meet emission reduction goals, utilising a mix of regulatory measures, incentives and international agreements to promote cleaner technologies and sustainable practices. As climate change impacts persist, efforts will also focus on developing and implementing adaptation strategies to address shifting weather patterns and rising sea levels.

The energy sector is expected to undergo a gradual transition toward lower-carbon energy sources. While fossil fuels may still be in use, investments in renewable energy technologies are expected to grow. The world will likely see ongoing advancements in renewable energy, carbon capture and storage and sustainable agriculture. Businesses may respond to increasing demand for environmentally friendly products, resulting in shifts in consumer behaviour and market trends.

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			ML	• Potential disruptions to gas and petroleum shipments due to rising sea levels that threaten port infrastructure • Heightened risk of intense storms in a warmer climate poses safety and operational challenges for maritime transportation. This may also result in increased insurance premiums • Altered weather patterns may require adjustments to shipping routes, potentially increasing transit times, fuel consumption and operational costs • Heightened scrutiny and stricter emission standards in the shipping industry could necessitate additional investments in cleaner technologies and alternative fuels, impacting operational costs for companies	• Optimisation of operations and business processes, including collaborations across the supply chain, due to the changing environment • Explore digitalisation to minimise dependency on physical assets, optimise operations and minimise maintenance costs. It could change the market need for manpower and port management services
			ML	• Severe risk of damage to shipping hubs and ports where critical infrastructure is affected, most being located only a few meters above sea level	• Stakeholder collaboration in the shipping industry, including port authorities, shipping associations and weather forecasting agencies to develop and implement effective mitigative strategies against changing wave patterns and sea level rise

Identifying Climate-related Risks and Opportunities

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			SM	• Uneven global adoption of legal obligations creates complexities for MISC's operations, impacting our efforts to align with and contribute to the global Net-Zero agenda • Higher CAPEX and operational expenditure (OPEX) due to the cost of implementing low- and zero-emissions solutions to adhere to stringent environmental and climate policies • Possible reduction in contract extensions due to the performance of ageing assets (high carbon emissions) and potential non-compliance with regulatory requirements, including the high cost of compliance for the customer	• Diversification of business portfolio into low-and zero-emission solutions by investing and adopting ammonia and hydrogen technologies aligning with global climate targets to enhance the company's profile • Cost savings from strategic planning to navigate the impact of carbon pricing on operational costs • Provision of climate change, sustainability and emerging technologies modules to align with regulatory shifts in the Maritime Education & Training segment
			SM	• Extensive collaborations and investments in technology are still required between different industries, necessitating significant capital deployment to bridge the transition towards a Net-Zero carbon economy • Potential increase in costs for energy transition initiatives due to the slower uptake of low-carbon solutions, as well as the lack of funding to deploy large-scale CCUS technologies • Higher investments in research and development to implement and deploy new technologies to cover broader environmental concerns	• Securing a market-leading position by actively adopting new low-carbon technologies within operations as policies favour low-emissions technology • Collaborative opportunities in renewable energy projects due to the urgency of climate targets. Potential financial benefits from lower upfront costs for procuring and installing renewable energy systems • Using nature-based solutions and offsets from forestry or land, or bioenergy or direct air capture of CO_2 with CCUS to GHG reduce emissions
			SM	• Loss of innovation opportunities from failing to invest in training and adapting to new technologies	• Adequate employee training to address the skill gaps in managing new technologies
			ML	• Potential reputational impact as stakeholders, including customers, investors and the public, increasingly value environmentally responsible and technologically advanced practices • Temporary business interruption risks due to uncertainties in the market from transitioning and expanding low-carbon solutions technology to meet customer expectations • Challenges in terms of the availability and cost of low-and zero-emission fuels with the transition in primary energy supply towards renewables	• Robust growth in natural gas demand as a transitionary fuel, driven mainly by non-OECD countries, leading to increased exploration and production activities • Strategic investments in low-and zero-emission solutions such as carbon capture technologies and cleaner fuel infrastructure, for long-term sustainability
			ML	• Impact on company valuation and funding opportunities due to risk of uncertainties in conventional energy businesses associated with the transition to renewable energy • Increased cost of borrowing and reduced capital availability from financial institutions due to concerns about the long-term viability and environmental impact of such projects • Risk of stranded assets and decreased asset value due to unanticipated or premature asset write-downs and early retirement due to increasingly stringent policies	• Reduced costs of borrowings for low-and zero-emissions technology with increased chances of securing preferential rates through sustainability-linked loans or green financing, benefitting early movers in the low-carbon technology space

Identifying Climate-related Risks and Opportunities

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			SL	• Failure to accommodate emerging efficiency and low emissions standards may lead to operational inefficiencies and increased costs, potential fines and a negative impact on reputation • Increasing stakeholder pressure to reduce value chain emissions as social awareness increases	• Implement proactive measures to ensure decarbonisation initiatives align with investor expectations, leading to securing financing for initiatives and enhancing the company's long-term sustainability and reputation • Position the company as a leader in the transformation journey by adopting low-carbon technologies to meet sustainability goals and customer demands
			SL	• Prolonged unemployment risk for employees due to the phasing out of high-emission industries and insufficient replacement of jobs in low-carbon industries • Shortage of skills in climate adaptation technologies and measures among displaced workers hinders the effective implementation of mitigation measures and transition to growing employment sectors amid the decline of traditional energy industries	• Proactive planning for the energy transition minimises job losses, fosters economic stability and employee confidence

3-4° SCENARIO

Under this trajectory, emissions and temperatures gradually rise, with CO_2 emissions projected to roughly double by 2100. Nationalism, growing concerns about competitiveness and security and persistent regional conflicts drive nations to focus on domestic and regional priorities. Over time, policy agendas increasingly centre on national and regional security, with countries prioritising energy and food security within their borders, often at the expense of broader, more holistic development strategies.

Investment in education and technological innovation declines, leading to stagnant economic progress characterised by material-intensive consumption and persistent or worsening inequalities. Population growth remains low in industrialised nations but high in developing countries. The limited global focus on environmental issues contributes to significant environmental degradation in certain regions.

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			ML	• Elevated OPEX due to operational delays or disruptions caused by extreme weather events • Rise in personal injury and asset damage cases resulting from extreme weather, leading to higher insurance premiums • Reputational impact from failure to meet project deadlines due to disruptions in asset newbuilding yards, port operations and supply chain operations affected by extreme weather • Escalation in compliance costs due to increased spill or leak risks resulting from extreme weather, leading to damages and potential litigation	• Significantly increased demand for maintenance and repair services to withstand the increasing intensity of extreme weather, presenting a business opportunity and increased revenue for the Marine & Heavy Engineering segment • Increased revenue through extended port anchorage due to bad weather and increased remote inspection services

Identifying Climate-related Risks and Opportunities

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			ML	• Impact on client's operations especially in terms of infrastructure and navigation due to the forecasted rise in sea level which results in higher waves • Higher risk of asset damages may disrupt the shipping and shore business (e.g. ports, yards, construction, etc.) as well as the entire supply chain (e.g. terminals may require relocation) • Significant investments in flood defences, elevated structures and more regular or extensive maintenance for port infrastructures to ensure safety and continuity of operations	• Reduced cost of business from less maintenance dredging (levelling of the seabed) services for our Marine & Heavy Engineering segment • Initiation of new asset development at jetties and terminals • Exploration of new business prospects and collaborations for specialised maritime solutions, leveraging innovative technologies to adapt to these changing environmental conditions
			SM	• Intensified pressure faced by the shipping industry compared to other sectors due to disparate policies in addressing decarbonisation leading to slower and more investment-intensive decarbonisation efforts • Variations in policies, standards and legislation demand diverse approaches based on country-specific requirements, resulting in high uncertainty and inconsistency in technological adoption	• Engagement and collaboration to invest in low-carbon technologies to position MISC as a leader in emission reduction within the energy and maritime sector • Lesser impact on operating costs due to projected slower growth of carbon prices • Leveraging incentives for the oil and gas sector in some regions, ensuring continued demand and activity
			SL	• Insufficient policies promoting CCUS development create challenges in securing funding and investments for large-scale CCUS deployment, resulting in increases in energy transition costs and complexity in decarbonising • Rising energy costs affect the entire sector, with challenges in the supply chain and higher prices for essential materials, resulting in oil and gas extraction becoming more expensive over time • Fewer opportunities for technology development and training requirements due to limited focus on technology development and transition to renewable energy	• Greater demand for climate resilience measures, requiring advanced engineering techniques through technological advancements for offshore infrastructure optimisation • Opportunity to lead in exploring low-carbon solutions, adapt to technological changes and address funding challenges for CCUS • Adapting training programmes to incorporate climate resilience, green technologies and emerging trends in the maritime industry • Less pressure to reduce GHG emissions in the offshore industry
			SL	• Delay in transitioning to Net-Zero and developing carbon capture storage creates a disconnect between the geographical spread and timing of job losses and gains	• Position MISC as a responsible and forward-looking employer, contingent on financial resources by showcasing our commitment to job protection and investment in innovative solutions such as CCUS and nature-based strategies
			ML	• Decrease in global demand for fossil fuels, potentially affects exploration and production activities, impacting offshore business operations and revenues • Shift to low-emission fuels and adoption of new technology challenges results in oil remaining significant for shipping, accounting for approximately 15% of shipping fuel demand by 2050 • Consistent oil demand in shipping attributed to challenges in transitioning to alternative fuels, especially for large vessels, requiring substantial investment and coordination to retrofit ships for low-emission fuels	• Secure market-leading position and swiftly pivot business strategies toward low-carbon transformation to meet robust annual growth in renewable energy adoption and shipping fuel demand, especially for shorter to mid-range operations to tackle energy-related CO_2 emissions • Continuously expand business as emerging markets experience increased fossil fuel demand amid slower economic growth and policy efforts. Witness the continual rise in fossil fuel demand, including EU gas prices • Increased demand for LNG export capacity by 2050, driven by a rebound in gas-fired generation due to rising demand in emerging markets, offsetting reductions in advanced economies

Identifying Climate-related Risks and Opportunities

Risk Category	Driving Forces	Risk	Time Horizons	Impact to Business	Potential Opportunities
			ML	• Higher capital cost for technologies due to lower level of technology acceptance, slower transition towards renewables, insufficient energy efficient technologies and infrastructure and fragmented policies and regulatory requirements • Increasing apprehension from investors about committing capital to carbon-intensive industries, leading to challenges in attracting the requisite capital for operations and growth	• Stable investment landscape with a gradual shift from fossil fuels to renewables • Focus on capturing growth opportunities in new energy business and implementing adaptive management strategies • Demonstrate capability to provide low-emission solutions to clients to align with the shift in capital provider's portfolio
			SL	• Heightened climate concerns from stakeholders (investors, suppliers, regulators and clients) which may harm our reputation and lead to a loss of trust • Challenges in maintaining our reputation as a progressive, socially conscious and ethically responsible company	• Attain greater flexibility to adjust to reputational expectations and requirements towards low-carbon solutions under this disorganised scenario due to fewer concerns about compliance
			SL	• Exposure to extreme weather conditions and other climate change may cause employees to be wary of the risks associated with working in an industry that is exposed to such challenges • Experience uncertainties and challenges in attracting talent due to a decrease in willingness to work in risky environments attributed to climate change, resulting in higher operating costs for retention and recruitment • Mass migration of the workforce from locations with increased physical risk to other locations with less physical risk, leading to scattered job demand and distribution	• Bolster talent attraction and retention strategies given the intensified climate risks • Demonstrate forward-looking business strategies by taking sufficient measures and investing in innovative low-carbon technologies and nature-based strategies to not only reassure and retain the existing workforce but also to enhance MISC's attractiveness as a future-oriented and socially and ethically responsible employer

Strategic Planning to Manage Risk

Strategic Planning to Manage Risk

MISC's long-term strategy for managing climate-related risks focuses on expanding a new portfolio of businesses, including new energy solutions and waste-to-value markets, in alignment with global commitments in the maritime, shipping and energy sectors. This approach integrates environmental and social considerations alongside commercial viability, ensuring a balanced and sustainable transition. For further details on MISC's Transition Plan, please refer to pages 90-103 of the Sustainability Report 2024.

EXTREME WEATHER

MISC's vessels and offshore assets are engineered to withstand harsh maritime environments and extreme weather conditions. However, the increasing severity and unpredictability of extreme weather events driven by climate change necessitate continuous asset assessments to ensure long-term resilience and operational safety. This is achieved through strategic partnerships with shipbuilders, classification societies, regulators and equipment manufacturers.

To support crews in navigating extreme weather conditions, MISC provides real-time weather updates from international meteorological organisations, including the National Oceanic and Atmospheric Administration (NOAA), alongside port authority guidance. Vessels are equipped with advanced sensors and weather monitoring systems to enhance sea state, wind and climate condition predictions, ensuring safe and efficient navigation.

In addition, rigorous crew training, operational experience and structured decision-making protocols further reinforce safe operations in adverse maritime conditions. These enhancements, along with ongoing vessel specification improvements, form part of MISC's proactive strategy to manage physical climate risks and safeguard asset integrity, crew safety and operational efficiency.

MISC strengthens the resilience of its managed ports against extreme weather conditions through collaborations with equipment manufacturers and technology providers to enhance port infrastructure and mooring solutions. The integration of remote inspection services and improvements to port anchorage options further reinforce safety and operational security. Additionally, MISC actively explores alternative shipping routes and diversified logistics strategies to mitigate disruptions in climate-vulnerable regions, ensuring supply chain resilience and continuity.

Through strong industry partnerships, MISC ensures that its newbuild vessels are designed and constructed to mitigate physical risks associated with extreme weather conditions. Rigorous safety controls are embedded in vessel navigation protocols, supported by a comprehensive set of procedures covering passage planning, vessel management in adverse weather, navigational equipment maintenance, resource optimisation and contingency planning for a wide range of vessel emergencies. These measures enhance operational resilience, crew safety and navigational efficiency in an evolving maritime landscape.

The MISC Strategic Crisis Management Guideline (SCMG) was established in 2023 replacing the MISC Group Crisis Management Plan, 2019, to effectively manage corporate-level crises. The SCMG is complemented by the MISC Business Continuity Management Framework (BCMF) established in 2024 to set expectations for clear and consistent Business Continuity Management (BCM) practices throughout our organisation. Together, the SCMG and BCMF seamlessly integrate operational-level emergency plans, creating a cohesive link between crisis management, business continuity management and disaster recovery planning. By aligning these critical components, MISC enhances its ability to mitigate business risks, maintain operational resilience and ensure a structured response to unforeseen disruptions.

SEA LEVEL RISE

Rising sea levels pose direct and indirect physical risks to MISC's operations, including shipping, offshore floating facilities, port infrastructure, marine repairs and heavy engineering yards. To address the uncertainty in the nature and severity of these risks, MISC actively monitors key risk indicators and implements targeted mitigation measures to enhance the resilience of its assets and infrastructure, ensuring long-term operational continuity and adaptability in a changing climate.

MISC is strengthening its response to chronic physical risks through preventive inspection and monitoring measures, including dredging activities, to reinforce coastal operational areas and enhance preparedness for the potential impacts of rising sea levels and tidal waves. These proactive measures ensure the long-term resilience and stability of MISC's infrastructure and operations.

MISC integrates sea level rise considerations into its shipping routes, logistics strategies and port operations to enhance resilience against climate-related disruptions. Investments in new infrastructure developments, including jetty maintenance, upgrades and digitalisation solutions, not only strengthen operational continuity but also create new opportunities for efficiency, sustainability and long-term growth.

INCREASING ENVIRONMENTAL/ CARBON POLICIES AND LEGISLATION

MISC operates within a strict regulatory landscape shaped by international Net-Zero commitments. Carbon-limiting policies and legislation, including the increasing adoption of carbon pricing at the state level, will further reinforce MISC's emissions reduction ambitions, particularly the MISC 2030 Ambition. To maintain compliance and industry leadership, MISC will continuously evaluate and refine its targets, ensuring alignment with the IMO and any new regulations introduced to support the sector's Net-Zero emissions goal by 2050.

The European Union Emissions Trading System (EU ETS) was extended to the maritime transport sector in 2024, influencing MISC's approach to carbon pricing policies and procedures. Additionally, the FuelEU Maritime Regulation, set to take effect on 1 January 2025, will introduce key requirements for low-carbon fuel adoption and compliance with GHG intensity limits, shaping MISC's decarbonisation strategy. In Malaysia, the forthcoming National Climate Change Bill, scheduled for 2025, is expected to create a more enabling regulatory environment, further driving companies, including MISC, towards meeting their climate commitments and emissions reduction targets.

MISC integrates regulatory compliance requirements into its operations, business strategies and governance frameworks, ensuring that associated costs and obligations are effectively managed. By embedding these considerations into its long-term planning, MISC remains committed to advancing the transition to low-, ultra-low- and zero-emission vessels, alongside energy efficiency initiatives. This proactive approach not only ensures regulatory compliance but also strengthens MISC's competitive edge in the evolving maritime and energy landscape.

MISC's compliance practices remain responsive to climate-related risks and opportunities through:

- Annual sharing sessions with industry experts and analysts to gain insights into market outlook and regulatory developments
- Active participation in maritime industry forums for idea exchange and staying informed about climate-related legislation
- Engagement with various stakeholders, including regulatory bodies, classification societies, flag states, marine departments and customers
- Internal assurance activities related to regulations and laws, involving self-assessment of compliance with existing and emerging regulations, along with attestation by relevant businesses
- Detailed studies on technological options and planning CAPEX and OPEX allocations to ensure compliance with current and emerging legislation

DEVELOPMENT OF NEW TECHNOLOGIES FOR LOW-CARBON SOLUTIONS

Technology and innovation serve as key enablers for MISC in mitigating and adapting to climate change. As part of its Transition Plan, MISC is committed to progressively renewing its fleet with lower emissions LNG dual-fuel engine vessels, while also preparing to deploy ultra-low emissions ammonia dual-fuel vessels by 2030. This phased approach ensures compliance with decarbonisation targets, enhances operational efficiency and supports the maritime industry's transition to a lower-carbon future.

MISC was among the world's first adopters of LNG dual-fuel vessels through its petroleum shipping arm AET, marking a significant milestone with the delivery of two LNG dual-fuel Aframaxes, Eagle Brasilia and Eagle Bintulu, in 2019. Since then, the organisation has expanded its LNG dual-fuel fleet further, taking delivery of two LNG dual-fuel Dynamic Positioning Shuttle Tankers (DPSTs) and five LNG dual-fuel Very Large Crude Carriers (VLCCs). Most recently, AET also signed a long-term charter for two LNG dual-fuel Aframaxes scheduled to enter the fleet from the end of 2027. The delivery of these vessels are part of MISC's decarbonisation strategy, contributing towards reducing our shipping operations GHG emissions intensity by 50% by 2030

Apart from our investments in LNG dual-fuel assets, MISC has also taken steps towards decarbonising the global shipping industry by entering into Time Charter Party contracts with PETCO Trading Labuan Company Ltd (PTLCL) for the charter of the world's first two ammonia dual-fuel Aframax tankers. Following this, AET signed Shipbuilding Contracts with Dalian Shipbuilding Industry Co., Ltd (DSIC) for the construction of these vessels. Furthering our efforts in this transition, we will launch a third ammonia dual-fuel Aframax. These tankers are designed to utilise ammonia as a lower-emitting alternative to traditional bunker fuels, marking a significant step toward the decarbonisation of the maritime industry. This milestone reinforces MISC's commitment to innovation and sustainability, accelerating the maritime sector's transition towards a Net-Zero future.

Strategic Planning to Manage Risk

To assess methane slip, where methane is released during combustion in LNG-fuelled engines, AET is piloting the PureMetrics solution from Daphne Technology to record emissions directly from engines on two vessels in its fleet. Additionally, MISC is exploring onboard carbon capture systems to retrofit our existing fleet to capture carbon dioxide from conventionally fuelled vessels.

As part of its innovation and sustainability strategy, MISC has partnered with PETRONAS CCS Ventures (PCCSV) and Mitsui O.S.K. Lines (MOL) to develop liquefied CO_2 (LCO_2) carriers in support of establishing Malaysia as a prominent CCS hub in this region. This collaboration represents a significant step in advancing CCUS solutions, reinforcing MISC's role in accelerating low-carbon shipping technologies.

MISC is also collaborating with PETRONAS Carigali, Clean Energy System Inc. and Aker Solutions on the Zero Emission Power Station (ZEUS) initiative, a pioneering energy solution that utilises advanced oxyfuel combustion with immediate CO_2 capture and storage. This initiative represents a critical step towards zero-carbon energy solutions, bridging the gap between conventional power generation and future Net-Zero energy systems

MHB, our Marine & Heavy Engineering segment is actively reducing their carbon footprint through initiatives like the use of renewable energy from solar panel installations. MHB expanded its renewable energy efforts with the installation of rooftop solar PV at MHB's Pasir Gudang Centre of Excellence, with a total installed capacity of 131 kWp.

Port management will be strengthened through the development of new technologies for low-carbon solutions, ensuring greater efficiency and sustainability. As digitalisation accelerates, MISC must address associated risks by upskilling its workforce and investing in automation, Artificial Intelligence (AI) and the Internet of Things (IoT). These advancements will enhance port operations, inspection and maintenance, optimising efficiency while supporting decarbonisation efforts and long-term resilience in an evolving maritime landscape.

TRAINING FOR THE RIGHT EXPERTISE AND SKILLS TO MANAGE NEW ASSETS

The transition to low- and zero-emission technologies in the maritime industry requires a fundamental shift in maritime education and training. Both onshore personnel and seafarers must develop the specialised skills and expertise needed to operate advanced assets and alternative fuel systems effectively. This includes enhancements to power systems and engines to enable LNG, ammonia and other low-carbon solutions, which are essential for achieving the maritime sector's decarbonisation goals.

At ALAM, an academic team is leading efforts to support this transition through research initiatives and stakeholder collaborations to develop curricula tailored to low-carbon operations. By integrating advanced maritime training programmes, ALAM ensures that future maritime professionals are equipped to navigate the challenges of industry decarbonisation while aligning with global regulatory and operational requirements.

Through a collaboration agreement between AET, ALAM and WinGD, we continue to drive the development of ammonia engines for ammonia dual-fuel vessels. This partnership not only advances clean fuel technology but also ensures the ongoing training and development of mariners at all levels to safely operate vessels equipped with ammonia dual-fuel engines and emerging maritime technologies.

SHIFT IN CUSTOMER AND MARKET EXPECTATIONS TOWARD A LOW-CARBON ECONOMY

The MISC 2050 Vision underscores the organisation's long-term strategic initiative for sustained growth, focusing on innovative solutions that drive the transition to a low-carbon economy. Recognising the global shift towards alternative energy sources, MISC is actively exploring advanced technologies and solutions to support the energy transition.

To align with market shifts and evolving customer preferences, MISC continues to expand its presence in the renewable energy sector. The Marine & Heavy Engineering (MHB) segment has successfully entered the offshore wind energy market through the fabrication of wind substations, reinforcing the organisation's commitment to portfolio diversification. These initiatives demonstrate MISC's proactive approach to meeting the growing demand for low-carbon energy across the maritime, shipping and energy sectors.

Furthermore, MISC is advancing carbon capture and storage (CCS) technologies through strategic partnerships with PETRONAS CCS Ventures and Mitsui O.S.K. Lines. These collaborations focus on the development of LCO_2 carriers, which are essential for transporting captured carbon to storage sites, supporting global decarbonisation efforts.

By embracing these innovative measures, MISC is capitalising on emerging market trends and business opportunities in the new energy space, reinforcing its leadership in the global energy transition.

For more information about our Economic Value Creation, please refer to pages 69-79 of MISC's Sustainability Report 2024.

Strategic Planning to Manage Risk

CHANGING CAPITAL PROVIDER TRENDS

Investors and financial institutions continue to redirect capital away from high-carbon and environmentally unsustainable assets, driven by the need to manage climate-related risks, and opportunities. Sustainable finance practices aim to foster long-term stability and resilience in response to global economic shifts. The maritime sector's transition toward decarbonisation presents a strategic opportunity for MISC to attract capital by adopting innovative solutions that align with sustainability goals.

In 2023, MISC financed its Net-Zero and GHG emissions intensity reduction goals through sustainable fundraising initiatives. AET secured a USD100 million sustainability-linked Islamic revolving credit facility. In 2022, we funded six very large ethane carriers (VLECs) through an 11-year sustainability-linked loan of USD527 million, with drawdown made in 2023. These KPI-driven loans ensure that MISC can benefit from annual adjustments of interest rates, based on its commitment to selected indicators over the course of each loan. MISC's adoption of these practices aligns the organisation with the IMO's 2050 decarbonisation trajectory and the Poseidon Principles.

The organisation's commitment to the maritime value chain is further showcased through its participation in sustainable capital markets, reinforcing sector-wide resilience and unlocking additional funding sources. MISC's proactive adoption of sustainable fundraising opportunities highlights its forward-thinking approach to responding to capital provider trends.

BEING PERCEIVED AS ADVANCED/ LAGGARD IN CLIMATE CHANGE

MISC's public commitment to achieving Net-Zero GHG emissions by 2050 reflects its accountability and transparency in advancing sustainability initiatives. This commitment is supported by a Transition Plan that proactively decarbonises business portfolios, integrates risk management strategies and enhances resilience to climate-related risks. By aligning with investor expectations, MISC continues to secure financing for future low-carbon initiatives, reinforcing its role in driving the maritime industry's energy transition.

Key initiatives supporting this transition include proactive collaborations across the maritime value chain, demonstrating a unified, sector-wide commitment to climate action. These partnerships not only unlock new funding sources but also enhance MISC's ability to meet evolving sustainability expectations. Additionally, MISC has implemented a sustainable supply chain management programme, incorporating self-assessments, stakeholder engagement and targeted initiatives to manage climate-related risks and strengthen its corporate reputation.

MISC also engages in strategic global partnerships to amplify its climate action efforts. As a key partner of the Global Maritime Forum and a signatory to the Getting to Zero Coalition since 2019, MISC's affiliations with leading climate initiatives highlight its leadership and commitment to supporting both global and local decarbonisation efforts, reinforcing its position at the forefront of the industry's transition to a sustainable future.

TALENT RETENTION AND ATTRACTION

The energy transition is driving technological advancements and redefining the skills required to manage low-, ultra-low- and zero-carbon technologies and their impacts on MISC's business. Recognising these challenges, MISC is proactively addressing the transition risks related to talent retention and attraction by implementing strategies to reskill and upskill its workforce.

In addition to the collaboration between ALAM, AET and WinGD, ALAM is expanding its global connections and driving digitalisation in response to the increasing demand for decarbonisation. In 2024, ALAM entered into a Memorandum of Understanding (MoU) with Maldives State Shipping (MSS) to enhance maritime education, training and innovation. One of the key opportunities within the MoU is to exchange information, expertise and experience in the maritime industry. These exchanges aim to advance engineering and technology for digital transformation and human capital development to achieve the Sustainable Development Goals (SDGs). Furthermore, ALAM reaffirmed its commitment to regional development through a strategic partnership in East Malaysia with Yayasan Sarawak and the University of Technology Sarawak (UTS).

These partnerships enable knowledge exchange and ensure that MISC remains at the forefront of innovation. Collectively, these efforts demonstrate MISC's leadership in global sustainability initiatives and its commitment to building a skilled workforce capable of advancing the energy transition and ensuring the industry's sustainable future.

Outcome of MISC Group Climate Scenario Analysis

The following is the outcome of our analysis using the three future scenarios identified and respective time horizons. We have systematically categorised climate-related risks and opportunities and identified risks of particularly high importance, considering the degree of impact and importance, as well as stakeholder interest.

Material risks and opportunities will be incorporated into our strategic priorities within our business plan. The risk or opportunity is deemed material if it has a high chance of occurrence and has a substantial financial impact on MISC's businesses.

Insignificant to minor impact on MISC's current business objectives

Minor to moderate impact on MISC's current business objectives

Major or substantial impact on MISC's current business objectives

Risk Category	Driving Forces	Risk	Low Emissions Scenario	Medium Emissions Scenario	High Emissions Scenario
Physical	Acute	Extreme Weather	• Minimal impact as our assets are built to withstand certain extreme weather conditions	• Increased OPEX to maintain and reinforce assets due to heightened extreme weather conditions	• Increased CAPEX for designing and constructing new assets and OPEX to maintain and reinforce assets due to heightened extreme weather conditions
	Chronic	Sea level rise	• Additional incurred cost of property maintenance/ reinforcements due to erosion from sea level rise/ tidal wave changes	• Increased cost of property maintenance/ reinforcements and reductions due to erosion from sea level rise/tidal wave changes	• Increased OPEX to relocate or implement adaptation measures for operations at coastal locations, such as upgrading sites/ infrastructure or relocating to higher grounds • Increased costs from operational delays and disruptions related to coastal flooding and erosion
Transitional	Regulatory	Increasing environmental/carbon regulations	• Significantly increased investment costs in low-carbon solutions	• Increasing compliance costs due to extensive carbon regulations – CAPEX and OPEX	• Increased compliance costs due to moderately increasing carbon regulations – CAPEX and OPEX
	Technological	Development of new technologies for low-carbon solutions	• Significantly increased investment costs in low-carbon solutions	• Increased investment costs in low-carbon solutions	• Increased investment costs in low-carbon solutions
		Training in the right expertise and skills to manage new assets	• Increased talent development and upskilling costs (OPEX)	• Increased talent development cost (OPEX)	• Increased talent development cost (OPEX)

Risk Category	Driving Forces	Risk	Low Emissions Scenario	Medium Emissions Scenario	High Emissions Scenario
Transitional	Market	Shift in customer and market expectations toward a low-carbon economy	• Substantial reduction in market demand for oil and gas products and increased transportation assets and logistic services	• Costs of investment and risk of temporary business interruption in adapting to the uncertainties to transition and expand low-carbon solutions technology to meet customer expectations	• Market trends toward profit-driven motives, showing less emphasis on environmentally conscious and low-carbon solutions • The global demand for fossil fuels is expected to decrease, potentially affecting export positions and revenues
		Changing capital providers' trends	• Lack of funding/ increased interest rates for conventional marine-fuelled assets	• Shift in investor sentiment impacts the valuation and funding opportunities for traditional energy companies • Increased cost of borrowing and reduced capital availability	• Lack of funding/ increased interest rates for conventional marine assets • Challenges in attracting the requisite capital for our operations and growth with increasing apprehension about committing capital to carbon-intensive industries
Reputational & Social		Being perceived as advanced/laggard in climate change	• Increased costs, potential fines and a negative impact on reputation from failure to meet stakeholder's increasing social awareness	• Increased costs, potential fines and a negative impact on reputation from failure to meet stakeholder's increasing social awareness	• More room for adjustments to expectations and requirements on reputation from customers with strict compliance requirements
		Talent Attraction	• Increased OPEX to attract and retain talent	• Increased OPEX to attract and retain talent	• Moderately increased OPEX to attract and retain talent

Risk Category

- Physical
- Transitional

Driving Forces

- Acute
- Chronic
- Regulatory
- Technological
- Market
- Reputational & Social

Risk

- Extreme Weather
- Sea level rise
- Increasing environmental/carbon regulations
- Development of new technologies for low-carbon solutions
- Training in the right expertise and skills to manage new assets
- Shift in customer and market expectations toward a low-carbon economy
- Changing capital providers' trends
- Being perceived as advanced/laggard in climate change
- Talent Attraction

Our Transition Plan

MISC recognises the pressing challenges posed by climate change to the global maritime and energy sectors. Our Transition Plan is strategically aligned to enhance sector-specific climate performance, allowing us to navigate the complexities of our operations while capitalising on the opportunities inherent in the shift toward a low-carbon energy future.

By systematically addressing the risks and opportunities identified, our Transition Plan aims to reduce emissions, strengthen resilience and embed sustainability throughout our operations. Key components of the plan include the adoption of innovative technologies, fleet renewal initiatives and energy efficiency measures that support our decarbonisation efforts.

At the heart of our strategy is the integration of low- and zero-emission technologies. Initiatives such as the deployment of LNG dual-fuel vessels and the development of ammonia-powered vessels highlight our proactive approach to offering lower-carbon solutions and meeting industry sustainability goals.

Furthermore, our Transition Plan underscores the importance of stakeholder collaboration. Through strategic partnerships with regulators, investors and customers, we are fostering a unified approach to addressing climate-related risks, ensuring that the transition to a sustainable, low-carbon future is both inclusive and impactful.

More detailed information about the individual aspects of our Transition Plan can be found on pages 90-103 of MISC's Sustainability Report 2024.

MISC GROUP TRANSITION PLAN FROM LOW-CARBON TO NET-ZERO BY 2050

Transition to low-carbon operations | **Deploy zero-carbon emissions vessels latest by 2030** | **Decarbonised shipping operations by 2050**

MISC Group Net-Zero GHG emissions by 2050

Short-Term (within the next 2-3 years)	Medium-Term (current year up to 2030)	Long-Term (2031-2050)
Fleet Renewal and Newbuilds • Progressive fleet renewal of our shipping fleet to high-efficiency LNG dual-fuel engine vessels from now to 2030 • Methane abatement on selected vessels	**Fleet Renewal and Newbuilds** • Progressively renew the fleet with ULEVs and ZEVs latest by 2030 • The Castor Initiative: Deployment of ultra-low emissions ammonia vessel in or after 2027 (except LNGCs) • Methane abatement on selected vessels	
	Value Chain Reduction • Value Chain emissions (Scope 3) reductions	
	Beyond Value Chain Mitigation (Carbon Removal, Avoidance & Reduction) • Carbon avoidance, reduction and removal outside of MISC's value chain	
	GHG Removal • Explore and adopt commercially viable technologies for our existing fleet with methane and carbon capture technologies to safely capture and store away excess carbon	
Technical and Operational Efficiency • Continuous exploration and adoption of technological solutions and improvements to optimise the operational efficiencies of our vessels		
Low-Zero Carbon Offshore Assets • Explore and adopt commercially viable energy efficient, zero-flaring, GHG reduction and CCUS-ready technologies for offshore assets		
Renewable Energy • Explore and adopt renewable energy for shipping and non-shipping assets		

1. *Zero-emissions vessels (ZEVs) refer to vessels that produce zero GHG emissions under continuous operations.*
2. *Ultra-low-emissions vessels (ULEVs) refer to vessels that produce very low, almost zero GHG emissions under continuous operations.*
3. *Low-emissions vessels refer to vessels powered by LNG that produce lower carbon emissions compared to conventional bunker fuel.*

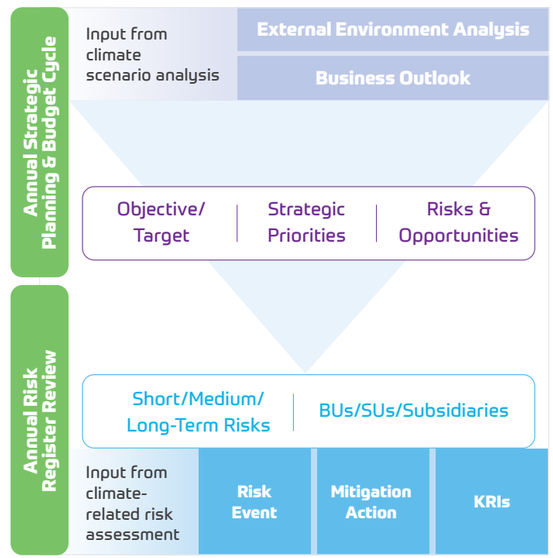
RISK MANAGEMENT

Our risk management process is central to ensuring sustained business success and resilience against the impacts of climate change. We have integrated the management of climate-related risks into our comprehensive risk management programme, which is designed to evaluate and address risks across the entire MISC Group. This ensures that we proactively manage climate-related challenges, safeguarding our operations and strengthening our long-term resilience.

We embed climate risk evaluation into our strategic planning and business processes through our adoption of the PETRONAS Resiliency Model. Similarly, the MISC Resiliency Model provides an integrated view for managing risks across 3 areas of business resilience:

1. **Enterprise Risk Management (ERM)**
2. **Crisis Management (CM)**
3. **Business Continuity Management**

Central to the management of climate-related risks is our ERM Framework. In addition, the Project Risk Assessment Framework (PRAF) facilitates the systematic assessment of risks before the initiation of any capital-intensive projects and other investment opportunities. This thorough evaluation enables us to identify potential risks, including those related to climate change, and implement effective controls and mitigation measures that align with our sustainability objectives.



Enterprise Risk Management

We recognise that climate-related risks are dynamic and continuously evolving, necessitating ongoing engagement with key stakeholders, including regulators, investors and customers to refine our risk management priorities and ensure alignment with their expectations. By systematically evaluating these risks, we establish a strong foundation for maintaining the resilience of our operations and investments, while ensuring alignment with shifting global and regional standards.

To further enhance the integration of climate-related risks into MISC's existing ERM practices, we are committed to navigating the complexities of climate change through a structured and comprehensive approach. Our ERM Framework is aligned with ISO 31000:2018, ensuring adherence to global best practices and providing a robust, forward-looking risk management strategy.

In 2024, the BSRC oversees climate-related risks, opportunities and performance, ensuring the effective implementation of MISC's Sustainability Strategy. Through these measures, the BSRC guides MISC's ongoing commitment to integrating ESG factors into business strategy, reinforcing our dedication to long-term sustainability and climate resilience.

For more information about our Enterprise Risk Management practices, please refer to pages 192 to 208 of MISC's Integrated Annual Report 2024.

Risk Oversight Structure

Board Level

Board of Directors
Responsible for establishing and overseeing the Group risk management framework, systems and activities as well as setting of the Group's risk appetite.

BSRC
- Reviews the adequacy and effectiveness of MISC's Risk Management Framework and on-going activities for identifying, evaluating, monitoring and mitigating risks.
- Reviews the risk assessments associated with investment opportunities, business proposals, corporate exercises and key initiatives.
- Reviews the Group's risk appetite and tolerance level.

Management Level

Group Strategy & Sustainability
- Review and monitors risk reporting quarterly
- MRC Secretariat

MRC
- Serves as the central platform in providing steering and stewardship on the implementation and institutionalisation of enterprise risk management in the Group to protect and safeguard the Group's interest.
- Provides a reasonable level of assurance to the BSRC that the Group's risks are being managed appropriately.

Business Unit/ Service Unit/ Subsidiary

Risk Owners
Responsible for implementing risk management processes at respective units.

Identifying and Assessing Risks and Opportunities

At MISC, our ERM Framework is central to identifying, tracking and monitoring risks across the organisation. These risks are managed through the 'three lines of defence' model, designed to safeguard against emerging challenges that could impact our ability to create long-term value for stakeholders. Our approach also views risks as opportunities, integrating both internal and external contexts into the decision-making process.

The external context involves analysing factors that could affect the achievement of MISC's objectives. This includes a comprehensive review of the external environment to identify trends, changes and driving forces, such as economic, political, social and industry conditions, regulatory requirements and other relevant factors. By evaluating climate-related scenarios, we assess their potential impact on our business outlook and strategic priorities, ensuring we are well-positioned to adapt to changes in the broader landscape.

The internal context provides a comprehensive overview of MISC's strategic direction, core operations and targets. By aligning risk management with MISC's objectives and strategies, we ensure that risks are addressed at the appropriate level to support our organisational goals. Material risks and opportunities are integrated into our five-year rolling business plan. These risks are considered material if they have a high probability of occurrence and substantial financial implications for MISC. By translating material risks into strategic business priorities, we ensure that MISC remains proactive in navigating challenges and seizing opportunities in an ever-changing global environment.

Furthermore, MISC's risk appetite outlines the acceptable levels of risk and boundaries MISC is prepared to take on in pursuit of its strategic and business goals. This risk appetite is expressed through risk statements, thresholds and tolerances, indicating the maximum risk that can be managed and measured. It is also integrated into the MISC Business Plan, Strategic Priorities and decision making framework, helping to navigate the risk landscape and build resilience while pursuing our business objectives.

Risk Assessment for Projects and Investment Opportunities

The PRAF is a risk-based tool that comprehensively evaluates risks associated with capital-intensive and/or revenue projects and other investment opportunities, enabling the business to identify and implement appropriate controls to mitigate these risks.

As part of this process, climate-related risks and opportunities are evaluated as part of our investment decision-making process to assess potential impacts and identify opportunities that align with our commitment to accelerating the transition toward a low-carbon and sustainable energy future. These evaluations are integral to the Risk Oversight Structure, ensuring that Executive Leadership and the Board exercise strategic oversight over the alignment of investments with long-term sustainability goals.

In these assessments, climate-related factors such as regulatory requirements, carbon emissions and energy efficiency are considered to ensure that each project supports our long-term objectives. This approach includes evaluating both existing and emerging regulatory frameworks and their potential impact on project viability. Additionally, low-carbon technologies and operational measures are assessed to mitigate emissions and improve energy performance, ensuring that new assets are fully aligned with our sustainability commitments.

METRICS AND TARGETS

MISC has identified key performance indicators and targeted benchmarks to 1) manage climate-related risks and opportunities and 2) advance the sustainable and low-carbon futures promoted by the MISC 2030 Ambition and the MISC 2050 Vision.

These include:

- GHG intensity performance (in annual emissions ratio in the unit of gCO_2e/ton-nm) for historical periods and 2050 projections
- Total GHG for Scope 1, 2 and 3
- Internal carbon price
- Revenue from low-carbon services
- Cash Flows from Operating Activities (CFO) from New Energy Solutions
- Operating expenditure on low-carbon or energy reduction initiatives
- Energy consumption

Our Commitment and Performance

Our Commitment and Performance

Scope

Gas and petroleum shipping falls within MISC's GHG Organisational Boundary (Financial Control)

Ships not subjected to the requirements of Regulations 21 and 25 of MARPOL Annex VI are excluded

Mid-Term Target: 50% Reduction in GHG Intensity (for Shipping Operations) by 2030

Base Year
2008

Target Type
Intensity reduction

Measurement Metric
AERCO_2e (gCO_2e/ton-nm)

GHG Included:
- All material GHG:
  - Carbon dioxide
  - Methane
  - Nitrous oxide

Scope

MISC's Value Chain

MISC's own operations (Scopes 1 and 2)

Material upstream and downstream operations to MISC (Scope 3)

Long-Term Target: Net-Zero GHG Emissions by 2050

Base Year
2008

Target Type
Absolute reduction

Measurement Metric
million tonnes CO_2e

GHG Included:
- All material GHG:
  - Carbon dioxide
  - Methane
  - Nitrous oxide

Our Net-Zero Equation

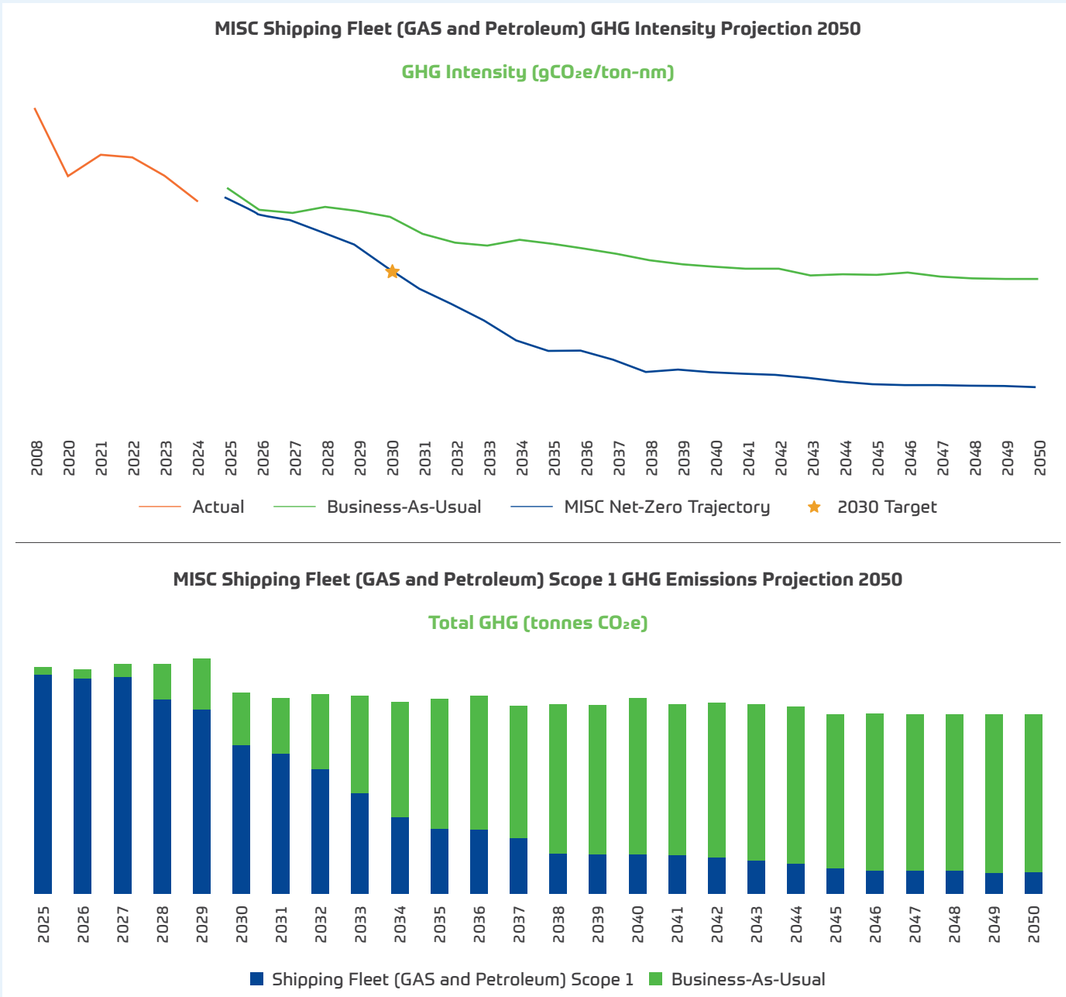
TOTAL GHG − **GHG ABATEMENT** − **GHG REMOVAL** = **RESIDUAL EMISSIONS** − **GHG REMOVAL OFFSET** = **NET-ZERO GHG EMISSIONS 2050**

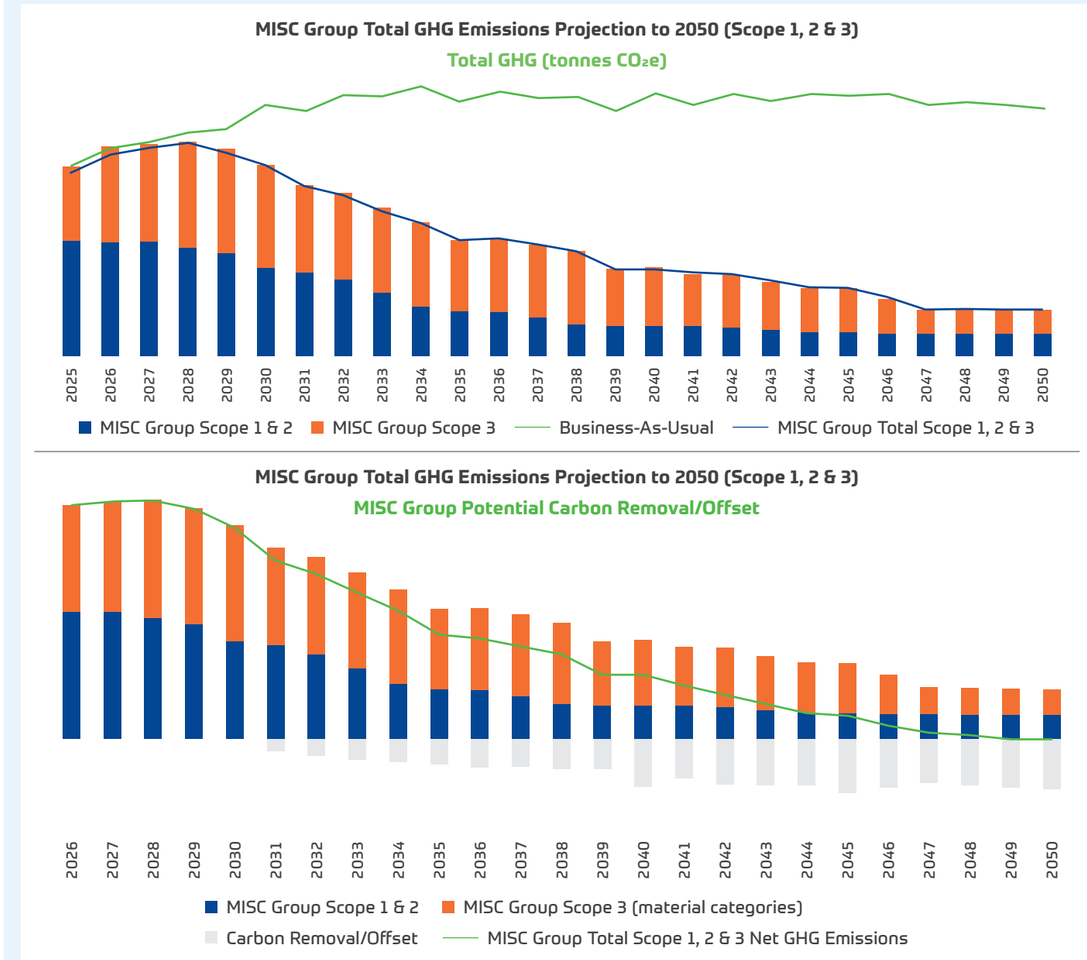
Scope of Gases	Scope of Activities	Mitigation Pathways	Timeframe
• All GHG • Unit: CO_2e	• Scopes 1, 2, 3	• Abatement • Removal • Removal Offset (beyond value chain)	• Long-term
GASES INCLUDE • Carbon dioxide (CO_2) • Methane (CH_4) • Nitrous oxide (N_2O)	• MISC operations (Scope 1 & 2) • Upstream and downstream of MISC's operations (Scope 3 on material categories)	• Abatement and removal pathways to reduce own operations and value chain emissions • Beyond value chain carbon removal, avoidance and reduction to offset residual GHG	• 2050

RATIONALE WHY NET-ZERO BY 2050
- Investments in our newbuild assets generally last for 20 years on average
- Assuming ZEVs are commercially available only in 2030, we will need 20 years from 2030 to complete the transition from existing fleet to ZEVs

MISC Group GHG Projections & Emissions Pathway

MISC conducts annual assessments to evaluate our GHG profile and identify potential opportunities to decarbonise our business and achieve our sustainability targets. These assessments encompass our existing fleet, including the performance of individual vessels, as well as newbuilds and upcoming projects. Additionally, we evaluate operational and technological innovations aimed at enhancing the energy efficiency of existing assets and reducing overall emissions, ensuring we remain aligned with our long-term decarbonisation goals.





We anticipate a steady decline in our GHG emissions between 2024 and 2027 due to improvements to energy efficiency in the existing fleet and the introduction of new vessels with high-efficiency/low-carbon designs. A steeper decline is expected after 2027 due to the introduction of new assets that can run on zero or near-zero carbon fuels and the potential installation of shipboard CCS on older vessels.

MISC Group GHG Inventory

MISC Group's GHG inventory is based on organisational boundaries and follows the GHG Protocol Corporate Standard's financial control approach. MISC has financial control over an operation if it can direct the operation's financial and operating policies to derive economic benefits from the operation's activities. For further details on the reporting principles, data assumptions and emission factors, please refer to the Additional Information section on pages 225-229 of MISC's Sustainability Report 2024.

SCOPE 1 & 2

All direct GHG emissions occurring on assets where MISC has financial control are accounted under MISC's Scope 1 GHG emissions. All indirect emissions from energy purchased for consumption on assets where MISC has financial control are accounted for under MISC's Scope 2 GHG emissions.

Scope 1 accounts for 99% of MISC Group's total Scope 1 & 2 GHG emissions with most of the emissions, i.e., 98% emitted from MISC's shipping operations. Scope 2 GHG emissions are from purchased electricity by yard and building operations, mainly from our non-shipping operations.

SCOPE 3

MISC Group accounts for and reports material Scope 3 emissions according to the following definition:

- Top Scope 3 categories covering at least 67% of the total Scope 3 emissions. This threshold shall be applied at the business/entity level of MISC's core businesses i.e., shipping, offshore and heavy engineering.
- Operational emissions from assets not accounted as MISC's Scope 1 and 2, which fall under the following Scope 3 categories:
  1. **Category 8**
     Upstream leased assets and facilities where MISC has no financial control
  2. **Category 13**
     Downstream leased assets and facilities where MISC has no financial control
  3. **Category 15**
     Investments not accounted for in MISC's Scope 1 and 2

In 2024, we revisited our material Scope 3 categories to evaluate their relevance to our evolving operations. The following Scope 3 categories remain material to MISC based on the updated materiality assessment:

1. **Category 1**
   (Purchased Goods and Services)
2. **Category 3**
   (Fuel-and Energy-Related Activities)
3. **Category 8**
   (Upstream Leased Assets) - In-chartered vessels where MISC is the commercial operator only (neither the vessel owner nor has technical control)
4. **Category 13**
   (Downstream Leased Assets) - Leased offshore assets such as our FSOs and FPSOs which are owned by MISC but leased out to our customers
5. **Category 15**
   (Investments) - Vessels which are jointly owned by MISC and other parties, where MISC has equity ownership but does not have financial control

In 2024, MISC Group's Scope 3 GHG emissions account for 36% of the Group's total GHG emissions in FY2024 across Scope 1, 2 and 3. The primary source of Scope 3 emissions is fuel-related activities, which include emissions from upstream fuel production and transportation. Other significant contributors to Scope 3 emissions include the operational emissions from offshore assets that are leased out to customers, as well as purchased goods and services within the marine and heavy engineering segment. These factors highlight key areas where MISC can focus its efforts to reduce emissions and enhance sustainability.

CARBON INTENSITY MEASUREMENT METRICS

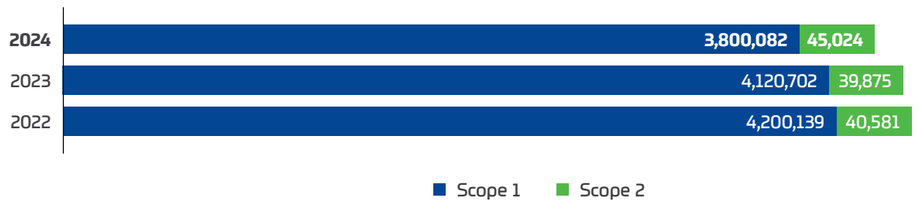
We measure our carbon intensity using the Annual Efficiency Ratio (AER) metric, which is aligned with the IMO's mandatory scheme on operational CO_2 reduction known as CII. AER measures a vessel's total CO_2 per unit of transport work (unit: gCO_2/ton-nm). Transport work is calculated by multiplying the vessel's deadweight by the distance travelled.

However, the AER metric only measures CO_2 and does not include other GHGs converted into CO_2 equivalent (CO_2e). Therefore, in addition to AER, we also track and report our vessels' GHG performance in units of gCO_2e per ton-nm which includes all relevant GHGs from our operations, i.e., CO_2, CH_4 and N_2O. For our VLECs which consume ethane as fuel, GHG from ethane (C_2H_6) is also included in the CO_2e calculations.

GHG EMISSIONS PERFORMANCE

GHG Emissions

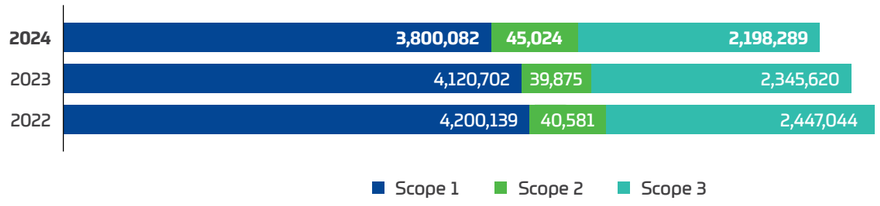
Scope 1 and 2 GHG Emissions (tonnes CO_2e)



Note:
Scope 1 & 2 data for 2022 and 2023 are restated upon third-party GHG verification exercise.

MISC total Scope 1 and 2 GHG emissions was at 3.85 million tonnes of CO_2e in 2024, which is lower by 0.31 million tonnes of CO_2e, or 7% compared to 2023.

Scope 1, 2 and 3 GHG Emissions (tonnes CO_2e)



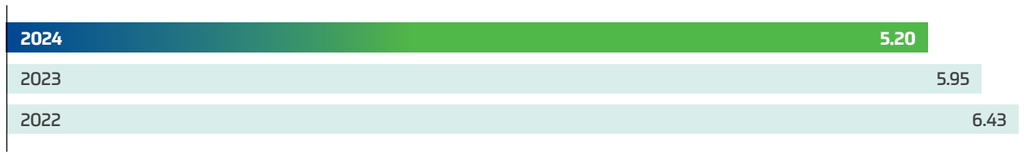
Note:
Scope 1 & 2 data for 2022 and 2023 are restated upon third-party GHG verification exercise.

MISC Group GHG Inventory

Shipping Carbon Intensity

In 2024, we have reduced our shipping fleet CO_2e intensity by 32% on average compared to 2008. In comparison to our performance in 2023, our fleet's average intensity improved by 13% in 2024.

Shipping Fleet GHG Emissions Intensity (gCO_2e/ton-nm)



The improvement was due to:

- Introduction of new fleet assets with better fuel efficiency
- Disposal of older, carbon-intensive assets
- Ongoing commercial and operational excellence interventions on the existing fleet, predominantly:

Awareness and collaboration with charterers to optimise speed (slow steaming), improving voyage planning and maximising consumption of boil-off gas for propulsion

Internal awareness of energy efficiency performance and operations

Trade optimisation particularly vessels on STS trading

Hull and propeller cleaning

Application of ultra-low friction paint when vessels are in drydock

Increased use of biofuel

Energy Management

The maritime sector consumes significant energy to power ships, sustain operations and facilitate vessel upgrades. Effective energy management is crucial to ensure that our ships and operations are energy-efficient, which helps to reduce operating costs, optimise performance and minimise environmental impacts. As the industry faces increasing pressure to reduce its environmental footprint, adopting energy-efficient practices and transitioning to cleaner fuels are essential steps in achieving environmental sustainability and complying with emission regulations.

Recognising the critical role of energy management, we have identified energy efficiency as one of the core pillars of our sustainability strategy. To support this, we are implementing a variety of energy efficiency measures across the short- and medium-term.

A key initiative in this area is our commitment to achieving ISO 50001:2018 Energy Management System certification for our Gas and Petroleum fleets. This certification demonstrates our adherence to international energy management standards and underscores our ongoing commitment to improving energy performance. To ensure compliance with ISO 50001 requirements, we conduct annual internal and external audits, which are critical for monitoring energy consumption, identifying areas for improvement and implementing corrective measures to further optimise efficiency. In addition, we regularly organise energy efficiency training programmes for both seafarers and shore staff, equipping them with the skills and knowledge needed to effectively manage energy consumption.

By embedding robust energy management practices and fostering a culture of continuous improvement, we are not only reducing our environmental impact but also enhancing the reliability and efficiency of our operations. These initiatives reflect our commitment to sustainability and position us as a leader in energy-efficient practices within the maritime sector.

INITIATIVES ON ENERGY MANAGEMENT

MISC has undertaken several initiatives to optimise energy consumption and improve efficiency across its operations. These measures align with our commitment to sustainable energy management and contribute to reducing our environmental footprint.

For our Shipping operations, key initiatives include:

- ISO 50001 Controls: Implementing energy management controls under ISO 50001, which involve monitoring energy consumption at discharge and loading ports, as well as conducting audits and corrective actions to ensure compliance and improvement.
- Efficiency Interventions: Introducing commercial and operational efficiency measures aimed at reducing energy consumption while maintaining or enhancing work outputs, as outlined in our decarbonisation strategies.

For our non-shipping operations, the following initiatives have been implemented:

- Fuel Monitoring: Monitoring fuel consumption for support craft under our Marine Services segment to identify inefficiencies and implement corrective actions.
- Energy-Efficient Lighting: Installing LED lighting and motion sensor lighting at selected facilities, including ALAM, MHB and FSUs, to reduce energy usage and promote sustainability.

Through these targeted initiatives, MISC continues to advance energy efficiency and environmental stewardship across all areas of its operations.

MISC Group Energy Consumption (GJ)

Climate-related Remuneration

In 2024, the management of climate-related risks and opportunities accounted for 5.5% of the Group Balance Scorecard. Relevant business units and subsidiaries responsible for climate performance were incentivised and rewarded based on their contributions to improving the company's GHG performance.

The ESG-related performance of senior management, evaluated via the scorecard and remuneration system, is reviewed by the Board Nomination and Remuneration Committee (BNRC).

Internal Carbon Pricing

In 2024, MISC continued to utilise its internal carbon price (ICP) as a key mechanism to proactively address climate-related regulatory developments and evolving market expectations concerning carbon emissions. The ICP integrates the consideration of carbon emissions and their associated costs into critical areas such as investment decisions, CAPEX planning and long-term business strategies, ensuring alignment with both client and investor expectations.

The ICP of USD68/tonne CO_2e in 2024 was revised to USD60/tonne CO_2e in 2025 to reflect evolving market conditions. The updated price for 2025 will be applied to evaluate the financial and environmental impacts of new investments.

Revenue from Low-Carbon Services

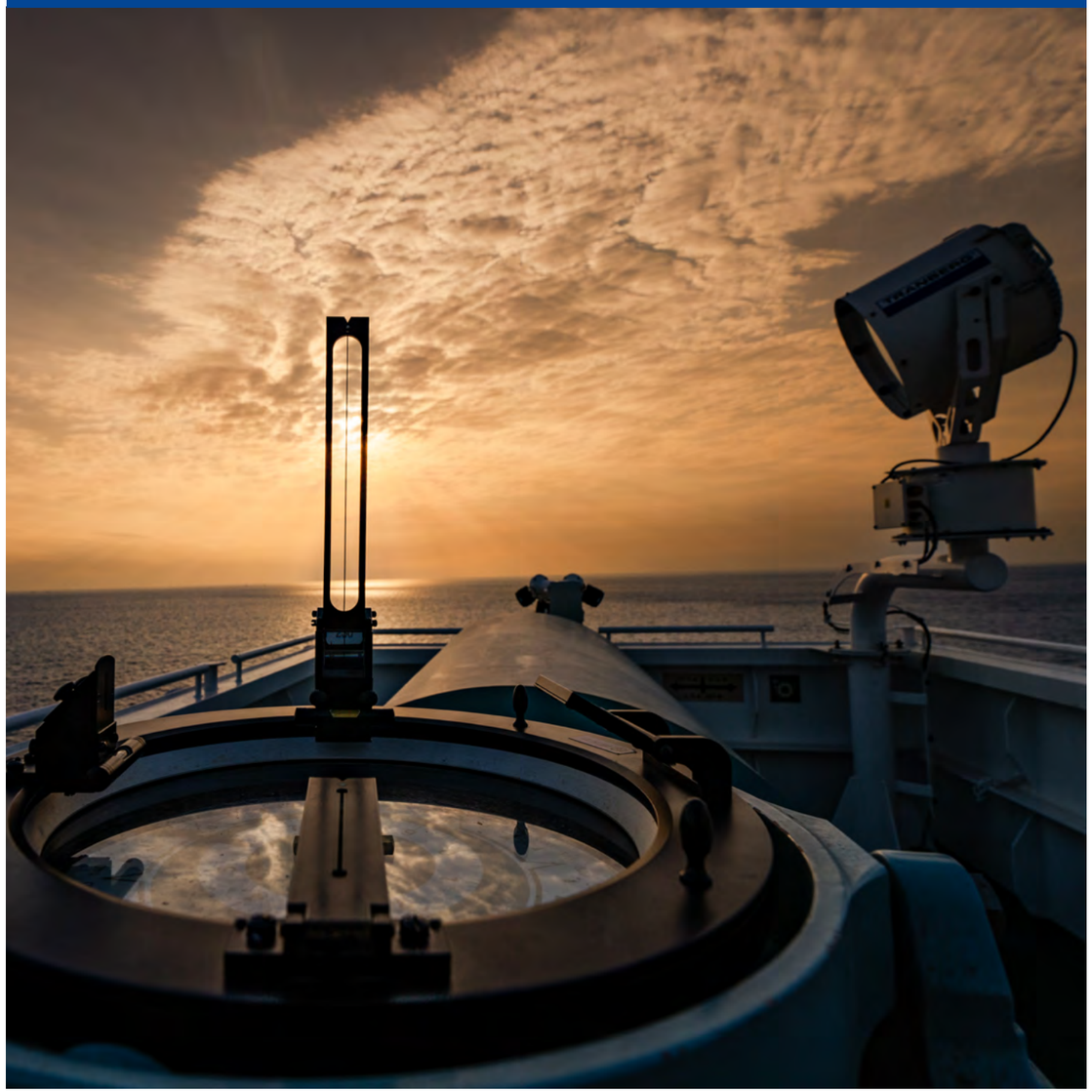
The majority of our business remains within the traditional energy sector, where we continue to leverage our expertise and financial strength to deliver steady returns for our stakeholders. As we expand and evolve, we are committed to achieving 25% of our cashflow from operations through New Energy Solutions by 2030. This goal encompasses the operation of zero-emission vessels, carbon capture and storage, offshore renewables and the development of alternative fuel value chains, all as outlined in our Transition Plan.

In 2024 RM1.58 billion of revenue was derived from low-carbon services.

Climate-related Expenditure

In 2024, MISC spent a total of RM167 million on climate-related expenses. These expenses were generated from the retrofit of our assets to improve energy efficiency and reduce emissions, such as for Propeller Boss Cap Fins and Shaft Power Limitation solutions. In addition to these expenditures, other environmentally-friendly procurements were made to manage interdependencies between climate and nature-related risks and opportunities, including the installation and maintenance of Ballast Water Treatment Systems. Finally, RM12 million was spent on environmental protection initiatives, including climate change and environmental management systems.

MOVING FORWARD



This report represents a material disclosure of MISC Group's climate-related risks and opportunities, reflecting our commitment to addressing the evolving challenges posed by climate change.

It underscores our dedication to embedding climate considerations into strategic decision-making and business practices. Through thorough assessment and transparent disclosure, we aim to enhance stakeholder understanding of our climate-related impacts, strengthen resilience and actively contribute to the global transition to a sustainable, low-carbon economy. These efforts affirm our commitment to creating long-term value for the organisation, its value chain and all stakeholders.

List of Abbreviations

AER	Annual Efficiency Ratio
ALAM	Akademi Laut Malaysia
BNRC	Board Nomination and Remuneration Committee
BSRC	Board Sustainability and Risk Committee
CAPEX	Capital Expenditure
CCS	Carbon Capture and Storage
CFO	Cashflow from Operating Activities
CH_4	Methane
CII	Carbon Intensity Indicator
CO_2e	Carbon Dioxide Equivalent
DPST	Dynamic Positioning Shuttle Tankers
DSIC	Dalian Shipbuilding Industry Co., Ltd
EEOI	Energy Efficiency Operating Indicator
ELT	Executive Leadership Team
ESG	Environmental, Social and Governance
EU ETS	European Union Emissions Trading System
FID	Final Investment Decision
FPSO	Floating Production Storage Offloading
FSO	Floating Storage Offloading
GHG	Greenhouse Gas
HSSES	Health, Safety, Security, Environment and Sustainability
ICP	Internal Carbon Pricing
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
ISO	International Organization for Standardization
ISSB	International Sustainability Standards Board
KRI	Key Risk Indicators
LCO_2	Liquid Carbon Dioxide
LED	Light-Emitting Diode
LNG	Liquefied Natural Gas
MARPOL	International Convention for the Prevention of Pollution from Ships
MCCG	Malaysian Code on Corporate Governance
MHB	Marine and Heavy Engineering
MISC	MISC Berhad and its Group of Companies
MMEGA	Mega Module Green Architecture
MOU	Memorandum of Understanding
MRC	Management Risk Committee
NBPFSO	New Built Floating Production Storage and Offloading
NOAA	National Oceanic and Atmospheric Administration
N_2O	Nitrous Oxide
OECD	Organization for Economic Cooperation and Development
OPEX	Operating Expenditure
PCCSV	PETRONAS CCS Ventures
PGCEO	President and Group Chief Executive Officer
PRAF	Project Risk Assessment Framework
PRASC	Project Risk Assessment Sub-Committee
PTLCL	PETCO Trading Labuan Company Ltd
RM	Ringgit Malaysia (Malaysian Currency)
SCMG	Strategic Crisis Management Guideline
SDGs	Sustainable Development Goals
STS	Ship-to-Ship
t-nm	Tonne Nautical Mile
USD	United States Dollar
VLCC	Very Large Crude Carrier
VLEC	Very Large Ethane Carrier

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