

TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)



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TCFD REFERENCE INDEX	

TCFD's Core Element	Recommended Disclosure	MedcoEnergi's Disclosure Reference
Governance	Describe the board's oversight of climate- related risks and opportunities.	Governance, page 4-5.
	Describe management's role in assessing and managing climate-related risks and opportunities.	Governance, page 4-5.
Strategy	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	Strategy (Risk Time Horizons), page 8.
	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	Strategy (Climate Scenario Analysis), page 8-12.
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Strategy (Climate Scenario Analysis), page 8-12.
Risk Management	Describe the organisation's processes for identifying and assessing climate-related risks.	 Strategy (Climate Scenario Analysis), page 8-12. Risk Management (Risk Management Framework and Process), page 13-14.
	Describe the organisation's processes for managing climate-related risks.	 Strategy (Climate Scenario Analysis), page 8-12. Risk Management (Risk Management Framework and Process), page 13-14.
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	• Risk Management, page 14-15.
Metrics and Targets	Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	 Strategy (Climate Scenario Analysis), page 8-12. Metrics and Targets, page 16-18.
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	 Metrics and Targets (GHG Emissions), page 16-18.
	Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	Metrics and Targets, page 16-18.



Replantation Activities, South Sumatra

The TCFD (Task Force on Climate-Related Financial Disclosures) has developed recommendations for businesses on how to prepare for the impacts of climate change. These recommendations include how to assess and disclose climate-related financial information to investors and other stakeholders so that all parties can understand and mitigate negative financial impacts due to climate change.

TCFD has the support of international sustainability frameworks and indexes such as S&P Global ESG Scores, Sustainability Accounting Standards Board (SASB), Carbon Disclosure Project (CDP), Climate Disclosure Standards Boards (CDSB), and the Global Reporting Initiative (GRI). TCFD is also supported by many companies, financial institutions, environmental social and governance (ESG) rating agencies, stock indexes, and governments.

PT Medco Energi Internasional Tbk (MedcoEnergi) joins numerous companies around the world committing climateto enhance our related performance and disclosures. TCFD disclosure is our first attempt report the cumulative efforts and most recent progress that our Company has made in understanding and managing climate-related risks and opportunities. The structure of this document aligns with the reporting framework recommended by TCFD, which covers four disclosure core elements: Governance, Strategy, Risk Management, and Metrics & Targets.

TCFD-aligned disclosure is a process which will evolve and develop at MedcoEnergi. We will continue to improve our climate-related performance and the quality of our TCFD-aligned disclosures in coming years.

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PURPOSE OF THIS DOCUMENT

MedcoEnergi acknowledges the need to integrate key climate-related risks and opportunities into our business strategy and operations. In doing so, we aim to improve the Company's resilience in the face of climate impacts and the movement towards a low-carbon energy transition. As recognised by the Paris Agreement, limiting the global temperature increase to below 1.5°C requires a collective and global effort. As a leading energy company in Southeast Asia, we recognise the need to play our part to ensure sustainable long-term value for our stakeholders.

We have established our net zero climate aspirations for Scope 1 and Scope 2 by 2050 and Scope 3 by 2060. To achieve this target, we developed a Climate Change Strategy which focuses on emissions reduction, a transition to low-carbon energy, and management of emerging physical climate risks.

In 2021, we developed the groundwork for our actions on climate change. We have begun initial assessments of our Scope 3 greenhouse gas (GHG)

emissions and developed our short-, mediumand long-term Climate Action Plan. We organised climate awareness workshops where employees, management, and our Board of Directors (BoD) discussed and evaluated climate-related risks, opportunities, and actions. The workshop content was based on our vision and mission, the framework of our sustainability aspirations, the Paris Agreement, and the Nationally Determined Contribution (NDC) of the host governments in the countries where we operate.

This document aims to communicate how we identify, manage, and respond to the financial implications of climate-related risks and opportunities.

MedcoEnergi aims to continually improve the Company's disclosure of our climate target setting and performance according to TCFD guidelines, as well as strengthening our responses to the CDP Climate Change questionnaire.

TCFD Recommendations Core Elements



Source: https://www.fsb-tcfd.org/about/

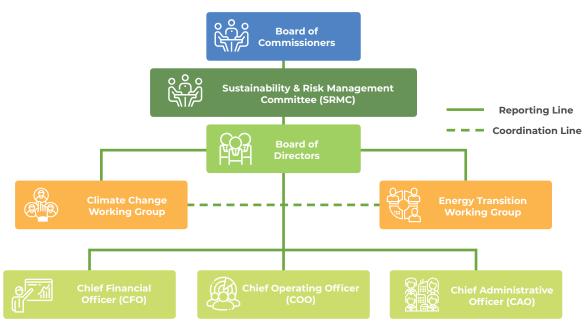
GOVERNANCE

MedcoEnergi has integrated climate change considerations into the Company's governance structure. The MedcoEnergi Board of Commissioners (BoC) provides oversight to the BoD on risk management for all businesses, including climate-related risks, with the support of the Sustainability & Risk Management Committee (SRMC).

The BOD oversees the integration of climate-related issues, risks, and opportunities into strategic planning and decision-making; monitors the climate-related risk management process; and reviews climate-related corporate goals, incentives, targets, and key performance indicators (KPIs).

In addressing climate-related risks, the BOD is supported by our climate change working team which includes relevant corporate functions, such as the Corporate Sustainability and Risk Management (CSRM), Corporate Health, Safety and Environment (HSE), and Corporate Planning and Investor Relations. These key functions report on their operations to the BoD and participate in Quarterly Performance Review (QPR) meetings, supporting the BoD's integration of climate-related risks and opportunities into business strategy and decision-making. The figure below illustrates our current climate governance organigram.

MedcoEnergi's Climate Governance Organigram



At MedcoEnergi, we provide performance incentives for attaining GHG emissions reduction targets as part of the Company's sustainability key performance indicators (KPIs) and Team Performance Contract. These incentives are rewarded to teams and individuals within the relevant corporate functions.

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BOARD OF COMMISSIONERS (BOC)

The BoC oversees the BoD and provides advice pursuant to the Articles of Association. The BoC supervises risk management and internal controls within MedcoEnergi, and ensures that Good Corporate Governance (GCG) is appropriately implemented.

With regards to climate governance, the BoC provides the oversight of the climate related issues across the organisation.

SUSTAINABILITY & RISK MANAGEMENT COMMITTEE (SRMC)

The SRMC provides assistance to the BoC in fulfilling its corporate governance oversight responsibilities related to sustainability and risk management. This responsibility includes addressing climate-related risks pertaining to the implementation of our Climate Change Strategy.

BOARD OF DIRECTORS (BOD)

The BoD consists of the President Director, the Chief Executive Officer (CEO), the Chief Financial Officer (CFO), the Chief Operating Officer (COO), and the Chief Administrative Officer (CAO).

Our BoD is responsible for establishing and implementing MedcoEnergi's Climate Change Strategy and ensuring that climate-related issues, risks, and opportunities are integrated within the Company's overall business strategy and objectives. They are tasked with formulating and implementing climate-related Work Programs and Budget, as well as overseeing the risk management process. Furthermore, the BoD has the responsibility to review the Strategy to ensure that it is up-to-date with the changing energy landscape and stakeholder expectations. The BoD is supported in these responsibilities by our climate change working team.

Climate-related issues are a scheduled agenda item in the BoD's weekly meeting, monthly performance review, QPRs, project gate review meetings, and SRMC meetings.



Rooftop Solar Panel, Tanjung Uncang, Batam, Riau Islands Province



Central Processing Plant, Block A, East Aceh, Indonesia

MEDCOENERGI'S CLIMATE CHANGE STRATEGY

In 2021, we publicly issued our Climate Change Strategy. The Strategy provides guiding principles for MedcoEnergi's businesses and operations to achieve our net zero climate aspirations for Scope 1 and 2 by 2050 and Scope 3 by 2060.

Our Climate Change Strategy has three main pillars: Emissions Reduction, Transition to Low Carbon Energy, and Emerging Physical Climate Risk Management. These pillars ensure that we tackle the climate challenge holistically, covering both climate-related transition and physical risks and opportunities.

Within our Climate Change Strategy, we have also identified four key enablers to support effective implementation. These enablers are Governance, Data Management, Transparency and Compliance, and Collaboration and Engagement, as presented in in the next figure.

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VISION

To be the Energy Company of Choice for our investors, shareholders, partners employees and the communities where we operate.

MISSION

To build long-term value with a portfolio of sustainable energy and natural resource business.

CLIMATE ASPIRATION

		Managing Tra		Managing Physical Climate Risks								
STRATEGY		-G ssions action		tion to on Energy	Emerging Physical Climate Risk Management							
FOCUS AREA	Technologies & Best Practice	Carbon Removal & Offset	Growing Gas as a Transition Energy Source	Growing Renewables Portfolio	Climate Adaptation	Climate Design						
KEY INITIATIVES	Reduce flaring, venting and fugitive emissions Reduce energy use & intensity, adopt renewable energy sources Collaborate along Supply and Value Chains to improve efficiency and emissions disclosure	Reduce flaring, venting and fugitive emissions Reduce energy use & intensity, adopt renewable energy sources Collaborate along Supply and Value Chains to improve efficiency and emissions Carbon sequestration through nature-based solutions Explore CCUS* and CCS* opportunities opportunities		enting and fugitive based solutions portfolio portfolio portfolio promptolic based solutions proves fictions based solutions provedure based solutions provedure based solutions provided to composite the solution portfolio promptolic promptolic provided to composite the solution provided to composite the solution provided to composite the solution provided to composite the solutions provided to composite the solutions provided to composite the solution provided to composite the solutions provided the solutions provided to composite the solutions provided the solutio		Expand renewable power portfolio Assess feasibility to adopt emerging renewable technologies Support initiatives for adoption of green solutions	Assess quantitative financial impact of climate- related physical risks Implement systems for regular monitoring of climate hazards and their impacts	Continue physical risk and biodiversity assessments on new investments Integrate climate risk assessment into future engineering designs				

ENABLERS										
Governance	Data Management	Transparency and Compliance	Collaboration and Engagement							
Board commitment and oversight Integration into business plans and performance management Staff engagement and capacity building	Improve Emission Data Management System Improve Scope 3 collection and calculation in alignment with protocols and standards	Continue third party verification of emission disclosures Strengthen TCFD* disclosures and improve CDP* and ESG scoring	Engage with regulators and investors to monitor emerging regulations and trends Collaborate with stakeholders to drive the low carbon economy							

* Note:
CCUS: Carbon Capture Utilization & Storage
CCS: Carbon Capture & Storage
TCFD: Task Force on Climate Related Financial Disclosure
CDP: Carbon Disclosure Project

CLIMATE-RELATED RISKS AND OPPORTUNITIES FOR MEDCOENERGI

Risk Time Horizons

MedcoEnergi defines climate risk time horizons in regards to our risk mitigation strategy and the actions required. The table below details these time horizon classifications:

MedcoEnergi's Time Horizons

Time Horizon	Years	Definition
Short-term	1-2	Our short-term climate-related risks are generally government policy-related and managed at the asset level through policy and technology to reduce emissions.
Medium-term	2-5	Our medium-term climate-related risks may include emerging regulatory policies that have yet to be fully developed, as well as any growing trends within the energy landscape that may impact our portfolio. The Company's GHG forecasting and financial planning processes are used to determine the risks and opportunities that could have a material financial impact during this period. These risks are managed by our assets, but if significant, may also be managed through corporate strategies and company-wide risk assessments.
Long-term	5 – 20	MedcoEnergi's long-term horizon is 5 years and beyond, and up to 20 years ahead depending on the type and nature of the risk. During this time horizon, the Company's portfolio, business strategy, and direction would have undergone changes to adapt to the low-carbon energy transition. Generally, long-term risks are managed through our scenario analysis, as they include long-term government policies, technology trends, and consumer preferences that will affect supply and demand over longer-term time horizons.

Climate Scenario Analysis

The scenario analysis process is used to identify and assess the implications that may potentially arise amidst climate uncertainty. The process helps us manage and integrate climate-related risks and hazards into our strategic and operational planning, and provides guidance for the Company to collectively consider what the future of our businesses and operations will look like.

In 2021, MedcoEnergi conducted an initial qualitative scenario analysis of climate-related transition and physical risks which can potentially impact the Company.

Assessing the Climate-related Physical Risks

In line with our Enterprise Risk Management Policy, the Company considers both acute¹ and chronic² physical risks in our climate-related risk assessments.

Acute physical risks refer to the occurrence of sudden risk events with a significant impact, such as cyclones, hurricanes, and floods.

Chronic physical risks are prolonged physical risk events due to longer-term shifts in climate patterns, such as sustained higher temperatures, sea-level rise, and chronic heat waves.

The initial assessment stage is the Portfolio Screening or Hot Spot Analysis. This screening consists of a high-level assessment of relative risk level from climate-related natural hazards to MedcoEnergi's assets. The assessment is done under different climate change scenarios and compared to the baseline natural hazards exposure. It is completed using both the spatial data available in the analysis model and business-specific information analysed at a corporate level.

MedcoEnergi assesses these risks as acute physical risks that can have a great impact on our facilities and surrounding environment. The Company also assesses the risk in our Environmental Impact Assessment (Analisis Manajemen Dampak Lingkungan/AMDAL) as part of the national regulatory as well as corporate-level requirements for project development.

MedcoEnergi assesses these chronic risks as the effect of slowly changing physical parameters may impact the long-term security of the Company's onshore and offshore facilities or surrounding environment.

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We conducted the assessment for climate change projections using two Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCP) scenarios¹ for the 2050 timeframe, listed below:



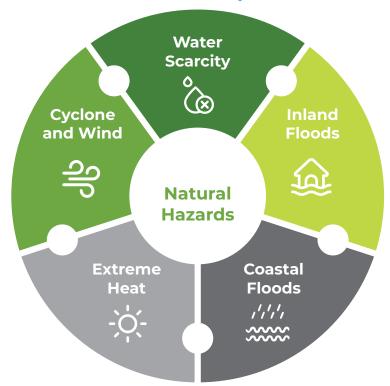
The scenario corresponds to a 3.7°C rise by the end of the century due to low or no effort to reduce emissions.



The scenario corresponds to a 1.8°C rise by end of the century due to moderate efforts to reduce emissions.

The scope of this scenario analysis encompassed 19 onshore material assets (15 in Indonesia, 2 in Oman, and 2 in Thailand). Five natural hazards categories were used in the assessment, based on their relevance to the selected assets. These are presented in figure below:

Natural Hazards Covered in the Physical Risk Assessment



The classification factors and the physical climate risk exposure across our assets is listed in can be seen in Appendix page 19.

¹ IPCC Representative Concentration Pathways (RCP) scenarios were used to show how temperature and other climate characteristics may change depending on different GHG concentrations in the atmosphere.

Natural Hazard Implications for MedcoEnergi's Assets

The key implications identified for climate-related physical risks are outlined in the table below, along with mitigation measures for our assets, both implemented and planned.

Event Type	Key Implications	Proposed Risk Mitigation Measures
Water Scarcity	 Impact on operations Impact on domestic water requirement Reputational risk during water stress periods 	 Conduct a water risk assessment and water audit Explore opportunities for rainwater harvesting at site and at catchment level Adopt water-efficient technology to reduce water usage Explore opportunities to reuse recycled wastewater within the plant or from nearby communities
Cyclone and Wind	 Damage to buildings and infrastructure Safety of employees Loss of revenue due to disruption of operations Cost of replacement and repair of damaged infrastructure Increased insurance costs 	 Comply with national or international best practices for wind load for the design and construction of all structures Implement monitoring mechanisms with national or regional meteorological agencies for an early warning system Develop a response mechanism to plan operations and take preventive steps (e.g. planned shut down before a cyclone) to reduce impacts Include cyclones and wind as one of the hazards in site-level emergency response plans
Inland Floods	 Damage to infrastructure, tools, and equipment Safety of employees Increased cost for replacement or repair of damaged assets Increased insurance costs Migration of hazardous material/waste to off-site areas 	 Conduct a flood (inland) risk assessment to identify areas prone to flooding for all key assets Design and implement suitable mitigation measures, such as increasing capacity of storm water drainage, pumping system, construction of flood barrier, etc. Include flood hazards in emergency response plans Evaluate existing spill management and storm water management plans
Extreme Heat	 Potential discomfort due to heat stress Reduced working efficiency of employees Overheating and breakdown of equipment Reduced efficiency of equipment 	 Include extreme heat conditions in emergency response plans Provide training to employees to identify symptoms of heat stress and provide first aid Evaluate existing operational temperature ranges of tools and equipment against projected extreme temperatures
Coastal Floods	 Damage to coastal infrastructure and tools and equipment Loss of land due to permanent inundation Safety of employees Increased cost for replacement or repair of damaged assets Increased insurance costs Migration of hazardous material/waste to off-site areas 	 Conduct a flood (coastal) risk assessment to identify areas prone to flooding for all key assets Design and implement suitable mitigation measures, such as increasing capacity of pumping system, construction of flood barrier, etc. Include flood hazards in emergency response plans

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Assessing Transition Risks and Opportunities

In 2021, we also conducted an initial desktop-based qualitative assessment of climate-related transition risks and opportunities at the corporate level. The transition risk assessment was conducted for two International Energy Agency (IEA) scenarios, as outlined below:

- The IEA Stated Policies Scenario (or "STEPS"), a pathway that takes into account announced climate-related policies (such as the current Paris Agreement and Nationally Determined Contributions), but does not forcefully pursue decarbonisation¹; and
- The IEA Sustainable Development Scenario (or "SDS"), a pathway towards reducing global CO₂ emissions and achieving other, non-climaterelated, sustainable development goals².

In choosing these two scenarios, the assessment provides insight into the potential range of impacts, where STEPS is less ambitious than SDS in terms of mitigation efforts. While SDS only assumes the achievement of net zero in 2070, it is much closer to the political reality of the countries where MedcoEnergi is present, namely Indonesia, Thailand, and Oman. Details regarding the key transition drivers applied in the assessment and how they may become material to the business are detailed in the Appendix on page 20.

During this initial assessment, we conducted workshops with management and Subject Matter Experts (SMEs) to understand the financial impact of each key driver. The results of this assessment are presented in table below.

Key Drivers and their Financial Impact for the Oil & Gas Business

Climate	Busines	s Impact	Financial	Proposed Risk
Attribute	Opportunity	Risk	Impact	Mitigation Measures
Carbon Pricing	Implementing internal carbon pricing will prepare the Company for national regulations regarding carbon pricing or carbon tax	Increase in costs for exploration, production, fuels, transportation, and carbon emissions (Scope 1 GHG).	OPEX	Improve our understanding of the potential impacts of carbon pricing to our businesses
Stringent Regulations and Mandates for GHG Emissions	Encourage development of renewable energy in our portfolio	Impact on compliance costs for high- emitting operations, such as oil exploration and production	OPEX	 Monitor the regulatory landscape to anticipate regulations that may impact our business Utilise findings to inform our business and operational strategy
Low Carbon Energy Demand and Electrification Trends	Increased revenue from petrochemical customers and from growing electric vehicle (EV) markets, e.g. batteries.	Consumers moving to EVs decreases oil demand and revenue	Revenue	 Capitalise on gas as a transition fuel Expand our renewable energy business
Adoption of Carbon Capture, Utilisation, and Storage/ Carbon Capture and Storage (CCUS/CCS) Technologies	Help reduce carbon costs	Investments required in CAPEX	CAPEX and OPEX	Carry out CCUS/CCS feasibility studies and explore opportunities.

Source of information: https://www.iea.org/reports/world-energy-model/stated-policies-scenario-steps.

Source of information: https://www.iea.org/reports/world-energy-model/sustainable-development-scenario-sds.

Climate Attribute	Busines	ss Impact	Financial	Proposed Risk	
	Opportunity	Risk	Impact	Mitigation Measures	
Increased Development of Commercially Viable Green Hydrogen	Help reduce carbon costsIncreased revenue from hydrogen	Impact on CAPEX for large-scale development within assets for Low Carbon Energy Transition	CAPEX and OPEX	Carry out feasibility assessment of hydrogen	
Stakeholder Pressure	Diversifying energy portfolio and building climate resilience will improve stakeholder confidence in the business	Reputation-related issues could result in declining stakeholder trust	Valuation and Revenue	Continuous improvement in climate-related disclosures (e.g. GHG emissions, CDP)	

Key Drivers and their Financial Impact for the Power Business

Climate	Busines	s Impact	Financial	Proposed Risk Mitigation Measures		
Attribute	Opportunity	Risk	Impact			
Carbon Pricing	Renewable energy in our portfolio offers carbon credits	Increased costs for fuel, feedstock, and transportation	OPEX and Revenue	Improve our understanding of the potential impacts of carbon pricing on our businesses		
Stringent Regulations and Mandates for GHG Emissions	Increased electricity demand from other sectors to meet their decarbonisation targets	Increased compliance costs for gas-based plants	OPEX and Revenue	 Monitor the regulatory landscape to anticipate regulations that may impact our business Utilise findings to inform our business and operational strategy. 		
Low Carbon Energy Demand and Electrification Trends	Increased revenue due to demandIncreased use of gas for power	Market demand for renewables, not gas	Revenue	 Capitalise on gas as a transition fuel Expand our renewable energy business Explore opportunities 		
Market Shift to Low Carbon Economy Transition	 Increased revenue as gas is recognised as transition fuel Increased revenue from renewables 	 Lack of infrastructure for renewables High CAPEX for R&D of low-emission technologies 	CAPEX and Revenue	for low carbon fuels		
Increased Development of Commercially Viable Green Hydrogen	Help reduce carbon costs	Potential high CAPEX for large-scale development within assets for low carbon energy transition	CAPEX and OPEX	 Carry out a feasibility assessment of hydrogen 		
Stakeholder Pressure	Reduced capital costs due to renewable energy aspirations of market	Reputation-related issues impacting company's valuation, earnings, and funding	Valuation and OPEX	 Continuous improvement in climate-related disclosures (e.g. GHG emissions, CDP) 		

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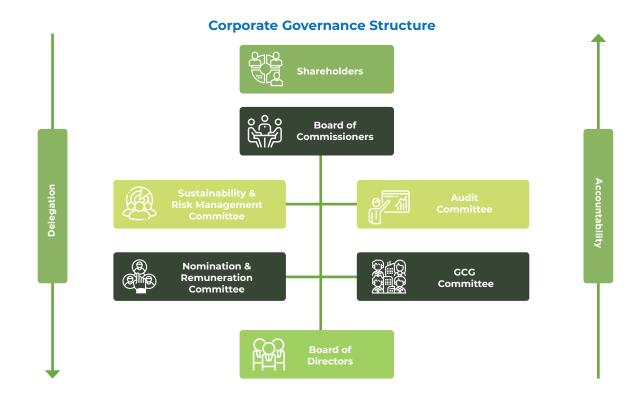
MedcoEnergi's climate-related risk management process takes into consideration a number of international and national frameworks and requirements. This ensures the alignment of our approaches with the best available standards and key stakeholder expectations, including NDC for GHG emissions reduction¹.

In light of the Indonesian government's recently established regulation on the Economic Value of Carbon², we will factor in the potential impact of a

national carbon price to our assessments to develop effective response measures.

RISK MANAGEMENT FRAMEWORK AND PROCESS

To establish an effective risk management framework, MedcoEnergi applies the Good Corporate Governance (GCG) Principles of Transparency, Accountability, Responsibility, Independence, and Fairness. The Corporate Governance Structure is shown below.

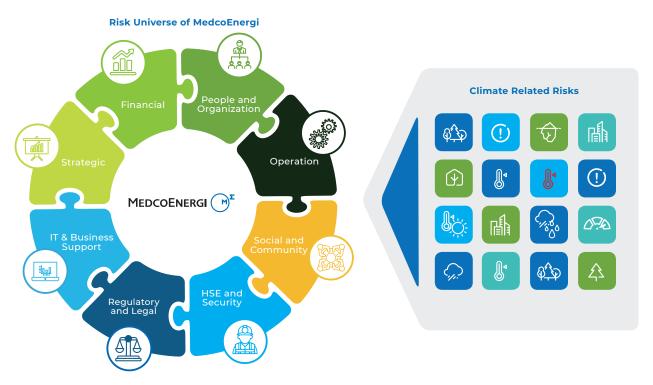


The Government of Indonesia has pledged to reduce emissions from 2020 to 2030 by 29% (unconditional) and up to 41% (conditional) against the 2030 business as usual (BAU) scenario. In the national energy mix, the country aims to generate at least 23% new and renewable energy by 2025 and at least 31% by 2050.

² Presidential Regulation No. 98/2021 on Implementing an Economic Value for Carbon for Achieving Nationally Determined Contribution Targets and Control of GHG Emissions in National Development.

We adopt an Enterprise Risk Management (ERM) framework that follows ISO 31000:2018 on Risk Management to identify, address, and manage risks that may impact the Company. We conduct rigorous risk identification and assessments, monitoring, and reporting. The framework covers all facets of risks related to strategy, finance, operations, people and organisation, information technology (IT) and business support, regulatory and legal, HSE and security, as well as social and community. Through this framework, we acknowledge that climate change is an overarching topic that profoundly interacts with every category of this risk universe, illustrated in figure below.

Enterprise Risk Management Framework & Climate-related Risks



The Corporate Sustainability and Risk Management (CSRM) division is tasked with assisting the BoD in creating the required infrastructure and in implementing the Board's agenda for sustainability and climate-related risk management. The CSRM division facilitates the risk management process by coordinating with each risk owner from the functions and assets to monitor and ensure progress towards our sustainability and climate targets.

Risk registers and sustainability performance are reported in our QPR by the operating businesses and divisions. The BoD then provides updates to the BoC on sustainability and risk management matters in the SRMC meetings.

Risk Identification and Assessment

We initiated our climate risk identification in 2021 with a preliminary qualitative climate-related risk assessment, covering both physical and transition risks relevant to our business and operational assets. The assessment included a scenario analysis based on established and recognised standards and frameworks, as per TCFD recommendations. For a detailed description of the methods adopted and results generated from the assessment, please refer to our Climate Scenario Analysis section.

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Solar PV at Peluang Wellhead Platform, Madura Offshore, East Java, Indonesia

Risk Prioritisation, Adaptation Planning, and Implementation

The risk assessment is followed by adaptation planning, which includes prioritisation of climate-related risks and planning for adaptation measures to either mitigate, transfer, or control those risks.

While there are many climate-related risks, it is critical to prioritise them for the sake of effective risk management. To prioritise identified risks and determine materiality, we engaged with key internal stakeholders, using defined criteria to gauge priorities and perceptions of the importance of each material issue. The results indicate the relative significance of climate-related risks to MedcoEnergi.

Prioritisation of climate risks allows us to efficiently direct our resources towards measures that address high-priority risks, such as GHG emissions. Therefore, we have focused our efforts on implementing GHG mitigation and low carbon transition initiatives.

Periodic Review and Feedback

At MedcoEnergi, we require operational functions to register any risk occurrence and report them during the QPR, facilitated by the CSRM. The same principle applies to climate-related risk management. Furthermore, as per the ISO 31000:2018 standard on Risk Management, continual improvement is a key process in maintaining and improving the suitability, adequacy, and effectiveness of our risk management framework.

METRICS AND TARGETS

GREENHOUSE GAS (GHG) EMISSIONS

MedcoEnergi has already been collecting GHG data, conducting inventories, and reporting our Scope 1 and 2 emissions in our sustainability report. In 2021, we conducted a preliminary assessment of our Scope 3 emissions based on the 15 categories outlined by the GHG Protocol's Corporate Value Chain (Scope 3) Standard¹. The assessment highlights our initial efforts to identify our Scope 3 emissions and to evaluate potential opportunities for management.

To enhance the quality of our GHG inventories, we have implemented the Air and GHG Emissions Calculation tool and several supporting measures since 2020. The improvement includes an addition of references in the methodology, namely the IPCC Guidelines for National Greenhouse Gas Inventories 2006, the GHG Protocol for Corporate Accounting and Reporting Standard from WBCSD and WRI 2004, and ISO 14064-1:2006. Another improvement is the

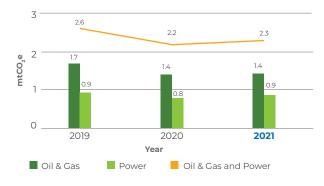
inclusion of more accurate quantification methods for several emissions sources as guided by the references, such as stationary combustion, mobile combustion, flaring, crude storage tanks, dehydration units, and thermal oxidisers.

To enhance the transparency and credibility of our reported emissions, we undertake a verification process annually based on the International Standard on Assurance Engagements (ISAE) 3000 assurance standards issued by the International Auditing and Assurance Standards Board (IAASB) and used by the Indonesian Institute of Certified Public Accountants (IICPA). We carried out the verification process through a third-party assurance provider for 100% of our reported Scope 1 and Scope 2 (location-based) emissions.

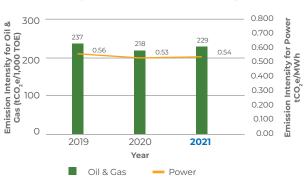
Direct GHG Emissions (Scope 1)

Our overall Scope 1 GHG emissions and emissions intensity are shown in figure below.

Absolute Scope 1 GHG Emissions



Scope 1 GHG Emissions Intensity



For our oil & gas operations in 2021, our absolute Scope 1 emissions decreased by 16% from 2019² as a result of reduction initiatives implemented across our assets, such as flare gas utilisation and energy efficiency as well as the optimisation of our equipment and operating conditions.

For our power business, our absolute Scope 1 emissions in 2021 was 857,808 tCO $_2$ e, a 7% decrease from 2019, but a 10% increase compared with 2020. This is due to variability in electricity demand following the gradual relaxation of COVID-19 restrictions by the government.

¹ For our initial Scope 3 assessment, MedcoEnergi utilised the categories and accounting methodology from the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard, issued in 2011. This Scope 3 Standard is the only internationally accepted method for companies across sectors to account for these types of value chain emissions.

² 2019 is used as a comparison as 2020 is considered an anomaly due to impacts of the COVID-19 pandemic.

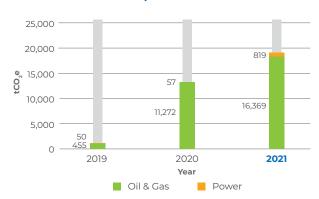
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Indirect GHG Emissions (Scope 2 & 3)

In addition to direct Scope 1 emissions, we have been reporting our location-based Scope 2 emissions since 2020 and in 2021, we conducted an initial Scope 3 emissions assessment.

Our Scope 2 GHG emissions include our indirect GHG emissions from the consumption of purchased electricity, illustrated in figure below. In 2021, our oil & gas operations had a 45% increase in Scope 2 emissions from 2020. This is mainly due to power source switching from the gas engine generator to purchased electricity in our Onshore Processing Facility in East Java¹. Our power business reported Scope 2 emissions of 819 tCO₃e.

Absolute Scope 2 GHG Emissions



Our initial Scope 3 assessment included four significant categories, based on the GHG Protocol's standards. These identified categories are listed in the table below:

Significant Scope 3 Categories to MedcoEnergi

Category No.	Scope 3 Category	Description
1	Purchased Goods and Services	Cradle-to-gate emissions of MedcoEnergi's purchases of goods and services, such as contractors' services and oils.
3	Fuel and Energy-related Activities	Extraction, production, and transport of MedcoEnergi's purchased fuels and energy, not accounted for in Scope 1 and 2.
10	Processing of Sold Products	Emissions from the processing of MedcoEnergi's products by customers.
11	Use of Sold Products	Emissions from the direct use of MedcoEnergi's products by customers.

Note: Category 10 and 11 are only significant to MedcoEnergi's oil & gas business.

Further details on the assessment can be found in Chapter 7 of our 2021 Sustainability Report.

With the Climate Change Strategy in place, which provides clear guidance for future direction across the company, we believe that our GHG mitigation performance will continue to improve.

Metrics Associated with Water, Waste and Land Use

In addition to GHG emissions, MedcoEnergi has collected data on water consumption and waste management for all our operations, in alignment with GRI requirements (please refer to our 2021 Sustainability Report at www.medcoenergi.com for details). We monitor our water consumption and seek to increase water use efficiency, as a majority of our assets are exposed to a medium to high hazard from water scarcity under the physical risk scenarios assessed (see Appendix page 21).

We employ an integrated waste management approach to ensure that non-hazardous and hazardous waste generated from our operations is responsibly disposed, stored, and treated in accordance with all applicable regulations. The outcome of our efforts is reflected in the decrease in volume of spills between 2019 and 2021, and we are working to understand the contribution of improved waste management to our climate performance.

 $^{^{1} \ \ \, \}text{The complete information on Scope 2 emission increase can be found in 2021 Medco Energi GRI Performance Data page 136.}$

Finally, MedcoEnergi is highly attentive to our environmental footprint. We are committed to safeguarding the environment, which extends to biodiversity conservation in our operational areas. In addition to conservation awareness campaigns, we have carried out a number of revegetation initiatives, both in line with and beyond regulatory requirements.

We will continue to study the linkage of our water, waste, and land use management efforts to climate-related risks and opportunities identified from relevant risk assessments.

Net Zero Emission & Zero Routine Flaring

We recognise the importance of achieving net zero, and are studying the implications of having set a net zero climate aspiration for our businesses. We strive to align with international and national aspirations such as the Paris Agreement and the NDCs of the countries where we operate, while keeping our commitment to meeting the energy demand of society. MedcoEnergi is committed to achieving net zero for Scope 1 and 2 emissions by 2050, and aiming to further expand to Scope 3 emissions by 2060. To achieve this aspiration, we will continue to improve our GHG data quality and study feasible mitigation measures to help us identify actionable drivers for a significant transition of our value chains towards a net zero future.

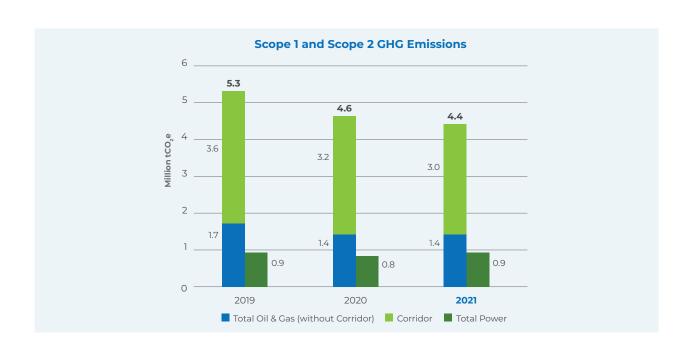
In addition, we have determined to achieve zero routine flaring by 2030. This aligns with the World Bank's Zero Routine Flaring by 2030 initiative, which is supported by the Indonesian government.

To achieve MedcoEnergi's climate ambitions, we have started a variety of initiatives in recent years, which can be found in our 2021 Sustainability Report (www.medcoenergi.com).

CORRIDOR ACQUISITION

In 2022, we recently closed the Corridor PSC acquisition from ConocoPhillips Indonesia Holding Ltd (CIHL), expanding our natural gas portfolio to 79%. This acquisition will enable us to grow gas as a transition energy source and meet the growing regional energy demand.

The graph below shows the total oil and gas Scope 1 and Scope 2 emissions from 2019-2021 if Corridor past emissions data are included. Moving forward, we will include these figures in our emissions inventory for determination of 2019 as the base year. Our 2019-2021 data that includes Corridor will be assured by a third party in the next reporting cycle.





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HAZARD CLASSIFICATION FACTORS

Table below presents the classification factors of the selected hazards based on relevance to MedcoEnergi's assets.

Classification Factors of Selected Hazards

Water Scarcity	Cyclone and Wind	Inland Floods	Extreme Heat	Coastal Floods
Hazard is classified using a Water Stress Index, which reflects the availability of water per person per year.	Tropical cyclone is classified using wind speed, provided as frequency-severity data.	urban flood hazards are classified using a threshold of 'area flooded to damaging intensity threshold of 0.5 m'.	Extreme heat hazard classification is based on daily maximum Wet Bulb Globe Temperature, provided as frequency-severity	Coastal flood is classified using onshore flood depth data, provided as frequency-severity data.
			data in raster format.	The damaging intensity thresholds are 2 m for high hazard, and 0.5 m for low and medium hazard.

CLIMATE-RELATED PHYSICAL RISK EXPOSURE ASSESSMENT

The following table presents the results of the climate-related physical risk exposure assessment conducted by MedcoEnergi.

We conducted an initial Hot Spot Analysis for 19 onshore material assets, including 15 assets in Indonesia, 2 in Oman, and 2 in Thailand. The analysis was carried out based on climate change projections for two Intergovernmental Panel on Climate Change (IPCC) Representative Concentration Pathways (RCP) scenarios for the 2050 timeframe:

RCP 8.5

Business as Usual

The scenario corresponds to a 3.7°C rise by the end of the century due to low or no effort to reduce emissions.

RCP 4.5

Middle Path

The scenario corresponds to a 1.8°C rise by end of the century due to moderate efforts to reduce emissions.

Baseline hazards were evaluated based on the open source tool Think Hazard developed by World Bank/Global Facility for Disaster Reduction and Recovery (GFDRR).

Climate-related Physical Risk Exposure Assessment

Assets Country Sector		Water Scarcity/ Drought		Inland Floods		Coastal Floods/ Sea Level Rise		Extreme Heat		Cyclone/Wind Speed							
			Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5
Rimau	Indonesia	Oil & Gas (P)	3	3	3	9	9	9	N/A	N/A	N/A	6	6	6	2	2	2
SSB	Indonesia	Oil & Gas (P)	3	3	3	9			N/A						2	2	2
Lematang	Indonesia	Oil & Gas (P)	3	3	3	9			N/A						2	2	2
Tarakan	Indonesia	Oil & Gas (P)	3	3	3	9									2	2	2
Block A	Indonesia	Oil & Gas (P)	3	3	3	3	9					3			2	2	2
Bangkanai	Indonesia	Oil & Gas (P)	3	3	3	9			N/A						2	2	2
The Energy Building	Indonesia	Office Oil & Gas Power	4	4	4	6			N/A			4	4	4		2	3
Karim Small Fields (KSF)	Oman	Oil & Gas (P)	6	6	6	3	6		N/A			9	9	9		6	6
Muscat Office	Oman	Office	6			4	4	4	6						2	2	2
Bangkok Office	Thailand	Office	4	4	4	4	6		N/A						3	3	3
Sattahip Warehouse	Thailand	Warehouse	1			9			N/A			4	4	4	6		

Qualitative Hazard Matrix

Assets	Country	Sector	Water Scarcity/ Drought		Inland Floods		Coastal Floods/ Sea Level Rise		Extreme Heat			Cyclone/Wind Speed					
			Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5	Baseline	RCP 4.5	RCP 8.5
MPE: Multidaya Prima Elektrindo	Indonesia	Energy (G)	3	3	3	9	9	9	N/A	N/A	N/A	6	6	6	2	2	2
EPE: Energi Prima Elektrika	Indonesia	Energy (G)	3	3	3	9			N/A			6			2	2	2
MEB: Mitra Energi Batam	Indonesia	Energy (G)	3	3	3	6			N/A			6			2	2	2
DEB: Dalle Energi Batam	Indonesia	Energy (G)	3	3	3	6			N/A			6			2	2	2
ELB: Energi Listrik Batam	Indonesia	Energy (G)	3	3	3	6			N/A			6			2	2	2
Sarulla Operations (Geothermal)	Indonesia	Energy (Ge)	3	3	3	9			N/A			6			2	2	2
Pembangkitan Pusaka Parahiangan (Mini Hydro)	Indonesia	Energy (H)	6						N/A			4	4	4	4	4	
Bio Jatropha Indonesia, Cibalapulang (Mini Hydro)	Indonesia	Energy (H)	6	6	6	9	9	9	N/A			4	4	4	4	4	6



Key:
(P) : Production
(G) : Gas Fired Thermal Power Plant
(Ge): Geothermal Power Plant
(H) : Mini Hydro Power Plant

MedcoEnergi Physical Hazard Matrix

Low Hazard	Medium Hazard	High Hazard
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The following summarises the key findings from the assessment:

- Locations of Oman and hydropower plants in Indonesia indicate a high hazard of water scarcity under all climate scenarios.
- Inland floods indicate a high flood hazard at all locations under all climate change scenarios, except the Muscat office where inland flood hazard is evaluated to be medium.
- Extreme heat indicates a high hazard at all locations under all climate change scenarios, except the Energy Building, hydropower plants in Indonesia, and the Sattahip warehouse in Thailand. These locations indicated a medium hazard of extreme heat.
- Coastal assets may be exposed to higher sea levels and more frequent extreme sea levels under both climate change scenarios.
- Karim small fields in Oman and Sattahip warehouse are likely to face a high hazard due to cyclone and wind speed under all climate change scenarios.
- The hydropower plants in Indonesia indicated a high cyclone¹/wind hazard under the RCP 8.5 scenario.

CLIMATE-RELATED TRANSITION RISK ASSESSMENT

The following presents the results of the climate-related transition risk assessment conducted by MedcoEnergi.

Key Drivers with a Climate-related Transition Risk Impact for Oil & Gas

2040 Scenario Indicator	Unit	IEA STEPS	IEA SDS	Risks	Opportunities	Description
Carbon pricing	\$/t, 2019 prices, developing countries	20-25	125	(\$00)		High carbon pricing, higher OPEX
Mandates and regulations of existing products and services	Mb/day, oil energy demand, ASEAN	7.1	4.5			Lower revenue due to decrease in oil demand for key sectors e.g. industries seeking for low carbon sources
EU Carbon Border Adjustment Mechanism (CBAM)	\$/t, 2019 prices, EU	52	140			Exports into EU would face carbon levy leading to higher OPEX
Decrease in oil demand in transport sector	Oil share of transport, ASEAN	87%	67%			Lower revenue for descreased oil demand in transport
Natural Gas demand	Mtoe, relative to 2019	3x	2x			Natural gas demand increases for low carbon transition
Hydrogen use	Relative to 2019, global	1.7x	4.7x	H		Large scale deployment of blue/ green hydrogen to reduce cost
Carbon Capture, Utilisation and Storage (CCUS)	Relative to 2019, global	41x	140x	[CO,	CO ₃	Scaling up of CCUS technology to support hard-to-abate sector

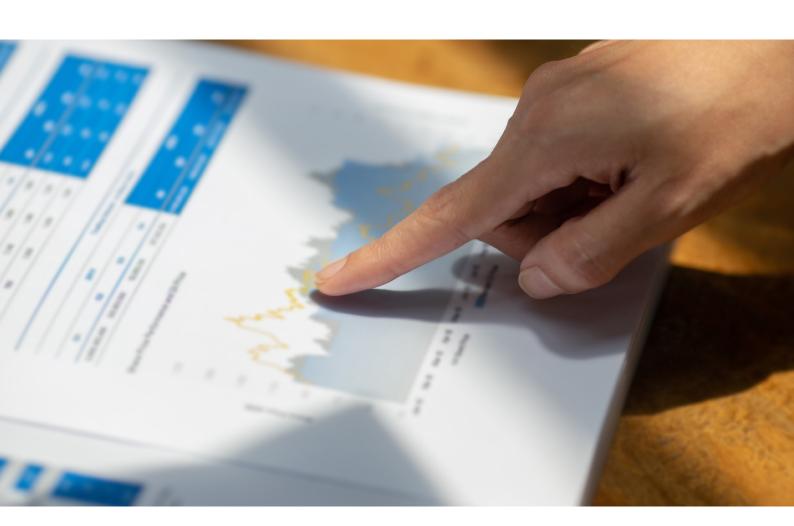
Note: IEA data for ASEAN, unless and until specified, IEA data interpolated or extrapolated where needed

Although Indonesia's equatorial location may indicate that the country is not directly in the path of cyclones, climate change is expected to interact with cyclone hazards in complex ways that are currently poorly understood. According to the World Bank's "Climate Risk Country Profile: Indonesia", the country is classified as being highly exposed to tropical cyclones, ranking 23rd out of 191. Indonesia is impacted from the movement of tropical cyclones in the southeastern Indian Ocean between January and April and the eastern Pacific between May and December.

Key Drivers with a Climate-related Transition Risk Impact for Power

2040 Scenario Indicator	Unit	IEA STEPS	IEA SDS	Risks	Opportunities	Description
Carbon pricing	\$/t, 2019 prices, developing countries	20-25	125	\$00		High carbon pricing, higher OPEX
Mandates and regulations of existing products and services	Mt CO ₂ /GDP, CO ₂ intensity, ASEAN (The amount of energy needed to generate a unit of GDP)	0.11	0.046			Lower number refers to higher degree of low carbon transition in the economy
Use of lower emission energy sources in power sector	% share of renewables in power sector, ASEAN (hydro, bioenergy, other renewables)	32%	75%			Customer looking for lower emission energy sources, higher CAPEX for transition
Hydro, bioenergy, renewables	Renewables demand, relative to 2019	1.6x	2.7x			Businesses to have greener sources of energy
Building energy demand	Mtoe, relative to 2019, ASEAN	3.8x	2.6x			
Hydrogen use	Relative to 2019, global	1.7x	4.7x			Large scale deployment of blue/ green hydrogen to reduce cost
EV cars	% of total car sales, global	17%	50%		t	EVs to impact fuel demand, may have higher plastics intensity

Note: IEA data for ASEAN, unless and until specified, IEA data interpolated or extrapolated where needed







TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)



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