

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

The MTR Corporation operates a predominantly rail based transportation system in Hong Kong, comprising domestic and cross-boundary services including a High Speed Rail service (connecting Hong Kong with the 29,000 km high speed rail network in the Mainland of China), a dedicated high-speed Airport Express Railway (the only rail system connecting to and from the Hong Kong International Airport) and a light rail system, which in total includes 13 railway networks, with total route length over 270 kilometers, serving all 18 districts in Hong Kong. Our network is one of the most intensively used in the world, known for its reliability, safety and efficiency. We also provide intercity services to and from the Mainland of China as well as bus operation in Hong Kong offering convenient feeder services. Leveraging our railway assets and expertise, the Corporation has moved forward with adjacent property and railway-related businesses, including rental of station retail space, advertising in trains and stations, telecommunications, rail consultancy, cable car operations and the Octopus Smart-card payments system. On the property side, we develop residential and commercial properties in collaboration with property developers. We hold investment properties, principally shopping malls and offices, and manage our properties and those of others. Our investment portfolio primarily includes shopping malls and 18 office floors of the Two International Finance Centre (IFC) office tower in Hong Kong. As at 31 December 2022, we managed more than 118,000 residential units, 14 shopping malls, and approximately 16,000 residential units and 2 shopping malls are under development in Hong Kong. Bringing expertise in railway development and property management to the Mainland of China and international market is a core component of the Corporation's strategy for continued growth. We invest in urban rail networks as well as property development projects in the Mainland of China and participate in "asset-light" operating concessions in the United Kingdom, Sweden, Australia and Macau. We will focus on successfully delivering our newly awarded businesses and continue prudently to pursue new railway and rail-related business opportunities that will generate incremental benefits to our shareholders.

Key achievements in 2022 included:

- In 2022, the Corporation strengthened its commitment to embedding environmental, social and governance ("ESG") considerations in our businesses by defining ten commitments and a set of 35 key performance indicators (KPI) across our three environmental and social objectives: Greenhouse Gas Emissions Reduction, Social Inclusion, and Advancement & Opportunities. To enable allocation of sufficient financial resources to suitable ESG initiatives effectively, we have formulated an ESG investment framework and allocated a designated ESG Fund for eligible ESG-focused projects that help achieve our KPIs.
- We are committed to setting science-based carbon reduction targets for the year 2030 for our railway and property businesses in Hong Kong, with the longer-term goal of achieving carbon neutrality by 2050. We submitted our commitment letter to the Science Based Targets initiative ("SBTi") in July 2022 and the targets were approved by SBTi in April 2023.
- The East Rail Line cross-harbour extension commenced service in May 2022, increasing both options and convenience for our passengers commuting between Hong Kong Island and the New Territories. In the United Kingdom, the Central Operating Section of the Elizabeth line commenced service in May 2022, transforming travel across London and the South East of the United Kingdom. The Southern Section of Beijing Metro Line 16 also began operations at the end of 2022.

In this CDP response, we cover the Corporation's principal activities in Hong Kong during 2022, however, the emissions data reported in this survey also covers our global operations when asked. The detailed information for our subsidiaries can be found in our Sustainability Website and 2022 Sustainability Report.

Sustainability Website:

<https://www.mtr.com.hk/sustainability/en/home.html>

2022 Sustainability Report:

https://www.mtr.com.hk/sustainability/assets/pdf/en/2022/Sustainability_Report.pdf

C0.2

(C0.2) State the start and end date of the year for which you are reporting data and indicate whether you will be providing emissions data for past reporting years.

Reporting year

Start date

January 1 2022

End date

December 31 2022

Indicate if you are providing emissions data for past reporting years

Yes

Select the number of past reporting years you will be providing Scope 1 emissions data for

5 years

Select the number of past reporting years you will be providing Scope 2 emissions data for

5 years

Select the number of past reporting years you will be providing Scope 3 emissions data for

5 years

C0.3

(C0.3) Select the countries/areas in which you operate.

Hong Kong SAR, China

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

HKD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-TO0.7/C-TS0.7

(C-TO0.7/C-TS0.7) For which transport modes will you be providing data?

Rail

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	HK0066009694

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual or committee	Responsibilities for climate-related issues
Board Chair	The Chairman of the Corporation chairs the Board-level Environmental & Social Responsibility (E&SR) Committee which holds the ultimate responsibility for climate-related issues of the Corporation. Climate-related issues are discussed in the E&SR Committee meeting and the Chairman guides the E&SR Committee to provide strategic guidance to address climate-related issues for the Corporation and review the climate-related best practices and performance. For instance, the Board approved the new Corporate Strategy in June 2020 introducing clearly defined environmental and social objectives, including Greenhouse Gas Emissions Reduction, to set out the direction of our future development. In March 2022, the Board has endorsed to set science-based targets for our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050. We submitted our commitment letter to the Science Based Targets initiative (SBTi) in July 2022 and the targets were approved by SBTi in April 2023.
Board-level committee	Chaired by the Chairman of the Corporation, the Board-level E&SR Committee meets at least twice a year to review and monitor corporate-wide implementation of the Environmental & Social Responsibility Policy and related sustainability initiatives, including responses to climate change. The E&SR Committee formulates strategic direction to address climate-related issues for the Corporation after taking relevant climate risks and opportunities into consideration. The E&SR Committee will also be responsible for tracking performance against the Corporation's environmental and social key performance indicators (KPIs), including the KPI on setting science-based targets, and reporting to the MTR Board on these issues.
Chief Executive Officer (CEO)	CEO sits on the Board-level E&SR Committee to review and monitor corporate-wide implementation of the Environmental & Social Objectives and related sustainability initiatives, including responses to climate change. As a member of the Board-level E&SR Committee, CEO provides insights to formulate strategic direction to address climate-related issues for the Corporation after taking relevant climate risks and opportunities into consideration as well as the performance of GHG reduction. The progress of KPIs developed under the 3 Environmental and Social Objectives will be regularly reported to CEO.
Other C-Suite Officer	Legal & Governance Director (L&GD) sits on the Board-level E&SR Committee chaired by the Chairman of the Corporation. The Board E&SR Committee meets at least twice a year specifically to review and monitor corporate-wide implementation of the Environmental and Social Objectives and related sustainability initiatives, including responses to climate change. As a member of the Board-level E&SR Committee, L&GD provides insights to formulate strategic direction to address climate-related issues for the Corporation after taking relevant climate risks and opportunities into consideration. L&GD also chairs an Environmental and Social Responsibility Steering Committee (E&SR Steering Committee), responsible for driving and reviewing the implementation of sustainability initiatives across all MTR divisions, including responses to climate change and the progress of KPIs developed under the 3 Environmental and Social Objectives. In addition, L&GD oversees the overall progress of GHG reduction in meeting the science-based targets by 2030 and achieving carbon neutrality by 2050.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	<p>Reviewing and guiding annual budgets</p> <p>Overseeing major capital expenditures</p> <p>Overseeing acquisitions, mergers, and divestitures</p> <p>Reviewing and guiding strategy</p> <p>Overseeing the setting of corporate targets</p> <p>Monitoring progress towards corporate targets</p> <p>Reviewing and guiding the risk management process</p> <p>Other, please specify (Reviewing and guiding major plans of action)</p>	<Not Applicable>	<p>The overall management of the Corporation's business is vested in the Board. The Board focuses on matters affecting the Corporation's overall strategic policies, corporate governance, finances and shareholders.</p> <p>The Board approved the new Corporate Strategy introducing clearly defined environmental and social objectives to support our future growth and deliver shareholder and stakeholder value by emphasising innovation and sustainability. Our new Corporate Strategy also sees the embedding of MTR's Environmental and Social (E&S) Objectives into our operation and management approaches. Reducing GHG emissions is one of the 3 key defined E&S Objectives. In addition, the Board endorsed the setting of SBTs for our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050.</p> <p>The Board integrates climate-related issues into our governance through a number of mechanisms. For instance, with the assistance of the Board-level Audit & Risk Committee, the Board oversees the Corporation's Enterprise Risk Management (ERM) Framework, top risks and emerging risks, including risks related to climate change. Climate risks are incorporated into our ERM Framework which integrates direct physical risks and other indirect risks into our strategic planning and cascades these concerns into departments within railway operations, property development, investment and management facilities that identify and manage relevant risks at the asset-level.</p> <p>The Board-level Audit & Risk Committee is responsible for reviewing the Corporation's ERM framework, guidelines, policy and procedures for risk assessment and risk management; reviewing the Corporation's top risks and key emerging risks and the controls in place to mitigate such risks; monitoring the Corporation's risk profile; conducting 'deep dive' reviews on selected key risk areas; reviewing the effectiveness of the ERM function; and reviewing the Corporation's crisis management arrangements. This demonstrates how the Board integrates climate risks into our governance through reviewing and guiding risk management policies.</p> <p>The Board-level E&SR Committee meets at least twice a year specifically to review and monitor corporate-wide implementation of E&S Objectives and related sustainability initiatives, including responses to climate change. Through the E&SR Committee, the Board reviews and guides corporate strategy to address climate risks as well as monitors and oversees progress against carbon reduction targets and climate-related issues.</p> <p>A designated ESG Fund will be allocated annually by the MTR Board to support ESG projects, including carbon reduction projects. This Fund is separated to the annual operational and capital expenditure budget and will be used to finance unbudgeted ESG projects which may not have a viable financial business case or to fund the incremental cost of a budgeted item that requires additional investment to enhance its ESG performance.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	<p>1) solid and strong experience from energy and utilities sector and is familiar with climate change issues and GHG emissions</p> <p>2) experience in green finance</p>	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Position or committee

Chief Executive Officer (CEO)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Managing climate-related acquisitions, mergers, and divestitures
Developing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Reports to the board directly

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

CEO has the overall responsibilities on ESG and climate-related issues. CEO leads the Executive Committee to review and endorse top ESG risks (including climate risks) and the control measures quarterly; and the corporate climate change risks map annually as well as evaluate the effectiveness of mitigation measures in addressing climate risks. CEO also sits on the Board-level E&SR Committee to facilitate board members to review and monitor corporate-wide implementation of the E&S Objectives and related sustainability initiatives, including climate-related issues. As a member of the Board-level E&SR Committee, CEO provides insights to formulate strategic direction to address climate-related issues for the Corporation after taking relevant climate risks and opportunities into consideration as well as the performance of GHG reduction. The Board-level E&SR Committee will also allocate an annual ESG Fund to support ESG projects, including climate-related projects.

Position or committee

Other C-Suite Officer, please specify (Legal and Governance Director)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

Legal & Governance Director (L&GD) chairs an Environmental and Social Responsibility (E&SR) Steering Committee and is a member of the Executive Directorate and the Board-level E&SR Committee. L&GD leads the E&SR Steering Committee to provide directions and guidance on ESG issues at operational levels, and to monitor progress of programmes for efficacy in achieving stated Environmental and Social Objectives and GHG targets including climate change. The Board-level E&SR Committee will also allocate an annual ESG Fund to support ESG projects, including climate-related projects.

L&GD also chairs the Enterprise Risk Committee (ERC) which is responsible for reviewing the Corporation's top risks and key emerging risks (including climate risks) annually; leads the ERC to review top 30 and emerging risks & opportunities every quarter; and reports the top risks to the Executive Committee and the Board-level Audit & Risk Committee on a quarterly basis and to the Board on a six-monthly basis. Climate change risks map at corporate level is reported to the Executive Committee annually. L&GD has led the ERC to initiate a review on mitigation measures regarding climate risks across different business units, corporate functions and hubs of MTRC for sharing and supporting the development of the corporate Climate Change Strategy.

Position or committee

Other committee, please specify (Executive Committee)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Managing climate-related acquisitions, mergers, and divestitures
Developing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

The Executive Committee is delegated to handle day-to-day management of the Corporation's business. With the support of the Enterprise Risk Committee (ERC), the Executive Committee is overall accountable for the ERM policy, the Climate Change Strategy and system implementation and continuous improvement including assessing and monitoring climate risks. The Executive Committee will review and endorse top risks (including climate risks) and the control measures quarterly and the climate change risks map annually as well as evaluate the effectiveness of mitigation measures in addressing climate risks.

Position or committee

Other committee, please specify (Environmental and Social Responsibility Steering Committee)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

The Environmental and Social Responsibility (E&SR) Steering Committee is tasked with providing directions and guidance on ESG issues at operational levels (including climate-related issues), and monitoring progress of programmes for efficacy in achieving the stated Environmental and Social Objectives and GHG reduction targets. The Chairman of the E&SR Steering Committee will report corporate-wide ESG issues including climate-related issues to the Executive Committee and the Board-level E&SR Committee. The E&SR Steering Committee is also responsible for the oversight and implementation of the ESG Investment Framework, which institutionalise environmental and social principles into the Corporation's investment decision making process and to provide funding for business units and corporate functions for eligible ESG projects.

Position or committee

Other committee, please specify (Enterprise Risk Committee)

Climate-related responsibilities of this position

Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

CEO reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

The Enterprise Risk Committee (ERC) is responsible for reviewing the Corporation's top risks and key emerging risks (including climate risks) annually. The ERC reviews top 30 and emerging risks and opportunities every quarter. The chairman of the ERC will report the top risks to the Executive Committee and the Board-level Audit & Risk Committee on a quarterly basis and to the Board on a six-monthly basis. Climate change risks map at corporate level is reported to the ERC and the Executive Committee annually by the Head of Sustainability and the Chairman of the ERC respectively. The ERC has initiated a review on mitigation measures regarding climate risks across different business units, corporate functions and hubs of the Corporation for sharing and supporting the development of the corporate Climate Change Strategy.

Position or committee

Other, please specify (Head of Sustainability)

Climate-related responsibilities of this position

Managing annual budgets for climate mitigation activities
Developing a climate transition plan
Implementing a climate transition plan
Integrating climate-related issues into the strategy
Conducting climate-related scenario analysis
Setting climate-related corporate targets
Monitoring progress against climate-related corporate targets
Assessing climate-related risks and opportunities
Managing climate-related risks and opportunities

Coverage of responsibilities

<Not Applicable>

Reporting line

Corporate Sustainability/CSR reporting line

Frequency of reporting to the board on climate-related issues via this reporting line

Half-yearly

Please explain

The Head of Sustainability is responsible for updating and reporting the climate change risks map at corporate level to the ERC annually as well as monitoring and formulating necessary responses regarding climate-related issues for the Corporation including new emerging trends and requirements on climate disclosures and GHG reduction such as recommendations from TCFD and requirements of the Science Based Targets initiative. The Head of Sustainability is also responsible for developing the

Climate Change Strategy, reviewing climate risk mitigation measures and formulating a long-term decarbonisation roadmap and SBTs for the Corporation. The Head of Sustainability is a member of the Environmental and Social Responsibility Steering Committee to provide directions and guidance on ESG issues at operational levels (including climate-related issues), and monitoring progress of programmes for efficacy in achieving the stated Environmental and Social Objectives and GHG reduction targets. The E&SR Steering Committee is also responsible for the oversight and implementation of the ESG Investment Framework, which institutionalise environmental and social principles into the Corporation's investment decision making process and to provide funding for business units and corporate functions for eligible ESG projects.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	We have identified our climate-related risks under our ERM framework stating the possible impacts on our operations and the associated mitigation actions. Climate-related risks may affect our operations and thus hinder us from achieving the targets stipulated in our Operating Agreement with the HKSAR Government and our own Customer Service Pledges, which are directly linked to the performance of the corporate executive team and will be reflected in their annual pay review and the Discretionary Award.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive

Corporate executive team

Type of incentive

Monetary reward

Incentive(s)

Other, please specify (Cash compensation)

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Target incentive levels for the Chief Executive Officer and other Members of the Executive Directorate represent approximately 25-35% of total cash compensation.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

We have identified climate-related risks under our ERM framework stating the possible impacts on our operations and the associated mitigation actions. Climate-related risks may affect our operations and thus hinder us to achieve the targets stipulated in our Operating Agreement with the Hong Kong SAR Government and our own Customer Service Pledges, which are directly linked to the performance of the corporate executive team and will be reflected in their annual pay review and the Discretionary Award.

As part of our Corporate Strategy, we have identified three Environmental and Social Objectives to embed ESG into our operation and management approaches. Reducing GHG emissions is one of the 3 objectives. Under these objectives, we have clearly defined 10 focus areas and a set of key performance indicators (KPIs) that we can create a greater impact for society. In 2022, we have set 14 KPIs related to reducing GHG emissions, including the setting of science-based targets for our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050. Selected KPIs are linked to the performance of respective members of the corporate executive team and will be reflected in their annual pay review and the Discretionary Award.

Entitled to incentive

Chief Executive Officer (CEO)

Type of incentive

Monetary reward

Incentive(s)

Other, please specify (Cash compensation)

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Target incentive level for the Chief Executive Officer represents approximately 25-35% of total cash compensation.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

CEO has the overall responsibilities on ESG and climate-related issues

We have identified climate-related risks under our ERM framework stating the possible impacts on our operations and the associated mitigation actions. Climate-related risks may affect our operations and thus hinder us to achieve the targets stipulated in our Operating Agreement with the Hong Kong SAR Government and our own Customer Service Pledges, which are directly linked to the performance of the CEO and will be reflected in their annual pay review and the Discretionary Award.

As part of our Corporate Strategy, we have identified three Environmental and Social Objectives to embed ESG into our operation and management approaches. Reducing GHG emissions is one of the 3 objectives. Under these objectives, we have clearly defined 10 focus areas and a set of key performance indicators (KPIs) that we can

create a greater impact for society. In 2022, we have set 14 KPIs related to reducing GHG emissions, including the setting of science-based targets for our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050. Selected KPIs are linked to the performance of CEO and will be reflected in their annual pay review and the Discretionary Award.

Entitled to incentive

Other C-Suite Officer

Type of incentive

Monetary reward

Incentive(s)

Other, please specify (Cash compensation)

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Target incentive levels for the Chief Executive Officer and other Members of the Executive Directorate represent approximately 25-35% of total cash compensation.

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

We have identified climate-related risks under our ERM framework stating the possible impacts on our operations and the associated mitigation actions. Climate-related risks may affect our operations and thus hinder us to achieve the targets stipulated in our Operating Agreement with the Hong Kong SAR Government and our own Customer Service Pledges, which are directly linked to the performance of the C-Suite officers and will be reflected in their annual pay review and the Discretionary Award.

As part of our Corporate Strategy, we have identified three Environmental and Social Objectives to embed ESG into our operation and management approaches. Reducing GHG emissions is one of the 3 objectives. Under these objectives, we have clearly defined 10 focus areas and a set of key performance indicators (KPIs) that we can create a greater impact for society. In 2022, we have set 14 KPIs related to reducing GHG emissions, including the setting of science-based targets for our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050. Selected KPIs are linked to the performance of respective C-Suite officers and will be reflected in their annual pay review and the Discretionary Award.

Entitled to incentive

Other, please specify (Head of Sustainability)

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Salary increase

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The Head of Sustainability is tasked with formulating a Climate Change Strategy and a long-term decarbonisation roadmap for the Corporation to manage climate risks. Timely completion and effective launch of the strategy and the roadmap are the major responsibilities of the Head of Sustainability, which are directly linked to her performance and will be reflected in her annual pay review and the Discretionary Award. She is also responsible for driving the implementation of GHG reduction initiatives to meet the SBTs and achieve carbon neutrality.

Entitled to incentive

Business unit manager

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Salary increase

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

We have identified climate-related risks under our ERM framework stating the possible impacts on our operations and the associated mitigation actions. Climate-related risks may affect our operations and thus hinder us to achieve the targets stipulated in our Operating Agreement with the Hong Kong SAR Government and our own Customer Service Pledges, which are directly linked to the performance of all the business unit managers and will be reflected in their annual pay review and the Discretionary Award.

As part of our Corporate Strategy, we have identified three Environmental and Social Objectives to embed ESG into our operation and management approaches. Reducing GHG emissions is one of the 3 objectives. Under these objectives, we have clearly defined 10 focus areas and a set of key performance indicators (KPIs) that we can create a greater impact for society. In 2022, we have set 14 KPIs related to reducing GHG emissions, including the setting of science-based targets for our railway and

property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050. Selected KPIs are linked to the performance of respective business unit managers and will be reflected in their annual pay review and the Discretionary Award.

Entitled to incentive

Procurement manager

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Salary increase

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

The Corporation has maintained a Supplier Code of Practice which requires all our suppliers to comply with applicable laws and regulations, including environmental regulations. We also survey our suppliers periodically to collect information about the status of their policies, initiatives and monitoring systems relating to sustainability (also including environmental protection). The procurement manager is responsible for ensuring suppliers' understanding and monitoring their compliance with our sustainability requirements. The effectiveness of supply chain engagement is linked to the performance of all procurement managers and will be reflected in their annual pay review and the Discretionary Award.

As part of our Corporate Strategy, we have identified three Environmental and Social Objectives to embed ESG into our operation and management approaches. Reducing GHG emissions is one of the 3 objectives. Under these objectives, we have clearly defined 10 focus areas and a set of key performance indicators (KPIs) that we can create a greater impact for society. In 2022, we have set 14 KPIs related to reducing GHG emissions, including the setting of science-based targets for our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050, as well as 3 KPIs related to our suppliers. Selected KPIs are linked to the performance of respective procurement managers and will be reflected in their annual pay review and the Discretionary Award.

Entitled to incentive

All employees

Type of incentive

Monetary reward

Incentive(s)

Bonus - % of salary
Salary increase

Performance indicator(s)

Other (please specify) (The performance ratings and assessments reflect the full range of factors over which the individual has accountability, including operational, other non-financial and financial factors.)

Incentive plan(s) this incentive is linked to

Short-Term Incentive Plan

Further details of incentive(s)

Explain how this incentive contributes to the implementation of your organization's climate commitments and/or climate transition plan

We have identified climate-related risks under our ERM framework stating the possible impacts on our operations and the associated mitigation actions. Climate-related risks may affect our operations and thus hinder us to achieve the targets stipulated in our Operating Agreement with the Hong Kong SAR Government and our own Customer Service Pledges, which are directly linked to the performance of all employees and will be reflected in their annual pay review and the Discretionary Award.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	5	The Corporation takes proactive measures to identify, evaluate and manage significant risks, including climate risks, arising from its recurrent and growth business and from the constantly changing business environment. Each risk is evaluated on the basis of the likelihood of the identified risk and the consequence of the risk event, taking into consideration the control measures in place. Broadly speaking, we have categorised the likelihood and our response plan into short-term (within 1-5 years), medium-term (6-10 years) and long-term (11-50 years).
Medium-term	6	10	The Corporation takes proactive measures to identify, evaluate and manage significant risks, including climate risks, arising from its recurrent and growth business and from the constantly changing business environment. Each risk is evaluated on the basis of the likelihood of the identified risk and the consequence of the risk event, taking into consideration the control measures in place. Broadly speaking, we have categorised the likelihood and our response plan into short-term (within 1-5 years), medium-term (6-10 years) and long-term (11-50 years).
Long-term	11	50	The Corporation takes proactive measures to identify, evaluate and manage significant risks, including climate risks, arising from its recurrent and growth business and from the constantly changing business environment. Each risk is evaluated on the basis of the likelihood of the identified risk and the consequence of the risk event, taking into consideration the control measures in place. Broadly speaking, we have categorised the likelihood and our response plan into short-term (within 1-5 years), medium-term (6-10 years) and long-term (11-50 years).

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

A risk is defined as substantive financial or strategic impact if it will lead to Government suspension of our Hong Kong franchises and taking over our administration (please see below for details of our relationship with the Hong Kong SAR Government). A risk matrix is used to determine risk ratings (E1-E4), with E1 being a very high risk and E4 being a low risk. The risk ratings reflect the required management attention and risk treatment effort, indicating the priorities for further action plans. The highest category of risks, "E1", is subject to the Board, the Board-level Audit & Risk Committee and the Executive Committee oversight. Our Enterprise Risk Management framework defines the financial implications of a risk event into 4 categories: 1) HK\$10M – 300M as "significant consequence", 2) >HK300M – HK\$1B as "major consequence", 3) >HK\$1B – HK\$10B as "critical consequence", and 4) >HK\$10B as "catastrophic consequence". Depending on the likelihood of the identified risk, the financial implication of a risk event in monetary terms >HK\$300M may be classified as a risk rating of E1 (if it is very likely to happen), which is considered as substantive. Note that the revenue generated from Hong Kong transport operations in 2022 is HK\$13,404 million.

Note: The HKSAR Government owns around 75% of the Corporation. Despite its majority ownership, the Corporation is independently managed on commercial principles. Under the Mass Transit Railway Ordinance (Cap. 556) the Corporation is granted the franchise to operate the HK railway network. However, the Chief Executive in Council may order the franchise be suspended if there is or is likely to be a substantial breakdown in the operation of the railway.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

MTR's Enterprise Risk Management (ERM) framework provides a clear and holistic view of the significant safety, business, finance, legal/regulatory and reputation/political risks that the Corporation faces. It covers issues in social, environmental and economic areas, including climate risks. The ERM framework provides a simple and effective management process to identify and review risks across all business units and corporate functions of the Corporation (including its direct operations and both upstream and downstream activities); prioritise resources to manage risks; give management a clear view of the significant risks facing by the Corporation; and support decision making and project execution for better business performance. The Corporation takes proactive measures to identify, evaluate and manage significant risks, including climate risks, arising from its recurrent and growth business and from the constantly changing business environment.

Each risk is evaluated on the basis of the likelihood of the identified risk and the consequence of the risk event by considering factors such as penalty due to failure to meet contract agreement, taking into consideration the control measures in place. A risk matrix is used to determine risk ratings E1-E4. The risk ratings reflect the required management attention and risk treatment effort, indicating the priorities for further action plans. The highest category of risks, "E1", is subject to the Board, the Board-level Audit & Risk Committee and the Executive Committee (EC) oversight. Opportunities are assessed and prioritised based on the return on investment and payback periods and pursued where appropriate.

The Enterprise Risk Committee (ERC), EC and the Board-level Audit & Risk Committee review the enterprises risk profile and brainstorm emerging risks half-yearly/quarterly to ensure that key risks and those cutting across different areas of the business are captured. Climate change risks are monitored, reviewed and updated annually through our ERM framework. We identify and review risks to our business units regularly and prioritise resources to mitigate and manage any emergent and significant risks. Divisional representatives report climate risks to the ERC which is responsible for reviewing the Corporation's top risks and key emerging risks (including climate risks) annually. The Chairman of the ERC will report the top risks to the EC and the Board-level Audit & Risk Committee on a quarterly basis and to the Board on a six-monthly basis. Climate change risks map at corporate level is reported to the ERC and the EC annually by the Head of Sustainability and the Chairman of the ERC respectively.

We also identify and assess climate risks as part of our materiality assessment during our sustainability reporting process for public disclosure and continuous improvement.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	<p>The Corporation is committed to complying with all the relevant legislative requirements. We have identified "regulatory pressure" as one of our climate risks under our Enterprise Risk Management framework (please refer to C2.2 above for details), which include, for instance, compliance with the mandatory disclosure of sustainability issues under the listing rules in Hong Kong. In addition, the Hong Kong Exchanges and Clearing Ltd is reviewing its ESG reporting framework to align with the new ISSB carbon disclosure requirements. In December 2020, the Green and Sustainable Finance Cross-Agency Steering Group announced that TCFD-aligned climate-related disclosures will be mandatory across relevant sectors no later than 2025.</p> <p>Non-compliance with the ESG Reporting Guide constitutes a breach of the Listing Rules, which may result in investigations or regulatory responses such as disciplinary actions or issuance of warning or caution letters by the Stock Exchange, depending on the facts and circumstances.</p>
Emerging regulation	Relevant, always included	<p>The Corporation is committed to complying with all the legislative requirements. We have identified "regulatory pressure" as one of our climate risks under our Enterprise Risk Management framework (please refer to C2.2 above for details), which include, for instance, more stringent requirements from the government on resilience of new infrastructures (especially buildings such as stations and commercial buildings) to climate change, which could lead to increase in capex and programme delay of new railway expansion projects.</p> <p>For example, the HKSAR government released the Hong Kong's Climate Action Plan 2050 in Oct 2021, setting out the vision of "Zero-carbon Emissions-Liveable City-Sustainable Development", and outlining the strategies and targets for combating climate change and achieving carbon neutrality before 2050. As electricity generation is a key contributor to the overall carbon emissions in Hong Kong, key actions are to cease using coal for daily electricity generation; increase the share of renewable energy in the fuel mix for electricity generation to 7.5% to 10% by 2035, and to 15% subsequently; and try out the use of new energy and strengthen co-operation with neighbouring regions to achieve the long-term target of net-zero electricity generation before 2050. It is expected that the above initiatives would increase our electricity cost as our railway systems are predominantly electrically-powered.</p> <p>In addition, the HKSAR Government would tighten the Building (Energy Efficiency) Regulation to continuously improve the energy efficiency standards of buildings which would impact the design of the E&M systems for our new development projects.</p>
Technology	Relevant, always included	<p>We have considered climate-risk associated with technology under our Enterprise Risk Management framework (please refer to C2.2 above for details). The Corporation provides public transport (metros and light rail) that has a high passenger capacity. This offsets the largely fossil-based road transportation modes such as buses and reduces the need for private cars and taxis. Our railway powered by electricity has provided a low carbon transportation service that contributes to emission avoidance. We keep track of technological advancement in all areas of railway operations and initiate upgrade to our system to continuously improve and maintain a high service level and efficiency. These upgrades involve capital investment and require careful planning in order to avoid service interruption which may negatively impact the Corporation's reputation.</p> <p>For example, the Corporation is currently replacing its existing signalling systems for seven urban lines at a total cost of HK\$3.3 billion. Upon completion of the signalling system replacement project, overall passenger capacity will be increased by 10%. As the new system has less equipment along the track area, it is expected that there will be fewer equipment faults and recovery time during incidents can be shortened. However, switch-over to the new signalling system requires completion of substantial drill and reliability tests which may cause service interruption.</p>
Legal	Relevant, always included	<p>The Corporation is committed to complying with all the legislative requirements. We have identified "regulatory pressure" as one of our climate risks under our Enterprise Risk Management framework (please refer to C2.2 above for details) to avoid climate-related litigation claims due to breaching of relevant legislation. For instance, we have included compliance with the mandatory Building Energy Code (Buildings Energy Efficiency Ordinance), which is a local regulation, in our list of climate risk. We also track local and international policy developments related to climate change. An update is regularly reported to the Environmental & Social Responsibility Steering Committee and Enterprise Risk Committee. However, we do not foresee any significant climate-related litigation claims in short term.</p>
Market	Relevant, not included	<p>The Corporation provides low-carbon mass transport that has a high capacity, and reduces the need for the largely fossil-based road transportation mode such as buses, private cars and taxis. Our trains are fully electrified and has a higher capacity than road vehicles, we provide low carbon transportation service that contributes to avoid emission. In addition, we have further reduced our carbon footprint by setting science-based targets for 2030 and our SBTs have been validated and approved by Science Based Targets initiatives (SBTI) in April 2023.</p> <p>We will be assisting the HKSAR Government in the development and implementation of 7 new rail projects under the Railway Development Strategy 2014 for the coming decade. These include the Tung Chung Line Extension, Tuen Mun South Extension, Kwu Tung Station for Phase 1 of the Northern Link, and Hung Shui Kiu Station projects, etc.</p> <p>The Tung Chung Line Extension project comprises three components: i) a new intermediate Tung Chung East Station between the Sunny Bay Station and Tung Chung Station, ii) an extension of the existing Tung Chung Line to a new terminal station at Tung Chung West, and iii) the Airport Railway Extended Overrun Tunnel (Remaining Section). The Tuen Mun South Extension is a 2.4-km extension of the West Rail from the existing Tuen Mun Station to a new terminus at Tuen Mun South, via a proposed intermediate station between Tuen Mun Station and new Tuen Mun South Station.</p> <p>The first phase of the Northern Link project will involve the construction of a new Kwu Tung Station. The second phase will be a railway line about 10.7 km long linking Kam Sheung Road Station on the Tuen Ma Line and the new Kwu Tung Station, via three intermediate stations in San Tin, Ngau Tam Mei and Au Tau. Construction of the first phase is expected to commence in 2023 and is scheduled to be completed in 2027.</p> <p>HKSAR Government has stated clearly in its Climate Action Plan 2050 that our railway system will continue to serve as the backbone for the local public transport system as part of the key decarbonisation strategies. We therefore consider market as an opportunity rather than risk as there will be higher demand for our low carbon services from our customers. We are also working on design and feasibility study of developing Tuen Mun South Station and Hung Shui Kiu Station as low-carbon stations.</p>
Reputation	Relevant, always included	<p>The Corporation has identified "reputational impact" as one of our climate risks under our Enterprise Risk Management framework (please refer to C2.2 above for details), which include, for instance, dissatisfaction and criticism from green groups on our carbon reduction efforts against their expectations, or Legislative Council hearings due to increasing disclosure and transparency on climate related information.</p> <p>Failure to maintain a reputation for addressing climate change challenges may result in increased stakeholder concern or negative stakeholder feedback which could impact our social licence to operate and working relations with HKSAR Government to obtain approval on our new railway projects.</p>
Acute physical	Relevant, always included	<p>According to the Hong Kong Observatory, extreme precipitation events have become more frequent in Hong Kong. The Corporation has conducted climate impact assessments on our operations. We have identified "changes in rainfall pattern - excessively heavy rain and flooding" as one of our climate risks under our Enterprise Risk Management framework (please refer to C2.2 above for details), which may cause, for instance flooding in stations. In addition, extensive road blockage due to serious flooding would disrupt public road transport which would lead to a surge in demand for our services causing overcrowding in our stations which in turn would impact our service quality.</p>
Chronic physical	Relevant, always included	<p>According to the Hong Kong Observatory, there was an increase in average temperature of 0.28 degree Celsius per decade during 1993-2022 in Hong Kong. The Corporation has conducted climate impact assessments on our operations. We have identified "higher ambient temperature" as one of our climate risks under our Enterprise Risk Management framework (please refer to C2.2 above for details), which may cause, for instance, increase in electricity use for the provision of air conditioning for passengers/customers, track equipment failure (such as track deformation or defects due to expansion of steel track under extreme heatwave along the open section of the East Rail Line of route length of over 45 km) leading to service suspension and heat stroke of staff working outdoor.</p>

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
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Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

The Chief Executive of the HKSAR pledged in the Policy Address 2020 that HKSAR will strive to achieve carbon neutrality before 2050 and released the Hong Kong's Climate Action Plan 2050 in Oct 2021 which sets out 4-pronged strategy to cut HK's carbon emissions and to achieve the reduction goal. According to the latest GHG inventory for Hong Kong released in June 2022, electricity generation continued to be the major source of emissions (amounting to 60.4% of the total emissions). Therefore, decarbonising the energy sector is the top priority which fossil fuels should be phase out in electricity generation and more natural gas will be needed as a transition fuel in the coming decade.

To achieve the goal of carbon neutrality before 2050, MTR may face the following risks:

- (i) higher electricity tariff from the power companies (there are only 2 power companies in Hong Kong) due to carbon levy or other related charges for more low carbon fuel sources; and
- (ii) possible energy efficiency programmes for railway operations including buses, company fleet, new rolling stock, LED lighting, etc., such as the mandatory Building Energy Code (Buildings Energy Efficiency Ordinance).

Our fully electrified rail network consumes a significant amount of electricity generated from both non-renewable and renewable fuel sources. As purchased electricity represents our largest carbon footprint as well as non-staff operating cost, we have concentrated our efforts to reduce energy consumption and improve energy efficiency in our rail and property operations. In 2022, our expenses on energy and utilities were HK\$1,991 million. Given that utilities constitute 10-15% of our transport operation costs, any increase in electricity tariff will have major financial implication to our bottom line due to higher electricity costs or other costs passed down through the supply chain.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

19910000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We have established an Enterprise Risk Matrix to assess risk level of each identified risk by considering its likelihood of occurrence and consequence in monetary terms. Our ERM framework defines the financial implications of a risk event into 4 categories: 1) HK\$10M – 300M as "significant consequence", 2) >HK300M – HK\$1B as "major consequence", 3) >HK\$1B – HK\$10B as "critical consequence", and 4) >HK\$10B as "catastrophic consequence". Risk 1 falls within the realm of "significant consequence" under the Matrix, which is equivalent to HK\$10M – 300M.

Given that utilities constitute 10-15% of our transport operation costs, there will be major financial implication on energy consumption. Our expenses on energy and utilities relating to Hong Kong transport operations were HK\$1,991M in 2022. Assuming there will be a 1% increase in our expenses on energy and utilities in Hong Kong transport operations due to the rising trend of mean temperatures, the financial impact will be HK\$19.91M.

Cost of response to risk

1127000000

Description of response and explanation of cost calculation

Recognising the extent of our portfolio and impact, the Corporation takes an active approach in adopting more stringent energy efficiency requirements beyond compliance. For existing infrastructure, we continue to put forward asset replacement/upgrade with more energy efficient products. These include but not limited to lighting in stations, trains and advertising panels; and environmental control systems to manage energy efficiency in stations, etc.

We also adopt energy storage solution for the regenerative braking system in the trains of our new lines and have invested HK\$19 million on the energy storage devices. The energy storage devices were installed at two locations – Tsuen Wan Depot and Kowloon Ventilation Building. The regenerative energy obtained from the braking of Electric Multiple Units (EMU) is stored in the storage devices and then back-fed to the power line for use by EMUs during acceleration. The energy consumption is estimated to be reduced by approximately 600 MWh per year.

In 2022, we have completed installation Station Energy Saving Inverter at Hong Kong University Station and Lai King Traction Substation (Project Sum = HK\$8M). The systems can capture total estimated average of 1,700kWh of regenerative energy per day, which may be converted to low-voltage AC electricity to power station facilities such as lighting, escalators and lifts.

Our on-going energy saving efforts include, for example:

- (i) Exhaust fans are used to create negative pressure in the station, which draws in cool ambient air through station entrances to reduce the overall cooling demand.
- (ii) Screen doors are installed to lessen the piston effect whereby moving trains pull cooled air into the tunnel and push hot air from the tunnel into the station, which in turn minimises the cooling volume on platforms.
- (iii) Phase 1 chiller replacement in stations and depots will be completed in 2023, which can reduce our chiller electricity consumption by up to 30% from 2017 levels

(invested HK\$1.1 billion for the replacement of 150+ chillers). Phase 2 replacement project for over 30 chillers in stations will be commenced in 2023 and completed in 2026, which can reduce our chiller electricity consumption by up to 20%.

Total = HK\$1.1 billion (chiller replacement) + HK\$19 million (energy storage devices) + HK\$8 million (Station Energy Saving Inverter) = HK\$1.127 billion.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Changing temperature (air, freshwater, marine water)
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

According to the Hong Kong Observatory, there was an increase in average temperature of 0.28 degree Celsius per decade during 1993-2022 in Hong Kong. Higher ambient temperature and more hot days/heat waves could impact our businesses in a number of ways: (i) increase demand on air-conditioning in our railway system leading to more loading on ventilation and cooling assets and in turn to higher electricity consumption; (ii) induce track deformation or defects leading to service suspension (i.e. over 45 km of the East Rail Line is mostly open section at grade which is susceptible to the consequences of heat waves); and (iii) impact on staff well-being, especially those working outdoor such as station attendant.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

153950000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We have established an Enterprise Risk Matrix to assess risk level of each identified risk by considering its likelihood of occurrence and consequence in monetary terms. Our ERM framework defines the financial implications of a risk event into 4 categories: 1) HK\$10M – 300M as "significant consequence", 2) >HK300M – HK\$1B as "major consequence", 3) >HK\$1B – HK\$10B as "critical consequence", and 4) >HK\$10B as "catastrophic consequence". Risk 2 falls within the realm of "significant consequence" under the Matrix, which is equivalent to HK\$10M – 300M. Specifically,

There will be major financial implication on energy consumption, higher capacity of electrical and mechanical systems, particularly the Heat, Ventilation and Air-condition (HVAC) leading to increased cost and higher need and frequency of maintenance. Our expenses on energy and utilities relating to Hong Kong transport operations were HK\$1,991M in 2022. Assuming there will be a 1% increase in our expenses on energy and utilities in Hong Kong transport operations due to the rising trend of mean temperatures, the financial impact will be HK\$19.91M.

Track deformation or defects may lead to service suspension (the open section of the East Rail Line with route length of over 45km is more susceptible to the consequences of heat waves). The revenue from our Hong Kong transport operations was HK\$13,404M in 2022. Assuming there will be a 1% decrease in revenue from Hong Kong transport operations due to service disruption caused by track deformation, the financial impact will be HK\$134.04M

Relating to staff, the increased temperature could reduce their productivity on site, or impacts their health adversely due to heat stress.

Based on the above estimation, the potential financial implication will be HK\$19.91M + HK\$134.04M = HK\$153.95M.

Cost of response to risk

1100000000

Description of response and explanation of cost calculation

Situation:

According to the Hong Kong Observatory, there was an increase in average temperature of 0.28 degree Celsius per decade during 1993-2022 in Hong Kong. We expect the trend will continue for the short- to mid-term leading to increase demand on air-conditioning in our railway system leading to more loading on ventilation and cooling assets and in turn to higher electricity consumption.

Task needs to be done:

In response to climate change, we have developed a Climate Change Strategy following a 3-pronged approach. We have concentrated our efforts to provide a low-carbon transport network, improve energy efficiency and strengthen climate adaptation and resilience measures in our operations. Under this specific situation, we need to identify and implement energy efficiency measures to minimise the financial impact caused by the increased expenses on energy and utilities.

Actions taken in 2022:

- (i) review of the capacity of E&M equipment, in particular the HVAC systems, at stations regularly or on an on-demand basis, as well as the capacity of power supply and consumption;
- (ii) replacement of a total of 150+ chillers in phases with better Coefficient of performance in stations/depots from year 2017 to 2022/23 (about half of the air conditioning systems in our Hong Kong's network);
- (iii) adoption of winter free cooling mode (i.e. using ambient air for station cooling and exhaust fans operate while chillers and intake fans are off-run);
- (iv) provision of platform screen doors in underground stations to prevent loss of air-conditioning to trackways and thereby energy wastage;
- (v) adoption of high-efficiency air-conditioning system (i.e. water-cooled air-conditioning system) where practicable for new MTR stations; and
- (vi) monitoring of power consumption due to hotter days and driving day-to-day energy saving measures.

Results:

2022 Progress: In 2022, we completed the first phase of our programme to replace 154 chillers with 133 new chillers of more energy efficient models
Total Investment Amount: HK\$1.1 billion for the replacement of 150+ chillers in phases. The fee includes 2 components and has been estimated by adding the 1) consultancy fee for feasibility studies and design works and 2) contractor fee for the projects carried out in different phases.

Benefit: The operating efficiency and performance of the new chillers is better than the existing chillers, the energy consumption is expected to be reduced by 30.4 GWh when completed.

Comment

The manpower and capital expenditures for the above management methods are hard to estimate as they are part of our overall strategy and budget.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Cyclone, hurricane, typhoon
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

According to the Hong Kong Observatory, extreme precipitation and super typhoon events have become more frequent in Hong Kong. Changes in rainfall pattern and intensity brought by super typhoon, especially excessively heavy rain and flooding could impact our operations in a number of ways:

- (i) lead to flooding in stations (especially in underground stations), tunnel and at at-grade tracks (i.e. over 45 km of the East Rail Line is mostly open section at grade) resulting in service suspension and loss of revenue; and also incur costs on repairing or replacing equipment affected by flooding;
- (ii) reduce visibility and increase risk of collision of fleets/between pedestrian/road vehicles leading to service suspension and loss of revenue;
- (iii) limit construction activities on site, leading to potential programme delay and increased project costs due to extension of time due to inclement weather; and
- (iv) expose underground car park and plant rooms to flooding risk that will incur costs on repairing or replacing equipment affected by flooding.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

134040000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

We have established an Enterprise Risk Matrix to assess risk level of each identified risk by considering its likelihood of occurrence and consequence in monetary terms. Our ERM framework defines the financial implications of a risk event into 4 categories: 1) HK\$10M – 300M as "significant consequence", 2) >HK300M – HK\$1B as "major consequence", 3) >HK\$1B – HK\$10B as "critical consequence", and 4) >HK\$10B as "catastrophic consequence". Risk 3 falls within the realm of "significant consequence" under the Matrix, which is equivalent to HK\$10M – 300M.

Extreme rainfall events could lead to suspension of the railway operation (resulting in reduction of fare revenue), construction programme delay and increased maintenance. In 2022, the fare revenue from our Hong Kong transport operations was HK\$13,404M. Assuming there will be a 1% decrease in revenue from Hong Kong transport operations due to service disruption caused by flooding, the financial impact will be HK\$134.04M.

Cost of response to risk

7370000000

Description of response and explanation of cost calculation

We have already included flood handling procedures and foggy weather handling procedures in our Standing Operations Procedures Manual. On-going actions are carrying

out to tackle extreme rainfall events in short to medium term:

- (i) carrying out regular maintenance;
- (ii) regular review of flood protection measures; and
- (iii) on-going improvement works for at-grade stations and critical equipment rooms.

Our railway infrastructure is constructed with appropriate flood protection e.g. the entrances/exits of most MTR stations are by design at least 450mm above street level and equipped with 1.2m high flood boards, floodgate at interface with the sea and waterproof doors at underground entrances/exits connecting the stations and other facilities as needed. The location of the plant rooms is carefully planned so that they would be least affected in the event of excessive rainfall. We have also set up Customer Service Rapid Response Unit (CSRRU) and Customer Service Support Team to support daily railway operation and offer help during service failure.

On construction sites, floodgates are constructed around openings to the underground to prevent flooding while pump facilities are on standby to tackle inundation. Meanwhile, the construction programme is also planned so that weather-sensitive works would be completed in dry seasons such as delivery of oversized construction equipment.

In 2022, MTR invested a total of more than HK\$7,370 million to maintain, upgrade or replace the Corporation's Hong Kong railway assets.

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Primary potential financial impact

Increased diversification of financial assets

Company-specific description

In 2017, the Hong Kong SAR Government announced to promote the development of green finance in Hong Kong and to issue a green bond in the financial year 2018/19. The promotion of green bonds by the Government will play an important role in establishing Hong Kong as an international green finance hub and expanding the local bond market. This will encourage more issuers to arrange financing for their green projects through the capital markets and attract more stakeholders to look into the new investment opportunities.

The Corporation established our Green Bond Framework and issued our first Green Bond in 2016. The green bond issuances have allowed us to tap into a new and fast-growing bond investor base and hence expanded and diversified our funding sources. They have provided similar cost effective financing as traditional bonds for our environmentally friendly services and network enhancements, primarily in relation to mitigating climate change.

Building upon our 2016 Green Bond Framework, the Corporation established a Green Finance Framework in 2018 to expand the scope of green finance to include green loans and other green credit facilities. In 2020, the Green Finance Framework has been further expanded to a Sustainable Finance Framework to cover eligible projects to enhance both green (added a new category of renewable energy) and social performance.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

32000000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Since 2016, MTR has raised sustainable finance of more than HK\$ 32 billion up to the end of 2022, which was a key part of our financing strategy for funding railway asset replacement, energy efficiency improvement and railway service enhancement projects.

In 2022 sustainable finance totalling HK\$ 2.8 billion was arranged to fund projects for energy conservation, environmental protection, as well as enhancement and expansion of low-carbon railway services. Please refer to our Sustainable Finance Report 2022 for details. All relevant figures have been independently assured by the Hong Kong Quality Assurance Agency.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

Situation:

In 2017, the HKSAR Government announced to promote the development of green finance in Hong Kong and to issue a green bond in the financial year 2018/19. The promotion of green bonds by the Government has played an important role in establishing HKSAR as an international green finance hub and expanding the local bond market. This encourages more issuers to arrange financing for their green projects through the capital markets and attracted more stakeholders to look into the new investment opportunities.

Task need to be Done:

We set up a Green Bond Framework in 2016 in alignment with the Green Bond Principles issued by the International Capital Market Association to integrate environmental, social and corporate governance into our financing and decision-making processes. In order to realise the opportunity of the emerging marketing of diversified green finance products in HKSAR, we need to expand our green bond framework to cover other forms of green finance, factoring in components recommended in the Green Loan Principles issued by the Asia Pacific Loan Market Association.

Actions Taken:

Building upon our 2016 Green Bond Framework, the Corporation established a Green Finance Framework in 2018 to expand the scope of green finance to include green loans and other green credit facilities. In 2020, we put in place a Sustainable Finance Framework to cover a wider range of financing transactions where the proceeds are used for furthering the development of sustainable urban infrastructure in support of the UN Sustainable Development Goals. The Framework sets out how the Corporation uses the proceeds of green finance to invest in projects and facilities that will result in enhanced service levels and environmental performance over the longer term. The arrangement of Sustainable Finance is an integral part of MTR's financing strategy and reflects our commitment to sustainable development.

Results:

Since 2016, MTR has raised sustainable finance of more than HK\$ 32 billion up to the end of 2022, which was a key part of our financing strategy for funding railway asset replacement, energy efficiency improvement and railway service enhancement projects.

Cost:

Manpower resources for the issuance of green bonds have been absorbed by relevant functions. No additional headcount has been deployed. The cost of issuing green bonds is therefore considered insignificant.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Other, please specify (Increased revenue through demand for lower carbon products and services)

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

In 2014, the HKSAR Government issued the Railway Development Strategy 2014 (RDS 2014) and plans to further expand the railway network up to 2030+ by including 7 new railway lines, extensions and stations (referred to as RDS 1-7 below). In Oct 2021, the Hong Kong Government published Hong Kong's Climate Action Plan 2050, which commended our rail network is the backbone of Hong Kong's low-carbon public transport network and will be continuously encouraged to grow. In 2021, the Corporation made progress on a number of projects recommended under the RDS 2014 framework for the future development of the Hong Kong railway network.

In December 2021, the Tung Chung Line Extension (RDS 1) became the first railway project under RDS 2014 to be gazetted under the Railways Ordinance. After receiving Government's invitation to proceed with detailed planning and design in April 2020, preliminary design commenced in June 2020. Construction is expected to commence in 2023 and be completed in 2029.

Following Government's invitation to proceed with the detailed planning and design for the Tuen Mun South Extension (RDS 2) in May 2020, detailed planning and design commenced in the fourth quarter of 2020. The scheme was authorised under the Railways Ordinance in June 2022. Construction is targeted to commence in 2023 and be completed in 2030.

After receiving Government's invitation to proceed with detailed planning and design in December 2020, we awarded the consultancy for the detailed planning and design of Kwu Tung Station (one of the stations under RDS 3) on the East Rail Line in April 2021. The scheme was authorised under the Railways Ordinance in November 2022, with construction targeted to commence in 2023 for completion in 2027. The preliminary design consultancy for the Northern Link Main Line and associated stations (RDS 3) was awarded in July 2021, with construction targeted to commence in 2025 for completion in 2034.

We were invited by Government to proceed with detailed planning and design for the Hung Shui Kiu Station (RDS 4) in May 2021, and we awarded the preliminary design consultancy for the project in October 2021. Construction is targeted to commence in 2024 for completion in 2030.

We are working closely with Government to address technical challenges regarding the East Kowloon Line (RDS 5) and North Island Line (RDS 6). We are also working with Government on the South Island Line (West) (RDS 7).

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

13404000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The detailed financial implications depend on the context and scale of the projects and on the agreed terms of projects to be built and operated. Nevertheless, the launch of new rail projects has critical financial significance to the Corporation. In 2022, the revenue generated from domestic service of Hong Kong transport operations is HK\$13,404 million which is derived from the annual patronage for domestic service (1,334.6 millions) in 2022 and the average fare for domestic service (HK\$8.06). Domestic service covers the following rail lines: Kwun Tong, Tsuen Wan, Island, South Island, Tung Chung, Tseung Kwan O, Disneyland Resort, East Rail (excluding Cross-boundary Service), and Tuen Ma lines.

Cost to realize opportunity

30100000000

Strategy to realize opportunity and explanation of cost calculation

In Hong Kong, the Corporation supports the Transport and Logistics Bureau in the process of delivering the Railway Development Strategy 2014 (RDS 2014), providing technical expertise in terms of development new railway lines and their connections to the existing network. In the meantime, we continue to open new lines such as the East Rail Line cross-harbour extension and enhance our services within Hong Kong to demonstrate our competence as we pursue these new opportunities.

Seven new railway projects have been proposed under the RDS 2014. We are now proceeding the detailed planning and design for 4 of these projects, namely the Tuen Mun South (TMS) Extension, the Northern Link (and Kwu Tung Station), the Tung Chung Line (TCL) Extension, and the Hung Shui Kiu Station. We also submitted a project proposal for the South Island Line (West) in December 2020. During the year, we continued to work with Government to address technical challenges on the East Kowloon Line and North Island Line projects.

The economic benefits accrued to transport infrastructure is generally measured in terms of time saving to road users. It is estimated that the TMS Extension will save the public a cumulative total of about 300 million hours over 50 years of operation. The economic benefits, including the said time saving, operating cost savings of other public transport vehicles and cost savings due to reduction in accidents, of the TMS Extension are estimated to be about \$28 billion in 2015 prices. It is estimated that the TCL Extension will save the public a cumulative total of about 792 million hours over 50 years of operation. The economic benefits, including time saving, public transport vehicle operating cost savings, and accident cost savings over 50 years of operation, of the TCL Extension are estimated to be about \$61.4 billion in 2016 prices.

Based on the HKSAR Government information, the estimated capital cost of the Tung Chung Line Extension and Tuen Mun South Extension is about HK\$18.7 billion and HK\$11.4 billion.

Total cost = HK\$18.7 billion + HK\$11.4 billion = HK\$30.1 billion

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization’s strategy include a climate transition plan that aligns with a 1.5°C world?

Row 1

Climate transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a climate transition plan within two years

Publicly available climate transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your climate transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your climate transition plan (optional)

<Not Applicable>

Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world and any plans to develop one in the future

Recognising the climate imperative for businesses, we have completed a carbon reduction study that takes into account a comprehensive range of factors including the latest climate science, technology trends, Hong Kong’s Climate Action Plan 2050, the risks and opportunities for our business, and the views of key internal and external stakeholders. Following this study, we have committed to setting science-based carbon reduction targets for 2030 with the longer-term goal of achieving carbon neutrality by 2050.

These targets will cover the scope 1 and scope 2 emissions from our Hong Kong railway and property businesses as well as scope 3 emissions and will be achieved by implementing a range of energy saving and carbon reduction initiatives, such as investing in the latest technologies, adopting innovative ways to enhance work efficiency, and partnering with key stakeholders including the electricity suppliers in Hong Kong, in a concerted effort to reduce carbon emissions.

In July 2022, we have submitted our commitment letter to SBTi for our near-term targets and the targets have been validated and approved by SBTi in April 2023.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios RCP 8.5	Country/area	<Not Applicable>	Parameters assessed - drought stress, fire, heat stress, precipitation stress, river flood, sea level rise, and tropical cyclone.
Physical climate scenarios RCP 4.5	Country/area	<Not Applicable>	Parameters assessed - drought stress, fire, heat stress, precipitation stress, river flood, sea level rise, and tropical cyclone.
Physical climate scenarios RCP 2.6	Country/area	<Not Applicable>	Parameters assessed - drought stress, fire, heat stress, precipitation stress, river flood, sea level rise, and tropical cyclone.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

High-level climate diagnostic study on our railway and property assets in Hong Kong to assess their exposures to climate-related physical risks under different time horizons and climate scenarios based on the selected Representative Concentration Pathways

Results of the climate-related scenario analysis with respect to the focal questions

The Study was completed in 2022. It will help us identify critical exposed assets at risk, which enables us to plan for a more in-depth scenario analysis where appropriate.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>One of the most substantive business decisions integrating climate-related issues into our business strategy is the establishment of our Green Finance Framework and Sustainable Finance Framework covering green bonds, green loans and other green credit facilities, providing funding to environmental projects and network enhancements to support the growing demand for low-carbon mass transport services as reported in C2.4a above.</p> <p>Since 2016, MTR has raised sustainable finance of more than HK\$ 32 billion up to the end of 2022, which was a key part of our financing strategy for funding railway asset replacement, energy efficiency improvement and railway service enhancement projects.</p> <p>In 2022 sustainable finance totalling HK\$ 2.8 billion was arranged to fund projects for energy conservation, environmental protection, as well as enhancement and expansion of low-carbon railway services.</p> <p>Background:</p> <p>In 2017, the HKSAR Government announced to promote the development of green finance in Hong Kong and to issue a green bond in the financial year 2018/19. The promotion of green bonds by the Government has played an important role in establishing HKSAR as an international green finance hub and expanding the local bond market. This encourages more issuers to arrange financing for their green projects through the capital markets and attract more stakeholders to look into the new investment opportunities.</p> <p>We set up a Green Bond Framework in 2016. In order to realise the opportunity of the emerging marketing of diversified green finance products, we need to expand our green bond framework to cover other forms of green finance. The Corporation established a Green Finance Framework in 2018 to expand the scope of green finance to include green loans and other green credit facilities. In 2020, we put in place a Sustainable Finance Framework to cover a wider range of financing transactions where the proceeds are used for furthering the development of sustainable urban infrastructure in support of the UNSDG. The Framework sets out how the Corporation uses the proceeds of green finance to invest in projects and facilities that will result in enhanced service levels and environmental performance over the longer term.</p>
Supply chain and/or value chain	Yes	<p>Around 75% of our total energy use attributes to the operation of our railway networks. In view of our business expansion, increase in train frequency to alleviate overcrowding in trains and provision of a comfortable riding environment, there will be corresponding rise in electricity consumption that needs to be managed proactively.</p> <p>The HKSAR government has devised a long-term decarbonisation strategy to combat Climate Change. As electricity generation is a key contributor to the overall carbon emissions in Hong Kong, one key action is to phase down the use of coal gradually and increase the use of more natural gas and/or non-fossil fuel sources for electricity generation.</p> <p>In view of the above, we expect our expenditure in electricity will continue to rise in short to medium term as defined in C2.1a above which would impact our operations.</p> <p>We have integrated climate change considerations into our business strategy to ensure that climate risks are thoroughly considered and incorporated in our planning, design and operations. We published our Climate Change Strategy in April 2020 presenting our 3-pronged strategy to address climate change.</p> <p>One of the measures under the Climate Change Strategy to address the risk related to the procurement of electricity is to explore the possibility of adopting more renewable energy (RE) where feasible. For example, the Feed-in Tariff (FIT) and Renewable Energy Certificates (RECs) under the new Scheme of Control Agreement between the two power companies in Hong Kong and the HKSAR Government have provided further opportunities in moving towards low-carbon operations through the adoption of RE and purchasing RECs.</p> <p>Increasing the generation of RE is a key component of addressing the global climate challenge. Following the successful installation of our 189-panel solar PV system at MTR Hung Hom Building in 2019, we installed another PV system comprising 296 solar panels at our Headquarters in 2020. In Jan 2021, we continued the Phase 1 Solar Facilities project in Hin Keng Station (HIK). The solar panel installation works at Pat Heung Depot, Chai Wan Depot, Sunny Bay Station and Siu Hong Station are underway.</p> <p>We will continue to identify suitable locations for the installation of more solar panel systems at our premises. Our target is to increase our generating capacity of renewable energy to 1 million kWh by 2023.</p>
Investment in R&D	Yes	<p>Effectiveness and Innovation is one of the four key focus areas of our Corporate Cultures for excellence and growth. We strive to be innovative in operating our system and managing our assets in order to fulfil our obligations in sustainability for medium to long term. Our regenerative braking system is an example of our willingness to apply innovative technologies to our operations in order to reduce the energy cost as identified as one of the climate-related risk in 2.3a above (installation of Station Energy Saving Inverter at Hong Kong University Station and Lai King Traction Substation).</p> <p>In Hong Kong, we have adopted the regenerative braking technology to convert kinetic energy produced during braking into electrical energy which is then fed back into the power supply network for use by other trains through the overhead power system. We invested around HK\$20 million for the installation of trackside energy storage devices at Tsuen Wan Depot and Kowloon Ventilation Building. It could save around 600MWh per year.</p> <p>To expand our usage of regenerative braking energy, we have completed installation of two Station Energy Saving Inverter systems at Lai King Traction Substation at Airport Express and Tung Chung Line and at HKU Station on the Island Line in 2022. The systems can capture total estimated average of 1,700kWh of regenerative energy per day, which may be converted to low-voltage AC electricity to power station facilities such as lighting, escalators and lifts.</p> <p>At Light Rail operations in Hong Kong, we also installed solar panels in one of our new generation Light Rail Vehicles to provide electricity for the in-compartment lighting system. We will review the effectiveness of this trial and consider possible expansion of the initiative in our light rail network in the coming 1-3 years.</p> <p>Recently, we have obtained the agreement-in-principle by the HKSAR Government to conduct a trial of light rail vehicles powered by hydrogen fuel in Tuen Mun in 2024.</p> <p>We have also conducted a trial project to apply a fully automated AI system to control a chiller plant at station in order to optimise energy performance in real time while maintaining a level of passenger comfort that suits each station's environment. The AI system is expected to achieve better energy efficiency with annual energy savings of approximately 8.7%.</p>

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Operations	Yes	<p>We recognise the importance of combating climate change and commit to integrating low-carbon measures into our policies, strategies and planning as well as strengthen our resilience and adaption to climate-related risks. We understand there are growing interests from stakeholders that our decarbonisation roadmap should align with the Paris Agreement and the increasing expectations from investors for low carbon products/services. In addition, the Chief Executive of the HKSAR pledged in the Policy Address 2020 that HKSAR will strive to achieve carbon neutrality before 2050. The former Environment Bureau released the Hong Kong's Climate Action Plan 2050 in Oct 2021 which sets out 4-pronged strategy to cut HK's carbon emissions and to achieve the reduction goal. Failure to develop suitable carbon reduction targets may result in increased concern and negative feedback from stakeholder especially our institutional investors.</p> <p>We have completed a carbon reduction study that takes into account a comprehensive range of factors including the latest climate science, technology trends, HK's Climate Action Plan 2050, the risks and opportunities for our business, and the views of key internal and external stakeholders. The Study aims to develop a long-term decarbonisation roadmap for the operation and development of our railway and property businesses in HK through analysing our carbon footprint, reviewing feasible technical solutions and industry best practices around the world, and assessing their applicability to our operation.</p> <p>Following the study, we have committed to setting science-based carbon reduction targets for the operation and development of our railway and property businesses in Hong Kong for 2030 with the longer-term goal of achieving carbon neutrality by 2050, which aligns with the HKSAR Government's pledge in the Hong Kong's Climate Action Plan 2050.</p> <p>We will implement a range of energy saving and carbon initiatives, such as investing in the latest technologies, adopting innovative ways to enhance energy efficiency, and partnering with key stakeholders including the electricity suppliers in HKSAR and tertiary institutions, to reduce our Scope 1, 2 & 3 emissions in line with the Paris Agreement.</p> <p>In July 2022, we submitted our commitment letter to SBTi for our near-term targets and the targets have been validated and approved by SBTi in April 2023.</p>

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Access to capital	<p>1. Access to Capital - Green Finance</p> <p>In 2017, the Hong Kong SAR Government announced to promote the development of green finance in Hong Kong and to issue a green bond in the financial year 2018/19. The promotion of green bonds by the Government has played an important role in establishing Hong Kong as an international green finance hub and expanding the local bond market. This also encourages more issuers to arrange financing for their green projects through the capital markets and attract more stakeholders to look into the new investment opportunities.</p> <p>The Corporation established our Green Bond Framework and issued our first Green Bond in 2016. The green bond issuances have allowed us to tap into a new and fast-growing bond investor base and hence expanded and diversified our funding sources. They have provided similar cost effective financing as traditional bonds for our environmentally friendly services and network enhancements, primarily in relation to mitigating climate change. Building upon our 2016 Green Bond Framework, the Corporation established a Green Finance Framework in 2018 to expand the scope of green finance to include green loans and other green credit facilities. In 2020, we have further expanded the Green Finance Framework to a Sustainable Finance Framework to fund both environmental (added a new category of renewable energy) and social projects.</p> <p>Since 2016, MTR has raised sustainable finance of more than HK\$ 32 billion up to the end of 2022, which was a key part of our financing strategy for funding railway asset replacement, energy efficiency improvement and railway service enhancement projects. In 2022 sustainable finance totalling HK\$ 2.8 billion was arranged to fund projects for energy conservation, environmental protection, as well as enhancement and expansion of low-carbon railway services.</p> <p>2. Installation of Solar PV System to Support Local Development of Renewable Energy</p> <p>Around 75% of our total energy use attributes to the operation of our railway networks. In view of our business expansion, increase in train frequency to alleviate overcrowding in trains and provision of a comfortable riding environment, there will be corresponding rise in electricity consumption that needs to be managed proactively.</p> <p>The HKSAR government has devised a long-term decarbonisation strategy to combat Climate Change. As electricity generation is a key contributor to the overall carbon emissions in Hong Kong, one key action is to phase down the use of coal gradually and increase the use of more natural gas and/or non-fossil fuel sources for electricity generation.</p> <p>In view of the above, we expect our expenditure in electricity will continue to rise in short to medium term.</p> <p>We have integrated climate change considerations into our business strategy to ensure that climate risks are thoroughly considered and incorporated in our planning, design and operations. We published our Climate Change Strategy in April 2020 presenting our 3-pronged strategy to address climate change.</p> <p>One of the measures under the Climate Change Strategy to address the risk related to the procurement of electricity is to explore the possibility of adopting more renewable energy (RE) where feasible. For example, the Feed-in Tariff (FIT) and Renewable Energy Certificates (RECs) under the new Scheme of Control Agreement between the two power companies in Hong Kong and the HKSAR Government have provided further opportunities in moving towards low-carbon operations through the adoption of RE and purchasing RECs.</p> <p>Increasing the generation of RE is a key component of addressing the global climate challenge. Following the successful installation of our 189-panel solar PV system at MTR Hung Hom Building in 2019, we installed another PV system comprising 296 solar panels at our Headquarters in 2020. In Jan 2021, we continued the Phase 1 Solar Facilities project in Hin Keng Station (HIK). The solar panel installation works at Pat Heung Depot, Chai Wan Depot, Sunny Bay Station and Siu Hong Station are underway. The tender for the installation of solar panel systems for Tai Wai Depot and Tuen Mun Depot was awarded in October 2022 and the design is currently in progress. Among all, the solar panel system at Pat Heung Depot comprises over 2,100 panels, which is the largest flexible system in a single building in Hong Kong.</p> <p>We will continue to identify suitable locations for the installation of more solar panel systems at our premises. Our target is to increase our generating capacity of renewable energy to 1 million kWh by 2023.</p>

C3.5

(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?

	Identification of spending/revenue that is aligned with your organization's climate transition	Indicate the level at which you identify the alignment of your spending/revenue with a sustainable finance taxonomy
Row 1	No, but we plan to in the next two years	<Not Applicable>

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

No target

C4.1c

(C4.1c) Explain why you did not have an emissions target, and forecast how your emissions will change over the next five years.

	Primary reason	Five-year forecast	Please explain
Row 1	We are planning to introduce a target in the next two years	In July 2022, we have submitted our commitment letter to SBTi for our near-term targets and the targets have been validated and approved by SBTi in April 2023. Our SBTs are: - reduce scope 1, 2 and 3 well-to-wheel GHG emissions from rail transport 46.2% per passenger kilometre by 2030 from a 2019 base year - reduce scope 1 and 2 GHG emissions from investment properties 58.6% per square meter of floor area by 2030 from a 2019 base year - reduce absolute scope 3 GHG emissions 13.5% within the same timeframe	The energy reduction target for our railway operations expired in 2020, while we achieved our target of a 12% reduction of energy used in our investment property portfolio in 2019, 4 years ahead of our target year by 2023.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production
 Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2019

Target coverage

Country/area/region

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Base year

2018

Consumption or production of selected energy carrier in base year (MWh)

0

% share of low-carbon or renewable energy in base year

0

Target year

2023

% share of low-carbon or renewable energy in target year

0.1

% share of low-carbon or renewable energy in reporting year

0

% of target achieved relative to base year [auto-calculated]

<Calculated field>

Target status in reporting year

Underway

Is this target part of an emissions target?

We did not have renewable energy system in 2018. To support the development of renewable energy in Hong Kong, we installed a solar PV system with a capacity of 58kW at our Hung Hom office in building in 2019. Following the successful trial, we installed a PV system comprising of 296 panels with the capacity of 93kW which exceeded our planned target of 40kW at our Headquarters Building in 2020. We continued the Phase 1 Solar Facilities project in Hin Keng Station with the contract awarded in January 2021. The solar system is of the capacity of 60kW. The solar panel installation works at Pat Heung Depot, Chai Wan Depot, Sunny Bay Station and Siu Hong Station are underway. The tender for the installation of solar panel systems for Tai Wai Depot and Tuen Mun Depot was awarded in October 2022 and the design is currently in progress. Among all, the solar panel system at Pat Heung Depot comprises over 2,100 panels, which is the largest flexible system in a single building in Hong Kong.

We have developed a KPI on clean energy generation. Our target is to increase our generating capacity of renewable energy to 1 million kWh by 2023. This target will support and align with our near term SBT targets.

Is this target part of an overarching initiative?

Science Based Targets initiative

Other, please specify (clean energy generation)

Please explain target coverage and identify any exclusions

Plan for achieving target, and progress made to the end of the reporting year

List the actions which contributed most to achieving this target

<Not Applicable>

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2022

Target coverage

Other, please specify (Hong Kong Operation)

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon buildings	Other, please specify (100% future new stations and new residential development projects aim to attain BEAM Plus Gold or above certification)
----------------------	---

Target denominator (intensity targets only)

<Not Applicable>

Base year

2022

Figure or percentage in base year

Target year

Figure or percentage in target year

Figure or percentage in reporting year

100

% of target achieved relative to base year [auto-calculated]

<Calculated field>

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

Other, please specify (To support our SBTs and long-term goal of achieving carbon neutrality)

Please explain target coverage and identify any exclusions

100% future new stations and new residential development projects aim to attain BEAM Plus Gold or above certification

Plan for achieving target, and progress made to the end of the reporting year

Our Tung Chung East and Tung Chung West stations have achieved BEAM Plus Provisional Gold certifications.

List the actions which contributed most to achieving this target

<Not Applicable>

Target reference number

Oth 2

Year target was set

2022

Target coverage

Other, please specify (Hong Kong Operation)

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Engagement with suppliers	Other, please specify (50+ key suppliers will attend training sessions on ESG best practices including carbon reduction in 2022)
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Target denominator (intensity targets only)

<Not Applicable>

Base year

2022

Figure or percentage in base year

Target year

2022

Figure or percentage in target year

Figure or percentage in reporting year

100

% of target achieved relative to base year [auto-calculated]

<Calculated field>

Target status in reporting year

Achieved

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

Other, please specify (To engage suppliers and encourage them to reduce carbon emissions to align with our environmental objectives and reduce our scope 3 emissions)

Please explain target coverage and identify any exclusions

50+ key suppliers will attend training sessions on ESG best practices including carbon reduction

Plan for achieving target, and progress made to the end of the reporting year

<Not Applicable>

List the actions which contributed most to achieving this target

A webinar was held in October 2022 attended by representatives from 57 key suppliers. Powitive feedback on enhancing understanding owas received.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	15	74348
To be implemented*	1	1610
Implementation commenced*	0	0
Implemented*	4	21238
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Other, please specify	Other, please specify (Procurement of 13 battery locomotives to replace 8 diesel locomotives and 5 old model battery locomotives)
-----------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

974

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

265000000

Payback period

No payback

Estimated lifetime of the initiative

>30 years

Comment

The operating efficiency and performance of the new electric-battery locomotives will be an improvement over the existing diesel and battery locomotives.

On average, each locomotive is active 8 hours / day
 For diesel locomotive, approximately 51 litres of diesel is consumed each hour.
 Diesel consumption per day: 8 x 51L= 408L
 Total CO2e emission per year = 2.61 * 365 * 408 = 388.7 tonnes

Electric-Battery Locomotive (old model)
 electricity consumption = 1,408 kWh / day
 CO2e emission factors of 0.55kgCO2e/kWh
 Total CO2e emission per year = 365 * 1,408 * 0.55 = 282.7 tonnes

Electric-Battery Locomotive (new model)
 electricity consumption = 1,360 kWh / day
 Total CO2e emission per year = 365 * 1,360 * 0.55 = 273.0 tonnes

Total CO2e emission reduction per year for 13 locomotive replacements = 8 * (388.7 – 273.0) + 5 * (282.7 – 273.0) = 974.1 metric tonnes

Initiative category & Initiative type

Energy efficiency in buildings	Heating, Ventilation and Air Conditioning (HVAC)
--------------------------------	--

Estimated annual CO2e savings (metric tonnes CO2e)

16264

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

30400000

Investment required (unit currency – as specified in C0.4)

1100000000

Payback period

>25 years

Estimated lifetime of the initiative

>30 years

Comment

A total of 154 chillers at 38 MTR stations and four railway depots will be replaced with more advanced and environmentally friendly systems by 2023. The new station chillers will provide a more comfortable station environment for passengers, with enhanced energy efficiency using variable-frequency drive inverter technology that could adjust the power output based on the actual temperature detected.

The operating efficiency and performance of the new chillers will be an improvement over the existing chillers. Total number of chillers needed is reduced to 133 chillers.

Total energy consumption is expected to be reduced by 30.4 GWh when completed:

Old chillers total energy consumption per annum: 92.1 GWh

New chillers total energy consumption per annum: 61.7 GWh

Estimated energy conserved per annum: 30.4 GWh

As of December 2022, all 154 old chillers have been replaced by new chillers. Computation of savings in energy based on specification numbers is at approximately 30.4 GWh per year ($154/154 \times 30.4\text{GWh}$).

CO₂e emission factors of 0.535kgCO₂e/kWh

Estimated energy saving in 2022 = 30.4 GWh

CO₂ saving in 2022 = 30,400,000 kWh x 0.535kgCO₂e/kWh = 16,264 metric ton CO₂e

Initiative category & Initiative type

Other, please specify	Other, please specify (Replacement of HV and LV rail power line and addition of power convertors to recycle traction power)
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Estimated annual CO₂e savings (metric tonnes CO₂e)

1700

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

3300000

Investment required (unit currency – as specified in C0.4)

4900000000

Payback period

No payback

Estimated lifetime of the initiative

21-30 years

Comment

The new power convertors and higher efficiency transformers provide the following expected benefits.

Power Converter savings: 1.7GWh / year

Transformer savings: 1.6GWh / year

Applying average market-based emission factors of 0.535kgCO₂e/kWh for HKSAR, the estimated annual CO₂e saving is around 1,700 tonnes of CO₂e.

Initiative category & Initiative type

Low-carbon energy generation	Other, please specify (Regenerative braking energy)
------------------------------	---

Estimated annual CO₂e savings (metric tonnes CO₂e)

2300

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

4300000

Investment required (unit currency – as specified in C0.4)

98000000

Payback period

21-25 years

Estimated lifetime of the initiative

21-30 years

Comment

R-IPM installed in trains allow a train to increase the regenerative energy (electricity generated from the braking system) ratio from 36% to 41%. The regenerative energy is fed back into the power supply network for usage by the train or other trains that run on the network.

The energy recycled back to the network that are utilized will increase to 35.7 GWh from 31.4 GWh per annum with a net savings of 4.3 GWh.

Applying average market-based emission factors of 0.535kgCO₂e/kWh for HKSAR, the estimated annual CO₂e saving is around 2,300 tonnes of CO₂e.

C4.3c**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

Method	Comment
Compliance with regulatory requirements/standards	<p>Since 2010, the Corporation has been the first company involved in property development in Hong Kong (under our Rail + Property business model) to implement voluntary environmental standards in a systematic way with a commitment that a number of our new residential property developments would achieve as a minimum the Hong Kong BEAM Plus Gold certification to improve building energy efficiency.</p> <p>In 2022, we have set a KPI for our future new stations aiming to attain BEAM Plus Gold or above certification.</p>
Dedicated budget for energy efficiency	The Corporation has an annual dedicated budget to explore and trial with energy efficiency initiatives.
Financial optimization calculations	For station energy efficiency retrofit projects, a pre-approved maximum budget and financial criteria had been set prior to the procurement process, so as to achieve a reasonable return on investment period.
Other (Green Finance)	<p>All our new railways are required to incorporate specific design standards for energy efficiency based on life-cycle cost and carbon footprint assessment of the rail lines, considering both construction and operation phases.</p> <p>The Corporation established Green Bond Framework and issued the first Green Bond in 2016 to fund our environmentally friendly projects and network enhancements. Expanding on the foundation of our Green Bond Framework, we established a Green Finance Framework in 2018 to cover other forms of green financing. By the end of 2019, we had issued a total of 9 green bonds and 2 green loans, partially funded 5 of our projects. In 2020, we have further expanded the Green Finance Framework to a Sustainable Finance Framework to fund both environmental (added a new category of renewable energy) and social projects. In 2020, we successfully issued a US\$1.2 billion green bond- the largest single tranche green bond for corporates in Asia Pacific. At the end of 2020, MTR's sustainable finance portfolio consisted of fifteen bonds in four different currencies and three HKD green loans. The green finance proceeds partially funded twelve of our green projects including Air Cooled Chiller Replacement, Tracksides Energy Storage, Regenerative Station Energy Saving Inverter System, Carbon Neutral Station Design for future stations, Battery Locomotives, and etc. Total amount financed by green bond proceeds for the green projects is HK\$23,420 million.</p> <p>Since 2016, MTR has raised sustainable finance of more than HK\$ 32 billion up to the end of 2022, which was a key part of our financing strategy for funding railway asset replacement, energy efficiency improvement and railway service enhancement projects. In 2022 sustainable finance totalling HK\$ 2.8 billion was arranged to fund projects for energy conservation, environmental protection, as well as enhancement and expansion of low-carbon railway services.</p>
Dedicated budget for other emissions reduction activities	The Corporation has formulated an ESG Investment Framework to institutionalise environmental and social principles into the Corporation's investment decision making process and to provide funding for business units and corporate functions for eligible ESG projects. A designated ESG Fund will be allocated annually by the MTR Board to support eligible ESG projects, and most of the fund will be allocated to emissions reduction activities. The Fund will be separated to the annual operational and capital expenditure budget (which includes funding for many large-scale projects with environmental benefits, such as our asset replacement projects or our network enhancements) and will be used to finance unbudgeted ESG projects which may not have a viable financial business case or to fund the incremental cost of a budgeted item that requires additional investment to enhance its ESG performance.

C4.5**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Rail	Other, please specify (sustainable and low-carbon mass transit railway services)
------	--

Description of product(s) or service(s)

We provide sustainable and low-carbon mass transit services as all our trains are fully electrified. The fuel mix of electricity generated by the local power companies to power our trains : 48% natural gas, 36% nuclear, 1% renewable energy and 15% coal.

Ref:

<https://www.clp.com.hk/en/about-clp/power-generation>

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify (Assume any usage of the lines as an incremental usage as the train trips would not have happened without the lines.)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

For estimation of the GHG emission avoidance, we assume any usage of the lines (i.e. passengers that used any one of the stations along the lines) as an incremental usage as the train trips would not have happened without the lines. i.e. passengers would have taken additional trip on a bus/car from end station, or passengers would have taken outright the full trip on bus/car.

Reference product/service or baseline scenario used

Reduced transportation trip on bus/car

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

41100

Explain your calculation of avoided emissions, including any assumptions

The average travelling distance of each passenger was 10.7km in 2022. Based on the number of passengers for South Island Line in 2022, the corresponding avoidance of GHG emissions is computed as follows:

Annual GHG Emissions Avoided = (Emission Factor for MTRC – Emission Factor for Local Bus) * Annual Passenger number * Average Passenger Distance

Kwun Tong Line Extension was previously evaluated as an extension with an ending node along the Kwun Tong line. Since the Tuen Ma line's opening in mid-2021, one of the stations along the extension (Ho Man Tin Station) has served as an interchange station between Kwun Tong line and the Tuen Ma line, therefore the GHG emission avoidance computation is switched to the asset value based approach to better reflect the station's characteristics.

The GHG emission avoidance number for Kwun Tong Line Extension is estimated based on the amount of expenditure divided by the Total Asset Value of the MTR rail system (inclusive of KCRC rail system), multiplied by the total GHG emission avoided by the whole system.

Based upon the above methodology, our estimation is summarised below:

Annual GHG Emissions Avoided from South Island Line is 16,900 tonnes CO2e

Annual GHG Emissions Avoided from Kwun Tong Line Extension is 24,200 tonnes CO2e

Total Estimated avoided emissions = 16,900 + 24,200 = 41,100 tonnes CO2e

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

28

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2008

Base year end

December 31 2008

Base year emissions (metric tons CO2e)

21775

Comment

Scope 2 (location-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

According to GHG Protocol, a location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice).

Based on the above, all scope 2 emissions have been reported using market-based emission factors.

Scope 2 (market-based)

Base year start

January 1 2008

Base year end

December 31 2008

Base year emissions (metric tons CO2e)

1066179

Comment

According to GHG Protocol, a location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice).

Based on the above, all scope 2 emissions have been reported using market-based emission factors.

Scope 3 category 1: Purchased goods and services

Base year start

January 1 2020

Base year end

December 31 2020

Base year emissions (metric tons CO2e)

1359

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 5: Waste generated in operations

Base year start

January 1 2008

Base year end

December 31 2008

Base year emissions (metric tons CO2e)

8068

Comment

Scope 3 category 6: Business travel

Base year start

January 1 2008

Base year end

December 31 2008

Base year emissions (metric tons CO2e)

1129

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3 category 15: Investments

Base year start

January 1 2019

Base year end

December 31 2019

Base year emissions (metric tons CO2e)

608949

Comment

N/A

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

N/A

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Hong Kong Environmental Protection Department, Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings, 2010
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
42188

Start date
January 1 2022

End date
December 31 2022

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
40611

Start date
January 1 2021

End date
December 31 2021

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
40949

Start date
January 1 2020

End date
December 31 2020

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
46134

Start date
January 1 2019

End date
December 31 2019

Comment

Past year 4

Gross global Scope 1 emissions (metric tons CO2e)
44102

Start date
January 1 2018

End date
December 31 2018

Comment

Past year 5

Gross global Scope 1 emissions (metric tons CO2e)
48924

Start date
January 1 2017

End date
December 31 2017

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are not reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

In Hong Kong, our energy suppliers are restricted to two vertically integrated power companies that are regulated by the Hong Kong SAR Government under a Scheme of Control Agreement (SCA) that is valid until 2033. Market-based emissions are calculated based on the emission factors provided by the two power companies (CLP and HEC) in their annual sustainability reports.

Emission Factor of CLP: The GHG intensity of the electricity sold in 2022 was 0.39 kgCO₂e/kWh (please refer to P.146 of the following report
Ref: https://www.clpgroup.com/content/dam/clp-group/channels/sustainability/document/sustainability-report/2022/CLP_Sustainability_Report_2022_en.pdf.coredownload.pdf

Emission Factor of HEC: The GHG intensity of the electricity sold in 2022 was 0.68 kgCO₂e/kWh
Ref: https://www.hkelectric.com/documents/en/CorporateSocialResponsibility/CorporateSocialResponsibility_CDD/Documents/SR2022E_statistics.pdf

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO₂e?

Reporting year

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

1012456

Start date

January 1 2022

End date

December 31 2022

Comment

Past year 1

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

1035654

Start date

January 1 2021

End date

December 31 2021

Comment

Past year 2

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

976574

Start date

January 1 2020

End date

December 31 2020

Comment

Past year 3

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

1332512

Start date

January 1 2019

End date

December 31 2019

Comment

Past year 4

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

1262450

Start date

January 1 2018

End date

December 31 2018

Comment

Past year 5

Scope 2, location-based

<Not Applicable>

Scope 2, market-based (if applicable)

1257664

Start date

January 1 2017

End date

December 31 2017

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1, Scope 2 or Scope 3 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

463.08

Emissions calculation methodology

Average product method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

10

Please explain

It is estimated less than 10% emissions data was obtained from suppliers due to the complexity of goods we purchased to support our rail operations.

Capital goods

Evaluation status

Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Due to businesses operation, we purchase a large amount of goods for railway operations, new lines construction and services, etc. but the embodied carbon is unavailable.

Currently, we are using proxy data to calculate our Scope 3 emissions on this category. We are working with a local university to develop a calculation methodology to estimate the embodied carbon emissions from our new railway development projects including embodied carbon of construction materials.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

All relevant fuel and energy-related emissions have been included in Scopes 1 and 2.

Upstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The main upstream transport impact of the MTR Corporation is from transport of construction materials and equipment for our railway construction projects. A study in 2012 revealed that the contribution of this is minor compared to the life cycle emission from operation. Hence, it is excluded from our assessments.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

782.17

Emissions calculation methodology

Other, please specify

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

The emission factor for general waste disposed to landfills is from the latest Measuring Emissions: A Guide for Organisations: 2020 Detailed Guide published by the New Zealand Ministry for the Environment, which was published in 2020.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

406.41

Emissions calculation methodology

Other, please specify

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

The emission factors for staff business travel are from Greenhouse gas reporting: conversion factors 2022 published by the United Kingdom Department for Business, Energy and Industrial Strategy.

Employee commuting

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Majority of staff commute is via our railway network (all our staff can enjoy free travel on our rail network). A small percentage of staff is provided with corporate cars consuming diesel or unleaded petrol. However, they have already been included in the Corporation's Scope 1 and 2 emissions.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The leased railway assets from Kowloon-Canton Railway Corporation under the merger agreement in 2008 have been included in Scope 1 and 2 as direct emissions of the Corporation.

Background Note: MTR Corporation Ltd is a merger of 2 railway companies in 2008 - the Kowloon-Canton Railway Corporation (KCRC) and the Mass Transit Railway (MTR).

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Manufacturing and sale of products are not the primary business of MTR Corporation.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Manufacturing and sale of products are not the primary business of MTR Corporation.

Use of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Manufacturing and sale of products are not the primary business of MTR Corporation.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Manufacturing and sale of products are not the primary business of MTR Corporation.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Emissions from the leased kiosks in stations, advertising panels, and common areas in properties have been calculated and included into the Corporation's Scope 2 emissions. Breakdowns are not provided separately.

Franchises

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

639725

Emissions calculation methodology

Other, please specify (Our primary reference document for GHG calculations is "Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (February 2010)")

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Emissions from our majority owned subsidiaries in the Mainland of China and overseas are reported separately under the Performance Metrics in our Sustainability Report 2022.

(https://www.mtr.com.hk/sustainability/assets/pdf/en/2022/Performance_Metrics.pdf).

Total Scopes 1+2 emissions in Mainland of China in 2022: 121,520 ton CO2e

Total Scopes 1+2 emissions in Australia in 2022: 468,820 ton CO2e

Total Scopes 1+2 emissions in UK in 2022: 48,274 ton CO2e

Total Scopes 1+2 emissions in Sweden in 2022: 1,111 ton CO2e

TOTAL Emissions = 639,725 ton CO2e

Investments

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

639725

Emissions calculation methodology

Other, please specify (Our primary reference document for GHG calculations is "Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong (February 2010)")

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Emissions from our majority owned subsidiaries in the Mainland of China and overseas are reported separately under the Performance Metrics in our Sustainability Report 2022.

(https://www.mtr.com.hk/sustainability/assets/pdf/en/2022/Performance_Metrics.pdf).

Total Scopes 1+2 emissions in Mainland of China in 2022: 121,520 ton CO2e

Total Scopes 1+2 emissions in Australia in 2022: 468,820 ton CO2e

Total Scopes 1+2 emissions in UK in 2022: 48,274 ton CO2e

Total Scopes 1+2 emissions in Sweden in 2022: 1,111 ton CO2e

TOTAL Emissions = 639,725 ton CO2e

Other (upstream)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1351.08

Emissions calculation methodology

Other, please specify (Emissions from water consumption and sewage treatment are calculated based on the most recent available annual report of Hong Kong Water Supplies Department (WSD) and sustainability report of Hong Kong Drainage Services Department (DSD).)

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Other (downstream)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Manufacturing and sale of products are not the primary business of MTR Corporation.

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

January 1 2021

End date

December 31 2021

Scope 3: Purchased goods and services (metric tons CO2e)

1411

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

1569

Scope 3: Business travel (metric tons CO2e)

137

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

680628

Scope 3: Investments (metric tons CO2e)

680628

Scope 3: Other (upstream) (metric tons CO2e)

808

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 2

Start date

January 1 2020

End date

December 31 2020

Scope 3: Purchased goods and services (metric tons CO2e)

1359

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

5731

Scope 3: Business travel (metric tons CO2e)

386

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

575489

Scope 3: Investments (metric tons CO2e)

575489

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 3

Start date

January 1 2019

End date

December 31 2019

Scope 3: Purchased goods and services (metric tons CO2e)

308

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

6440

Scope 3: Business travel (metric tons CO2e)

1913

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

608949

Scope 3: Investments (metric tons CO2e)

608949

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 4

Start date

January 1 2018

End date

December 31 2018

Scope 3: Purchased goods and services (metric tons CO2e)

395

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

11634

Scope 3: Business travel (metric tons CO2e)

539

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

610580

Scope 3: Investments (metric tons CO2e)

610580

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Past year 5

Start date

January 1 2017

End date

December 31 2017

Scope 3: Purchased goods and services (metric tons CO2e)

385

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

23802

Scope 3: Business travel (metric tons CO2e)

2340

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

619265

Scope 3: Investments (metric tons CO2e)

619265

Scope 3: Other (upstream) (metric tons CO2e)

1280

Scope 3: Other (downstream) (metric tons CO2e)

Comment

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0000220581

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

1054644

Metric denominator

unit total revenue

Metric denominator: Unit total

47812000000

Scope 2 figure used

Market-based

% change from previous year

3.25

Direction of change

Decreased

Reason(s) for change

Other emissions reduction activities

Change in revenue

Please explain

C-TS6.15

(C-TS6.15) What are your primary intensity (activity-based) metrics that are appropriate to your emissions from transport activities in Scope 1, 2, and 3?

Rail

Scopes used for calculation of intensities

Report Scope 1 + 2 + 3 (category 4)

Intensity figure

0.000056671

Metric numerator: emissions in metric tons CO2e

845683

Metric denominator: unit

p.km

Metric denominator: unit total

14922688600

% change from previous year

-2.63

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.

No exclusion

ALL

Scopes used for calculation of intensities

Report Scope 1 + 2 + 3 (category 4)

Intensity figure

0.0000708751

Metric numerator: emissions in metric tons CO2e

1057647

Metric denominator: unit

p.km

Metric denominator: unit total

14922688600

% change from previous year

-1.97

Please explain any exclusions in your coverage of transport emissions in selected category, and reasons for change in emissions intensity.

No exclusion

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	41173.85	IPCC Second Assessment Report (SAR - 50 year)
CH4	15.93	IPCC Second Assessment Report (SAR - 50 year)
N2O	998.29	IPCC Second Assessment Report (SAR - 50 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/area/region.

Country/area/region	Scope 1 emissions (metric tons CO2e)
Hong Kong SAR, China	42188

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

- By business division
- By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Corporate functions and main office buildings	4658
Transport operations	28782
Network expansion	158
Properties and other businesses	8590

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Fuel - rail operations and maintenance, in-house support and network expansion	5498.17
Fuel - feeder bus services	15972.02
Fuel - property business	189.78
Refrigerants - transport operations and in-house support	12128.11
Refrigerants - property business	8399.98

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions, metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	33598	<Not Applicable>	

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/area/region.

Country/area/region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Hong Kong SAR, China	0	1012456

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Corporate Functions and Main Office Buildings	0	10515
Transport Operations	0	816355
Network Expansion	0	695
Properties and Other Businesses	0	184890

C7.7

(C7.7) Is your organization able to break down your emissions data for any of the subsidiaries included in your CDP response?

Yes

C7.7a

(C7.7a) Break down your gross Scope 1 and Scope 2 emissions by subsidiary.

Subsidiary name

MTR Corporation (Shenzhen) Limited

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

481

Scope 2, location-based emissions (metric tons CO2e)

121040

Scope 2, market-based emissions (metric tons CO2e)

Comment

Subsidiary name

Metro Trains Melbourne Pty. Ltd.

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

6069

Scope 2, location-based emissions (metric tons CO2e)

397655

Scope 2, market-based emissions (metric tons CO2e)

Comment

Subsidiary name

Metro Trains Sydney Pty. Limited

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

241

Scope 2, location-based emissions (metric tons CO2e)

64855

Scope 2, market-based emissions (metric tons CO2e)

Comment

Subsidiary name

MTR Elizabeth line

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

8

Scope 2, location-based emissions (metric tons CO2e)

48266

Scope 2, market-based emissions (metric tons CO2e)**Comment**

Subsidiary name

MTR Nordic AB

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

180

Scope 2, location-based emissions (metric tons CO2e)

915

Scope 2, market-based emissions (metric tons CO2e)**Comment**

Subsidiary name

MTR Mälartåg AB

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

0

Scope 2, location-based emissions (metric tons CO2e)

8

Scope 2, market-based emissions (metric tons CO2e)

Comment

Subsidiary name

MTR Express (Sweden) AB

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

8

Scope 2, location-based emissions (metric tons CO2e)

0

Scope 2, market-based emissions (metric tons CO2e)

Comment

Subsidiary name

MTR Facility Management AB

Primary activity

Passenger rail

Select the unique identifier(s) you are able to provide for this subsidiary

Please select

ISIN code – bond

<Not Applicable>

ISIN code – equity

<Not Applicable>

CUSIP number

<Not Applicable>

Ticker symbol

<Not Applicable>

SEDOL code

<Not Applicable>

LEI number

<Not Applicable>

Other unique identifier

<Not Applicable>

Scope 1 emissions (metric tons CO2e)

64

Scope 2, location-based emissions (metric tons CO2e)

0

Scope 2, market-based emissions (metric tons CO2e)

Comment

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	0	816355	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change in emissions	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities	10000	Decreased		Implementation of on-going carbon reduction initiatives such as chiller replacement, energy saving inverters, replacement of diesel loco led to an estimated saving of around 10,000 tCO2e
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	21621	Decreased	2	The market-based emission factor of electricity purchased decreased from 0.71 kg CO2e/kWh in 2021 to 0.68 kg CO2e/kWh in 2022.
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 10% but less than or equal to 15%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	84544	84544
Consumption of purchased or acquired electricity	<Not Applicable>	0	1961165	1961165
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	60	<Not Applicable>	60
Total energy consumption	<Not Applicable>	60	2045709	2045769

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

N/A

Other biomass

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

N/A

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Coal

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

N/A

Oil

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

N/A

Gas

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

N/A

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

Unable to confirm heating value

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

<Not Applicable>

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Comment

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
84544

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	730	0	730	0
Heat				
Steam				
Cooling				

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Country/area of low-carbon energy consumption
Hong Kong SAR, China

Sourcing method
None (no active purchases of low-carbon electricity, heat, steam or cooling)

Energy carrier
<Not Applicable>

Low-carbon technology type
<Not Applicable>

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)
<Not Applicable>

Tracking instrument used
<Not Applicable>

Country/area of origin (generation) of the low-carbon energy or energy attribute
<Not Applicable>

Are you able to report the commissioning or re-powering year of the energy generation facility?
<Not Applicable>

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)
<Not Applicable>

Comment

C-TS8.2f

(C-TS8.2f) Provide details on the average emission factor used for all transport movements per mode that directly source energy from the grid.

Category	Emission factor unit	Average emission factor: unit value	Comment
Rail	gCO2e/kWh	390	Based on the sustainability report of CLP (One of the 2 power companies in HK), the emission factor is 0.39 kgCO2e/kWh (p.146 of the report) https://www.clpgroup.com/content/dam/clp-group/channels/sustainability/document/sustainability-report/2022/CLP_Sustainability_Report_2022_en.pdf.coredownload.pdf
Rail	gCO2e/kWh	680	https://www.hkelectric.com/documents/en/CorporateSocialResponsibility/CorporateSocialResponsibility_CDD/Documents/SR2022E_statistics.pdf

C8.2g

(C8.2g) Provide a breakdown by country/area of your non-fuel energy consumption in the reporting year.

Country/area

Hong Kong SAR, China

Consumption of purchased electricity (MWh)

1961165

Consumption of self-generated electricity (MWh)

0

Is this electricity consumption excluded from your RE100 commitment?

<Not Applicable>

Consumption of purchased heat, steam, and cooling (MWh)

0

Consumption of self-generated heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

1961165

C-TS8.5

(C-TS8.5) Provide any efficiency metrics that are appropriate for your organization's transport products and/or services.

Activity

Rail

Metric figure

0.104

Metric numerator

Other, please specify (kWh)

Metric denominator

Other, please specify (passenger-km)

Metric numerator: Unit total

1545346000

Metric denominator: Unit total

14922688600

% change from last year

2.97

Please explain

Total patronage for MTR rail and bus services decreased by 4.3% in 2022 compared to 2021 due to pandemic while the electricity consumption for our railway network only decreased by 0.6% compared to 2021. To fulfill the service pledge, the Corporation could not significantly reduce the train frequency even though the number of patronages was dropped.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

C-TO9.3/C-TS9.3

(C-TO9.3/C-TS9.3) Provide tracking metrics for the implementation of low-carbon transport technology over the reporting year.

Activity

Rail

Metric

Fleet adoption

Technology

Other, please specify (Procurement of 13 battery operated locomotives to replace eight diesel and five old battery locomotives)

Metric figure

13

Metric unit

Other, please specify (unit)

Explanation

Activity

Rail

Metric

Other, please specify (Regenerative Braking Energy)

Technology

Other, please specify (Regenerative braking energy)

Metric figure

579

Metric unit

Other, please specify (MWh)

Explanation

To expand our usage of regenerative braking energy, we have completed the installation works of two Station Energy Saving Inverter systems at Lai King Traction Substation at Airport Express and Tung Chung Line and at HKU Station on the Island Line in 2022. The systems can capture total estimated average of 1,700kWh of regenerative energy per day, which may be converted to low-voltage AC electricity to power station facilities such as lighting, escalators and lifts. The estimated annual saving is around 579 MWh.

Activity

Rail

Metric

Fleet adoption

Technology

Other, please specify (Replacement of first generation trains)

Metric figure

93

Metric unit

Other, please specify (unit)

Explanation

As part of MTR's long-term asset renewal strategy, 93 eight-car trains were procured to replace some of the first-generation M-trains, which have been in service for decades on Tsuen Wan Line, Kwun Tong Line, Island Line and Tseung Kwan O Line.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-TO9.6a/C-TS9.6a

(C-TO9.6a/C-TS9.6a) Provide details of your organization's investments in low-carbon R&D for transport-related activities over the last three years.

Activity

Rail

Technology area

Other, please specify (Smart systems)

Stage of development in the reporting year

Large scale commercial deployment

Average % of total R&D investment over the last 3 years

20

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Application of big data analytic would help analyse historic data to optimise building system, enhance predictive maintenance and thus improve overall energy efficiency. The establishment of the Data Studio is a major milestone in MTR's digital transformation journey and it indicates the Corporation has entered a new era of Smart Maintenance to improve safety, reliability and efficiency. The Data Studio has been established as a centralised hub for collecting, integrating and analysing different asset data from railway systems, asset condition monitoring applications, and maintenance activities. It is a key enabler for Predictive and Prescriptive Maintenance and Maintenance Optimisation. The Data Studio will assist in setting a world class standard for railway technology applications and enrich customer experience and service reliability through artificial intelligence and data analytics, paving the way towards round-the-clock smart monitoring system of railway facilities and thus improving overall energy efficiency.

Activity

Rail

Technology area

Other, please specify (AI)

Stage of development in the reporting year

Pilot demonstration

Average % of total R&D investment over the last 3 years

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

20

Average % of total R&D investment planned over the next 5 years

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

Chillers account for up to 40% of total station energy consumption in the HK Mass Transit Railway (MTR) system. As part of green railway initiatives, a site trial was conducted to apply a fully automated AI system to control a chiller plant in order to optimise energy performance in real time while maintaining a level of passenger comfort that suits each station's environment. Through the predictive power of the AI system, the plant power's consumption and cooling demands can be forecasted based on actual chiller, station, and weather conditions, all of which vary over time. The optimal operational settings can then be determined using an optimisation model for real-time chiller plant control, including staging, sequencing, chilled water supply temperature set-point, etc. The results of the comparison of the proposed AI system using data-driven machine learning models and numerical optimisation against rule-based control optimisation in a conventional building management system through this site trial revealed that the proposed AI system achieves better energy efficiency with annual energy savings of approximately 8.7%.

Activity

Rail

Technology area

Infrastructure

Stage of development in the reporting year

Pilot demonstration

Average % of total R&D investment over the last 3 years

20

R&D investment figure in the reporting year (unit currency as selected in C0.4) (optional)

Average % of total R&D investment planned over the next 5 years

Explain how your R&D investment in this technology area is aligned with your climate commitments and/or climate transition plan

In Hong Kong, we have adopted regenerative braking technology to convert kinetic energy produced during train braking to electrical energy which is then fed back into the power supply network for use by other trains through the overhead power system. Super-capacitor energy storage devices were also installed on the South Island Line (East) to make better use of the surplus energy produced from regenerative braking. To expand our usage of regenerative braking energy, we have commenced the installation works of two Station Energy Saving Inverter systems at Lai King Traction Substation at Airport Express and Tung Chung Line and at HKU Station on the Island Line. The systems can capture total estimated average of 1,700kWh of regenerative energy per day, which may be converted to low-voltage AC electricity to power station facilities such as lighting, escalators and lifts. The installation was completed in 2022.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Performance_Metrics.pdf

Page/ section reference

Page 2-3

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Performance_Metrics.pdf

Page/ section reference

Page 2-3

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

- Scope 3: Purchased goods and services
- Scope 3: Waste generated in operations
- Scope 3: Business travel
- Scope 3: Investments
- Scope 3: Franchises

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Performance_Metrics.pdf

Page/section reference

Page 2-3

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	International Standard on Assurance Engagements 3000 (Revised) and International Standard on Assurance Engagements 3410	Relevant data has been assured annually as part of the independent assurance exercise of our Sustainability Report.
C6. Emissions data	Year on year change in emissions (Scope 3)	International Standard on Assurance Engagements 3000 (Revised) and International Standard on Assurance Engagements 3410	Relevant data has been assured annually as part of the independent assurance exercise of our Sustainability Report.
C8. Energy	Energy consumption	International Standard on Assurance Engagements 3000 (Revised) and International Standard on Assurance Engagements 3410	Relevant data has been assured annually as part of the independent assurance exercise of our Sustainability Report.
C6. Emissions data	Waste data	International Standard on Assurance Engagements 3000 (Revised) and International Standard on Assurance Engagements 3410	Relevant data has been assured annually as part of the independent assurance exercise of our Sustainability Report.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization canceled any project-based carbon credits within the reporting year?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

- Yes, our suppliers
- Yes, our customers/clients
- Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change
Other, please specify (Compliance to Supplier Code of Practice)

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement

We have taken a holistic approach to identify and evaluate our supply chain-related risks through our Enterprise Risk Management framework. As part of this approach, the Corporation continues to monitor the implementation of environmental protection initiatives across our entire supply chain. Internally, we have several procurement-related policies and guidelines, including our Green Procurement Policy, which provides our employees engaged in procurement activities with guiding principles when making sustainable procurement decisions and further promotes green initiatives in the supply chain. Furthermore, in addition to looking inward at our own internal procedures, the Corporation also applies stringent requirements in our supply chain through our Supplier Code of practice to ensure high standards for human and labour rights, supply chain management, and ethical business practices are met.

Impact of engagement, including measures of success

Aspiring to exercise responsible and sustainable practices beyond compliance, we maintain bilateral and constructive dialogue with our diverse suppliers. We invite them to participate in forums, seminars and site visits to benchmark their performance and share best practices. Our procurement teams also pay visits to suppliers' facilities to foster a culture of cooperation and mutual support. We believe engagement helps us in our quest for continuous improvement and encourages collaboration. As such, we conduct periodic supplier surveys with the goal of understanding how suppliers align with our Supplier Code of Practice and to assess the maturity of their sustainability policies, initiatives and monitoring systems in six areas including ethical standards, human and labour rights, environmental protection, consumer protection, supply chain management and conflicts of interest.

Extending our sustainability considerations beyond the Corporation, our suppliers are also encouraged to explore and implement environmental practices within their operations. The Supplier Code of Practice serves as a behavioural framework to guide suppliers on ethical standards, human and labour rights, environmental protection and supply chain management. Full compliance is a prerequisite to collaborative supply chain relationships with the Corporation.

We set a target in 2021 that 50+ key suppliers shall attend training sessions on ESG best practices in 2022. A webinar was held in October 2022 attended by representatives from 57 key suppliers. Positive feedback on enhancing understanding of ESG was received. In 2022, we set another KPI to arrange training sessions on ESG best practices in 2023 for 60+ suppliers.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing	Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services
-------------------------------	---

% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

We engage our customers direct through innovation and technologies via our mobile app "MTR Mobile" which reaches over 1.23 million active users every month. With the objectives of raising public awareness towards green transport, we launched a "Carbon Footprint Challenge" to encourage MTR Mobile registered users to achieve savings on carbon emissions by taking MTR rides and earn extra MTR Points as reward. More than 145,000 registered users participated in the Challenges, saving over 61,000 tonnes of carbon emissions, equivalent to the amount of carbon dioxide removed by over 2.6 million trees in a year.

We have set up a facebook account (with over 240,000 followers) to engage our customers. Promotional messages in relation to sustainability initiatives including climate change will be conveyed to our customers via the mobile app and social media regularly.

In addition, we have engaged our customers through the traditional channels. We consider all our customers/tenants can contribute to carbon reduction, we therefore engage all of them to align with our commitment to the environment and climate change mitigation/adaptation.

Impact of engagement, including measures of success

The impact of this engagement has been strongly positive. The success of this engagement programme was measured by the number of passengers participating in the programme, taking MTR trains instead of driving private cars. More than 145,000 registered users participated in the Challenges, saving over 61,000 tonnes of carbon emissions, equivalent to the amount of carbon dioxide removed by over 2.6 million trees in a year.

Type of engagement & Details of engagement

Collaboration & innovation	Other, please specify (Developing an one-stop green lifestyle reward app to engage our customers for behavioural changes)
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% of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

We consider all our customers can contribute to carbon reduction and make a positive change, we therefore engage all of them for a greener lifestyle. Carbon wallet, a one-stop green lifestyle reward app, was introduced in March 2021 to encourage the public to adopt a low carbon lifestyle. The app promotes carbon reduction actions across four lifestyle categories: recycling, dining, shopping and mobility. Through practising carbonconscious behaviour, users can earn points based on the carbon emissions saved, which may in turn be redeemed for green products and services from our participating partners. The app also provides an interactive map which allows users to find the nearest recycling point, drinking water stations (including those installed at MTR stations), and vegetarian restaurants. The number of downloads has reached over 80,000 since its launch. In 2022, Carbon Wallet partnered with more than 28 sustainable businesses, vegetarian restaurants, cafe's and green groups to promote carbon reduction actions. Overall, users have submitted more than 250,000 recycling records in total. Combining all green actions captured in the app, our community saved 470,000 kg CO₂e which is equivalent to the amount of carbon dioxide emitted by around 1,728 households' electricity consumption in a month in Hong Kong. Carbon Wallet will continue to expand its ecosystem and co-organise campaigns with partners to engage our staff and the public to practice low-carbon lifestyle in their daily lives.

Impact of engagement, including measures of success

The impact of this engagement has been strongly positive. The success of this engagement programme was measured by the number of recycling records captured via the app. Overall, users have submitted more than 250,000 recycling records in total. Combining all green actions captured in the app, our community saved 470,000 kg CO₂e, which is equivalent to the amount of carbon dioxide emitted by around 1,728 households' electricity consumption in a month in Hong Kong.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Effectiveness and innovation is one of the four key focus areas of our corporate cultures for excellence and growth. We strive to be innovative in operating our system and managing our assets in order to enhance our performance including sustainability. We have set a KPI to invest over HK\$300 million in startups from 2022 to 2025.

In June 2022, the Corporation signed an MOU with Hong Kong University of Science and Technology ("HKUST") on the establishment of the "HKUST-MTR Joint Research Laboratory", which is the first-ever research laboratory we have set up with an institution of higher education. Combining the strengths of HKUST and MTR, this collaboration is set to further enhance Hong Kong's research and development capacity in smart city and sustainable development and contribute to the city's carbon neutrality goal.

Under the Joint Research Laboratory, we are working with HKUST to measure the embodied carbon emissions arising from our new railway development projects. Commenced in November 2022, this 2-year project aims to develop a quantification tool to track and benchmark embodied carbon of our new railway development projects and to explore the use of blockchain technology for carbon footprint reporting in our new railway construction projects. This project enables us to gauge our embodied carbon and identify potential areas for further reduction, which helps us achieve our 2030 carbon reduction targets and carbon neutrality goal by 2050.

In June 2022, the Corporation signed an MoU with The Hong Kong Polytechnic University on a three-year collaboration to establish a partnership to explore advanced and innovative railway technologies and to facilitate smart railway asset and operations management, as well as intelligent maintenance.

We joined hands with Carbonless Asia, a growing innovation and investment platform, to organise the "MTR x Carbonless Asia Challenge" to identify novel and scalable data-driven decarbonisation solutions for our systems and operations around the globe in order to enhance our operation efficiency and services for our customers in the value chain. The challenge topic "Carbon Reduction for MTR's Daily Operations" attracted 142 teams from 23 countries to create tailor-made and innovative proposals for MTR. After months of intense screening and evaluation, a winning team has been selected to further discuss potential collaboration opportunities with MTR. A closing ceremony was organised with all the short-listed start-ups joining together for experience sharing. Currently, we are conducting the second round of the MTR x Carbonless Asia Challenge to identify novel solutions to decarbonise our construction site offices for the coming new railway development projects.

MTR Lab, a wholly owned subsidiary of MTR, looks to invest in, collaborate and co-create with like-minded partners working in mobility (Mobility as a Service (MaaS), new mobility modes, rail tech), retail, property, financial and data services, smart city technology and sustainability. In November 2022, MTR Lab launched Co+Lab Initiative, which is a strategic platform to works together with like-minded partners to construct carbon-neutral smart communities. The initiative forms an open platform that enables members of the innovation community to partner with MTR Lab to explore building a more sustainable, technology-driven future together, supporting the community to achieve carbon neutrality by 2050.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, our membership of/engagement with trade associations could influence policy, law, or regulation that may impact the climate

Yes, we fund organizations or individuals whose activities could influence policy, law, or regulation that may impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

Climate Change Strategy

Climate_Change_Strategy.pdf

Describe the process(es) your organization has in place to ensure that your external engagement activities are consistent with your climate commitments and/or climate transition plan

The Corporation is well aware of the threat of climate change and the importance of reducing its carbon output. We have completed a comprehensive carbon reduction study that would help us set science-based carbon reduction targets for 2030 with the longer-term goal of achieving carbon neutrality by 2050. We aim to meet these targets via several initiatives, such as investing in the latest green technologies, adopting innovations that enhance work efficiency, and partnering with key stakeholders, particularly Hong Kong's electricity suppliers. We engaged a wide range of stakeholders both internally and externally throughout the carbon reduction study to develop our carbon reduction targets to combat climate change. Our targets have been validated and approved by Science Based Targets initiative in April 2023.

We will continue to engage our stakeholders that could either directly or indirectly influence policy, law or regulation that may impact the climate.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Hong Kong's Climate Action Plan 2050, setting out the vision of "Zero-carbon Emissions, Liveable City, Sustainable Development", and outlining the strategies and targets for combating climate change and achieving carbon neutrality in response to the Paris Agreement.

Category of policy, law, or regulation that may impact the climate

Climate change mitigation

Focus area of policy, law, or regulation that may impact the climate

Climate-related targets
Climate transition plans

Policy, law, or regulation geographic coverage

National

Country/area/region the policy, law, or regulation applies to

Hong Kong SAR, China

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

We have engaged the law makers regularly via the Subcommittee on Matters Relating to Railways under the Legislative Council which covers the new railway development projects including low carbon station design.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

<Not Applicable>

Have you evaluated whether your organization's engagement on this policy, law, or regulation is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Please explain whether this policy, law or regulation is central to the achievement of your climate transition plan and, if so, how?

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization is a member of, or engages with, which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify (International Association of Public Transport (UITP))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

UITP acknowledges that addressing the issue of climate change is a key topic for all, and for transport in particular. At present carbon dioxide from transport is growing despite improvements in technology and fuels due to the sheer increase of a number of trips made. As mobility continues to be a fundamental necessity of the 21st century living, public transport is vital for future development and the sector is making significant efforts to ensure that it is able to help ensure citizens today enjoy high quality of life in a safe and healthy environment. The UITP Charter on Sustainable Development thus launched in 2003 is to increase awareness within the sector, to take decisions understanding the impact and determining a good balance in terms of social justice, environmental protection and economic sense.

UITP has formed a Working Group on Climate Change under its Sustainable Development Committee to raise members' awareness and preparedness in relation to climate change mitigation, adaptation and resilience.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Hong Kong Green Building Council (HKGBC))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

HKGBC is a non-profit, member led organisation established in 2009, which strives to promote the standards and development of sustainable buildings in Hong Kong. It aims to raise green building awareness by engaging the public, the industry and the government, and to develop practical solutions for Hong Kong's unique, subtropical built environment of high-rise, high density urban area, leading Hong Kong to a world's exemplar of green building development.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Hong Kong Construction Industry Council (CIC))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

One of the objectives of the CIC is to promote good practices in the construction industry in relation to environmental protection, sustainable construction and other areas conducive to improving construction quality. As buildings are the major contributor to greenhouse gas (GHG) emissions in Hong Kong, they pose both challenges and opportunities for reduction of GHG emission. In this respect, the CIC sees itself as having a significant role to play. One of its latest initiatives is to set up an embodied carbon database for construction materials commonly used in Hong Kong.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Business Environment Council (BEC))

Is your organization's position on climate change policy consistent with theirs?

Consistent

Has your organization attempted to influence their position in the reporting year?

Yes, we publicly promoted their current position

Describe how your organization's position is consistent with or differs from the trade association's position, and any actions taken to influence their position

BEC is an independent, charitable membership organisation. One of BEC's focuses is climate change and Climate Change Business Forum (CCBF) has been formed. Business leaders collaborate together to tackle climate change and set up CCBF advisory group. On this platform, BEC explores opportunities and risks of climate change, discusses policies and regulations to convey to government, funds research and shares best practices with greater business community.

Funding figure your organization provided to this trade association in the reporting year (currency as selected in C0.4)

0

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3c

(C12.3c) Provide details of the funding you provided to other organizations or individuals in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Sustainability_Report 2022.pdf

Performance_Metrics.pdf

Page/Section reference

Climate change and GHG emissions performance - Sustainability Report 2022 (pages 18-25 and 57-68)

TCFD - Sustainability Report 2022 (pages 69 - 72)

GHG emissions performance - Performance Metrics (pages 6-8)

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

C12.5

(C12.5) Indicate the collaborative frameworks, initiatives and/or commitments related to environmental issues for which you are a signatory/member.

	Environmental collaborative framework, initiative and/or commitment	Describe your organization's role within each framework, initiative and/or commitment
Row 1	Other, please specify (4T Charter, Carbon Neutrality Partnership, Charter on External Lighting, Energy Saving Charter, UITP Charter on Sustainable Development)	Participating in the 4T Charter, Carbon Neutrality Partnership, Charter on External Lighting and Energy Saving Charter organised by the Environment and Ecology Bureau of the HKSAR Government UITP Charter on Sustainable Development - signatory

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	To conserve natural habitats and nurture biodiversity, we take great care to implement our Environmental & Social Responsibility Policy particularly in ecologically sensitive areas. We strictly adhere to relevant environmental legislations and requirements and avoid and minimise adverse impacts on ecology and biodiversity relating to our operations and new development projects. There are 3 levels to ensure consistency with our Environmental and Social Responsibility Policy. 1. Oversight from the Board is exercised through the Board-level Environmental & Social Responsibility ("E&SR") Committee. The E&SR Committee has the mandate to monitor and implement the Environmental and Social Responsibility Policy, identify emerging issues and provide regular updates for the Board. 2. The E&SR Committee is supported by the E&SR Steering Committee, which is chaired by the Legal and Governance Director, a member of the Executive Directorate reporting directly to the Chief Executive Officer. Sustainability and corporate responsibility issues are discussed at the E&SR Steering Committee under the guidance of the Executive Directorate. The E&SR Steering Committee is also responsible for developing and implementing sustainability initiatives (including biodiversity) for the Corporation and the respective units and functions that members represent. 3. E&SR Department coordinates among different business units and corporate functions to ensure activities are consistent with the Environmental and Social Responsibility Policy.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Other, please specify (biodiversity preservation for Lok Ma Chau Wetland which is managed by the Corporation)	SDG Other, please specify (biodiversity preservation which included 32 hectares enhanced wetland habitats and ongoing ecological monitoring, is an example of our commitment to conserving the natural habitat)

C15.3

(C15.3) Does your organization assess the impacts and dependencies of its value chain on biodiversity?

Impacts on biodiversity

Indicate whether your organization undertakes this type of assessment

Yes

Value chain stage(s) covered

Direct operations

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

Other, please specify (Following the requirements of the Environmental Impact Assessment Ordinance and relevant guidelines in Hong Kong)

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

Detailed ecological assessment would be carried out during the Environmental Impact Assessment stage. Ecological impacts will be avoided to the maximum extent practicable and minimised as far as practicable. For habitats of significant ecological value that would be adversely impacted by the Project, habitat compensation is one of the key measures to mitigate the permanent and temporary wetland habitat loss. The scale of compensation and timeframe would be further reviewed in consultation with Government bureau and departments during the detailed design stage.

Dependencies on biodiversity

Indicate whether your organization undertakes this type of assessment

No and we don't plan to within the next two years

Value chain stage(s) covered

<Not Applicable>

Portfolio activity

<Not Applicable>

Tools and methods to assess impacts and/or dependencies on biodiversity

<Not Applicable>

Please explain how the tools and methods are implemented and provide an indication of the associated outcome(s)

<Not Applicable>

C15.4

(C15.4) Does your organization have activities located in or near to biodiversity- sensitive areas in the reporting year?

No

C15.5

(C15.5) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity-related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Other, please specify (Biodiversity preservation for Lok Ma Chau Wetland which is managed by the Corporation in accordance with the Habitat Creation and Management Plan (HCMP))

C15.6

(C15.6) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Other, please specify (Lok Ma Chau Habitat Creation and Management Plan)

C15.7

(C15.7) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments	Sustainability Website: https://www.mtr.com.hk/sustainability/en/greenhouse-gas-emissions-reduction.html Sustainability Report 2022 page 68 Sustainability_Report 2022.pdf
Other, please specify (Lok Ma Chau Wetland Website)	Content of biodiversity-related policies or commitments Governance Details on biodiversity indicators	Lok Ma Chau Wetland Website: https://www.mtr.com.hk/en/corporate/sustainability/environmental_reporting_lmc.html

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Legal and Governance Director	Other C-Suite Officer

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company’s annual revenue for the stated reporting period?

	Annual Revenue
Row 1	47812000000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

No

SC1.4b

(SC1.4b) Explain why you do not plan to develop capabilities to allocate emissions to your customers.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms