



## Climate Scenario Analysis Report 2025

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## 1. Introduction

Climate change is one of the most significant global challenges, with the potential to affect economies, societies, and businesses worldwide. These impacts arise from both physical risks, resulting from increasingly frequent and severe weather events, and transition risks, driven by changes in policies, regulations, technologies, and stakeholder expectations related to greenhouse gas (GHG) emissions reduction.

For the healthcare sector, climate change may affect hospital operations, the continuity of medical services, energy and resource management, as well as future healthcare demand. These challenges require organizations to strengthen their resilience and enhance their capacity to respond effectively to climate-related risks and opportunities.

Bangkok Chain Hospital Public Company Limited ("BCH" or the "Company") has therefore conducted a Climate Scenario Analysis to assess the potential impacts, risks, and opportunities arising under different climate scenarios. The results of this assessment are used to support the Company's strategic planning, enterprise risk management, and long-term business planning, while strengthening its adaptive capacity and organizational resilience in response to climate change.

### 1.1 Objectives of the Climate Scenario Analysis

- 1) To assess the climate-related risks and opportunities that may arise under different climate scenarios.
- 2) To evaluate the potential impacts on hospital operations, infrastructure, the supply chain, and stakeholders.
- 3) To support the Company's enterprise risk management and strategic decision-making processes.
- 4) To strengthen the Company's preparedness and adaptive capacity in responding to climate-related risks over the short-, medium-, and long-term.
- 5) To support the Company's climate commitments, including achieving Carbon Neutrality by 2030 and Net Zero Emissions by 2050.

### 1.2 Scope of the Assessment

- 1) Physical risks, including heatwaves, heavy rainfall, flooding, and other extreme weather events.
- 2) Transition risks, including environmental regulations, energy costs, technological developments, and stakeholder expectations.
- 3) Climate-related opportunities associated with improving energy efficiency, increasing the use of renewable energy, adopting innovative technologies, and enhancing organizational resilience.

### **1.3 Standards and Reference Frameworks**

This Climate Scenario Analysis has been developed with reference to internationally recognized frameworks, standards, and data sources, including:

- 1) Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)
- 2) IFRS Sustainability Disclosure Standards – IFRS S2 Climate-related Disclosures
- 3) Intergovernmental Panel on Climate Change (IPCC)
- 4) International Energy Agency (IEA)
- 5) Network for Greening the Financial System (NGFS)

## **2. Climate Governance**

The Company recognizes that climate change is a significant issue that may affect its business operations, the delivery of healthcare services, and its ability to create sustainable long-term value. Accordingly, the Company has integrated climate governance into its corporate governance framework and Enterprise Risk Management (ERM) processes to ensure the effective identification, assessment, monitoring, and management of climate-related risks and opportunities.

### **2.1 Governance Structure**

The Board of Directors oversees sustainability and climate-related matters through the Sustainability, Corporate Governance and Risk Management Committee, which is responsible for overseeing, monitoring, and providing recommendations on environmental, social, and governance (ESG) risks and opportunities, including climate-related issues that may affect the Company's business operations.

Management is responsible for implementing the policies and strategic directions approved by the Board and relevant committees. This includes monitoring performance, assessing climate-related risks and opportunities, and regularly reporting performance outcomes and significant developments to the relevant governing bodies.

The Company promotes the integration of climate-related considerations into the operational processes of relevant functions to strengthen risk management, enhance resource efficiency, and support the sustainable operation of its business over the long term.

## 2.2 Roles and Responsibilities

### 1) Board of Directors

- Oversees the Company's sustainability strategy and direction.
- Reviews significant business risks and opportunities, including climate-related risks and opportunities.
- Provides oversight to ensure that climate-related initiatives are aligned with the Company's strategic objectives and long-term business goals.

### 2) Sustainability, Corporate Governance and Risk Management Committee

- Oversees and monitors climate-related issues that may affect the Company.
- Reviews climate-related risks and opportunities and provides recommendations to the Board of Directors.
- Monitors the progress of environmental performance and greenhouse gas (GHG) management initiatives.

### 3) Management and Relevant Functions

- Implements the Company's climate-related policies, strategies, and targets.
- Collects, monitors, and manages data on energy consumption and greenhouse gas (GHG) emissions.
- Develops and implements measures to mitigate environmental impacts and improve environmental performance.
- Supports the assessment of climate-related risks and opportunities, as well as the preparation and disclosure of relevant climate-related information.

## 2.3 Integration with Enterprise Risk Management

The Company integrates climate-related considerations into its Enterprise Risk Management (ERM) framework to systematically identify, assess, monitor, and manage risks and opportunities that may affect its business operations. This approach encompasses both physical risks and transition risks, while also considering relevant external factors, including climate change trends, regulatory developments, technological advancements, and evolving stakeholder expectations.

The insights gained from this process support strategic planning, the development of risk management measures, and informed decision-making, while strengthening the Company's long-term adaptive capacity and organizational resilience in response to climate-related challenges.

### **3. Methodology**

The Company conducted a Climate Scenario Analysis to assess the climate-related risks and opportunities that may affect its business operations under different climate scenarios. The assessment focuses on evaluating the potential impacts on hospital operations and healthcare service delivery, while using the results to support the Company's enterprise risk management and strategic planning processes.

#### **3.1 Scenario Analysis Approach**

The analysis was conducted by assessing climate-related risks and opportunities under a range of hypothetical climate scenarios with varying levels of severity. The assessment covers both physical risks and transition risks to evaluate the Company's potential exposure to climate-related impacts.

The Company assessed the potential impacts on hospital operations, energy consumption, infrastructure, supply chain, healthcare service delivery, and other relevant business factors to evaluate future climate-related risks and opportunities. The findings are used to support the development of risk management measures, adaptation strategies, and long-term organizational resilience.

#### **3.2 Assessment Scope**

The assessment covers the Company's core business activities and its subsidiaries under the management of BCH, with a focus on areas that may be affected by climate change, including:

- Hospital and healthcare facility operations
- Energy consumption and utility systems
- Buildings and infrastructure
- Supply chain and the procurement of goods and services
- Healthcare service delivery and public healthcare demand

The analysis focuses on a qualitative assessment of climate-related impacts at the organizational level, based on the Company's current operational data.

### 3.3 Assessment Time Horizons

The Company has established the assessment time horizons in alignment with the nature of its business operations, its Enterprise Risk Management (ERM) framework, and its climate-related commitments. These time horizons are used to assess the climate-related risks and opportunities that may affect the Company's hospital business over the short, medium, and long term, as outlined below.

<b>Time Horizon</b>	<b>Physical Risks</b>	<b>Transition Risks</b>	<b>Potential Impacts</b>
<b>Short-term (1–3 years)</b>	Heavy rainfall, flash flooding, heatwaves, and severe weather events affecting operational areas.	Volatility in energy prices, changes in environmental regulations, and evolving ESG disclosure requirements.	Increased energy costs, partial disruption to business operations, impacts on the mobility of employees and patients, and the need to enhance environmental data management systems.
<b>Medium-term (3–10 years)</b>	Increasing frequency and severity of extreme weather events, leading to higher energy demand for indoor temperature control.	Transition toward a low-carbon economy, technological advancements, and increasing expectations from investors and other stakeholders.	Increased investment in energy efficiency, renewable energy, environmentally friendly technologies, and operational support systems.
<b>Long-term (&gt;10 years)</b>	Long-term climate change may affect infrastructure, business continuity, and patterns of climate-related health risks.	More stringent carbon-related policies and regulations, together with structural changes in the economy and supply chains.	and regulations, together with structural changes in the economy and supply chains.  The need to enhance the resilience of buildings and utility systems, strengthen supply chain risk management, and prepare for future changes in demand for healthcare services.

**Note:** The assessment time horizons and potential impacts presented in this report are based on a qualitative assessment under hypothetical climate scenarios. They are intended to support the Company's Enterprise Risk Management (ERM) and strategic planning processes, with reference to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), IFRS S2 Climate-related Disclosures, and other internationally recognized climate-related data sources and frameworks.

### 3.4 Assumptions and Data Sources

The Company's Climate Scenario Analysis has been developed based on internationally recognized frameworks and data sources, together with the Company's internal operational data, to assess the climate-related risks and opportunities that may affect its hospital business under different climate scenarios.

#### 1) Key Assumptions

- Hospital operations will continue to rely on a stable supply of electricity and utility systems to support the continuous delivery of healthcare services.
- Climate change may increase the frequency and severity of extreme weather events.
- Environmental regulations, climate-related policies, and stakeholder expectations regarding climate change are expected to become increasingly stringent over time.
- The transition to a low-carbon economy may influence the Company's investment priorities, technology adoption, and operating costs.
- Demand for healthcare services may be affected by climate change and its associated health impacts.

#### 2) Data Sources

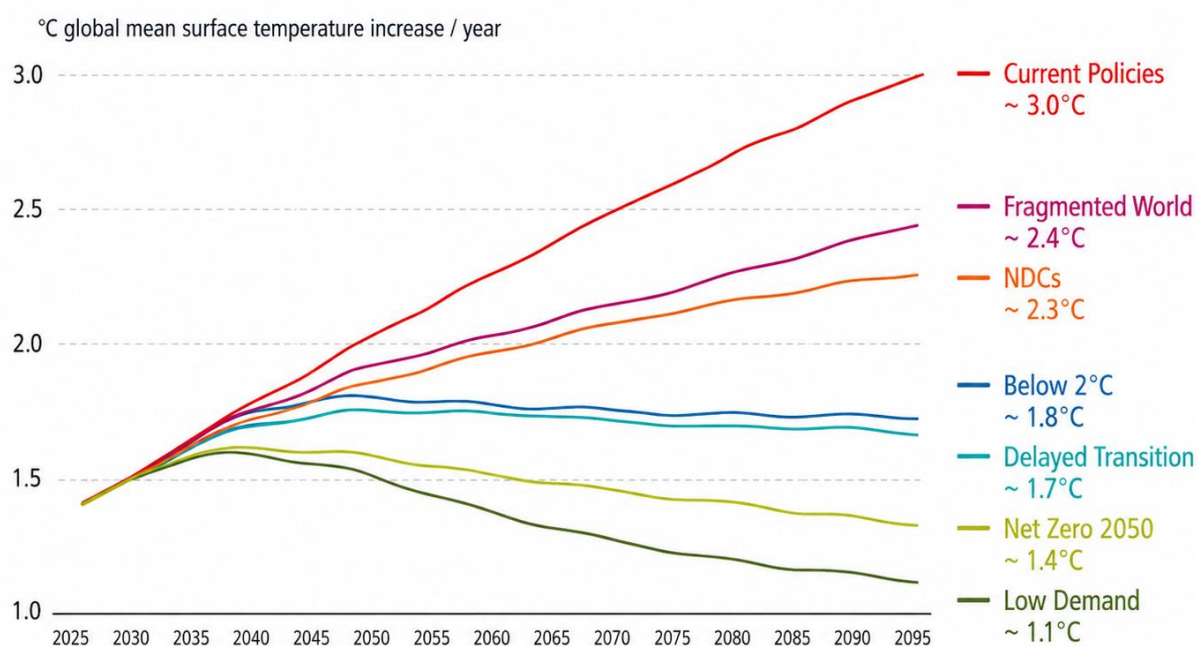
<b>Data Category</b>	<b>Data Sources</b>
1. Energy Data	Data on electricity consumption, fuel consumption, and renewable energy use across the Company's hospitals.
2. Greenhouse Gas (GHG) Data	The Company's Scope 1 and Scope 2 greenhouse gas (GHG) emissions data.
3. Operational Data	Information on buildings, utility systems, hospital operations, and resource consumption.
4. Risk Management Data	Information derived from the Company's Enterprise Risk Management (ERM) framework and Business Continuity Management (BCM) plans.
5. Climate-related Data	Data and reports published by the IPCC, IEA, and NGFS.
6. Disclosure Frameworks	Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and IFRS S2 Climate-related Disclosures.

#### 4. Climate Scenarios

The Company conducted an assessment of the impacts of climate change under a range of hypothetical scenarios with varying levels of severity. The objective was to evaluate the climate-related risks and opportunities that may affect its business operations over the short, medium, and long term, with reference to internationally recognized frameworks and data sources.

### Temperature Evolution by Scenario

AR6 Surface Temperature (GSAT) increase (50<sup>th</sup> percentile)



Source: Network for Greening the Financial System (NGFS), *NGFS Climate Scenarios for Central Banks and Supervisors – Phase IV, 2023*.

ที่มา: Network for Greening the Financial System (NGFS), *NGFS Climate Scenarios for Central Banks and Supervisors – Phase IV, 2023*. Data based on IIASA NGFS Climate Scenarios Database and MAGICC Climate Model.

หมายเหตุ: บริษัทเลือกใช้สถานการณ์ Low-carbon Scenario, Moderate Transition Scenario และ High-emissions Scenario เป็นตัวแทนของเส้นทางการเพิ่มขึ้นของอุณหภูมิโลกในระดับต่ำ ปานกลาง และสูง เพื่อใช้ในการวิเคราะห์ความเสี่ยงและโอกาสด้านสภาพภูมิอากาศ

## Summary of Climate Scenario Analysis Results

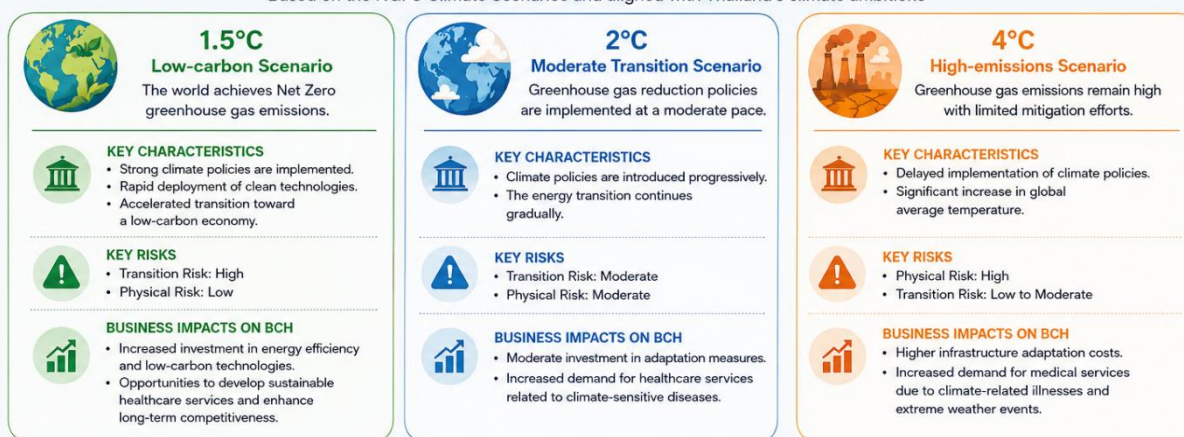
Topic	Low-carbon Scenario (1.5°C)	Moderate Transition Scenario (2°C)	High-emissions Scenario (4°C)
<b>Scenario Description</b>	Global greenhouse gas (GHG) emissions are reduced in line with climate targets, enabling an effective transition to a low-carbon economy.	Greenhouse gas (GHG) emissions are reduced gradually; however, significant challenges remain in achieving climate goals.	Greenhouse gas (GHG) emissions are not reduced in line with climate targets, resulting in severe climate change impacts.
<b>Key Risks</b>	Transition risks are the primary concern.	Both physical and transition risks become increasingly significant.	Physical risks become the dominant concern.
<b>Regulations and Disclosure Requirements</b>	More stringent ESG disclosure requirements and greenhouse gas (GHG) management regulations.	Progressive enhancement of environmental regulations and climate-related policies.	Regulatory impacts may be less significant than in other scenarios; however, physical climate impacts are expected to be substantially greater.
<b>Energy Costs</b>	Increased investment in energy efficiency and renewable energy initiatives.	Energy costs fluctuate due to both market dynamics and policy developments.	Higher energy demand for temperature control and maintaining service continuity.
<b>Buildings and Infrastructure</b>	Low to moderate physical impacts on buildings and infrastructure.	Increased exposure to more frequent extreme weather events.	Greater risks from flooding, heatwaves, and other extreme weather events that may disrupt operations.
<b>Hospital Operations</b>	Focus on improving operational efficiency and reducing greenhouse gas (GHG) emissions.	Balance energy efficiency improvements with climate adaptation measures.	Increased risks to business continuity and healthcare service delivery.
<b>Supply Chain</b>	Suppliers may need to comply with stricter environmental requirements.	Increased cost and transportation risks.	Greater risk of disruptions to transportation and the supply of medical products and equipment.

<b>Topic</b>	<b>Low-carbon Scenario (1.5°C)</b>	<b>Moderate Transition Scenario (2°C)</b>	<b>High-emissions Scenario (4°C)</b>
<b>Patients and Communities</b>	Limited health impacts associated with climate change.	Demand for healthcare services may increase due to climate-related diseases and health conditions.	Demand for healthcare services is expected to increase significantly due to climate-related health impacts.
<b>BCH's Key Priorities</b>	Improving energy efficiency, expanding renewable energy use, and strengthening greenhouse gas (GHG) management.	Strengthening energy risk management, investing in climate adaptation, and enhancing organizational resilience.	Enhancing Business Continuity Management (BCM), strengthening infrastructure preparedness, and improving resilience to extreme weather events.
<b>Overall Impact Level</b>	<b>Low to Moderate</b>	<b>Moderate</b>	<b>Moderate to High</b>

**Note:** The analysis presented above is based on a qualitative assessment using internationally recognized climate scenarios and the Company's operational data. It is intended to support the Company's Enterprise Risk Management (ERM) and strategic planning processes. The potential impacts presented are based on hypothetical climate scenarios and may change over time in response to future developments in climate conditions, regulatory requirements, technological advancements, and other external factors.

## CLIMATE SCENARIOS USED FOR THE ANALYSIS

Based on the NGFS Climate Scenarios and aligned with Thailand's climate ambitions



### COMPARISON OF CLIMATE RISKS AND BUSINESS IMPACTS FOR BCH

TOPIC	1.5°C Low-carbon Scenario	2°C Moderate Transition Scenario	4°C High-emissions Scenario	OVERALL BUSINESS IMPACT
Physical Risk	Low	Moderate	High	High under the 4°C scenario
Transition Risk	High	Moderate	Low to Moderate	Moderate
Financial Impact	Moderate	Moderate	High	High under the 4°C scenario
Business Continuity	Low	Moderate	High	High under the 4°C scenario



#### NOTE:

This assessment represents a qualitative evaluation of climate-related risks and business impacts. It is intended to support strategic planning and climate risk management. The assessment will be regularly reviewed and updated to reflect evolving climate conditions and the latest available information.

Based on the Climate Scenario Analysis, the Company recognizes that climate-related risks may affect its business operations in several areas, including energy management, infrastructure, supply chain resilience, and the continuity of healthcare service delivery. The magnitude of these impacts may vary depending on the climate scenario considered. Nevertheless, the Company's ongoing efforts in energy management, renewable energy adoption, Enterprise Risk Management (ERM), and Business Continuity Management (BCM) will strengthen its preparedness and organizational resilience in responding to future climate-related challenges. The Company will continue to monitor climate trends and other relevant factors to support strategic planning and business decision-making, ensuring alignment with its climate commitments of achieving Carbon Neutrality by 2030 and Net Zero Emissions by 2050, while promoting the Company's long-term sustainable growth.

## 5. Climate-related Risks, Opportunities, and Business Impacts

Based on the Climate Scenario Analysis, the Company identified that climate-related risks and opportunities may affect its business operations across multiple dimensions, particularly in relation to energy management, infrastructure, the continuity of healthcare service delivery, and supply chain resilience. The extent of these impacts is expected to vary depending on the climate scenario and assessment time horizon considered.

<b>Topic</b>	<b>Description</b>	<b>Potential Impacts on BCH</b>
<b>Physical Risks</b>	Extreme weather events, including heavy rainfall, flooding, heatwaves, and rising temperatures.	May affect buildings and facilities, utility systems, the mobility of employees and patients, and increase energy demand.
<b>Transition Risks</b>	Changes in environmental regulations, climate-related disclosure requirements, fluctuations in energy costs, and evolving stakeholder expectations.	May require additional investment to enhance operational processes, adopt new technologies, and strengthen environmental management practices.
<b>Climate Opportunities</b>	Improvements in energy efficiency, increased use of renewable energy, digital transformation, and enhanced environmental management.	Can reduce long-term operating costs, improve resource efficiency, and support the Company's climate commitments.
<b>Operational Impacts</b>	Climate-related issues are closely linked to energy management, infrastructure, business continuity, and supply chain resilience.	Require the Company to strengthen risk management, improve energy efficiency, enhance the resilience of buildings and supporting systems, and reinforce Business Continuity Management (BCM) to address future climate-related challenges.

**Note:** The analysis presented above is based on a qualitative assessment using the Company's operational data and internationally recognized climate scenarios. It is intended to support the Company's Enterprise Risk Management (ERM) and long-term strategic planning. The assessment is designed to provide insights into potential climate-related risks, opportunities, and business impacts under different climate scenarios.

## **6. Climate Risk Management and Adaptation Approach**

The Company has established climate risk management and adaptation approaches to address the risks associated with climate change. These approaches focus on reducing greenhouse gas (GHG) emissions, improving resource efficiency, increasing the use of renewable energy, and strengthening business preparedness. Through these initiatives, the Company aims to support its climate commitments while enhancing its long-term organizational resilience.

<b>Approach</b>	<b>Implementation</b>
<b>Greenhouse Gas (GHG) Emissions Reduction</b>	Continuously collect and monitor the Company's greenhouse gas (GHG) emissions data while implementing energy conservation measures and promoting the efficient use of resources to support the Company's Carbon Neutrality and Net Zero Emissions targets.
<b>Energy Efficiency Improvement</b>	Implement energy conservation measures across hospital operations, including the optimization of air-conditioning systems, lighting systems, and electrical equipment. Energy consumption data are continuously monitored and analyzed to improve operational efficiency.
<b>Renewable Energy Adoption</b>	Promote the use of renewable energy through the installation of solar rooftop photovoltaic (PV) systems at suitable hospitals to reduce dependence on externally supplied electricity and lower greenhouse gas (GHG) emissions associated with electricity consumption.
<b>Business Continuity Management and Organizational Resilience</b>	Integrate climate-related considerations into the Company's Enterprise Risk Management (ERM) and Business Continuity Management (BCM) frameworks to enhance preparedness for events that may disrupt business operations. The Company also strengthens the resilience of its infrastructure, supporting systems, and operational processes to improve its capacity to respond to climate-related challenges.

## 7. Climate-related Targets and Action Plan

The Company is committed to conducting its business while effectively managing climate-related impacts. To support this commitment, the Company has established climate-related targets and action plans focused on reducing greenhouse gas (GHG) emissions, improving resource efficiency, and strengthening organizational resilience to climate change over the long term.

<b>Target</b>	<b>Action Plan</b>
<b>Carbon Neutrality 2030</b>	Implement greenhouse gas (GHG) emissions reduction measures across the Company's operations through improved energy efficiency, increased adoption of renewable energy, and the development of appropriate greenhouse gas emissions reduction projects.
<b>Net Zero Emissions 2050</b>	Support the long-term reduction of greenhouse gas (GHG) emissions by enhancing operational efficiency, adopting appropriate technologies, and continuously improving greenhouse gas emissions management practices in alignment with the Company's long-term climate objectives.
<b>Climate Roadmap</b>	Integrate climate-related considerations into the Company's Enterprise Risk Management (ERM) framework, energy management, renewable energy initiatives, and Business Continuity Management (BCM) to strengthen preparedness for climate-related risks and opportunities and enhance long-term organizational resilience.

Note: The Company's Carbon Neutrality 2030 and Net Zero Emissions 2050 commitments represent its long-term climate targets. The corresponding action plans will be periodically reviewed and updated to reflect the latest scientific developments, relevant technologies, the evolving business environment, and future climate-related developments.

<b>Time Horizon</b>	<b>Action Plan</b>
<b>Short-term (1–3 years)</b>	Enhance the completeness and reliability of the Company's greenhouse gas (GHG) data collection and management systems. Continuously monitor and evaluate GHG emissions, improve energy efficiency across hospital operations, and promote the adoption of renewable energy where technically and economically feasible.
<b>Medium-term (3–10 years)</b>	Expand energy conservation and greenhouse gas (GHG) emissions reduction initiatives, increase the share of renewable energy, develop technologies and innovations that enhance operational efficiency, and strengthen climate risk management and adaptation capabilities.
<b>Long-term (&gt;10 years)</b>	Support the achievement of the Company's Carbon Neutrality and Net Zero Emissions targets through continuous operational improvements, the adoption of appropriate technologies, and the enhancement of organizational resilience to address future climate-related impacts.

## Conclusion

In 2025, the Company conducted a Climate Scenario Analysis to assess the climate-related risks, opportunities, and potential business impacts under different climate scenarios. The assessment indicates that climate change may affect the Company's operations across multiple dimensions, particularly in relation to energy management, infrastructure, the continuity of healthcare service delivery, and supply chain resilience.

Recognizing the importance of climate risk management and adaptation, the Company has integrated climate-related considerations into its Enterprise Risk Management (ERM) framework. At the same time, it continues to implement initiatives to improve energy efficiency, promote renewable energy adoption, strengthen greenhouse gas (GHG) management, and enhance Business Continuity Management (BCM) in order to strengthen organizational preparedness and resilience against future climate-related challenges.

The Company will continue to monitor climate trends, scientific developments, and other relevant factors to ensure that its climate risk management and business strategies remain aligned with the evolving business environment. These efforts will support the achievement of the Company's Carbon Neutrality by 2030 and Net Zero Emissions by 2050 commitments, while creating long-term value for stakeholders and promoting the Company's sustainable growth.