

Finance, Move Together



1. Introduction

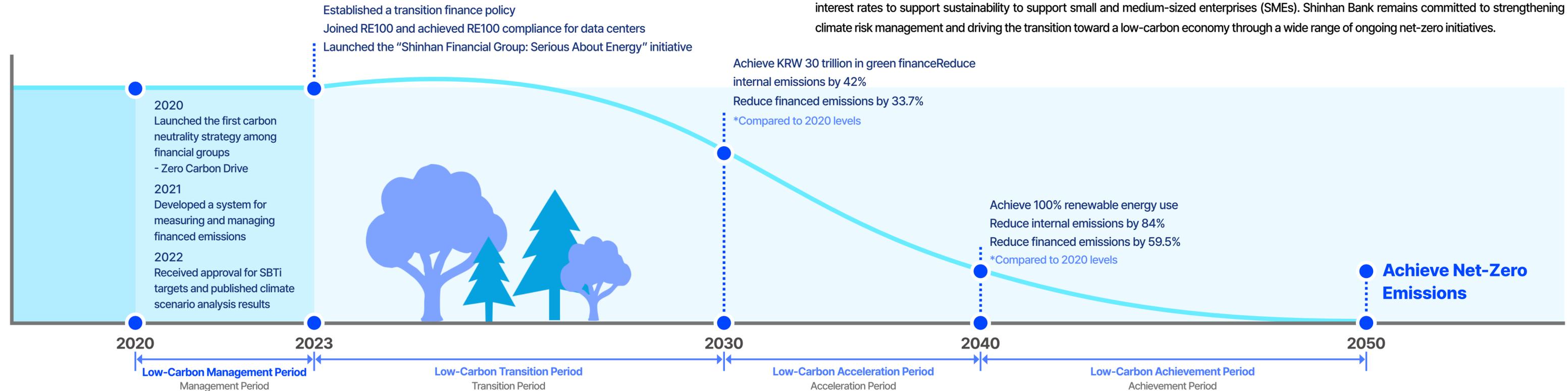
Shinhan Bank's Commitment to Climate Action

Engagement in Global Initiatives

Shinhan Bank positions climate action as a key pillar of its business strategy and pursues comprehensive initiatives to achieve carbon neutrality. In September 2020, the bank became the first commercial bank in South Korea to join the Equator Principles, a voluntary framework that restricts financial support for large-scale project financing (PF) involving potential environmental destruction or human rights violations. Despite a one-year grace period following its enrollment, Shinhan Bank has consistently published annual reports since 2021 to ensure transparency in implementation. For relevant projects, the bank conducts a comprehensive review of environmental and social impacts based on environmental impact assessments. It evaluates factors such as compliance with international standards, stakeholder engagement, and the existence of grievance mechanisms before making financing decisions. Shinhan Bank has also announced a "coal phase-out" policy, ceasing project financing (PF) and bond underwriting for coal-fired power plants domestically and internationally. As part of its commitment to climate risk management, the bank is a signatory to the Carbon Disclosure Project (CDP) and implements the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). In 2023, Shinhan Bank joined the global RE100 initiative, setting a target to fully transition to renewable energy. As part of this effort, the bank signed a Renewable Energy Certificate (REC) purchase agreement with Korea East-West Power and established a joint venture (JV) with Hanwha Convergence to facilitate renewable energy trading. Through these sustainable finance initiatives, Shinhan Bank continues to play a leading role in addressing climate change.

Financed Emissions Measurement and Net-Zero Commitment

To support the global objective of achieving net-zero emissions by 2050, Shinhan Bank carried out a range of initiatives in 2023, including the expansion of green finance, employee-led efforts to reduce greenhouse gas (GHG) emissions, resource conservation, greater adoption of renewable energy, and green social contribution programs. The bank is advancing emissions reductions for both financed emissions and internal operations by applying the Science Based Targets initiative (SBTi) methodology, which aligns with the Paris Agreement. Based on the 1.5°C scenario, Shinhan Bank established emissions reduction targets and, in 2021, began tracking financed emissions across key areas such as lending, investment, and project financing, along with setting corresponding reduction goals. Financed emissions are determined based on the Partnership for Carbon Accounting Financials (PCAF) methodology, which involves categorizing financed assets and conducting an objective assessment that attributes a portion of a financed entity's greenhouse gas emissions to the financial institution, in proportion to its level of financial involvement. As a member of the Net-Zero Banking Alliance (NZBA), Shinhan Bank also participates in working groups to develop and monitor interim targets for achieving net-zero emissions across its lending and investment portfolios. Since 2022, the bank has operated a financed emissions tracking system to manage GHG emissions in a structured way. It has also participated in the Korean Green Taxonomy Expansion Agreement, led by the Ministry of Environment, and in the 2023 private-sector project to develop a K-Taxonomy implementation system. In 2024, through an MOU with Samsung Electronics and the Financial Supervisory Service (FSS), Shinhan Bank launched a project to promote green finance for partner companies, offering incentives such as reduced interest rates to support sustainability to support small and medium-sized enterprises (SMEs). Shinhan Bank remains committed to strengthening climate risk management and driving the transition toward a low-carbon economy through a wide range of ongoing net-zero initiatives.



2. Governance

Governance of Climate-Related Risks and Opportunities

Board Roles and Responsibilities

Shinhan Bank is enhancing its oversight and decision-making functions for sustainable management, with leadership from its highest governing body, the Board of Directors. In March 2022, Shinhan Bank became the first commercial bank in South Korea to establish a dedicated ESG Committee under the board, composed of the CEO and all independent directors. Through its ESG Committee and Risk Management Committee, Shinhan Bank defines its strategic approach to climate change and reviews and approves key matters related to the transition to a low-carbon economy. The ESG Committee holds final approval authority over climate-related policies and processes, including those governing green finance performance, financed emissions, and emissions intensity. It also monitors the progress of ESG strategic initiatives and oversees internal control policies. The Risk Management Committee is responsible for identifying, assessing, monitoring, and controlling a wide range of risks associated with financial transactions. It also deliberates on key factors related to climate risk. In 2024, Shinhan Bank convened four ESG Committee meetings and fourteen Risk Management Committee meetings (including four regular and ten ad hoc sessions).

2024 ESG Committee Operation Status

Date	Category	NO	Agenda
2024.03.21	Report	1	Review of Shinhan Bank's 2023 bank-wide ESG strategic initiatives and plans for 2024 implementation
	Report	2	Status and plans for key initiatives led by the ESG Division
	Report	3	Review of social contribution fund disbursements exceeding KRW 1 billion
	Report	4	Launch of "Shinhan Bank 2023 ESG POP UP 10"
2024.05.23	Report	1	<Environmental> Key project outcomes and plans for advancement
	Report	2	<Social> Key project outcomes and plans for advancement
	Report	3	Review of social contribution fund disbursements exceeding KRW 1 billion
2024.08.22	Report	1	Progress report on bank-wide ESG initiatives for the first half of 2024
	Report	2	<Environmental> Key project outcomes and plans for advancement
	Report	3	<Social> Key project outcomes and plans for advancement
	Report	4	Review of social contribution fund disbursements exceeding KRW 1 billion
2024.11.21	Report	1	Overview of domestic and international ESG disclosure regulations and Shinhan Bank's ESG reporting direction
	Report	2	<Environmental> Key project outcomes and plans for advancement
	Report	3	<Social> Key project outcomes and plans for advancement
	Report	4	Review of social contribution fund disbursements exceeding KRW 1 billion

Executive Management Responsibilities

To clearly define executive roles in sustainable management and climate risk management, Shinhan Bank operates the ESG Management Committee and the Risk Policy Committee, both comprising all members of the executive team. These committees meet regularly to review, deliberate, and make decisions on key ESG initiatives, including those related to climate change. In 2024, Shinhan Bank convened six ESG Management Committee meetings and sixteen Risk Policy Committee meetings. The bank has further clarified executive responsibilities by reinforcing climate-related leadership and expertise and establishing a structured reporting framework. In addition, green finance performance, internal emissions (Scope 1 and 2), and financed emissions (Scope 3) are incorporated into the bank's executive performance evaluation criteria.

Training and Capacity Building for Climate Action

Shinhan Bank provides ongoing training programs to strengthen climate risk management capabilities across all levels of the organization, including board members, executives, and employees. These programs are designed to build capacity, provide practical training, and ensure the organization is equipped with the necessary expertise to address climate-related challenges. The bank also develops and shares practical ESG-related content that enables employees to incorporate climate considerations into their day-to-day work.

1	An Introduction to Shinhan Financial Group's ESG Strategy	Shinhan Financial Group ESG Planning Team
2	"Now or Never": Understanding the Climate Crisis and How to Respond	Shinhan Bank ESG Planning Office
3	ESG Disclosure in Practice: Shinhan's Approach to Climate Finance, Diversity, and Human Rights	Shinhan Financial Group ESG Planning Team
4	Green Taxonomy and Key Response Challenges	Shinhan Bank ESG Planning Office
5	ESG Consulting That Supports Sales Activities	Shinhan Bank Corporate Banking Department
6	What's a Carbon Footprint — and Why Should We Reduce It?	Shinhan Bank ESG Planning Office
7	Why Risk Management Is Essential in ESG	Shinhan Bank Risk Management Department
8	Yes, You Can Do ESG Too!	Shinhan Bank Win-Win Finance Department
9	Why Measure ESG Performance Using the Shinhan ESG Value Index?	Shinhan Financial Group ESG Planning Team
10	Green IB and ESG Investment: A Strategic Necessity for the Future	Shinhan Bank Green IB Lab

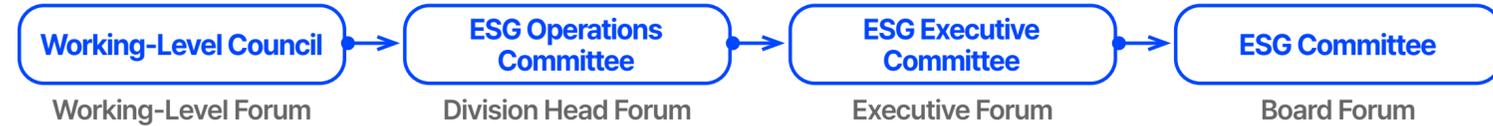
2. Governance

Governance of Climate-Related Risks and Opportunities

Roles of the Management Structure

Shinhan Bank recognizes that climate action must be integrated into its sustainability (ESG) management framework. In alignment with this approach, the bank has expanded its governance structure by establishing a dedicated ESG management function alongside its existing risk management organization. To support this structure, the ESG Planning Office and the Risk Management Department serve as dedicated units, with clearly defined roles and responsibilities in both climate and ESG-related governance. Each unit carries out specific tasks to strengthen subject-matter expertise. Climate risk is managed through a collaborative effort between the Risk Management Department and the ESG Planning Office, which are responsible for developing relevant standards, frameworks, policies, and strategies. Based on these foundations, individual business units establish and incorporate tailored management plans into their operational strategies. Shinhan Bank operates an ESG Operations Committee composed of department heads from ESG implementation units. The committee meets regularly to review climate-related activities and strengthen the execution of ESG management across the organization. In 2024, Shinhan Bank enhanced the function of the ESG Operations Committee to extend beyond simply sharing goals and progress on ESG initiatives. The committee now serves as a platform for discussing the financial, social, and environmental impacts across business units and for identifying opportunities for cross-functional collaboration—strengthening the effectiveness of ESG implementation.

Agenda Development Process



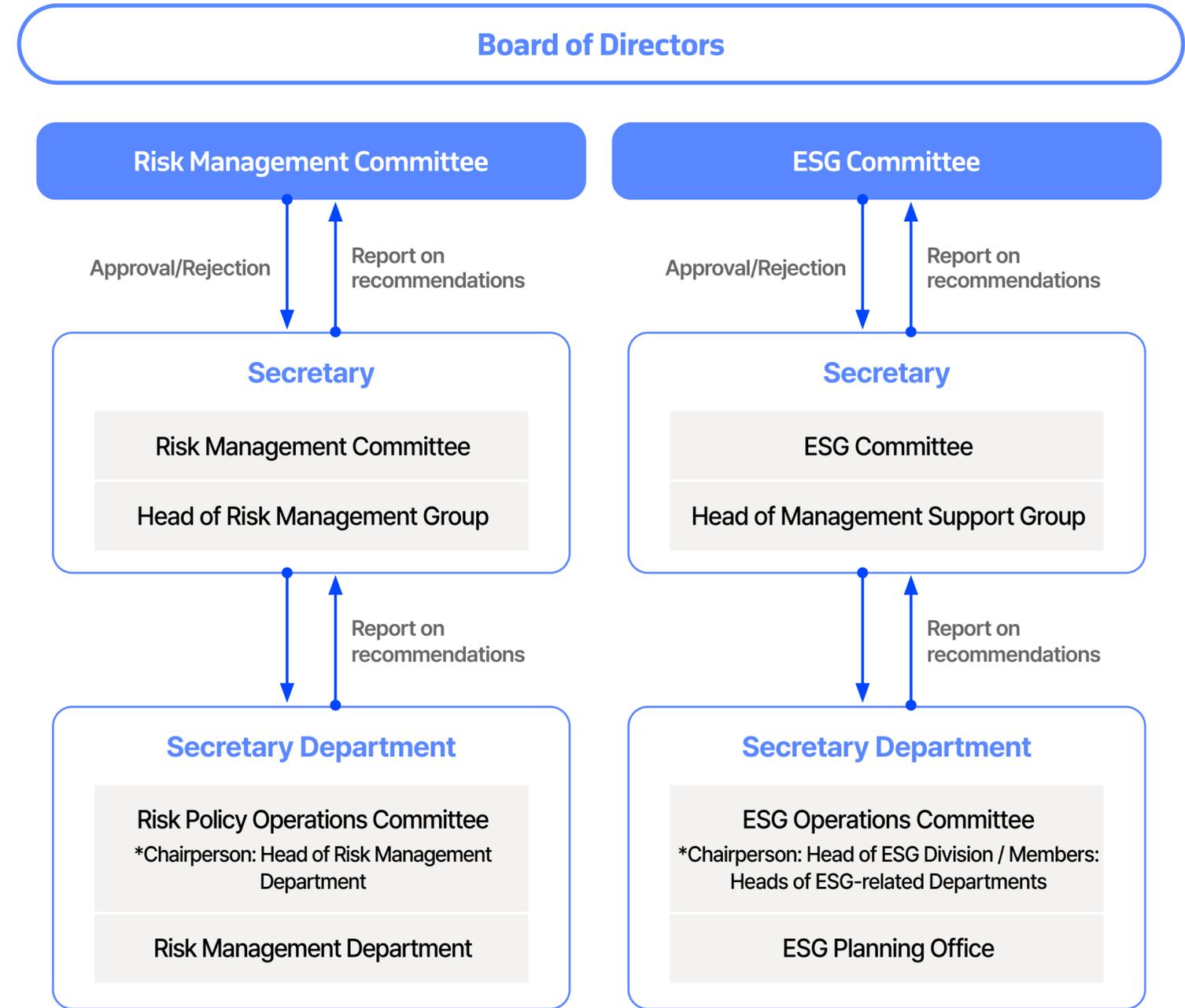
ESG and Climate Risk Work Areas

Category	Climate Risk Management	ESG Implementation
Risk Identification	<ul style="list-style-type: none"> Identification of climate-related risk factors 	<ul style="list-style-type: none"> Identification of opportunity factors
Risk Assessment	<ul style="list-style-type: none"> Development of financed emissions measurement system and database Climate scenario analysis 	<ul style="list-style-type: none"> Execution of identified opportunity factors
Risk Management	<ul style="list-style-type: none"> Operation of financed emissions dashboard Identification and management of high-carbon industries Monitoring of key environmental/social impact areas 	<ul style="list-style-type: none"> Establishment and oversight of emission reduction targets aligned with carbon neutrality Development and management of strategies to achieve reduction targets
Disclosure & Reporting	<ul style="list-style-type: none"> Disclosure of climate risk-related information Assistance in preparing ESG reports 	<ul style="list-style-type: none"> ESG performance disclosure and climate finance reporting

ESG and Climate Risk Management Structure

Category	Climate Risk Oversight	ESG Governance Oversight
Dedicated Team	Risk Management Department	ESG Planning Office
Executive Forum	Risk Policy Committee	ESG Executive Committee
Disclosure & Reporting	Risk Management Committee	ESG Committee

Shinhan Bank Climate Action Governance



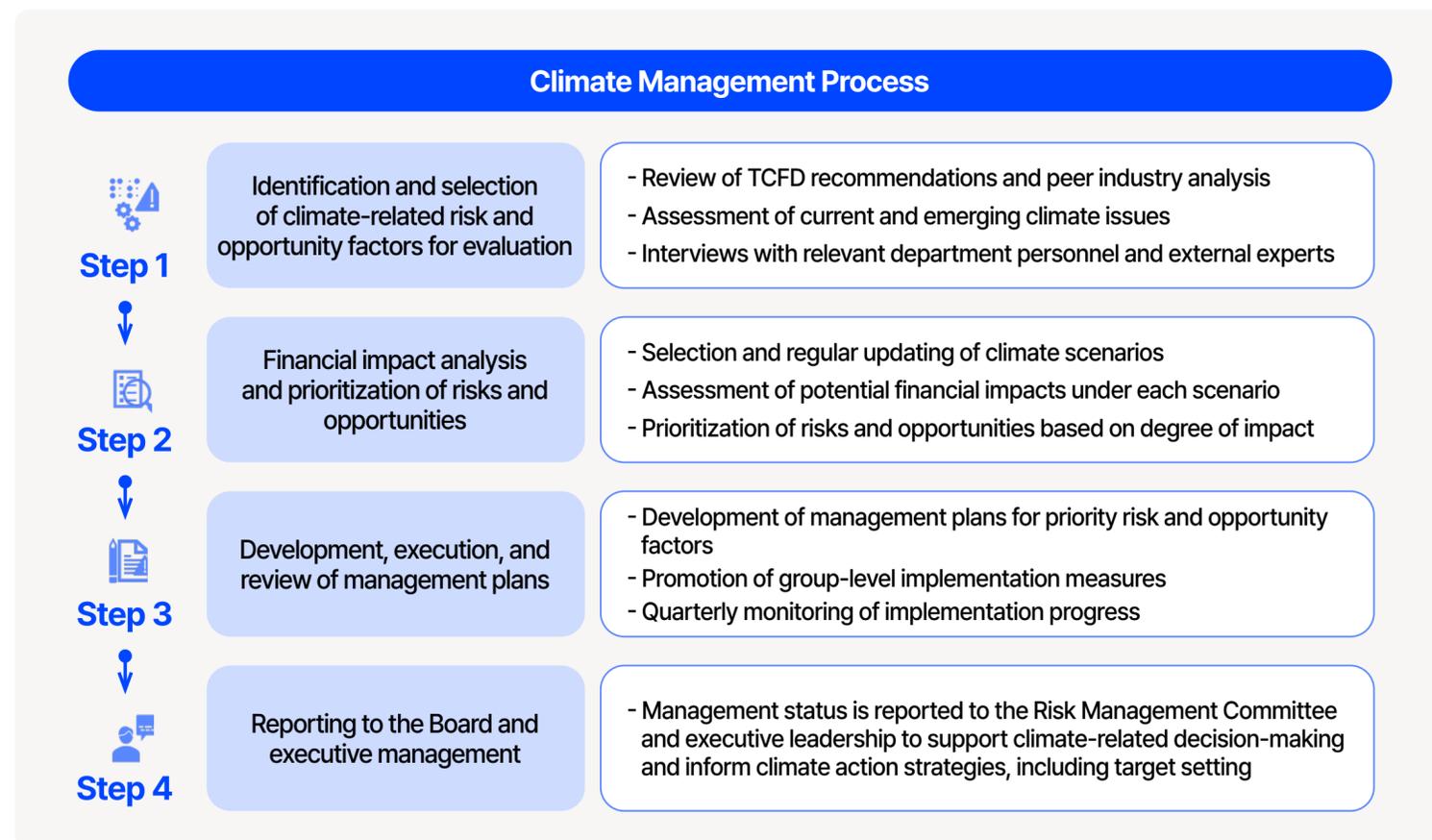
3. Strategy

Climate-Related Risks and Opportunities

Identification of Climate-Related Risks and Opportunities

Shinhan Bank analyzes a wide range of factors associated with climate change and assesses their potential financial impacts across short-, medium-, and long-term time horizons. In line with the TCFD recommendations, the bank has identified key transition and physical risks as well as opportunity factors, drawing on international references such as UNEP FI's climate issue materials and the World Economic Forum's 2024 Global Risks Report. Through this process, the bank has identified a total of 30 climate-related risks and opportunities. In doing so, the bank reflected the unique characteristics of the financial sector by considering not only direct risks to Shinhan Bank, but also indirect risks that may be transferred from clients. Based on these identified factors, relevant departments evaluate both the likelihood of occurrence and the potential financial impacts, categorizing them as transition or physical risks and associated opportunities over time.

Climate-Related Risk and Opportunity Identification Process



Time Horizons for Climate Risk and Opportunity Factors

Shinhan Bank evaluates climate-related risks and opportunities using a three-tiered time horizon: short-term, medium-term, and long-term. The short term is defined as the period from the reporting year through the following year (0 to 1 year). The medium term refers to the time horizon of up to five years, during which financial impacts (such as the BIS ratio) are projected to show meaningful variation based on climate risk scenario analysis. The long term is defined as the period beyond five years, which exceeds the typical forecast range of scenarios; climate risks during this period are assessed with greater conservatism. Opportunity factors are also evaluated using the same time horizon framework. Among climate risks, transition risks may also present opportunities. In particular, opportunities arising from responses to regulatory risks are expected to occur primarily in the short term (0 to 1 year). The medium term (1 to 5 years) is viewed as a phase in which the pace of low-carbon transition is likely to accelerate due to rising carbon prices and the implementation of carbon taxes, thereby creating more opportunities in green business. Beyond five years, the risk of delayed or disorderly implementation of carbon neutrality scenarios is expected to increase.

Climate-Related Time Horizon

Definition of time horizon	Time Horizon		
	Short Term (0~1year)	Medium Term (1~5years)	Long Term (Beyond 5 years)
Strategy and planning integration by time horizon	<p>To manage internal emissions expected in the short term, Shinhan Bank has set a science-based target to reduce emissions by 4.2 percentage points annually and is expanding its use of renewable energy.</p> <p>To accelerate the growth of green finance, the bank is increasing lending and investment activities in line with its capital deployment targets.</p>	<p>In the medium term, Shinhan has developed strategies to manage the intensity of financed emissions and expand transition finance. These strategies are aligned with anticipated financial impacts and the expected growth of the low-carbon transition market.</p>	<p>Over the long term, Shinhan Financial Group aims to achieve net-zero financed emissions (Scope 3) by 2050, in line with both orderly and delayed carbon neutrality scenarios. Ahead of that, the bank targets net-zero internal emissions (Scope 1 and 2) by no later than 2044.</p>

3. Strategy

Climate-Related Risks and Opportunities

Climate Risk Factors

Key transition risks identified by Shinhan Bank include rising carbon credit prices, increased regulatory costs such as carbon taxes, higher raw material and energy prices, and the potential for investor divestment. Ongoing increases in average global temperatures may further accelerate the rise in raw material and energy costs. These environmental shifts may not only lead to increased production costs for financial institutions but also result in the transfer of operational risks from borrowing companies to the financial institutions themselves. In terms of physical risks, typhoons and heavy rainfall—frequent occurrences in South Korea—are viewed as the most financially disruptive to corporate clients. Over the long term, a sustained rise in average temperatures across the Korean Peninsula may lead to a broad decline in industrial productivity, highlighting the need for enhanced risk preparedness.

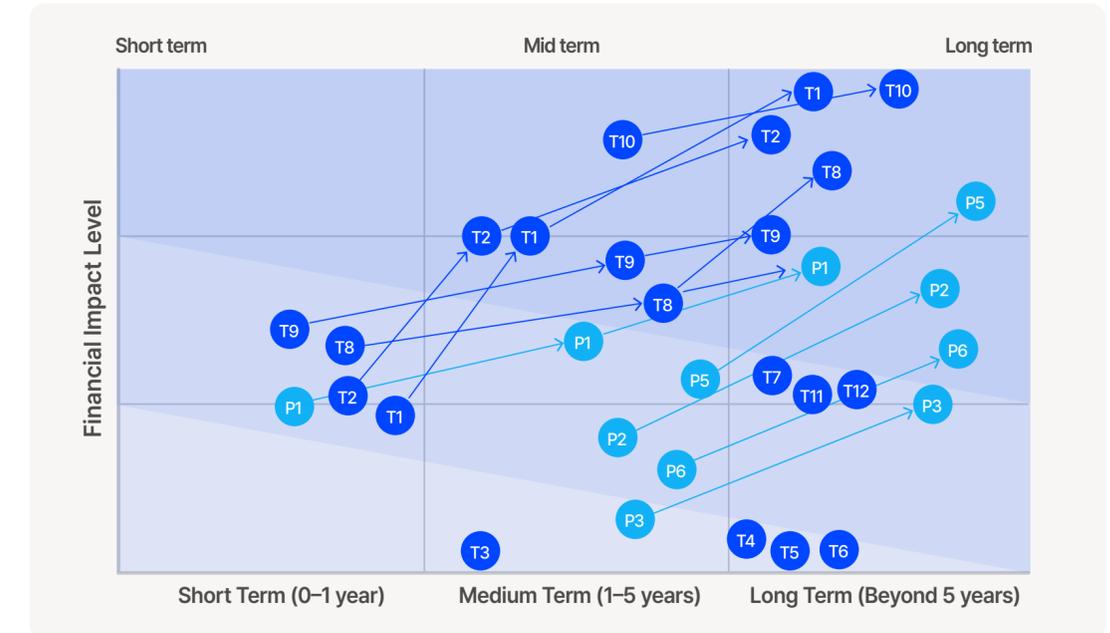
Climate Opportunity Factors

Shinhan Bank sees strong potential for increased lending and investment demand in areas such as green transportation and sustainable building development. Capital raising and deployment supported by public-sector incentives is considered a key financial opportunity. Over the medium to long term, the bank expects new climate-related markets to emerge, particularly through increased investment in advanced technologies such as carbon capture. Furthermore, financial markets are expected to expand with the growth of instruments such as carbon futures and climate-related investment funds. As demand for climate adaptation rises under the NGFS “Delayed Transition” scenario, the need for innovative insurance solutions is expected to become increasingly prominent.

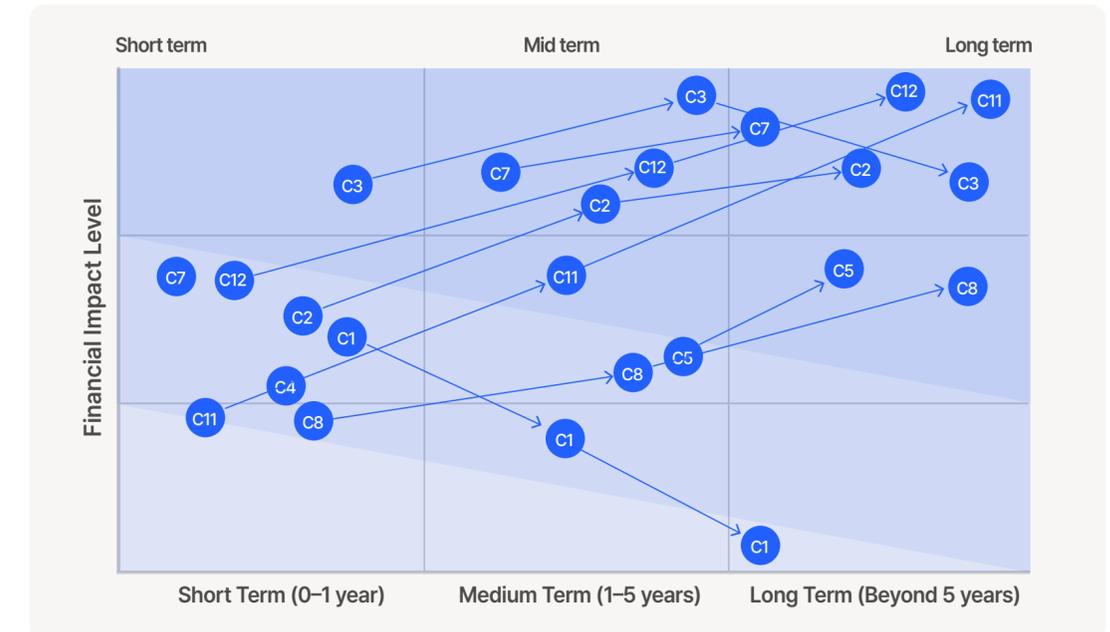
Category		Factors
Transition risk	Policy and legal	T1 Increase in carbon credit prices
		T2 Increase in policy-driven costs such as carbon taxes
		T3 Mandatory environmental disclosure requirements
	Technology	T4 Failure to adopt low-carbon technologies
		T5 Increased costs for improving energy efficiency
		T6 Failure to invest in emissions reduction technologies
	Market	T7 Loss of customers (corporate/retail)
		T8 Increase in raw material prices (inflation)
		T9 Increase in energy costs (electricity, fuel)
Reputation	T10 Divestment by investors	
	T11 Increased consumer (public) skepticism	
	T12 Heightened negative perception from stakeholder groups	
Physical risk	Acute risk	P1 Typhoons (high winds) / floods / heavy rainfall (inundation)
		P2 Wildfires / landslides
		P3 Cold waves / heavy snowfall
		P4 Earthquakes
	Chronic risk	P5 Rise in average temperatures
		P6 Sea level rise

Category		Factors
Resource efficiency	C1 Efficient energy use	
	C2 Expansion of green transportation	
	C3 Expansion of green buildings	
Energy resources	C4 Increased use of low-carbon energy	
	C5 Participation in carbon markets	
	C6 Adoption of new energy-related technologies	
Products and services	C7 Expansion of low-carbon product/service development	
	C8 Climate adaptation and insurance solutions	
	C9 New services through technological innovation	
Market	C10 Shifts in consumer product preferences	
	C11 Emergence of new climate-related markets	
	C12 Utilization of public-sector incentives	

Impact Level by Climate Risk Factor



Impact Level by Climate Opportunity Factor



3. Strategy

Climate-Related Risks and Opportunities

Financial Impact Level Moderate: ○ Significant: ⊙ Highly Significant: ● / **Time Horizon** Short Term: 0~1year, Medium Term: 1~5years, Long Term: Beyond 5 years

Category	Code	Risk Factor	Time Horizon			Potential Impact	Current Measures and Future Plans
			Short Term	Medium Term	Long Term		
Policy and legal	T1	Increase in carbon credit prices	○	⊙	●	<ul style="list-style-type: none"> Identification of climate-related risk factors 	<p>(Short Term) Secure corporate emissions data and conduct trend analysis</p> <p>(Medium Term) Expand transition finance for high-emission industries</p> <p>(Long Term) Manage and adjust portfolio exposure to high-risk industries</p>
Policy and legal	T2	Increase in policy-driven costs such as carbon taxes	○	⊙	●	<ul style="list-style-type: none"> For export-oriented companies, increased export costs due to strengthened carbon taxes and regulations on high-emission industries Increased operational costs during the localization process 	<p>(Short Term) Integrate internal carbon pricing into emission reduction efforts and investment decision-making</p> <p>(Medium to Long term) Expand investments in eco-friendly companies and renewable energy projects while continuously monitoring internal carbon pricing and adjusting it to global benchmark levels</p>
Market	T8	Increase in raw material prices (inflation)	○	○	●	<ul style="list-style-type: none"> Higher production costs driven by increases in raw material prices and changes in waste disposal fees 	<p>(Medium to Long term) Continuous monitoring of carbon risks associated with key raw material supply partners</p>
Market	T9	Increase in energy costs (electricity, fuel)	○	⊙	●	<ul style="list-style-type: none"> Unexpected increases in energy costs leading to higher cost of goods sold 	<p>(Short Term) Invest in energy-efficient facility upgrades, including heating and cooling system replacements</p> <p>(Medium to Long term) Strengthen RE100 implementation stability by expanding REC and PPA agreements</p>
Reputation	T10	Divestment by investors		●	●	<ul style="list-style-type: none"> Reduced investment due to growing concerns among customers and investors Insufficient climate action may weaken customer preference and damage brand reputation, resulting in financial losses 	<p>(Medium to Long term) Strengthen climate-related disclosure and implementation through sustained participation in global initiatives such as CDP, SBTi, and TCFD</p>
Acute risk	P1	Typhoons (high winds) / floods / heavy rainfall (inundation)	○	○	⊙	<ul style="list-style-type: none"> Operational disruptions at company-owned or supply chain facilities may trigger a chain reaction of credit risks Decline in productivity and operating profit due to deteriorating worker health Increased operational and capital expenditures from facility damage or early asset retirement 	<p>(Medium to Long term) Identify high- and low-risk regions for typhoons, floods, and heavy rainfall, and adjust investment weightings accordingly; establish occupational health and safety management systems, and provide safety training and guidelines to employees and partner companies</p>
Acute risk	P2	Wildfires / landslides		○	⊙	<ul style="list-style-type: none"> Rising recovery costs due to damage at owned or supplier-operated facilities Increased risk of facility damage or human accidents at the Jukjeon data center, located in a mountainous area 	<p>(Medium to Long term) Identify high- and low-risk regions for wildfires and landslides, and adjust investment weightings accordingly; establish occupational health and safety management systems, and provide safety training and guidelines to employees and partner companies</p>
Chronic risk	P5	Rise in average temperatures		○	●	<ul style="list-style-type: none"> Increased electricity and water consumption, along with reduced labor productivity Long-term shifts in climate patterns leading to higher operational costs 	<p>(Medium Term) Identification of buildings and branches vulnerable to climate variability</p> <p>(Long Term) Plan to analyze and continuously monitor site-specific location factors that may pose long-term risks to business operations</p>

3. Strategy

Climate-Related Risks and Opportunities

Financial Impact Level Moderate: ○ Significant: ⊙ Highly Significant: ● / **Time Horizon** Short Term: 0~1year, Medium Term: 1~5years, Long Term: Beyond 5 years

Category	Code	Risk Factor	Time Horizon			Potential Impact	Current Measures and Future Plans
			Short Term	Medium Term	Long Term		
Resource efficiency	C2	Expansion of green transportation	○	⊙	●	<ul style="list-style-type: none"> Increased demand for financing from corporate clients recognizing the need for energy efficiency improvements and the establishment of green transportation and infrastructure 	<p>(Short Term) Launch of financial products related to green transportation Promote internal adoption by supporting electric vehicle purchases for employees</p> <p>(Medium to Long term) Investment in public infrastructure related to green transportation, including EV charging stations and bicycle lanes</p>
Resource efficiency	C3	Expansion of green buildings	⊙	●	⊙	<ul style="list-style-type: none"> Increase in the value of fixed assets, such as energy-efficient buildings Reduction in operating costs and carbon emissions through energy-efficient building design 	<p>(Short Term) Launch of financial products related to green buildings and projects</p> <p>(Medium Term) Expand acquisition of U.S. green building certification (LEED) for directly operated and supply chain facilities</p>
Energy resources	C5	Participation in carbon markets		○	⊙	<ul style="list-style-type: none"> Increase in the value of fixed assets, such as energy-efficient buildings Reduction in operating costs and carbon emissions through energy-efficient building design 	<p>(Medium to Long term) Promote a low-carbon society through the development of an emissions trading market; establish a virtuous cycle by continuously managing carbon emissions and donating carbon credits</p>
Products and services	C7	Expansion of low-carbon product/service development	○	⊙	●	<ul style="list-style-type: none"> Establishment of sustainability strategies focused on the development of green financial products, enhancing competitive advantage Increased revenue driven by growing demand from corporate clients for green financial products 	<p>(Short Term) Expand green finance offerings such as eco-themed funds and renewable energy infrastructure project financing (PF)</p> <p>(Medium to Long term) Continuously monitor performance of green financial products</p>
Products and services	C8	Climate adaptation and insurance solutions	○	○	⊙	<ul style="list-style-type: none"> Revenue growth through the introduction of new solutions to meet climate adaptation needs (e.g., insurance risk transfer products and services) 	<p>(Medium to Long term) Develop customized insurance products to prepare for natural disaster risks such as typhoons and floods</p>
Market	C11	Emergence of new climate-related markets	○	⊙	●	<ul style="list-style-type: none"> Early capture of financing opportunities in new markets through industry monitoring Market leadership and revenue growth through diversification of financial products incorporating new technologies such as fintech 	<p>(Short Term) Invest in and support the growth of startups and innovative companies in low-carbon technology and services</p> <p>(Medium to Long term) Expand long-term infrastructure investment in renewable energy projects such as solar and wind power</p>
Market	C12	Utilization of public-sector incentives	○	●	●	<ul style="list-style-type: none"> Reduction in indirect operating costs through utilization of public-sector incentives 	<p>(Short Term) Collect and analyze information on public-sector incentives and subsidy programs</p> <p>(Medium to Long term) Participate in municipally-led projects funded by national energy-related grants</p>

3. Strategy

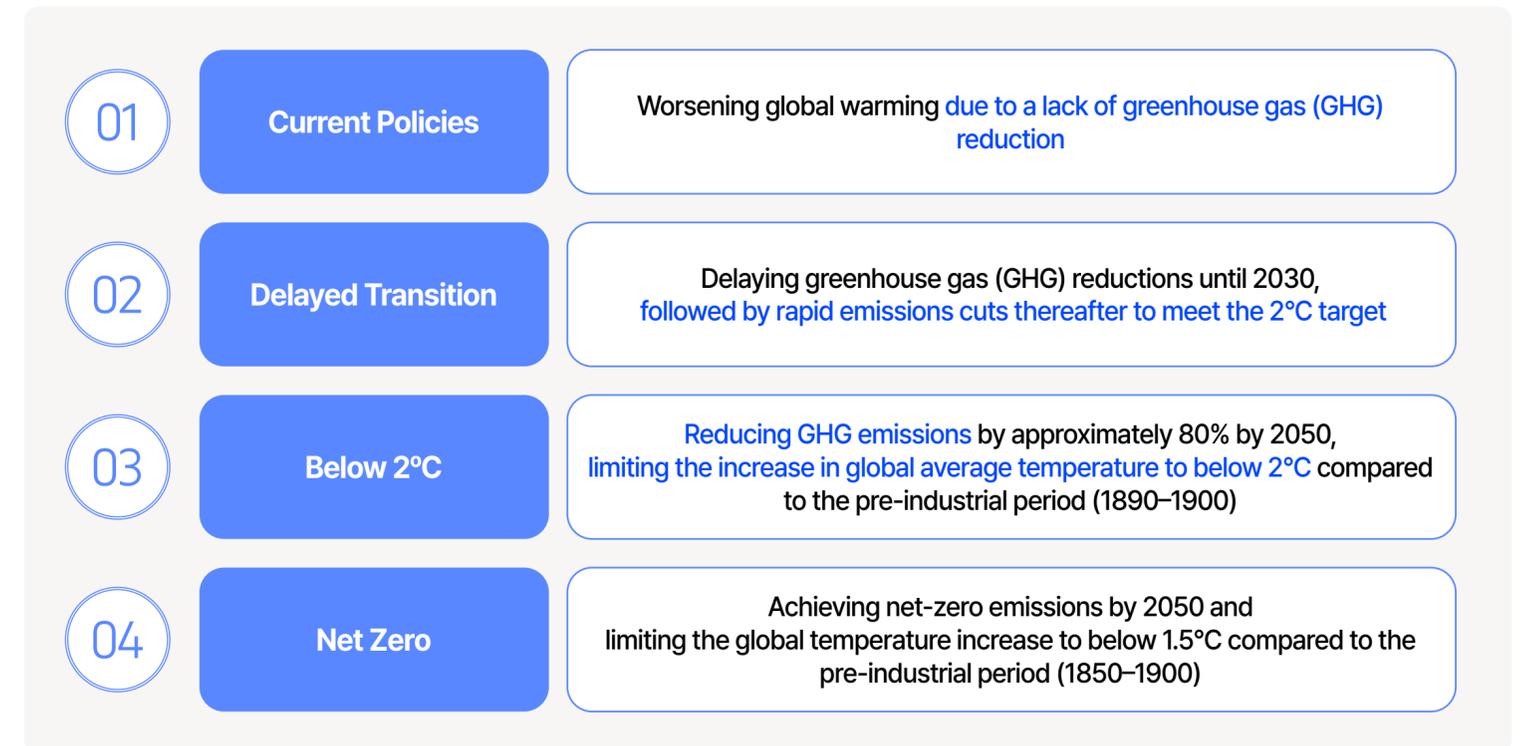
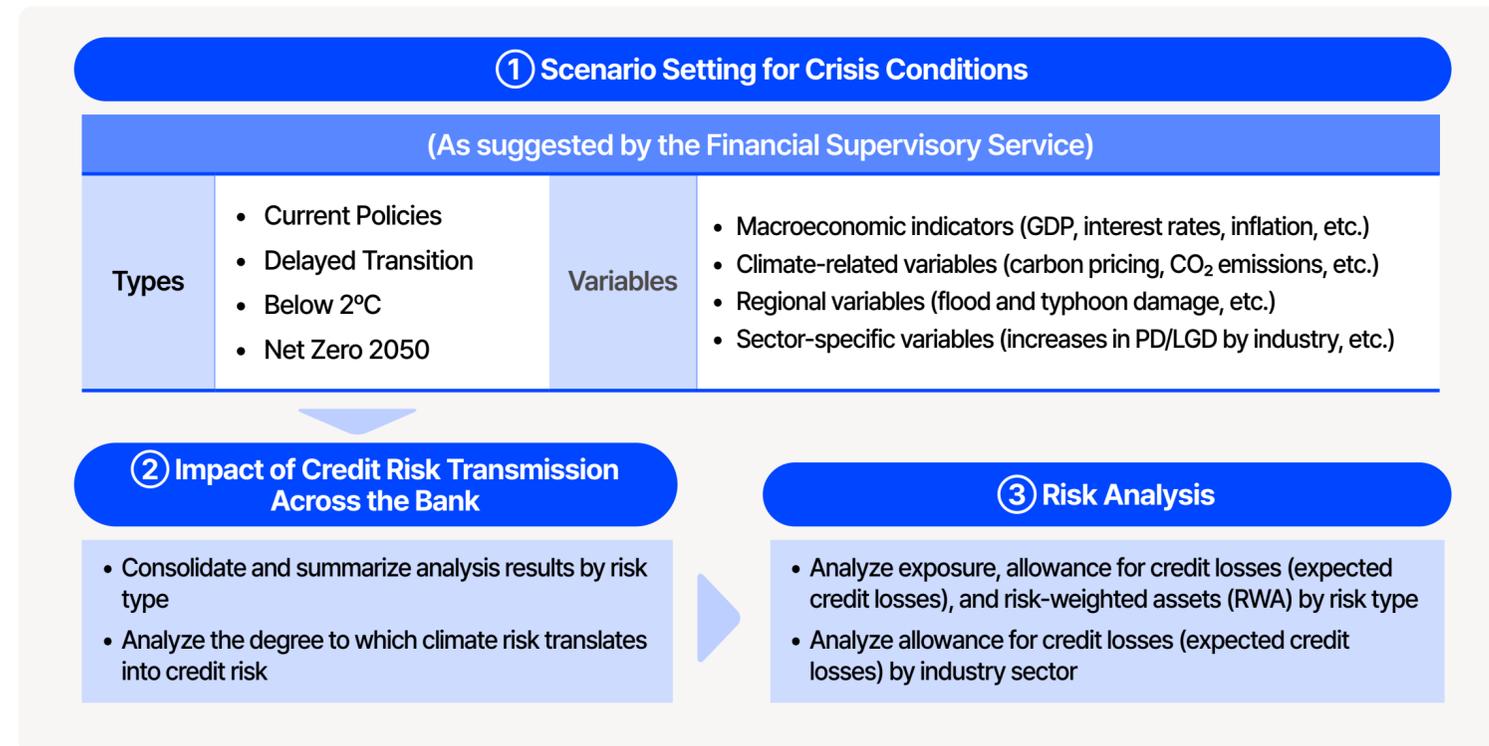
Climate-Related Risks and Opportunities

Shinhan Bank's Scenario Analysis Framework

Traditional stress testing, such as that used to assess the impacts of financial crises or the COVID-19 pandemic, typically focuses on short-term financial effects over a one- to two-year period. In contrast, climate risk scenario analysis examines long-term impacts, meaning that risks may materialize over extended timeframes. This creates a mismatch between the maturity of financial assets—such as loans—and the time horizon over which climate risks are analyzed. Additionally, the complexity of climate risk is heightened by the fact that historical trends may no longer serve as reliable predictors, especially given the evolving landscape of domestic and international climate policy and the varied pace of corporate responses. Because climate risks affect industries, economies, and markets through multiple and interconnected pathways, scenario-based analysis that anticipates future conditions is essential. To address these needs, Shinhan Bank designs its climate scenario analyses using a diverse set of variables and systematically identifies risk transmission channels and impact levels for each scenario. Using December 2023 as the reference point, Shinhan projected outcomes for the years 2030, 2050, 2080, and 2100. It assessed changes in credit risk-weighted assets (RWA) and allowances for credit losses (expected credit losses, ECL) over time. The bank defines transition risks as potential financial losses stemming from policy shifts, technological developments, and changes in consumer and investor sentiment during the transition to a sustainable economy. Physical risks are defined as economic and financial impacts resulting from extreme weather events—such as typhoons, floods, or heatwaves—as well as long-term shifts in climate patterns.

Scenario Analysis Results

Shinhan Bank conducted its climate scenario analysis using four pathways—Net Zero 2050, Below 2°C, Delayed Transition, and Current Policies—selected from those jointly developed by the Bank of Korea and the Financial Supervisory Service, based on the NGFS Phase 4 reference scenarios. These four scenarios were chosen for their distinct assumptions and implications. Using variables such as GDP growth, market interest rates, carbon pricing, and energy mix from the NGFS climate scenarios, Shinhan distinguished between macroeconomic and carbon policy-related impacts to estimate future balance sheets of individual corporate borrowers. Based on the projected financial statements, the bank recalculated corporate credit ratings. These were then used to assess potential changes in risk-weighted assets (RWA) and expected credit losses (ECL), as well as to evaluate the bank's capital adequacy ratio through 2100. As the lowest projected BIS capital ratio remained well above the bank's internal management threshold, a separate resilience analysis was deemed unnecessary. This analysis was conducted for corporate clients assessed under Shinhan's standard corporate credit rating model, focusing on companies with meaningful financial disclosures. Although the Current Policies scenario may appear less disruptive in the near term, it implies a global temperature increase of over 2°C by 2050. Under such a pathway, the intensification of physical risks—often inversely correlated with transition risks—is expected to result in significantly greater global economic losses over time. Taken together, the scenario results reinforce the urgent need for proactive and early transition efforts toward a low-carbon economy aligned with the Net Zero 2050 scenario.



3. Strategy

Climate Scenario Analysis Framework

Financial Impact by Scenario

Current Policies

Medium Term (5–10 years) Due to a lack of transition to a low-carbon economy, there is no increase in carbon prices or volatility in energy prices, resulting in no significant transition risk impact. However, capital adequacy ratios show a slight decline, influenced by certain macroeconomic variables such as GDP, interest rates, and inflation.

Long Term (After 10 years) From 2030 onward, stable interest rates and steady GDP growth result in minimal financial impact on businesses. However, potential physical risks from natural disasters are expected to gradually increase, particularly from 2050 onward, manifesting in a sustained and escalating pattern.

Delayed Transition

Medium Term (5–10 years) With no change in carbon policy until 2030, the business impact remains consistent with that of the “Current Policies” scenario.

Long Term (After 10 years) As carbon prices rise, direct and indirect emissions costs increase, and interest rates climb (due to inflation), leading to a decline in corporate operating profits and a rise in financing costs. Credit risk significantly deteriorates, especially for high-emission, highly leveraged firms. Although carbon prices continue to increase, beginning around 10 years after implementation, opportunities arise through the adoption of low-carbon energy sources and investment in carbon-reduction technologies. As a result, GHG emissions begin to decline, gradually easing the financial burden on companies.

Below 2°C

Medium Term (5–10 years) As the economy progressively transitions to low-carbon practices, carbon prices gradually increase. Recovery begins relatively early (after 3–4 years), supported by emerging opportunities. GHG emissions begin to decline, though carbon prices continue to rise steadily.

Long Term (After 10 years) With the expansion of low-carbon industries and increased investment in carbon reduction, GHG emissions fall below zero after 2062, easing the financial burden on companies. However, during the transition, capital ratios do not recover, though they stabilize by 2080.

Net Zero 2050

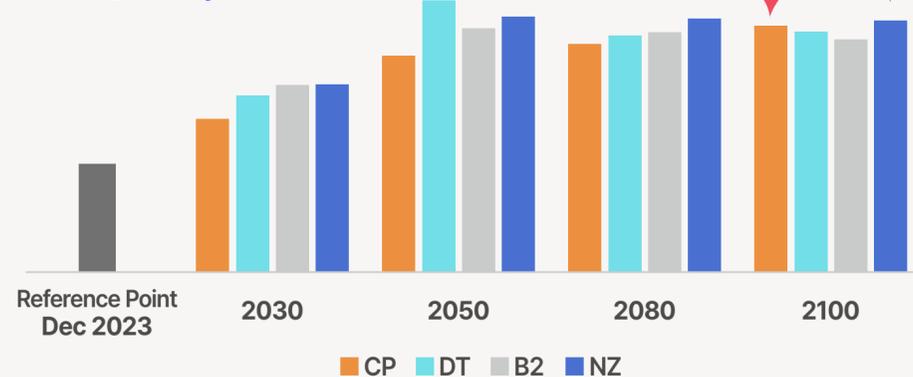
Medium Term (5–10 years) As the economy progressively transitions to low-carbon practices, carbon prices gradually increase. Recovery begins relatively early (after 3–4 years), supported by emerging opportunities. GHG emissions begin to decline, though carbon prices continue to rise steadily.

Long Term (After 10 years) After 2047, GHG emissions fall below zero. Despite high carbon prices, corporate financial burdens begin to ease. Interest rates remain stable during the transition, and while capital ratios do not fully recover, the rate of decline slows.

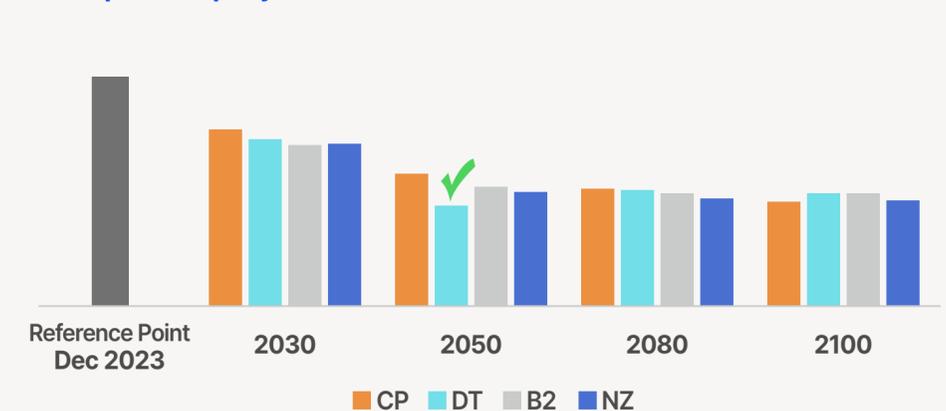
Trend of Allowance for Credit Losses by Scenario



Trend of Credit Risk-Weighted Assets (RWA) by Scenario



BIS Capital Adequacy Ratio



4. Risk Management

Process for Identifying, Assessing, and Prioritizing Climate Risks and Opportunities

Identifying and Managing Key Climate Risks and Opportunities

Shinhan Bank has established a structured process to identify, assess, and prioritize key climate-related risks and opportunities, ensuring they are managed in a systematic and effective manner. The bank's risk management division has designated financed emissions as a core risk indicator across its lending and investment activities, with monthly monitoring in place. On the opportunity side, Shinhan identifies new business prospects emerging from the low-carbon transition—such as transition finance for high-emission sectors—and actively incorporates them into its climate opportunity strategy. Both climate risks and opportunities are prioritized based on internal assessments. For risk evaluation, the bank leverages scenario analyses co-developed by the Bank of Korea and the Financial Supervisory Service, based on the NGFS Phase 4 reference scenarios, to estimate potential financial impacts. Additionally, the bank sets exposure limits for high-carbon sectors and monitors financed emissions against internal thresholds through its climate risk dashboard. For climate-related opportunities, Shinhan Bank regularly tracks progress toward its annual green finance targets and continues to strengthen its management framework by developing new green financial products.

	Climate Risk Factors – Financed Emissions		Climate Opportunity Factors – Green and Transition Finance	
Identification of Climate-Related Factors		<ul style="list-style-type: none"> Recognizing the potential impact of carbon emissions on corporate operations <ol style="list-style-type: none"> Rising costs associated with carbon taxes and emissions trading schemes Unexpected losses driven by climate-related events Reframing client emissions as risks attributable to financial institutions <ul style="list-style-type: none"> Climate risk assessments conducted using Scope 3 financed emissions indicators 		<ul style="list-style-type: none"> Identifying diverse business opportunities arising from the low-carbon transition <ul style="list-style-type: none"> Green finance products and net-zero-related technologies or emerging business models Recognizing the low-carbon transition and technology development of high-emission sectors as key opportunity factors <ul style="list-style-type: none"> Expanding financial support and investment to help achieve these goals
Assessment Process for Risk and Opportunity Factors		<ul style="list-style-type: none"> Measuring financed emissions based on total group assets <ul style="list-style-type: none"> Assessing all asset classes for which financed emissions can be calculated Including estimated data in the measurement to avoid underestimating climate risk Integrating climate risk into the group's risk management system 		<ul style="list-style-type: none"> Managing performance against annual green finance targets <ul style="list-style-type: none"> Managing performance against annual green finance targets Tracking cumulative progress toward the KRW 30 trillion green finance target by 2030 Verifying green finance eligibility during loan and investment reviews
Approach to Setting Priorities		<ul style="list-style-type: none"> Conducting materiality assessments of climate risk factors <ul style="list-style-type: none"> Monitoring sector-specific climate risk asset exposure and emissions volatility based on financed emissions Setting priorities through internal materiality evaluation Conducting climate scenario analysis <ul style="list-style-type: none"> Performing scenario analysis based on NGFS and IPCC climate models Estimating potential financial impacts 		<ul style="list-style-type: none"> Conducting materiality assessments of climate opportunity factors Analyzing mid- to long-term trends in the green and transition finance markets
Management Plan		<ul style="list-style-type: none"> Enhancing resilience based on the results of climate scenario analysis Setting and managing exposure limits for high-emission sectors <ul style="list-style-type: none"> Continuously managing climate risk through regular monitoring of the risk dashboard 		<ul style="list-style-type: none"> Establishing group-wide standards and systems for green finance <ul style="list-style-type: none"> Including the development of a transition finance policy framework Setting group-level green finance targets and regularly reviewing progress <ul style="list-style-type: none"> Expanding the pipeline of new green finance offerings and product launches across affiliates

4. Risk Management

Integration of Climate Risk into Overall Risk Management

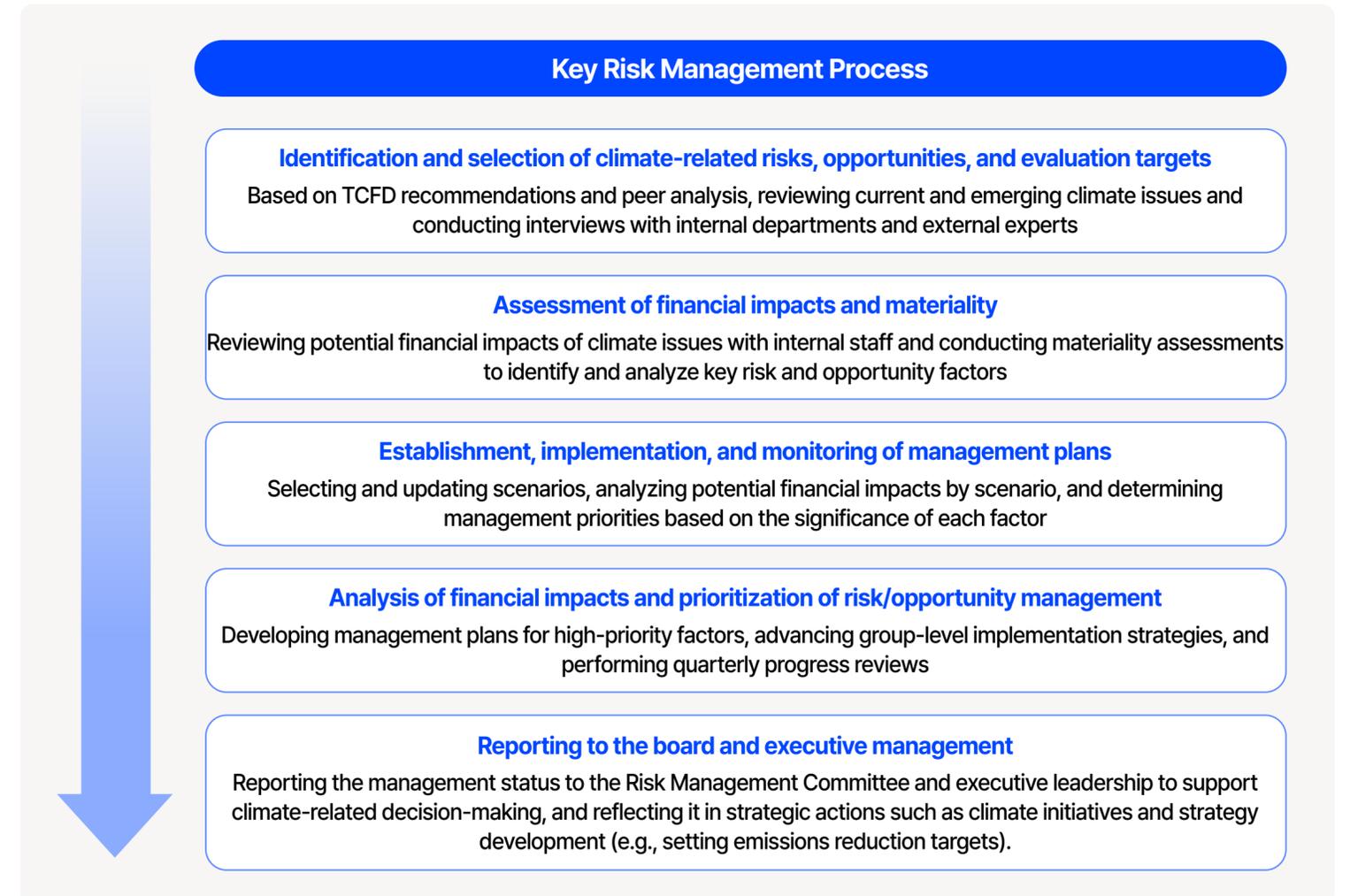
Integrated Risk Management Process and Regulatory Framework

Shinhan Bank has established a proactive risk management framework to identify and address a wide range of climate-related risks—including transition and physical risks—by assessing potential environmental and social risks during business decision-making processes. As part of this approach, the bank identifies and manages sensitive or high-risk areas with potentially negative environmental and social impacts. When providing large-scale financial services in such areas, it conducts environmental and social risk assessments and, where necessary, develops appropriate mitigation measures. To ensure transparency and accountability, the bank publicly discloses key policies related to environmental and social risk management to both internal and external stakeholders. Shinhan Financial Group has embedded climate risk within its broader enterprise risk management process. This enables the group to effectively identify and monitor climate-related risks across its operations. In alignment with TCFD recommendations, the group has systematically defined climate and environmental risks and developed tailored methodologies for risk evaluation. Furthermore, it continues to enhance its governance and regulatory framework through the development of a financed emissions measurement system and database, as well as the establishment of internal guidelines for effective climate risk management.



Risk Management Regulatory Framework

Risk Management Committee Regulations	Group Risk Management Regulations	Group ESG Risk Management Guidelines	Group ESG Risk Management Best Practices
Establishing basic risk management principles Setting risk tolerance levels	Defining ESG risk Specifying subordinate regulations related to ESG risk management	Detailing ESG risk identification, measurement, and management	Best practices for ESG risk management Managing climate risk, managing sensitive areas, reviewing environmental and social risks, ESG risk management systems, etc.

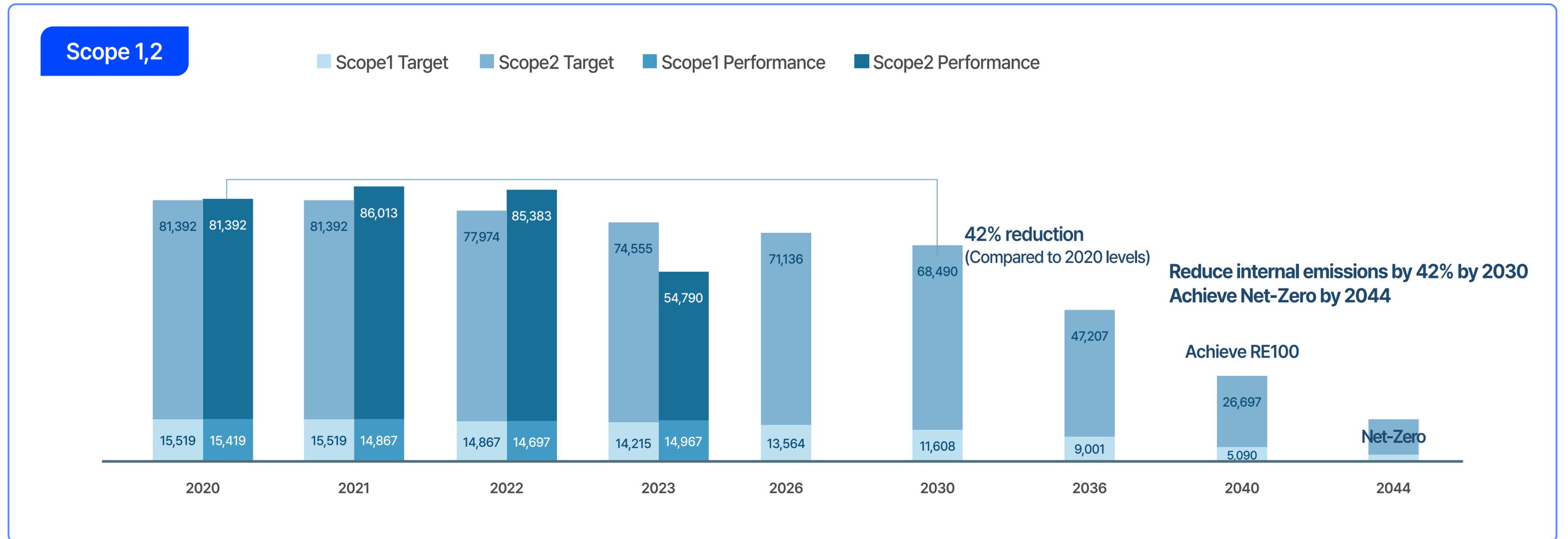


5. Metrics & Targets

Net-Zero Goals

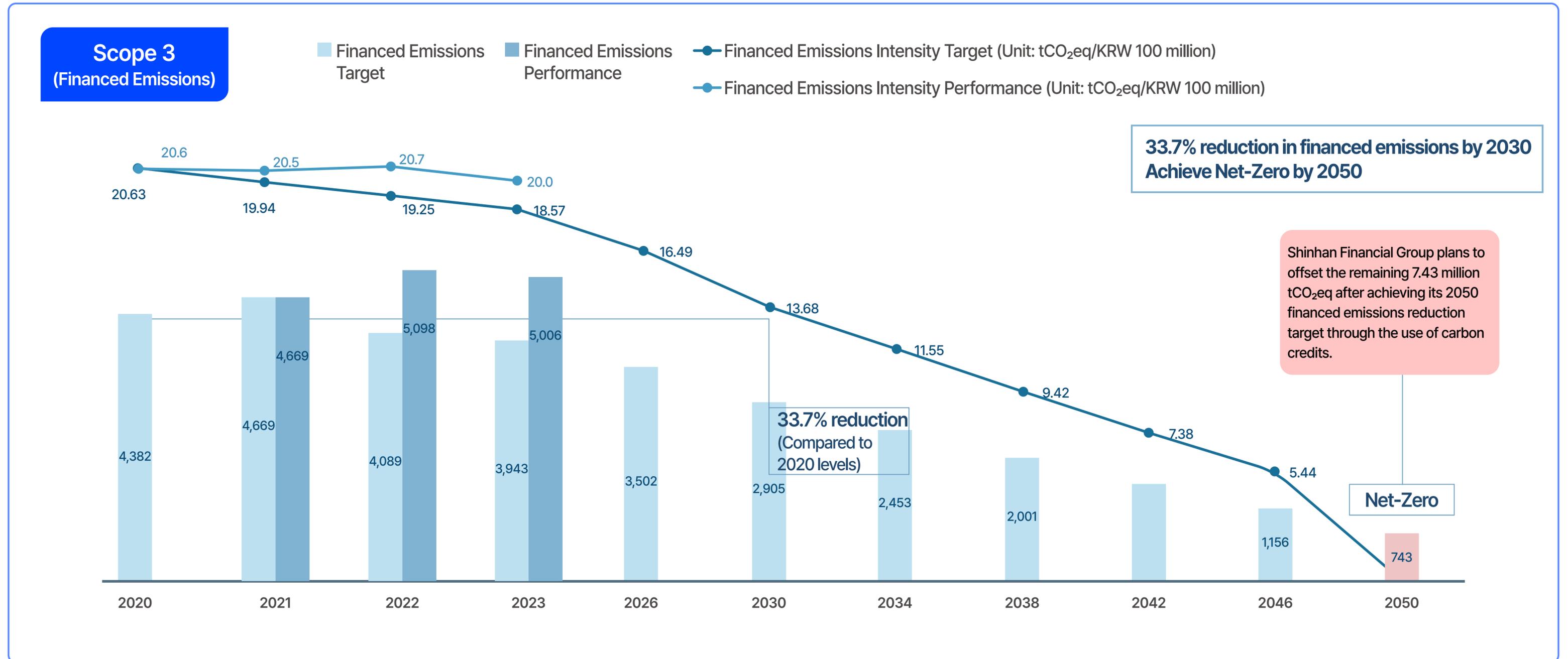
Shinhan Bank's Net-Zero Commitment

Shinhan Financial Group was the first financial group in East Asia to announce a net-zero strategy in 2020, setting a goal to achieve carbon neutrality by 2050. The group tracks its progress annually to ensure accountability and alignment. It aims to transition 100% of the electricity used across all subsidiaries to renewable energy by 2040 and to reach zero internal emissions by 2044. For financed emissions, the group applies the Science Based Targets initiative (SBTi) methodology to achieve net-zero emissions across its asset portfolio by 2050.



5. Metrics & Targets

Net-Zero Goals



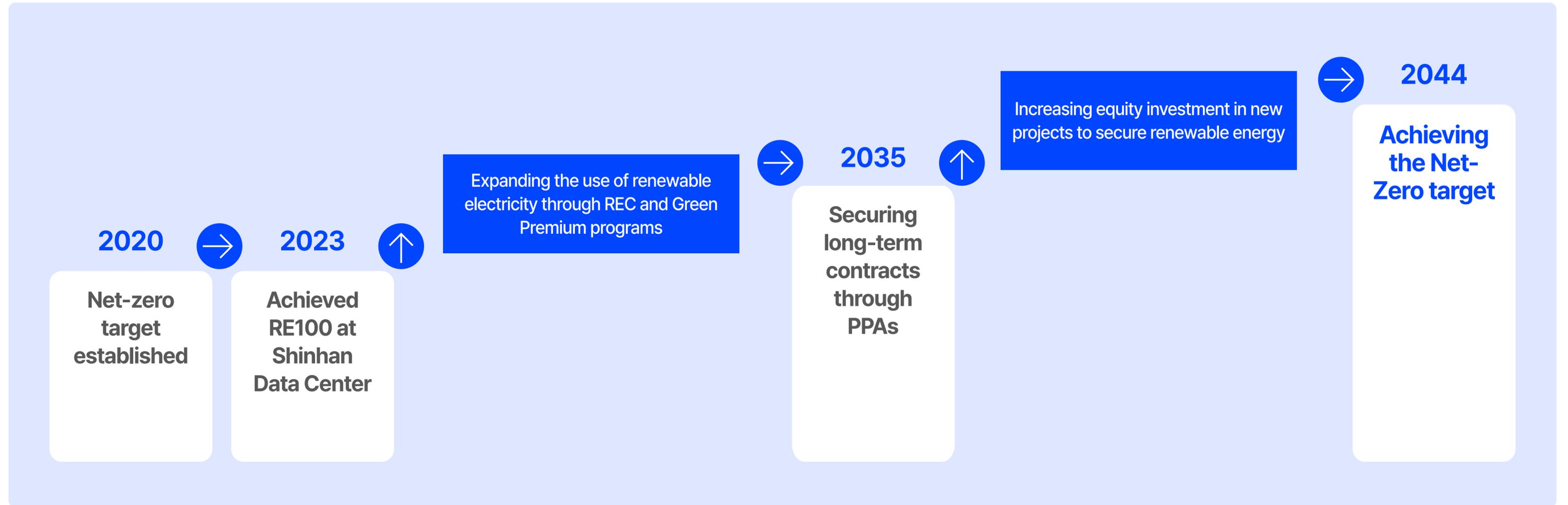
5. Metrics & Targets

Net-Zero Goals

Shinhan Bank's Net-Zero Target Roadmap

Shinhan Bank's Scope 1 emissions primarily stem from gasoline used in company vehicles, while Scope 2 emissions result from electricity consumption. The bank aims to fully transition its business vehicle fleet to green alternatives—such as electric and hydrogen vehicles—by 2030. As a result, by the medium-term period of 2030 to 2035, Scope 1 emissions are expected to be largely replaced by Scope 2 emissions.

Looking ahead, Scope 2 emissions are anticipated to rise significantly due to the expansion of digital finance and the adoption of AI technologies. To reach net-zero, Shinhan plans to increase its procurement of renewable energy, while also enhancing its approach through infrastructure investments and the expansion of long-term power purchase agreements (PPAs).



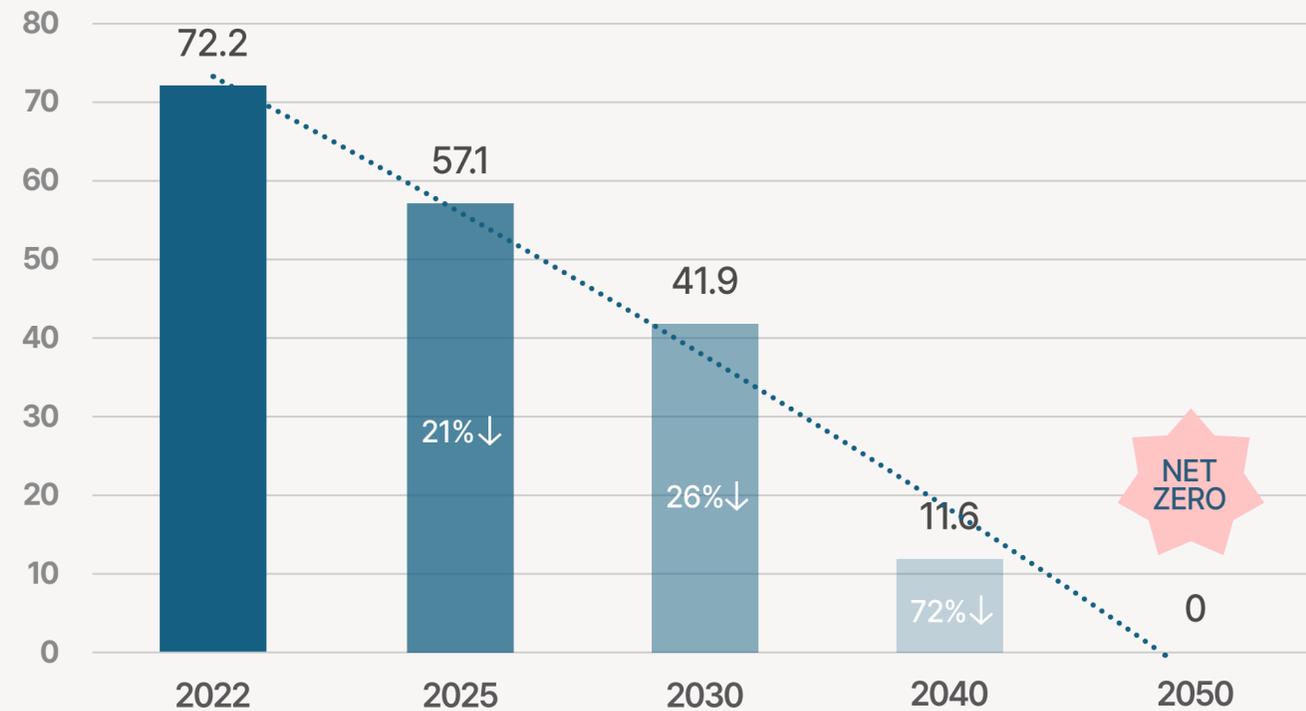
5. Metrics & Targets

Internal GHG Reduction Target – Scope 1 & 2

Shinhan Bank is committed to achieving net-zero internal greenhouse gas (GHG) emissions by 2050, in alignment with the 1.5°C scenario of the Paris Agreement. To this end, the bank is pursuing an annual reduction rate of 4.2%, based on science-based tools recommended by the Science Based Targets initiative (SBTi). Targets are managed in accordance with the Guidelines for Reporting and Verification of Emissions under the Emissions Trading Scheme (Ministry of Environment Notification No. 2022-279). Reported emissions data have been verified by an independent third party at a limited assurance level to ensure credibility.

Target for Internal GHG Emissions Reduction by 2050

(Unit: 1,000 tCO₂e)

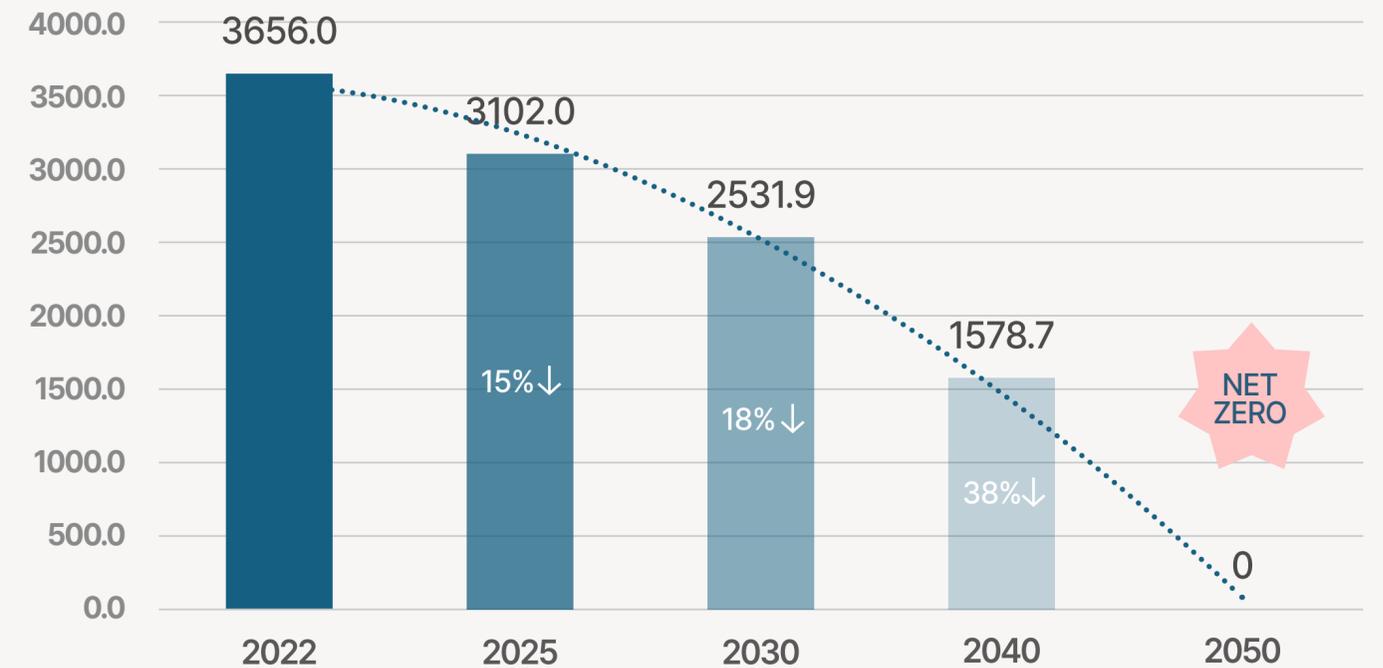


Financed Emissions Reduction Target – Scope 3

Financed emissions are measured using the Partnership for Carbon Accounting Financials (PCAF) methodology, and Shinhan Bank has set reduction targets based on the SBTi framework to ensure objectivity. To meet these goals, the bank is actively supporting the transition of high-emission sectors through dedicated financing and pursuing a low-carbon asset growth strategy. It also focuses on supporting emissions reductions by financed entities, strengthening oversight of high-emission sectors, and promoting phased reduction plans. As part of these efforts, Shinhan is building a comprehensive climate risk management system and expanding its portfolio of low-carbon financial products. Assets included in financed emissions calculations comprise listed and unlisted equity, corporate loans, project finance (PF), corporate bonds, commercial real estate, and vehicle loans.

Target for Financed Emissions Reduction by 2050

(Unit: 10,000 tCO₂e)



5. Metrics & Targets

Internal Carbon Pricing and Capital Allocation

Internal Carbon Pricing

Shinhan Bank manages greenhouse gas (GHG) emissions in accordance with the GHG Protocol by categorizing them into Scope 1, 2, and 3. The bank operates a system that applies internal carbon pricing to both its operational and financed emissions (or reductions), thereby recognizing carbon as either a cost or a financial opportunity. The internal carbon price for Scope 1 and 2 emissions is determined based on the short-term cost of procuring renewable energy to meet the bank’s net-zero and RE100 targets. Specifically, the bank has set an internal carbon price of approximately KRW 100,000–130,000 per ton, based on the costs of three key instruments: Green Premium programs, Renewable Energy Certificates (RECs), and Power Purchase Agreements (PPAs). This pricing is considered in emissions reduction initiatives, purchasing strategies, and internal decision-making processes. For Scope 3 financed emissions, the internal carbon price is set using projected national carbon prices derived from NGFS scenario analysis. These prices are incorporated into the bank’s lending and investment decisions, serving as the basis for incentive structures or contractual terms. Shinhan Bank evaluated three climate-economic integrated assessment models (IAMs) provided by the NGFS—GCAM (Global Change Assessment Model), MESSAGEix-GLOBIOM, and REMIND-MAGPIE—and selected GCAM as the most appropriate model to reflect Korea’s national climate context. Looking ahead, the bank will continue to identify low-carbon investment and financing opportunities and refine its strategies in support of Shinhan Financial Group’s “Zero Carbon Drive” initiative.

Capital Raising for Climate Risks and Opportunities

Shinhan Bank became the first commercial bank in Korea to issue green bonds in 2022, starting with KRW 100 billion. This was followed by issuances of KRW 150 billion in 2023 and KRW 250 billion in 2024, totaling KRW 500 billion in green bonds to date. The bank leverages interest subsidies from green bond proceeds to offer preferential rates on green loans, thereby creating a virtuous cycle of green finance that links capital raising, deployment, and system integration. This initiative underscores the bank’s commitment to advancing ESG (Environmental, Social, and Governance) management.

Green Bond Issuance Overview

(Unit: KRW 100 million)

Category	2022	2023	2024
Green Bond	1,000	1,500	2,500

Overview of Internal Carbon Pricing

Type of internal carbon price	Shadow price
Carbon price determination method	<ul style="list-style-type: none"> • Cost of measures required to meet emission reduction targets - Price in the NGFS scenario
Purpose of internal carbon pricing implementation	<ul style="list-style-type: none"> • Change internal behavior among employees • Drive improvements in energy efficiency • Stress test investment assets • Identify and seize low-carbon opportunities
Scope of emissions accounting	Scope 1, 2, 3(Upstream)
Pricing approach	Variable pricing (Evolutionary)
Internal carbon price applied – minimum	KRW 1,156.06 (1 US\$2010/tCO2)
Internal carbon price applied – maximum	KRW 2,314,894.5 (2,002.4 US\$2010/tCO2)
Application of internal carbon pricing in business decision-making	<ul style="list-style-type: none"> • Operations – Procurement - Risk management • Opportunity management

5. Metrics & Targets

Exposure Share and Emissions by Key Industry

Industry-Level Exposure to Climate Risk

Shinhan Bank conducts portfolio-level exposure analysis to identify assets vulnerable to transition and physical risks. This analysis focuses on 12 environmentally and socially sensitive sectors designated by Shinhan Financial Group under its Group Environmental and Social Risk Management Guidelines, along with four high-carbon sectors independently selected by the bank. Given the heightened short-term exposure risks associated with the strengthening of emissions trading schemes and the introduction of the EU Carbon Border Adjustment Mechanism (CBAM), Shinhan monitors the exposure share of steel/non-ferrous metals, non-metallic minerals, petrochemicals, and utility industries separately.

Reference date: December 2024

Sector	Exposure Share (%)	Financed Emissions (tCO2eq)	Emission Intensity (tCO2eq/KRW 100 million)
Steel/Non-ferrous Metals	3.8	747.0	81.9
Non-metallic Minerals	0.9	208.5	94.1
Petrochemicals	5.9	852.8	60.2
Utility	1.2	302.4	105.9

Target Setting Based on the Sectoral Decarbonization Approach (SDA)

At the group level, Shinhan adopted the Science Based Targets initiative's (SBTi) Sectoral Decarbonization Approach in 2020 to define sector-specific emission reduction targets. Based on these, the group established a long-term decarbonization pathway through 2050 for the systematic management of financed emissions. Using portfolio carbon intensity as a key metric, Shinhan Bank aims to reduce carbon intensity by 33.7% by 2030 (compared to the 2020 level) and achieve net-zero financed emissions by 2050. To support these goals, the bank has outlined reduction targets and trajectories for key industries, including power generation, aluminum, cement, steel, pulp and paper, transportation, chemicals, commercial real estate, mortgages, and auto loans. Going forward, Shinhan Bank will continue to track emission trends by industry, regularly assess sectoral intensity averages, and enhance monitoring of high-intensity companies within each sector to ensure progress toward its reduction targets.

5. Metrics & Targets

Equator Principles Implementation Report

Shinhan Bank has adopted the Equator Principles to identify and manage environmental and social risks associated with large-scale projects. The Equator Principles are a voluntary framework adopted by financial institutions to restrict financing for major development projects that may result in environmental harm or human rights violations affecting local communities or vulnerable groups. In September 2020, Shinhan Bank became the first commercial bank in Korea to adopt the Equator Principles. Since then, the Bank has conducted environmental and social impact assessments for relevant projects and, where necessary, has required additional measures or requested corrective actions through independent third-party monitoring. As a result, all applicable projects have been confirmed to meet the standards outlined in the Equator Principles. Shinhan Bank also discloses its implementation status and outcomes on the official Equator Principles website, in accordance with the reporting guidelines established by the Equator Principles Steering Committee.



Application Scope for the Equator Principles

Category	Application Criteria
Project Finance Advisory Services	Projects with a total cost of USD 10 million or more
Project Finance (PF)	Projects with a total cost of USD 10 million or more
Project-Related Corporate Loans (PRCL)	Corporate loans that meet all three of the following conditions: <ul style="list-style-type: none"> Used for a project over which the client has effective control (direct or indirect) and represents at least 50% of the total loan amount Total loan size and the bank's commitment amount are USD 50 million or more Loan maturity is 2 years or longer
Bridge Loans	Projects with a total cost of USD 10 million or more
Refinancing and Acquisition Finance	Refinancing and acquisition finance that meet all of the following conditions: <ul style="list-style-type: none"> The original project was subject to the Equator Principles No material change in project scale or scope The project is not yet completed at the time of signing

Equator Principles – Roles and Responsibilities

Category	Implementation Plan
Dedicated Equator Principles Unit	Review whether financial transactions promoted by the Bank are subject to and compliant with the Equator Principles <ul style="list-style-type: none"> Identify the causes and details of environmental and social risks associated with projects and recommend or advise on necessary corrective actions Disclose relevant information and prepare reports related to Equator Principles implementation Revise internal guidelines in line with updates to the Equator Principles and related standards
Front Office / Branches	<ul style="list-style-type: none"> Communicate with clients Conduct and submit project-related assessment documents (e.g., Environmental and Social Impact Assessments) Equator Principles requirements
Equator Principles Review Team	<ul style="list-style-type: none"> Identify whether the Equator Principles are applicable during the review of project-related deals Ensure that the final review opinion from the dedicated Equator Principles unit is reviewed and reflected in the credit decision
Executive Management	Conduct additional review and approval procedures when high environmental and social risks are identified in transactions subject to the Equator Principles

5. Metrics & Targets

Equator Principles Implementation Report

Equator Principles Implementation Overview – Project Finance (PF) & Project-Related Corporate Loans (PRCL)

In 2024, Shinhan Bank reviewed a total of 19 projects for applicability under the Equator Principles. All reviewed cases were confirmed to be in full compliance with the framework’s requirements. The table on the right provides a detailed breakdown by sector, region, country, and whether an independent review was conducted. Of the projects assessed in 2024, none were classified as Category A; five were categorized as Category B, and fourteen as Category C. These figures reflect the number of reviews completed and processed as of 2024. In line with the Equator Principles guidelines, Shinhan Bank will disclose the total number of reviewed transactions on the Equator Principles’ official website.

Training

Shinhan Bank provides ongoing Equator Principles training for all employees and relevant departments. In 2024, the Bank’s dedicated Equator Principles team led company-wide awareness training and hosted in-depth sessions with external experts. These focused sessions were structured around the 10 core Equator Principles and addressed the framework’s intent, the screening process, and roles and responsibilities (R&R) by department. Customized Q&A materials tailored to each business unit were also developed and distributed. Shinhan Bank’s Equator Principles team continues to enhance implementation quality through participation in the annual general meeting and external networking events. Roundtable discussions with other domestic financial institutions and participation in Asia-Pacific conference calls have supported active dialogue on implementation progress, helped address key challenges, and deepened the Bank’s understanding of the framework through case studies. Looking ahead, Shinhan Bank will continue strengthening collaboration with relevant departments to advance the effective and responsible application of the Equator Principles.

Equator Principles Implementation Status

	2021			2022			2023			2024		
	A	B	C	A	B	C	A	B	C	A	B	C
	Sector											
Mining												
Infrastructure	1				1							
Oil & Gas				1	1	1	2	3				
Power Generation		4			1						2	1
Other					2	3		2	7		3	13
	Region											
Americas				1	1	2	2	1	3			3
Europe / Middle East / Africa		1				2			2			
Asia-Pacific	1	3			4			4	2		5	11
	Designated Country											
Designated Country	1	4		1	5	4	2	5	7		5	13
Non-Designated Country												1
	Independent Review											
Conducted	1			1	1		2	2				1
Not Conducted		4			4	4		3	7		5	13
	Summary											
	A	B	C	A	B	C	A	B	C	A	B	C
Subtotal	1	4	0	1	5	4	2	5	7	0	5	14
Total Number of Reviews		5			10			14			19	

