

Climate Change–related Risks and Opportunities

Endorsing and Addressing the TCFD Recommendations

In January 2020, NSK endorsed the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. In accordance with the recommendations of the TCFD, NSK identifies business risks and opportunities, adapts management plans, and enhances information disclosure with the aim of contributing to both the sustainable development of society and the sustainable growth of NSK, while endeavoring to take its environmental activities to the next level.

Climate-related Governance

As a Company with Three Committees, NSK proactively delegates to executive officers decision-making authority with regard to the execution of operations and strives to increase the efficiency and agility of management. The Board of Directors oversees the proper and fair execution of duties by the executive officers.

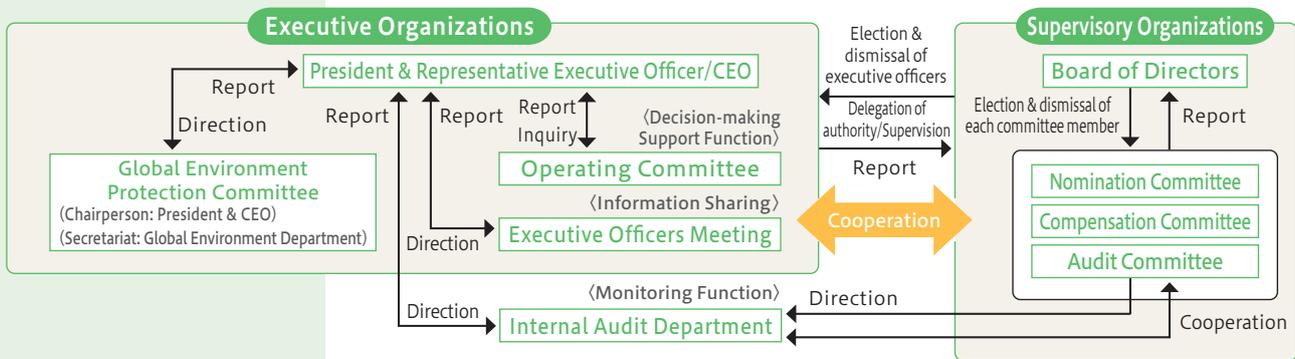
▶ P. 60 Corporate Governance

Based on its core values of safety, quality, compliance, and the environment, NSK has set forth its two policies of “operational excellence,” representing the constant pursuit of competitiveness, and “challenging innovation,” or the creation of new value. Moreover, we are tackling three management issues, namely new initiatives targeting growth, enhancing managerial resources, and contributing to the environment and society. The Board of Directors determines the Mid-Term

Management Plan, and executive organizations report on the plan’s progress to the Board of Directors.

The Global Environment Protection Committee, chaired by the President & CEO with relevant executive officers serving as committee members, deliberates on activity policies, including for climate change, considers promotion systems, and assesses and revises activity progress as an organization that comprehensively advances issues pertaining to NSK’s efforts to preserve the global environment.

Together with having a good grasp of ongoing changes to the social environment, as well as stakeholder needs and expectations, NSK evaluates the risks and opportunities that arise along with climate change, reflects countermeasures to management strategy and business plans, and strengthens the actions it takes.



Climate-related Risk Management

NSK works to build a risk management system based on clearly stipulated fundamental principles aimed at effectively enabling global Group management and internal control functions. Every year, all the business sites perform their own risk assessment classifying, analyzing, and evaluating risks in accordance with changes in the social environment, the frequency of risk occurrence, the size of impact, and other factors to identify risks that should be addressed. The Corporate Planning Division Headquarters and the Finance Division Headquarters coordinate with business and regional and functional headquarters regarding risks at each division and each business site, which

are managed in accordance with prescribed reporting systems. While putting in place preventive measures, the Company devises steps to swiftly and appropriately act in the unfortunate event a risk is actually manifested, and then works to mitigate the impact.

▶ P. 56 Risk Management

We had been treating climate-related risk, which is among the risks associated with the environment, across businesses or divisions as a risk of high importance. However, from fiscal 2021, we have been working to enhance climate-related risk management by also making use of the scenario analysis recommended by the TCFD while analyzing changes in the business environment and the impact on NSK’s business.

Strategy

With the goal of considering the future impact climate change will have on NSK’s value chain, as well as the effectiveness of climate change countermeasures, NSK looked at the period up to the year 2050, and performed two scenario analyses, one scenario with a temperature increase of 1.5°C to 2°C and another scenario of 4°C.

Given the results achieved, NSK determined that its basic strategy would be to contribute to the realization of the 1.5°C to 2°C scenario, so as to have a hand in building a sustainable society. NSK will act to address transition risks associated with CO₂ emissions regulations; indeed, NSK will seize upon the opportunities

to advance its business field of Motion & Control™ by addressing society’s needs, namely decarbonization throughout a product’s life cycle, promoting measures to deal with climate change during its overall business activities.

On the other hand, NSK is also promoting measures in the event of an anticipated 4°C scenario against natural disasters that are caused by climate change.

Based on the results of this analysis, NSK will formulate a strategy and build a framework in which it can continue to achieve sustainable growth, even with a different climate and social environment.

Scenario Analysis

Analysis targets and prerequisites

Region	Period	Scope	Main Scenarios Adopted
Countries/regions with NSK presence	2021–2050	Value chain	RCP2.6 (1.5°C), RCP4.5, RCP6.0 (2°C), RCP8.5 (4°C), WEO2020, etc.

Image of anticipated 2050 society in which NSK operates its business for the scenario analysis (outline)

	Society Where Temperature Rises 1.5°C to 2°C	Society Where Temperature Rises 4°C
Anticipated image of society	<ul style="list-style-type: none"> Aggressive environmental policies put in place by governments and other entities fix the price of carbon at a high level, and more than 80% of the power supply is from non-fossil fuels. Fuel economy regulations for the automobile industry become more stringent, and almost all new cars sold are EVs. The frequency and impact of natural disasters caused by climate change are greater than current levels but are less severe than in the 4°C scenario. 	<ul style="list-style-type: none"> Only mild environmental policies are put in place by governments and other entities, and the ratio of non-fossil fuels in the energy source composition edge up only slightly. Technological innovation in the automobile industry is lackluster, and internal combustion vehicles that use conventional fossil fuels remain in the mainstream for a large number of new cars sold. The average temperature continues to rise, and natural disasters caused by climate change increasingly escalate in severity.

es: Addressing the TCFD Recommendations

Risks and Opportunities

Classification		Identified Risks/Opportunities		NSK Countermeasures	Industrial Machinery Business	Automotive Business	
Risk	Physical	Acute	Increasingly severe natural disasters caused by climate change*	Production suspension due to in-house flood damage	<ul style="list-style-type: none"> ● Making regular confirmations using hazard maps, etc. ● Implementing appropriate countermeasures against flooding and other risks 	○	○
			Supply suspension due to flood damage at suppliers	Source diversification of suppliers	○	○	
	Transition	Legal	Transition to decarbonization/electrification	Introduction and strengthening of automobile fuel efficiency regulations and ZEV regulations lowers demand for products geared toward internal combustion engines and transmissions.	Strengthening development, sales, and production of products for ZEV		○
				Decreased demand for machinery and facilities that produce automotive internal combustion engines and transmissions	Strengthening product development for machine tools that address the processing of core components that replace automobile internal engines and transmissions and of materials that lower automobile weight, and the electrification of automobile parts	○	
		More stringent regulations pertaining to greenhouse gas emissions	Rising carbon prices lead to increased costs for components, raw materials, and energy procurement, and in line with this, higher costs for developing new materials and methodologies, and for capital investments.	<ul style="list-style-type: none"> ● Promoting decarbonization in NSK business activities 	○	○	
	Reputation	Increasingly sophisticated decarbonization requests from customers	Rising development costs and capital investments for decarbonization, as well as stagnation of efforts results in reduced credibility and not being selected by customers.	<ul style="list-style-type: none"> ● Employing self-help efforts to cut costs and appropriately reflect in pricing 	○	○	
Opportunities	Products and services	Rising decarbonization needs throughout the life cycle	Increasing needs to cut CO ₂ emitted when users operate automobiles, machinery, etc. (final goods manufacturer Scope 3 downstream)	<ul style="list-style-type: none"> ● Constantly generating environmentally friendly products, enhancing low friction, achieving lighter weight ● Generating new technologies and new products that arise from the Four Core Technologies plus One 	○	○	
			Increasing needs to cut CO ₂ on components purchased by automobile, equipment, etc., manufacturers (final goods manufacturer Scope 3 upstream)	Reflecting decarbonization in NSK's business activities in product pricing	○	○	
			Accelerating action to reduce CO ₂ emitted in the manufacturing process of automobile, equipment, etc., manufacturers (final goods manufacturer Scope 1 + 2)	Offering new solutions utilizing tribology technology	○	○	
	Markets	Electrification progress	<ul style="list-style-type: none"> ● Expanding demand for products/solutions geared toward automobile electrification applications ● Growing need for electrification of industrial machinery mobility such as tractors and bulldozers, and machine tools, etc. 	<ul style="list-style-type: none"> ● Strengthening development, sales, production, and solutions for products that address electrification (actuators, etc.) in mobility (automotive, industrial machinery) and machine tools, etc. ● Shortening development speeds by utilizing digital twin technology 	○	○	
			Rising demand for storage/charging technology	Helping to solve the issue of EV prevalence through participation in open innovation		○	
		Growing air-conditioning demand*	Expanding demand for products/solutions for air-conditioning equipment	Bolstering products/solutions that contribute to eliminating the need for maintenance	○		
		Expanding railway demand	Growing demand for products/solutions for railways	Strengthening development, sales, production, and solutions for products geared toward railways and wind power generation	○	○	
	Energy source	Growing renewable energy demand	Increasing demand for wind power generation	Developing high-speed rotary bearings for cooling fans	○		
			Rising demand for storage/charging technology	Strengthening and expanding the condition monitoring system (CMS) business for facilities and equipment	○		
			Increasing needs for failure diagnostics/residual life diagnostics	Promoting the development of products for harsh and special environments	○		
			Expanding demand for products/solutions associated with hydrogen energy	Strengthening development and production of products for construction machinery	○		
	Resilience	Increased investment into addressing BCP*	As countermeasures for disaster prevention and mitigation, rising demand for construction equipment, etc., necessary for infrastructure maintenance	Promoting product development for household compact power generators	○		
		Expanding demand for hydrogen energy	Growing demand for power generators in line with disaster countermeasures		○		

Created based on the 1.5°C to 2°C scenario. However, * is assumed to be for a 4°C scenario.

Metrics and Targets

NSK takes a dual approach to CO₂ reduction, both with expanding on the volume of CO₂ emissions avoided at the product usage stage owing to products that help reduce CO₂ emissions, and CO₂ emissions cut during our business activities. We set respective long-term goals while advancing various efforts to mitigate the impact of climate change. Moreover, considering current conditions where there is increasing urgency to address the dangers of climate change, we are considering bringing our goals forward.

In addition, in terms of CO₂ emissions reduction goals, as one goal that is consistent with raising corporate value, we are using them as a metric for short-term performance-based compensation for executive officers.

Targets	FY2020 Results
Target for FY2026: Offset CO ₂ emissions volume through products that help reduce CO ₂ emissions Note: Surpass the CO ₂ emissions volume from NSK Group business activities (Scope 1 + 2 + 3) with the volume of contribution generated with products that help reduce CO ₂ emissions	FY2020 results: Offset ratio (②÷①) = 89% ① CO ₂ emissions volume (Scope 1 + 2 + 3): 2.83 million t-CO ₂ ② Volume avoided through products that help reduce CO ₂ emissions: 2.51 million t-CO ₂
CO ₂ emissions volume from business activities (Scope 1 + 2) reduction targets ● FY2020 5% reduction* ● FY2026 16% reduction* ● FY2030 25% reduction* ● FY2050 60% reduction* The above targets were announced in FY2019. *From FY2017 levels	CO ₂ emissions volume from business activities (Scope 1 + 2) reduction results ● FY2020 results: 31% reduction* (Ref.) Emissions per sales unit equivalent to a 6.1% improvement
For the Mid-Term Management Plan starting in FY2022, the Company plans to announce the setting of new goals and efforts to be taken toward realizing carbon neutrality.	