

SG Holdings Group

# TCFD Report

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March 2022



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# Disclosure Based on TCFD Recommendations

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## ■ Background of Initiatives

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As the global transition to a carbon-free society progresses, the realization of sustainable management is becoming increasingly important for companies. The SG Holdings Group recognized its responsibility as a group of logistics companies handling social infrastructure, and expressed support for the Task Force on Climate-Related Financial Disclosures (TCFD) in 2019. Seeing climate change to be a serious issue for the Group, the Group began scenario analysis based on TCFD recommendations in July 2021. The purpose of the analysis is to ascertain the risks and opportunities related to climate in business continuity, and to take measures based on the assumption of a variety of situations. In future, such efforts will continue in line with changes in social conditions and advancements in technology, and be linked to business strategy, included in risk management processes and utilized to engage in deeper internal and external communication.

Reference sites	▷ Official TCFD site (English)	<a href="https://www.fsb-tcdf.org/">(https://www.fsb-tcdf.org/)</a>
	▷ TCFD Consortium	<a href="https://tcfd-consortium.jp/about"> (https://tcfd-consortium.jp/about)</a>

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## ■ Results of FY2021 Analysis

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The governance, strategy, risk management and indicators & targets for the Delivery Business and the Logistics Business that are the Group's main businesses were organized in line with TCFD recommendations. Among these, for the strategy portion that is the center of scenario analysis, we identified the financial impact of important risks and considered measures to take in response.

The Group evaluated the "increased costs due to carbon tax" as being one of the important risks with a large impact in the transition risks of the 1.5°C scenario because there are many CO<sub>2</sub> emissions originating from fossil fuels as a result of the Group's business being centered on the Delivery Business using trucks. As a result of estimating the effect based on measures to address climate change, the amount of carbon tax avoided due to reducing CO<sub>2</sub> emissions exceed the expenses pertaining to measures to address climate change such as energy conversion required for measures and capital investment costs, and it was found that promoting measures to address climate change has a positive impact on the Group's business. The results of analysis are disclosed for each of the TCFD recommendations as follows.

\* This analysis is a simulation using forecasting data published by the International Energy Agency (IEA), and the like, and is not an assurance of the realization of the scenarios. Furthermore, it may vary in the event the assumed data is revised or modified.

→Please see "[Reference Scenarios](#)" on [page 3](#) for the data used as a reference.

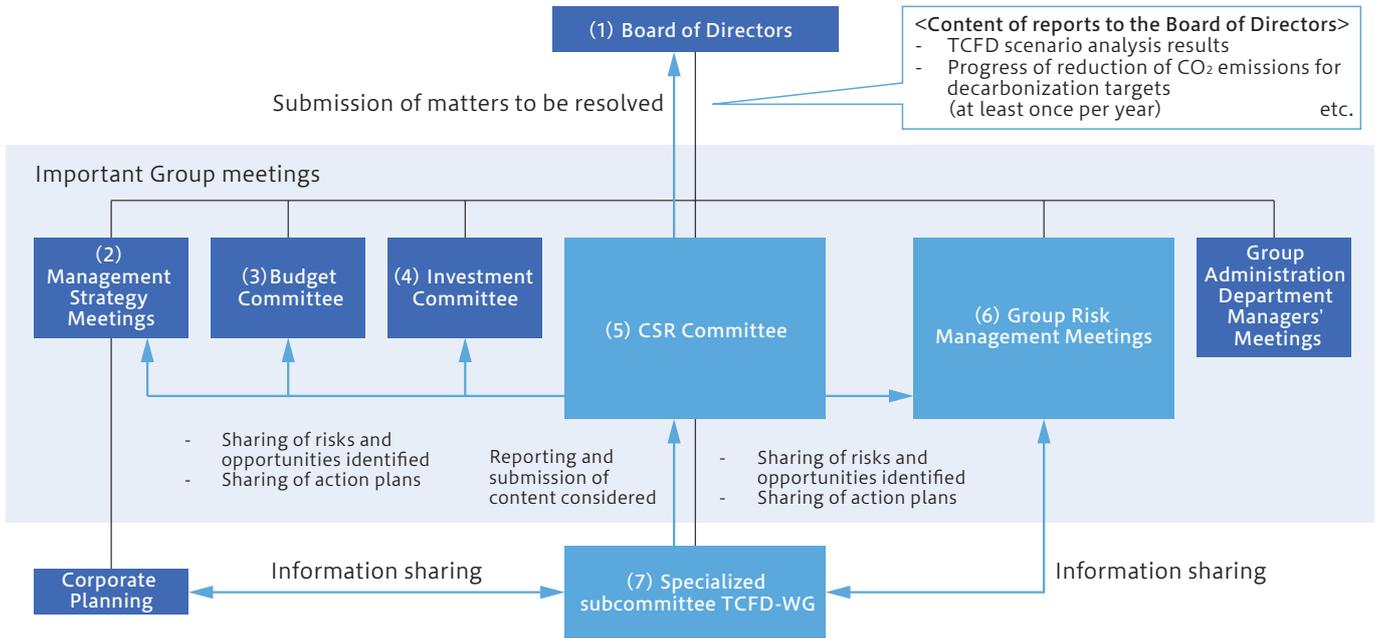
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## ■ Governance and Risk Management Systems

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The SG Holdings Group has established a CSR Committee for the purpose of creating management systems for the entire Group concerning sustainability, and the promotion of ongoing improvement activities. The committee is chaired by the Chairperson, CEO and President of SG Holdings, and meetings are held four times a year in principle. A Groupwide specialized subcommittee (TCFD Working Group: TCFD-WG) analyzes and considers climate-related risks and opportunities, and reports and submits its findings to the CSR Committee. The results considered in the committee are reported to the Board of Directors in a system for performing management and oversight. Furthermore, these climate-related risks are evaluated and managed in the same manner as other business risks by sharing information with Group Risk Management Meetings that serves as the Group's risk management organization.

## Organizational Chart of Governance Related to Climate



## Meeting Bodies in Climate-Related Governance Systems

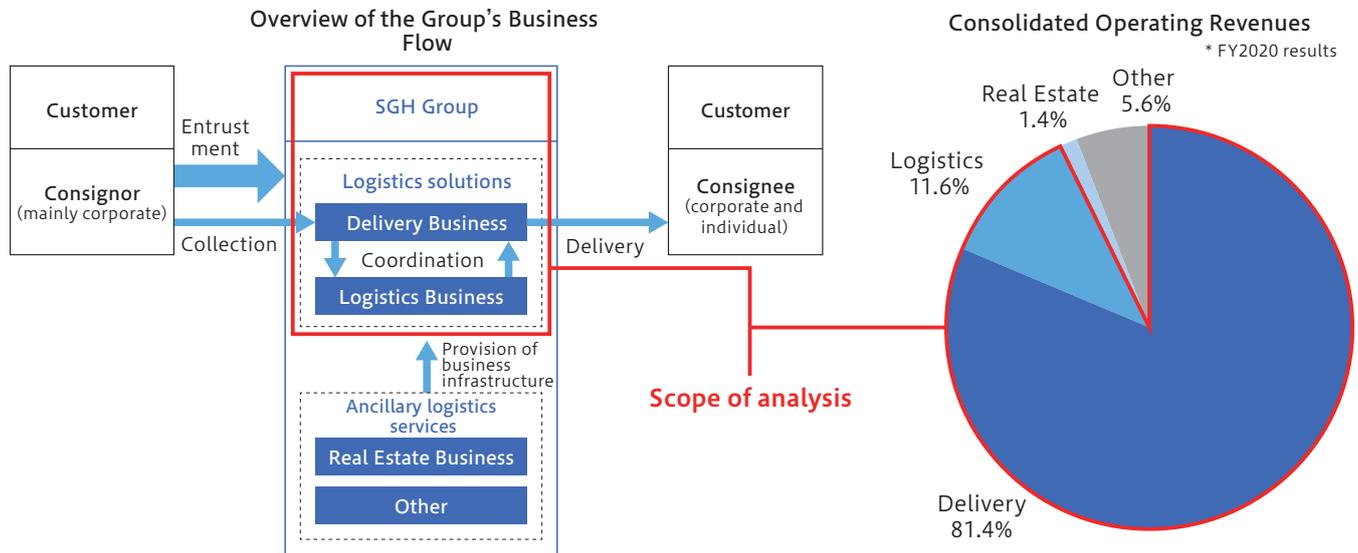
Meeting body	Composition	Role	Meeting Frequency
(1) Board of Directors	Directors and Audit & Supervisory Board Members of SG Holdings	Decision-making on execution of business in general	Once per month
(2) Management Strategy Meetings	Directors and Executive Officers of SG Holdings, personnel responsible for each department and Presidents of Group companies	Discussion of Group management strategy	Once per month
(3) Budget Committee	Directors and Executive Officers of SG Holdings and personnel responsible for each department	Reviewing and reporting important matters related to the Group's management plans	Once per month
(4) Investment Committee	Directors and Executive Officers of SG Holdings and personnel responsible for each department	Reviewing and verifying the execution of the Group's proposed investment plans	Once per month
(5) CSR Committee	Chairman: Chairperson, CEO and President of SG Holdings Members: Directors and Executive Officers of SG Holdings and personnel responsible for each department	Reviewing the Group's CSR measures including responses to climate change, and promoting the creation of management systems and ongoing improvement activities	Four times per year
(6) Group Risk Management Meetings	Directors and Executive Officers of SG Holdings, personnel responsible for each department and Presidents of Group companies	Reviewing and verifying the Group's risk management including responses to climate change	Once per month
(7) Specialized subcommittee TCFD Working Group	Person in charge: General Manager, General Affairs Department, SG Holdings Members: Personnel in charge in the relevant departments	Analyzing and reporting on the Group's climate-related risks and opportunities as an organization under the CSR Committee	Six times per year (FY2021)

# Strategy

## ● Preconditions of Scenario Analysis

### Scope of Implementation

The Delivery Business and the Logistics Business, which collectively account for over 90% of the Group's consolidated operating revenues, were included in the analysis.



Segment	Business Content	Companies Subject to Analysis
Delivery Business	Express package delivery service, mail express, TMS, etc.	Sagawa Express*
Logistics Business	Logistics processing, distribution center operation, international transport, etc.	Sagawa Global Logistics EXPOLANKA HOLDINGS PLC

\* The risks and opportunities of SG Fielder, which operates a temporary staffing business for Sagawa Express sales offices, etc., were also included in the analysis of the Delivery Business.

## Climate Scenarios

In scenario analysis, it was considered important to assume the worst situation, and 1.5°C and 4°C scenarios with the greatest impact were used to perform analysis. Substitutes were used for analysis in cases where there was no equivalent scenario data.

## Reference Scenarios

Warming Scenario		Reference Scenarios
1.5°C	Transition risks	IEA/NZE(Net-Zero Emissions by 2050 Scenario) IEA/SDS(Sustainable Development Scenario)*1 IEA/APS(Announced Pledges Scenario ) *1
	Physical risks	IPCC/SSP(Shared Socioeconomic Pathways)1-1.9 IPCC/SSP(Shared Socioeconomic Pathways)1-2.6*1
4°C	Transition risks	IEA/STEPS(Stated Policies Scenario ) *2
	Physical risks	IPCC/SSP(Shared Socioeconomic Pathways)5-8.5

\*1 Scenarios for less than 2°C, etc. were used as substitutes in cases where there was no 1.5°C scenario.

\*2 Used as a substitute because there was no 4°C scenario.

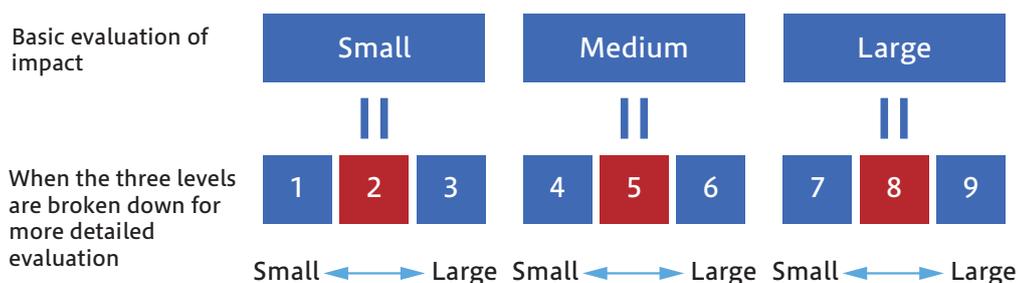
IEA: International Energy Agency  
IPCC: Intergovernmental Panel on Climate Change

## Time Scale

The time scale was set at 2024 for the short term, 2030 for the medium term and 2050 for the long term to match the fiscal years of executing the Group’s Mid-Term Management Plan and the time scale of Japan’s greenhouse gas emission targets.

## Impact Evaluation Criteria

The impact is basically rated as “small” = 2, “medium” = 5 and “large” = 8 based on the Group’s risk management evaluation criteria (evaluated from 1 to 9).



## The Group’s Risk Management Evaluation Criteria

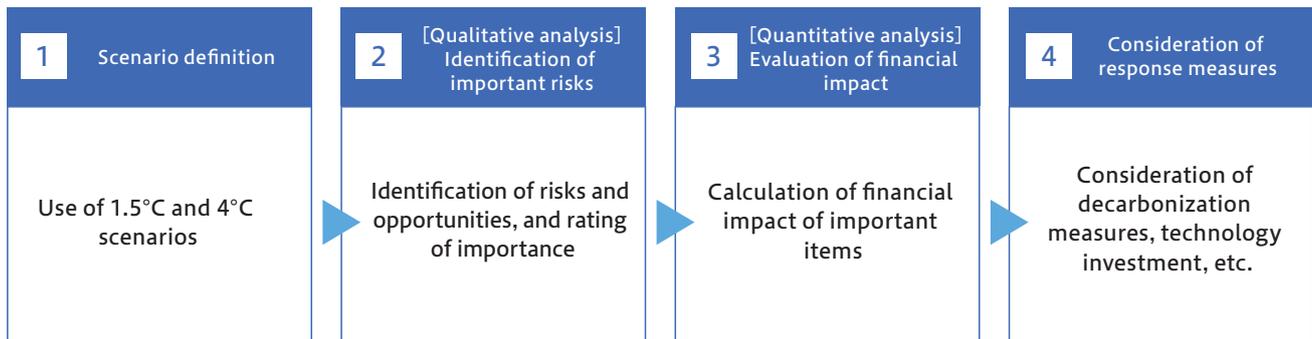
Impact		Evaluation Guideline			
		Qualitative Evaluation			Quantitative Evaluation
		People’s Health & Safety	Civil, Criminal and Administrative Disposition	Social Criticism	Percentage of Losses vs. Operating Income Plan
Large	9	- Level affecting human life	- Level of suspending activities at all business sites	- Level reported nationwide by major media outlets such as newspapers and television	5% or more
	8		- Level of suspending activities of a sales office	- Level subject to boycotting by consumer groups, etc.	
	7	- Severe injury level			
Medium	6	- Minor injury level		- Level reported locally by some media outlets	1% or more and less than 5%
	5	- Level leading to feeling unwell	- Level not reaching suspension of activities (improvement order/fine level)	- Level of receiving many complaints and inquiries at call centers	
	4				
Small	3			- Level not covered by the media	Less than 1%
	2	- No injury level	- Level of warning or guidance	- Level not noticed by society	
	1				

\* Basic evaluation is Large = 8, Medium = 5 and Small = 2, each of which can be adjusted by ±1.

\* Quantitative evaluation is implemented voluntarily when the anticipated size of the loss can be converted into a monetary amount.

## ●Steps of Initiatives

Climate-related risks and opportunities of the relevant businesses were analyzed using the following steps.



## ●Details of Scenario Analysis

### STEP1: Scenario definition

Use of 1.5°C and 4°C scenarios

### STEP2: [Qualitative analysis] Identification of important risks and opportunities

We identified risks and opportunities anticipated to arise due to climate change as follows by referring to forecasts of socioeconomic trends related to the businesses covered. As a result, it was found that transition risks are large in the 1.5°C scenario. We think one main factor is that the world has already begun the transition to becoming carbon neutral, and that the impact has already been seen.

## Identified Climate-Related Risks and Opportunities and Rating of Their Impact

\* In quantitative evaluation, there are some areas with a large impact in the Logistics Business due to evaluation of the percentage of operating income.

(★) The risks and opportunities of SG Fielder, which operates a temporary staffing business for Sagawa Express sales offices, etc., were also included in the analysis of the Delivery Business.

Climate-Related Risks and Opportunities		Time Scale	Impact (1.5°C)		Impact (4°C)		
			Delivery	Logistics	Delivery	Logistics	
Transition risks	Policy/Legal	Increase in cost of responses such as strengthening the monitoring system associated with GHG emission regulations	Short	2	2		
			Medium	2	2		
			Long	2	2		
		Increase in operating costs associated with rise in carbon tax (Scope1+2)	Short	5	8		
			Medium	8	8		
			Long	8	8		
		Increase in operating costs associated with rise in carbon tax (Scope 3: Only consigned transport)	Short	8	8		
			Medium	8	8		
			Long	8	8		
	Increase in operating costs associated with rise in carbon tax (Scope 3: Other than the above)	Short	5				
		Medium	5				
		Long	8				
	Replacement of commercial air conditioning and refrigerators with those using natural refrigerants due to strengthening of regulation of CFCs * Including refrigerated vehicles	Short	2	2			
		Medium	5	8			
		Long	2	2			
	Impact of carbon border tax on cross-border e-commerce <Risks and opportunities>	Short	2	2			
		Medium	2	2			
		Long	5	5			
Increase in operating costs associated with GHG emission regulations in international marine transportation	Short		2				
	Medium		5				
	Long		5				
Increase in operating costs associated with GHG emission regulations in international air transportation	Short		2				
	Medium		5				
	Long		5				

## Identified Climate-Related Risks and Opportunities and Rating of Their Impact

Climate-Related Risks and Opportunities		Time Scale	Impact (1.5°C)		Impact (4°C)	
			Delivery	Logistics	Delivery	Logistics
Technology	Increase in costs associated with decarbonization of vehicles (EVs, FCVs)	Short	5	2		
		Medium	8	2		
		Long	8	2		
	Reduction of fuel associated with decarbonization of vehicles (EVs, FCVs) <Opportunities>	Short	2			
		Medium	8			
		Long	8			
	Increase of cost of introduction of EVs and fuel cell (FC) forklifts	Short	1	2	1	2
		Medium	1	2	1	2
		Long	1	2	1	2
	Increase in power demand due to implementation of EVs, etc. and increase of costs associated with the introduction of renewable energy	Short	2	8	2	2
		Medium	5	8	2	2
		Long	5	8	2	2
	Cost of responding to power supply risks such as in the event of a disaster	Short	2	2	2	2
		Medium	5	5	5	5
		Long	2	2	5	5
	Reduction of energy and carbon costs through automation and improvement of efficiency utilizing robots, drones, etc. <Opportunities>	Short	2	2	2	2
		Medium	5	5	5	5
		Long	5	5	5	5
Market	Conversion from cardboard to returnable packaging <Risks and opportunities>	Short	2	2	2	2
		Medium	5	5	2	2
		Long	5	5	2	2
	Impact of transition to carbon-free society on markets <Risks and opportunities>	Short	2	2		
		Medium	5	5		
		Long	2	2		
Transition risks	Loss of stakeholder trust and decline in branding power associated with delayed measures to address climate change (★)	Short	5	5		
		Medium	8	8		
		Long	8	8		
	Strengthening of demand from business partners for decarbonization during transportation	Short	5	5		
		Medium	5	5		
		Long	8	8		
	Increased difficulty securing personnel due to heightened sense of crisis about climate change among younger generations (★)	Short	5	5		
		Medium	8	5		
		Long	8	8		
Reputation						

## Identified Climate-Related Risks and Opportunities and Rating of Their Impact

Climate-Related Risks and Opportunities		Time Scale	Impact (1.5°C)		Impact (4°C)		
			Delivery	Logistics	Delivery	Logistics	
Physical risks	Acute	Sites (sales offices, transfer centers) affected by storm and flood damage (★)	Medium	2	2	2	2
			Long	2	2	5	5
		Sites of business partners affected by storm and flood damage (★)	Medium	2	2	2	2
			Long	2	2	5	5
		Suspension of business due to an entire region being affected by storm and flood damage (★)	Medium	2	2	2	2
			Long	5	5	5	5
		Contribution of transportation of supplies in areas affected by storm and flood damage (Opportunities)	Medium	2	1	2	1
			Long	2	1	4	1
		Trucks being affected during delivery due to sudden storm and flood damage (★)	Medium	2		2	
			Long	2		2	
		Impact of the escalation of scale of storm and flood damage on global logistics	Medium		2		2
			Long		2		5
		Impact of temporary staff being affected by disasters (★)	Medium	2		2	
			Long	2		5	
Chronic	Physical risks	Impact of rising sea levels on sites (sales offices, transfer centers) located on the coastline	Long	2	2	5	5
		Impact of rising sea levels on business partners' sites located on the coastline (★)	Long	2	2	5	5
		Impact of rising sea levels and rising temperatures on global logistics (marine transportation, air transportation)	Long		2		5
		Restrictions on outdoor work due to rising temperatures (★)	Medium	2	2	5	2
			Long	2	2	5	5
		Increase of cost of air conditioning and cool express costs	Medium	2	2	2	2
			Long	5	5	8	8
Impact on decline in business partners' shipments due to the impact on GDP (★)	Medium	2	2	2	2		
	Long	5	5	5	5		

### STEP3: [Quantitative analysis] Evaluation of financial impact

Of the climate-related risks and opportunities identified in STEP2, the financial impact was calculated for the following items that have a large and quantifiable impact centered on the impact on transportation costs associated with the transition to a carbon-free society such as carbon tax.

<Items subject to quantification>

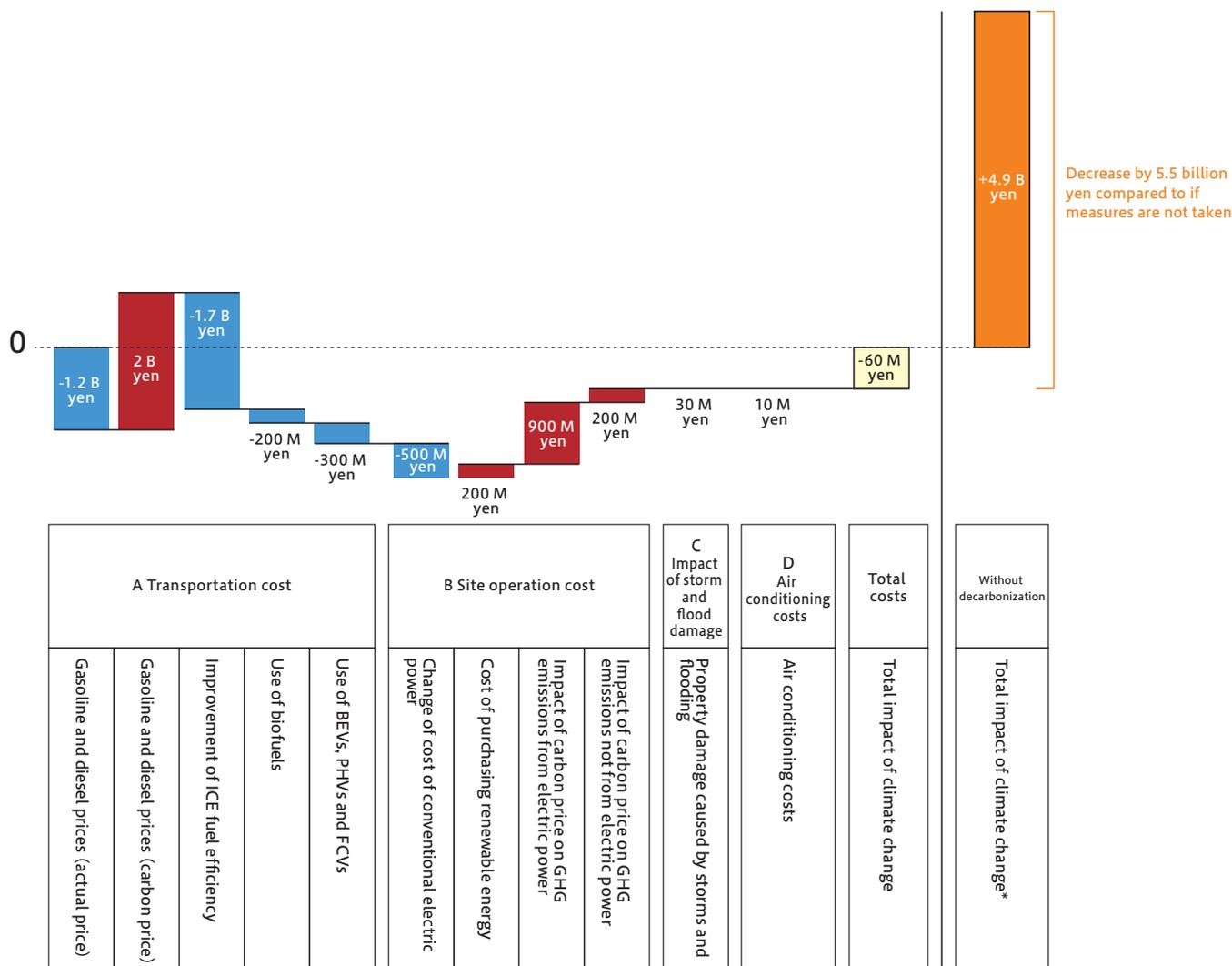
A) Transportation costs: Amount of transportation-related effect arising due to carbon-free transition

B) Site operation costs: Effect of CO<sub>2</sub> emissions and renewable energy purchasing in facilities

C) Impact of storm and flood damage: Property damage caused by storms and flooding

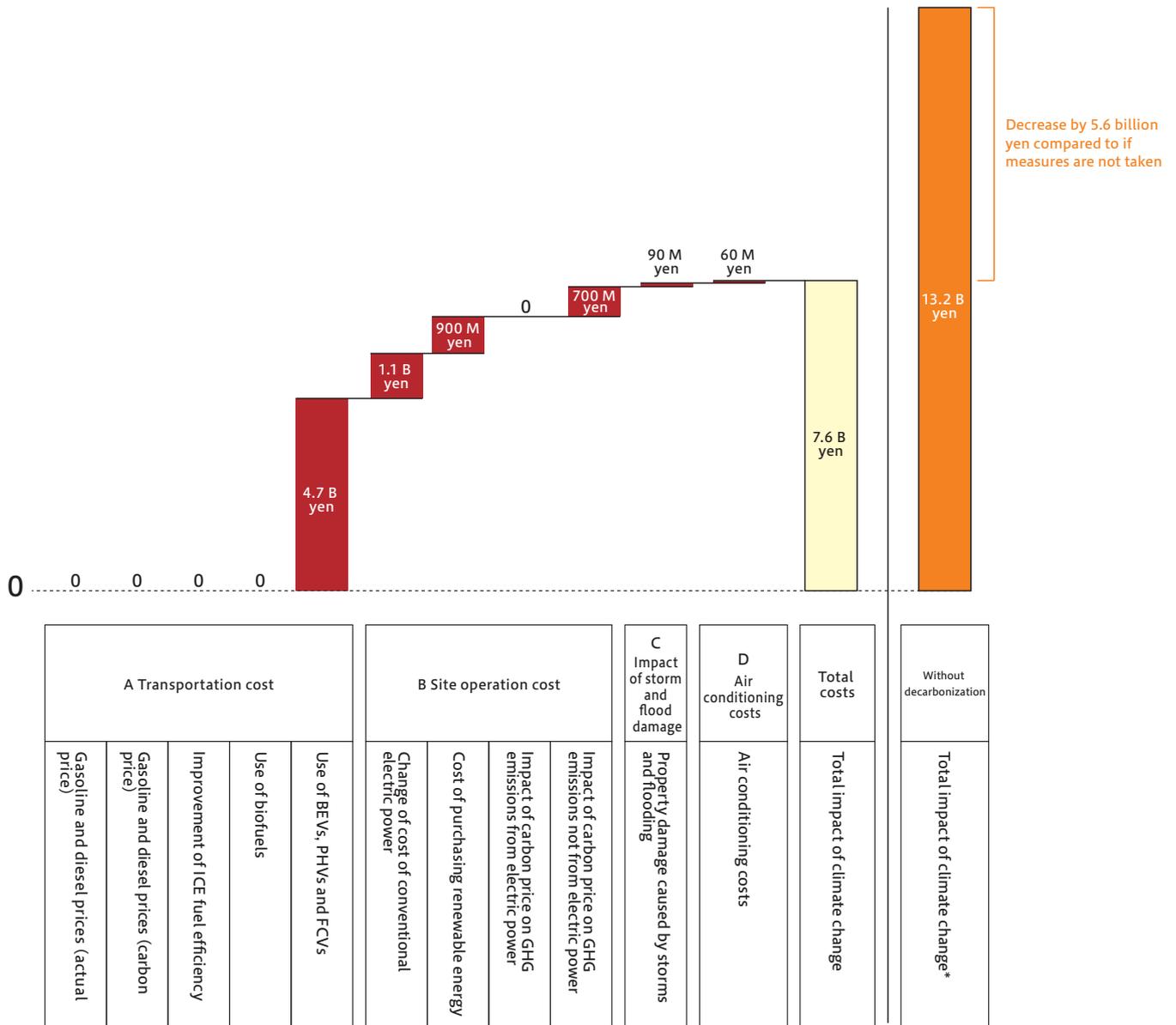
D) Air conditioning cost: Effect of air conditioning expenses caused by rising temperatures

1.5°C Scenario: Cost Effect in 2030 (Increase or Decrease)



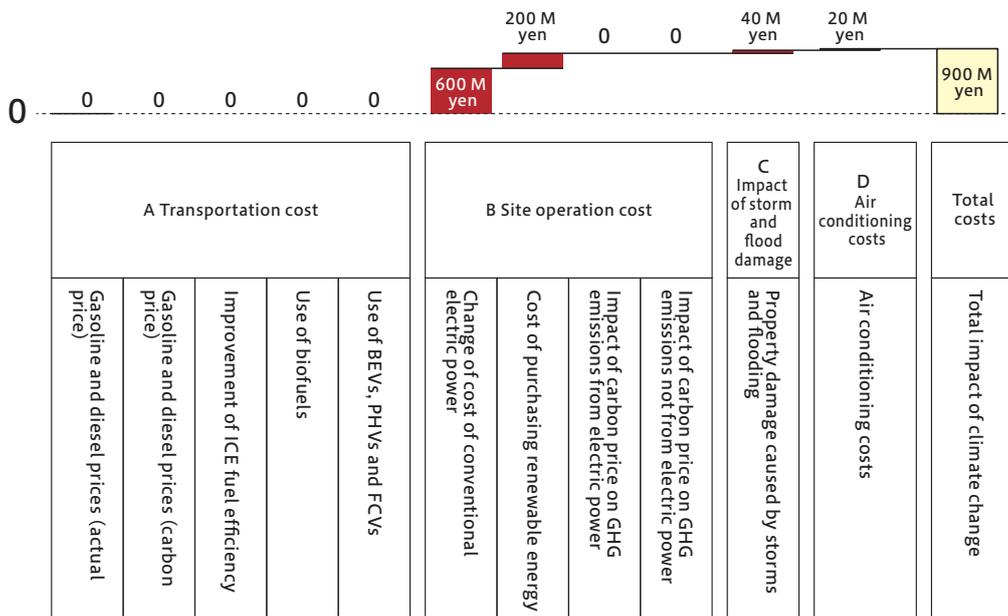
\* Impact of carbon tax of \$130/t-CO<sub>2</sub>

## 1.5°C Scenario: Cost Effect in 2050 (Increase or Decrease)

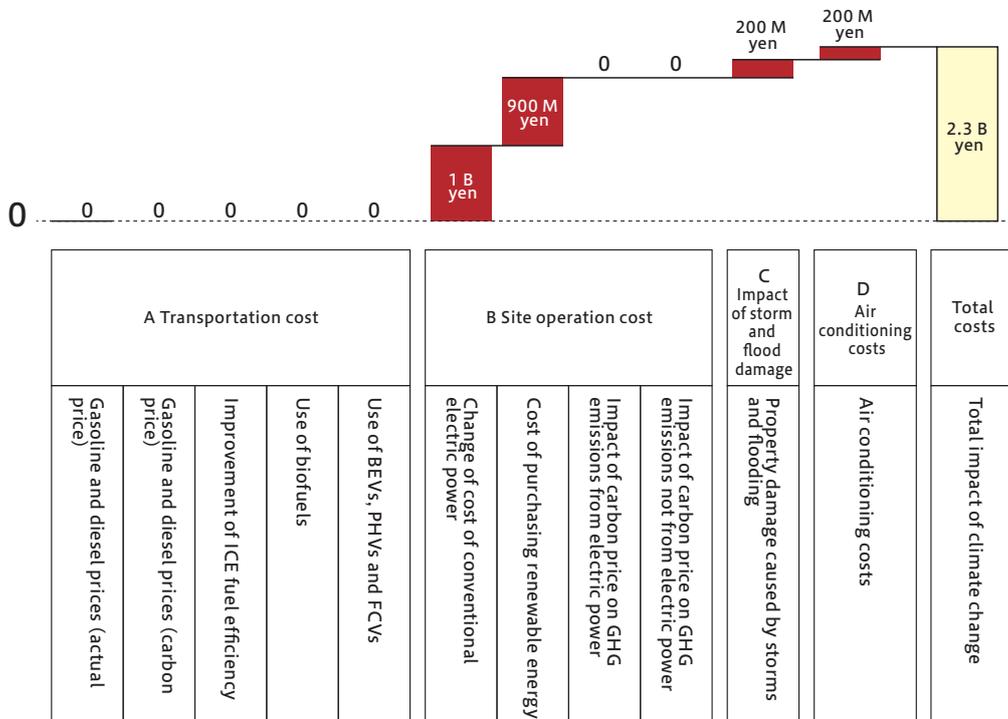


\* Impact of carbon tax of \$250/t-CO<sub>2</sub>

### 4°C Scenario: Cost Effect in 2030 (Increase or Decrease)



### 4°C Scenario: Cost Effect in 2050 (Increase or Decrease)



\* The above analysis of financial impact is a simulation using forecasting data made public by the IEA, and the like, and is not an assurance of the realization of the scenarios. Furthermore, it may vary in the event the assumed data is revised or modified.

\* ICE: Internal Combustion Engine; BEV: Battery Electric Vehicle; PHV: Plug-in Hybrid Vehicle; FCV: Fuel Cell Vehicle

## STEP4: Consideration of response measures

Through STEPs 1-3, we identified the Group's risks and opportunities associated with climate change, and ascertained the size of the impact and the financial impact. In addition to continuing existing initiatives aimed at reducing emissions, we perceive climate-related risks and opportunities to be important management issues, and will consider effective measures aimed at the mitigation of medium- to long-term negative impact and the creation of new business opportunities.

Major Risks		
Category	Risk	Future Action
Policy/Legal	Increase in operating costs associated with rise in carbon tax (Scope 1, 2 and 3)	<p>Formulation of Decarbonization Vision and CO<sub>2</sub> emission reduction targets in March 2022. Execution and continuation of emission reduction measures.</p> <p>&lt;Targets&gt;</p> <ul style="list-style-type: none"> <li>- 2030: 46% reduction (compared to FY2013)</li> <li>- 2050: Aim to become carbon neutral</li> </ul> <p>&lt;Measures&gt;</p> <ul style="list-style-type: none"> <li>- Introduction of environmentally friendly vehicles</li> <li>- Procurement and generation of electric power from renewable energy sources</li> <li>- Creation and utilization of CO<sub>2</sub> offset credits such as forest credits etc.</li> </ul>
Technology	Costs associated with decarbonization of vehicles (EVs, FCVs)	<ul style="list-style-type: none"> <li>- Utilization of subsidies when introducing environmentally friendly vehicles</li> <li>- Consideration of means to procure alternative fuels such as next-generation biofuels</li> </ul>
Technology	Increase in power demand due to implementation of EVs, etc. and increase of costs associated with the introduction of renewable energy	<ul style="list-style-type: none"> <li>- Installation of solar panels in logistics facilities owned by the Group, promotion of private power generation, consideration of means to generate renewable energy within the company</li> </ul>
Acute	Sites (sales offices, transfer centers) affected by storm and flood damage	<ul style="list-style-type: none"> <li>- Risk analysis of major sites</li> <li>- Consideration of medium- to long-term impact of climate change when relocating and establishing sites</li> </ul>
Major Opportunities		
Category	Opportunity	
Efficiency of resources	<ul style="list-style-type: none"> <li>- Reduction of the number of vehicles and distance traveled through the creation of an efficient transportation network such as the establishment of new transfer centers</li> <li>- Reduction of distance traveled and improvement of fuel efficiency through optimization of delivery routes utilizing AI</li> </ul>	
Energy sources	<ul style="list-style-type: none"> <li>- Reduction of fuel through decarbonization of vehicles (EVs, FCVs)</li> </ul>	
Market	<ul style="list-style-type: none"> <li>- Access to funding related to green projects such as green bonds</li> <li>- Acquisition of trust of customers and enhancement of corporate value through early implementation of measures to address climate change</li> </ul>	
Resilience	<ul style="list-style-type: none"> <li>- Contribution to transportation of supplies in areas affected by storm and flood damage</li> </ul>	

## ■ Indicators and Targets

The transportation sector including private vehicles accounts for approximately 20% of Japan's CO<sub>2</sub> emissions. As the transition to a carbon-free society accelerates, the SG Holdings Group has announced a "Group Decarbonization Vision" as a statement of intent to engage in decarbonization. It explicitly outlines medium- to long-term emission reduction targets in line with Japan's targets, and the direction of emission reduction measures, and we will implement measures as a logistics group handling social infrastructure.

Scope	Targets
Scope 1 and 2	2030: 46% reduction in CO <sub>2</sub> emissions (* compared to FY2013) 2050: Aim to become carbon neutral
Scope 3	Engage in reduction of emissions throughout the entire supply chain

\* Reduction level and prerequisites

- Reduction level: In line with Japan's emission reduction targets  
Including offsets using carbon credits, etc.
- Prerequisites: Realization of the 2030 power generation mix\* in the Sixth Strategic Energy Plan  
(\* 59% non-fossil: 36-38% renewable energy, 20-22% nuclear power, 1% hydrogen and ammonia)

If there are changes in the reduction level of prerequisites due to social conditions, the emission reduction target may be reviewed.

Reference sites	<ul style="list-style-type: none"> <li>▷ Decarbonization Vision <a href="https://www.sg-hldgs.co.jp/csr/mission/environment/climate/">(https://www.sg-hldgs.co.jp/csr/mission/environment/climate/)</a></li> <li>▷ Please refer to ESG BOOK for details of greenhouse gas emissions data <a href="https://www.sg-hldgs.co.jp/ir/library/esg-book/">(https://www.sg-hldgs.co.jp/ir/library/esg-book/)</a></li> </ul>
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[Revision history]

1st Edition : 30/03/2022

2nd Edition : 15/06/2022

Updated "impact of temporary staff being affected by disasters," and "restrictions on outdoor work due to rising temperatures" (Page 8)