

Information Disclosure Aligned with TCFD Recommendations

Support for TCFD

Following the adoption of the Paris Agreement, activities targeting progress toward a de-carbonized society extended around the world. The frequency and severity of natural disasters has increased in recent years, and this trend is thought to be related to climate change. Business activities have been significantly affected. Accordingly, the JR Kyushu Group has positioned climate change as one of its ESG material issues and has advanced measures to address the climate change issue.

In this setting, in February 2021, the Company announced its support for the recommendations of TCFD, which was established by the Financial Stability Board.

In addition, JR Kyushu participated in a program supporting the scenario analysis of climate risks and opportunities in alignment with the TCFD. This program was conducted by the Ministry of the Environment. The Company's operations involve large volumes of CO₂ emissions, and the Company conducted scenario analysis regarding the influence of climate change on the railway business, which is affected by increasingly frequent/severe natural disasters.

Moving forward, in accordance with the TCFD recommendations, the Company will advance information disclosure from four perspectives: governance, strategy, risk management, and metrics and targets. In addition, the Company will advance environment-related initiatives and contribute to the realization of a sustainable society.

Governance

Environmental initiatives, including the climate change issue, are one of the Group's ESG material issues, and we have established an environmental management system.

In 1999, we established the Ecology Committee, chaired by the President and CEO as an institution for discussing and making decisions about basic policies and necessary matters related to the environment, including the climate change issue.

In August 2021, we integrated the Ecology Committee into the ESG Strategy Committee to further implement initiatives to tackle environmental issues such as climate change as part of our corporate ESG.

Therefore, the ESG Strategy Committee will confirm that business activities are being advanced in line with the basic philosophy and basic policies, confirm the status of progress in regard to voluntary targets for supporting the resolution of the climate change issue, formulate risk management.

In addition, when necessary, the Board of Directors receives reports about important matters that have been discussed at the ESG Strategy Committee and provides instructions.

In February 2021, Our Group would aim to achieve net-zero CO₂ emissions by 2050 and contribute to the realization of a de-carbonized society, which was discussed and approved by the Board of Directors.

Furthermore, the Board of Directors approved in August 2021 that a medium-term target is to cut emissions for JR Kyushu by 50% between the fiscal year ended March 2014 and the fiscal year ending March 2031.



Strategy

1. Climate change-related Risks and Opportunities

The risks associated with climate change are classified as risks related to the transition to a lower-carbon society (transition risks) and physical impacts (physical risks).

The following is a review of the impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning for the railway business.

Type			Evaluation	Risks	Opportunities
Transition	Policy/regulation	Increase in carbon tax (Increase in carbon price)	Large	(Medium to long term) · Energy procurement cost increase · Materials procurement cost increase due to rise in price of iron and steel · Decrease in sales due to passing of procurement costs on to wages	(Medium to long term) · Insignificant influence on energy procurement costs from measures to address trend toward energy saving and de-carbonization
		Regulations related to carbon emissions and the use of fossil fuels	Moderate	(Medium to long term) · Increase in development/manufacturing costs for rolling stock to address regulations (Long term) · Difficulty in operating diesel rolling stock if unable to address regulations	(Medium to long term) · Increase in sales accompanying maintenance of environmental superiority of railways resulting from early adoption of de-carbonization
	Market	Change in energy mix Change in energy prices	Large	(Medium to long term) · Energy procurement cost increase · Decrease in sales due to passing of energy procurement costs on to wages	(Medium to long term) · Lower costs and higher sales due to introduction/expansion of renewable energy businesses accompanying advances in photo-voltaic power generation and electricity storage technologies
	Technologies	Adoption of next-generation technologies	Large	(Medium to long term) · Decline in sales due to decrease in environmental superiority of railways resulting from adoption of electric vehicles, etc. · Failure of investment in new technologies for environmentally friendly rolling stock, etc. (Long term) · Decrease in sales following loss of railway superiority due to adoption of self-driving technologies for automobiles, etc.	(Short to medium term) · Lower costs due to adoption of self-driving technologies for railways (Medium to long term) · Decrease in costs due to efficient inspection operations accompanying advances in weather forecasting · Increase in sales accompanying active use of public transportation due to adoption of MaaS (Long term) · Decrease in maintenance costs and increase in environmental superiority due to introduction of next-generation rolling stock, increase in sales due to increased environmental superiority
	Reputation	Changes in customer preferences	Large	(Short to medium term) · Decline in sales if the environmental superiority of railways decreases, resulting from a shift to alternative means of transportation due to higher environmental consciousness among customers	(Short to medium term) · Increase in sales if the environmental superiority of railways is maintained, resulting from a shift to the use of railways due to higher environmental consciousness among customers
		Change in reputation among investors	Small	(Short to medium term) · Decline in reputation among investors if environmental measures are not considered to be aggressive	(Short to medium term) · Attraction of ESG investment due to shift to low-carbon, environmentally friendly businesses
Physical	Acute	Increased frequency/severity of natural disasters	Large	(Short term) · Decrease in sales due to disaster recovery cost increases and service suspensions accompanying increased or longer incidents of rain/strong winds (Short to medium term) · Influence on business continuity due to supply chain interruption · Decline in asset value in regions with high disaster risk	(Medium to long term) Decrease in disaster restoration costs and increase in sales due to operation of a railway business that is disaster resilient.
	Chronic	Rise in average atmospheric temperature	Large	(Short term) · Increase in air-conditioning costs · Increase in costs to address heatstroke · Increase in costs due to breakdown of electrical equipment and other railway assets and to rail buckling (Short to medium term) · Decline in sales due to trend toward refraining from going out	-

2. Scenario Selection

We analyzed the effect of climate change on our railway business, based on 2°C to 4°C* scenarios outlined by specialist institutions, such as the IPCC (Intergovernmental Panel on Climate Change) and IEA (International Energy Agency).

<Major scenarios used in scenario analysis>

Used primarily to analyze transition risks	IEA: SDS, STEPS, DRS
Used primarily to analyze physical risks	IPCC: RCP2.6, RCP8.5

* Including IEA 2020 scenario of 2.7°C or higher

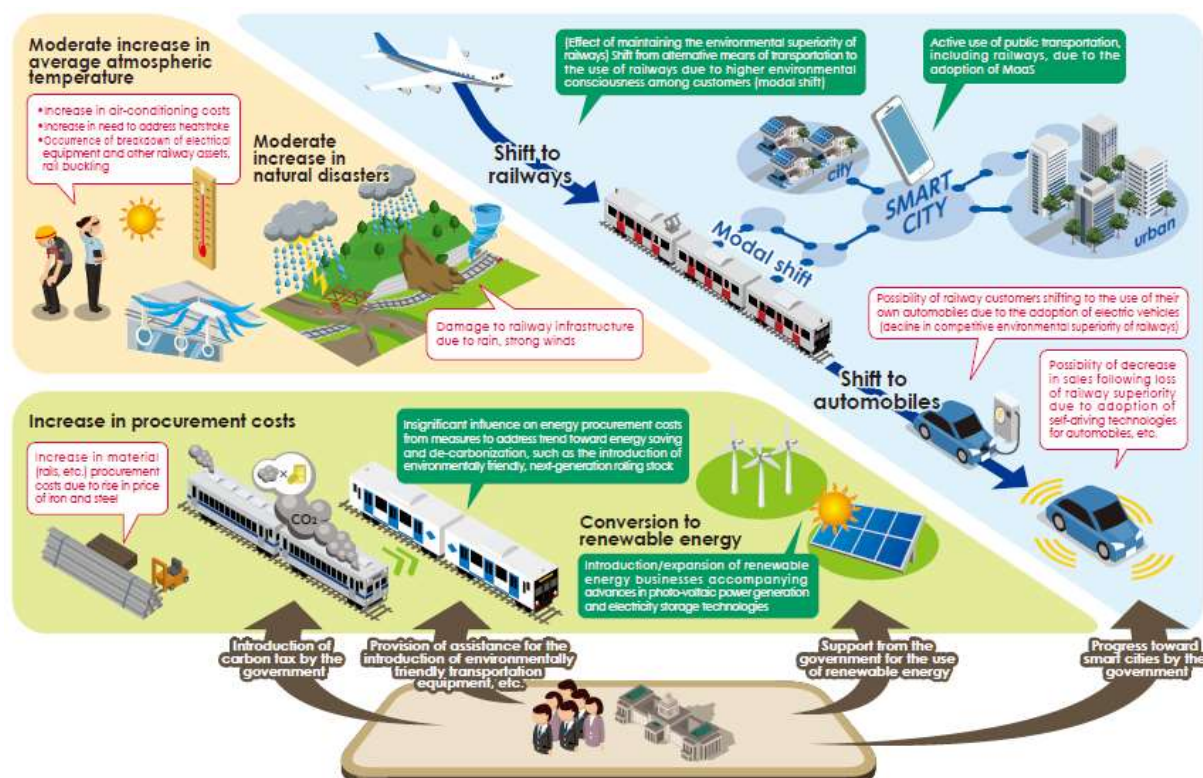
3. Results of Scenario Analysis and Future Policies and Initiatives

Under the 2°C scenario, which anticipates an increase in carbon taxes and cost increases due to the adoption of renewable energy, if the environmental superiority of railways can be maintained, then there will be a shift of customers from other means of transportation, and we will be able to secure opportunities to increase sales.

In addition, under the 4°C scenario, due to the increasing frequency/severity of natural disasters caused by climate change, there will be damage to railway assets and an increase in maintenance costs, as well as a decline in sales due to the suspension of operations.

For society and for the Company, The Group will work to advance initiatives for the achievement of the 2°C world to facilitate the realization of a sustainable society.

◇Results of Scenario Analysis (Global outlook under 2°C scenario (2050))



Risk Management

The Group's ESG Strategy Committee, which is chaired by the President and CEO, plans, formulates, and manages the progress of measures to reduce CO₂ emissions. In addition, to identify and evaluate the influences of climate change on the Group's businesses, we analyze climate change risks and opportunities, and in the ESG Strategy Committee, reports are made at least once per year. In addition, reports are made to the Board of Directors as necessary.

Metrics and Targets

To address the issue of climate change, in September 2015 we formulated the JR Kyushu Low-Carbon Society Action Plan as a set of new voluntary targets. Results in FY2021/3, we achieved our target for unit energy consumption.

As a new target, JR Kyushu Group aim to achieve net-zero CO₂ emissions by 2050. And, a medium-term target is to cut emissions for JR Kyushu by 50% between the fiscal year ended March 2014 and the fiscal year ending March 2031.

Continuously, we will consider the specific measures, and we will formulate a road-map.