

Disclosures Based on TCFD Recommendations

Management Involvement in Sustainability

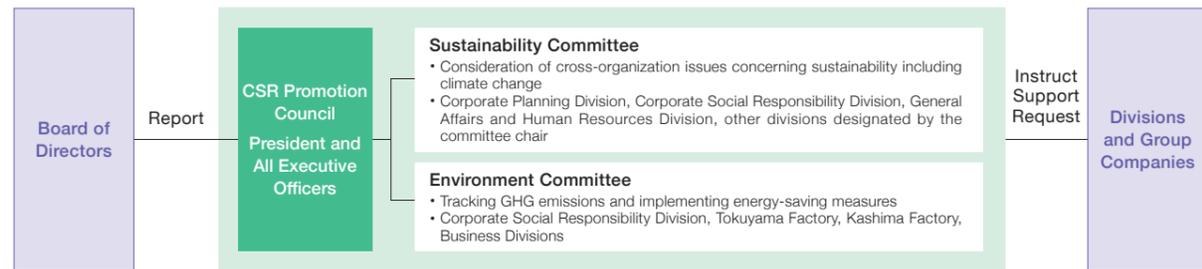
Governance Risk Management

Tokuyama positions the issue of climate change as one of the greatest management risks. In February 2021, Tokuyama announced its support for the TCFD recommendations, and in April 2021 it established a Carbon Neutral Strategy Division, reporting directly to the President. Climate-related risks and opportunities that have an impact on the Group's business have been analyzed and reflected in Medium-Term Management Plan 2025.

In FY2022, a new Sustainability Committee was established

to discuss risks such as climate change, human rights and CSR procurement, creating a framework for identifying and evaluating those risks and opportunities across organizations. Particularly important matters are discussed in the CSR Promotion Council chaired by the President, and reported to the Board of Directors. The Board of Directors confirms the progress of action plans in line with quantitative targets established to "contribute to mitigation of global warming," which is a priority issue in both Medium-Term Management Plan 2025 and future investment plans.

Framework for Promoting Carbon Neutrality



Climate Change Scenario Analysis (Risks and Opportunities)

Strategy

Medium-Term Management Plan 2025 incorporates risks such as increased costs caused by carbon pricing, the impact of changes in customers' procurement policies, and the impact of changes in the policies of financial and investment companies on funding, as well as new business opportunities in the area of the environment. Furthermore, the Company implemented analysis of a 1.5°C scenario and

a 4°C scenario on a timeline from the present until 2050 by referring to the International Energy Agency (IEA) transition risk scenario and the Intergovernmental Panel on Climate Change (IPCC) physical risk scenario. The Company aims to mitigate climate-related risks by transforming its portfolio from that of an energy-intensive company to one of a value-creative company.

Climate Change Scenario Analysis

Risks Opportunities

Scenario	Type	Event	Impact on the Company	Countermeasures	Impact
1.5°C	Policy Regulation	Strengthening of carbon tax	Increased operating costs associated with carbon pricing system (Reference: Base year FY2019 total CO ₂ emissions of approximately 6.76 million tons)	Transformation of portfolio into energy-efficient business model Consideration of introduction of renewable energy	Large
	Reputation	Request for large CO ₂ emitters to make improvements	Increase of funding costs associated with requests and divestment by investors		Medium
	Market	Penetration of green procurement by customers	Increase of capital investment associated with requests for changes in energy-saving manufacturing processes	Execution of planned improvements and capital investment Establishment of energy-saving manufacturing processes	Medium
	Market	Increasing demand from environmental industries	Expansion of waste treatment and resource utilization industries, expansion of industries against global warming	Commercialization of renewable resources and energy (biomass, hydrogen, ammonia, etc.)	Large
	Recycling Efficiency	Requests for CCU-related products	Entry into new business areas through establishment of carbon recycling systems	Acceleration of research and development, field trials and implementation in actual business	Large
4°C	Physical Risk (acute)	Increased severity of abnormal weather, rising sea level	Damage to production equipment due to flooding or windstorms, delayed production plans and increased costs due to disruption of supply chains	Expansion of BCP response such as strengthening of disaster prevention measures and use of multiple procurement sources	Medium

Business Opportunities in the 1.5°C Scenario

Future Events	Spread of green hydrogen	Expansion of electrification of mobility	Rapid digitalization	Spread of energy-saving housing	Formation of a closed-loop society	
Business Opportunities	Rapid increase in demand for water electrolysis equipment	Expansion of demand for lithium batteries	Expansion of semiconductor demand	Increase in demand for functional materials, e.g. insulation material	Increase in demand for recycling of waste material and industrial waste	Response to large quantities of waste from photovoltaics panels
Products and Technology	Water electrolyzers	Ion exchange membranes Thermal management materials	Polycrystalline silicon Photoresist developer Silica for CMP High-purity IPA Thermal management materials, etc.	Super-insulated, highly-airtight plastic window sashes Plaster sheets	Waste gypsum board recycling technology Conversion of sewage sludge into biomass	Recycling technology for photovoltaics modules

* Business opportunities in 4°C scenario include cement-type stabilizers required for disaster prevention and disaster mitigation, and diagnostic agents for addressing infectious diseases

Incorporation into Medium-Term Management Plan 2025

KPIs and Targets

Until now, the Company has managed greenhouse gas (GHG) emissions, the GHG discharge rate, and the energy consumption rate. Now, however, it has designated total CO₂ emissions as company-wide measurement and performance indicators in Medium-Term Management Plan 2025, and specified as targets a 30% reduction in FY2030 with FY2019 as a baseline, and the achievement of carbon neutrality in FY2050. Furthermore, emissions are calculated for categories 1 through 7 and 9 for Scope 3, and certification has been obtained from an external organization.

➔P17 "Carbon-Neutrality Action Plan"

Emissions from Energy Consumption	Captive power plants	Zero CO ₂ emissions (target of 50% reduction in FY2030)
Emissions from Raw Materials (limestone)	Cement	Seek to reduce limestone consumption
	Chemicals	Explore possibility of offsetting emissions with CCU technologies, green products, etc. (already underway)

FY2050 CO₂ Emission Reduction Target

