

Climate Change

TCFD Information Disclosure

JDI declared its support for the TCFD in July 2023, and has since disclosed information based on the TCFD framework. In this disclosure, JDI has updated the scenario analysis, countermeasures, and greenhouse gas emissions targets and indicators.



JDI positions addressing climate change as one of its material issues. Since FY2022, JDI has initiated scenario analysis based on the TCFD recommendations to identify key risks and opportunities related to climate change and assess their financial impacts. Currently, JDI is working to incorporate these analysis results into its management strategies for climate change measures and actively engages in disclosing relevant information to stakeholders.

Governance

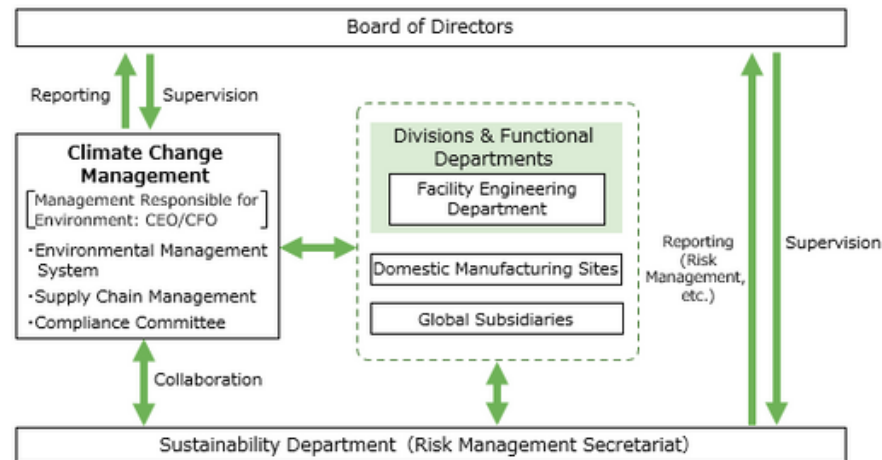
Board Oversight of Climate-Related Issues

JDI has established multiple committees and management systems related to environmental, social, and governance (ESG) issues, addressing climate change as part of its efforts to tackle ESG challenges. The Board of Directors receives sustainability-related reports, including those on climate change issues, at least once a year, as well as timely and appropriate reports from management systems. The Board conducts discussions as needed, oversees related issues, and approves important decisions.

Decision-Making on Climate-Related Issues

The CEO is the highest authority responsible for addressing climate change issues and holds the responsibility for making decisions related to climate change. Under the CEO, the CFO oversees all of JDI's environmental activities. Decisions and progress are summarized annually by the CFO and reported to the CEO, and subsequently by the CFO to the Board of Directors.

Risk Management Framework



Risk Management

Climate-Related Risk and Opportunity Identification, Evaluation, and Management Processes

The Sustainability Promotion Department serves as the lead division, ensuring proper management of company-wide risk identification, evaluation, and control processes, including those related to climate change, in accordance with JDI's Risk Management Regulations. Each responsible department identifies potential climate-related risks and opportunities, such as new regulations, products and services, and market trends, by following risk management workflows related to their business activities.

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Strategy

JDI is undertaking efforts such as energy-saving activities to realize a decarbonized society and considering the use of renewable energy, aiming to reduce greenhouse gas emissions. Recognizing the significant impact that rising temperatures due to climate change can have on society, JDI conducted scenario analyses up to 2050 using 1.5°C scenario and 4°C scenario from FY2022. Based on the key risks and opportunities identified through these scenario analyses, JDI is aiming to formulate strategic measures against climate change.

Adopted Scenarios, Analysis Targets, and Timeframes

JDI, anticipating an uncertain future associated with the transition to a decarbonized society, conducted scenario analyses as recommended by TCFD. We examined potential business challenges in worldviews where global temperatures rise by 1.5°C and 4°C respectively compared to preindustrial levels. The scenario analysis targets the entire company, and the whole supply chain including EMS and suppliers.

Estimated Temperature Rise	Scenario	Assumed Environment	Target Business	Analysis Time Frame	Analysis Period
1.5°C	[Transition] IEA ^{*1} NZE ^{*2}	This scenario outlines the path to stabilize the world's average temperature at 1.5°C above pre industrial levels. It assumes the advancement of low carbon policies, a surge in carbon pricing, and a significant reduction in fossil fuel supply. Additionally, it envisions a rapid increase in clean energy policies and investments, with developed countries reaching net zero emissions ahead of others.	Company wide	Short-term: 1-3 years	2030 2050
	[Physical] SSP ^{*3} 1-2.6	This scenario introduces climate policies to keep the temperature rise below 2°C compared to pre industrial levels under sustainable development. It anticipates net zero CO ₂ emissions in the latter half of the 21st century, presenting a low stabilization scenario.		Medium-term: 3-10 years	
	[Physical] SSP 5-8.5	This is a high reference scenario that does not introduce climate policies under development dependent on fossil fuels.		Long-term: over 10 years	
4°C	[Physical] SSP 5-8.5	This is a high reference scenario that does not introduce climate policies under development dependent on fossil fuels.			

*1 IEA : International Energy Agency

*2 NZE : Net Zero Emissions by 2050 Scenario

*3 SSP : Shared Socioeconomic Pathways

Climate-Related Risks and Opportunities

Impact of Climate Related Risks Short-term: 1-3 years, Medium-term: 3-10 years, Long-term: 10 years or more

Risk Type		Risks	Period	Scenario	Value Chain Stage (Risk Area)	Financial Impact
Transition Risk	New Regulations	Increase in raw material costs due to rising carbon tax	Long term	1.5°C	Upstream	Cost increase
		Increase in outsourcing costs due to rising carbon tax	Medium term	1.5°C	Upstream	Cost increase
		Increase in decarbonization costs due to rising carbon taxes and strengthened regulations	Medium term	1.5°C	Direct operation	Cost increase
		Increase in taxation costs due to carbon tax	Long term	1.5°C	Direct operation	Cost increase
	Reputation	Decreased sales due to being excluded from customers' supply chains if our efforts to address climate change are deemed insufficient	Medium term	1.5°C	Downstream	Sales decrease
Physical Risk	Acute Risk	Decreased sales due to supply chain disruptions chain from increased frequency and severity of natural disasters	Medium term	4°C	Upstream	Sales decrease
		Decreased sales due to the cessation of our production activities caused by the increased frequency and severity of natural disasters	Medium term	4°C	Direct operation	Sales decrease
	Chronic Risk	Loss on sales opportunities due to a decrease in labor productivity caused by rising temperature	Medium term	4°C	Downstream	Sales decrease
		Increased BCP response costs due to the increased frequency and severity of natural disasters	Medium term	1.5°C-4°C	Direct operation	Cost increase

Impacts of Climate Related Opportunities

Opportunity Classification	Opportunities	Period	Scenario	Value Chain Stage (Risk Area)	Financial Impact
Products and Services	Increase in revenue through the provision of licenses for eLEAP, which contributes to the reduction of greenhouse gases, and HMO technology that significantly reduces power consumption	Medium term	1.5°C	Downstream	Sales increase
	Increased sales of products effective for disaster support, such as Raelclear	Medium term	4°C	Downstream	Sales increase
Market Changes	Increased revenue through market entry of the energy-efficient eLEAP.	Medium term	1.5°C	Downstream	Sales increase
	Increased revenue from LumiFree (adaptive lighting) driven by energy-saving initiatives.	Medium term	1.5°C	Downstream	Sales increase
	Increased revenue from high-resolution 2VD products that meet the demand for reducing environmental impact in automotive components by enabling two-display content to be shown on a single screen.	Medium term	1.5°C	Downstream	Sales increase

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Strategy: JDI's Risks and Opportunities, Business Impacts and Countermeasures

The table below summarizes JDI's risk and opportunity factors, along with countermeasures for their impact on the business.

Risks: ▼(small) · ▼▼(medium) · ▼▼▼(large)
Opportunities: ▲(small) · ▲▲(medium) · ▲▲▲(large)

Catego- ries	Impact on the Business	Measures	Financial Impact	
			1.5℃	4℃
Risks	Increase in raw material costs due to rising carbon tax	<ul style="list-style-type: none"> Addition of climate change elements to the Supply Chain Sustainability Promotion Guidebook (Revised January 2025) Addition of climate change elements to the provisions of the Basic Procurement Agreement (Revised October 2024) 	▼▼▼	—
	Increase in outsourcing costs due to rising carbon tax	<ul style="list-style-type: none"> Conduct surveys on emissions and reduction activities by contractors Addition of climate change elements to the Sustainability Promotion Guidebook (Revised January 2025) 	▼▼▼	—
	Increase in decarbonization costs due to rising carbon taxes and strengthened regulations	<ul style="list-style-type: none"> Reduce energy consumption by improving operations at manufacturing sites 	▼▼	—
	Increase in taxation costs due to carbon tax	<ul style="list-style-type: none"> Promote renewable energy introduction Establish SBT and promote initiatives to achieve targets 	▼▼▼	—
	Decreased sales due to being excluded from customers' supply chains if our efforts to address climate change are deemed insufficient	<ul style="list-style-type: none"> Promotion of activities based on the TCFD framework 	▼▼▼	—
	Decreased sales due to supply chain disruptions chain from increased frequency and severity of natural disasters	<ul style="list-style-type: none"> Request for diversification of manufacturing/supply bases to major suppliers Addition of Business Continuity Plan (BCP) items to the Supply Chain Sustainability Promotion Guidebook (Revised January 2025) Keeping product inventory at global sales companies 	—	▼▼▼
	Decreased sales due to the cessation of our production activities caused by the increased frequency and severity of natural disasters	<ul style="list-style-type: none"> Keeping product inventory at global sales companies Expand outsourcing of manufacturing 	—	▼▼
	Loss on sales opportunities due to a decrease in labor productivity caused by rising temperature	<ul style="list-style-type: none"> Diversify production system by outsourcing to outside manufacturing companies indifferent geographies 	—	▼
	Increased BCP response costs due to the increased frequency and severity of natural disasters	<ul style="list-style-type: none"> Continuous review of Business Continuity Plan (BCP) through the establishment of a Crisis Management Committee Mitigation of disaster risk impact through risk assessment and implementation of countermeasures 	▼▼▼	▼▼▼
Opportunities	Increase in revenue through the provision of licenses for eLEAP, which contributes to the reduction of greenhouse gases, and HMO technology that significantly reduces power consumption	<ul style="list-style-type: none"> Expansion of technology income through license provision Development and execution of strategies to expand licensing to new customer segments 	▲▲▲	—
	Increased sales of products effective for disaster support, such as Ræclear	<ul style="list-style-type: none"> Formulation of strategies to expand sales targets to new customer segments, in addition to local governments 	—	▲
	Increased revenue through market entry of the energy-efficient eLEAP	<ul style="list-style-type: none"> Product supply through collaboration with foundry partners Ensure superiority in the market through continuous technological improvements Formulation of strategies to expand sales to new customer segments 	▲▲▲	—
	Increased revenue from LumiFree (adaptive lighting) driven by energy-saving initiatives	<ul style="list-style-type: none"> Formulation of strategies to expand sales to new customer segments 	▲	—
	Increased revenue from high-resolution 2VD products that meet the demand for reducing environmental impact in automotive components by enabling two-display content to be shown on a single screen.	<ul style="list-style-type: none"> Formulation of strategies to expand sales to new customer segments 	▲▲▲	—

Strategy: Scenario Analysis Results

	1.5°C Scenario	4°C Scenario
Scenario Analysis Results	If our commitment to addressing climate change issues is perceived as subpar, it could significantly impact our sales with automotive customers. Furthermore, due to high power consumption in manufacturing, the introduction of a carbon tax could substantially increase our procurement and manufacturing outsourcing costs. However, we anticipate significant growth in demand for our proprietary next generation OLED technology, eLEAP, by 2050. eLEAP, which effectively reduces CO ₂ emissions, has been identified as the most significant opportunity for our company.	The intensification and increased frequency of natural disasters pose a risk of sales reduction due to supply chain disruptions and decreased production efficiency from chronic temperature rises. The impact is expected to be similar in 2030 and 2050. Additionally, the cost of implementing BCP to mitigate floods and other disasters will be higher in 2050 compared to 2030. Increased risks of natural disasters may drive demand for disaster management products like Rælclear, leading to a sales increase. However, the financial impact is expected to be minor and limited.
Countermeasures	JDI has identified eLEAP (next-generation OLED with low power consumption), HMO, LumiFree, and 2VD, which reduces the environmental impact of automotive components, as opportunities related to climate change. JDI invests in R&D to continuously improve these technologies and maintain their position as essential solutions. To address cost increases from carbon taxes, JDI promotes renewable energy adoption and engages with suppliers to reduce emissions. The outcomes of these efforts will be disclosed and communicated to customers to highlight JDI's initiatives.	To ensure sustainable procurement, JDI is diversifying its supplier base and maintaining a certain level of product inventory at sales companies. Additionally, JDI continues to evaluate optimal raw material inventory levels based on BCP (Business Continuity Plan) assessments. To mitigate risks in in-house production and establish a future capacity for increased production, JDI is systematically expanding external manufacturing outsourcing, including collaborative efforts. For products like Rælclear, JDI invests in R&D to continuously improve technologies and maintain their position as essential solutions.
Summary	In a 1.5°C world by 2050, JDI has identified significant opportunities through the utilization of proprietary technologies such as eLEAP, 2VD, and HMO, which contribute to the transition to a low-carbon society. JDI has confirmed that advancing strategies to enter high-growth sectors with these unique technologies will create long-term opportunities. Additionally, by implementing countermeasures to mitigate risks, JDI aims to leverage its proprietary technologies—one of its key strengths—to contribute to the realization of a 1.5°C world by 2050.	

Indicators and Targets

In addition to Scope 1 and Scope 2 emissions, which are key indicators of environmental impact, JDI calculates and discloses emissions across all relevant Scope 3 categories. Third-party assurance for this greenhouse gas emissions data was obtained in FY2024.
To reduce greenhouse gas emissions, JDI is working toward achieving its renewable energy ratio target for FY2025 and is also considering setting medium- to long-term reduction targets across the entire value chain.

Indicators for Targets and Objectives

Indicators	FY2024 Results	Target
Energy-derived CO ₂ emission reductions	1,433 t-CO ₂	FY2025: 695 t-CO ₂
Renewable energy ratio	0.03 %	FY2025: 1.5 %

* The achievements and targets apply to JDI's domestic production sites.

Plan to Obtain SBT Certification

The JDI Group aims to achieve future SBT certification as part of its efforts to reduce greenhouse gas emissions.

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Greenhouse Gas Emissions Based on the GHG Protocol

JDI calculates greenhouse gas (GHG) emissions based on the GHG Protocol^{*1} and promotes initiatives to reduce emissions from its business activities and the use of JDI's products.

Breakdown of Scope 1, 2, and 3 emissions

Category			Emissions (t-CO ₂ e)			Reference
			FY2022	FY2023	FY2024	
Scope1 (Direct greenhouse gas (GHG) emissions that are controlled or owned by an organization (fuel combustion/industrial processes))			71,635	^{*2} 76,966	68,448	
Scope2 (Indirect greenhouse gas (GHG) emissions associated with the use of electricity, heat and steam supplied by a third party)			325,359	^{*2} 243,242	208,455	
Scope1 + 2 Total (JDI)			396,994	^{*2} 320,207	276,903	
Scope3 (Indirect emissions other than Scope 1 and 2 emissions)	Upstream	1.Purchased Goods and Services	704,210	590,495	377,965	
		2.Capital Goods	12,112	8,550	4,901	
		3.Fuel- and Energy-Related Activities	59,602	47,895	41,691	
		4.Upstream Transportation and Distribution	79,681	^{*2} 62,045	51,149	
		5.Waste Generated in Operations	968	446	303	
		6.Business Travel	326	925	787	
		7.Employee Commuting	1,246	1,761	1,496	
		8.Upstream Leased Assets	—	—	—	Not Applicable
	Downstream	9.Downstream Transportation and Distribution	7,248	3,873	5,944	
		10.Processing of Sold Products	18,373	54,297	52,605	
		11.Use of Sold Products	322,662	363,671	313,695	
		12.End-of-Life Treatment of Sold Products	2	1	1	
		13.Downstream Leased Assets	—	—	—	Not Applicable
		14.Franchises	—	—	—	Not Applicable
		15.Investments	—	—	—	Not Applicable
Scope3 Total			1,206,431	^{*2} 1,133,961	850,536	
Scope1 + 2 + 3 Total			1,603,425	^{*2} 1,454,168	1,127,440	

Reasons for Some Categories being Not Applicable

- Sums may not add due to rounding of figures.
- * 1 GHG Protocol Standard: International standard for calculating and reporting greenhouse gas (GHG emissions)
- * 2 The emission values for FY2023 contained errors, which have been corrected along with the total value.
- Category 8: JDI includes emissions from the operation of tenant offices and other assets leased by the organization as Scope 1 and 2 emissions.
- Category 13 to 15: JDI does not engage in any applicable operations

JDI Enhances Transparency with Independent Assurance Report for its Greenhouse Gas Emissions

JDI has secured third-party assurance for its Greenhouse Gas (GHG) emissions data for FY24/3. This is an important step for JDI as it works to further enhance the accuracy, reliability, and transparency of its GHG emissions.

In this GHG emissions data verification, JDI received third-party verification from the SOCOTEC Certification Japan, aligning with the international standard JIS Q 14064-3:2023 (ISO14064-3:2019), and obtained an assurance report. This enables JDI to deliver data of heightened reliability and transparency to its stakeholders.

Environmental Data:

<https://www.j-display.com/en/sustainability/library/esg/environment.html>