



Disclosures Based on TCFD Recommendations 2024

Japan Display Inc.

July 2024

Introduction

Japan Display Inc. (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's philosophy is to cultivate a world propelled by limitless technology and unique ideas. Believing that the health of people, society, and the Earth is paramount, JDI prioritizes environmental preservation as a key issue for humanity. We aim to be a company that values people and the environment, contributing to a sustainable society.

In line with TCFD* recommendations, JDI considers climate change's financial "risks and opportunities," integrating future measures into our strategies. We strive to resolve climate-related social issues through our business, aiming to enhance corporate value and meet stakeholder expectations.

Governance	Strategy
Governance of the organization on climate-related risks and opportunities	Actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategies, and financial planning
Risk Management	Indicators and targets
Processes to identify, evaluate, and manage climate-related risks	Indicators and targets used in assessing and managing climate-related risks and opportunities



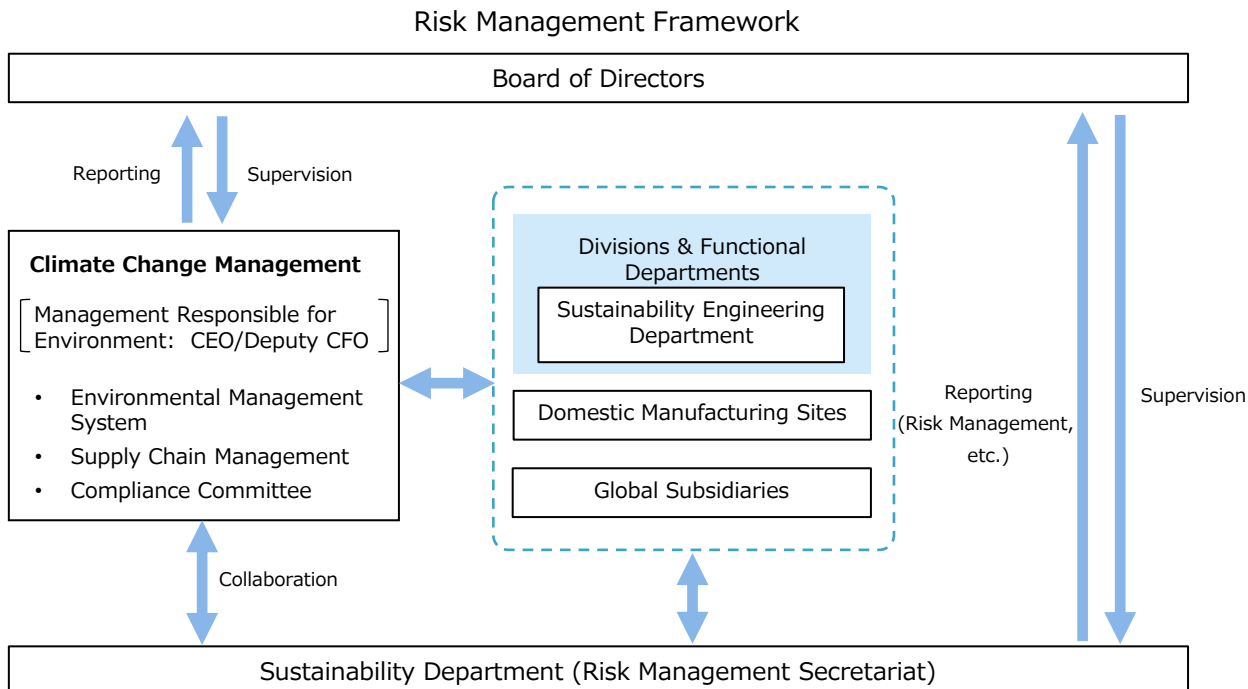
Climate-Related Financial Disclosure Task Force (Task Force on Climate-Related Financial Disclosures). At the request of G20, the TCFD was established by the Financial Stability Council (FSB). TCFD recommends that companies understand and disclose the financial impact of climate change.

Governance and Risk Management

Board Oversight of Climate-Related Issues

The JDI Group acknowledges climate change as one of its primary management concerns and has established various committees and management systems dedicated to environmental, social, and governance (ESG) issues. In addressing these ESG issues, we are concurrently responding to climate change.

The Board of Directors annually receives sustainability-related reports, which include climate change matters. They also receive timely reports from a suitable management system and provide oversight for the issues, making key decisions when necessary.



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 Deputy CFO oversees all of JDI's environmental activities.

Decisions and progress are reported annually from the Deputy CFO to the CEO, who then reports to JDI's Board of Directors.

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

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

The Sustainability Department is primarily responsible for managing the identification, evaluation, and management processes of company-wide risks, including those related to climate change, in accordance with risk management rules.

Each risk-related department identifies climate-related risks and opportunities pertaining to new regulations, products and services, and markets, following the risk management flow associated with business activities.

Assumptions for Scenario Analysis

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 pre-industrial levels. The scenario analysis targets the entire company, and the whole supply chain including EMS and suppliers. The analysis timeframes are defined as short-term (1-3 years), mid-term (3-10 years), and long-term (over 10 years).

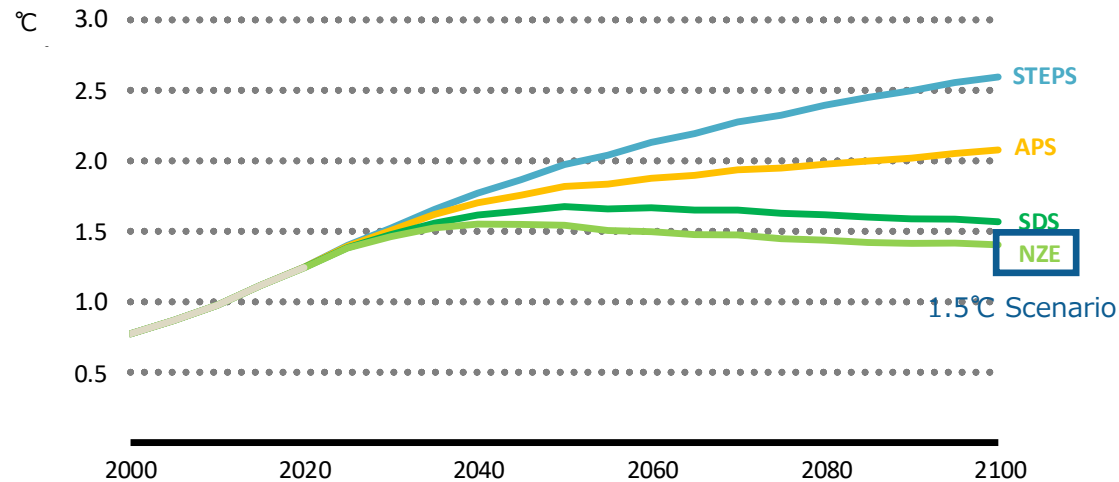
Estimated Temperature Rise	Scenario	Assumed Environment	Target Business	Analysis Timeframe	Analysis Period
1.5°C	[Transition] IEA*1 NZE*2	This scenario outlines the path to stabilize the world's average temperature at 1.5°C above pre-industrial levels. It assumes the advancement of low-carbon policies, 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 Medium-term: 3-10 years Long-term: over 10 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 CO2 emissions in the latter half of the 21st century, presenting a low stabilization scenario.			
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

Reference

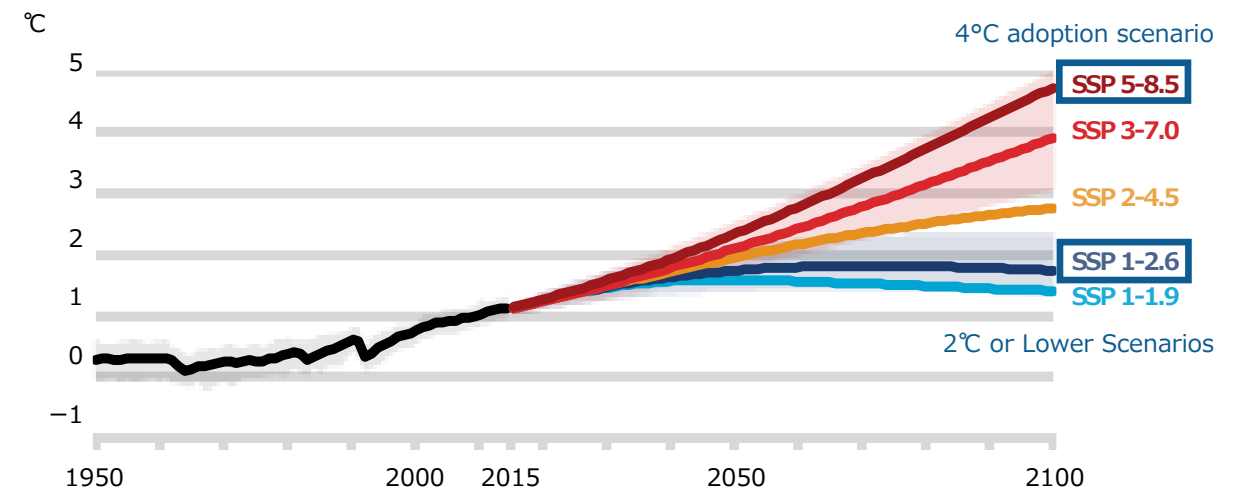
Average Temperature Change in Each Scenario

Changes in Global Average Temperature for Different Transition Scenarios in the IEA



Source: IEA "World Energy Outlook 2021"

Changes in Global Average Temperature for Different Physical Scenarios in the IPCC* Sixth Assessment Report



Source: IPCC Sixth Assessment Report SPM.8 (a) Global Mean Temperature Changes 1850-1900

*IPCC: The Intergovernmental Panel on Climate Change. Established in 1988, its purpose is to conduct comprehensive evaluations from scientific, technical, and socio-economic perspectives on climate change, its impacts, adaptation, and mitigation measures caused by human activities. Information provided by the organization, including temperature rise scenarios in its assessment reports, is widely adopted in scenario analyses under the TCFD.

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℃	Upstream	Cost increase
		Increase in outsourcing costs due to rising carbon tax	Medium term	1.5℃	Upstream	Cost increase
		Increase in decarbonization costs due to rising carbon taxes and strengthened regulations	Medium term	1.5℃	Direct operation	Cost increase
		Increased costs due to carbon tax	Long term	1.5℃	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℃	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℃	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℃	Direct operation	Sales decrease
	Chronic Risk	Loss on sales opportunities due to a decrease in labor productivity caused by rising temperature	Medium term	4℃	Downstream	Sales decrease
		Increased BCP response costs due to the increased frequency and severity of natural disasters	Medium term	1.5℃・4℃	Direct operation	Cost increase

Climate-Related Risks and Opportunities

Impacts of Climate-Related Opportunities

Short-term: 1-3 years, Medium-term: 3-10 years, Long-term: 10 years or more

Opportunity Classification	Risks	Period	Scenario	Value Chain Stage (Risk Area)	Financial Impact
Products and Services	Increased revenue from licensing eLEAP* (next-generation OLED) and HMO technology, which contribute to greenhouse gas reduction and significantly reduce power consumption	Medium term	1.5℃	Downstream	Sales increase
	Increased sales of products such as Raelclear, which are effective for disaster relief	Medium term	4℃	Downstream	Sales increase
Market	Increased demand for low-power consumption eLEAP	Medium term	1.5℃	Downstream	Sales increase
	Increased demand for the new technology LumiFree* (light distribution control) due to the growing needs of energy conservation	Medium term	1.5℃	Downstream	Sales increase

* eLEAP, Raelclear, and LumiFree are trademarks or registered trademarks of JDI.
Please refer to pages 12-14 for an overview of the technology.

Business Impact Assessment Based on 1.5°C Scenario

Impact Assessment Using Waterfall Graph

Represents changes in the impact of climate-related risks and opportunity factors as of 2030 and 2050, based on 2023 operating income on a zero basis.

Summary of Analysis Results for 2030

Risk

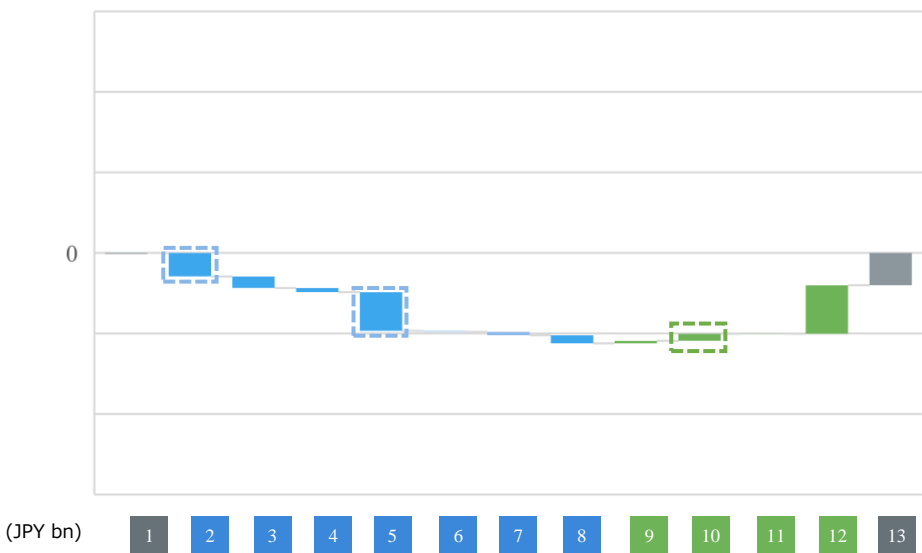
25

Relatiely significant impacts include sales loss from being excluded from customers' supply chains due to climate change evaluation, market shifts, and increased manufacturing costs increase from carbon taxes.

Opportunity

10

Although increased eLEAP demand may boost sales, the impact is not expected to be significant.



- 1 FY2022 operating profit
- 2 Increase in manufacturing costs due to the introduction of the carbon tax
- 3 Increase in outsourcing costs due to introduction of carbon tax
- 4 Costs for dealing with decarbonization
- 5 Evaluation of attitudes toward addressing climate change issues
- 6 Increased BCP response due to frequent occurrence of natural disasters
- 7 Increase in taxable costs
- 8 Response costs
- 9 Increase in revenue from technology licensing
- 10 Increased demand for eLEAP (next-generation OLED)
- 11 Expansion of the new business "LumiFree".
- 12 Recovery through risk countermeasures
- 13 FY2030 & 2050 operating profit

Summary of Analysis Results for 2050

Risk

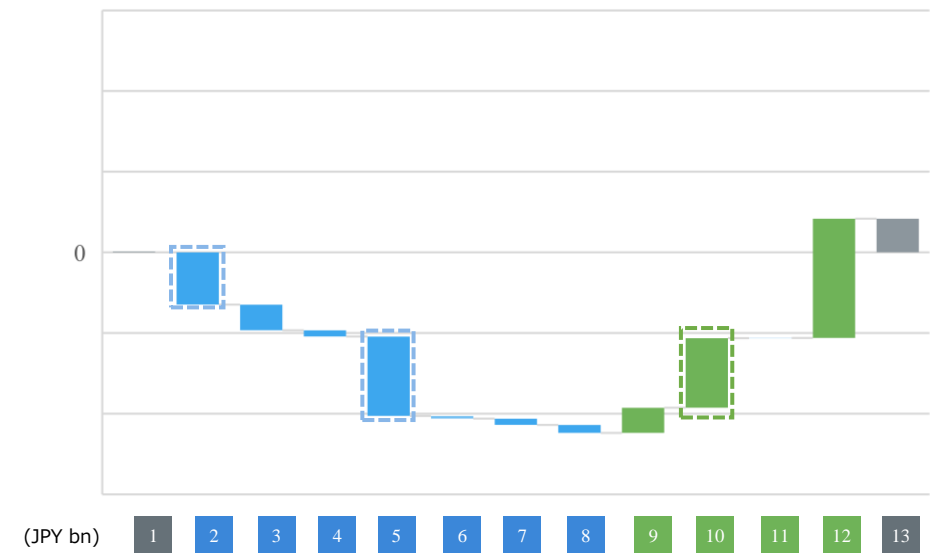
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Significant impacts include sales loss from being excluded from customers' supply chains due to climate change evaluations and market shifts, and manufacturing costs increases from carbon taxes.

Opportunity

10

The impact will be extremely large because the negative factors will turn positive because of the anticipated expansion of sales opportunities due to increased demand for eLEAP (next-generation OLED).



Business Impact Assessment Based on 4°C Scenario

Impact Assessment Using Waterfall Graph

Represents changes in the impact of climate-related risks and opportunity factors as of 2030 and 2050, based on 2023 operating income on a zero basis.

Summary of Analysis Results for 2030

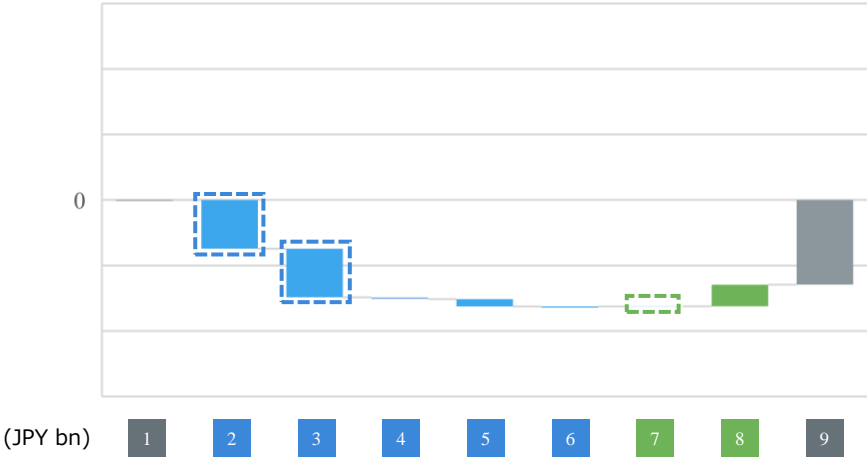
- Risk

23

Relatively significant impacts include production disruptions due to supply chain disruption and productivity declines from chronic temperature increases.
- Opportunity

7

Although increased demand for disaster relief products like Rælclear may boost sales, the impact is expected to be small.



- 1 FY2023 Operating Income
- 2 Suspension of production activities due to supply chain disruption
- 3 Decrease in production efficiency due to increase in temperature
- 4 Incidence of production delays due to spread of infectious diseases
- 5 Increased BCP response costs due to increased natural catastrophes
- 6 Response costs
- 7 Increased sales of products effective for disaster support
- 8 Recovery through risk countermeasures
- 9 FY2030 & 2050 operating profit

Summary of Analysis Results in 2050

- Risk

23

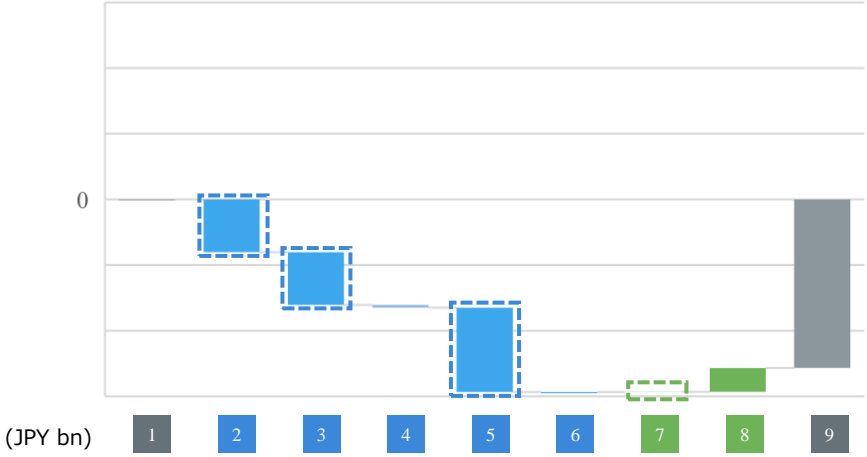
Relatively significant impacts include production disruptions due to supply chain disruption and productivity declines from chronic temperature increases.
- Risk

5

Significant impacts include increased response costs for BCP in the event of natural disasters.
- Opportunity

7

Although increased demand for disaster relief products like Rælclea may boost sales, the impact is expected to be small.



Measures to Address Business Risks

Risk: ▼ (small), ▼▼ (medium), and ▼▼▼ (large)

	Impact on the Business	Measures	Financial Impact	
			1.5 °C	4 °C
Risk	Increase in raw material costs due to rising carbon tax	<ul style="list-style-type: none"> Adding climate change elements to the JDI Supply Chain Sustainability Guidebook ("Sustainability Guidebook," scheduled for 2024) Adding climate change elements to the Procurement Basic Agreement (scheduled for 2024) 	▼▼▼	-
	Increase in outsourcing costs due to rising carbon tax	<ul style="list-style-type: none"> Investigating emissions & reduction activities of EMS Adding climate change elements to the Sustainability Guidebook (scheduled for 2024) 	▼▼▼	-
	Increase in decarbonization costs due to rising carbon taxes and strengthened regulations	<ul style="list-style-type: none"> Improving manufacturing input unit with eLEAP production technology Reduce energy consumption at manufacturing sites 	▼▼	-
	Increased costs due to carbon tax	<ul style="list-style-type: none"> Promotion of renewable energy use SBT setting and efforts towards achieving the respective 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"> Promoting 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"> Diversification of manufacturing/supply bases for major suppliers Adding BCP items to the Sustainability Guidebook (scheduled for 2024) Ensuring a certain level of product inventory at the sales subsidiaries 	-	▼▼▼
	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"> Ensuring a certain level of product inventory at the sales subsidiaries Creating multiple production sites Expansion of outsourced production 	-	▼▼
	Loss on sales opportunities due to a decrease in labor productivity caused by rising temperature	<ul style="list-style-type: none"> Decentralized production system through outsourcing to EMS companies in different geographies 	-	▼
	Increased BCP response costs due to the increased frequency and severity of natural disasters	<ul style="list-style-type: none"> Continuous review of BCP at the Crisis Management Committee (established in 2023) Mitigation of disaster risk impact through risk assessment and countermeasures 	▼▼▼	▼▼▼

Measures to Address Business Opportunities

Opportunities: ▲ (small), ▲▲ (medium), and ▲▲▲ (large)

	Impact on the Business	Measures	Financial Impact	
			1.5 °C	4 °C
Opportunity	Increased revenue from licensing eLEAP* (next-generation OLED) and HMO technology, which contribute to greenhouse gas reduction and significantly reduce power consumption	<ul style="list-style-type: none">Revenue expansion through technology licensingExpanding sales to new customer groups	▲▲▲	-
	Increased sales of products such as Rælclear, which are effective for disaster relief	<ul style="list-style-type: none">Expanding sales to new customer groups, in addition to local governments	-	▲
	Increased demand for low-power consumption eLEAP	<ul style="list-style-type: none">Expanding the eLEAP supply network by providing technology to other companiesSecuring a competitive edge in the market through continuous technological improvements	▲▲▲	-
	Increased demand for the new technology LumiFree* (light distribution control) due to the growing needs of energy conservation	<ul style="list-style-type: none">Expanding sales to new customer groups	▲▲	-

Please refer to pages 12-14 for an overview of the technology.

Scenario Analysis Results

1.5°C 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 CO₂ emissions, has been identified as the most significant opportunity for our company.

Countermeasures

JDI has identified eLEAP, HMO, and LumiFree as opportunities related to climate change. These are positioned as part of the six growth drivers in our METAGROWTH 2026 growth strategy. We will maintain ongoing investment in R&D to continuously enhance these technologies and uphold their relevance in the market. To counteract the cost increase due to the introduction of a carbon tax, we will advocate for the use of renewable energy and foster engagement with our suppliers to reduce emissions. We commit to disclosing the results of these initiatives and communicating their value to our customers.

[Summary]

In the 1.5°C world of 2050, we found that we can expect significant opportunities through the use of our proprietary technologies such as eLEAP and HMO, which are effective for transitioning to a low-carbon society.

We confirmed that promoting our METAGROWTH 2026 growth strategy, which positions these technologies as growth drivers, will bring long-term opportunities.

We will aim to reduce risks through countermeasures and strive to realize the 1.5°C world of 2050 with our technologies.

4°C Scenario Analysis Results

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 Raelclear, leading to a sales increase. However, the financial impact is expected to be minor and limited.

Countermeasures

For sustainable procurement, JDI is diversifying suppliers and maintaining product inventory at sales subsidiaries. We're also adjusting raw material inventories based on BCP verification and planning to expand outsourcing to mitigate production risks and increase capacity.

We'll keep investing in R&D for products like Raelclear to continually improve technology and meet demand.

*For details on the METAGROWTH 2026 growth strategy and each technology of the growth drivers, please refer to the following pages.

METAGROWTH 2026 Growth Strategy



Technologies identified as opportunities for climate change in the growth strategy "METAGROWTH 2026".



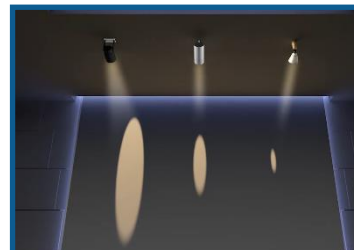
eLEAP technique (next-generation OLED)

- High brightness, long life and high definition GreenTech
- Supports a wide range of sizes and resolutions



HMO technical (High Mobility Oxide)

- Ultra-low power consumption, high definition and large screen
- Applicable to G8/G10 as a fundamental technical



LumiFree (New Tech, Products, & Businesses)

- Flexible control of light distribution
- Available in a wide range of lighting fixtures with silence, fast response, thinness, and long life

eLEAP (NextGen OLED)

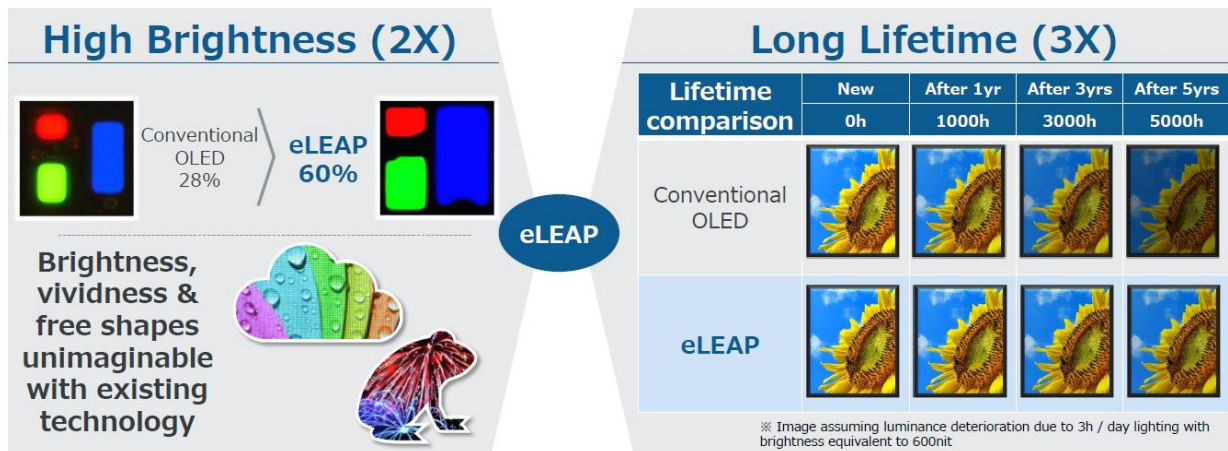
World's First Maskless Deposition + Lithographic OLED

JDI has developed eLEAP, the world's first OLED technology ready for mass production using maskless deposition and lithography.

eLEAP overcomes the weak points of OLED and liquid crystal display, and has features such as thin, light weight, high-contrast, and high-speed response of the conventional FMM-OLED, while it solves the life issue (seizure) of the conventional FMM-OLED, and can realize further high aperture ratio, peak-luminance improvement, and high definition.

Maskless OLED deposition is a breakthrough, environment positive production process that eliminates mask cleaning chemicals 150k tons p.a. of CO₂ emission reduction via deployment at JDI's Mobara Fab.

*CO₂ emissions are JDI's calculations based on G6 Mobara plant at 30k sheets/month



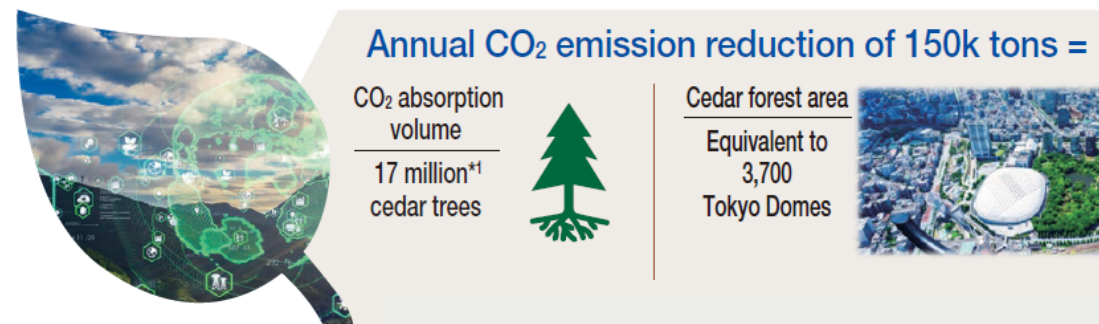
eLEAP

environment positive

Lithography with maskless deposition

Extrême long life, low power, and high luminance

Any shape Patterning



HMO (High Mobility Oxide)

World's First G6 Oxide Semiconductor TFT

JDI's new OS-TFT technology generates high-mobility oxide semiconductors (HMO), which have 2X the field-effect mobility of conventional OS-TFTs, and ultra-high mobility oxide semiconductors (UHMO), which have 4X higher field-effect mobility than conventional OS-TFT (hereafter, HMO/UHMO collectively referred to as "HMO"). UHMO's field-effect mobility on JDI's G6 mass production line is 52cm²/Vs, an extraordinarily high level.

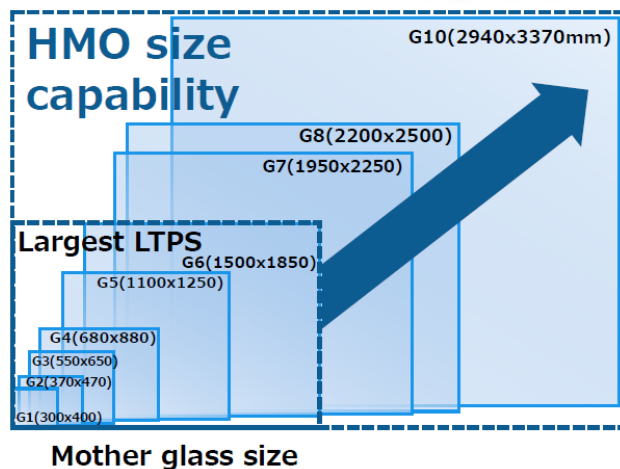
	Conventional Oxide	HMO	UHMO
Mobility	12cm ² /Vs	36cm ² /Vs (Over x2 conventional)	52cm ² /Vs (Over x4 conventional)



Conventional oxide, low resolution, small- & medium-sized screens



HMO, high resolution, can do large screens



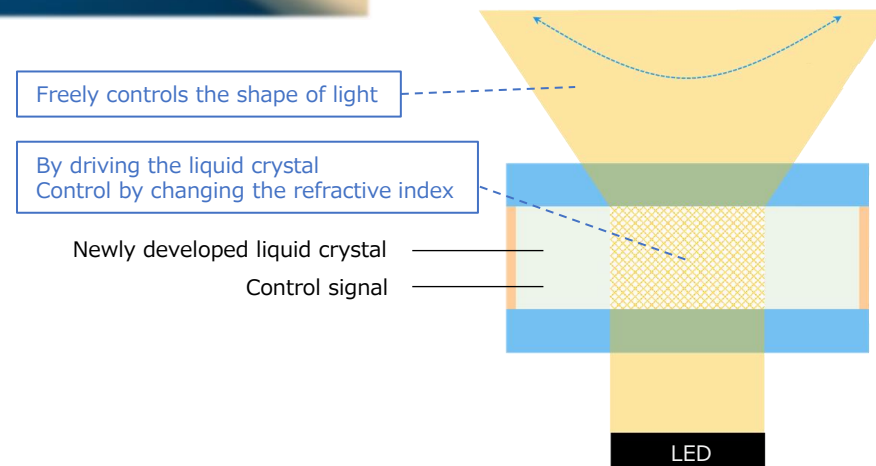
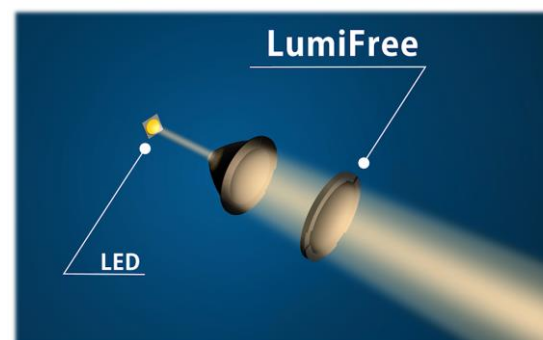
LumiFree (New Tech, Products & Businesses)

World's First LED Free-Lighting Technology

JDI has developed LumiFree off the back of its deep expertise in both backplane and frontplane technologies that it has developed over its many years in the display industry.

LumiFree makes it possible to control the light distribution characteristics of lighting at any given time, enabling the delivery of the right amount of light at the right time and place.

JDI is working to contribute to the realization of a sustainable society by creating new value through new lighting effects, reducing energy consumption by optimizing light for each usage scenario, and by reducing light pollution caused by the excessive use of lighting.



Reduction of Greenhouse Gas Emissions

Indicators for Targets and Objectives

JDI has set the following goals.

Indicator	Target	Target year
Renewable energy ratio	5.0% (Domestic production sites included, based on FY2022)	2025

Plan to Obtain SBT Certification

JDI aims to acquire SBT certification within a few years to reduce greenhouse gas emissions.

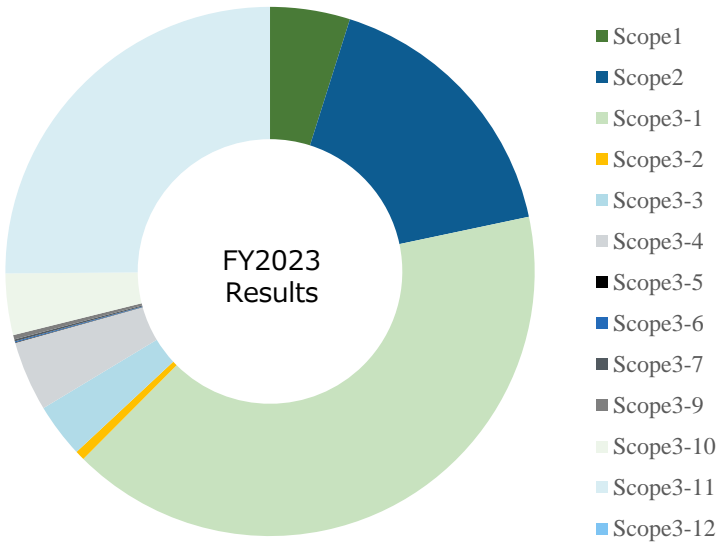
Greenhouse Gas Emissions

Trends and Percentage of Scopes 1, 2, and 3 in Business Activities

Scope 1 and Scope 2					Unit :t-CO ₂
	Scope of Calculation	FY2021	FY2022	FY2023	Ratio
Scope 1	All domestic sites and global manufacturing subsidiaries	89,235	71,635	70,706	22.5%
Scope 2	All domestic sites and global manufacturing subsidiaries	380,169	325,359	243,241	77.5%
	Total	469,404	396,994	313,947	100.0%

Scope 3					Unit :t-CO ₂
Category		Data Used for Calculation	FY2022	FY2023	Ratio
1	Purchased goods & services	Purchased goods and services data (monetary value)	704,210	590,495	52.1%
2	Capital goods	Fixed asset registration data (monetary value)	12.112	8,550	0.8%
3	Fuel & energy-related activities not included in Scope 1 or 2	Amount of energy used in each fiscal year	59,602	47,895	4.2%
4	Upstream transportation and distribution	Transportation volume (ton-kilometers) data	*1 79,681	62,046	5.4%
5	Waste generated in operations	Waste data	968	446	0.0%
6	Business travel	Data on business travels	326	925	0.1%
7	Employee commuting	Number of employees and days worked, and the rate of attendance and teleworking	1,246	1,761	0.2%
9	Downstream transportation & distribution	Transport volume (ton-kilometers) data	7,248	3,873	0.3%
10	Processing of sold products	Volume shipped and lifetime power consumption of major products	18,373	54,297	4.8%
11	Use of sold products	Same as above	322,662	363,671	32.1%
12	End-of-life treatment of sold products	Sales volume by major product and weight data by material	2	1	0.0%
		Total	1,206,431	1,133,962	100.0%

Scopes 1, 2, and 3 Breakdown FY2023 Results



<Scope of calculation>
Scope 1 and 2: JDI domestic bases and global subsidiaries
(Up until FY2022, JDI domestic bases and global manufacturing subsidiaries)
Scope 3: JDI domestic bases and global subsidiaries.
(For FY2022, JDI domestic bases only)

• Greenhouse gas emissions are calculated based on the Act on Promotion of Global Warming Countermeasures.
• Scope-specific emissions are defined according to the GHG Protocol Initiative.
• Sums may not add due to rounding of figures
*1 There was an error in the reported emissions data for Category 4 in FY2022, as such JDI has corrected that value and the total.



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