

Disclosures Based on TCFD Recommendations 2023

Japan Display Inc.

August 2023

Introduction

JDI believes that the health of people, society, and our planet is fundamental to a thriving world, and recognizes that the preservation of the global environment is one of the most important issues for humanity. JDI is a company that values people and the environment and is working to contribute towards a sustainable society.

In accordance with TCFD* recommendations, JDI analyzes climate change risks and opportunities and generates robust responses as part of its management strategy. Through its business operations, JDI will continue to contribute towards solutions for climatechange-related social issues and will work to drive higher corporate value for its shareholders and other stakeholders.

Governance	Strategy
The organization's governance around climate-related risks and opportunities	The actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning
Risk Management	Metrics and Targets
The processes used by the organization to identify, assess, and manage climate-related risks	The metrics and targets used to assess and manage relevant 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

JDI recognizes climate change as an important management topic and has established several environmental, social, and governance committees and management systems to address climate-related issues along with broader ESG matters. The Board of Directors is updated annually on JDI's sustainability activities including its climate change responses and also receives timely reports from the various management systems within the company. The Board of Directors incorporates information from these reports into its discussions and deliberations.



Risk Management Framework

Decision-Making on Climate-Related Issues

The CEO is the top executive responsible for climate change issues. The CFO serves as the Environmental Manager of the company and hosts semi-annual environmental promotion meetings.

The CFO reports to the CEO annually on key decisions and progress made during the year, and the CEO in turn reports to the Board of Directors.

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

In accordance with the risk management flow for business activities, each division identifies climate-related risks and opportunities with respect to products, services, markets, and expected regulatory changes, and the Sustainability Promotion Department compiles the results.

Pusuant to JDI's risk management rules, the Sustainability Promotion Department manages the identification, assessment, and management process of company-wide risks including climate-related risks.

Prerequisites for Scenario Analysis

Scenarios, Scope, and Timelines

In light of the highly uncertain future associated with the transition to a carbon-free society, JDI analyzed what business challenges could arise from TCFD's scenarios of 1.5°C and 4°C temperature increases compared to pre-industrial levels. The scenario analysis covers the entire company including its supply chain and spans a time horizon of 1-3 years for the short term, 3-10 years for the medium term, and more than 10 years for the long term.

Estimated Tempera- ture Rise	Scenario	Environment	Scope of Business	Timeline	Analysis Period
1.5℃	[Transition] IEA ^{*1} NZE ^{*2}	JDI presents a path for stabilizing global mean temperature at 1.5°C from pre-industrial levels. Low-carbon policies have been promoted, carbon prices have risen, and fossil fuel supply has decreased significantly. Scenarios in which clean energy policies and investments are rapidly increasing and developed countries are leading other countries to reach net zero.		Short-term: 1-3 years Medium-term: 3-10 years	2030 2050
	[Physical] SSP* ³ 1-2.6	Introduction of climate policies to keep temperature increases below 2°C from pre-industrial levels under sustainable development. 21 Net CO2 emissions are expected to be zero in the second half of the century. Low stabilization scenario.	Company-wide	Long-term: 10 years or more	
4 °C	[Physical] SSP* ⁵ -8.5	High-level reference scenarios that do not introduce climate policies under fossil fuel-dependent development.			

*1 IEA : International Energy Agency

*2 NZE: Net Zero Emissions by 2050 Scenario

*3 SSP: Shared Socioeconomic Pathways

Reference Changes in Average Temperature for Each Scenario



Changes in Global Average Temperature by Transition in IEA

Source: International Energy Agency "World Energy Outlook 2021"

Changes in Global Average Temperature by Physical Scenario in 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 (Intergovernmental Panel on Climate Change).

Established in 1988 for the purpose of conducting a comprehensive assessment of anthropogenic climate change, impacts, adaptation and mitigation measures from a scientific, technical and socioeconomic perspective. Assessment reports, including temperature-rise scenarios, provided by the organization are widely used in scenario analyses in 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		Details	Period	Scenario	Value Chain Stage (Risk Area)	Financial Impact
Transition Risk		Increase in raw material costs due to carbon tax hike	Long term	1.5℃	Upstream	Cost increase
	Now	Increase in outsourcing costs due to carbon tax hike	Medium term	1.5℃	Upstream	Cost increase
	New Regulations	Increase in costs for decarbonization due to rising carbon taxes and tightening regulations	Medium term	1.5℃	Direct operation	Cost increase
		Increase in taxable costs due to carbon tax	Long term	1.5℃	Direct operation	Cost increase
	Reputation	Decline in sales due to JDI being removed from customer supply chains due to a decline in their evaluations of JDI's approach to addressing climate change issues	Medium term	1.5°C	Downstream	Sales decrease
Physical Risk	A suts Disk	Decline in sales due to supply chain disruption caused by frequent and severe natural disasters	Medium term	4°C	Upstream	Sales decrease
	Acute Risk	Decrease in sales due to discontinuation of in-house production activities due to frequent occurrence and enlargement of natural disasters	Medium term	4°C	Direct operation	Sales decrease
	Chronic	Loss on sales opportunities due to a decline in labor productivity caused by an increase in temperature	Medium term	4°C	Downstream	Sales decrease
	Risk	Increased BCP response costs due to frequent occurrence and enlargement of natural disasters	Medium term	1.5℃·4℃	Direct operation	Cost increase

Impacts of Climate-Related Opportunities

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

Opportunity Classification	Details	Period	Scenario	Value Chain Stage (Risk Area)	Financial Impact
	Increased sales through licensing of eLEAP* technicals that contribute to reducing greenhouse gases	Medium term	1.5℃	Downstream	Sales increase
Products and Services	Increased revenue from licensing HMO technology-a technology that drastically reduces power consumption	Medium term	1.5°C	Downstream	Sales increase
	Increased sales of solutions that are useful in disaster-prevention measures, such as disaster-simulation VR	Medium term	4°C	Downstream	Sales increase
	Increased demand for low-power next-generation OLED (eLEAP)	Medium term	1.5°C	Downstream	Sales increase
Market	Increased demand for high-definition displays due to growth in the metaverse market through energy conservation	Medium term	1.5℃	Downstream	Sales increase
	Increased demand for LumiFree* by promoting energy conservation	Medium term	1.5℃	Downstream	Sales increase

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 2022 operating income on a zero basis.

Outl	ine of A	Analysis Results for 2030		Su	mmary o	f Analysis Results in 2050		
Risk	2 5	Sales losses from being removed from the customer's supply chain due to assessment of attitudes toward climate change and changes in market values, and the impact of increased manufacturing costs due to the introduction of a carbon tax, are relatively large.	 FY2022 operating profit Increase in manufacturing costs due to the introduction of the carbon tax Increase in outsourcing costs due to introduction of carbon tax Costs for dealing with decarbonization 	Risk	2 5	Evaluation of attitudes toward climate change and changes in market values have a major impact on sales losses from being removed from the customer's supply chain and increased manufacturing costs due to the introduction of a carbon tax.		
Opportunity 10		The expansion of sales opportunities is expected due to increased demand for eLEAP (next-generation OLED), but	5 Evaluation of attitudes toward addressing climate change issues	Opport	unity 10	The impact will be extremely large because the negative factors will turn positive because of the anticipated		
		this is not a major impact.	Increased BCP response due to frequent occurrence of natural disasters			expansion of sales opportunities due to increased deman for eLEAP (next-generation OLED).		
			7 Increase in taxable costs					
			8 Response costs					
			9 Increase in revenue from technology licensing					
			10 Increasing demand for eLEAP next- generation OLED					
0			Expansion of new technologies such as eLEAP and HMO technologies	0				
			Increase in sales of high-definitiondisplays due to increased demand for metaverses	0				
			Expansion of new business "Lumi Free"					
(IPV bp)	1 2	3 4 5 6 7 8 9 10 11 12 13 14 15	Recovery through risk countermeasures	(1PV ba		3 4 5 6 7 8 9 10 11 12 12 14 15		
(ווע דיינ)			15 FY2030 & 2050 operating profit	עריייט איזע				

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 2022 operating income on a zero basis.

Outline of Analysis Results for 2030

- Risk
- Production shutdowns due to supply chain disruptions and productivity declines due to chronic temperature increases are relatively significant.



Increased demand for disaster countermeasures SW due to the urgency of meteorological disasters is expected to lead to opportunities. However, the impact is small.

1 FY2022 operating profit

Suspension of production activities due to supply chain disruption

- Decrease in production efficiency due to increase in temperature
- Incidence of production delays due to spread of infectious diseases
- Increased BCP response costs due to increased natural catastrophes
- Response costs

9



- Recovery through risk countermeasures
- FY2030 & 2050 operating profit

Summary of Analysis Results in 2050

Risk	2	3	Production shutdowns due to supply chain disruptions and productivity declines due to chronic temperature increases are relatively significant.
Risk	5		Significant impact of increased BCP response costs due to natural disasters.
Opportunit	y 7		Increased demand for disaster countermeasures SW due to the urgency of meteorological disasters is expected to lead to opportunities. However, the impact is small.





Measures to Address Business Risks

Risk: \checkmark (small), $\checkmark \checkmark$ (medium), and $\checkmark \checkmark \checkmark$ (large)

	Impact on the Rusiness	Measures Incorporate climate change factors into self-audit items by suppliers Add climate change items to the provisions of the Basic Procurement 	Financia	l Impact
		Measures	1.5 °C	4 ℃
	Increase in raw material costs due to carbon tax hike	 Incorporate climate change factors into self-audit items by suppliers Add climate change items to the provisions of the Basic Procurement Agreement 	• • •	-
	Increase in outsourcing costs due to carbon tax hike	 Conduct surveys on emissions and reduction activities by contractors Add climate-change items to the guidelines for JDI manufacturing contractors 	• • •	-
Risk	Increase in costs for decarbonization due to rising carbon taxes and tightening regulations	 Improve production intensity by applying eLEAP production techniques. Switch to external manufacturing strategy Reduce energy consumption by improving operations at manufacturing sites 	••	-
	Increase in taxable costs due to carbon tax	Promote renewable energy introductionEstablish SBT and promote initiatives to achieve targets	• • •	
	Decline in sales due to customers being removed from the supply chain due to a decline in their evaluations of approaches to addressing climate change issues	Promote activities based on TCFD framework and disclose results	• • •	-
	Decline in sales due to supply chain disruption caused by frequent and severe natural disasters	 Create multi-supplier system Secure inventory of appropriate parts and materials based on BCP verification Keep product inventory at sales companies 	-	•••
	Decrease in sales due to discontinuation of in-house production activities due to frequent occurrence and enlargement of natural disasters• Maintain product inventory at sales companies • Create multiple production sites 		-	••
	Loss on sales opportunities due to a decline in labor productivity caused by an increase in temperature	 Diversify production system by outsourcing to outside manufacturing companies in different geographies 	_	▼
	Increased BCP response costs due to frequent occurrence and enlargement of natural disasters	Undertake continuous BCP review	•••	•••

Measures to Address Business Opportunities

Opportunities: \blacktriangle (small), $\blacktriangle \blacktriangle$ (medium), and $\blacktriangle \blacktriangle \blacktriangle$ (large)

	Impact on the Rusiness	Mooduraa	Financia	Impact
		Measules	1.5 ℃	4 °C
	Increased sales through licensing of eLEAP technologies* that contribute to reducing greenhouse gases	 Expand into a wide range of display products through licensing Undertake strategic planning and sales promotion to expand sales to new customer segments 		-
	Increased sales through licensing of HMO technology*, which realizes drastic power savings	• Expand into a wide range of display products through licensing		-
Opportunity	Increased sales of solutions that are useful in disaster-prevention measures, such as disaster-simulation VR	 Formulate strategies to expand sales targets to new customer segments in addition to universities and hospitals 	-	
	Increased demand for low-power eLEAP *	 Expand our supply network through technological provision of eLEAP to other companies Ensure superiority in the market through continuous technological improvements 		-
	Increase in demand for high-definition displays due to growth in the metaverse market through energy conservation • Make capital investments to increase in-house production			-
	Increased demand for LumiFree * by promoting energy conservation	Make early launch and raise awareness		-

Scenario analysis profile

Results of 1.5℃ Scenario Analysis

JDI's stance on climate change issues is not recognized as being sufficient, negatively affecting its business with automotive-related customers, resulting in a relatively large impact on sales. In addition, the introduction of a carbon tax increased procurement and manufacturing outsourcing costs due to the large amount of electricity consumed in manufacturing, which also has a significant impact on JDI's financial results.

On the other hand, demand for next-generation OLED (eLEAP), jDI's proprietary technology, grew significantly in this scenario. JDI regards eLEAP as its biggest opportunity as it is a technology that is highly effective in reducing CO2 emissions.

Countermeasures

JDI formulated METAGROWTH 2026 as a growth strategy and positioned HMO technology, LumiFree, and metaverse VR solutions identified as climate change opportunities, including eLEAP (next-generation OLED), as growth drivers. JDI will invest in research and development to continuously carry out these technological improvements, and maintain its position as a technology that is constantly required. In response to the cost increase caused by the introduction of the carbon tax, JDI will promote the reintroduction of energy and the engagement with suppliers to reduce emissions.

JDI will disclose the results of these initiatives and promote them to its customers.

Results of 4°C Scenario Analysis

The severity and frequency of natural disasters increased, resulting in production activity stoppages due to supply chain disruptions and lower production efficiency due to chronically high temperatures, posing a risk of lower sales, and the magnitude of impact was about the same in 2030 as in 2050. In addition, the increase in BCP response costs to prepare for floods and other disasters was larger in 2050 than in 2030.

On the other hand, demand for disaster countermeasure software products increased due to the urgency of natural disasters, and sales of JDI's solutions, such as disaster simulation VR, increased. However, the impact is small and limited.

Countermeasures

To ensure sustainable procurement, JDI is diversifying its suppliers and securing a certain amount of product inventory at its dealers. In addition, JDI will continue to examine appropriate inventory quantities of raw materials based on BCP testing. Furthermore, JDI plans to systematically expand outsourced manufacturing in order to avoid risks in its own production and to build a system to increase production in the future.

With regard to VR solutions, JDI will invest in R&D to continuously make technological improvements and maintain its status as a technology that is constantly required.

[Overview] In 2050, the 1.5°C globally, JDI has learned that JDI can expect a great deal of opportunity by utilizing its proprietary technologies that are useful in shifting to low-carbon societies such as eLEAP, HMO, and we can grow these technologies.

JDI has confirmed that the promotion of METAGROWTH 2026, its growth-oriented strategy, will provide long-term opportunities.

JDI aims to achieve 1.5°C worldwide in 2050 by reducing emissions through risk countermeasures and using its proprietary technology, which is JDI's strength.

*See the next page for details on METAGROWTH 2026 growth strategy and growth driver technologies.

METAGROWTH 2026 Growth Strategy



Of the six growth drivers defined by METAGROWTH 2026, Technologies and products identified as climate change opportunities



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



Metaverse (high-definition display)

- Immersive display specifications
- Developing VR solution services in various fields with partner companies

LumiFree (new technologies, new products, and new 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





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	НМО	UHMO
Mobility	12cm2/Vs	36cm2/Vs (Over x2 conventional)	52cm2/Vs (Over x4 conventional)
	Conventional oxide, low resolution, small-& medium-sized screens	HMO, high resolution large screen	n, can do
	HMO siz capabili Largest LTPS G5(1100x12 G3(550x650) G2(370x470) G1(300x400)	G10(2940x3370 ty G8(2200x2500) G7(1950x2250) 6(1500x1850) 500	0mm)

Mother glass size

Metaverse (Ultra High Resolution)

A metaverse is said to be a virtual space or service created within a computer network such as the Internet. It is a place where you can share a virtual space not only with yourself but also with people at a distance, enjoy yourself individually, and perform various tasks together with others through communication. In particular, it can be said to be a place where you can experience, learn, and train in a community with the same goal, which is not easy to do in the real world, taking advantage of virtual space that has a high affinity with VR. Until now, the use of the metaverse has been limited to games and events, but recent advances in networking and hardware infrastructure, as well as the limitations of real-world activities due to the effects of COVID-19, have led to its expansion into a wide range of businesses.

JDI's strength lies in its experience in manufacturing VR panels and building VR solutions. JDI is working to create an environment where everyone can experience and learn efficiently in the metaverse with training and education solutions using VR based on safety and operations training, which are essential for the manufacturing industry.

/R Goggles View

Metaverse Ultra High-Definition Displays



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 is 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)	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-CO2					
	Scope of C alculation	FY21/3	FY22/3	FY23/3	Ratio
Scope 1	All domestic sites and global manufacturing subsidiaries	85,730	89,235	71,635	18.0%
Scope 2	All domestic sites and global manufacturing subsidiaries	459,954	380,169	325,359	82.0%
	Total	545,685	469,404	396,994	100.0%
Scope 3 *JDI started Scope 3 calculation from FY22/3 (domestic only)				Ur	nit :t-CO2

Scope 3 [•]JDI started Scope 3 calculation from FY22/3 (domestic only)

	Category	Data Used for Calculation	FY22/3	FY23/3	Ratio
1	Purchased goods & services	Purchased goods and services data (monetary value)	720,711	704,210	55.4%
2	Capital goods	Fixed asset registration data (monetary value)	15,123	12.112	1.0%
3	Fuel & energy-related activities not included in Scope 1 or 2	Amount of energy used in each fiscal year	68,671	59,602	4.7%
4	Upstream transportation and distribution	Transportation volume (ton-kilometers) data	93,484	143,853	11.3%
5	Waste generated in operations	Waste data	904	968	0.01%
6	Business travel	Data on business travels	165	326	0.0%
7	Employee commuting	Number of employees and days worked, and the rate of attendance and teleworking	1,308	1,246	0.1%
9	Downstream transportation & distribution	Transport volume (ton-kilometers) data	740	7,248	0.6%
10	Processing of sold products	Volume shipped and lifetime power consumption of major products	24,119	18,373	1.4%
11	Use of sold products	Same as above	303,983	322,662	25.4%
12	End-of-life treatment of sold products	Sales volume by major product and weight data by material	4	2	0.0%
		Total	1,229,212	1,270,604	100.0%



<Scope of calculation>

Scope 1 and 2: All domestic sites and global manufacturing subsidiaries Scope 3:JDI (domestic) non-consolidated

