

Information Disclosure Based on
the Recommendations of the Task Force on
Climate-related Financial Disclosures (TCFD) (Update)

Issue: March 18, 2022
Update: March 17, 2023

PIOLAX, INC.

Major updates

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Section2 Strategy

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Subject bases
U.S.: PIOLAX CORPORATION (Sales and Design Office, Michigan) (Head Office and Plant, Georgia)
Mexico: PIOLAX MEXICANA S.A. de C.V. (Nuevo Leon)
China: PIOLAX (CHINA) CO., LTD. (Shanghai) , DONGGUAN PIOLAX CO., LTD. (Dongguan),
WUHAN PIOLAX CO., LTD. (Wuhan)

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Introduction



Piolax discloses information on climate change-related risks and opportunities based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), as the information can be incorporated into the management strategies for sustainable growth and medium- to long-term development and also be effectively utilized in stakeholder engagement.

Requirements of TCFD Recommendations			
Governance	Strategy	Risk Management	Indicators and Targets (KPI)
Board's oversight	Risks and opportunities identified over short/medium/long terms	Corporate processes for identification and assessment	Criteria used for evaluation
Management's role in assessment and management	Impact on business, strategy and financial planning	Explanation of risk management	GHG Protocol Scope 1 to 3 emissions and related risks
	Resilience of organization's strategy under different climate change scenarios, including 1.5°C scenario	Integration of climate-related risk management into overall risk management	Management targets and performance

- Source: Final Report, Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)
- GHG Protocol: Greenhouse gas accounting standards

Section 1



Governance

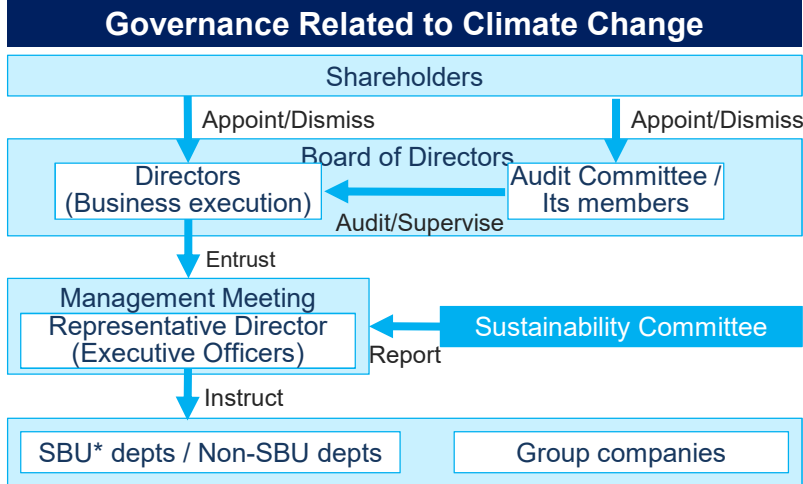
[Recommended disclosures]

- Board's oversight
- Management's role in assessment and management

Governance on Climate Change

In December 2021, we established Sustainability Committee to deliberate sustainability issues including climate change measures. The committee is chaired by the representative director and consists of directors and other members, and meets four times a year.

To respond to risks and opportunities posed by climate change, company-wide policies and targets and specific measures are deliberated at Sustainability Committee, then discussed at the Management Meeting about the relationship and consistency with management strategies, and finally determined by the Board of Directors. The representative director participates in discussions at the Management Meeting and executes measures determined by the Board of Directors across the group.



* SBU: Strategic Business Unit

Overview of Sustainability Committee	
Committee members	Chairperson: Representative Director Members: Elected from among directors and appointed by the chairperson
Secretariat	Corporate Planning Group, Management and Planning Dept.
Frequency	Meeting: Four times/year (whenever necessary) Report to the Board of Directors: Twice a year
Main agenda	Respond to TCFD. Identify all company-wide risks and opportunities through committee and project activities. Review materiality and portfolio. Discuss sustainable management targets.
Other	Subcommittees are established for individual themes.

Strategy

[Recommended disclosures]

- Risks and opportunities identified over short, medium and long terms
- Impact on business, strategy and financial planning
- Resilience of the organization's strategy under different climate change scenarios, including 1.5°C scenario

Progress in Strategy Implementation

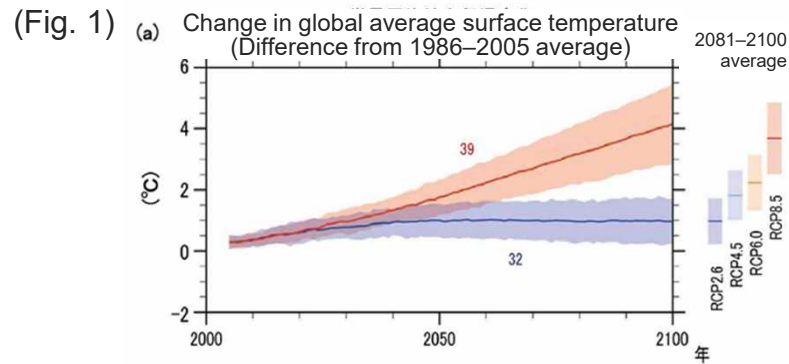
- To deal with CASE (Connected, Autonomous, Shared, Electric), once-in-a-hundred-years transformation of the automotive industry, and global warming by climate change, we have identified risks and opportunities for our mainstay automobile-related business with a time frame up to 2050 focusing on the domestic business. At the same time, we announce our targets in the domestic business areas to achieve carbon neutrality by 2050. In FY2022, we began analysis at our bases in North American (U.S. and Mexico) and China. We will promote group-wide initiatives including analysis of other overseas bases and non-automotive businesses.

Business Environment

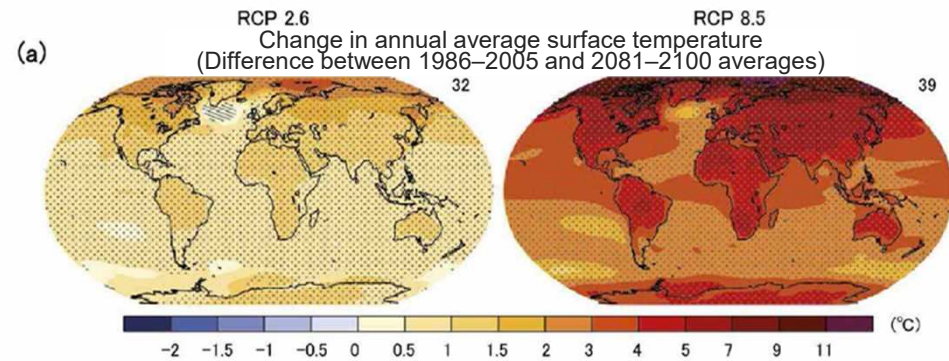
<p>1.5°C scenario</p>	<ul style="list-style-type: none"> ■ Efforts for carbon neutrality and resource circulation are requested by stakeholders including customers, and carbon tax and regulations on fuel efficiency and exhaust emissions are tightened. In the automobile-related business, the transition to CASE, notably electrification, is accelerated and response to it becomes urgent.
<p>4°C scenario</p>	<ul style="list-style-type: none"> ■ Since disasters (wind and flood damage) occur frequently due to extreme weather posed by temperature rise and coasts erode with the rising sea level, implementing a business continuity plan including the supply chain becomes urgently necessary while actions for carbon neutrality, resource circulation and automobile structural reform are taken in a limited manner.

Scenario Settings and Time Frame

- Climate change-related analysis (Fig. 1) is based on RCP2.6 and RCP8.5 scenarios*2 in the “Fifth Assessment Report” of IPCC*1 as well as impacts of 1.5°C and 2°C shown in the IPCC “Special Report on Global Warming of 1.5°C” with reference to the IEA WEO 2021 Report.
- The trend of electrification, a typical example of CASE, is surveyed. (Fig. 2 on the next page)
- Time frame: The time when impacts of risks and opportunities come to the surface is defined in three stages.
 - Short term: 2024 [Three years from 2022]
 - Medium term: 2030 [Achievement of SDGs (Sustainable Development Goals)]
 - Long term: 2050 [Goal of limiting global average temperature rise to 1.5°C]



Source: IPCC AR5 WG I SPM Fig. SPM.7(a)



SPM Fig. SPM.8(a)

*1 IPCC: Intergovernmental Panel on Climate Change

*2 RCP2.6 scenario: Global average temperature rise at the end of 21st century is suppressed to less than 2°C compared to before Industrial Revolution

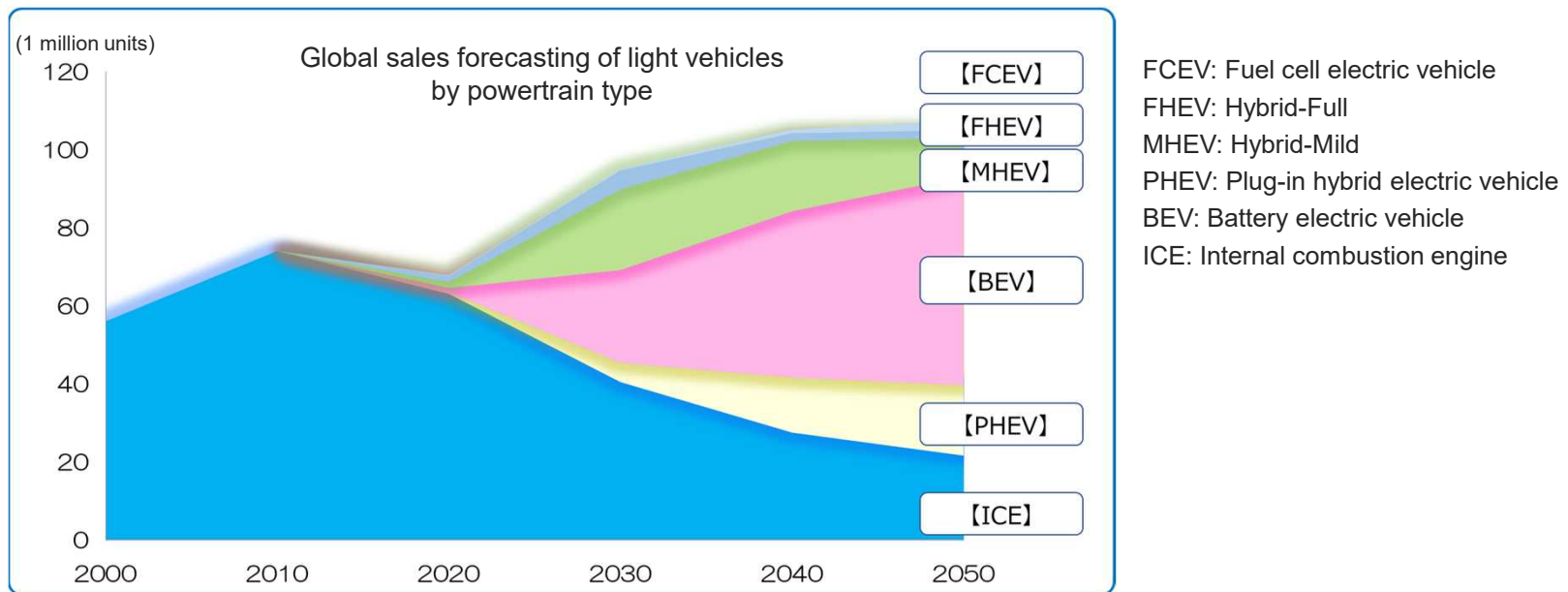
RCP8.5 scenario: Rise of around 4°C compared to before the Industrial Revolution

RCP: Representative Concentration Pathways

Prediction of Automobile Electrification

- The proportion of production volume by powertrain type was calculated on a medium- to long-term basis and used to identify risks and opportunities for the transition of our automobile-related business unit (fasteners, powertrain parts, fuel system parts, opening and closing mechanism parts).

Fig. 2



Footnote #1: This graph is based on the update of March 2022, IHS Markit Global Engine Forecast.

Footnote #2: PHEV data is created by Piolax, based on IHS Markit data.

Footnote #3: Numbers from 2033 onwards is created by Piolax, based on IHS Markit data.

2. Risks and Opportunities (Transition Risks and Opportunities -1) 【Transition risks】



Procurement	Impact/ Time frame		Manufacturing and Logistics	Impact/ Time frame		Development and Sales	Impact/ Time frame				
<ul style="list-style-type: none"> Higher raw materials and transport prices with carbon tax and energy transition at suppliers 	1.5°C	Large	Medium to long term (China: short to medium)	<ul style="list-style-type: none"> Rise in capital investment and improvement cost related to manufacturing process decarbonization 	1.5°C	Medium to large	Short to medium	<ul style="list-style-type: none"> Review of product development and sales strategies in response to rapid electrification 			
<ul style="list-style-type: none"> Loss of market due to non-eco raw materials 				<ul style="list-style-type: none"> Rise in energy cost with review of heat sources for manufacturing process decarbonization and use of green electricity 				<ul style="list-style-type: none"> Drop in orders for existing products with increased electrification 			
<ul style="list-style-type: none"> Drop in demand for materials for existing products with increased electrification, rise in material cost and difficulty in procurement 				<ul style="list-style-type: none"> Rise in costs of waste water/waste treatment with stricter environment-related regulations (U.S., China) Increased response costs due to strengthened or changed government environmental policies 				<ul style="list-style-type: none"> Rise in new product development cost/capital investment to address CASE Drop in sales with reduced new car sales due to domestic population decrease and spread of MaaS 			
				<ul style="list-style-type: none"> Delayed response to increased transport process disruptions 	4°C	Medium (U.S.: large)	Short to medium	<ul style="list-style-type: none"> Reduced market size and orders due to restrictions by new pandemic, etc. 	4°C	Medium	Medium to long

Degree of impact

Large: A failure to respond has a great impact on the survival and growth of the company and its businesses.

Medium: A failure to respond poses a limited impact and does not affect the survival and growth of the company and its businesses.

2. Risks and Opportunities (Transition Risks and Opportunities -2) 【Opportunities and Measures】



	Procurement	Manufacturing and Logistics	Development and Sales
Opportunity	<ul style="list-style-type: none"> Review raw materials (conversion to eco-friendly or recycled ones), suppliers, product designs, etc. to promote actions for decarbonization and resource recirculation, and differentiate us from competitors. <p>(U.S., China)</p> <ul style="list-style-type: none"> Increase local procurement of raw materials to strengthen competitiveness. (Realize cost reduction and stable procurement.) 	<ul style="list-style-type: none"> Accelerate efforts to improve productivity through factory automation and decarbonize domestic facilities. 	<ul style="list-style-type: none"> Promote and accelerate co-creation activities with customers to increase sales of products for CASE. <p>(U.S., China)</p> <ul style="list-style-type: none"> Strengthen sales expansion to non-Japanese OEMs and increase market share focusing on fastener parts, etc., which are less affected by electrification
Measure	<ul style="list-style-type: none"> Resin material: Use of bioplastics Metal material: Replacement with low-CO2 materials Cost reduction through procurement of locally produced goods Reduction of energy used for transport Purchase of decarbonized energy sources 	<ul style="list-style-type: none"> Moka Plant renewal to improve productivity Thorough energy conservation Reduction of energy consumption by replacing utility system Improvement of thermal efficiency of injection molding machine Gas replacement in heat treatment furnace (LPG → LNG) 	<ul style="list-style-type: none"> Development and sales of new products for CASE Increase of existing market share mainly in fuel and drive system components (Short-term response to demand for ICE vehicles)
		<p>[Reference]</p> <ul style="list-style-type: none"> P16: Moka Plant renewal plan P20: Roadmap for carbon neutrality by 2050 	<p>[Reference]</p> <ul style="list-style-type: none"> P15: Actions for CASE

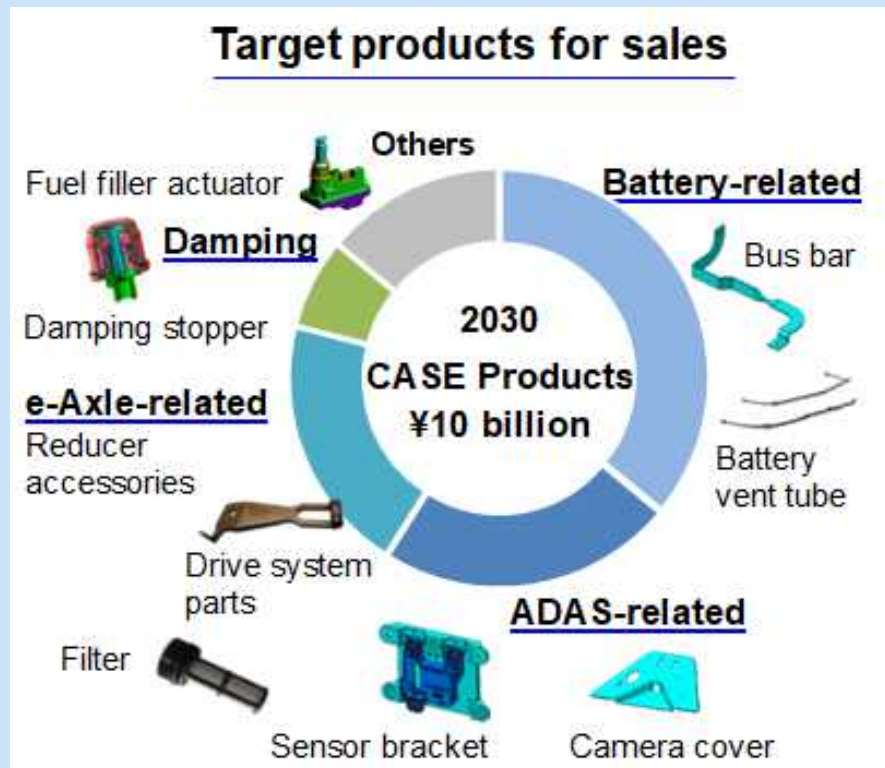
2. Risks and Opportunities (Physical Risks and Opportunities -1) [Risks and Measures]



	Chronic Risk	Impact/ Time frame		Acute Risk	Impact/ Time frame			
Physical risk	<ul style="list-style-type: none"> Rise in air conditioning cost with temperature rise and health hazards to employees Degradation of raw material and product quality with temperature and humidity rise Shutdown of operations and vessels due to inundation of coastal sites by rising sea levels 	4 °C	Medium (China: medium to large)	Long	<ul style="list-style-type: none"> Impact on plant operations due to supply chain disruptions caused by increased natural disasters Decrease in orders due to delay in responding to changes in performance requirements from automakers as a result of rising temperatures Delay in reviewing procured materials in response to performance requirements from automakers due to rising temperatures 	4 °C	Medium (U.S.: large)	Short to medium
	<ul style="list-style-type: none"> Suspension of operations due to decrease in available water resources caused by rapid drop (or depletion) of groundwater level 		Medium (Mexico: large)		Long (Mexico: short)		<ul style="list-style-type: none"> Increased procurement/logistics costs due to increased natural disasters Shutdown of plant and warehouse due to abnormal weather and increase in repair cost Destabilization of energy supply due to abnormal weather 	
Measure	<ul style="list-style-type: none"> Infrastructure development to strengthen plant and warehouse resilience Improvement of work and material storage environment through thermal management (room temperature and humidity) Introduction of water circulation system through water management Review of risk assessment with BCP database including supply chain 			<ul style="list-style-type: none"> Reduction of inventory cost through increased use of locally produced goods Stable procurement through supply chain diversification and raw material standardization Infrastructure development to strengthen plant and warehouse resilience (U.S., China) Promote local production and consumption, and enhance cooperation with business partners in view of geopolitical risks. 				

3. Measures to address risks and opportunities

Initiatives for CASE Response: Strengthen Co-creation Activities with Customers



We foresee a risk of decline or loss of orders for existing products as the electrification of vehicles advances and the need for internal combustion engines decreases.

On the other hand, this major change also provides new business opportunities, so we set up e-Products Development Department dedicated to developing and expanding sales of CASE products in April 2022. Products that we are focusing on are as follows.

- **Battery-related products** for electrification
- **ADAS-related sensor/camera peripherals** for autonomous driving
- Products related to **e-Axle** (EV drive motor system) which accelerates EV shift
- **Vibration control products** to secure quietness inside vehicles

3. Measures to address risks and opportunities



Construction of new Moka Plant

- Moka Plant (Moka City, Tochigi Prefecture), our core plant in Japan, will be renewed by FY2025. It aims to improve productivity and enhance resilience through the introduction of factory automation (addressing physical risks).
- Promote infrastructure development toward carbon neutrality by 2050 (response to transition risks). (See P20.)

Schedule			
■ Phase I		■ Phase II	
Dec. 2022	Start of construction	FY2024	Start of construction
FY2023	Operation	FY2025	Operation



Risk Management

[Recommended disclosures]

- Corporate processes for identification and assessment
- Explanation of risk management
- Integration of climate-related risk management into overall risk management

Identification, Assessment and Management of Risks

- Sustainability Committee will handle company-wide integrated management of various risks and opportunities, including climate change. We will identify risks and opportunities that could affect our group's business activities, develop an action plan based on the assessment of their importance, and monitor the progress.
- The risks and opportunities related to climate change are considered to have a particularly large impact on our group's business activities. Therefore, we will consider a medium- to long-term action plan, also continuously review it based on external evaluations, and strive to manage it appropriately. In FY2022, subcommittees were set up under Sustainability Committee to work on individual themes. We will enhance our organizational response to sustainability-related risks, including climate change risks.

Indicators and Targets

[Recommended disclosures]

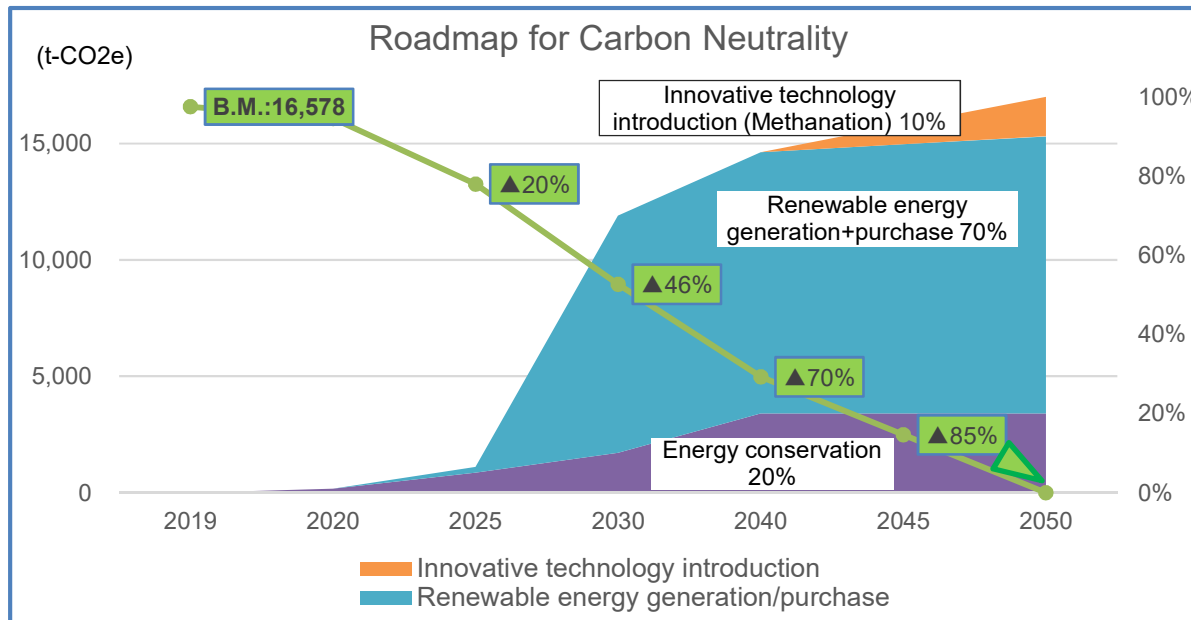
- Indicators used for assessment
- GHG Protocol Scope 1 to 3 emissions and related risks: citing data from the Sustainability Report
- Management targets and performance

Roadmap for Carbon Neutrality by 2050



Efforts to Achieve Carbon Neutrality

- To achieve carbon neutrality in our business areas of Scope 1 and Scope 2 based on the GHG Protocol, Piolax and its group companies in Japan set the amount in 2019 as the benchmark and aim to achieve a 46% reduction by 2030 and a 100% reduction by 2050.
- Regarding Scope 3 of the domestic supply chain area, we will continue to consider efforts for reduction.



Carbon neutrality in Scope 1 and Scope 2 of our business areas will be achieved through the combination of energy conservation, renewable energy and innovative technologies.

[Measures to achieve targets]

- For Scope 2 of our domestic business areas, switch to renewable energy (60% of total).
- To calculate the effect of capital investment for necessary resources, internal carbon pricing is used to judge the effect with consideration to CO2 reduction effect.

* For carbon neutrality in the overseas group companies, we will continue analysis and group-wide discussions.

Statement of Support for the TCFD Recommendations

Our declaration that we will disclose information on our response to climate change in accordance with the guidelines of the TCFD recommendations.

Support for the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

PIOLAX, INC. supports the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB) at the request of the G20.

We believe that the analysis of risks and opportunities posed by climate change and the achievement of set goals will be effective in solving issues on the ongoing global warming, and thus express our support for the recommendations of the TCFD.

We will reduce greenhouse gas emissions in our own business areas as well as in the supply chain area to contribute to the realization of sustainable society. Based on the TCFD declaration, we will continue to analyze and address risks and opportunities that climate change poses to our business, and strive to improve information disclosure.

March 18, 2022
Yukihiko Shimazu
President
PIOLAX, INC.



The future outlook described in this document is based on the information currently available.
Due to various factors, actual results may be different from the expectations.