

Role in Sustainability - Green Production

VisEra considers pollution prevention as one of its top operational responsibilities and strives for environmental sustainability and green production, with the vision of becoming a benchmark enterprise in environmental protection.

Note: For VisEra's environmental policies and commitments, please refer to <u>VisEra</u> official website / About VisEra / Environment, Safety, and Health.

- **5.1** Climate Strategy and Greenhouse Gas
- **5.2** Energy Management
- **5.3** Water Resource Management
- **5.4** Waste Management
- **5.5** Air Pollution Prevention
- **5.6** Environmental Protection Expenditures and Investments

93.76%

Waste recycling rate (including Alternative Energy)

Acquiring 36,643

Renewable Energy Certificates, which is equivalent to reducing emissions by 18,102 metric tons of CO₂



Employee

Relations



Climate Strategy and Greenhouse Gas

Greenhouse Gas Management

Maximize exhaust gas reduction to minimize Scope 1 greenhouse gas emissions.



Communication Channels: Industrial Safety and Environmental Protection Department ESG@viseratech.com

identified carbon footprint hotspots.



5.1 Climate Strategy and Greenhouse Gas

5.1.1 Climate Strategy

In response to increasingly severe cases of extreme weather, it is crucial for companies to build up the resilience to respond to climate disasters in their business operations. VisEra established an Enterprise Risk Management (ERM) system with reference to the ISO 22301 Business Continuity Management standards. We evaluated the frequency of risk events and the severity of their impact on the Company's operations with a Risk Map, defined the priority and risk level for risk management, and adopted corresponding risk management strategies based on the risk rating. The assessment results showed that the risks associated with climate change include drought, strong typhoons, flooding, earthquakes, power and water shortages, and increasingly stringent regulatory requirements. VisEra conducts training and exercises on mitigation measures through scenario simulation, and regularly reviews risk changes and responses every quarter.

14064, to identify emission sources and enable focused management.

Product life cycle assessments are conducted, with efforts to improve carbon footprint hotspots through hotspot

Since 2022, VisEra's ESG Committee has been identifying climate risks and opportunities every two years based on the Task Force on Climate-related Financial Disclosures (TCFD) framework. ESG Committee reviews international research reports and evaluates climate change risks and response measures, identifying potential risks and opportunities. Based on these assessments, key performance indicators are established to manage goals and effectively track the progress and outcomes of the actions taken, thereby reducing the financial impact of climate risks on operations. ESG Committee focuses on four major risks—"Greenhouse Gas Emissions Cap Control and Carbon Fee Collection/Net-Zero Emissions, Extreme Weather Events such as Typhoons and Floods, Droughts, and Rising Average Temperatures"—and two major opportunities—"Material Conservation Designs and Reduction of Water Usage and Consumption". Considering both internal and external environmental changes, the committee refers to methodologies disclosed by companies worldwide to perform financial impact quantification. Strategies and actions for addressing climate change are developed under the four dimensions of "Governance", "Strategy", "Risk Management", and "Indicators and Targets", aiming to mitigate the impact of climate risks and enhance the organization's climate resilience.

renewable energy targets have been set. For details, please refer to the "Energy Management" section of this report.

Product life cycle assessments have been completed, and improvement measures have been implemented based on

Climate-Related Strategy Management Framework

Category **Management Strategy** Implementation Results in 2024 The Board of Directors regularly reviews the risks and opportunities related to climate change. The ESG Committee convenes quarterly to discuss corporate sustainability issues, including strategies for responding to climate change. Matters discussed are recorded as resolutions or pending action items, which are subject to follow-up and ESG Committee: It is chaired by the senior executive appointed by the Chairman and regularly reviews the Company's climate change strategies and goals, and reports to the board of directors. Risk Management Steering Committee: It is chaired by the President and accompanied by a management representative, The Risk Management Steering Committee held a total of 4 meetings, reviewing operational risks such as carbon fees, netthe Committee is responsible for the focus of corporate risk management and risk assessment and mitigation, while zero emissions, extreme weather events and so on. Response strategies are formulated quarterly and the implementation Governance reporting annually to the Board of Directors on annual corporate risk management, including climate change issues. status is reviewed accordingly. Regarding transition risks, the Company referred to the World Energy Outlook (WEO-2024) released by the IEA and selected the 2050 Net Zero Emission (NZE) Scenario and the very low emissions scenarios in the Shared Socioeconomic Pathways · The ESG Committee regularly discusses and identifies short-, medium-, and long-term climate-related risks and (SSP) 1-1.9 in the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR6) in the scenario opportunities. analysis to assess the cost required for implementing carbon reduction strategies in the future. · Assesses the impact of climate risks and opportunities on the organization's operations, strategy, and financial Regarding physical risks, the Sixth Assessment Report (AR6) of the Intergovernmental Panel on Climate Change (IPCC), performance. specifically the Shared Socioeconomic Pathways (SSP) scenarios SSP1-2.6 and SSP5-8.5, is used as the foundational Strategy Conducts scenario analysis to evaluate the resilience of the organization's strategy under various climate scenarios. database for climate-related risk analysis. These scenarios help assess potential impacts and financial implications that may arise in future operations, and guide the development of corresponding risk management measures. • ESG Committee evaluated the qualitative and quantitative financial impacts of material climate-related risks and · A climate risk identification process is developed every two years using the TCFD framework. opportunities discussed by relevant departments The significance of climate-related risks and opportunities is assessed based on the level of impact and likelihood of A total of 4 major risks were identified-Greenhouse Gas Emissions Cap Control and Carbon Fee Collection/Net-Zero Emissions, Extreme Weather Events such as Typhoons and Floods, Droughts, and Rising Average Temperatures, and 2 occurrence, with corresponding response measures formulated. major opportunities-Material Conservation Designs and Reduction of Water Usage and Consumption. The results of climate risk identification and assessment are integrated into the Enterprise Risk Management (ERM) Risk system and are regularly reviewed by senior management. The financial impacts of the identified major risks were estimated and reported to senior management at the annual Risk Management Management Steering Committee meeting. · Greenhouse gas management and energy recycling targets have been established. For details, please refer to the · Management indicators and targets are established to measure climate-related risks and opportunities. "Greenhouse Gas Management" and "Energy Management" sections of this report. Greenhouse gas emissions from Scope 1, 2, and 3 are inventoried and disclosed annually in accordance with ISO · Compliance with renewable energy regulations for major energy users has been achieved, and medium- to long-term

Indicators and

Targets



Climate-Related Risks and Opportunities and Corresponding Strategies

Туре	Category	Issues	Scenario Assumptions	Potential Financial Impact	Response Strategies
NET ZERO Transition Risk	Policy and Regulatory Risk	Greenhouse Gas Emissions Cap Control and Carbon Fee Collection/Net- Zero Emissions	 IEA WEO 2024 NZE 2050 Net Zero Emissions Scenario: A global pathway to limit temperature rise to no more than 1.5°C. IPCC AR6 Shared Socioeconomic Pathway SSP1-1.9: An ultra-low emissions scenario. 	 In accordance with the Climate Change Response Act, carbon fees will be implemented starting in 2025, with the projected impact on the company's operating costs estimated at less than 1%. Installation and operational costs for carbon reduction equipment are expected to increase. Costs associated with the purchase of renewable energy and carbon rights fee are also expected to rise, with an anticipated impact on the company's operating costs of less than 1%. 	 Set aggressive carbon reduction targets and use 100% renewable energy company-wide by 2050. Raise resource utilization and reduce the Company's mid- and long-term operating costs, which can also achieve the goal of energy conservation and carbon reduction. Continue to conduct greenhouse gas inventory, analyze the status quo of emissions, and set reduction targets.
	Immediate Risk	Extreme Weather Events such as Typhoons and Floods	Under climate change, extreme weather events expose the company's operational sites to natural disasters, resulting in business interruptions and increased restoration costs. • Under the low emissions scenarios of SSP1-2.6, the average annual total precipitation in Taiwan in the medium and long term will increase by around 12% and 16%, respectively, and the average annual maximum daily precipitation intensity will increase by around 15.7% and 15.3%, respectively. • Under the very high emissions scenarios of SSP5-8.5, the average annual total precipitation in Taiwan in the medium and long term will increase by around 15% and 31%, respectively, and the average annual maximum daily precipitation intensity will increase by around 20% and 41.3%, respectively.	Sudden-onset climate disasters may cause damage to assets, such as plants and equipment. The Company may face operational disruptions or reconstruction or repair costs, which are expected to affect the Company's operating revenue by roughly 1% to 3% and increase repair costs.	 Establish and improve emergency response procedures, such as purchasing sandbags to block water flows, turning on the stormwater discharge valves in the side ditches to stop collecting stormwater, and conducting regular exercises to respond in advance and mitigate the impact. Sign a property damage business interruption (PDBI, including business interruption insurance and property insurance) insurance contract with an insurance company every year to reduce business interruption losses and repair costs caused by extreme weather events, and increase in operating expenses of less than 5%.
Physical Risk		Droughts	It is estimated that water resource interruption may halt production lines, resulting in a prolonged operational shutdown.	It is assumed that water shortage may cause disruption to the Company's operations for seven days, which may affect the Company's operating revenue by roughly 1% to 3%.	 Regularly conduct water shortage exercises. Establish water filling procedures and install filling equipment, and regularly offer training on operating procedures. Operating costs are expected to increase by approximately 1% to 3%. Improve water resource efficiency, continue to implement water-saving measures, use recycled water, and reduce water use and consumption.
	Long-term Risk	Rising Average Temperatures	 Under the mitigation scenarios of SSP1-2.6, the annual average temperature in the middle and late 21st century may rise by 1.3°C and 1.4°C, and the number of days with maximum temperature above 36°C in various places will increase by about 6.8 days and 6.6 days, respectively. Under the worst scenarios of SSP5-8.5, the annual average temperature in the middle and late 21st century may rise by more than 1.8°C and 3.4°C, respectively, and the number of days with maximum temperature above 36°C in various places will increase by about 8.5 days and 48.1 days, respectively. 	Rising average annual temperatures lead to increased usage of energy equipment, resulting in higher energy costs. According to information from Taiwan's Bureau of Energy, lowering air conditioning temperature by 1°C increases electricity consumption by 6%. Assuming electricity tariffs remain unchanged, under the SSP1-2.6 scenario, electricity costs are projected to rise by approximately 7.8% to 8.4%, with an impact on operating costs of less than 1%. Under the SSP5-8.5 scenario, electricity costs are expected to increase by approximately 10.8% to 20.4%, also with an impact on operating costs of less than 1%.	 Establish an energy management organization to formulate energy conservation and carbon reduction development targets and plans, coordinate and integrate various departments' energy conservation and carbon reduction strategies and projects, and continue to adopt and evaluate various energy-saving technologies to implement energy improvement plans for relevant equipment. Adopt intelligent control equipment to improve energy efficiency.
~ ~ ~/	Resource Efficiency	Material Conservation Designs	To meet the requirements of a green supply chain, efforts are made to enhance the recycling and reuse rates of packaging, packing materials, and used empty containers.	The domestic packaging material recycling rate exceeds 80%, reducing packaging procurement costs, with an expected impact on operating costs of less than 1%.	 Product packaging material recycling and reuse. Packaging bags recycling and reuse. Discarded empty containers recycling and reuse.
		Reduction of Water Usage & Consumption	To implement effective water resource management.	Efforts to reduce the procurement cost of backup water sources are projected to result in an operating cost impact of less than 1%.	 Continuously promote water-saving measures. Improve industrial water efficiency.



5.1.2 Greenhouse Gas Management

Scope 1

Scope 2

Scope 3

Greenhouse Gas Emissions

5,235 metric tons of CO₂e **30,753** metric tons of CO₂e **32,350** metric tons of CO₂e

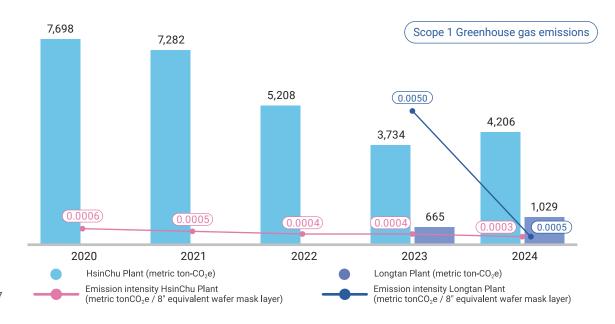
Greenhouse Gas Emissions

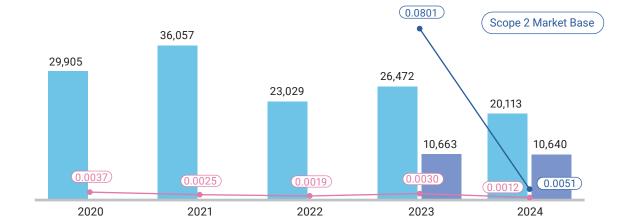
Greenhouse Gas Emissions

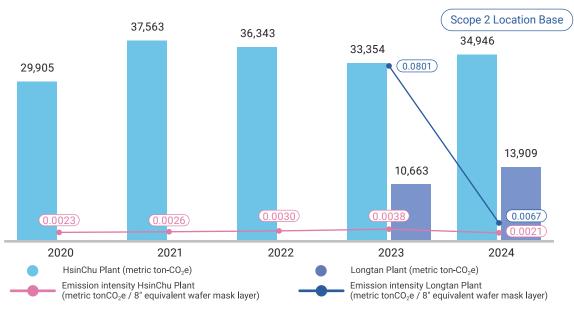


VisEra established a voluntary greenhouse gas inventory system in 2013. We referenced ISO 14064-1 standards and the WBCSD/ WRI Greenhouse Gas Protocol, and regularly inventory greenhouse gas emissions every year to monitor greenhouse gas usage and emissions, verify the effectiveness of reduction actions, and obtain third-party verification.

VisEra regards renewable energy as an important strategy for attaining net zero emissions. We continued to optimize process greenhouse gas usage and maximize exhaust gas reduction as our benchmark actions. Since 2020, we have local scrubbers (LSC), which are now 100% installed in new and existing plants. We also continue to replace inefficient LSC in existing plants, effectively reducing process fluorine gas emissions. Compared with not installing LSC, we have taken concrete actions to reduce direct greenhouse gas emissions in Scope 1 by 33,393 metric tons of CO2e. In 2024, due to the introduction of multiple energysaving measures and the increase in the use of renewable energy in the factory (as detailed in the energy management section), the Scope 2 emission intensity will be reduced. The carbon reduction amount of the energy-saving project in 2024 will reach 368.18 metric tons of CO₂e. Since 2023, the Hsinchu Plant and Longtan Plant Office have been using 100% renewable energy.





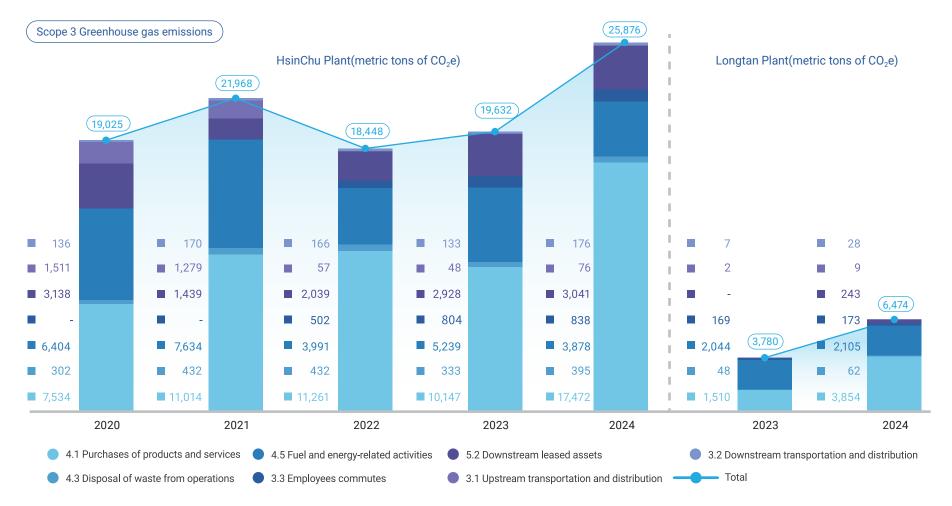


- Note 1: In terms of the organizational boundaries, we adopted the 100% operation control methodology. Including VisEra Hsinchu Site and Longtan Site (joined from 2023), excluding Zhongli Site (emissions account for less than 5% of total emissions.
- Note 2: The GWP values prior to 2022 were based on the IPCC Fourth Assessment Report (AR4), values for 2023 were based on the Fifth Assessment Report (AR5), and values for 2024 are based on the Sixth Assessment Report (AR6).
- Note 3: Electricity carbon emissions were calculated using the emission factor of 0.494 kg CO₂e/kWh, as published in 2023 by the Bureau of Energy, Ministry of Economic Affairs.

Green



To strengthen the integrity of the GHG inventory in the value chain, VisEra has included the quantification of Scope 3 emissions and obtained external verification starting from 2020. VisEra referenced the 15 types of Scope 3 emissions defined in the WBCSD/WRI Greenhouse Gas Protocol Scope 3 Calculation Guidance and estimated the categories of significant indirect emissions, taking into account factors such as ease of obtaining activity data, accuracy of emission coefficients, time required for data collection, and compliance obligations. Emissions from employee commutes have been included in the inventory since 2022. The results show that the areas with significant Scope 3 greenhouse gas emissions were raw material production and energy-related activities. We will actively work with suppliers to implement effective action plans and create a sustainable supply chain.



Note 1: Disposal of waste includes both solid and liquid waste

Note 2: Scope 3 emissions have included the Longtan Plant since 2023.

Note 3: For Scope 3 emissions, GWP values prior to 2022 were based on the IPCC Fourth Assessment Report (AR4), values for 2023 were based on the Fifth Assessment Report (AR5), and values for 2024 are based on the Sixth Assessment Report (AR6).

Focus case- scope 1-reduction

To responding the global climate change and the trend of semiconductor/ skill revolution, the chemical usage are diverse and the public focus on the climate change (the green house gas reduce/ the exhaust control). Comply with the government 2025 policy of zero exhaust. VisEra set LSC to make sure the green house reduce benefit >98% with different chemistry usage and gas exhaust to let the green house gas exhaust reach the first step tackle and put in the cental air pollution tackle equipment to implement waste gas to coincide the rule standard. The performance of reducing CO2 also get the competent authority pride and get the country science and technology committee science park CO₂ reduction merit award in 2023.



5.1.3 Product Environmental Impact Assessment

VisEra devote to decrease the lifeline of products to the environment impact in each phase with the sustainability thinking including the ingredient manufacture and transportation, the product manufacture, test and cover. To execute evaluation of a life cycle of products, CO_2 foot print and the water foot print every three year and get ISO14040, ISO14067, ISO14046, and ISO50001the third side certification. We discover the inspection result in 2023, the green house effect hot spot occupied 66,55% of exhaust of the electronic usage. VisEra continue to progress the direction except to increase the renewable energy's electricity consumption ratio and also find another strategy for the sourse reduction. To respond the production demand, we adjust the number of supplied machine and scrubber leak. The factory engineering equipment evaluate the measure of electronic saving and water saving. Refer to "Energy Management" and "Water Resource Management" of the Report for more information.



VisEra Customers and End Cusomers

2023 Midpoint Environmental Footprints Verified

Unit: per 8-inch wafer equivalent/layer

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Midpoint Characterisation Factors	Raw Material Acquisition Stage	Raw Material Acquisition Stage		Production Stage	Total	Unit	Percentage
Greenhouse Effect	2.55E-02	23.89%	8.11E-02	76.11%	1.07E-01	kgCO ₂ e/ per 8-inch wafer equivalent/layer	100.00%
Ozone Depletion	5.40E-09	18.52%	2.37E-08	81.48%	2.91E-08	kg CFC-11 eq/ per 8-inch wafer equivalent/ layer	100.00%
Freshwater Ecotoxicity	1.17E+00	7.27%	1.49E+01	92.73%	1.61E+01	CTUh/ per 8-inch wafer equivalent/layer	100.00%
Human Toxicity, Cancer	5.60E-12	13.11%	3.71E-11	86.89%	4.27E-11	CTUh/ per 8-inch wafer equivalent/layer	100.00%
Human Toxicity, Non-Cancer	3.28E-11	3.88%	8.13E-10	96.12%	8.45E-10	CTUh/ per 8-inch wafer equivalent/layer	100.00%
Particulate Matters / Respirable Inorganic Substances	1.38E-09	14.09%	8.44E-09	85.91%	9.82E-09	Disease inc./ per 8-inch wafer equivalent/ layer	100.00%
Ionising Radiation, Human Health	5.77E-03	6.41%	8.43E-02	93.59%	9.00E-02	kBq U235 eq/ per 8-inch wafer equivalent/ layer	100.00%
Photochemical Ozone Formation	5.40E-05	8.07%	6.16E-04	91.93%	6.70E-04	kg NMVOC eq/ per 8-inch wafer equivalent/ layer	100.00%
Acidification	1.20E-04	7.70%	1.44E-03	92.30%	1.56E-03	mol H+ eq/ per 8-inch wafer equivalent/layer	100.00%
Eutrophication-Land	1.99E-04	5.44%	3.45E-03	94.56%	3.65E-03	mol N eq/ per 8-inch wafer equivalent/layer	100.00%
Eutrophication- Freshwater	9.21E-06	2.38%	3.78E-04	97.62%	3.88E-04	kg P eq/ per 8-inch wafer equivalent/layer	100.00%
Eutrophication- Seawater	2.31E-05	0.38%	6.09E-03	99.62%	6.12E-03	kg N eq/ per 8-inch wafer equivalent/layer	100.00%
Resource Depletion- Water	6.35E+00	13.88%	3.94E+01	86.12%	4.57E+01	m³ depriv./ per 8-inch wafer equivalent/layer	100.00%
Resource Depletion - Minerals and Metals	9.84E-10	1.63%	5.94E-08	98.37%	6.03E-08	kg Sb eq/ per 8-inch wafer equivalent/layer	100.00%
Resource Depletion - Fossil Fuels	3.54E-03	100.00%	0.00E+00	0.00%	3.54E-03	MJ/ per 8-inch wafer equivalent/layer	100.00%
Land Use	3.38E-02	11.56%	2.59E-01	88.44%	2.93E-01	pt/ per 8-inch wafer equivalent/layer	100.00%
Single Score	4.90E-05	13.23%	3.21E-04	86.77%	3.70E-04		100.00%

Note 1: The life cycle assessment software used for the 2023 product environmental footprint calculation is SimaPro v9.5.0.0, including the updated database. The life cycle impact assessment methodology follows Environmental Footprint 3.1 V1.00, with the EF 3.1 normalization and weighting set selected.

Note 2: Ozone Depletion: 2.91*10-11 ton CFC-11 eq.

Note 3: The LCA ozone-depleting substances (ODS) primarily refer to halogenated compounds regulated under the Montreal Protocol, especially those containing chlorine and bromine, including the following items:

Substance Name	Material Name	Substance Name	Material Name
CFC-11	CCI₃F	Halon-1301	CBrF₃
CFC-12	CCI ₂ F ₂	Carbon tetrachloride	CCI ₄
CFC-133	CCI ₂ FCCIF ₂	Methyl chloroform	CH₃CCI₃
Halon-1211	CBrCIF ₂	Methyl bromide	CH₃Br

New

Usage rate 26%



Energy Management

Energy Structure

Reduce energy consumption and lower carbon emissions to decrease energy costs and enhance overall economic efficiency, thereby achieving the goal of sustainable business development.

Improving Energy Efficiency

To establish an effective energy management system with the goal of enhancing energy efficiency and reducing greenhouse gas emissions, thereby achieving sustainable business development.

Renewable Energy

Closely follow global climate initiatives such as RE100 and actively engage in the use and procurement of renewable energy.

Results in 2024 2025 Target 2027 Target **Target Setting Power Consumption Power Consumption** per Unit **4.32** per Unit <8.29 (kWh/8"equivalent wafer - layer) (kWh/8"equivalent wafer - layer) **Power Consumption per Unit** New Product at Hsinchu Plant (kWh/8"equivalent wafer - layer) Average annual power Average annual power saving rate >1.5%



Average annual power saving rate of Hsinchu and Longtan Plants

Renewable Energy Usage Rate of **Hsinchu and Longtan Plants**

1 Usage rate **37.1**%

Target Usage rate >24%

saving rate >1.5% New

Average annual power saving rate >1.5%

2030 Target

(kWh/8"equivalent wafer - layer)

Power Consumption

per Unit <8.12

New

New

Usage rate 40%



Communication Channels: Industrial Safety and Environmental Protection Department, Factory Department ESG@viseratech.com



5.2 Energy Management

5.2.1 Energy Management Policy

To establish an effective energy management system, VisEra has implemented the ISO 50001 Energy Management System. With the goal of improving energy efficiency and reducing greenhouse gas emissions, the company is committed to achieving sustainable business development. The use of energy in the manufacturing process under routine operation and management must meet the requirements in energy regulations and standards based on international norms. VisEra is committed to maintaining a high level of corporate social responsibility and fulfills its corporate citizenship obligations.

To achieve the above goals, we promise to continuously improve and achieve:



5.2.2 Energy Structure

VisEra's energy consumption structure is primarily based on externally purchased electricity, which accounts for 87.3%, followed by natural gas at 12.5%, and diesel at 0.2%. Therefore, the main target for energy saving is on reducing electricity and natural gas consumption. In 2024, total energy consumption was approximately 113,324 MWh, a 10.7% increase compared to 2023, mainly due to the inclusion of the Longtan plant's operations. VisEra is fully committed to purchasing renewable energy to achieve the company's goal of 100% renewable energy usage by 2050. In 2024, the renewable energy share, including both the Hsinchu and Longtan plants, reached 37.1%.

Total energy consumption

113,324 MWh 98,8

Total Electricity Consumption

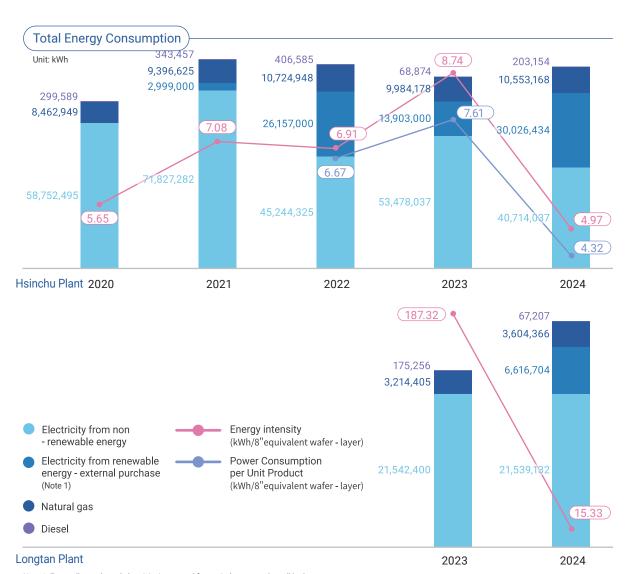
98,896 _{MWh}

Externally purchased electricity from renewable energy

36,643 _{MWh}

Percentage of renewable energy to total electricity consumption

37.1%



Note 1: Externally purchased electricity is sourced from wind power and small hydropower.

Note 2: 1 m³ natural gas = 10.465 kWh : 1 L diesel= 9.767 kWh : unit conversion coefficient provided for reference only: Bureau of Energy's Energy Statistics Handbook.

 $Note 3: 1 \, kWh = 0.0036 \, GJ \cdot 2024 \, total \, energy \, consumption \, was \, approximately \, 407,967.1 \, GJ \cdot (Non-renewable \, Energy = 224,111.4 \, GJ \, \\ \vdots \, Renewable \, Energy = 131,915.3 \, GJ).$

Note 4: Zhongli Plant is a leased plant of Xintec Inc., which has been merged and disclosed in the ESG sustainability report of Xintec Inc.. The indirect energy usage is 528,472 kWh.

Hsinchu plant

Replaced traditional Fab and Cup lamps with high-efficiency

LED liahts.

155.800

Power Saving (kWh)

560.88

Cumulative Power

Saving(GJ)

82.700

Power Saving (kWh)

Cumulative Power

Saving(GJ)

Longtan plant

Shut down unused lighting equipment in the Office building

2024

155.800

Cumulative Power

Saving (kWh)

2024

82.700

Cumulative Power

Saving (kWh)

76.97

(metric ton-CO₂e)

76.97

40.85

(metric ton-CO₂e)

40.85

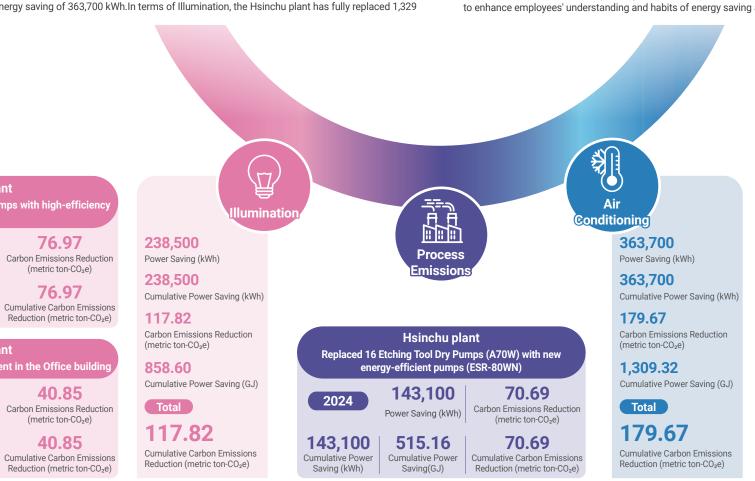


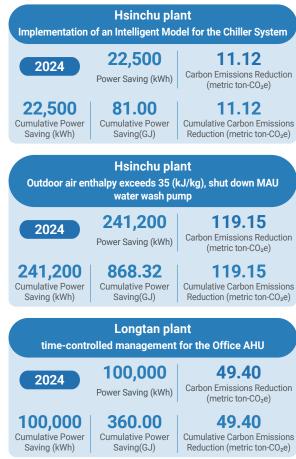
5.2.3 Improve Energy Efficiency

To effectively reduce the environmental impact of the greenhouse effect and reduce energy consumption, VisEra established an energy management organization to set energy saving and carbon emissions reduction targets and plans. We coordinated and integrated departments to promote energy saving and carbon reduction strategies and programs, and continuously launch and evaluate energy conservation technologies and implement energy improvement plans for related equipment. In 2024, multiple energy-saving measures will be implemented in air conditioning, lighting, and process exhaust systems to improve energy efficiency and reduce carbon emissions.

In the area of air conditioning, the Hsinchu plant has implemented an intelligent model for the chiller system and shut down the MAU water wash pumps when the outdoor air enthalpy exceeds 35 (kJ/kg). The Longtan plant has adopted time-controlled management for the Office AHU, resulting in a total energy saving of 363,700 kWh.ln terms of Illumination, the Hsinchu plant has fully replaced 1.329 traditional Fab and Cup lamps with high-efficiency LED lights. The Longtan plant has shut down unused lighting equipment in the Office building, resulting in an energy saving of 238,500 kWh.For process exhaust, the Hsinchu plant has replaced 16 Etching Tool Dry Pumps (A70W) with new energy-efficient pumps (ESR-80WN), saving a total of 143,100 kWh. These three energy-saving measures resulted in a total annual energy saving of 745,300 kWh. Based on the latest electricity carbon emission factor (0.494 kq-CO2e/kWh) published by the Bureau of Energy for 2023, this equates to a reduction of approximately 368 metric tons of CO2e emissions.

In addition to the above-mentioned energy-saying measures, a shutdown plan for equipment was assessed and implemented at the beginning of 2024, resulting in a total energy saving of 268,400 kWh for the year. At the same time, efforts were made to promote the habit of turning off unnecessary energy in office and public areas, supported by related awareness campaigns and training programs to enhance employees' understanding and habits of energy saving and carbon reduction.





Role in Sustainabil

Product Innovation Responsible Procurement

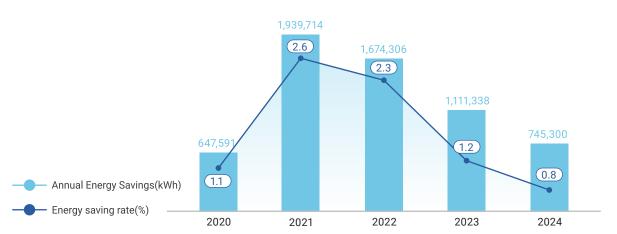
Green Employee Production Relations

Corporate Citizenship Operation and Governance

Appendix







Note: The energy savings for 2024 include both the Hsinchu and Longtan plants. The Zhongli plant is not included in the energy savings calculation as it operates in a leased facility and shares public utilities.

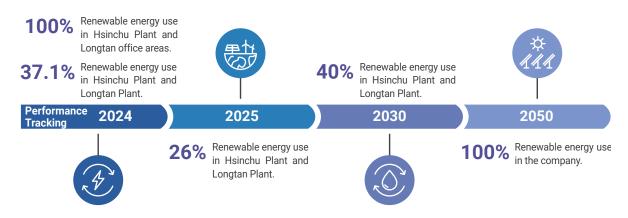
Spotlight -Intelligent Control of Chiller

To achieve carbon reduction and sustainable development, VisEra has integrated AI technology to smartly transform chiller system, aiming to enhance energy efficiency and reduce carbon emissions.

- Building the AI Platform: By analyzing key data such as outdoor temperature, system pressure, and chilled water outlet temperature, real-time data collection and processing of the chiller system's operations are enabled.
- Establishing Predictive Models: Key control points that influence energy efficiency, such as compressor load, condenser temperature, and load demand, are identified. These data-driven adjustments allow the system to dynamically optimize and achieve precise energy savings.
- Introducing Distributed Control Systems (DCS) for Remote Automatic Control: Each chiller is equipped with an
 independent control unit, which allows local and remote adjustments via the AI system, enhancing system response
 time and flexibility. This control architecture adjusts equipment operation according to load demand, preventing energy
 waste.
- Data Feedback Function: Continuous regression training optimizes the model, ensuring that the equipment operates
 with optimal energy efficiency in different environments. This self-learning mechanism further enhances operational
 stability and reduces failure and maintenance costs.

The integration of intelligent control for the chiller system has achieved a 4% energy saving and a reduction in carbon emissions. This innovative initiative effectively lowers operational costs and strengthens the company's ESG performance.

5.2.4 Renewable Energy



VisEra understands our corporate responsibility to the environment. In addition to continuing to improve energy efficiency, we are actively involved in the use and purchase of renewable energy by paying close attention to the Science Based Targets (SBT) initiative and the RE100 Global Renewable Energy Initiative to limit global warming to 1.5 °C. We also actively participate in the use and purchase of renewable energy. Consolidated calculation of electricity consumption for the newly added Longtan Plant in 2024, We set the target for attaining 26% renewable energy use in Hsinchu Plant and Longtan Plant, and we used carbon credits to offset the greenhouse gas emissions of the natural gas used in the kitchen to attain the short-term goal of net zero emissions in the office. Our mid-term goal is to expand the stable supply of renewable energy and attain 40% renewable energy use in Hsinchu Plant and Longtan Plant by 2030, and our long-term goal is to attain 100% renewable energy use in the Company by 2050.

Since 2021, VisEra has gradually purchased renewable energy from land-based wind and small hydropower sources. Land-based wind power was introduced in November 2021, followed by the adoption of small hydropower in June 2022. Starting in 2024, VisEra began purchasing 50,000 kWh of solar power from Taiwan Power Company (Taipower) for use at the Longtan plant. In that year alone, the company obtained 36,643 Renewable Energy Certificates(RECs), equivalent to a reduction of 18,102 metric tons of CO_2 emissions. As of 2024, the cumulative transferred renewable electricity totaled 79,702,138 kWh, with an accumulated 79,702 RECs acquired. By the end of 2024, VisEra had signed renewable energy purchase agreements that include a 3,600 kW wind power system and an 8,150 kW hydropower system. These systems are expected to generate a combined total of approximately 33,440 MWh annually—equivalent to 33,440 RECs per year and a reduction of approximately 16,520 metric tons of CO_2 emissions annually. Additionally, VisEra has installed a 29.8 kW solar power system. In 2024, it sold a total of 20,868 kWh of solar electricity to Taipower, demonstrating its strong commitment to green energy and its proactive support for clean, renewable energy.



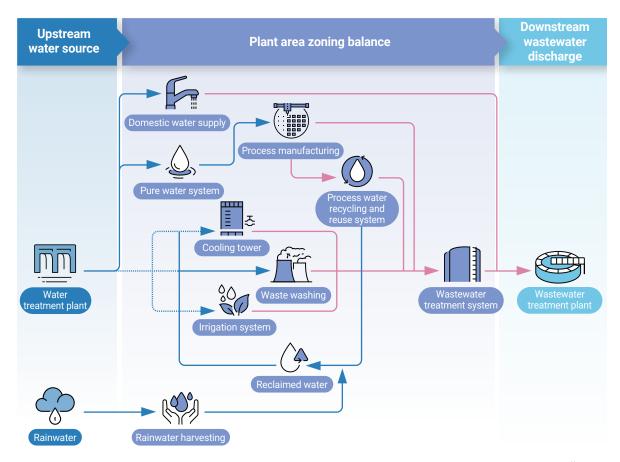


5.3 Water Resource Management

5.3.1 Water Resource Risk Management

Water resources are critical for the semiconductor production process. VisEra primarily sources its water from Taiwan Water Corporation (Baoshan Reservoir) and does not extract water from other sources such as seawater or groundwater. Wastewater is discharged through the Hsinchu Science Park wastewater treatment plant. Using the World Resources Institute (WRI) Aqueduct Water Risk Assessment Tool, VisEra evaluates water risk based on key indicators such as water supply availability, environmental discharge quality, regulatory and reputational risk. The results of the assessment for the Company's Hsinchu Plant, and Longtan Plant sites are all medium to low risk. We enforced the three strategies of "implement water use plans, seek opportunities to conserve water, and control pollution channels" and we set up have mechanical or electronic flow meters on all water inlets and key water pipelines. We assign onduty personnel to record meter readings every day. The engineer in charge of the water system compiles statistics and sets water use plans based on the meter reading records. After evaluating the capacity of the system in 2023, we changed the source of water for the plant-side waste gas scrubber from tap water to reclaimed water to demonstrate our commitment to water conservation. We set up a Water Supply Emergency Response Team with representatives from relevant departments to discuss future water shortages, sources for purchasing water, and ways to replenish sources of purchased water. They divided the work based on the resolution to arrange the water purchase and replenishment schedule and implement water resource risk management.

2024 Water Resource Quantitative Data	Hsinchu Plant (megaliters)	Percentage (%)	Longtan Plant (megaliters)	Percentage (%)
Upstream water supply source -total withdrawal	247.897	100%	116.032	100%
—Tap water plant withdrawal	241.271	97.3%	116.010	99.98%
-Rainwater collection volume	6.626	2.7%	0.022	0.02%
Plant regional balance - total water consumption	424.409	100%	210.678	100%
—Domestic water consumption	29.659	7.0%	6.301	2.99%
—Pure water system - process water consumption	210.300	49.6%	46.617	22.13%
-Reclaimed water recycling volume	14.052	3.3%	80.774	38.34%
—Cooling tower water consumption	126.015	29.7%	74.335	35.28%
-Waste gas scrubbing water consumption	43.657	10.2%	2.636	1.25%
-Watering system water consumption	0.726	0.2%	0.015	0.01%
Downstream effluent - total water discharge	140.399	100%	73.056	100%
—Plant wastewater treatment volume	114.400	80.9%	64.625	88.46%
-Domestic sewage discharge	25.999	19.1%	8.431	11.54%
Total water consumption	107.498		42.976	



- Note 1: The water resource statistics included Hsinchu Plant and Longtan Plant. Zhongli Plant is leased and the tap water withdrawal and wastewater effluent are included in the lessor's water treatment system and cannot be calculated separately.
- Note 2: Rainwater collection involves the use of the plant's rooftop rainwater recovery and reuse system that collects rainwater for the rainwater recovery tank. It is filtered and used as a source of water in the reclaimed water system.
- Note 3: Reclaimed water recycling refers to treatment of wastewater in the plant with advanced organic reclaim (AOR) recycling systems. They treat wastewater that can be reused in the process by filtration, adsorption, and neutralization, and redirect the treated wastewater to other systems.

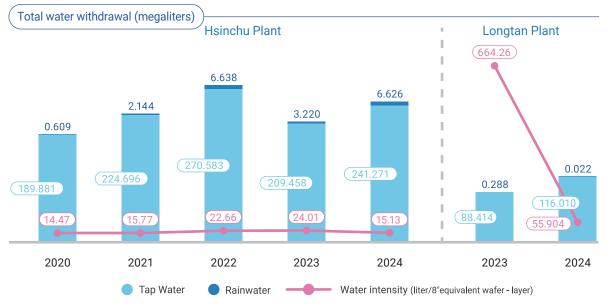
 Note 4: The pure water system directs tap water through adsorption, dosing, filtration, UV sterilization, and filtering processes for use on the production line and
- produces wastewater in the process.

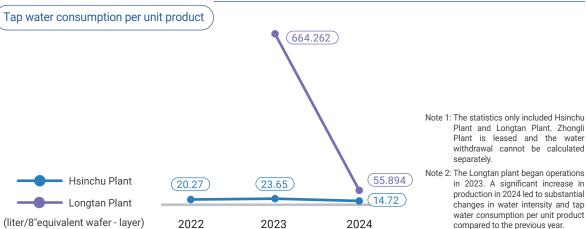
 Note 5: The cooling towers of the air-conditioning system uses the contact of water with air for cooling. Some of the water mist escapes from the cooling tower when
- Note 5: The cooling towers of the air-conditioning system uses the contact of water with air for cooling. Some of the water mist escapes from the cooling tower when the system operates and it causes water consumption.
- Note 6: The waste gas scrubbing system mainly uses recycled reclaimed water. If the reclaimed water cannot replenish the water necessary for the scrubbing tower due to its supply of water to the cooling tower, tap water is used to replenish the supply.
- Note 7: The wastewater is collected in the pipeline system and discharged into the sewer system of the Science Park after the pH is adjusted by dosing to meet the discharge standards.
- Note 8: The Company's wastewater is discharged in accordance with the water quality standards specified for the sewer system of Hsinchu Science Park by Hsinchu Science Park Bureau, Ministry of Science and Technology.
- Note 9: Total water consumption = total water withdrawal total water discharge.



5.3.2 Water Resource Withdrawal

In 2024, VisEra's Hsinchu Plant and Longtan Plant total water withdrawal totaled 363.929 megaliters. Tap water was the main source accounted for about 98.2% and rainwater recycling accounted for 1.8%. To manage water consumption per unit of product, VisEra has set reduction targets for tap water consumption per unit product at the Hsinchu plant, using 2018 as the baseline year. The goal is to reduce this metric by 1% by 2025 and 3% by 2030. In 2018, the tap water consumption per unit product was 25.03 liters per 8"equivalent wafer per layer. Therefore, the target values are less than 24.78 liter/8"equivalent wafer - layer by 2025 and less than 24.28 liter/8"equivalent wafer - layer by 2030.





5.3.3 Water Conservation Measures and Recycled Water

VisEra has achieved water conservation by reducing domestic water usage, improving industrial water efficiency, and lowering industrial water consumption. In 2024, the total water saved at VisEra's Hsinchu and Longtan plants reached 16.262 megaliters, bringing the cumulative water savings to 30.798 megaliters.

Water Conservation Measures



Reduce domestic water consumption

- A Enhance internal training and communication
- Participate in advocacy campaigns.
- C Use water-saving equipment and products.



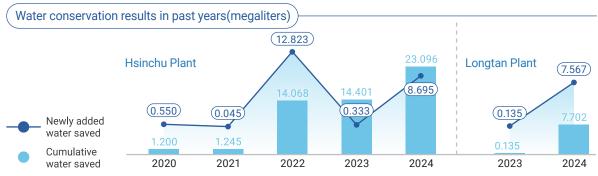
Increase industrial water usage efficiency

- A Participate in plant water conservation assistance programs.
- B Review the possibility of setting up different process wastewater recycling systems and convert the wastewater into water that can be reused.
- © Review unnecessary loss of water resources with measures such as seeking assistance from production units (process/equipment) to jointly review opportunities to reduce water consumption in the production process.



Reduce Industrial Water Consumption

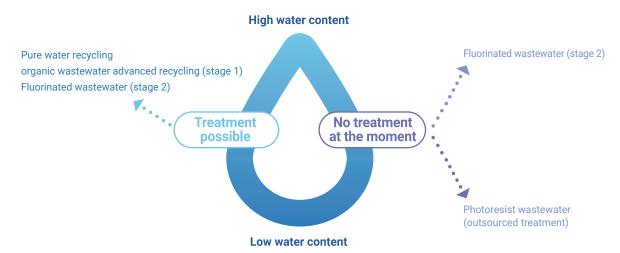
- A Reduced water consumption from Local Scrubber equipment at the Hsinchu plant, resulting in an additional water saving of 1.126 megaliters in 2024.
- The Hsinchu plant introduced a 4-second cleaning process using 0K73 to replace rinsing and baking steps in the 8-inch process, achieving an additional water saving of 0.101 megaliters in 2024.
- Adoption of an atmospheric plasma process in the EBML process at the Hsinchu plant eliminated the wafer backside cleaning step, contributing an additional water saving of 0.218 megaliters in 2024.
- D Installation of flow control valves on QDR overflow piping at the Hsinchu plant to reduce DI water usage, resulting in an additional water saving of 7.250 megaliters in 2024.
- Extended cleaning intervals for the 2B3T/MB Rinse system in the Ultra Pure water system at the Longtan plant, saving an additional 0.758 megaliters of water in 2024.
- [Implementation of DI Water Saving measures for Wet Bench equipment at the Longtan plant led to an additional water saving of 6.809 megaliters in 2024.



Note: The statistics only included Hsinchu Plant and Longtan Plant. Zhongli Plant is leased and the water withdrawal resources cannot be calculated separately



To attain the goal of recycling process wastewater, the wastewater produced during the production process is first collected through separate pipelines based on the level of water content and whether it can/cannot be treated to avoid cross-contamination that could result in the inability to recycle any wastewater. In the first stage, the wastewater that can be recycled by preliminary filtration is directed into the reclaimed water collection system. In the second stage, the reclaimed water is produced after a special treatment system is installed. At present, due to cost and site restrictions, the wastewater with high water content and photoresist stripping solution is still disposed by contractors of outsourced services. If there is a breakthrough in treatment technology in the future, we will prioritize the recycling of this water source. After the concentrated efforts in the two stages, the water resource usage rate can be calculated as "(tap water consumption + reclaimed water) /tap water consumption = number of times a drop of water is used". At the Hsinchu and Longtan plants, each drop of water is reused approximately 3.1 times.

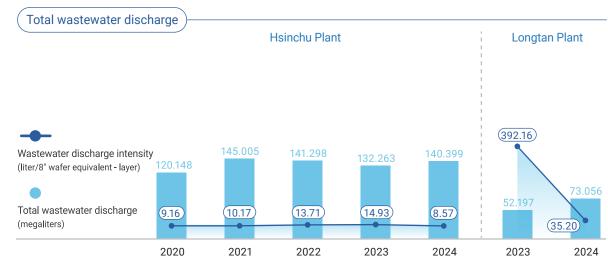


Water resource recycling volume and recycling rate



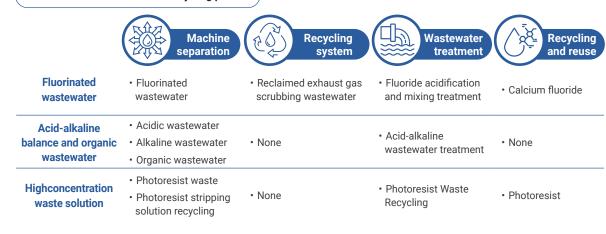
5.3.4 Effluent Management

VisEra actively develops water pollution prevention measures to reduce the potential impact in operations. We implement pollution prevention and treatment of wastewater quality indicators including biological oxygen demand (BOD), chemical oxygen demand (COD), fluoride ion concentration (F-) and suspended solids (SS) discharge concentration. The indicators were in compliance with the discharge water standards of the Science Park.



Note: The process wastewater in Zhongli Plant is collected in the wastewater system of the lessor for treatment and recycling and cannot be verified.

Wastewater classification and recycling process





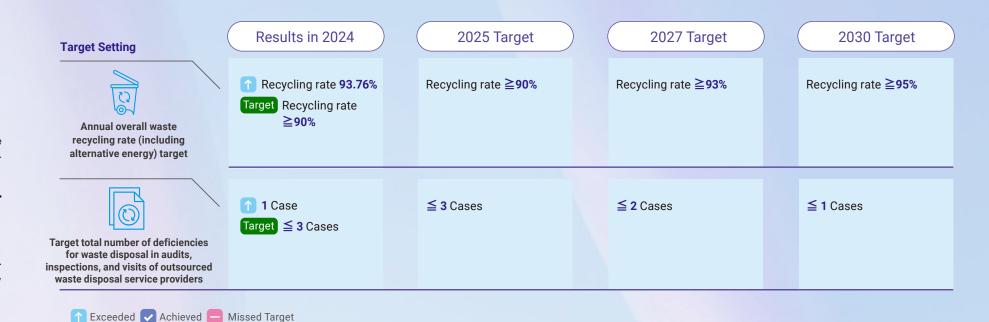
Waste Management

Waste Production and Recycling

VisEra implements green manufacturing and upholds the waste management principle of "minimizing waste generation and maximizing resource circulation"

Waste Disposal Contractor Management

Outsources all business waste disposal through environmental agencies, with selection conducted jointly high-quality vendors by the company's internal units



Communication Channels: Materials Management Department ESG@viseratech.com



5.4 Waste Management

VisEra is a subsidiary of the critical foundry supply chain of the parent company (tsmc). The hazardous industrial waste derived from materials used in the production process account for approximately 60% of the total waste. Any failure in management or disposal will directly cause significant pollution to the environment, indirectly damage the interests of customers and the Company's corporate image, and lead to negative perception of the Company in the society. So, We will implement ESG target management to strengthen the capabilities of our contracted waste disposal companies and jointly support environmental protection and the society. To achieve our goals, we commit to:





Internal environmental protection units, procurement units, and waste management units select new eligible suppliers based on the six major criteria for the selection of waste disposal suppliers.



Use high-quality suppliers approved by the parent company (tsmc).



Work with the parent company (tsmc) to implement the annual inspections and assistance of the external waste disposal suppliers.



Encourage waste disposal suppliers to obtain ISO 14001 and other environmental, safety, and health certifications.



Establish legal constraints in contracts.



Implement fairness in the procurement process.

5.4.1 Waste Production and Recycling

VisEra implements green manufacturing and upholds the waste management principle of "minimizing waste generation and maximizing resource circulation". We prioritize "material recovery" and "energy recovery" over incineration and landfill to ensure maximum resource utilization. Since 2020, VisEra has experienced rapid growth in sales, production capacity, and process innovation. As a result, the consumption of various chemical raw materials, consumables, and machine line cleaning and maintenance has significantly increased. With the introduction of new materials and widespread adoption of innovative processes, VisEra has not only witnessed a substantial increase in the production of both conventional

Resource recycling and waste (including alternative energy)

Total waste quantity

Waste recycling rate (including alternative energy)

 $2,479_{\text{tons}} \div 2,644_{\text{tons}} = 93.76\%$

and hazardous waste but also faced constraints in waste management due to limitations in disposal technologies and environmental regulations. Consequently, the annual material recovery rate dropped from 74% to 55%. In 2021, VisEra began actively seeking alternative waste treatment facilities to replace incineration. Collaborating with the Foundation of Taiwan Industry Service, in December of the same year. VisEra partnered with a recycling company to divert and purify a portion of previously non-recyclable waste, turning it into auxiliary fuel to replace conventional high-polluting fuels such as coal and natural gas. This initiative led to a material recovery rate (including alternative energy sources) of over 90% in 2022. By 2024, the recycling and reuse rate (including alternative energy sources) had reached 2,479 tons per year, with a landfill rate of only 0.53%. Furthermore, since the establishment, VisEra has maintained a landfill rate of less than 1% for 19 consecutive years.

Comprehensive waste management process, integrating source reduction and circular economy approaches



Collaborative Supply Chain

Efforts Towards Reduction

Upstream and downstream companies

work together to recycle wafer shipment

packaging materials for reuse in product

shipments. The percentage of recycled

packaging materials used in product

shipments is over 80%.







Process improvement

for waste reduction

From 2015 to 2018, all employees

continuously applied the CIT approach

for waste reduction and reuse initiatives.

We strive for optimal process parame-

ters with the goal of reducing the usage

of hazardous substances and chemicals.

ultimately achieving a 33% reduction in



Process improvement for waste reduction









Waste production

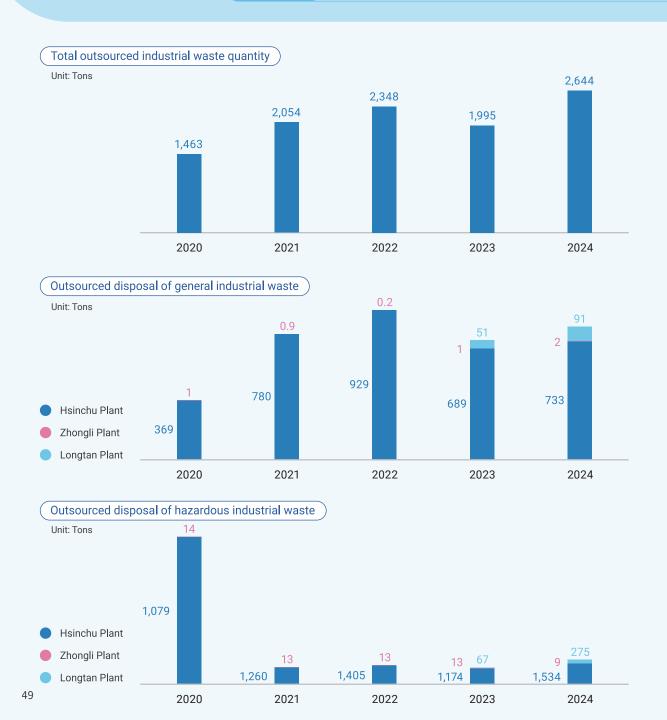
- O Sorting at the source and collection with separate pipelines.
- O Output tracking and in-plant reduction
- O In-plant pre-processing, recycling, and reuse of waste resources.

waste generation.

		Waste generated (tons)	General industrial waste (tons)	Hazardous industrial waste (tons)	(%)
Resource output after use by	VisEra	2,644	826	1,818	100%
Recycling/reuse/disposal by	Incineration	151	118	33	5.71%
outsourced service provider	Landfill	14	14	0	0.53%
(waste resources after	Alternative energy	572	572	0	21.63%
manufacturing process)	Recycled and reproduced products (Note 2)	1,907	122	1,785	72.13%



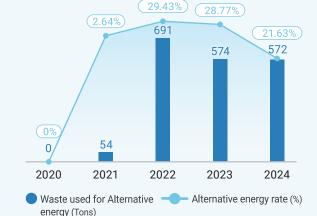








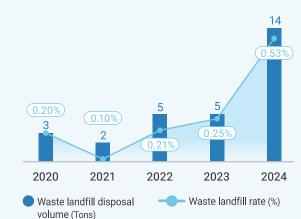
(Waste used for Alternative energy





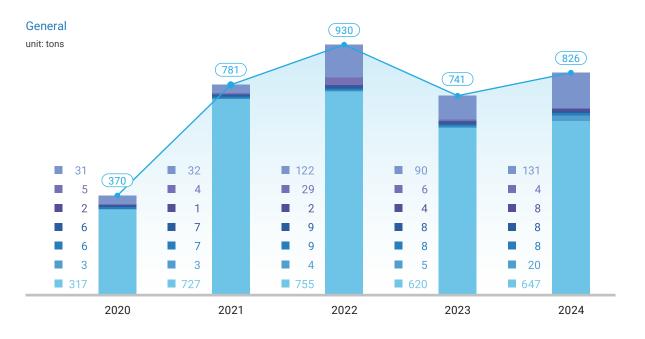
Waste landfill disposal volume



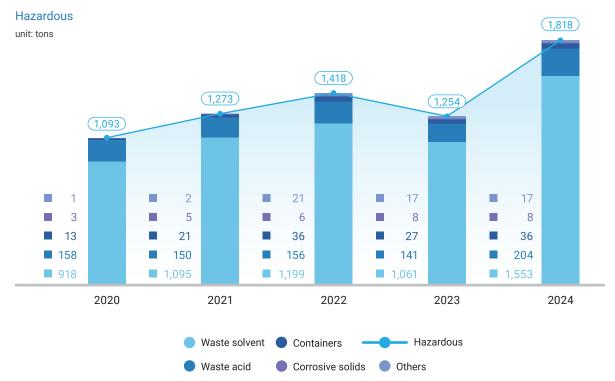


- Note 1: Material recovery processing refers to any waste treatment that does not involve incineration or landfill. Waste treatment by physical, heat treatment, reuse, etc. to produce reusable materials or products are considered material recovery.
- Note 2: Alternative energy refers to the use of waste materials as fuel to produce heat (generally in the form of steam), which is then used to produce electricity with a steam turbine generator. Alternative energy generates both heat and electricity. The heat in the form of steam and electricity can be supplied to companies in the industrial zone.

Total waste quantity







Green



5.4.2 Circular Economy





Project Name Waste solvent reuse

Project Targets

Waste photoresist solution, acetone

Method

The waste photoresist and waste acetone solvent, originally mixed together, are now segregated and collected separately. After segregation, the waste liquid is sent to the disposal company Shun Tsang Co., Ltd. for distillation treatment, producing PGME (Propylene Glycol Monomethyl Ether) and PGMEA (Propylene Glycol Monomethyl Ether Acetate), which are then utilized by other industries as coating materials. The acetone is supplied to other industries for use.

Project Objectives

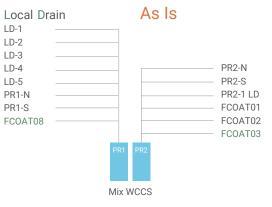
Waste photoresist PGME+PGMEA >85% Wastewater acetone concentration >80%

Investment Cost

NT\$1.6 million

ltem	In-Plant Treatment Method	Disposal Company Treatment Method	Reuse Purpose	2024 Treatment Volume (tons/year)	2024 Economic benefits (NT\$10,000/year)
Photoresist	Separation (46% -90%)	Distillation (90% -98%)	Industrial materials (coatings, ink solvents, detergents)	882	2,337
Acetone	Separation (52 %-80%)	Distillation (80% -95%)	Industrial materials (acetone)	209	397





LD-1~5/PR-1/N & S: PR-2 S CF8 coat tool

PR2-1 LD: FCNDT01

PR2-N: CF12 Tool (CO4,5,6)





Project Name Waste solvent reuse

Project Targets

Waste Tetramethylammonium sulfate (TMAX) solvent

Improvement Method

The TMAH recycling system of the Plant uses resin absorption to remove the TMAH. After running for a certain period of time, it requires the use of sulfuric acid (H2SO4) for desorption and restoration of the absorption capacity of the resin. After the treatment, the waste solvent that contains sulfuric acid is separated by a contractor to produce TMAH and sulfuric acid. It is used to produce industrial-grade materials for use in other industries to reuse resources and reduce the impact on the environment.

Project Objectives

TMAX concentration >10%

Investment Cost

NT\$19.78 million

Project Benefits

Item In-Plant Disposal Company Reuse Purpose (tons/year)	2024 Economic benefits NT\$10,000/year)
--	---

TMAX

Increase concentration $(1\% \to 10\%)$

Discharge of lowconcentration

photoresist TMAH waste liquid.

Electrolysis $(10\% \rightarrow 25\%)$

Industrial materials

159

95

Production

machinery

Containing significant photoresist TMAH emissions



Wastewater storage tank

Discharge of highconcentration photoresist TMAH waste liquid.

Subsequent treatment after removing photoresist through nanofiltration and reverse osmosis membrane

TMAH recapture through resin tower after filtering photoresist with nanofiltration and reverse osmosis membranes



Two-stage nanofiltration reverse osmosis

membrane filtration



SAC cation resin tower



Recycling system for reuse

Natural environment of the science park rivers



Natural environment of the science park rivers



03 Case

Project Name Product packaging materials

Project Targets Product packaging materials

Improvement

Method

Recycling and reuse of packaging materials domestic shipment

Project Objectives Annual use rate of recycled packaging materials for domestic shipment > 80%

Investment Cost NT\$0

Project Benefits
• Cost benefits (2023 as example): NT\$2,600,000/year

- Calculation method: Annual Purchasing Price of Packaging Materials for Each Size * Annual Recycling Usage of Packaging Materials for Each Size
- Waste reduction benefits (2023 as example): 14,000 cardboard boxes/year
- Domestic shipments will use recycled cartons by 2024 was 91%





Project Name

Material Conservation Design - Recycling and Reuse of Packaging Bags

Project Targets

Material Packaging Bags

Improvement
Method

Recycling and Reuse of Packaging Bags

Project Objectives

Reducing the purchase and usage of garbage bags by 5,000 annually.

Investment Cost

NT\$0

Project Benefits

 Recycled polystyrene packaging bags are used for outgoing shipments from the warehouse, repurposed as packaging bags for general business waste. This initiative reduces the quantity of purchased garbage bags, resulting in an estimated reduction of approximately 7,300 disposed garbage bags per year (1 large bag equals 5 small garbage bags), amounting to a waste reduction of approximately 900 kg/year.







Project Name

Material Conservation Design - Recycling and Reuse of Packaging Bags

Project Targets

Discarded barrels after use of raw materials

Improvement Method Recycling and reuse of chemical waste barrels generated from 53GL of chemical raw materials after use

Project Objectives

Reuse in monthly cycle of 8 to 10 ea

Investment Cost

NT\$0

Project Benefits

- After using 53GL plastic drums for chemicals, the empty drums are repurposed as containers for process-generated waste liquids, reducing discarded drum and new purchase needs by approximately 96 to 120 ea annually. This reduces waste by about 1.5 to 1.9 tons per year, equivalent to approximately 3,800 kgCO₂e reduction in carbon emissions (based on carbon footprint emission factors announced by the Ministry of Environment).
- Calculation method: Each empty drum weighs 16 kg, annually 1,536 kg to 1,920 kg.





Green



5.4.3 Waste Disposal Contractor Management

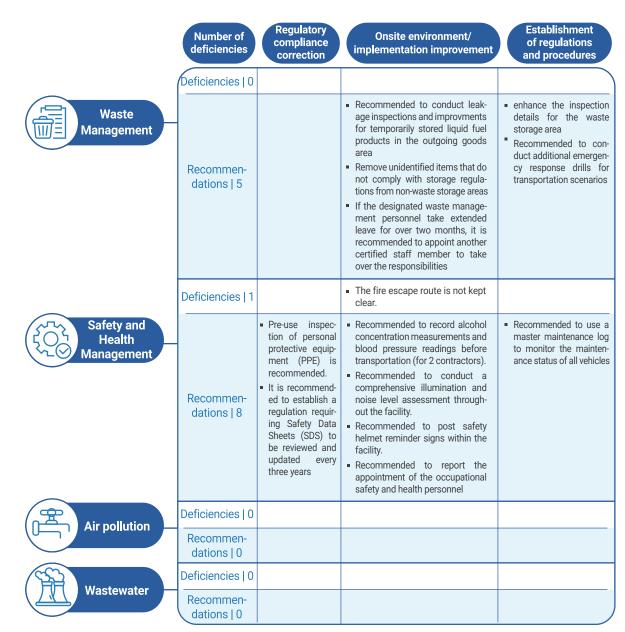
VisEra outsources all business waste through environmental agencies, with selection conducted jointly by the company's internal environmental, procurement, and waste management units based on six criteria (including scale/reputation, permit documents, violation records, on-site facilities, waste control, and safety and health).

Product

Innovation

The selection process involves screening for high-quality vendors based on these criteria. Environmental unit personnel and waste management unit personnel conduct on-site visits and evaluations (utilizing eight aspects covering 166 audit items for on-site audits), with vendors needing to score over 60 points, as set by the parent company (tsmc), and gaining unanimous approval from the visiting unit personnel. Following this, vendors must undergo legal contract review, approval, and procurement procedures before being approved as waste disposal vendors for the company. Finally, the "Annual Evaluation of Waste Disposal Vendors" serves as the basis for vendor replacement assessments. Since 2018, VisEra has collaborated with TSMC to conduct visits and guidance for outsourced waste disposal vendors, addressing common regulatory audit deficiencies and penalty items, sharing internal management methods and experiences, and strengthening management processes through face-to-face communication with vendors. Additionally, we encourage vendors to disseminate this process to other clients, collectively striving for environmental sustainability.





Employee

Relations



5.5 Air Pollution Prevention

Stable Operation of Air Pollution Control Equipment

The air pollution prevention capabilities of VisEra meets the regulations in the "Air Pollution Control and Emissions Standards for the Semiconductor Industry" and "Standards for Air Pollutant Emission from Stationary Pollution Sources". To ensure stable 24-hour year-round operations pollution prevention equipment, all air pollution prevention equipment must be equipped with at least one backup system (N+1 design) and a DC backup system to prevent power interruption. The design is implemented to ensure zero failure of the prevention equipment and ensure stable and continuous pollution monitoring. In addition, VisEra also set up automatic monitoring facilities to monitor the effectiveness of waste gas treatment in all systems. Related information is reported to the on-duty office of plant operations and the Occupational Safety and Environmental Protection Emergency Response Center to operate the independent dual-track monitoring system and ensure that the stack emissions meet regulatory requirements.

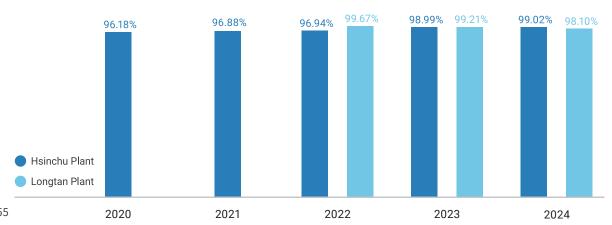
Multi-level Air Pollution Control Strategies

VisEra's air pollutants can be divided into acidic and alkaline gases and volatile organic gases. We adopted "separation of emissions at the source" and "best available technology for multi-section processing system" as our strategy for air pollution prevention so that the pollutant levels meet (or are superior to) government environmental protection regulations. The first stage for separation of emissions at the source is implemented for acid and alkaline process waste gas that are corrosive, flammable, greenhouse gas, or perfluorinated compounds as determined based on process characteristics. We added high-performance air treatment local scrubbers to effectively treat process emissions. Finally, the inorganic acid and alkaline gases are directed to the central scrubber for the second-stage of water neutralization process in the terminal pollution prevention equipment. For volatile organic gases, we determine whether to install treatment equipment such as local condensers based on their boiling points. We then direct the process emissions to the zeolite rotor concentrator system for treatment. With separation at the source and two-stage treatment, we enhance the efficiency of air emission treatment across the board.

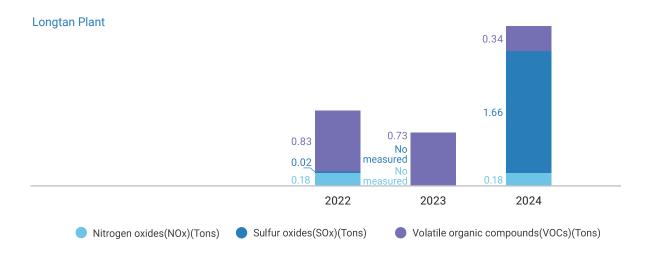
Equipment Upgrades and Continuous Optimization of Emissions Management

To improve the reduction rate of organic exhaust central treatment waste gas system, a budget will be allocated year by year starting from the end of 2021 to replace zeolite rotors, and two sets of old equipment will be replaced with high-efficiency zeolite rotors by 2023.As a result, VisEra's air emissions have consistently met (exceeded) the standards for emissions set by the EPA. With our early warning mechanisms and immediate response to issues, there were no anomalies involving pollutant emissions that were reported to the competent authority in 2024.

Volatile Organic Compounds (VOC) Reduction Rate



Total air pollutant emissions Hsinchu Plant 2.12 3.83 11.26 1.21 5.51 8.58 6.54 5.93 7.56 5.78 5.61 5.49 2020 2021 2022 2023 2024



Note 1: Zhongli plant's emissions are excluded due to shared facility treatment.

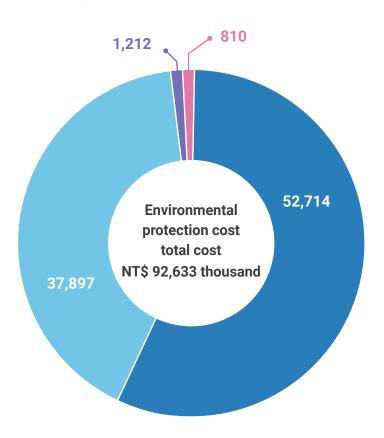
Note 2: Air pollutant emissions included nitrogen oxides (NOx), sulfur oxides (SOx) and volatile organic compounds (VOCs). Volatile organic compounds (VOCs) are continuously monitored by the FAC Dept.

Note 3: The SOx and NOx are tested once every five years in accordance with regulatory requirements, so measurements were not conducted in 2023 of Longtan Plant.

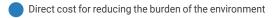


5.6 Environmental Protection Expenditures and Investments

By upholding the philosophy of attaining coexistence and common prosperity in business growth and the ecological environment, VisEra is committed to the full implementation of environmental pollution prevention actions to protect the local environment and increase the value of the Company. The environment investment cost 17,717 on the waste water and waste gas treatment equipment and the cost on the hardware annually. The total cost 92,633 refer to all expense including the depreciation expense, research and development, human resourse, motivation, maintain, examine, material, entrust, education, donation and other expenses.







Expenditures for social activities for reducing the burden of the environment Direct cost for reducing the burden of the environment (cost of social activities for environmental protection)

(Total investment amount)

Indirect cost for reducing the burden of the environment Other costs related to environmental protection (environmental protection management expenses)

