2024 SUSTAINABILITY REPORT (English)

Promise · Sustainable · Innovation

2024

Contents

Message from the CEO

Dear friends of PSI,

In 2024, despite challenges arising from inflationary pressures, a high interest rate environment, and industry-wide inventory adjustments, the global semiconductor sector has gradually emerged from its downturn. Fueled by strong demand for AI applications and advanced process technologies, the industry regained upward momentum. Upholding our core values of Promise, Sustainability, and Innovation, PSI continued to focus on two critical competencies—high-purity wafer surface processing and wafer thinning technologies. Through agile product-mix optimization and continuous enhancements in operational efficiency and process performance, PSI achieved annual revenue of NTD 3.552 billion, marking the fourth consecutive year of record highs. Operating profit reached NTD 535 million, a remarkable 133% year-over-year growth, demonstrating PSI's resilience and long-term growth potential. As global demand for high-performance and low-carbon manufacturing accelerates, we continued expanding our green manufacturing footprint. Our Taichung Branch, the world's first lights-out, fully unmanned reclaim-wafer fab, increased its monthly capacity to 240,000 wafers in 2024 and initiated Phase II expansion. Upon completion in 2025, capacity is expected to rise to 310,000 wafers per month, bringing PSI's total corporate capacity to 800,000 wafers per month, further solidifying our global leadership.

To advance our renewable energy strategy, PSI signed a Green Power Purchase Letter of Intent in December 2024, marking a key step toward integrating renewable electricity into our operations. Despite a 23.5% increase in total production capacity, we successfully achieved a 6.4% reduction in greenhouse gas emissions, a 1.9% decrease in electricity consumption, a 17.7% reduction in tap-water usage, and a 140-ton reduction in waste generation. PSI also earned a CDP Climate Change rating of B and completed ISO 14064-1 verification, reinforcing our commitment to low-carbon and sustainable manufacturing.

Sustainability extends beyond environmental protection—it encompasses corporate governance and social responsibility as well. In 2024, we established the Sustainability Development Committee and completed a full re-election of the Board of Directors, bringing in new members with diverse professional backgrounds to further enhance board effectiveness. At the same time, we continued to strengthen our employee welfare programs, offering diverse learning resources and career development opportunities to foster a supportive, engaging, and inclusive workplace culture. In terms of social participation, PSI donated refurbished laptops to remote schools and supported music and sports clubs to help narrow the educational resource gap, actively creating positive societal impact. With our overall ESG performance, PSI was recognized among the Top 25 in the Small Giants category of the Common Wealth Magazine Corporate Sustainability Awards, affirming our strong commitment to ESG and the tangible results we have achieved.

Looking ahead, as generative AI and geopolitical shifts reshape the semiconductor landscape, PSI will continue to drive technological innovation and smart manufacturing while advancing our global expansion and strengthening supply chain resilience. Guided by the principles of sustainability, we remain committed to creating long-term and meaningful value for our shareholders, employees, and society, as we progress toward a new milestone of becoming a world-class semiconductor enterprise.

CEO Tony Tsai

Achievement and Awards

Business Management

6%~20% 11th Corporate Governance Evaluation

35.52B Annual revenue 35.52B · YoY 6.73%

4.92B Net income after tax · YoY 57.66%

2.2 Cash dividend · annual increase 22.22%

Achievement & Awards

- Common Wealth Sustainable Citizen Award – Little Giant Group Top 25
- Healthy Workplace Recognition
- National Innovation Award (21st)

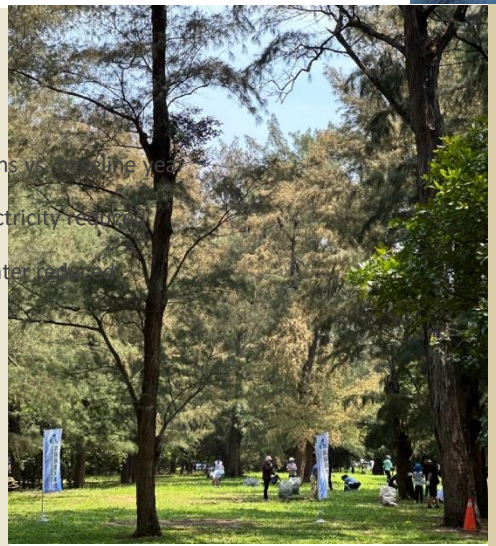
Environmental Sustainability

9% reduction in greenhouse gas emissions vs. baseline year

2% energy saving rate, 930,000 kWh electricity reduced

17% water saving rate, 150,000 tons water reduced

>95% waste recycling rate



Social Responsibility

1,213 volunteer participations

100% hazardous work health checks

NTD 1.58M employee health exams

40% employee stock trust contribution

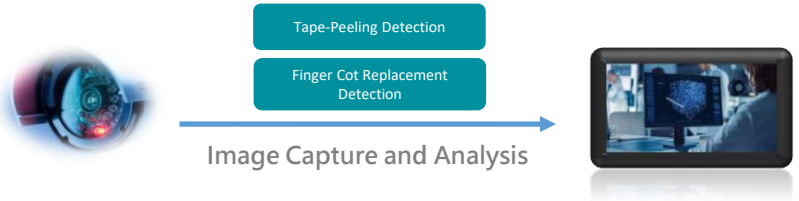
PSI ♥ AI Advanced Process Control

PSI actively advances smart manufacturing. In 2022, we established the world's first intelligent and fully automated reclaimed-wafer facility at our Chungkang Branch in the Taichung Industrial Science Park. We have continued integrating AI technologies to enhance process efficiency, strengthen operational resilience, and reinforce sustainable competitiveness. Through the adoption of artificial intelligence, we aim to further improve process intelligence and elevate quality-management standards across our operations.

PSI CEO Mr. Tsai and the company's technical team collaborated with Professor Lin of the Department of Computer Science and Information Engineering at National Taipei University to jointly advance AI smart manufacturing technologies.

Industry–Academia Partnership: Behavior Recognition Technology Project

PSI partnered with National Taipei University to advance industry–academia collaboration through the "Behavior Recognition Technology Project." Using the RTSP protocol to connect network cameras, the system captures and analyzes real-time images to identify two key behaviors: tape-peeling action and finger-cot replacement. This reduces abnormal-process response time and improves production efficiency. The collaboration began in April 2023, developing the tape-peeling speed and finger-cot detection systems. Testing finished in October, and the solution was implemented in PSI's wafer-thinning process the following month.



Technical Achievements

The project integrates AI-based behavior recognition to strengthen real-time production-line monitoring and information visibility. It enables instant detection of critical actions—such as tape-peeling speed and finger-cot replacement—thereby improving process stability. After deployment in 2024, production yield surpassed 99%, and abnormal-case comparison and handling time decreased by 4%, demonstrating PSI's continued innovation in both smart manufacturing and green sustainability.

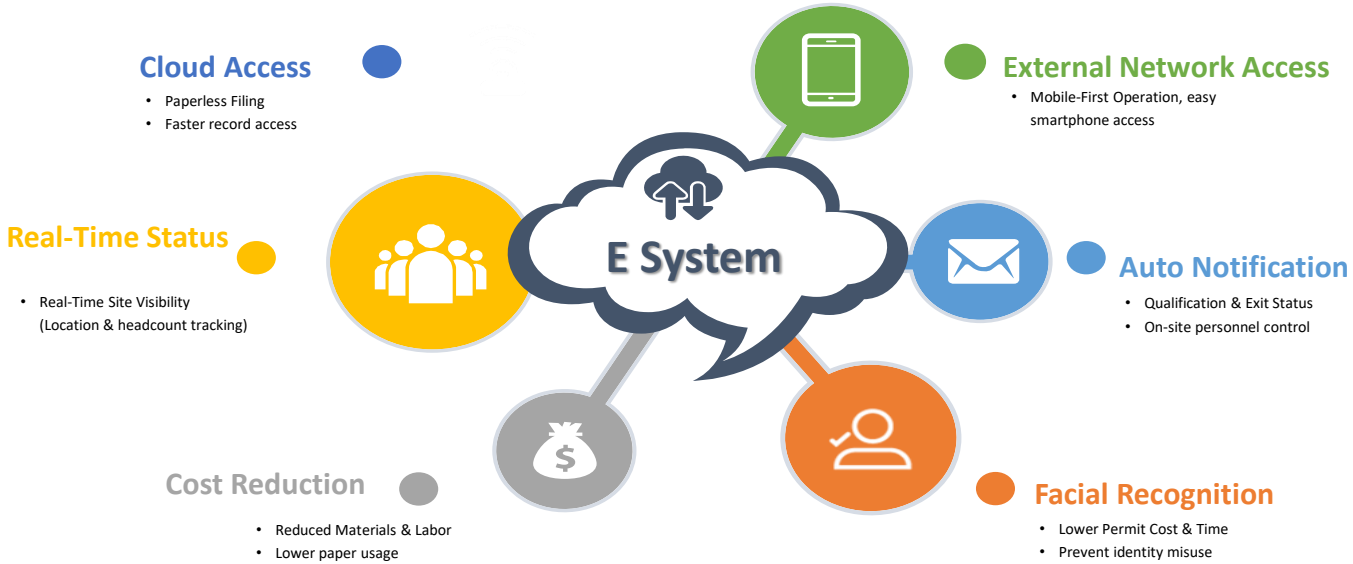
PSI ♥ AI

AI Facial Access

PSI previously relied on traditional paper-based procedures for contractor entry management, including hazard communication, work-permit preparation, identity checks, and personnel tracking. These processes required significant manpower, consumed considerable paper and storage space, increased environmental burden, and reduced response efficiency—creating potential risks in a precision manufacturing environment that demands zero incidents and real-time monitoring.

To advance ESG goals, PSI adopted facial recognition as a core management tool to achieve paperless operations and digital identity verification. This transition supports environmental protection by lowering carbon emissions, reducing material use, and cutting paper consumption—saving 4,830 sheets in 2024. The system provides real-time visibility into contractor access, work locations, and on-site activities, strengthening safety oversight and accelerating risk response in line with our responsibility for worker health and safety.

Through system integration and intelligent management, PSI further enhanced operational governance by preventing identity misuse, reducing manual errors, and minimizing delays. Facial recognition combined with a mobile interface improves convenience and real-time control, demonstrating how PSI leverages technology to reinforce ESG practices and build an efficient, low-carbon, and safe smart-manufacturing environment.



Major Investment

Capacity Expansion Local Commitment Financial Resilience

Fab Expansion, Capacity Growth

To meet the growing global demand for high-quality reclaimed wafers, PSI is constructing an advanced facility in the Taichung Port Technology Industrial Park, with a total investment of NT$2.5 billion and completion expected in 2026. Upon completion, monthly 12-inch reclaimed-wafer capacity will increase from 630,000 to 800,000 units, supporting both domestic and international customer orders while enhancing production efficiency and energy utilization.

Rooted in Taiwan, Local Commitment

PSI supports the government's "Invest in Taiwan" initiative as part of our commitment to deepening local roots and advancing localized production. Through the expansion of our manufacturing base in the Taichung Port Technology Industrial Park, we further strengthen PSI's strategic position within Taiwan's semiconductor supply chain. The company will continue collaborating with local governments and communities to create high-quality employment opportunities and fulfill our corporate social responsibility.

Capital Investment, Financial Resilience

To strengthen our capital structure and support the capital expenditures associated with this expansion, PSI successfully issued NT$2 billion in convertible bonds in 2024. The fundraising enhances financial flexibility and reflects capital market confidence in the company's long-term sustainable growth potential.

Sustainability Achievement 2024 Common Wealth Sustainable Citizen Award

Little Giant Group Top 25

In 2024, PSI participated for the first time in the “Common Wealth Sustainable Corporate Awards” and was selected among the Top 25 in the Small Giants category, earning strong recognition from experts and scholars. The award assesses companies across Corporate Governance, Corporate Commitment, Social Engagement, and Environmental Sustainability, honoring organizations with outstanding sustainability performance. This achievement affirms PSI’s long-term efforts in green manufacturing, governance, and stakeholder value creation.

PSI also launched a Low-Carbon Supply Chain Program in 2024, initiating carbon inventories for suppliers representing 80% of procurement value and planning to set reduction targets by 2026 with regular reviews from 2027 to 2029. Internally, nine improvement projects—such as equipment upgrades and air-conditioning and lighting optimization—support energy saving and carbon reduction. PSI also signed a Green Power Purchase Letter of Intent, aiming to adopt 30 million kWh of green electricity within three years and pursuing RE100 as a long-term goal.

Through supplier commitments, on-site audits, and integrated oversight across procurement, quality, risk, and EHS functions, PSI strengthens supply chain sustainability and promotes local sourcing and domestic production. As the world’s leading reclaimed-wafer manufacturer, PSI remains committed to driving decarbonization and shared progress across the semiconductor value chain.

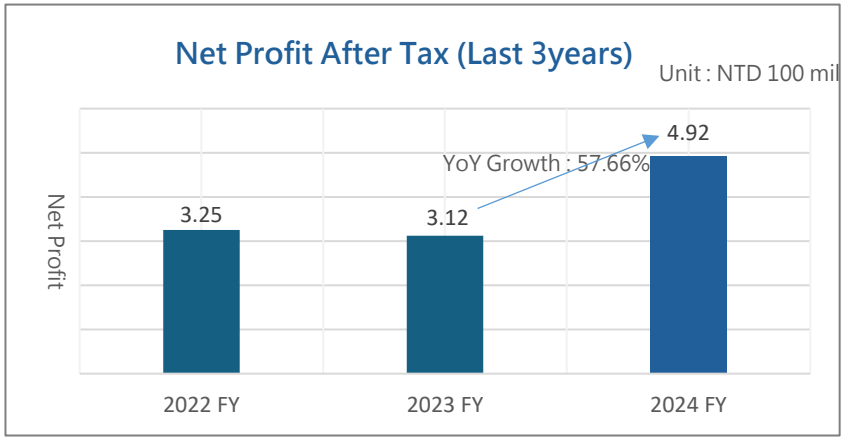
About PSI

Founded in 1997 and headquartered in the Hsinchu Science Park, PSI is a trusted partner in the semiconductor supply chain, specializing in high value-added wafer reclamation and wafer thinning services. With a paid-in capital of NTD 1.726 billion, the company continues to strengthen its technological capabilities and production efficiency.

Our ChungKang Branch in the Taichung Industrial Science Park operates an automated production facility dedicated to wafer reclamation, reflecting PSI's commitment to efficiency and sustainability. As of the end of 2024, PSI had a total of 827 employees, with 85% based at headquarters and 15% at the Chung-Kang Branch—together driving innovation and quality excellence.

Annual Revenue (Unit: NTD 100 Million)	Cash Dividend (NTD per share)	Net Profit After Tax (Unit: NTD 100 Million)
35.52	2.2	4.92
Annual Revenue YoY Growth (%)	**Cash Dividend YoY Growth (%)**	**Net Profit After Tax YoY Growth (%)**
6.73%	22.22%	57.66%

Operating Performance



Note: For related financial performance, please refer to pages 89–97 of the Annual Report.

Company Profile

Established	1997 March 3rd
Capital	NTD 1.726 Billion
Employee	827 employees (Note)
Chairman	Mike Liang
President	Tony Tsai
Location	◆HQ：No.6, Lixing Rd., East Dist., Hsinchu City 300094, Taiwan (R.O.C.) ◆ChungKang Branch：No. 2, Jian 7th Rd., Wuqi Dist., Taichung City 435059, Taiwan (R.O.C.)
Product	◆Wafer Reclaim Service ◆Wafer Thinning Service

Note: Employees at HQ and Chung-Kang Branch as of Dec 31, 2024.

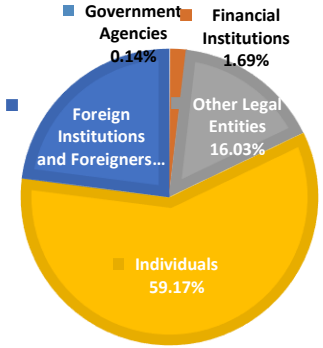
About PSI

Shareholding Structure

March 30, 2024; Unit: People; Shares; %

Shareholding Structure	Government Agencies	Financial Institutions	Other Legal Entities	Individuals	Foreign Institutions and Foreigners	Total
Number of People	1	15	291	59,544	171	60,022
Number of Shares Held	248	2,914	27,677	102,142	39,647	172,628
Shareholding Ratio	0.14%	1.69%	16.03%	59.17%	22.97%	100%

204 Shareholding Ratio



Core Corporate Values

PSI upholds the values of Technological Innovation, Quality Priority, Customer Satisfaction, and Sustainability, continuously enhancing service quality and process competitiveness. In 2024, customer satisfaction for wafer reclamation and wafer thinning rose by 3.61% and 4.71%, showing steady improvement.

We values human rights, diversity, and talent development, and actively engages in social participation and local care, earning the Excellence in Corporate Social Responsibility Award and recognized as Top 25 Sustainability Giants. PSI also certified to ISO 27001, ISO 14064-1, and IATF 16949, demonstrating strong management systems.

In 2025, PSI was named among the 2025 Taiwan FINI 100, reflecting strong recognition from foreign institutional investors for our sustainability and corporate governance performance. PSI follows the TCFD framework to disclose climate risks and continues carbon footprint and reduction initiatives toward sustainable operations.

List of Industry Associations Participated In

Organization Name	Member Status
The Allied Association for Science Park Industries	Member
Taiwan Electrical and Electronic Manufacturers' Association	Member
Taiwan Chief Information Security Officer Alliance	Member
Taiwan Semiconductor Industry Association (TSIA)	Member
Taichung Port Technology Industrial Park Manufacturers' Association	Member

01

Corporate Sustainability

Annual Revenue
NTD 3.552 Billion
Annual Growth Rate: 6.73%

Organization and Strategy

Sustainable Vision

"Promise • Sustainable • Innovation" defines PSI's commitment to sustainable development. Guided by five key pillars—corporate governance, environmental protection, supply chain management, a people-friendly workplace, and social engagement—PSI is committed to protecting the environment and giving back to society with integrity. Through sustainable business practices, we carry forward our corporate culture; through innovative technologies, we create long-term value for the industry—fully embodying the spirit of corporate sustainability.

Sustainable Development Governance and Strategy

PSI actively promotes sustainable governance. In December 2022, we established the Sustainable Development Executive Committee, chaired by the CEO, to coordinate the formulation and implementation of sustainability policies, systems, and management strategies, and to report progress regularly to the Board of Directors. To further strengthen Board-level oversight of sustainability matters, we established the Sustainable Development Committee in November 2024, composed of three independent directors with diverse professional backgrounds and practical experience. The Committee is responsible for reviewing sustainability strategies and supervising implementation effectiveness, ensuring PSI's development aligns with long-term stability and responsible growth. The Sustainable Development Executive Committee operates across four key dimensions—Environment, Society, Governance, and Economy, and oversees eight cross-functional task forces led by senior executives from relevant business units. These task forces are responsible for identifying key ESG issues, developing action plans, allocating sustainability budgets, and establishing performance tracking and continuous improvement mechanisms. Each task force reports progress on a quarterly basis. In 2024, the Executive Committee convened three meetings to consolidate implementation outcomes and to formulate sustainability objectives and action plans for the following year. Overall sustainability performance and strategic outcomes are reported annually to the Board of Directors for review. The Board evaluates effectiveness and feasibility and provides guidance for adjustments as needed. The 2024 implementation results and the 2025 work plan were formally reported to the Board on February 24, 2025, reinforcing collaboration between governance and execution levels and advancing PSI's sustainability roadmap.

Stakeholder Engagement and Communication

Stakeholder Group	Communication Channels & Frequency	Key Topics of Concern	2024 Engagement Outcomes
Investors / Shareholders Investors/shareholders provide investment capital to the Company	1. Annual Shareholders' Meeting (annual) 2. Annual Report (annual) / Quarterly Financial Reports 3. Regular Earnings Calls & Briefings (quarterly) 4. Public Disclosure via Market Observation Post System (MOPS) 5. Investor Section on Company Website Contact: ir@psi.com.tw Contact person: Mr. Chang Tel: +886-3-564-1888	1. Economic Performance 2. Customer Service 3. Business Ethic	1. 1. Chinese & English earnings briefings: 5 sessions 2. Capital market meetings: 18 sessions 3. Investor & analyst meetings: 54 sessions
Employees Employees are key assets for the Company's sustainable operations	1. Employee Assembly, Labor–Management Meetings, Welfare Committee (quarterly) 2. Internal Website, Email & Announcements 3. Regular & Ad-hoc Department Meetings 4. Employee Suggestion Box & Satisfaction Surveys Contact person: Ms. Hsieh (Manager) / Tel: +886-3-564-1888	1. Economic Performance 2. Ethical Management 3. Occupational Health & Safety	1. Labor–Management Meetings: 3 sessions 2. Employee Welfare Committee: 3 sessions 3. Health Promotion Activities: 145 participations
Customers Customers are the primary source of product purchases	1. Customer Satisfaction Survey (annual) 2. Customer Audits (quarterly) 3. Customer Service & Quality Contact Window Contact persons: Mr. Chen / Mr. Yu (Managers) / Tel: +886-3-564-1888	1. Ethical Management 2. Greenhouse Gas Management 3. Sustainable Supply Chain	1. Routine Audits: 9 cases 2. Vehicle-related Audits: 2 cases 3. Other Audits: 2 cases
Government Authorities Government agencies supervise the Company's regulatory compliance	1. Official Correspondence (as needed) 2. Participation in Government Meetings & Inspections (as needed) 3. Public Information Disclosure via Company Website & MOPS Contact person: Mr. Huang (General Manager) / Tel: +886-3-564-1888	1. Greenhouse Gas Management 2. Air Pollution Control 3. Occupational Health & Safety	1. Occupational Safety Inspections: 6 cases 2. Environmental Protection Inspections: 85 cases 3. Fire Safety Inspections: 9 cases

Stakeholder Engagement and Communication

Stakeholder Group	Communication Channels & Frequency	Key Topics of Concern	2024 Engagement Outcomes
Suppliers Suppliers are key partners in providing products and services	1. Supplier qualification review (annually) 2. Corporate website 3. Procurement department contact window Contact person: Mr. Chiu (Manager) Tel: 03-564-1888	1. Ethical business practices 2. Sustainable supply chain 3. Air pollution prevention and control	1. 1. Supplier qualification reviews: 10 suppliers 2. Supplier evaluations: 223 suppliers 3. Procurement audits completed: 45 cases
Financial Institutions Financial institutions provide operating capital for the Company	1. Corporate financial reports: Annual report (annually); Quarterly reports (quarterly) 2. Material information disclosures (as needed) 3. Monthly operating performance announcements 4. Annual Shareholders' Meeting 5. Institutional investor briefings (quarterly) Proactive meetings or contact via Finance Department Contact person: Ms. Shan (Manager)Tel: 03-564-1888	1. Financial performance 2. Customer service 3. Sustainable supply chain	1. 1. Financial institution visits: 28 institutions 2. Material disclosures: 48 announcements 3. 10th Corporate Governance Evaluation score: 90 points (previous year: 85 points)

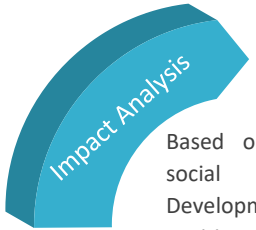
Materiality Management and SDGs Alignment

Stakeholder Identification and Engagement

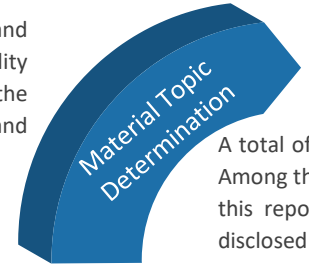
Based on its operational characteristics, PSI Semiconductor identifies six key stakeholder groups through cross-departmental discussions, including investors/shareholders, customers, employees, government agencies, suppliers, and financial institutions. Stakeholder concerns are incorporated into daily sustainability management and annual action plans.

Material Topic Analysis and Determination

Questionnaire surveys were conducted among the six stakeholder groups to assess the importance of sustainability topics. A total of 83 valid questionnaires were collected in 2023.



Based on economic, environmental, and social dimensions, the Sustainability Development Committee evaluated the positive and negative impacts and significance of each topic.

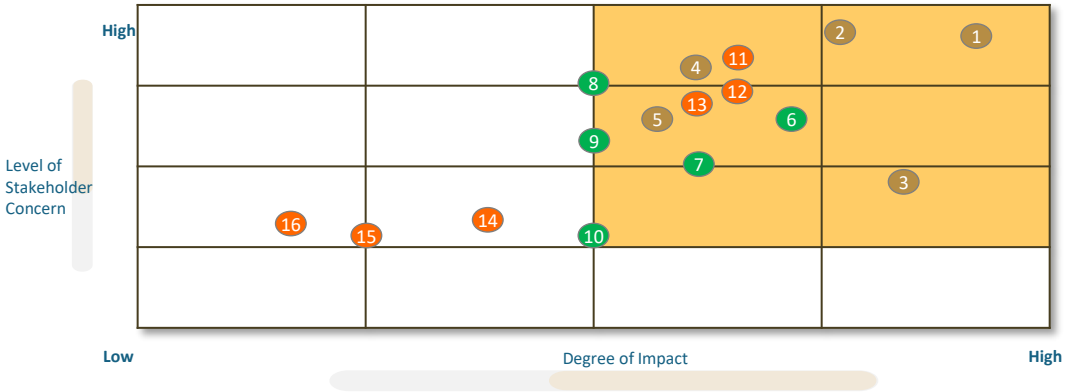


A total of 16 material topics were identified. Among them, 11 key topics are highlighted in this report, while the remaining topics are disclosed in relevant chapters.

PSI conducts a materiality review every two years, with the next assessment scheduled for 2025.

Materiality Management and SDGs Alignment

Material Topic Matrix



In 2023, PSI identified 16 sustainability topics and assessed their impacts on economic, social, and environmental dimensions. Eleven material topics were determined as key disclosures in this Sustainability Report.

Environmental	Energy / GHG / Water Resource / Waste Management
Social	Talent Retention and Employee Care / Human Rights / Occupational Health and Safety
Economic	Ethical Management / Information Security / Customer Service / Sustainable Supply Chain

Notes: Economic topics mainly relate to corporate governance and operations, while air pollution prevention was not identified as a material topic in 2023 but is still disclosed in this report.

Ranking	Topic	Ranking	Topic	Ranking	Topic
1	Financial Performance	6	Human Rights	11	Greenhouse Gas Management
2	Ethical Management	7	Customer Service	12	Waste Management and Resource Recycling
3	Occupational Health and Safety	8	Talent Retention and Employee Care	13	Energy Management
4	Information Security Management	9	Sustainable Supply Chain		
5	Air Pollution Prevention	10	Water Resource Management		

Based on the survey results, stakeholder concern in 2023 increased notably regarding occupational health and safety, talent retention and employee care, as well as ethical management and human rights. PSI Semiconductor will continue to focus on these key topics and implement relevant action plans to strengthen management effectiveness.

Management of Material Topic Impacts

Dimension	Material Topic	Impact Description	Strategy	Impact Boundary and Degree			Related Chapters
				Up-stream	PSI	Down-stream	
ECONOMIC	Ethical Management	Positive: Establishes an ethical management culture and strengthens compliance risk control. Negative: Non-compliance or unethical conduct may impact business operations and corporate reputation.	• Establish codes of conduct and related policies, and implement integrity and ethics training. • Align with international standards and strengthen internal controls to enhance corporate governance. • Implement whistleblower mechanisms to prevent fraud and corruption.	▲	●	●	Corporate Governance – Ethical Management
	Information Security	Positive: Protects business secrets and information assets, ensuring stable operations. Negative: Information breaches may result in financial loss and reputational damage.	• Establish an information security management system and obtain ISO 27001 certification. • Conduct regular system monitoring and drills. • Strengthen data protection and cybersecurity controls.		●	▲	Corporate Governance – Risk Management
	Customer Service	Positive: Enhances customer trust and long-term partnerships, stabilizing revenue sources. Negative: Customer complaints may directly affect revenue and operational risks.	• Collect customer feedback and understand customer needs to improve satisfaction. • Conduct customer satisfaction surveys and complaint-handling mechanisms. • Maintain service quality and responsiveness.		●	●	Innovative Services – Products & Customers
	Sustainable Supply Chain	Positive: Strengthens upstream and downstream collaboration and supply chain risk management. Negative: Geopolitical impacts may disrupt supply chains and affect operations.	• Enhance supply chain risk management and supplier conduct standards. • Reduce supply disruption risks through diversification. • Promote low-carbon supply chains (local sourcing, ISO 14064).	●	●	▲	Innovative Services – Sustainable Supply Chain

Management of Material Topic Impacts

Dimension	Material Topic	Impact Description	Strategy	Impact Boundary and Degree			Related Chapters
				Up-stream	PSI	Down-stream	
ENVIRONMENTAL	Energy Management	Positive: Reduce energy costs, improve efficiency, and strengthen low-carbon competitiveness. Negative: Increased costs and risks from inefficient energy use.	Improve equipment efficiency and implement energy-saving strategies.	○	●	▲	Environmental Protection – Energy & GHG Management
	Greenhouse Gas Management	Positive: Enhance corporate carbon management and climate response capability. Negative: Increased carbon costs and customer requirements.	Manage GHG inventory and emissions reduction; pursue ISO 14067 product carbon footprint verification by 2025.	○	●	▲	Environmental Protection – Energy & GHG Management
	Water Resource Management	Positive: Improve water efficiency and reduce operating costs; access water-related incentives. Negative: Water scarcity and regulatory risks from improper discharge.	Monitor water usage and wastewater discharge; enhance water recycling; assess alternative water sources.	○	●	▲	Environmental Protection – Water Management
	Waste Management	Positive: Reduce disposal costs, lower environmental impact, and demonstrate corporate responsibility. Negative: Higher treatment costs and compliance risks from improper waste handling.	Implement waste reduction and recycling; promote circular use of materials.	○	●	▲	Environmental Protection – Circular Economy

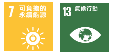
Management of Material Topic Impacts

Dimension	Material Topic	Impact Description	Strategy	Impact Boundary and Degree			Related Chapters
				Up-stream	PSI	Down-stream	
SOCIAL	Talent Attraction and Retention	Positive: Optimize talent utilization, ensure sustainable talent development, enhance employee capabilities, and strengthen organizational competitiveness. Negative: Talent turnover or insufficient development opportunities may affect operational stability.	Improve employee compensation and benefits; understand employee needs and expectations; promote diverse retention measures and well-being programs; foster a people-centered and inclusive workplace.	▲	●	▲	Shared Growth – Talent Attraction and Retention
	Human Rights	Positive: Promote a healthy and sustainable corporate culture. Negative: Potential impacts on employee well-being and normal operations; non-compliance may result in internal disputes or external complaints.	Provide regular training on workplace anti-discrimination and legal compliance; ensure equal opportunities and respect for human rights; establish a friendly and inclusive working environment.	▲	●	▲	Shared Growth – Human Rights Management
	Occupational Health and Safety	Positive: Improve employee welfare and productivity; attract and retain talent. Negative: Workplace safety risks and health incidents may lead to labor disputes or operational disruptions.	Implement occupational health and safety management systems; prevent workplace injuries; conduct emergency drills; strengthen safety management and promote employee health.	▲	●	▲	Shared Growth – Safe Workplace

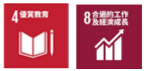
Material Topics and Sustainable Development Goals

Dimension	GRI & SDGs	Material Topic	2024 Targets	Achieved / Not Achieved	2025 & Mid-term Targets
ECONOMIC	GRI 205 GRI 2-23 GRI 2-24 GRI 2-27 SDGs 5 SDGs 16	Ethical Management 	• Zero major legal violations; • Zero corruption cases; • 100% completion rate of ethics training for employees; • Zero reports of violations of ethical management	Achieved	• Zero major legal violations; • Zero corruption cases; • Zero reports of violations of ethical management
	GRI 2-23 GRI 2-27 SDGs 9 SDGs16	Information Security 	• Completion of ISO 27001 surveillance audit; • Zero information security incidents affecting operations; • Obtain ISO 27001 certification by 2026	Achieved	• Establish risk management policies and procedures; • Zero information security incidents affecting operations; • Obtain ISO 27001 certification by 2026
	GRI 417 GRI 418	Customer Service	• Customer satisfaction; Wafer Reclaim: 92 points; Wafer Reclaim: 83 points	Not Achieved Achieved	• Customer satisfaction; Wafer Reclaim customer satisfaction ranking top 2 Wafer Polishing customer satisfaction ranking top 2
	GRI 204 GRI 308 GRI 414 SDGs 8 SDGs 12	Sustainable Supply Chain 	• Maintain 100% responsible mineral sourcing; • Complete development of 12 diversified sourcing solutions in 2024 (40 solutions by 2027); • Local sourcing of raw materials ≥44% (≥67% by 2027); • Local sourcing of spare parts ≥33% (≥74% by 2027); • Key electricity-consuming suppliers to obtain ISO 14064 GHG verification (10% completion in 2024; 100% by 2027)	Achieved Not Achieved Not Achieved Achieved Achieved	• Local sourcing of raw materials ≥55%

Material Topics and Sustainable Development Goals

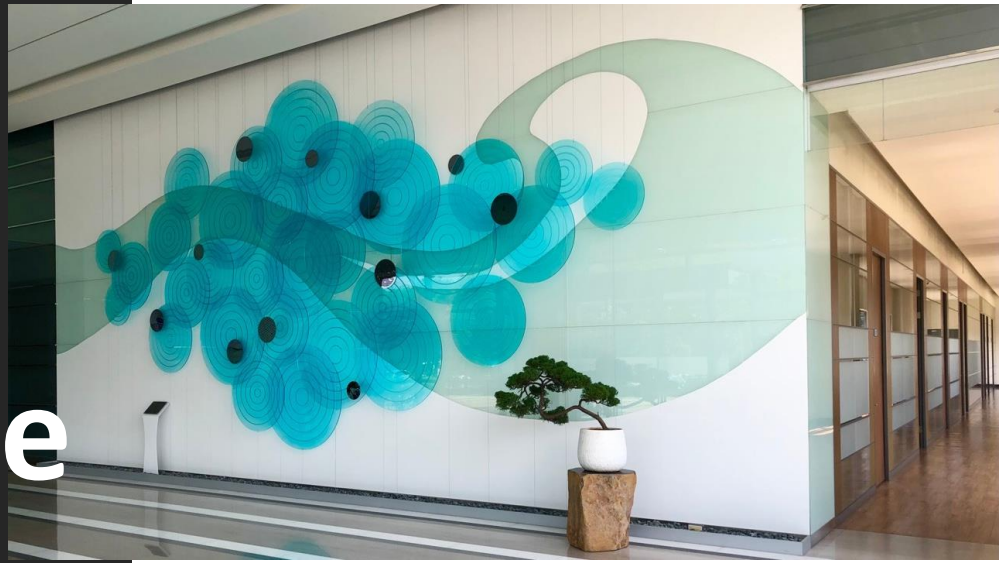
Dimension	GRI & SDGs	Material Topic	2024 Targets	Achieved / Not Achieved	2025 & Mid-term Targets
ENVIRONMENTAL	GRI302 SDGs 7	Energy Management 	Baseline year: 2023 • Annual electricity saving rate ≥2%; • Green electricity usage rate 10% (30% by 2027)	Not Achieved	• Total electricity saving of 7.5 million kWh by 2025 (baseline: 2023–2024 total consumption 4.5 million kWh); • Green electricity usage rate 50% by 2030
	GRI 305 SDGs 7 SDGs 13	Greenhouse Gas Management 	Baseline year: 2023 • Carbon reduction ≥2% in 2024; • Return to 2021 emission level by 2027	Achieved	• Carbon reduction ≥6% by 2025 (Scope 1+2); • Carbon reduction ≥20% by 2030 (baseline year: 2023)
	GRI 303 SDGs 6	Water Resources Management 	• Increase reclaimed water recovery rate >10% in 2024; • Manufacturing water recovery rate reaches 50% in 2024; • Reduce nitrogen discharge pollution by 50% (mid-term target)	Achieved	• Reclaimed water recovery rate >10% by 2025; • Manufacturing water recovery rate 50% by 2025; • Reclaimed water recovery rate 65% by 2030; • Manufacturing water recovery rate 70% by 2030
	GRI 306 SDGs 12	Waste Management 	• Reduce waste by 140 tons in 2024; • Recycled products account for 5% of total waste by 2025; • Zero waste by 2040	Achieved	• Waste reuse rate ≥95% by 2025; • Recycled products account for 5% of total waste by 2025; • Waste reuse rate ≥98% by 2030; • Recycled products account for 50% of total waste by 2030

Material Topics and Sustainable Development Goals

Dimension	GRI & SDGs	Material Topic	2024 Targets	Achieved / Not Achieved	2025 & Mid-term Targets
SOCIAL	GRI404 SDGs 4 SDGs 8	Talent Retention and Employee Engagement 	• Employee satisfaction score to increase by 5% compared to the previous year; • 3-month new hire retention rate ≥70%; • Internal training completion rate 100%	Not Achieved Achieved Not Achieved	• Employee satisfaction score to increase by 5% compared to the previous year
	GRI 2-24 GRI 2-25 SDGs 8	Human Rights 	• 100% completion rate of workplace harassment prevention education and training; • 100% resolution rate of employee grievance cases	Achieved Achieved	• 100% completion rate of workplace harassment prevention education and training; • 100% resolution rate of employee grievance cases
	GRI 403 SDGs 3	Occupational Safety and Health 	• FR and SR lower than the industry three-year average; • Zero occupational fatalities (excluding traffic accidents)	Not Achieved Achieved	• FR and SR lower than the industry three-year average; • Zero occupational fatalities (excluding traffic accidents)

02

Corporate Governance



Corporate Governance Evaluation: 6%–20%

Corporate Governance

PSI upholds the principles of operational transparency and protection of shareholders' rights, recognizing that a sound and effective Board of Directors is essential to strong corporate governance.

To implement this principle, we completed a full re-election of its Board of Directors in 2024, further optimizing the Board structure. Newly appointed members bring diverse professional backgrounds and industry experience, enhancing the Board's overall professionalism and decision-making quality.

Operation and Composition of the Board of Directors

The Board of Directors is the Company's highest governance body, responsible for formulating corporate strategies, supervising management operations, and exercising duties and powers in accordance with laws, the Articles of Incorporation, and resolutions of shareholders' meetings, while being accountable to PSI and all shareholders. We adopt a candidate nomination system for the election of directors, who are elected by the shareholders' meeting from the list of director candidates. In 2024, the shareholders elected the 10th Board of Directors, consisting of 9 directors, including 5 non-independent directors and 3 independent directors (one of whom is female).

Members of the Board have diverse professional backgrounds in corporate management, industry, finance, law, and commerce, providing comprehensive recommendations and enhancing decision-making quality and operational efficiency. To ensure sound corporate governance, the 10th Board elected Mike Liang, an independent director, as Chairman, and reappointed Tony Tsai as General Manager. The Board convenes at least once every quarter. In 2024, a total of 7 Board meetings were held.

In addition to establishing the Audit Committee and the Remuneration Committee, we newly established the Sustainable Development Committee in November 2024 to strengthen governance execution. Members of the functional committees are appointed by independent directors. Each committee assists the Board in supervising business operations, remuneration policies, and ESG strategy implementation, and regularly reports its operational outcomes and resolutions to the Board, ensuring independent and effective decision-making.

PSI has established the position of Chief Corporate Governance Officer to coordinate the Board and functional committees, promote governance implementation, and ensure compliance with corporate governance regulations, thereby enhancing governance quality and protecting shareholders' rights.

Functional Committees Overview

Board Professionalism, Independence and Diversity

Professionalism

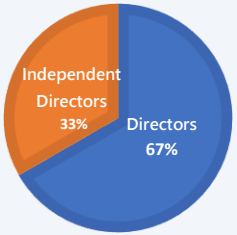
Board members possess diverse professional expertise and extensive management experience, enabling effective oversight and informed decision-making.

Independence

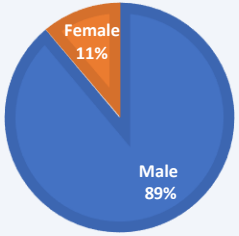
Independent directors perform their duties objectively, strengthening the Board's checks and balances and enhancing governance transparency.
✓ Independent directors comprise one-third (1/3) of the Board

Diversity

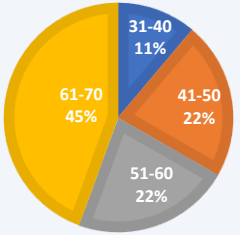
The Board demonstrates diversity in professional expertise, gender, and age, contributing to broader perspectives and more effective decision-making.
✓ One female director appointed



Board Composition
Directors: 6
Independent Directors: 3



Gender Distribution of the Board
Male: 8
Female: 1



Age Distribution of the Board
Age 31–40: 1 Age 41–50: 2
Age 51–60: 2 Age 61–70: 4

Name	Gender	Professional knowledge and skills					Age				Employee Status
		Industry or Technology	Finance or Accounting	Legal	Marking	Sustain-ability	31~40	41~50	51~60	61~70	
Mike Liang	M	V	V		V					V	None
Wen-Cheng Cheng	M	V								V	
Yaw Zen- Chang	M	V						V			
Shin-Chin Huan	F		V						V		
Frank Liang	M	V	V	V				V			
Chun-Wei Liang	M	V	V				V				
Guo-Chao Hong	M		V			V			V		
Shih-Kung Lee	M	V	V			V				V	
Giin-Tarng Hwang	M			V		V				V	

Note: No directors are spouses or relatives within two degrees of kinship.

Directors' and Executives' Remuneration Policy

PSI establishes remuneration policies for directors and executives in accordance with the Articles of Incorporation, Directors' Remuneration Regulations, and Employee Bonus and Distribution Regulations.

Remuneration mechanisms are reviewed by the Audit and Remuneration Committee and approved by the Board to ensure fairness, sustainability, and effective risk management.

Board Remuneration

Under PSI's Articles of Incorporation and Directors' Remuneration Regulations, directors' remuneration includes compensation, remuneration, transportation and attendance fees, and retirement benefits.

Compensation	Except for the Chairperson, directors do not receive fixed compensation; independent directors receive monthly fixed compensation for performing their duties and serving on the Audit and Remuneration Committees.
Remuneration	Distributed based on the Company's annual operating performance, subject to Board resolution and shareholders' approval.
Transportation and Attendance Fees	Directors receive attendance fees and transportation reimbursement for each meeting attended in person.
Retirement Benefits	Directors who concurrently serve as employees (none currently) are entitled to retirement benefits in accordance with the Company's employee retirement regulations.

Executives' remuneration is linked to job responsibilities and performance outcomes, with both financial and non-financial indicators considered, including ESG-related factors.

General Manager's Remuneration

In accordance with PSI's Articles of Incorporation and Employee Bonus Regulations, executive remuneration comprises fixed and variable compensation.

Monthly salary	year-end bonuses, and long-term share trust bonuses granted upon completing one year of service.		
Variable Compensation	Financial Indicators (80%)	Operating bonuses are determined based on revenue achievement rate and operating profit growth. No operating bonus is granted to the General Manager. Variable compensation for each Deputy General Manager is capped at four months' base salary.	
		Employee incentives are determined based on post-tax profit growth.	
	Non-Financial Indicators (20%)	To promote sustainable development, key ESG performance indicators are incorporated into annual performance evaluations and linked to executive incentives, reinforcing management's commitment to sustainability goals.	
		Aspect	Key Performance Indicators (KPIs)
		Environmental (E)	Electricity consumption, water consumption, and greenhouse gas emission reduction rate
		Social (S)	Reduction in employee turnover rate and number of occupational injury incidents
		Governance (G)	Customer satisfaction and local procurement ratio

Performance Evaluation of the Board of Directors and Functional Committees

The Company adopted the Board of Directors and Functional Committees Performance Evaluation Procedures on December 24, 2019. At the end of each fiscal year, performance evaluations are conducted through internal self-assessment questionnaires covering the Board as a whole, individual directors, and functional committees (including the Audit Committee and the Remuneration Committee), with results reported to the Board of Directors. In 2024, the Board of Directors and all functional committees completed self-assessments, with overall results rated as satisfactory and no items requiring improvement. The results were reported to the Board on February 24, 2025, and serve as a reference for performance evaluation, remuneration, and reappointment of Board and committee members. For details on the implementation and results of the 2024 performance evaluation, please refer to pages 17–18 of the Company's annual report.

Continuous Development of Board Members

The Company continuously provides continuing education and training programs for directors and senior executives to enhance their professional knowledge and governance capabilities in sustainability and digital transformation. In 2024, all directors completed at least six hours of continuing education, while corporate governance officers completed 12 hours of training in accordance with regulatory requirements, demonstrating the Company's commitment to professional development. In 2024, the Company arranged training programs for directors on topics such as AI Era and Innovative Corporate Growth Strategies and ESG Governance Trends and Climate Change Risks and Opportunities to address evolving industry and governance trends and strengthen directors' capabilities in sustainability and innovation. Newly appointed directors are required to complete at least 12 hours of initial training to familiarize themselves with corporate operations and legal responsibilities, ensuring sound and compliant board operations. For details on training completed by directors, corporate governance officers, and executives, please refer to pages 47–48 of the Company's annual report.

Avoidance of Conflicts of Interest

Directors of the Company adhere to principles of integrity and self-discipline. To ensure independence and fairness in board operations, rules regarding conflicts of interest and recusal are clearly stipulated in the Rules of Procedure for Board Meetings and the Audit Committee Charter. Where a director has a conflict of interest with respect to a proposal or agenda item, the director shall disclose the relevant relationship and abstain from discussion and voting and shall not exercise voting rights on behalf of other directors. The Company has established procedures for approving directors' engagement in competitive businesses and conducts annual reviews to confirm whether directors are involved in activities related to or similar to the Company's business, with shareholder approval obtained in accordance with applicable laws to safeguard corporate governance and shareholders' interests. Information regarding directors holding positions in other companies is disclosed on pages 4–6 of the Company's annual report.

Directors' Training Programs

- AI Era and Innovative Corporate Growth Strategies
- ESG Governance Trends and Climate Change Risks and Opportunities

Taxation

PSI is committed to the principle of integrity, complying with applicable tax laws and regulations in all jurisdictions, and maintaining respectful, transparent, and timely communication with tax authorities to ensure that tax strategies align with sustainable development goals while enhancing transparency and protecting investors' interests. In 2024, PSI's income tax expense amounted to NT$67 million, with an effective tax rate of 11.99%, lower than Taiwan's statutory corporate income tax rate of 20%, primarily due to tax incentives under the Statute for Industrial Innovation and investment tax credits for R&D expenditures and advanced manufacturing equipment.

Tax Policy and Commitments

- **We uphold mutual trust and integrity and maintain a relationship of mutual respect with tax authorities.**
- **Financial reporting and disclosures comply with applicable laws, regulations, and accounting standards.**
- **We emphasize information transparency, and all tax disclosures are made in accordance with relevant laws and regulations.**
- **We assess tax risks based on the operating environment, and major business decisions take tax implications into consideration.**

Tax Governance and Risk Management

Departments	Responsibilities
Finance and Accounting	Oversees income tax filings, manages tax-related information, and assesses tax risks.
Audit Unit	Conducts regular audits of tax processes and compliance.
External Tax Advisors	Certified public accountants engaged to provide advice and risk alerts on major transactions, transfer pricing, and cross-border tax matters.
Audit Committee	Evaluates the impact of significant tax policy changes and related risk control measures.

1. **Key Tax Governance Measures**
   - Enhance employees' tax expertise and risk identification capabilities.
   - External Tax Advisors: Certified public accountants engaged to provide advice and risk alerts on major transactions, transfer pricing, and cross-border tax matters.
2. **We maintain robust tax filing and approval procedures.**
   - Income tax filings are centrally managed by the Finance and Accounting Department and controlled through internal approval mechanisms.
3. **We adhere to principles of tax integrity and transparency in external relations.**
   - Comply with tax laws and ensure timely and accurate tax reporting and disclosure.
   - Regularly assess tax risks to safeguard the interests of the Company and its investors.

Integrity Management

Ethical Business Philosophy and Policy

PSI upholds ethical business conduct as a core corporate value and believes that integrity is the foundation of sustainable operations. Ethical conduct helps build a strong corporate reputation, enhance satisfaction among customers, employees, and shareholders, and strengthen operational performance and competitiveness. We formulate policies based on integrity, transparency, and accountability, and establish sound corporate governance and risk management mechanisms to foster a sustainable business environment. PSI strictly complies with the Securities and Exchange Act and other applicable regulations, prohibiting insider trading and improper disclosure of non-public information to mitigate operational risks and enhance governance transparency.

Code of Ethical Conduct

- ✓ Principle of Integrity：All directors, executives, and employees shall conduct business fairly, honestly, in good faith, and transparently, and refrain from any fraudulent or unethical conduct.
- ✓ Prohibition of Improper Conduct：Bribery, kickbacks, insider trading, disclosure of confidential information, and conflicts of interest are strictly prohibited in accordance with applicable laws and Company policies.

Code of Ethical Conduct for Directors and Executives

- ✓ Conflict of Interest Avoidance：Directors and executives shall prioritize the Company's interests, proactively disclose conflicts of interest, and recuse themselves from related decision-making to ensure fair governance.
- ✓ Prohibition of Improper Benefits：Directors and executives shall not accept kickbacks, gifts, or other improper benefits from suppliers, customers, or third parties to ensure ethical conduct and fair transactions.

Ethical Business Procedures and Guidelines

- ✓ PSI has established effective accounting systems and internal controls to implement ethical business practices. Employees are required to proactively report ethical concerns or conflicts of interest to prevent improper conduct.
- ✓ Prior to engaging suppliers, PSI conducts due diligence on transaction records and external information to ensure ethical compliance and strengthen supply chain risk management.

Personal Data Protection Policy and Implementation

- ✓ PSI has established personal data protection policies, management systems, internal controls, operational procedures, and emergency response mechanisms.
- ✓ In 2024, all employees completed personal data protection training, with 660 training participations and a 100% completion rate, strengthening information security and personal data protection awareness.

Implementation of Ethical Business Practices in 2024

Prevention of Insider Trading

PSI conducts regular training on the prevention of insider trading each year. In 2024, training sessions were held on June 24 and December 21, covering relevant laws and regulations, improper use of insider information, and practical case studies. A total of 39 directors, executives, and managers participated. Training materials were uploaded to the internal knowledge management system for reference. Newly appointed directors, executives, and employees are required to complete mandatory ethics training upon onboarding. To strengthen information disclosure management and regulatory compliance, PSI implements the Insider Trading Prevention Management Policy. Prior to financial report announcements, trading blackout notices are issued. In 2024, blackout periods were implemented on January 18, April 23, July 22, and October 21, and directors and executives also participated in external insider trading compliance courses to enhance corporate governance.

Supplier Management

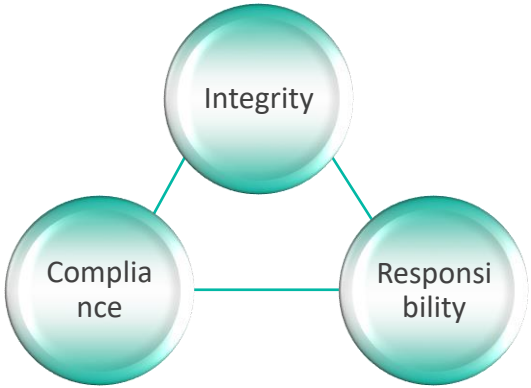
- ✓ PSI requires suppliers to sign a Supplier Integrity Commitment, pledging compliance with the Code of Ethical Business Conduct and Responsible Business Alliance (RBA) Code of Conduct. As of 2024, 531 suppliers have completed the commitment process.
- ✓ Contracts explicitly state that if suppliers engage in unethical conduct, PSI reserves the right to terminate or rescind the contract at any time.

Education and Training

- ✓ In 2024, PSI conducted ethics, legal compliance, and integrity-related training programs, reaching a total of 815 participants, with a 100% completion rate.
- ✓ PSI also regularly publishes ethics and compliance-related articles on its internal intranet to promote ethical business practices and awareness. In 2024, 14 articles were published.

Reporting System / Regular Reviews

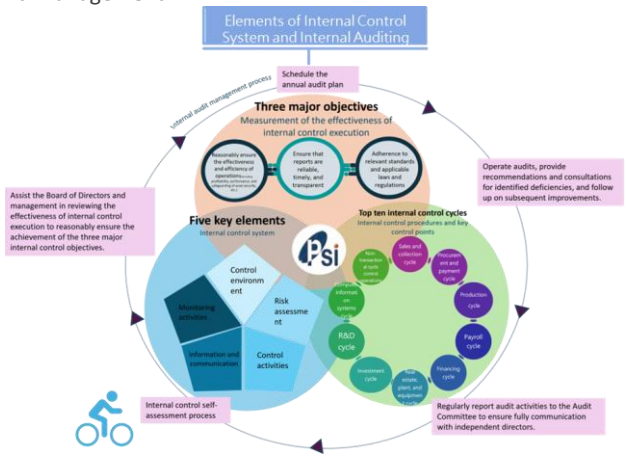
- ✓ PSI has established a whistleblower reporting mailbox, with designated legal and compliance units responsible for handling reported matters in accordance with internal procedures.
- ✓ In 2024, no cases of reported violations of ethical business practices were received.
- ✓ In 2024, no incidents of violations of professional ethics were identified.



Internal Audit

The Internal Audit function of PSI is an independent unit reporting directly to the Board of Directors. The purpose of Internal Audit is to assist the Board and management in reviewing deficiencies in the internal control system, assessing the effectiveness and efficiency of operations, and providing timely improvement recommendations to management, thereby ensuring the continuous and effective implementation of internal controls and serving as a basis for their review and revision.

PSI's auditor develops annual audit plans based on risk assessment. Auditors file the audit plan for review by the Audit Committee and approved by the Board. Internal auditor executes specific project audits as directed by the Board and management.



Auditor was regularly submitted audit reports to the Chairman and reported to the Audit Committee and Board within statutory deadlines.

Auditor maintains communication with auditees, reports internal control deficiencies or abnormalities, and supervises improved actions. The auditor assists other units in performing self-assessments, reviews the assessment results and submits them to Board meeting for approval, and issues the annual Internal Control Statement accordingly. Since 2024, we have systemized self-assessment using an E-platform, requiring units to submit digital working papers as evidence to enhance transparency, self-auditing capabilities, and traceability.

In response to the 2024 amendments to the "Regulations Governing Establishment of Internal Control Systems by Public Companies," we amended internal control revisions during the Board meeting on December 26, 2024. These included new "Sustainable Information Management" procedures, which will be a mandatory audit item starting from 2025 to strengthen the quality and transparency of sustainability disclosures.

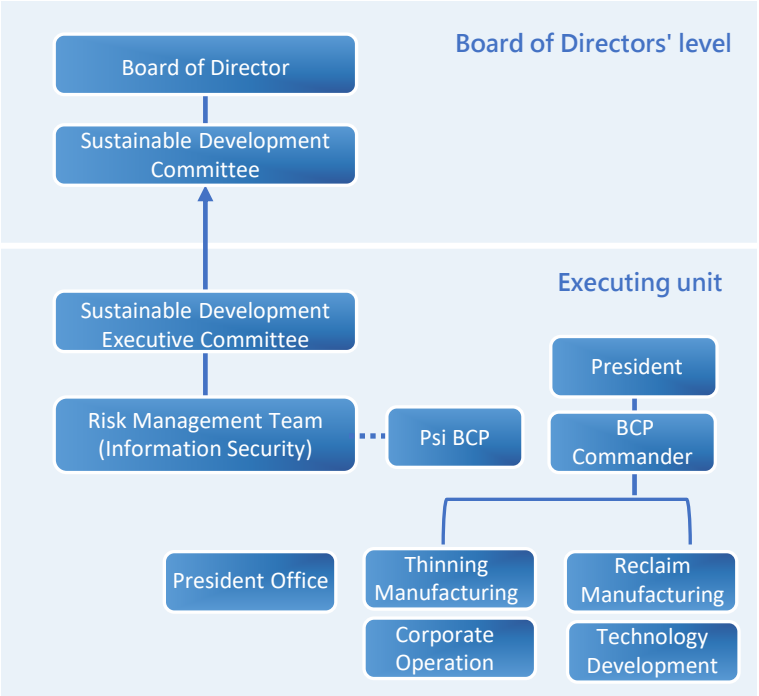
Risk Management

Risk Management Architecture

PSI's risk governance integrates into the sustainability system. The Board-level committee provides oversight, and the executive committee executes.

To enhance risk identification and response, we established a Risk Control team, focusing on key risks like information security. We collaborate with the dedicated Psi BCP team (Business Continuity Procedure) on assessment and planning.

The BCP command is led by the President, integrating various operations, R&D, and admin departments. They plan prevention and response for interruption risks, conducting regular drills to boost resilience.



Business Continuity and Risk Management Framework

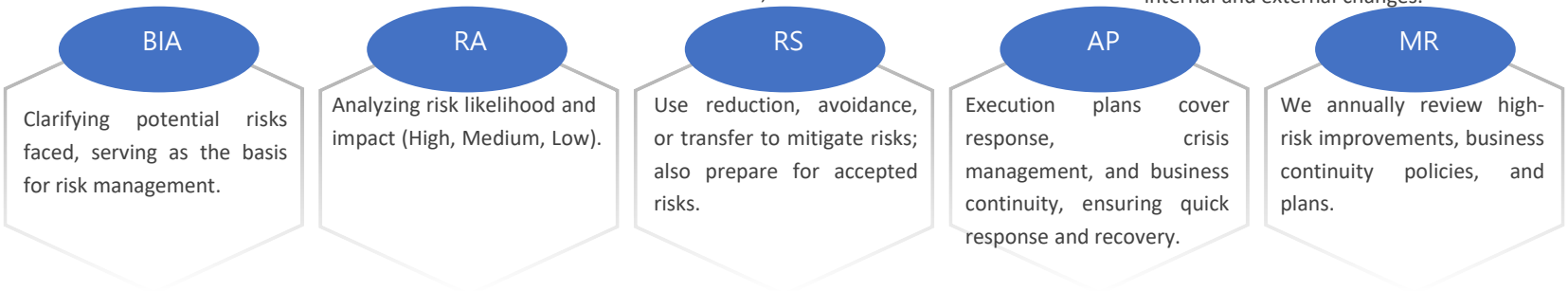
PSI built BCP procedures via a cross-departmental team to manage risk and strengthen resilience. We integrate IT security and continuity strategies.

Future plans involve adopting "Risk Management Principles for Listed Companies" to enhance governance and improve management of major operational, climate, and security risks.

Risk Management

PSI follows risk-oriented principles, building a risk management mechanism focused on business continuity. The process covers five stages: Business Impact Analysis, Risk Assessment, Risk Strategy, Execution Plan, and Supervision/Review. This enhances organizational resilience to sudden events.

1. Business Impact Analysis (BIA): Units identify critical activities, analyze potential interruption impacts, assess tolerable downtime, set recovery targets, and inventory necessary resources.
2. Risk Assessment: Focuses on potential threats and vulnerabilities affecting critical operations. We assess the likelihood and impact of risks to prioritize them and formulate strategies.
3. Risk Strategy: Develops concrete countermeasures, including avoidance, reduction, transfer, and acceptance. These are integrated into plans and response procedures to ensure operability and timeliness.
4. Execution Plan: Covers three levels: Emergency Response, Crisis Management, and Business Continuity. Emergency response focuses on personnel safety and asset protection. Crisis management targets command, resource coordination, and communication. Business continuity focuses on restoring core functions and ensuring effective cross-departmental coordination. Organizational structures, responsibilities, processes, and notification mechanisms are clearly defined beforehand, executed, and monitored via standardized guidelines.
5. Supervision/Review: Involves regular drills, audits, and continuous improvement. Analysis of drill results and a systematic feedback mechanism ensure high consistency between plans and practice, with rolling revisions made in response to internal and external changes.



PSI systematically manages risks (identify, prevent, respond) to ensure business continuity and resilience during disruptions, achieving governance and sustainable goals.

Risk Management and Response Measures

Major Risk	Risk Level (Likelihood / Impact)	Risk Description	Response Measures and Mitigation Actions
Natural Disasters	Medium (Medium / Low)	Typhoons, earthquakes, or other natural disasters may cause power outages, system abnormalities, or production disruptions, affecting manufacturing progress and delivery schedules.	• Establish an Emergency Response Team (ERT) and conduct regular emergency drills; • Strengthen equipment maintenance and structural reinforcement, and enhance supplier contingency agreements; • Train employees in emergency response and coordinate external supplier support when necessary.
Raw Material Shortage	Medium (Medium / Low)	Geopolitical conflicts or supply disruptions may affect key raw material supply, causing production interruptions and increased costs.	• Develop alternative supplier sourcing and diversify supply channels; • Support supplier capability development and enhance supply chain resilience; • Increase inspection and testing of critical materials to ensure uninterrupted production.
Cyber Attacks and Data Breaches	Medium-High (Medium / Medium)	Hacker attacks or system intrusions may cause data breaches, operational interruptions, and information security risks.	• Implement information security monitoring and protection mechanisms; • Strengthen internal network security management and information system access controls; • Conduct regular system testing and execution of Information Management Systems (IMS).
Water Supply Shortage	Medium-Low (Medium / Low)	Climate change or drought may reduce water availability, affecting production water usage.	• Adjust water recycling systems and improve water efficiency; • Coordinate with local water authorities to ensure emergency water supply.
Equipment Damage	Medium (Medium / Low)	Natural disasters or unstable supply may cause partial equipment damage, affecting normal production operations.	• Implement regular equipment inspection and preventive maintenance; • Maintain spare parts inventory and emergency repair plans; • Prioritize rapid recovery of critical equipment.
Labor Shortage	Medium (Medium / Low)	Major disasters or operational disruptions may result in workforce shortages, affecting production continuity.	• Establish workforce contingency plans and flexible staffing arrangements; • Utilize outsourcing or temporary workforce support; • Increase automation to mitigate labor dependency.
Transportation Delays	Medium (Medium / Low)	Global supply chain disruptions or port congestion may delay shipments, impacting delivery schedules and customer trust.	• Evaluate alternative logistics routes and shipping schedules; • Assess transportation risks and diversify logistics options; • Maintain flexible delivery arrangements to reduce disruption impacts.
Trade Tariffs	Medium-High (Medium / High)	Changes in international trade policies or tariffs may increase export costs and reduce profit margins.	• Assess product manufacturing locations and tariff exposure; • Work with customers to adjust delivery or export arrangements; • Optimize customs and logistics processes to mitigate tariff risks.

Information Security Management Policy

Information Security Organization

Information security plays a critical role within PSI. It enhances information security management capability, protects corporate assets, ensures regulatory compliance, and supports business development, while strengthening employee awareness and reducing information security risks. PSI has established an Information Security Committee, which convenes monthly information security meetings to review and resolve key information security and data protection matters, and to monitor policy implementation. At least once a year, management reports to the Board on major information security policies, risk assessment results, operational impact analyses, business continuity planning for critical operations, system access control reviews, vulnerability scanning, and social engineering drill outcomes. The most recent Board briefing was conducted on November 8, 2024, providing guidance from the highest governance level and ensuring alignment with PSI's information security policy objectives.

Information Security Committee

General Manager, Vice Presidents, Chief information Officer, Chief Information Security Officer

- **Information Security Team** — Responsible for implementation, maintenance, review, and continuous improvement of information security management systems
- **Emergency Response Team** — The information received by the monitoring station should be evaluated, and information security incidents should be reviewed to suggest appropriate actions in response to identified information security events.
- **Information Security Audit Team** — Evaluates the implementation status of the information security management system

Information Security Policy

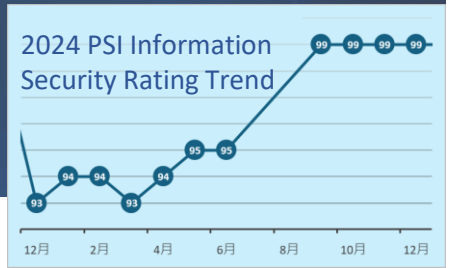
Information security and data protection are core commitments to PSI's customers, shareholders, and partners. PSI has established a comprehensive information security governance and management framework, including an Information Security Committee, dedicated security personnel, and defined responsibilities. In alignment with corporate policies, PSI formulates information security management programs and issues an Information Security Statement, clearly expressing management's commitment and objectives to maintain competitiveness and protect the interests of customers and partners.

Information Security Statement

PSI is committed to providing customers and partners with high-quality semiconductor manufacturing services. Recognizing the importance of information security in collaborative relationships, PSI continuously strengthens its information security governance and protection mechanisms to enhance competitiveness and safeguard stakeholder interests.

Third-Party Information Security Risk Management Platform

PSI adopts a third-party risk management platform to assess information security risks. In 2024, the information security maturity score improved **from 93% to 99%.**



Information Security Management System

To enhance information security standards, strengthen corporate credibility, increase customer satisfaction, and reduce information security risks in support of sustainable development, PSI has obtained ISO 27001:2022 certification. Through the establishment and implementation of an Information Security Management System (ISMS), PSI ensures the confidentiality, integrity, and availability of information assets. PSI conducts information asset classification, risk assessment, and control measures; formulates information security policies and procedures; implements security controls; and performs regular monitoring, review, and continuous improvement. These measures further enhance organizational management maturity and internal security culture, contributing to long-term sustainability and competitiveness.

2024 Information Security Education and Training

- Regular internal communications are conducted through internal announcements and newsletters to promote information security awareness. In 2024, a total of 12 articles were published.
- Information security policies and regulations are announced and reinforced through education and training, which is included as a mandatory onboarding course. All new employees are required to complete 3 hours of information security training. Total participation reached 658 employees.
- Social engineering drills are conducted periodically to test employee awareness and response capability. In 2024, 122 phishing simulation emails were issued, and follow-up training was completed for identified risk cases.

Comprehensive Information Security Management Measures

IT and System Security	Security controls are applied across system development, maintenance, information processing, facilities, and networks, with regular audits to identify and remediate vulnerabilities.
Personnel Security and Education	Employees receive 3 hours of information security training, along with regular disaster recovery and social engineering drills.
Personal Data and Confidential Information Management	• Personal data and confidential information are managed in accordance with the Personal Data Protection Act and Trade Secrets Act. • In June 2024, 65 training sessions were completed with 655 participants, achieving a 100% completion rate.
Server and Virtualization Management	System architecture planning, data backup, and disaster recovery measures are implemented, supported by cloud and virtualization technologies to enhance efficiency and resilience.
Information Security Alliance Participation	PSI participates in TWCERT/CC and related alliances; in 2024, 172 threat intelligence alerts were received and addressed.
International Information Security Certification	PSI is certified under ISO 27001:2022, valid from September 25, 2023 to September 24, 2026.

Operational Performance

PSI maintains a sound financial foundation through prudent operating strategies, creating stable long-term economic value while balancing the interests of all stakeholders. During the reporting period, the semiconductor industry faced inventory adjustments, inflationary pressure, supply chain disruptions, and geopolitical risks. Nevertheless, supported by the rapid growth of AI applications, advanced manufacturing, and AI server demand, the industry began to show a gradual recovery in 2024. Leveraging its technological leadership, PSI continues to focus on high value-added surface processing and wafer reclaim core technologies, while optimizing manufacturing efficiency and yield to strengthen product competitiveness.

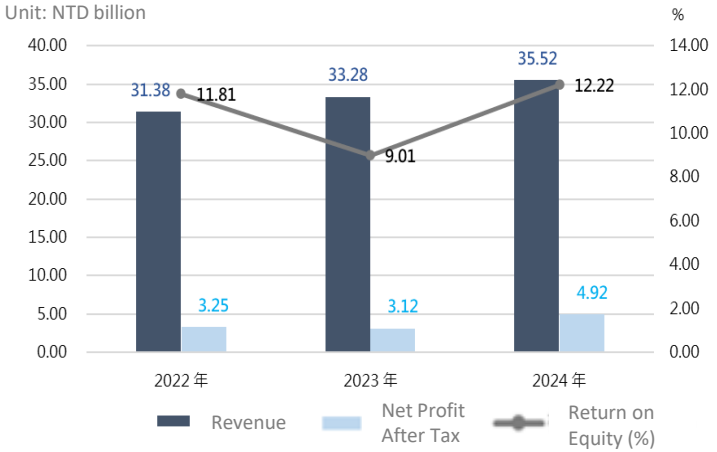
In 2024, revenue reached NTD 35.52 billion, representing a 6.73% year-on-year increase and marking the fourth consecutive year of record highs. Benefiting from product mix optimization and operational efficiency improvements, net profit after tax increased significantly to NTD 4.92 billion, a 57.66% growth compared to the previous year.

Financial Performance

Unit: NTD billion

Item / Year	2022	2023	2024	vs.2023 Growth
Revenue	31.38	33.28	35.52	6.73%
Operating Profit	3.08	2.29	5.35	133.05%
Net Profit After Tax	3.25	3.12	4.92	57.66%
EPS (NTD)	2.17	2.02	2.85	41.09%
Return on Assets (%)	4.72	4.12	5.81	41.02%
Return on Equity (%)	11.81	9.01	12.22	35.63%

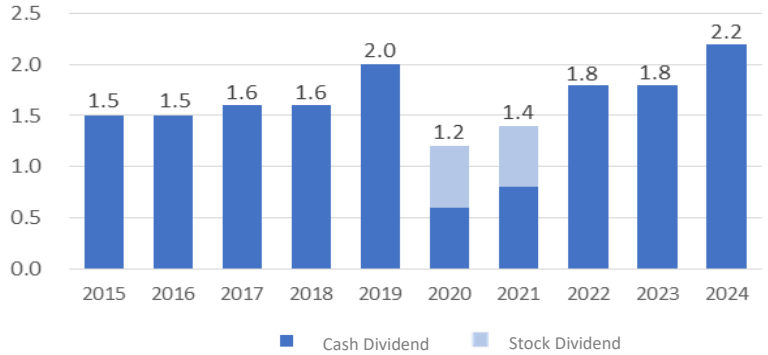
Note: Please refer to pages 89–97 of the Annual Report for related financial information.



Dividend Distribution

PSI upholds a prudent financial strategy, striving to achieve stable and sound financial performance while continuously delivering tangible returns to shareholders. Since 2015, PSI has consistently distributed cash dividends on an annual basis, demonstrating its long-term commitment to shareholders and focus on capital returns. In 2024, supported by solid profitability, PSI distributed a cash dividend of NTD 2.2 per share, marking a new high over the past ten years and reflecting strong operating momentum and sustained commitment to shareholder value.

Currency: NTD



Market Capitalization

Creating Long-Term Investment Value at PSI — Two Key Strategies

Long-Term Investment Value

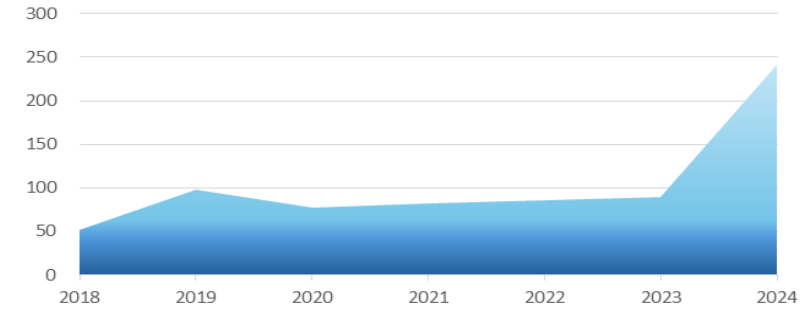
Technological Innovation & Capacity Support

- World's first fully automated lights-out smart reclaimed wafer fab.
- High-precision thinning capability upgraded to **50 µm,** supporting advanced reclaimed wafer and packaging applications.
- 2024 reclaimed wafer capacity reached an equivalent **12-inch annual output of 7 million wafers.**

Revenue Growth & Stable Profitability

- Revenue CAGR (2018–2024): 8.97%
- Net Income After Tax CAGR (2018–2024): 13.27%
- Return on Equity CAGR (2018–2024): 10.10%

Currency: NTD



Historical Market Capitalization (PSI IPO in 2018)

03

Innovative Services

21st National Innovation Award

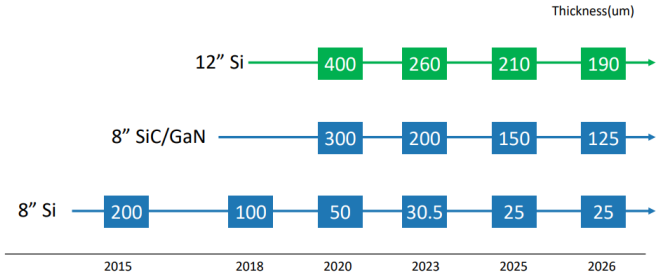
All-in-One Liquid Protein Real-Time Quantitative Detection Chip

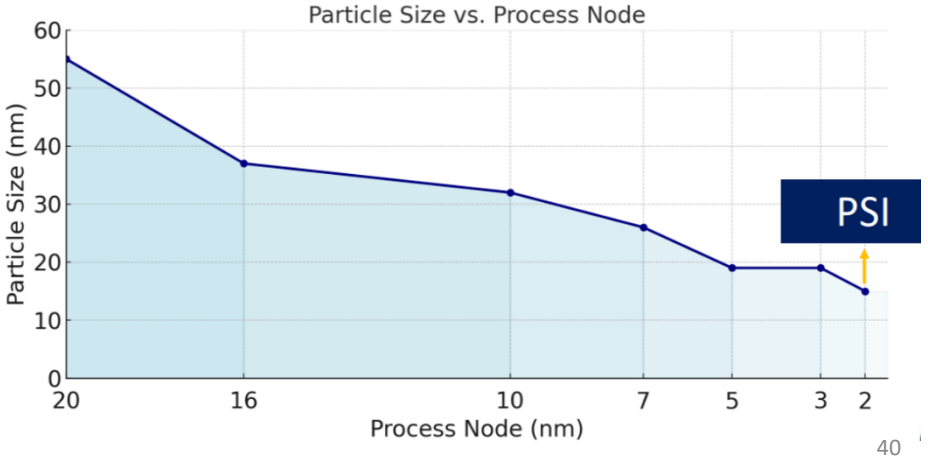
Innovation and R&D

Core Technology

PSI's core technologies focus on wafer polishing, etching, cleaning, and wafer thinning processes. With the rapid rise of AI and the resulting surge in semiconductor demand, customers continue to advance toward more sophisticated manufacturing technologies—driving PSI to consistently push the boundaries of its process capabilities. Today, PSI has become a major supplier of reclaim wafers for customers working at advanced nodes below 2nm. In addition to continuous capacity expansion, PSI also provides ultra-flat, low-defect carrier wafers to meet the stringent requirements of advanced packaging technologies such as CoWoS.

In recent years, PSI's thinning technology has gone beyond reducing traditional silicon power-device wafers down to 25µm. With the growing markets of electric vehicles, low-Earth-orbit satellites, and AI servers, third-generation semiconductors(SiC/GaN) have gained significant attention due to their high-power performance and low-energy-consumption advantages. PSI has successfully overcome the machining challenges of hard and brittle materials, demonstrating strong competencies in wafer thinning. Customer product qualifications are underway, and this new business momentum is expected to become a fresh growth driver for PSI's future revenue.





AI Innovation

PSI's 12-inch reclaim wafer fab features a high level of automation supported by extensive AI adoption. This approach significantly reduces reliance on direct labor while shifting focus to advanced talent responsible for equipment management and process optimization, positioning PSI as a leading example of AI-driven manufacturing among its peers.

To meet growing customer demand, PSI continues to expand capacity through AI-enabled automation, accelerating mass production without being constrained by workforce learning curves. Total capacity is expected to reach 850,000 wafers per month by the end of 2025.

Knowledge-sharing Platform

We encourage employees to think proactively and propose innovative ideas in their daily work, starting with strong engineering fundamentals such as systematic documentation and record-keeping, while also promoting applications for trade secret protection. In the second half of 2024, we established an internal knowledge-sharing platform that enables all units to implement innovation in daily operations, including information security, energy efficiency and carbon reduction, occupational safety, and environmental protection, embedding an innovation-driven DNA across the organization.

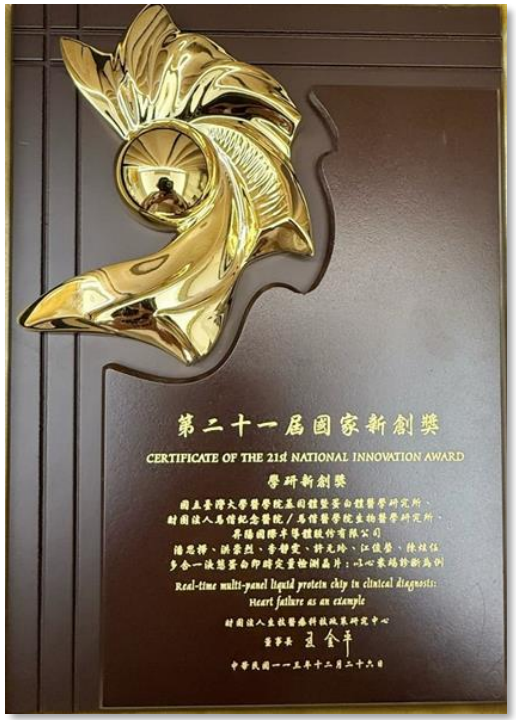
In addition to internal innovation, we collaborate with external partners, particularly local suppliers. By integrating internal capabilities with external resources, we aim to deliver more competitive and sustainable solutions.

21st National Innovation Award

All-in-One Liquid Protein Real-Time Quantitative Detection Chip – Heart Failure Diagnosis

Since its establishment in 2018, PSI's Biochip Technology Development Department has focused on the development of protein detection chips. In 2020, supported by the National Science and Technology Council (NSTC), we collaborated with National Taiwan University College of Medicine and MacKay Medical College to develop a Lung Adenocarcinoma Recurrence Monitoring Chip and an All-in-One Liquid Protein Detection Chip for point-of-care clinical use. The All-in-One Liquid Protein Detection Chip integrates four cardiovascular biomarkers to enable chronic disease risk assessment using micro-sample analysis. By applying PSI's proprietary surface modification and surface-structuring technologies, antibody alignment and spatial configuration are optimized while interference from ions and non-specific proteins is minimized, allowing weak yet distinguishable signals to be detected without secondary signal amplification.

This technology not only enables effective control of development costs, but also significantly reduces reliance on animal-derived antibodies, thereby decreasing the use of experimental animals. In addition, it provides early warning and personalized healthcare intervention recommendations for high-risk populations with chronic comorbidities, such as diabetes. The technology was recognized with the 21st National Innovation Award in the Academia–Industry Innovation category and is expected to be extended to primary care clinics and home-testing applications, offering patients more efficient and accessible healthcare solutions.



Ms. Ching-Wen Li, Manager of PSI's Biochip Technology Development Department (third from right), together with Associate Professor Pan of the National Taiwan University College of Medicine (center) and Professor Hung of MacKay Medical College (second from right), is pictured with Dr. Yang, Vice Chairman of the Taiwan Bio Industry Organization (third from left), at the 21st National Innovation Awards ceremony.

Products and Customer Services

We focus on wafer reclaim and wafer thinning services. Driven by rapid growth in advanced process demand (CAGR >20%), we continue to expand reclaim wafer capacity while advancing toward higher-specification products, advanced applications, and highly automated manufacturing, including the adoption of dry photoresist stripping equipment to improve efficiency and reduce costs.

Our wafer thinning services are evolving toward larger wafer sizes (8-inch to 12-inch) and Backside Grinding and Backside Metallization (BGBM) processes for third-generation semiconductors such as GaN and SiC. Our customers include wafer foundries, memory manufacturers, IDMs, and IC design houses. While meeting customer upgrade needs, we integrate sustainability into our operations and work with customers toward a sustainable future.

We are committed to meeting customer needs while advancing environmental protection and sustainable operations. Reclaim wafer services are our core business, restoring used wafers to reusable condition through advanced processes. This enables wafer foundries to reuse wafers for process control, significantly reducing new wafer consumption and supporting energy savings, carbon reduction, and circular utilization, in line with green supply chain principles. For wafer thinning services, we enhance sustainability by adopting eco-friendly materials, reducing packaging and waste, and providing sponge and wafer carrier box cleaning and recycling solutions. In particular, improving thinning yield and process capabilities for third-generation semiconductor applications is a key focus of our future development.

PSI Sustainability Strategy

Core Business

Wafer Reclaim and Thinning
The foundation of PSI's sustainable operations.

Reclaim Strategy

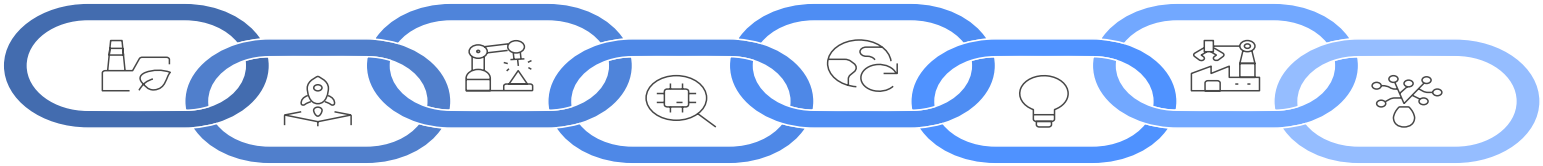
Advance process technologies and automation to ensure stable and high-efficiency wafer reclaim services.

Reclaim Sustainability

Promote reclaimed wafer reuse to effectively reduce resource consumption.

Key Customer Segments

Serve leading wafer foundries, IDMs, and IC design companies.



Growth Drivers

Customer demand drives capacity expansion and enables accelerated growth.

Thinning Strategy

Expand advanced packaging and third-generation semiconductor technologies.

Thinning Sustainability

Introduce resource recycling and recovery measures to enhance energy efficiency.

Sustainability Value Chain

Create long-term value and environmental co-prosperity through sustainability initiatives.

Customer Privacy and Data Protection

With the acceleration of digital transformation, customer privacy and data protection have become essential to business operations. PSI strictly complies with applicable laws and regulations and has established comprehensive information security policies and management procedures. An Information Security Statement has been issued to demonstrate the Company's commitment to safeguarding customer information. PSI implements multi-layered technical safeguards, including data encryption, firewall systems, and intrusion detection mechanisms. Access controls, regular internal audits, and ongoing employee training further strengthen information security management. By integrating data protection practices into daily operations and governance mechanisms, PSI ensures the confidentiality and integrity of customer data, reinforces corporate credibility, and supports long-term sustainable development.

Customer Relationships and Communication

PSI believes that trust is the foundation of sustainable customer relationships. Through regular communication and feedback mechanisms, the Company proactively understands customer needs and transparently shares sustainability performance to strengthen cooperation. Annual customer satisfaction surveys are conducted to evaluate service quality and overall experience. Survey results are analyzed across key areas, including product quality, delivery performance, pricing, and service responsiveness, and are translated into concrete improvement actions. To enhance responsiveness, PSI has established standardized customer complaint handling procedures, with dedicated teams responsible for issue resolution and preventive measures. Through structured communication and feedback management, PSI continues to strengthen customer trust and long-term partnerships.

Customer Satisfaction

In 2024, PSI achieved customer satisfaction scores of 86 for reclaimed wafers and 89 for wafer thinning services, both representing year-on-year improvements compared to 2023.Although reclaimed wafer services did not fully meet the annual target, improvement initiatives generated positive customer feedback. While wafer thinning services also fell short of the target, all major evaluation items showed improvement, with "quality" demonstrating the most significant progress. PSI places customer trust at the core of its operations. Customer feedback is regularly reviewed by management and incorporated into decision-making. By strengthening exception management, maintaining price stability, and flexibly responding to capacity demands, PSI continues to enhance customer confidence and operational performance.

Customer Satisfaction Survey Process

Sustainable Supply Chain

Supply Chain Overview

PSI is the world's leading provider of reclaimed wafer capacity and collaborates with over one hundred suppliers globally. Major procurement categories include raw materials, equipment and spare parts, transportation and logistics, facilities and engineering services, outsourced services, and waste management. To ensure alignment with sustainability requirements, PSI requires 100% of suppliers to sign a Supplier Code of Conduct.

Raw material suppliers have a significant impact on daily operations and production. PSI classifies raw materials into three categories based on criticality:

(A) critical materials that remain on products after manufacturing;

(B) indirect materials that do not remain on products;

(C) packaging and consumable materials.

PSI views suppliers as long-term partners and is committed to responsible supply chain management. We emphasize environmental responsibility, business ethics, employee rights, and safe working conditions, while continuously strengthening supply chain resilience and sustainable operations.

PSI's Key Supply Chain

Sustainable Supply Chain

PSI integrates quality management, environmental protection, and corporate social responsibility into its supply chain strategy. Through supplier risk assessments, avoidance of conflict minerals and hazardous substances, and timely corrective actions, PSI strengthens supply chain resilience and advances long-term sustainable development.

Sustainable Supply Chain Management Process

PSI has established a standardized supplier management process covering risk assessment, audits, and continuous improvement. Transparent management mechanisms ensure suppliers meet quality, technical, and sustainability requirements, enhancing supply chain stability while supporting PSI's sustainable development objectives.

Supplier Risk Management
- Supplier risk matrix review (including risk assessment)

Compliance Requirements
- Codes of conduct and regulations / Conflict-free minerals / Green management

Risk Assessment
- Supplier self-assessment questionnaires/CSR risk assessment/Supplier information management system

Audit and Verification
- On-site or virtual audits/ESG audits/Document reviews/RBA audit documentation/Employee interviews

Continuous Improvement
- Performance reviews/Education and training/Supplier conferences

Supplier Code of Conduct

PSI recognizes that sustainable growth requires consideration of social and environmental impacts throughout its operations. To enhance positive social impact and fulfill corporate responsibility, PSI requires all suppliers to comply with the Responsible Business Alliance (RBA) Code of Conduct and sign a formal commitment to social responsibility. If suppliers establish their own codes of conduct, PSI conducts due diligence to verify alignment with RBA standards. All suppliers are expected to continuously improve sustainability performance and fully comply with PSI's requirements. To ensure accountability, PSI requires 100% of suppliers to sign the Supplier Code of Conduct Statement, reinforcing responsible business practices across the supply chain.

Supplier Integrity Commitment Signing	2022	2023	2024
New Supplier	112	56	62
Signing Rate	100%	100%	100%

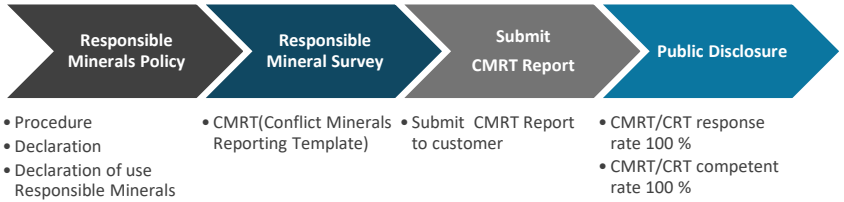
Green Management and Procurement

PSI requires suppliers to declare compliance with hazardous substance restrictions and PSI's material management requirements. Suppliers must adhere to applicable regulations and customer standards, including the EU RoHS Directive. Through green procurement practices, PSI reduces environmental impact, ensures regulatory compliance, and promotes responsible material use across its supply chain.

Office Supplies & Appliances		2022	2023	2024
Green Procurement Rate	Buy products with certification marks	112	56	62

Responsible Minerals Commitment

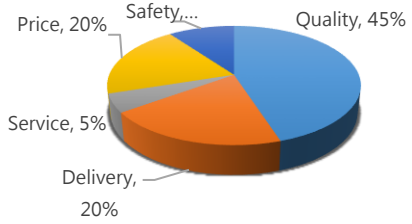
PSI is committed to responsible sourcing as a global corporate citizen and prohibits the procurement or use of materials originating from conflict-affected or high-risk areas, including gold, tantalum, tin, tungsten (3TG), cobalt, mica, copper, natural graphite, nickel, and related raw materials. Suppliers are required to fulfill their corporate social responsibility and ensure that their products do not contain conflict minerals. PSI adopts internationally recognized reporting tools, including the Conflict Minerals Reporting Template (CMRT) and Extended Minerals Reporting Template (EMRT), to conduct due diligence and trace mineral sources. These measures ensure transparency, responsible sourcing, and compliance with PSI's Responsible Minerals Policy.



Responsible Minerals Survey	2022	2023	2024
New suppliers	0	0	0
Supplier surveyed	5	5	4
Survey Completion Rate	100%	100%	100%

Sustainability Evaluation

PSI conducts quarterly evaluations of qualified raw material suppliers with active transactions. Assessments are jointly performed by relevant departments using weighted criteria based on item importance. Suppliers are required to pursue continuous improvement and align with PSI's sustainability objectives. Evaluation results are used to identify gaps, drive corrective actions, and strengthen supplier competitiveness, supporting the long-term development of a sustainable supply chain.

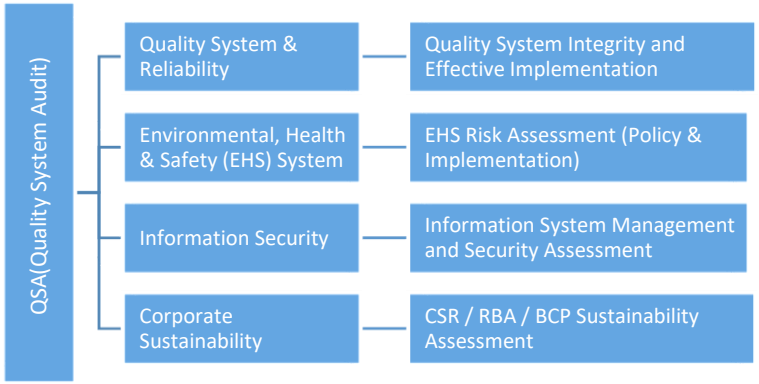


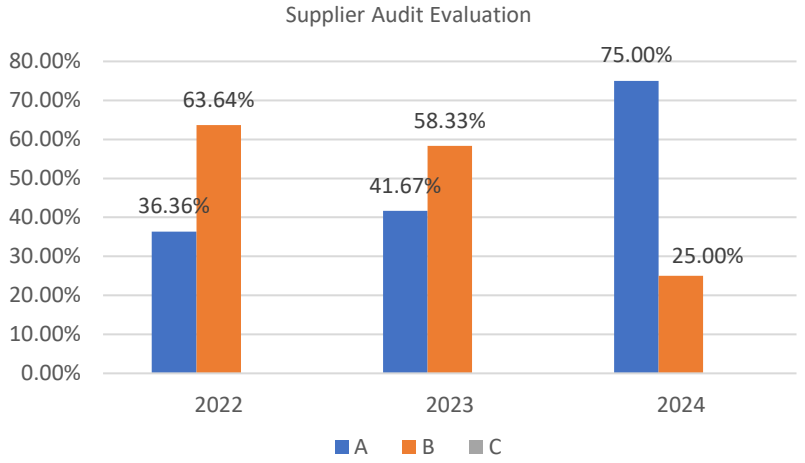
Quarterly Audit Item

Sustainability Audit

Each year, PSI selects key raw material suppliers for sustainability audits based on quality performance and manufacturing requirements, and establishes audit plans accordingly. For critical suppliers, on-site audits are conducted under the Quality System Audit (QSA) framework, with joint participation from Quality and ESH departments to verify compliance with safety, health, environmental, and regulatory requirements. Audit results are incorporated into supplier management decisions, and corrective actions are tracked to ensure continuous improvement.

Supplier Annual Audit





Local Procurement

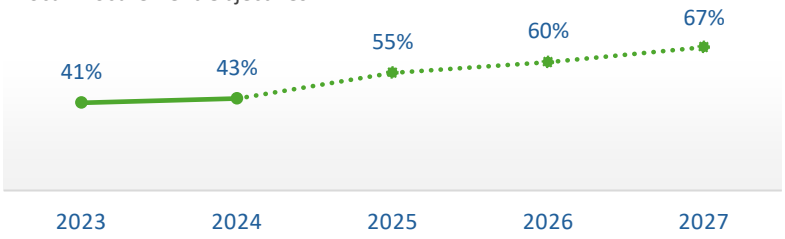
To implement our sustainable management strategy, PSI is committed to promoting local procurement. In addition to engaging international partners to establish production bases in Taiwan, we collaborate with local suppliers to enhance supply flexibility, shorten lead times, reduce transportation costs, and lower carbon footprints. These efforts contribute to local job creation and support a more efficient and resilient supply chain through close supplier partnerships.

Promoting Local Procurement

Action Plan	Increase Local Procurement	Introduce Local Materials	Establish Manufacturing in Taiwan
2024 Actual	+1.76%	5 items	1 facility

Benefits of Local Procurement

Local Procurement Objectives



Low-Carbon Supply Chain Initiative

As sustainability has become a global priority, PSI has promoted energy conservation and carbon reduction since 2011 through ISO 14064-1 certification and alignment with international climate initiatives. We support suppliers in conducting GHG inventories to identify emission hotspots and reduction opportunities, driving supply chain decarbonization.

Carbon footprint assessments cover raw material suppliers representing the top 80% of procurement spending, with high electricity-consuming suppliers encouraged to obtain ISO 14064 verification.

Chemical Drum Recycling	2023	2024	(F)2025	(F)2026	(F)2027
Target: Key Suppliers to Obtain ISO 14064 Certification	71%	77%	84%	92%	100%

Note: Key suppliers are defined as those accounting for the top 80% of procurement spending and classified as high electricity consumers (located in Taiwan with single-site electricity consumption exceeding 5 million kWh per year).

Waste Reduction Initiative in Collaboration with Suppliers

Semiconductor manufacturing requires the use of large volumes of chemical materials. PSI works closely with suppliers to optimize supply methods and promote reuse solutions, with the goal of achieving waste reduction targets.

Chemical Drum Recycling	2024	(F)2025	(F)2026
Waste Reduction (by Weight)	25.894T	27T	29T

ESG Sharing

Low-Carbon Supply Chain Initiative

PSI engages suppliers through Supplier Conferences to communicate our vision and share ESG initiatives and progress. Outstanding suppliers are recognized for excellence in production support, technology collaboration, and green manufacturing. The conferences also facilitate the exchange of ESG, carbon reduction, and renewable energy practices, strengthening partnerships and advancing a low-carbon supply chain.

2025 PSI Green Power

Memorandum of Understanding (MOU) for Green Power Purchase Signing Ceremony
Tony Tsai, President of PSI (left), and Hsiao-Ju Feng, CEO of SunnyFounder (right)

04

Environmental Protection

Greenhouse Gas Emissions

9.2% Reduction vs. Base Year

Environmental Management Policy

While pursuing growth, PSI is committed to protecting the environment and advancing sustainable operations. We proactively manage environmental impacts across our operations and comply with, or exceed, regulatory requirements related to energy use, resource consumption, emissions, and waste. Guided by Environmental, Safety, and Health (ESH) principles, we promote energy conservation, carbon reduction, ecological protection, and safe workplaces, while engaging stakeholders to strengthen ESH awareness and accountability. All PSI sites are certified to ISO 14001 and ISO 14064 with annual third-party verification, and the Hsinchu site obtained Clean Production Certification in April 2024.

EHS Policy

- Protect the environment while pursuing sustainable business growth
- Proactively manage environmental impacts and exceed regulatory requirements
- Apply ESH principles to ensure safety and pollution prevention
- Engage stakeholders to strengthen ESH awareness and accountability
- Maintain ISO-certified systems with continuous third-party verification

Environmental Management Item	Environmental Management Targets
Climate Change Response	• Reduce GHG emissions compared to the base year (Scope 1 & 2) • Increase the share of renewable energy
Energy Management	• Reduce energy intensity (non-renewable energy) • Continuously promote company-wide energy-saving initiatives (annually)
Water Resource Management	• Reduce water intensity • Increase water reuse rate
Circular Resource Utilization	• Increase waste resource recovery rate

Climate Change Management

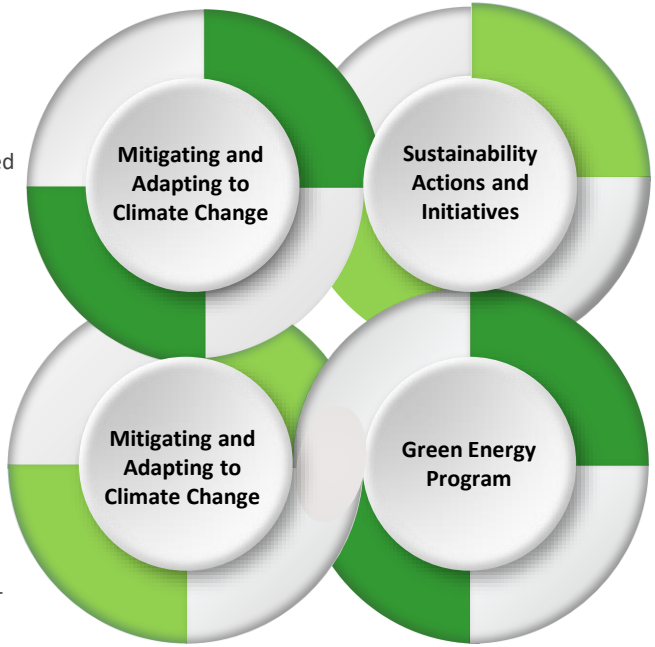
Net Zero 2050 Strategy

Mitigating and Adapting to Climate Change

- Adopt the TCFD framework to identify climate-related risks and opportunities
- Assess potential financial impacts
- Conduct greenhouse gas inventories and verification
- Implement product carbon footprint assessments

Mitigating and Adapting to Climate Change

- Continuously implement international environmental management systems
- Prioritize facility upgrades and high-efficiency energy-saving equipment
- Collaborate with key suppliers to jointly promote low-carbon transformation



Sustainability Actions and Initiatives

- Actively assess participation in domestic and international climate-related initiatives
- Foster sustainability mindset across the workforce
- Support government-led programs and share corporate green impact and best practices

Green Energy Program

- Systematically implement energy-saving projects
- Increase the use of renewable energy
- Continuously evaluate other green energy options

Climate Change Management

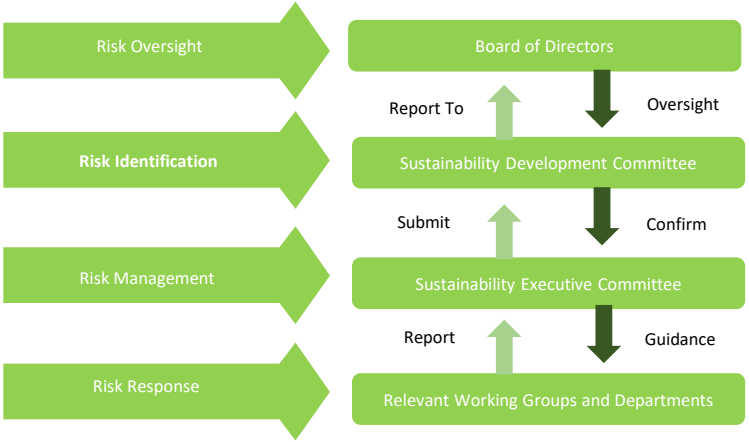
Climate change is a critical global issue. PSI aligns with the Paris Agreement and the Sustainable Development Goals to reduce greenhouse gas emissions and enhance climate resilience through energy-saving and carbon reduction initiatives. Leveraging our governance framework, we adopt the TCFD recommendations to identify and disclose climate-related risks, opportunities, and management actions. We also promote environmental awareness among employees, suppliers, and stakeholders to advance low-carbon and green manufacturing practices.

Climate Governance

PSI is committed to fulfilling its corporate citizenship responsibilities. In 2022, the Board established the Sustainability Development Executive Committee, chaired by the President, as a cross-functional platform aligned with international standards. In 2024, the Board further formed the Sustainability Development Committee, composed of three independent directors, to oversee sustainability strategies and implementation. Led by the President, the governance structure sets annual and short-, medium-, and long-term sustainability objectives, monitors performance, balances stakeholder interests, and drives positive development across the industry and supply chain.

Governance	• The Board of Directors reviews environmental issues, including climate change, at least twice a year. • Under the Sustainability Development Executive Committee, the Environmental Protection Group and Renewable Energy Group report quarterly on progress in assessing and managing climate change, water resources, and resource recycling risks and opportunities across operations.
Strategy	• Through cross-functional discussions and reviews, the Company identifies short, medium, and long-term climate-related risks and opportunities and conducts scenario analyses to assess risks and opportunities under different scenarios. • The potential impacts of material risks and opportunities on the Company's operations and financial performance are also evaluated.
Risk Management	• In accordance with the TCFD framework, material climate-related risks and opportunities are jointly identified, corresponding response measures are established, and implementation results are reported to the Board of Directors. • The resources required and financial costs associated with the adopted management measures are evaluated.
Metrics and Targets	• Carbon footprint reduction: Based on ISO 14064 inventory results, major emission sources are identified and emission reduction plans are formulated. • Efficient use of energy and resources: The Company actively promotes the use of renewable energy, introduces high-efficiency energy-saving equipment, enhances water recycling and reuse, strengthens upstream material management, and reduces waste generation. Annual targets are set and regularly reviewed by the Sustainability Development Executive Committee on a quarterly basis.

Climate Governance Framework



Climate-related Risks and Roles & Responsibilities

Board of Directors	• Oversees the Company's overall climate change management approach.
Sustainability Development Committee	• Reviews and approves the Company's sustainability reports and submits them to the Board of Directors. • Provides oversight of climate risk management and supervises continuous improvement of related management measures.
Sustainability Executive Committee	• Manages climate-related risks and climate strategy action plans. • Oversees the implementation of energy-saving initiatives, water conservation programs, and greenhouse gas inventories. • Coordinates internal and external communication on climate-related issues.
Relevant Working Groups and Departments	• Develop and execute climate risk and climate strategy action plans. • Identify, assess, and evaluate climate-related risks and opportunities.

Climate Governance Action Overview

Governance & Senior Management

- The Board of Directors reviews climate-related performance and targets annually.
- The Sustainability Development Executive Committee, chaired by the CEO and composed of senior management, convenes quarterly to oversee climate-related execution.

Policies & Management Systems

- Environmental protection policies and GHG reduction targets are established.
- International management systems are adopted and verified by third parties, including ISO 14001 and ISO 14064-1.

Carbon Management

- Annual CDP participation to improve carbon and resource efficiency.
- TCFD framework adopted to manage climate and water-related risks.
- Internal carbon pricing supports investment decisions.
- Green energy initiatives include solar power and renewable electricity procurement.

Green Impact

- Engaging customers to advance supply chain decarbonization.
- Hosting low-carbon supply chain forums to foster collaboration.
- Expanding renewable energy deployment and green power procurement.

Climate Risk and Opportunity Identification

In 2024, PSI established its first climate-related financial disclosure and launched a biennial Climate Change Risk and Opportunity Identification Workshop. Aligned with the TCFD framework, PSI developed formal procedures for identifying and managing climate-related risks. The Board of Directors serves as the highest authority for climate risk governance, while the Environmental Protection Task Force, under the Sustainability Development Executive Committee, coordinates cross-functional climate risk identification and integrates results into the enterprise risk management framework. PSI integrated climate-related risk identification, assessment, and management into its corporate risk management system in 2024 to strengthen governance, crisis response capabilities, and employee awareness, in compliance with ISO 14001 and related standards. The process covers risk identification, analysis, evaluation, response, monitoring, reporting, and disclosure, and is incorporated into the Company's Business Continuity Management procedures, consolidating climate risks into overall operational risk management.

To enhance corporate governance and information transparency, all risk management processes and outcomes are systematically documented, reviewed, reported, and retained. Records include risk identification, analysis, evaluation, response measures, monitoring results, and information sources. The Sustainability Development Executive Committee reports the status and effectiveness of risk management implementation to the Board of Directors on an annual basis, ensuring effective oversight and alignment with stakeholder expectations.

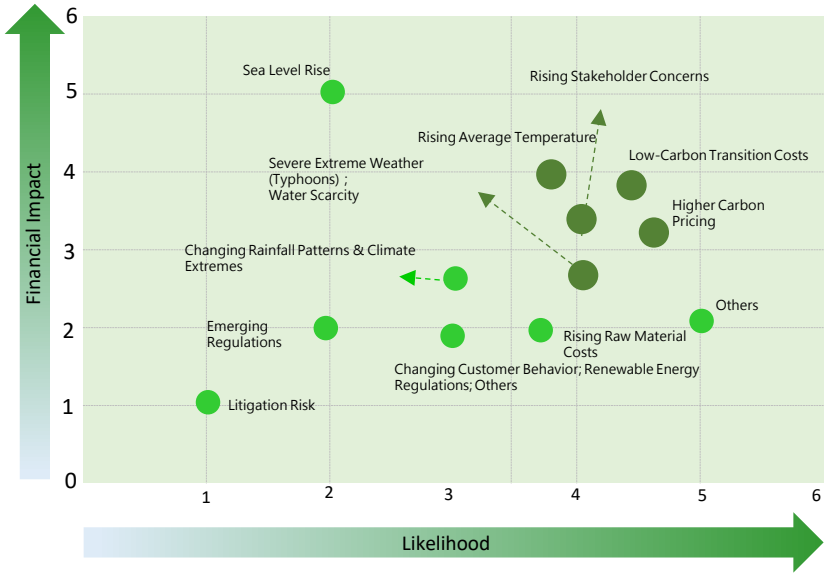
Climate Change Scenario Analysis

PSI develops climate scenarios based on the latest scientific assessments from the International Energy Agency (IEA) and the Intergovernmental Panel on Climate Change (IPCC). Using a severe scenario approach, the Company assesses potential financial and operational impacts of climate-related risks and opportunities. To address climate uncertainty, PSI also incorporates data from Taiwan's Climate Change Projection Information and Adaptation Knowledge Platform (TCCIP), as well as the National Science and Technology Council (NSTC) and the National Science and Technology Center for Disaster Reduction (NCDR). Multiple climate models are applied to enhance understanding of medium- to long-term climate trends and support strategic planning and risk management.

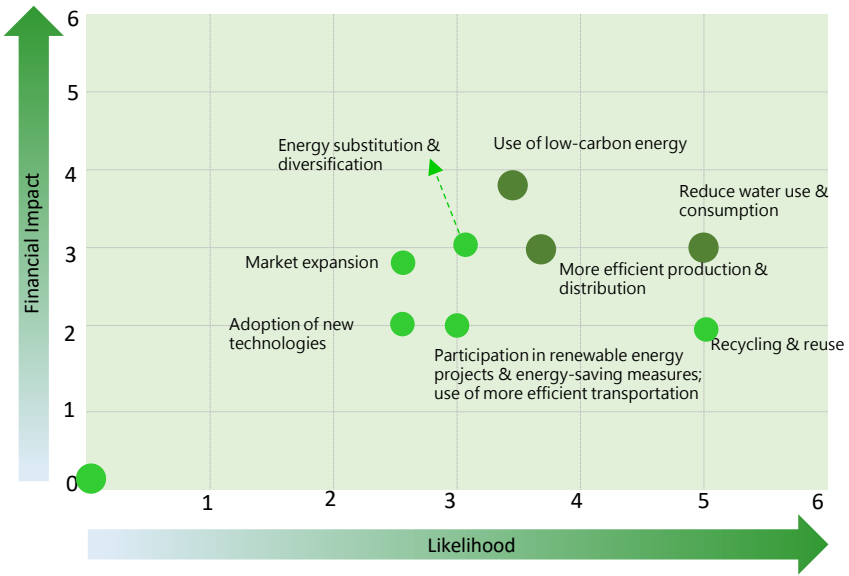
Risk / Opportunity Type	Assessment Scenario	Scenario Description
Transition Risks & Opportunities	• 1.5°C scenario • Taiwan's 2050 Net-Zero Pathway and Strategies	Net-zero emissions by 2050 is a global trend. Taiwan's 2050 Net-Zero Pathway, announced in 2022, outlines key transition strategies and governance measures to drive economy-wide decarbonization, which may affect the Company's operations and value chain through regulatory and transition impacts.
Physical Risks	• IPCC AR6 global warming scenario (SSP5-8.5)	Under a high-emissions scenario (SSP5-8.5), climate projections indicate rising temperatures and increased frequency of extreme weather events, including heatwaves and intense rainfall, potentially affecting the Company's operations and supply chain stability.

Guided by the TCFD framework, PSI identifies climate-related issues across transition risks and physical risks, categorized into regulatory and policy, market and technology, and operational disruption risks. The assessment identified 18 carbon transition risks (3 material), 24 physical risks (3 material), and 28 carbon-related opportunities (3 material), totaling 70 climate-related risk and opportunity items. Risks and opportunities were prioritized based on impact timing (short-, medium-, and long-term) and severity factors, including financial, operational, regulatory, and reputational impacts. As a result, PSI identified 6 material carbon risks and 3 material carbon opportunities, assessed potential financial impacts, and developed corresponding mitigation and response strategies to reduce climate risks and capture future business opportunities.

Climate-related Risk Matrix



Climate-related Opportunity Matrix

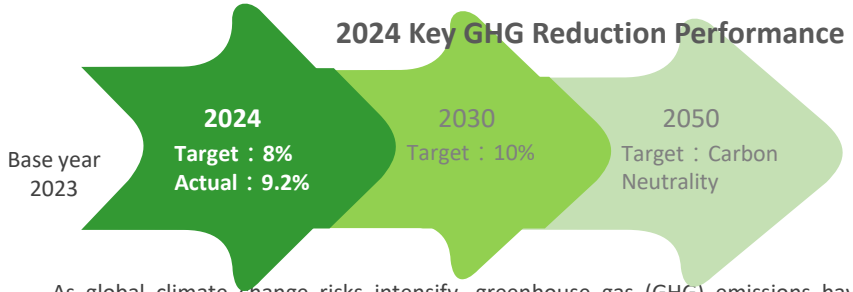


Risk / Opportunity	Category	Risk Description	Risk Description	Time Horizon	Financial Impact	Management Measures and Strategies
Transition Risk	Policy & Regulation	Increased greenhouse gas emissions pricing (carbon fees).	Under the Climate Change Response Act, enterprises are required to pay carbon fees based on emissions. Although the Company has not yet been subject to regulation, future carbon pricing requirements may increase operating costs.	Medium to Long Term	Increased operating costs	1. Install renewable energy facilities and procure renewable electricity (from 2025). 2. Establish internal carbon pricing mechanisms. 3. Continuously monitor carbon pricing policies.
Transition Risk	Technology	Costs associated with low-carbon technology transition.	Adoption of low-carbon and net-zero technologies may require additional investment and increase operating costs.	Medium to Long Term	Increased operating costs	1. Procure renewable energy and prioritize solar PV installation and green power certification, promoting self-generation and self-consumption. 2. 2.Establish energy management targets with an average annual energy-saving rate above 1%.
Transition Risk	Market	Increased negative feedback from stakeholders.	Heightened climate change concerns may lead customers to impose stricter carbon reduction requirements on suppliers, increasing operating costs.	Medium to Long Term	Increased operating costs	1. Engage with customers through environmental communication to understand climate expectations and set carbon reduction pathways aligned with customer requirements. 2. Participate in renewable energy group procurement to reduce green energy costs.
Physical Risk	Chronic	Rising average temperatures.	Although current impacts are limited, long-term global warming (by ~2050) may lead to insufficient air-conditioning capacity, increased energy consumption, higher costs, and greater emissions.	Medium to Long Term	Increased operating costs	1. Install intelligent energy monitoring systems to optimize air-conditioning operations. 2. Regularly inspect HVAC equipment to improve energy efficiency. 3. Apply green building and energy-efficient design principles to future facilities to reduce heat-related impacts.
Physical Risk	Acute	Typhoons.	Increased intensity and frequency may cause heavy rainfall, disrupt employee commuting and transportation, and affect production operations.	Short Term	Increased operating costs	1. Conduct internal management, disaster prevention, and emergency response drills to reduce potential impacts from extreme weather events. 2. Obtain relevant insurance coverage to mitigate financial losses and increased operating risks.
Physical Risk	Acute	Water scarcity.	Manufacturing operations require significant water usage; water shortages may disrupt production and increase operating costs.	Short Term	Increased operating costs and operational disruptions	1. Continuously promote water-saving initiatives to identify efficiency improvement opportunities. 2. Develop long-term strategies for sustainable water sourcing, including seawater desalination procurement, to mitigate operational and financial risks despite higher procurement costs.

Risk / Opportunity	Category	Opportunity	Opportunity Description	Time Horizon	Financial Impact	Management Measures and Strategies
Opportunity	Resource Efficiency	Higher-Efficiency Production	Adoption of high-efficiency production equipment reduces energy consumption, improves production efficiency, and lowers long-term operating costs.	Medium to Long Term	Improved productivity and cost savings	1. Upgrade production equipment, HVAC, and lighting systems; implement energy management systems to enhance efficiency and economic benefits. 2. Implement green factory planning to reduce cooling energy demand.
Opportunity	Energy Sourcing	Low-Carbon and Alternative Energy Use	Renewable energy deployment also enhances brand value and attracts customers with low-carbon procurement requirements.	Medium to Long Term	Improved productivity and cost savings	1. Set renewable energy targets: RE50 by 2030 and RE100 by 2040. 2. Procure renewable electricity and utilize on-site renewable energy for self-consumption (from 2025).
Opportunity	Resource Efficiency	Reduced Water Consumption and Usage	Reduced water consumption and improved water efficiency lower operating costs and enhance operational resilience, particularly for water-intensive processes.	Medium to Long Term	Cost savings	1. Optimize water use without affecting production yield to achieve manufacturing water-saving targets. 2. Recycle and reuse process water, monitor water quality, and continuously improve water recovery rates.

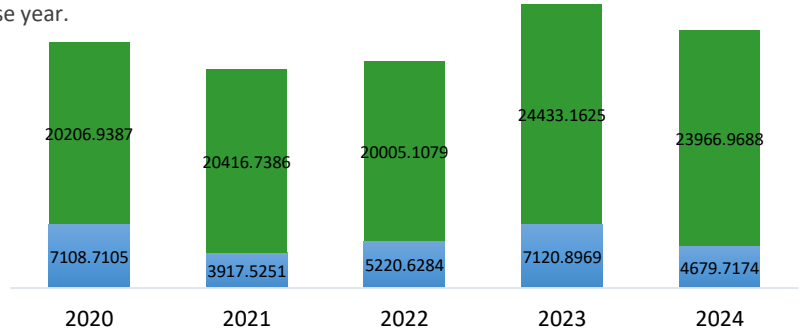
In response to climate-related physical and transition risks, the Company recognizes climate change as a critical factor influencing corporate resilience and long-term competitiveness. By adopting the TCFD framework, climate-related risks and opportunities have been systematically identified and integrated into operational decisions, capital expenditure planning, risk management, and supply chain management. The Company will continue to enhance greenhouse gas inventories and emission reduction actions, regularly review climate scenarios and related financial impacts, and progressively establish an environmental accounting approach to systematically capture ESG-related environmental costs. An IFRS S2 gap analysis is planned for completion by 2026, alongside gradual improvements in financial impact quantification and Scope 3 emissions disclosure. In parallel, the Company actively pursues low-carbon transition opportunities through green manufacturing, circular economy initiatives, and technological innovation. We believe that proactive climate action is essential not only for effective risk management, but also for long-term value creation and strengthening stakeholder trust.

Energy and Greenhouse Gas Management



As global climate change risks intensify, greenhouse gas (GHG) emissions have become a critical issue in corporate operations. Effective GHG management and emission reduction help mitigate environmental impacts, comply with regulatory and international decarbonization commitments, and enhance competitiveness and brand value across the supply chain. Through GHG inventories, emission reduction targets, and concrete mitigation actions, companies can identify climate-related risks and opportunities, improve resource efficiency, optimize costs, and respond to stakeholder expectations. PSI actively addresses global decarbonization trends by integrating climate change mitigation and adaptation into its operational management. The Company plans to complete ISO 14067 product carbon footprint verification by 2025. Carbon management initiatives are overseen by the Environmental Protection Task Force under the Sustainability Development Executive Committee, which regularly monitors emission reduction progress and implementation effectiveness to support long-term value creation and sustainable development.

Since 2021, PSI has voluntarily conducted greenhouse gas (GHG) inventories in accordance with ISO 14064-1:2018 and the GHG Protocol, defining organizational boundaries based on operational control. Emission factors are sourced from the Ministry of Environment's 2024 GHG Emission Factors, IPCC 2006 Guidelines, and the national carbon footprint database, with Global Warming Potential (GWP) values adopted from the IPCC Sixth Assessment Report. PSI establishes comprehensive GHG inventories to identify and manage key emission sources across production processes. Annual third-party verification is performed to ensure data accuracy and reliability, supporting target setting and transparent carbon management disclosure. In 2024, production capacity increased by 11%, while total Scope 1 and Scope 2 emissions were approximately 28,646.69 tCO_2e, representing a 9.2% reduction compared with the 2023 base year.

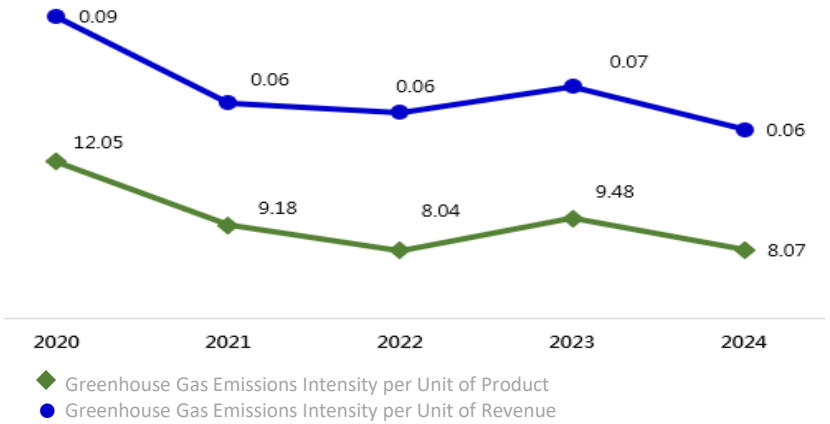


Note 1: Due to an expansion of the reporting boundary in 2023 to include the Taichung Port Plant, the base year was adjusted to 2023.

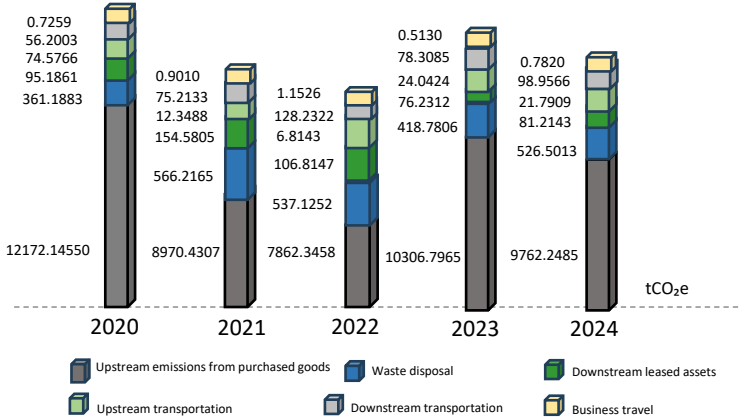
■ Scope 1 greenhouse gas emissions of consolidated facilities (tCO_2e)

■ Scope 2 greenhouse gas emissions of consolidated facilities (tCO_2e)

In 2024, 83.66% of total greenhouse gas (GHG) emissions were Scope 2 emissions from purchased electricity, while Scope 1 emissions accounted for 16.34%. Of Scope 1 emissions, 97.02% originated from process emissions, primarily from the use of perfluorocarbons (PFCs). In response to this emission profile, the Company sets annual energy-saving and carbon reduction targets, implements energy efficiency programs across major energy-consuming equipment, and installs PFC abatement systems to effectively reduce process emissions. In 2024, 8 energy-saving and carbon reduction initiatives were implemented, resulting in a 14.28% reduction in GHG emissions intensity per unit product (wafer area, m^2) and a 14.87% reduction in GHG emissions intensity per unit revenue. The Company will continue advancing energy-saving and decarbonization measures toward its 2050 carbon neutrality goal.



In 2024, emissions from Scopes 3 to 6, covering six emission categories, were verified with limited assurance. Among these categories, Category 4 (upstream emissions from purchased goods) was the largest source, followed by waste treatment, and downstream leased assets related to telecom base station leasing.



Emissions from Scopes 3 to 6 represent GHG sources beyond the Company's direct control across the value chain, accounting for 26.58% at the Hsinchu Plant and 27.27% at the Taichung Port Plant, both exceeding Scope 1 emissions. As a result, Scopes 3 to 6 have become a core focus of ESG carbon management. The Company will prioritize reducing Category 4 upstream emissions from purchased goods by strengthening internal source reduction and collaborating with suppliers on joint decarbonization actions to enhance value chain climate resilience.

Internal Carbon Pricing

In response to climate change and the global net-zero transition, Taiwan announced its 2050 net-zero target in 2022 and enacted the Climate Change Response Act in 2023, establishing the basis for carbon pricing. To internalize carbon costs and enhance decision-making, PSI is implementing an internal carbon pricing mechanism. The pricing basis includes environmental investment costs, such as renewable energy procurement agreements signed in November 2024 and internal energy-saving project expenditures. Internal carbon prices for 2025–2027 are applied to evaluating new energy-consuming equipment and decarbonization initiatives, strengthening carbon reduction incentives. Internal carbon price = Environmental investment cost (NTD) / Total emission reductions (tCO_2e).

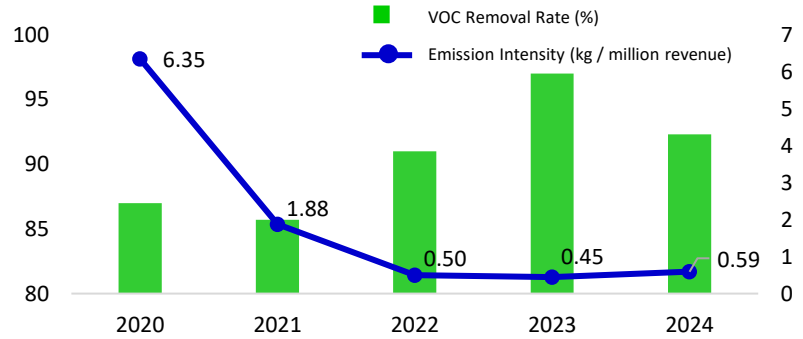
Environmental Initiative Participation

Transparent disclosure of environmental impacts has become a key focus for global supply chains and investors. Since 2022, PSI has participated in the Carbon Disclosure Project (CDP) assessment at customer invitation, annually disclosing greenhouse gas emissions and reduction actions. CDP evaluation results are used to identify gaps and continuously improve internal carbon management practices. Through consistent disclosure and performance enhancement, PSI aims to achieve a management-level CDP rating in the 2025 CDP disclosure, scheduled for release in 2026, demonstrating its commitment to climate transparency and responsible environmental governance.

Year	2022	2023	2024
Grade	Disclosure	Management	Disclosure

Air Pollutant Emissions

PSI is committed to reducing air pollutant emissions through source segregation and appropriate treatment systems. Acidic and alkaline exhaust gases are treated by scrubbers, while organic exhaust gases are managed using activated carbon fiber adsorption systems. In accordance with regulatory requirements, annual VOC testing is conducted. In 2024, the VOC reduction rate reached 92.3%, with an emission concentration of 11 ppm, meeting semiconductor industry standards.



A September 2023 permit deviation at the Hsinchu Plant resulted in a penalty in June 2024; corrective actions were completed, and no violations occurred as of December 31, 2024.

Energy Management

2024 Key Energy-Saving Performance

- Electricity saving rate: 1.9% decrease compared with 2023
- Energy intensity: 8% decrease compared with 2023
- Energy-saving and carbon reduction: 447 tCO_2e

Amid the global transition toward net-zero emissions and energy transformation, effective energy management has become essential for sustainable development in the electronics industry, which is highly energy intensive. Through systematic energy management, companies can reduce energy costs and emissions, improve process efficiency, minimize resource waste, and enhance green competitiveness. As supply chain carbon verification and ESG disclosure requirements continue to intensify, proactive energy management supports regulatory compliance, reduces climate-related operational risks, and demonstrates corporate responsibility to stakeholders. PSI operates two production sites, with energy use consisting of purchased electricity, diesel, and gasoline, primarily sourced from public utilities and fuel stations. Purchased electricity accounts for the majority of energy consumption and is mainly used for production processes and facility operations.

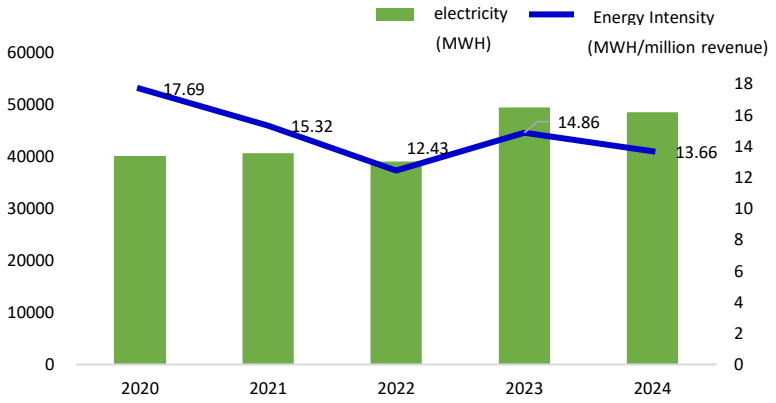
Recognizing the urgency of effective energy management, PSI actively implements structured energy-saving initiatives each year and continuously introduces energy-efficient technologies and equipment. Energy management plans and targets are established by the Environmental Protection Task Force and the Renewable Energy Task Force under the Sustainability Development Executive Committee. In 2024, total electricity consumption across two sites was 48,516 thousand kWh, a reduction of approximately 944 thousand kWh compared with the previous year. Purchased electricity accounted for 99.93% of total energy use. In addition, all gasoline-powered company vehicles were retired in 2024, resulting in zero gasoline consumption from that year onward and further reducing operational emissions.

Energy Consumption

	2020	2021	2022 Note 4	2023	2024	Unit
Note 1 Purchased Electricity	40,105	40,615	39,018	49,460	48,516	kWh (thousand)
	144,378	146,214	140,465	178,056	174,658	GJ
Note 2 Diesel	7,358	6,993	6,053	7,328	3,385	
	258	245	212	257	119	GJ
Note 3 Gasoline	2,809	1,055	751	39	0	Liters
	92	34	24	1	0	GJ
Total (Energy Resources)	144,726	146,494	140,701	178,314	174,777	GJ

Note 1: Electricity conversion factor: 1 kWh = 0.0036 GJ
Note 2: Diesel conversion factor: 1 liter = 0.0351 GJ
Note 3: Gasoline conversion factor: 1 liter = 0.0326 GJ
Note 4: Taichung Port Plant officially entered trial mass production.

In 2024, production capacity increased by 11.58% compared with 2023, while total electricity consumption still decreased by approximately 943 thousand kWh, resulting in an 8.08% reduction in energy intensity. To achieve the Company's energy-saving and carbon reduction targets, cross-functional collaboration was coordinated through the Sustainability Development Executive Committee. Energy-saving initiatives focused on four key areas: process optimization, adoption of energy-efficient equipment, and smart energy management, covering facility systems, production areas, and manufacturing equipment, with company-wide participation. All sites complied with applicable energy regulations and set an annual electricity-saving target of at least 1%.As purchased electricity represents the largest share of energy consumption, the Taichung Port Plant applied in December 2024 to convert existing solar facilities to self-generation and self-consumption, and signed a renewable power purchase agreement, with renewable energy use commencing in March 2025.

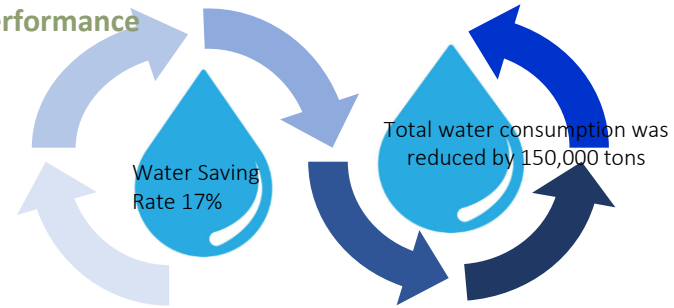


Note: Energy savings (kWh) for the 2024 fiscal year.

Category	Project Description	Energy Savings(kwh)	Energy Savings (GJ)	Carbon Reduction (tCO_2e)	Investment Cost (NTD million)
Process Energy Efficiency	• Adjust cooling and heating parameters without affecting product quality to improve energy efficiency. • Optimize production areas and centralize operations to reduce air-conditioning power and related energy use.	383,159	1,379.37	181.61	0
Equipment Upgrade	• Replace secondary chilled-water pumps and aging pumps used for over 20 years. • Replace FRP cooling tower fan blades with low-friction fiberglass blades to reduce transformer load and improve efficiency.	9,424	33.9264	4.46	About 2.25
HVAC Energy Efficiency	• Replace dust-free room fan filter units (FFU) and DC air-conditioning systems with higher-efficiency DC motors, reducing power consumption by ~30–50% compared with conventional AC systems. • Recover exhaust heat from chemical scrubbers for preheating reuse, reducing heater load and energy use.	107,126	385.65	50.77	About 7.25

Water Resource Management

2024 Key Water Resource Management Performance



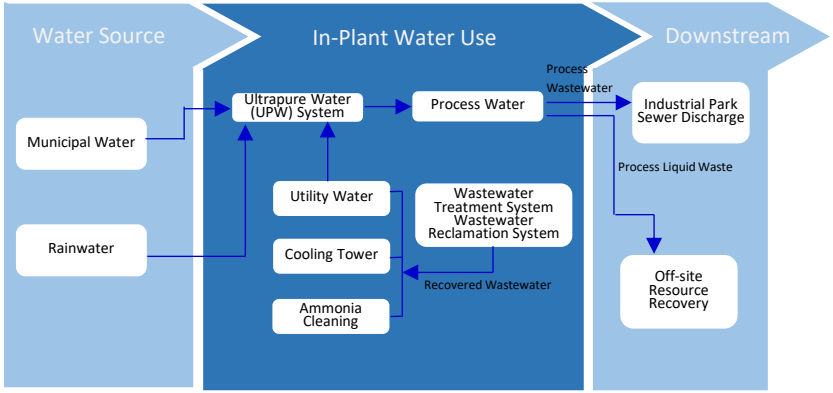
Amid intensifying global climate change and extreme weather events, Taiwan has experienced increasingly polarized rainfall patterns, heightening the simultaneous risks of flooding and water shortages. Effective water management and sustainable use have become integral to corporate operations. Water is a critical resource in semiconductor and electronics manufacturing, encompassing process water use, ultrapure water production, and wastewater treatment and recycling. Beyond supporting stable production and employee health, water management directly affects supply chain resilience and ecosystem sustainability. PSI continues to enhance water-use efficiency, expand wastewater reclamation, optimize water circulation systems, and conduct regular water risk assessments to minimize environmental and stakeholder impacts. Through technological innovation and cross-functional collaboration, PSI strengthens water stewardship to achieve shared industrial and environmental sustainability.

In 2024, multiple typhoon systems delivered substantial rainfall, with single-day accumulations exceeding 1,000 mm in central and southern mountainous areas, significantly replenishing reservoir levels. According to Taiwan's Water Resources Agency, the national water status indicator did not exceed the green alert level throughout the year, indicating slightly tight but stable supply conditions. Despite frequent reservoir fluctuations, strategic water dispatch and rainfall replenishment maintained supply stability, resulting in a "cautiously optimistic" outlook. PSI's water sources primarily include municipal water supplied by Taiwan Water Corporation and harvested rainwater. The Hsinchu plant draws from Baoshan Reservoir, while the Chung Kang plant sources water from Shihgang Dam and Liyutan Reservoir. Using the World Resources Institute Aqueduct Water Risk Atlas, both sites were assessed as low water-risk areas, supporting continued water conservation and control initiatives.

Plant	Water Source	Regional Water Demand Note 1	PSI Water Consumption Note 2	Water Stress Impact Level Note 3
Hsinchu	Baoshan Reservoir	54.72	0.15	0.27%
Chung Kang	Shihgang Dam Liyutan Reservoir	107	0.06	0.06%

Note 1: Based on the total daily regional municipal water supply reported by the Taiwan Water Corporation (10,000 m³/day).
Note 2: Average daily municipal water consumption in 2024 (10,000 m³/day).
Note 3: Water Use Impact Level = water withdrawal of each plant/total regional water withdrawal.

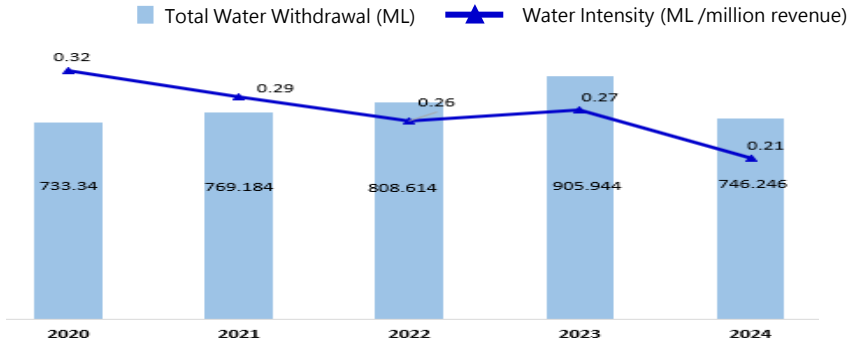
Water Resource Management Flow Diagram



By monitoring water withdrawal sources and total water consumption data, PSI comprehensively assesses its water use profile and associated potential impacts and risks. In semiconductor manufacturing, water resources are primarily used for process operations and facility cleaning, accounting for the highest proportion of total consumption. In 2024, total water withdrawal reached 746.246 million liters, representing a 17.63% decrease compared to 2023. Total wastewater discharge amounted to 551.242 million liters, down 24.03% year-on-year, reflecting improved water-use efficiency and enhanced water management practices.

Unit: million liters

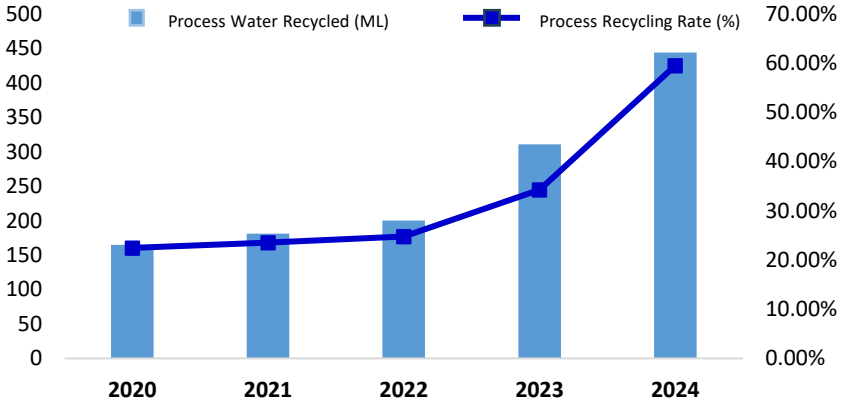
Item	2020	2021	2022	2023	2024
Water Withdrawal	733.340	769.184	808.614	905.944	746.246
Wastewater Discharge	541.616	593.144	670.197	725.616	551.242
Water Consumption	191.724	176.040	138.417	180.328	195.004



In response to capacity expansion, PSI enhanced water-saving efforts through cross-functional collaboration between process and facility teams. In 2024, six water conservation projects were implemented, delivering annual savings of 213.693 million liters. Consequently, water intensity declined by 22.22% year-on-year, demonstrating the effectiveness of systematic water management and PSI's commitment to responsible water stewardship.

Water Conservation Initiative	Water Savings(m^3/year)
Full recovery of wafer grinding wastewater for treatment and reuse, reducing municipal water consumption	58,240
Reclaimed water purified through RO treatment and reused as an alternative water source	32,032
Reduction of DI water usage through grinding equipment optimization	11,085.60
Full recovery of wafer polishing wastewater for treatment and reuse, reducing municipal water consumption	27,300
Recovery and reuse of ammonia wastewater from cleaning processes	21,600
Recovery of wastewater from facility equipment cleaning for reuse	63,435

In response to wastewater generated during production, PSI diverts a portion of process wastewater for recovery and reuse. Key reclaimed sources include grinding wastewater, etching process rinse water, and cleaning effluent. In 2024, reclaimed process water totaled approximately 443.86 million liters, a 25.21% increase from 2023. Continued wastewater recovery reduces reliance on municipal water, enhances on-site water self-sufficiency, mitigates operational risks during droughts or water restrictions, and lowers wastewater discharge volumes and treatment costs.



PSI operates 24-hour online effluent water quality monitoring systems at both manufacturing sites to protect surrounding aquatic ecosystems and meet internal control targets. In line with local regulations, the Company implements pollution prevention measures by reducing pollutant inputs and deploying high-efficiency equipment for water reclamation and contaminant removal. In addition to internal testing, PSI conducts regular third-party wastewater analyses and long-term monitoring to ensure discharged water consistently complies with applicable effluent standards.

The Hsinchu plant is located within a Science Park, while the Chung Kang plant operates in the Taichung Port Industrial Park. Wastewater from both sites is treated through centralized park or industrial zone wastewater treatment facilities prior to discharge. Treated water is released only after meeting effluent standards and is discharged into receiving water bodies approved by environmental authorities, ensuring regulatory compliance and minimizing environmental impacts.

Plant	Regulatory Basis	Key Control Parameters
Hsinchu	Effluent acceptance standards for industrial wastewater discharged to the sewer system of the Hsinchu Science Park Administration	pH Fluoride Ammonia Nitrogen (NH_3-N)
Chung Kang	Regulations governing industrial wastewater sewer usage in the Taichung Port Industrial Park	

Environmental Initiatives

Amid global climate change and growing sustainability expectations, transparent disclosure of environmental impacts and management practices has become a core concern for global supply chains and investors. Since 2022, at customers' request, PSI has participated in the evaluation conducted by the non-profit organization Carbon Disclosure Project (CDP), annually disclosing information related to water security management. Through CDP assessments, PSI identifies and manages water-related risks, evaluates water-use hotspots and efficiency, and promotes water conservation, water recycling, and process optimization to enhance resource efficiency and cost control. PSI's water security rating has improved from Level D to Level B since 2022, and the Company continues progressing toward leadership-level performance.

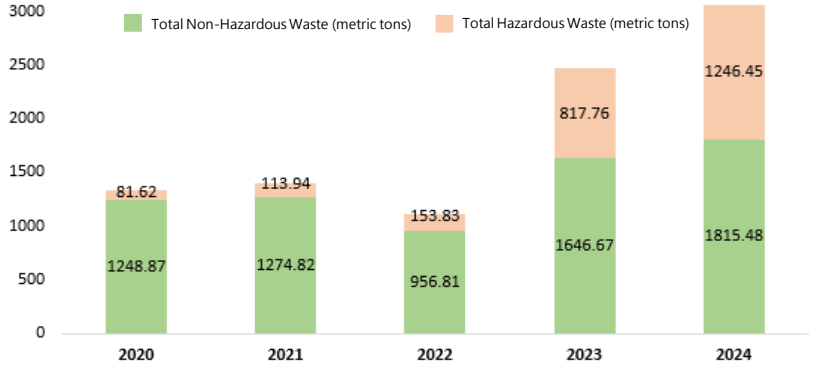
Year	2022	2023	2024
Grade	Disclosure	Awareness	Management

Circular Economy and Resource Reuse

2024 KPI
(Waste Reuse Rate)
Target>95%

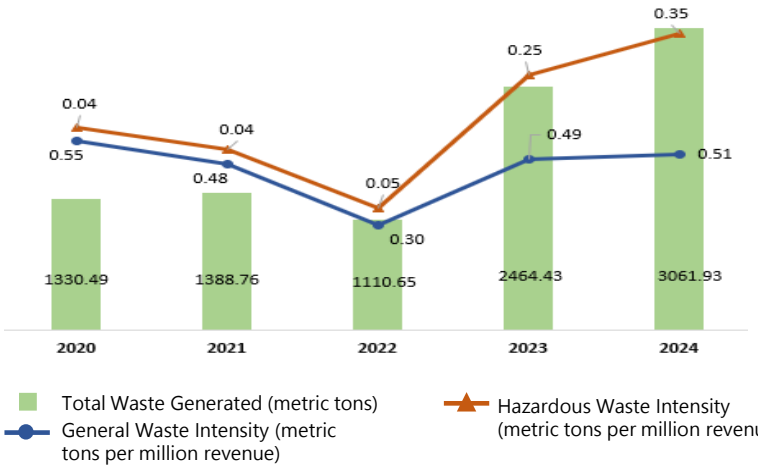
Amid growing resource constraints and heightened environmental awareness, effective waste management and resource circularity have become essential to corporate environmental responsibility. PSI adopts a comprehensive waste management approach covering source reduction, proper segregation, recycling and reuse, and final disposal to ensure regulatory compliance while embedding circular economy principles across processes and product life cycles. Through cross-functional collaboration and close engagement with supply chain partners, PSI continues to enhance waste reuse rates and ensure proper handling of hazardous waste. With customer approval, raw material usage parameters—such as acidic chemicals used in etching processes—were adjusted to reduce chemical consumption. Spent acids are reused in subsequent processes, while chemical suppliers support container reuse programs, reducing environmental impacts and advancing toward maximum resource circulation and zero-waste goals.

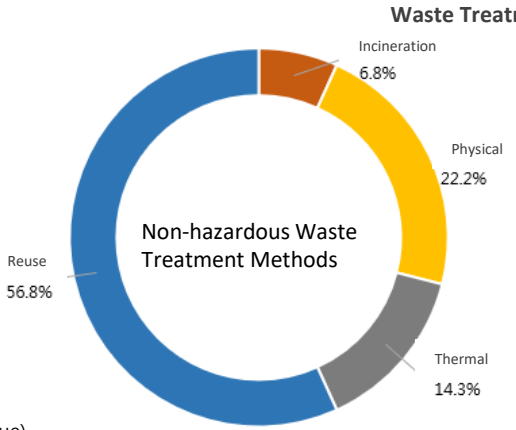
PSI follows waste management principles of “reduce where possible, reuse before disposal, recycle instead of incineration, and apply final disposal only when necessary.” Operational waste is classified as general and hazardous industrial waste, centrally managed to ensure accurate tracking of sources and volumes. Waste generation and disposal data are monitored through regulatory reporting systems and internal records. In 2024, total waste increased by 597.50 metric tons compared to 2023, primarily due to changes in treatment methods. The Hsinchu plant outsourced spent process acids to qualified recycling facilities for material recovery, while the Chung Kang plant installed ammonia nitrogen wastewater treatment equipment, with resulting by-products handled by certified reuse vendors, supporting improved resource recovery and compliance.

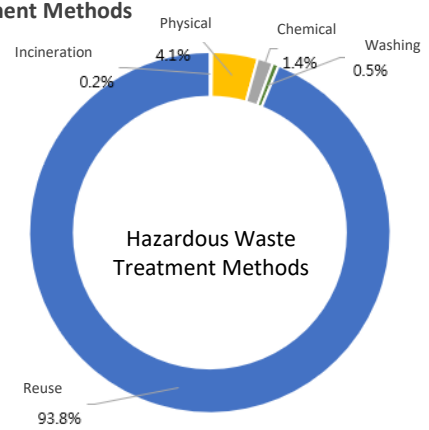


Through source management, waste reduction, and continuous efforts to enhance resource reuse, PSI's waste statistics show that in 2024, general waste accounted for 59.29% of total waste (1,815.48 metric tons), while hazardous waste represented 40.71% (1,246.47 metric tons). In terms of waste treatment, PSI prioritizes recycling and reuse methods over disposal, including cleaning and reuse, waste liquid purification, and conversion into by-products. Inorganic sludge is treated through thermal processing and reused as secondary raw materials in cement production. As a result, the overall waste reuse rate reached 95.91%, reflecting effective waste management and circular economy practices.

Category / Treatment Method	Reuse	Thermal Treatment	Incineration	Physical / Chemical / Solidification	Off-site Disposal	Total	Reuse Rate
Hazardous Waste	1,175.69	0	2.26	68.5	0	1,246.47	99.82%
Non-hazardous Waste	1,030.54	259	122.86	403.08	0	1,815.48	93.23%
Total	2,206.23	259	125.12	471.58	0	3,061.95	-
Waste Treatment Share	72.05%	8.46%	4.09%	15.40%	0%	100%	95.91%







2024 Waste Reduction Measures and Outcomes

Source reduction and sustainable resource circulation form the core of PSI's waste management approach. Each department proactively identifies waste reduction opportunities based on its operational activities, translating daily practices into actionable measures. Through cross-functional engagement and continuous improvement at the source, PSI advances waste minimization initiatives to achieve overall waste reduction targets and strengthen circular economy performance.

Initiative / Measure	Description of Impact	Benefits
Reduced chemical usage in etching processes	Reduction of hazardous industrial waste	Annual waste reduction of 13.41 metric tons
Reduced chemical usage in polishing processes	Reduction of hazardous industrial waste	Outsourced hazardous waste solvent reduced by ~30 m^3
Recovery and reuse of chemical containers by suppliers	Reduction of hazardous industrial waste	Hazardous waste reduced by 25.89 metric tons
Reduced use of cleanroom wiping cloths	Reduction of non-hazardous industrial waste	Annual incineration volume reduced by 0.06 metric tons
Reduced sludge generation from wastewater treatment	Reduction of non-hazardous industrial waste	Moisture content reduced by ≥25%
Conversion of HF waste liquid into crystalline solids	Reduction of hazardous industrial waste	Annual waste reduction of 0.96 metric tons
Reuse of process waste liquids through alternative process routes	Reduction of hazardous industrial waste	Annual waste reduction of 5.68 metric tons
Use of waste liquid solvents as blended cleaning agents	Reduction of hazardous industrial waste	Annual waste reduction of ~1 metric ton
Replacement of disposable wipes with reusable cloths for tool cleaning	Reduction of non-hazardous industrial waste	Annual incineration volume reduced by 1.1 metric tons
Promotion of paperless operations across internal processes	Reduction of non-hazardous industrial waste	Annual reduction of 0.6 metric tons of general waste

PSI conducts annual audits of waste treatment contractors to ensure regulatory compliance and responsible waste management. In 2024, a total of six waste treatment vendors were audited, with no non-compliance or irregularities identified. Over the past three years, no major violations by waste contractors have occurred. PSI has also established a compliance review mechanism to assess contractors' legal conformity as a basis for cooperation decisions. No major leakage incidents or cross-border disposal of hazardous industrial waste occurred at any site during the reporting period.

As an entity required by the Ministry of Environment to report waste generation, storage, clearance, treatment, reuse, export, and import via online systems, PSI was subject to a data reconciliation review by the Taichung City Environmental Protection Bureau in May 2024, covering the Chung Kang plant's reporting from September 2023 to February 2024. Discrepancies were identified for mixed waste containing toxic heavy metals (C-0119), where reported generation volumes did not match stored quantities, resulting in a violation of Article 31 of the Waste Disposal Act. PSI subsequently implemented a mass and energy balance reconciliation tool, monthly cross-checks of inputs and outputs, automated data integration, dual-review controls, and EHS system integration to reduce manual errors, enhance data accuracy, and prevent recurrence through regular internal audits.

05

Inclusive Growth

Common Wealth Sustainability Award

-Little Giant Group Top25

Human Rights Management

PSI is dedicated to CSR by safeguarding the fundamental human rights of all employees, customers, and stakeholders. We strictly adhere to local labor laws and voluntarily align with international standards, including the Universal Declaration of Human Rights, UN Global Compact, UN Guiding Principles on Business and Human Rights, ILO, and RBA. Annually, we review our operations, value chain, and new business activities (such as M&A or joint ventures) through issue monitoring, data tracking, and surveys. These measures identify and assess potential human rights risks, allowing us to formulate control plans and continuously improve implementation results. Based on these commitments, our human rights policies and specific plans are summarized below:

Through our policies, PSI integrates human rights into business strategies, culture, and daily operations. We conduct awareness programs during orientation and focus on the listed issues based on our operational characteristics, implementing action plans to fulfill these goals.

Action Plan	Summary
Freely Chosen Employment	Employment is voluntary with legal contracts. PSI prohibits forced, bonded, or prison labor and human trafficking. We do not withhold personal documents or restrict movement. Workers pay no recruitment fees; any discovered fees are reimbursed.
Young Workers	We hire all roles legally. Student workers are protected by law, and we provide necessary support and training.
Working Hours	Hours and rest must comply with laws. Workweeks shall not exceed 60 hours, and all overtime is voluntary.
Wages and Benefits	Pay and benefits meet legal standards. Wages are paid timely and in full; deductions are never used as a disciplinary tool.
Humane Treatment	We strictly prohibit harsh or inhumane treatment, including harassment, sexual abuse, corporal punishment, or mental/physical coercion.
Non-Discrimination	PSI does not tolerate discrimination in hiring, pay, training, promotion, termination, or retirement.

PSI provides human rights training at orientation. In 2024, 163 staff completed orientation, while 111 managers finished mandatory gender equality and harassment prevention training. We will continue raising awareness to mitigate risks.

Employee Grievance Channels

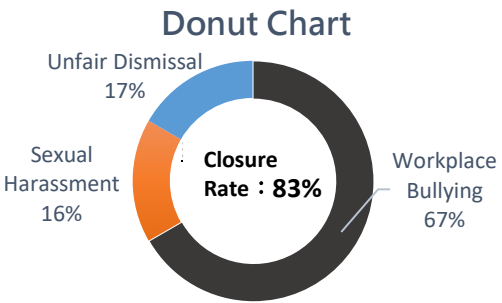
The Company is committed to a safe, respectful, and inclusive workplace. We have established “Workplace Safety Management” and “Grievance Procedures” to address unfair treatment. In response to the “Stalking and Harassment Prevention Act” and 2024 “Gender Equality in Employment Act” updates, we have revised internal regulations to protect employee dignity. When risks arise, we integrate resources to provide immediate care and mitigate harm. Employees can file grievances via suggestion boxes, dedicated mailboxes, or hotlines. The Legal Affairs Department ensures full privacy and strictly prohibits retaliation. Through these mechanisms, we uphold our commitment to eliminating unlawful infringement and promoting sustainable governance.

Receive Grievance
- Initiate inquiry within 10 days

Complete Report
- Case closed within 60 days

File Appeals
- Submit within 10 days

In 2024, 6 named grievances were filed. 5 cases have completed responses, and 1 remains under review by the Hsinchu District Court for clarification.



Regular Risk Assessments
- Departmental hazard identification and risk assessment reviews.
- Supervisor self-checks on workplace conduct to adjust management.

Prevention & Communication Training
- Sensitivity training on gender, diversity, and non-discrimination.
- Interpersonal skills to prevent and de-escalate workplace conflict.

Optimized Workforce Planning
- Consistent scheduling with consent to avoid overwork and stress.
- Flexible hours and benefits to support work-life integration.

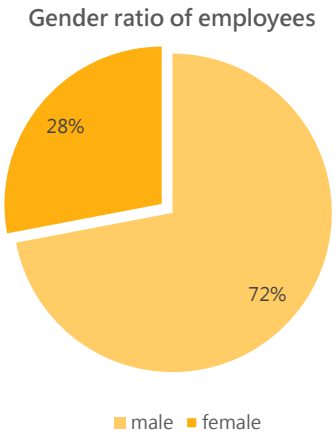
Incident Handling Protocols
- Clear reporting and emergency protocols for immediate response.

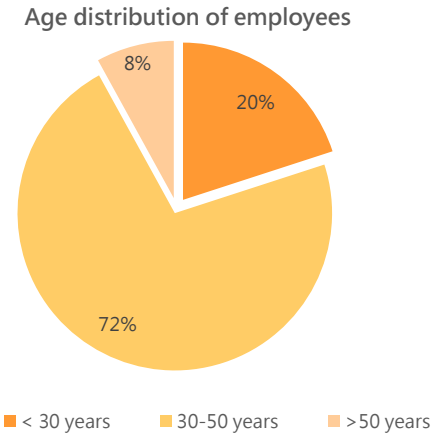
Talent attraction and retention

Workforce Structure

PSI upholds diversity and inclusion. We establish comprehensive systems and follow regulations to protect employee rights, aiming for talent attraction and retention, and striving for a win-win growth for both the company and employees. In 2024, there were 163 new hires, with a gender ratio of 75% male and 25% female; the ratio of domestic to foreign employees was 84% and 16%, respectively. The company-wide annual turnover rate decreased from 21% in 2023 to 18% in 2024. Broken down by direct and indirect employees, the turnover rates were 16% and 20%, respectively, with an average monthly turnover rate of 1.5%. As of the end of 2024, the total number of employees was 827, with males accounting for 72% and females for 28%.

Sort		Total number	Origin	Foreigners
Gender	Male	598	463	135
	Female	229	197	32
Total		827	660	167
Age	<30 years	168	112	56
	30-50 years	594	486	111
	> 50 years	65	65	0
Total		827	660	167





Data date：2024/12/31

Note 1: The Company has no non-regular employees.

Note 2: Annual turnover rate calculation = Number of annual resignations / {(Number of employees at the beginning of the year) + (Number of employees at the end of the year) / 2}. The turnover rate calculation does not include involuntary terminations, leaves of absence without pay, or fixed-term contract personnel.

Talent Acquisition and Retention

PSI values recruitment and retention, striving to build a sustainable enterprise through diversity. The following outlines these strategies and how they promote the company's sustainable development.

Regarding recruitment, our 2024 focus remained on multicultural prosperity, utilizing channels like Filipino hiring, campus recruitment, referrals, and R&D programs. We held 6 online briefings, 3 campus events, 1 lecture, and 7 intern sessions. Twenty foreign colleagues joined, continuing our effort to attract diverse talent and foster organizational innovation and competitiveness.

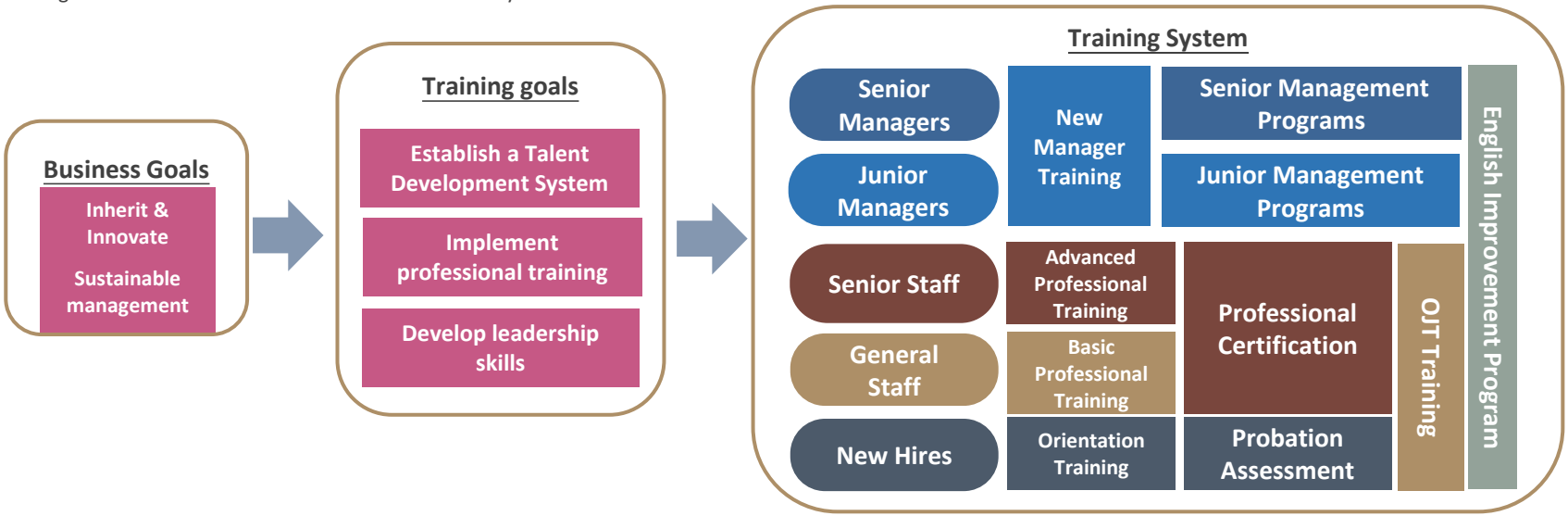
To enhance diversity and development, the company promotes career, skill, and leadership programs. In 2024, the PSI core value system and an English learning platform were launched to strengthen learning resources. Retention strategies included newcomer care and a Mentor mechanism, where 71 senior instructors assisted new hires via journals and "growth tables". Furthermore, to balance work and life, we provide flexible hours, health activities, medical protection, and free dormitories. Optimized stock ownership trust contributions in 2024 also enhanced overall benefits and retention appeal.

Diversity, Equity, and Inclusion (DEI)

PSI consistently upholds the spirit of diversity and inclusion. Through institutional systems and regulatory compliance, we safeguard employee rights and remain committed to attracting talent and ensuring stable retention, achieving mutual growth for both the company and its employees. In 2024, we continued promoting dormitory exchange activities. Through fun competitions, we facilitated social engagement between Taiwanese managers and foreign colleagues, strengthening their connections. These efforts deepen understanding among employees of different nationalities, fulfilling our commitment to multicultural inclusion and employee care.

Talent cultivation

Upholding a legacy of innovation, PSI continuously deepens its talent development system while implementing professional and management training to cultivate talent aligned with corporate needs and achieve sustainable business goals. We prioritize the growth and capability enhancement of every employee; new hires must first complete orientation training to ensure seamless integration into the company. During their tenure, employees receive ongoing professional training and relevant certifications tailored to their specific tasks and individual career paths. To bolster global competitiveness, we launched the "PSI E-Power" program to enhance employees' English proficiency. Furthermore, we develop internal lecturers and management talent through instructor training and coaching-based mentorship, creating a diverse and sustainable talent cultivation ecosystem.



Talent cultivation achievements in 2024

In 2024, PSI provided diverse training in general, professional, and management competencies. With 43 in-person and 182 online courses, we reached 20,897 participants and averaged 81.06 learning hours per employee.

We promote "Quality First, Zero Defect" by integrating quality mindsets into daily tasks. In 2024, quality awareness training reached a 100% completion rate. Professional courses like IATF 16949, QC 080000, FMEA, and DOE were held to boost efficiency and support sustainable growth.

Talent cultivation achievements in 2024

- 43 In-person Courses
- 182 Online Courses
- 20,897 Participants
- Avg. 81.06 Learning Hours
- 100% Quality Awareness Completion

Psi E-Power English Improvement Plan

To enhance English communication and global competitiveness, PSI launched "Psi E-Power" in September 2024. This initiative includes a learning platform and incentive system integrated into ESG training indicators. Open to indirect employees, the platform features interactive group learning and assessments to encourage improvement. 117 employees completed the test, with 22 reaching job-specific proficiency thresholds, demonstrating success in boosting language skills and motivation. Employees meeting grade standards receive scholarships, further enhancing engagement and learning outcomes. PSI remains committed to fostering self-growth through diverse platforms and incentives, ensuring talent sustainability and corporate resilience.

Salary and Benefits

PSI complies with labor wage regulations, benchmarking market trends and company performance to adjust salaries based on individual performance and responsibility. Compensation adheres to fairness, rewarding goal contribution without discrimination.

A "Remuneration Committee" oversees executive pay, while general employee salary is determined by expertise and experience. Company articles define profit-sharing standards to motivate staff and foster harmonious labor relations. In 2024, the total salary for non-managerial full-time employees was 650,788,000 NT dollars. The median salary was NT$727,000, and the average was NT$822,000, representing a 3% increase from 2023.

PSI 2024 Remuneration Ratio

Remuneration Ratio by Category	Headcount		Remuneration Ratio	
	Female	Male	Female	Male
Management	21	60	0.76	1.00
Non-management	208	538	1.05	1.00

P.S. The female-to-male remuneration ratio (annual salary ratio) is calculated as the average annual salary of females in a specific category divided by the average annual salary of males in that same category.

Long-term benefits

Per the Labor Standards Act, employees hired on or before June 30, 2005, are entitled to old system pension seniority. At least 4% of their monthly salary is deposited into a dedicated reserve account at the Central Trust of China. By late 2024, accumulated reserves in the Bank of Taiwan totaled approximately NT$15.72 million. Currently, 16 employees are eligible for retirement; the Supervisory Committee confirmed that allocated funds are sufficient to meet these needs. In 2024, there were 3 applicants for retirement.

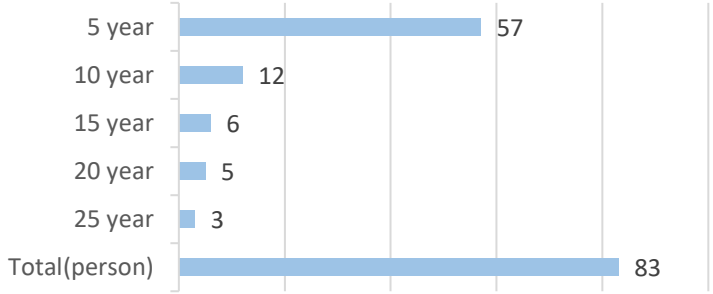
Per the Labor Pension Act, for employees hired on or after July 1, 2005, PSI contributes 6% of the monthly wage into their individual pension account. Beyond the mandatory 6% employer contribution, employees may voluntarily contribute an additional 0% to 6% of their wage. To enhance security, starting July 2024, the employer contribution increases to 7% for employees who voluntarily contribute 6%, totaling 13% deposited into their accounts for comprehensive retirement preparation.

Welfare measures

We offer diverse welfare measures across various dimensions, including “welfare bonuses,” “health promotion,” “work-life balance,” and a “happy workplace.” Driven by empathy, we aim to meet the practical needs of employees across all generations and strive to realize the vision of a happy enterprise.

Long-term commendation

In 2024, we honored 83 senior employees, thanking them for their long-term dedication and passion. Long-service bonuses were awarded for five, ten, fifteen, and twenty-year milestones. We encourage them to continue passing on their expertise and core values as we face future challenges.



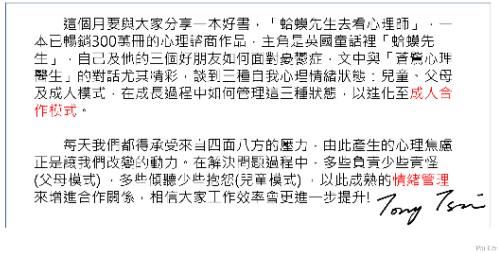
Welfare Measures	Welfare Bonuses	Health Promotion	Work-Life Balance	Happy Workplace
Free Dormitory				●
Free Drinks & Snacks				●
Lunch & Dinner Subsidy				●
Festival Bonuses (3 Major Festivals)	●			
Holiday Perks (Festivals & Birthday)	●			●
On-site Physician Consult		●		
Health Seminars		●		
Group Medical & Life Insurance				●
Life Event Grants (Marriage/Funeral)	●			●
Regular Health Checkups		●		
Operational Bonuses	●			
Health & Occupational Insurance		●		
Flexible Hours & Lunch Breaks			●	
Lifestyle Activities (DIY)			●	
Medical & Lactation Room				●
Continuing Education Subsidy				●
Children's Scholarships				●

Labor-Management Interaction and Employee Care

To foster harmonious labor relations and cooperation, PSI established transparent communication channels for horizontal and vertical dialogue. We encourage employee feedback on health, safety, and welfare, proactively addressing concerns to achieve positive, mutually beneficial interactions.

Letter from the President

A Letter from Tony



這個月要與大家分享一本好書，「蛤蟆先生去看心理師」，一本已暢銷300萬冊的心理諮商作品，主角是英國童話裡「蛤蟆先生」，自己及他的三個好朋友如何面對憂鬱症，文中與「青鷺心理醫生」的對話尤其精彩，談到三種自我心理情緒狀態：兒童、父母及成人模式，在成長過程中如何管理這三種狀態，以進化至成人合作模式。

每天我們都得承受來自四面八方的壓力，由此產生的心理焦慮正是疫我們改變的動力，在解決問題過程中，多些負責少些責怪(父母模式)，多些傾聽少些抱怨(兒童模式)，以此成熟的情緒管理來增進合作關係，相信大家工作效率會更進一步提升!

Tony Tsai

The monthly "Letter from Tony" on the intranet encourages employees and shares policy updates to bridge gaps, strengthen communication, and inspire dedication across the entire organization.

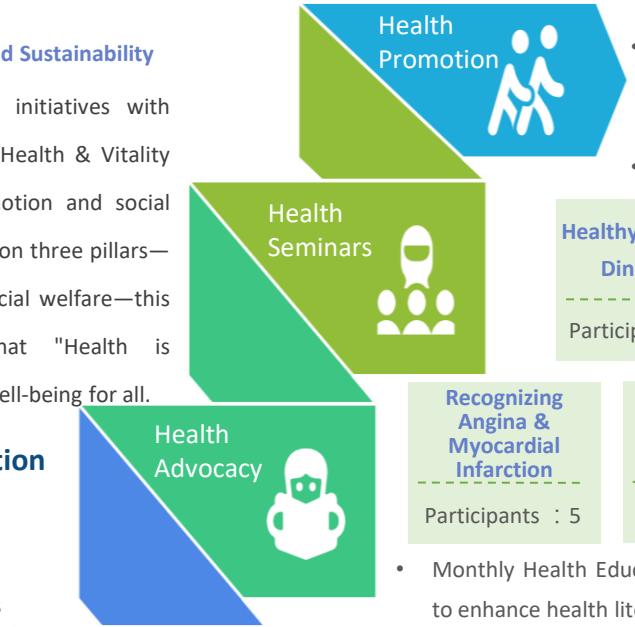
- Emotional Management: Prioritize emotional management when facing challenges. - Jan
- Taking the spirit of the dragon to show action and commitment. - Feb
- Participating in QIC Semiconductor Day, focusing on AI applications and key technology layout. - Mar
- Integrating the DNA of environmental protection and low carbonization into our lives. - Apr
- Roles of leaders and followers should be adjusted timely. - May
- “Inheritance and Succession” is the next key to PSI's sustainability. - Jun
- "Good to Great" corporate transformation declaration, challenging multi-fold profit growth. - Jul
- Continuous excellence: Extra contributions to labor pensions and employee stock ownership trusts. - Aug
- "Believe in letting children shine," directly passing PSI's power to those we support. - Sep
- Demonstrating core competitiveness and values; managers lead teams with management functions. - Oct
- Established the "Sustainability Development Executive Committee" to strengthen sustainable governance. - Nov
- "Low-Carbon Wafer Supply Chain" Supplier Conference, realizing goals of automation, intelligence, and green energy. - Dec

LOHAS PSI

PSI Health & Vitality Circle –

Building a Comprehensive Culture of Health and Sustainability

To align long-term health and social initiatives with corporate sustainability, PSI established the "Health & Vitality Circle". This concept integrates health promotion and social responsibility into employees' daily lives. Built on three pillars—a healthy workplace, fitness activities, and social welfare—this initiative reinforces our core belief that "Health is Sustainability," fostering physical and mental well-being for all.



- "Slim Down for Summer" Weight Loss: 114 participants, total 290 kg lost.
- "Health Starts with Walking" Challenge: Monthly average of 7,000 steps; 64 participants met the goal 288 times total. Estimated carbon reduction: ~14,400 kg.
- Tech-based Physical Fitness Testing: 62 participants total.

Healthy Eating for Dining Out
Participants：80

Aerobic Fitness: Turning Fat to Muscle
Participants ：5

Strength Training & Fascial Release
Participants ：5

Recognizing Angina & Myocardial Infarction
Participants ：5

Healthy Weight Loss & Dieting
Participants ：17

Eating for Health with a Nutritionist
Participants ：3

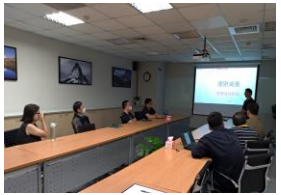
Mental Health: Stress Relief & Adaptation
Participants ：22

- Monthly Health Education: Regular release of disease prevention concepts to enhance health literacy; 70 total posts for the year.

Healthy Workplace - Health Promotion Activities

To integrate health consciousness daily, PSI implements long-term wellness programs ensuring effectiveness. Rising health awareness fosters employee engagement and well-being, creating a positive cycle for corporate and social sustainability.

- Low-Dose CT (LDCT) Scans: Free slots provided for employees, with discounted rates for dependents.
- Employees (Free): 65 participants
- Dependents (Discounted): 15 participants



LOHAS PSI - Active Sports Clubs, Promoting Physical Activity

To encourage regular exercise and promote well-being, PSI actively creates a supportive sports environment. The Employee Welfare Committee invests long-term resources to facilitate diverse sports clubs... In 2024, a total of NT$236,929 was subsidized for sports clubs, demonstrating our commitment to employee health. Currently, there are four sports clubs: Badminton, Table Tennis, and Bowling Clubs at both Hsinchu and Chung-Kang plants. These activities are essential for health management and happiness, reflecting our corporate responsibility and commitment to sustainability.

Annual Events	Participants
Badminton Doubles Tournament	32
Hsinchu Bowling Tournament	75
Chung-Kang Bowling Tournament	40
Table Tennis Team Tournament	38

Club Name	Headcount
Bowling Club (Hsinchu)	30
Bowling Club (Chung-Kang)	20
Badminton Club	22
Table Tennis Club	38

Each club holds annual competitions open to all employees, fostering cross-departmental interaction and teamwork. These events enhance the sports culture and emotional connection among staff, showcasing PSI's "people-oriented" core values and commitment to a healthy, vibrant workplace.

Safe workplace

Occupational Health and Safety Management System

Providing a safe working environment is a fundamental duty of PSI as a corporate citizen. Compliance is our basic requirement. The company centers efforts on EHS policies to drive occupational safety through a ten-item framework. Following the PDCA cycle, we continuously improve by setting standard procedures for consistent execution. Annual reviews ensure suitability, forming the foundation for a safe workplace.

Our Hsinchu and Taichung plants implemented ISO 45001 and passed CNS 45001 certification. This ensures accident prevention, employee safety, and asset protection, creating a comfortable environment. We value safety in all communication, aiming for a sustainable, healthy workplace.

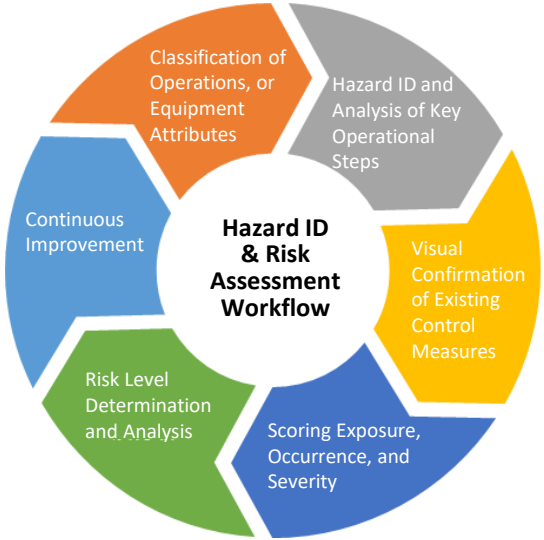

bsi.
Certificate of Registration


bsi.
Certificate of Registration

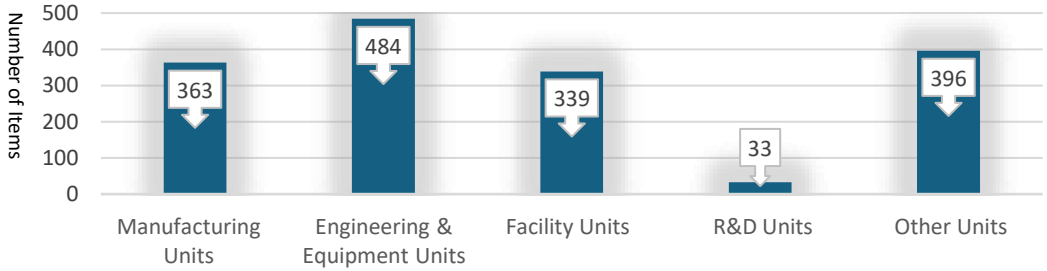
Safety and Health Management Risk Assessment

Hazard identification and risk assessment procedures are conducted for routine and non-routine operations across all departments. Risk levels are determined by factors such as exposure frequency, occurrence probability, and severity to analyze significant occupational risks. This assessment covers employees, contractors, visitors, and external personnel. In 2024, a total of 217 activities were identified, involving 1,615 risk assessment items. Among these, 13 improvement actions were implemented through elimination, substitution, engineering, and administrative controls to effectively reduce workplace hazards.

To continuously reduce safety risks and ensure a safe environment for employees and partners, PSI strengthens management and execution of safety, environment, and energy issues annually. Preventive measures and improvement projects have increased in recent years, with cumulative investment exceeding NT$45 million. Professional designs ensure the full implementation of safety measures, maintaining a stable and safe workplace.



PSI Risk Assessment Execution Statistics



PSI Annual Improvement Project Statistics

	2021	2022	2023	2024
No. of Projects	7	5	9	13
Completion Rate	100%	100%	100%	83% Note1
Amount / NT$1,000	6,055	676	9,286	28,986

Note 1：Some projects are 2-year terms and are expected to be completed by December 31, 2025.

Occupational safety and health training

As global sustainability and corporate responsibility gain importance, companies face diverse and complex occupational safety and health risks. Systematic safety education and training are essential for identifying hazards and enhancing prevention. Comprehensive training not only meets legal requirements but also reduces accident rates and protects employee well-being, strengthening corporate productivity and resilience. This reflects our commitment to stakeholders and lays a solid foundation for ESG (Environmental, Social, and Governance) goals. PSI establishes a comprehensive annual safety training plan, viewing legal compliance as a baseline. In addition to mandatory courses, multiple non-statutory items are included to raise overall safety awareness. Adapting to post-pandemic challenges, we innovated contractor training by implementing 24/7 online safety orientations and exams. Personnel must complete online courses and tests before applying for entry permits through the system. This flexible platform allows learners to review content repeatedly, effectively strengthening the implementation and self-management of safety education.

Category	Training Item	Target Audience	Hours	Sessions	Complete training No.
Statutory EHS Training	➢ General Safety & Health Training	New Hires & Transferred Staff	6	49	163
	➢ General Safety Refresher Training	All Employees	1	2	1,307
	➢ Hazard Communication Training	Personnel handling chemicals	1	2	792
	➢ Professional Certification Training	Specific technical personnel	Per Certification	External training	59
	➢ Fire Safety & Evacuation Drills	All Employees	8	10	822
Professional Training	➢ ERT Professional Training (New/Commander/Refresher)	Indirect Personnel (Mfg/Equip/Facility/EHS)	1	9	241
Contractor Safety	➢ Contractor Hazard Education	Personnel managing contractors	1	3	266
	➢ Pre-entry Safety Orientation & Coordination Meeting	All onsite contractors	1	Online	1,618

Chemical Management

Committed to ESG sustainability, PSI strengthens the life-cycle management of chemicals to achieve three core goals: regulatory compliance, risk control, and employee health protection. We implement risk assessment mechanisms and chemical databases for all operations to ensure transparency and safety. By utilizing Chemical Control Banding (CCB) tools, we monitor high-risk substances and conduct regular environmental monitoring. Our facilities are equipped with required protective equipment and hazard labels. Highly hazardous chemicals are stored in explosion-proof cabinets to minimize risks. PSI regularly conducts respiratory protection fit tests and PPE training, promoting a dual-track safety culture through both institutional systems and education.

Procurement & Entry
- Chemical usage review procedures
- Establishment of chemical database
- Management of non-production chemicals

Storage
- Labeling and incompatible material separation
- Stacking height control
- Earthquake protection for shelving
- Firefighting systems in storage areas

Usage
- Usage management procedures
- Personnel hazard notifications
- Workplace environment measurements
- Effectiveness of local exhaust ventilation

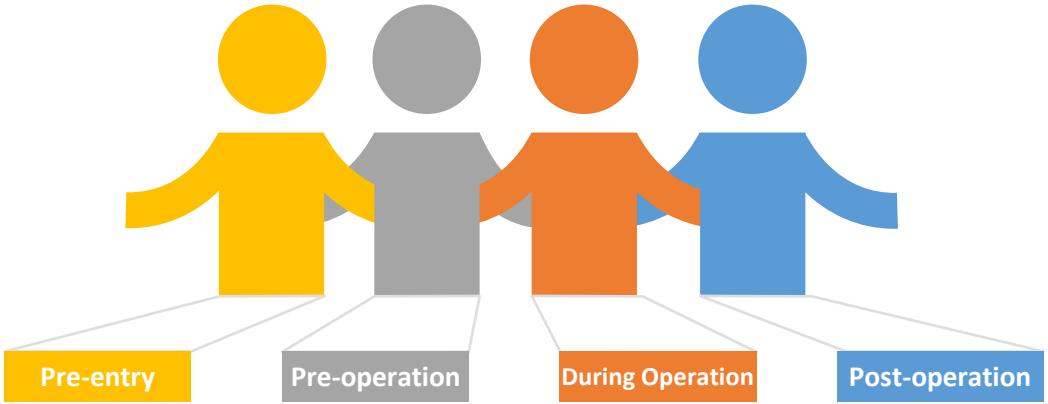
Detection
- Leak detection equipment and alarms
- Testing of protective/alarm equipment
- Regular and ad-hoc inspections
- Real-time monitoring equipment

Emergency Response
- Spill handling procedures
- Warning devices
- Equipment setup and inspection
- Disaster response and reporting procedures
- Emergency drills

Disposal
- Waste chemical handling procedures
- Transport reporting and verification

Contractor Management

PSI aims for "Zero Contractor Work Accidents" as a core goal, fully implementing occupational health and safety management while fostering an internalized safety culture among employees and partners. Before commencement, we enforce hazard identification and high-risk assessment to ensure safety control and prevent accidents at the source. We believe "Participation" and "Commitment" are cornerstones of a sustainable safety culture. Based on our ESG governance framework, we have built a transparent contractor management system with clear accountability, integrating contractors into our value chain. By incorporating green operations and pollution prevention into requirements, we collaborate with contractors to create a safe, healthy, and sustainable workplace, demonstrating our ESG commitment.



Smart Control

Integrating training, hazard notification, and entry applications through a digital platform for qualification review and identity verification.

Risk Control

Implementing self-inspections before starting to ensure site conditions meet safety standards; enforcing strict risk management for high-risk tasks.

Safety Supervision

Establishing dynamic safety supervision mechanisms to confirm high-risk operations with contractors, maintaining continuous monitoring and clear oversight.

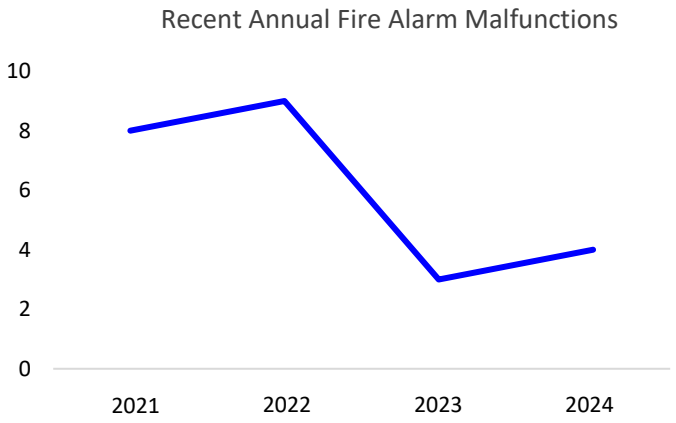
Completion Inspection

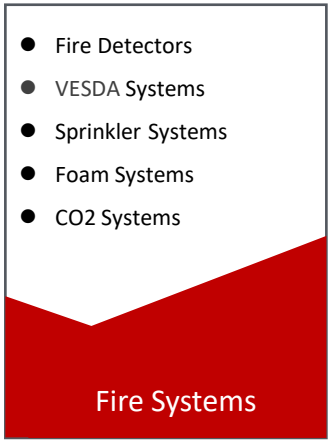
Performing 5S cleanup upon completion; ensuring fire safety and environmental facilities are restored and verified by designated personnel.

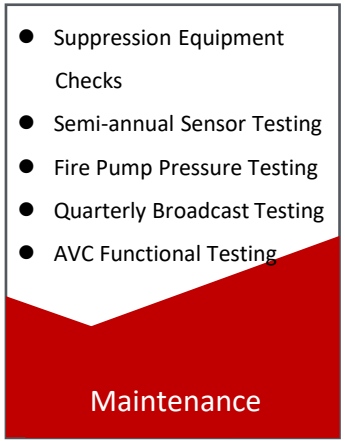
Fire Protection and Safety Management

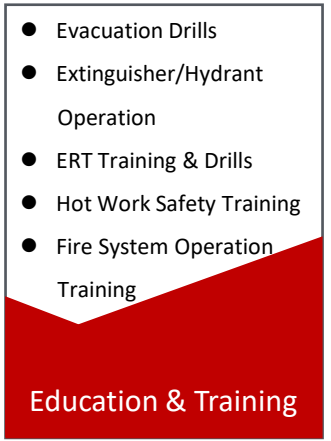
Given the non-negligible fire risks from chemical usage, PSI has installed various zoned fire protection systems. Different processes and areas are equipped with fire detectors, VESDA systems, sprinklers, foam systems, and CO2 suppression systems to detect abnormalities early and activate precise responses. This effectively contains disasters and minimizes secondary damage to equipment and the environment.

We systematically perform fire equipment maintenance and testing based on a four-stage framework: "Mitigation, Preparedness, Response, and Recovery". Tasks include functional checks of suppression systems, fire pump pressure tests, semi-annual sensor testing, quarterly fire alarm broadcasts, and **AVC** (Automatic Voice Communication) functional tests. All records are stored digitally to track maintenance effectiveness, enhance system reliability, and reduce false alarms. Sensors showing repeated malfunctions are replaced immediately to ensure alarm accuracy and site safety.



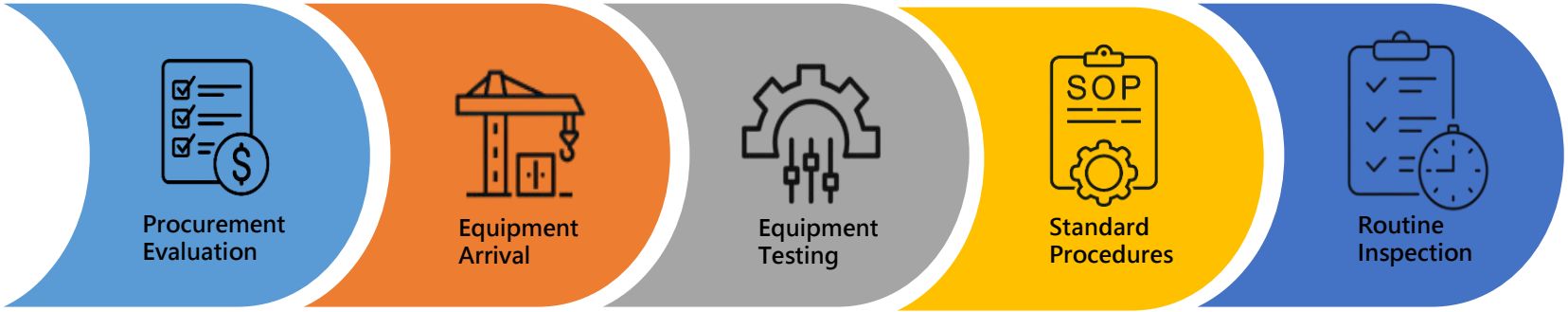






Machinery Safety Management

To ensure operator safety and prevent risks during machinery operation, repair, and maintenance, PSI reviews old equipment for safety gaps to reinforce them and allocates budgets for replacements. Recognizing that hazard isolation and source prevention are key, we began integrating "Intrinsic Safety" elements into new equipment evaluations in recent years. By implementing strict controls from the procurement stage through to the operational stage, we strive to minimize potential machinery hazards.



Safety Specs Evaluation

General requirements, material specs, ventilation, safety interlocks, chemical hazard prevention, electrical design, and earthquake protection.

Positioning & Power-on Check

Warning labels, emergency stops, piping materials, pressure leak tests, spill prevention, and education/training.

Safety Device Testing

Testing safety interlocks, leak detection, over-temperature protection, and dry-burn prevention.

Establishing Test Standards

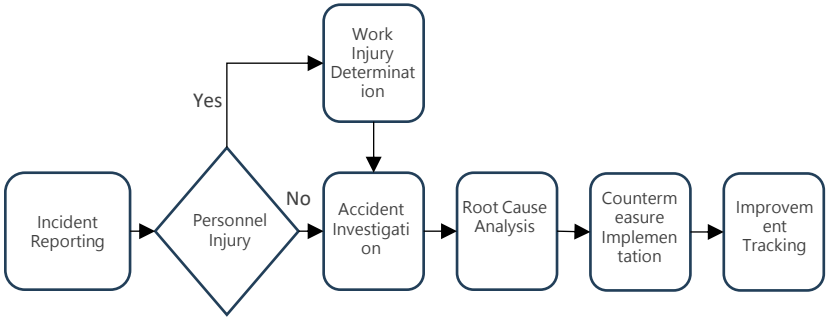
Defining testing workflows, standard practices, education/training, and OJT (On-the-Job Training).

Periodic Device Testing

FEM equipment inspections, record keeping, abnormality notification, and improvement tracking.

Occupational Accident Investigation and Management

PSI has established management procedures for accident investigation, reporting, and prevention to ensure rapid notification and subsequent improvement. The scope of reporting extends beyond personnel injuries to include fires, explosions, leaks, and smoke that may impact public safety. When an incident reaches a certain level, it is classified as an "Accident," triggering an investigation to determine root causes and formulate countermeasures while seeking input from labor representatives. If injuries are involved, we provide necessary assistance during legal work injury determination.



In 2024, main occupational injuries included falls (0.02%), cuts (0.01%), and chemical contact or crushing (0.01% each), totaling 5 cases. Minor injuries with less than one lost day increased compared to the previous two years, primarily due to falling objects, collisions, and chemical contact (6 cases). For each event, we implement corrective and preventive measures. Starting in 2025, occupational injury occurrences will be included in departmental performance appraisals, with monthly EHS health lights used to reflect safety trends and performance.

	2020	2021	2022	2023	2024
Avg. Monthly Employees	786	820	900	957	829
Total Exposure Hours (HR)	1,553,136	1,621,680	1,812,704	1,896,376	1,650,456
Disabling Injuries (Cases)note1.	10	10	4	4	11
Disabling Injuries (Persons) note2.	6	6	0	3	5
Lost Days (Day)	13	21	0	39	59
Injury Frequency (FR)note3.	3.86	3.70	0	1.58	3.03
Injury Severity (SR)note4.	8.36	12.95	0	20.57	35.75
Freq-Severity Indicator (FSI)note5.	0.17	0.21	0	0.18	0.32
Injuries per 100 Employeesnote6.	0.1	0.1	0.03	0.03	0.11

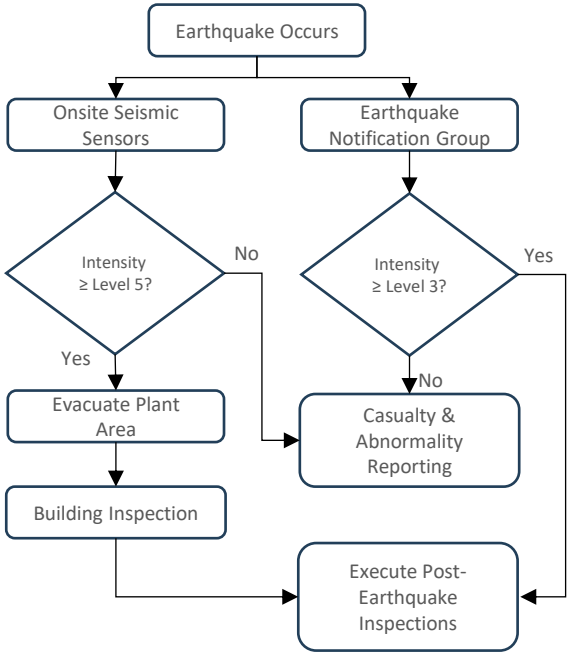
Note 1. Number of Disabling Injuries: Total number of incidents resulting in personn injuries.
Note 2. Number of Persons Injured: Number of personnel injured with lost workday: exceeding one day.
Note 3. Frequency Rate (FR): (Number of disabling injuries x 1,000,000) / Total exposure hours. (Calculated to two decimal places; subsequent digits discarded per regulations).
Note 4. Severity Rate (SR): (Total lost workdays x 1,000,000) / Total exposure hours. (Calculated to an integer; subsequent digits discarded per regulations).
Note 5. Frequency-Severity Indicator (FSI): $\sqrt{(FR \times SR) / 1000}$. (Calculated to two decimal places; subsequent digits discarded per regulations).
Note 6. Occupational Injury Rate per 100 Employees: (Number of disabling injuries / Total employees) x 100.
Note 7. The above occupational injury statistics exclude traffic accidents.

2024 EHS Highlights

Earthquake Response Push Notifications

Located in a seismic belt, Taiwan experiences frequent earthquakes. Most semiconductor plants use seismometers to determine intensity. In addition to onsite sensors, PSI established the "PSI Earthquake Response Group" to quickly synchronize information. This group provides rapid updates on affected plants and seismic intensity by comparing and extracting data from the Central Weather Administration (CWA) database in real-time.

Earthquake Response Workflow



Safe workplace

Creating a healthy and safe working environment

Regular Health Examinations

- Total of 783 participants for annual and special health exams, with a 98.2% completion rate.
- 64 participants for special hazardous health exams, achieving a 100% completion rate.
- Provided NT$35,300 in health exam subsidies for employees.
- Organized onsite cardiovascular screening for 40 participants.

Onsite Physician Services

- Collaborated with medical institutions for monthly physician visits to provide onsite health consultations.
- Physician services totaled 36 sessions.
- Provided 125 individual health consultation services.

Occupational Disease Prevention

- Identified high-risk groups for cardiovascular disease and organized medical assessments and consultations.
- Implemented ergonomic risk identification and improved workstations with auxiliary tools.
- Performed mental health stress assessments and conducted interviews with high-risk individuals.

Maternal Health Protection

- Provided health consultations for 6 pregnant or postpartum employees.
- Conducted workplace environmental risk assessments and workload adjustments for maternal employees.

Social Impact

Goals and Vision

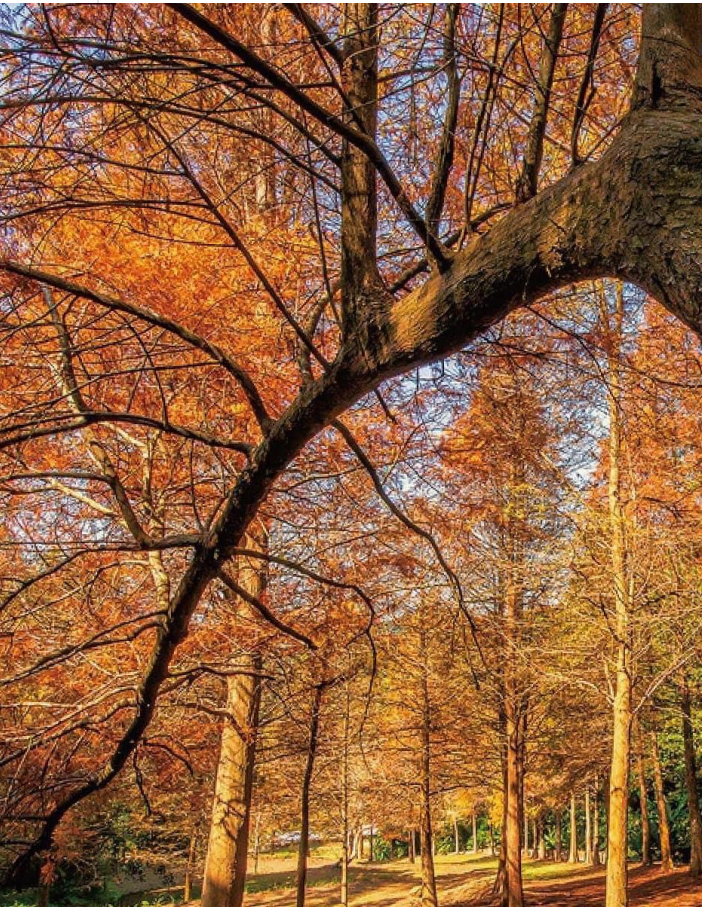
PSI responds to community and environmental needs, demonstrating corporate social responsibility. From supporting education and vulnerable groups to promoting health and sustainability, the company invests resources and takes action to connect impacts. These efforts enhance community well-being and drive a positive cycle between environment and society, reflecting our long-term commitment.

Total Reach (Persons)
1208 persons

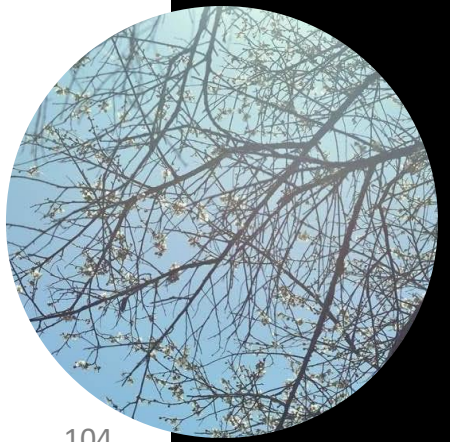
Total Investment (Funds)
NT$ 441,885

Number of Volunteers
90 persons

Concrete Action Items	
Rural Education	• Donated NT$ 34,200 in scholarships, 5 laptops, 25 sets of clothing, and NT$ 130,000 in activity rentals to Fulong Elementary and Hengshan Junior High in Hsinchu. • Charity fair reached 106 members of vulnerable rural families, with 365 total participants.
Social Care	• Donated 120 Mid-Autumn gift boxes to Huashan Social Welfare Foundation • Collected 160 sets of New Year supplies for Taiwan Fund for Children and Families (TFCF). • Fulong Elementary "Wishing Tree" program: Donated 96 sets of school/living supplies.
Regular Blood Donation	• Donated 52,000 cc of blood, a 59% growth compared to 2023, with 140 participants.
Environmental Park Care	• Adopted the "Nanliao Harbor Environmental Park" (Hsinchu Air Quality Purification Zone) for the 6th consecutive year. • Organized environmental volunteers for weeding activities, clearing 295 kg of weeds.



Appendix



About This Report

Phoenix Silicon International Corporation (hereinafter referred to as PSI or the Company) primarily provides professional processing services for semiconductor wafers. Our two major business segments are Wafer Reclaiming and Wafer Thinning. Driven by a spirit of technological innovation and quality priority, we have expanded into new test wafer areas to provide customers with more competitive, all-around services.

Reporting Focus

PSI remains committed to social responsibility, sound governance, and environmental protection. Having published voluntary reports since 2023, PSI will comply with legal filing regulations starting in 2025. We fully disclose ESG performance and strategies for the company's future development.

Reporting Standards

This report framework references GRI Standards (2021) and complies with regulations for listed companies. It also follows SASB semiconductor industry indicators. Data was reviewed by department heads and approved by the Board on August 1, 2025.

Reporting Boundary and Period

- Issue Date : August 2025
- Reporting Period : January 1, 2024, to December 31, 2024
- Reporting Scope : The scope of this report includes PSI Headquarters and the Chung Kang Branch.
- Site Data : Hsinchu Science Park Main Plant, Plant II, Plant III, and Chung Kang Branch.

Contact Information

Sustainability Development Office: Angela Hsu

Phone : 03-5641888

Email : ESG@psi.com.tw

Company Website : https://www.psi.com.tw

External Assurance Measures for Accompanying Reports

The financial data disclosed in this report is derived from consolidated financial statements audited by PricewaterhouseCoopers (PwC) in accordance with International Financial Reporting Standards (IFRS). Furthermore, the following management systems have been verified by independent third-party certification bodies: ISO 9001:2015 Quality Management Systems, IECQ QC 080000:2017 International Electrotechnical Commission Quality Assessment System Hazardous Substance Process Management System, IATF 16949:2016 International Automotive Task Force Quality Management System, ISO 14001:2015 Environmental Management Systems, ISO 45001:2018 Occupational Health and Safety Management Systems, ISO 14064-1:2018 Greenhouse Gas Emissions Verification, ISO 27001 Information Security Management Systems.

Management System Certification Information

Management System	Standard & Version	Effective Date	Expiry Date
Quality Management	HQ ISO9001:2015	2023-07-18	2026-07-17
	Chung Kang Branch ISO9001:2015	2023-07-09	2026-07-08
	HQ IECQ QC 080000	2023-07-21	2026-07-23
	Chung Kang Branch IECQ QC 080000	2023-07-21	2026-07-23
	HQ IATF 16949:2016	2023-07-18	2026-07-07
Info Security	HQ ISO27001:2022	2023-09-25	2026-09-24
	Chung Kang Branch ISO27001:2022	2023-09-25	2026-09-24

Management System	Standard & Version	Effective Date	Expiry Date
EHS	HQ ISO14001:2015	2022-10-08	2025-10-07
	Chung Kang Branch ISO14001:2015	2022-10-08	2025-10-07
	HQ ISO45001:2018	2022-10-08	2025-10-07
	Chung Kang Branch ISO45001:2018	2022-10-08	2025-10-07
	HQ ISO14064-1:2018	Issue Date:2025-03-11	

GRI Standards Index

GRI2 : General Disclosures			
Code	Information Disclosed	Corresponding Chapter	Page
2-1	Organization details	Preface - About PSI	9
2-2	Entities included in the Sustainability Report	Appendix - About This Report	95
2-3	Reporting period, frequency, and contact person	Appendix - About This Report	95
2-4	Restatements of information	Appendix - About This Report	95
2-5	External assurance	Appendix - About This Report	96
2-6	Organizational activities, value chain, and relationship with other entities in the value chain	Innovation - Products and Customer Services	43
2-7	Employee information	Inclusive Growth - Talent Attraction and Retention	74
2-8	Information on other workers	Inclusive Growth - Talent Attraction and Retention	74
2-9	Governance structure and composition	Governance - Governance Organization	26
2-10	Nomination and selection of the highest governance unit	Governance - Governance Organization	26, 27
2-11	Chairperson of the Highest Governance Unit	Governance - Governance Organization	27
2-12	Role of the highest governance unit in supervising impact management	Governance - Governance Organization	24
2-13	Appointments for managing impact	Governance - Governance Organization	24
2-14	Role of the highest governance unit in sustainability reporting	Sustainability - Sustainable Development Org & Strategy	12
2-15	Conflict of interest	Governance - Governance Organization	27
2-16	Critical Issues for Communication	Sustainability - Stakeholder Communication	13
2-17	Collective intelligence of the highest governance unit	Governance - Governance Organization	25
2-18	Performance evaluation of the highest governance unit	Governance - Governance Organization	27
2-19	Remuneration Policy	Governance - Governance Organization	26
2-20	Process for determining remuneration	Governance - Governance Organization	26
2-21	Percentage of Annual Remuneration	Inclusive Growth - Talent Attraction and Retention	74

GRI Standards Index

GRI2 : General Disclosures			
Code	Information Disclosed	Corresponding Chapter	Page
2-22	Statement on the Sustainable Development Strategy President's	Sustainability - Sustainable Development Org & Strategy	12
2-23	Policy commitments	Sustainability - Sustainable Development Org & Strategy	12
2-24	Internalize policy commitments	Governance - Governance Org, Innovation - Sustainable Supply Chain	29, 47
2-25	Procedures for remedying negative impacts	Inclusive Growth - Talent Attraction and Retention	73
2-26	Mechanisms for seeking recommendations and matters of concern	Appendix - About This Report	95
2-27	Regulatory compliance	Governance - Ethical Management	30
2-28	Membership of associations	Preface - About PSI	10
2-29	Approach to stakeholder engagement	Sustainability - Materiality Management & SDG Response	15
2-30	Collective bargaining agreements	The Company has not signed any collective bargaining agreements	-

GRI3 Material Topics			
Code	Information Disclosed	Corresponding Chapter	Page
3-1	Process of Determining Major Issues		
3-2	List of Major Issues	Sustainability - Materiality Management & SDG Response	15~22
3-3	Management of major issues		

GRI Standards Index

GRI 200： Economic Series			
Code	Information Disclosed	Corresponding Chapter	Page
201-1	Direct Economic Value Generated and Distributed by Organizations	Governance - Business Performance	37
201-2	The financial impact, other risks and opportunities that climate change caused on organizational activities	Environmental Protection - Climate Change Management	53
201-3	Defined benefit plan obligations and other retirement plans	Inclusive Growth - Talent Attraction and Retention	79
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	Inclusive Growth - Talent Attraction and Retention	74
202-2	Proportion of senior management hired from the local community	All senior management of the company are local residents	-
204-1	Proportion of spending on local suppliers	Innovation Service - Local Procurement	49
205-1	Operations assessed for risks related to corruption	Governance - Ethical Management	30
205-2	Communication and training about anti-corruption policies and procedures	Governance - Ethical Management	30~31
205-3	Confirmed incidents of corruption and actions taken	Governance - Ethical Management	30
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	No such incidents occurred in 2023	-
207-1	Approach to tax	Governance - Governance Organization	29

GRI Standards Index

GRI 300 ： Environmental Series			
Code	Information Disclosed	Corresponding Chapter	Page
301-1	Materials used by weight or volume	Environmental Protection - Circular Economy	68~70
301-2	Recycled input materials used		
301-3	Reclaimed products and their packaging materials		
302-1	Energy consumption within the organization	Environmental Protection - Energy Management	63~64
302-3	Energy intensity		
302-4	Reduce Energy Consumption		
302-5	Reductions in energy requirements of products and services		
303-1	Interactions with water as a shared resource	Environmental Protection - Water Resource Management	65~67
303-2	Management of water discharge-related impacts		
303-3	Water withdrawal quantity		
303-4	Water discharge quantity		
303-5	Water consumption quantity		
305-1	Direct (scope 1) GHG emissions	Environmental Protection - Energy and GHG Management	60~62
305-2	Energy indirect (Scope 2) GHG emissions		
305-3	Other indirect (Scope 3) GHG emissions		
305-4	GHG emissions intensity		
305-6	Emissions of ozone-depleting substances (ODS)		
305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions		
306-1	Waste Generation and Significant Waste Related Impacts	Environmental Protection - Circular Economy	68~70
306-2	Management of significant waste-related impacts		
306-3	Waste generated		
306-4	Waste diverted from disposal		
306-5	Waste directed to disposal		
308-1	New suppliers that were screened using environmental criteria	Innovation Service - Sustainable Supply Chain	47

GRI Standards Index

GRI 400 ： Social Series			
Code	Information Disclosed	Corresponding Chapter	Page
401-1	New employee hires and employee turnover	Inclusive Growth - Talent Attraction and Retention	74~80
401-2	Benefits provided to full-time employees that are not provided to temporary or parttime employees		
401-3	Parental leave		
403-1	Occupational health and safety management system	Inclusive Growth - Safe Workplace	83
403-2	Hazard identification, risk assessment, and incident investigation		84
403-3	Occupational health services		85
403-4	Worker participation, consultation, and communication on occupational health and safety		85
403-5	Worker training on occupational health and safety		85
403-6	Promotion of worker health	Inclusive Growth – LOHAS PSI	81
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		81
403-8	Workers covered by an occupational health and safety management system	Inclusive Growth - Safe Workplace	83
403-9	Work-related injuries		84
403-10	Work-related ill health		84
404-1	Average hours of training per year per employee	Inclusive Growth - Talent Attraction and Retention	77
404-2	Programs for upgrading employee skills and transition assistance programs		
405-1	Diversity of governance bodies and employees	Inclusive Growth - Talent Attraction and Retention	74
405-2	Ratio of basic salary and remuneration of women to men		78
406-1	Discrimination incidents and improvement action taken	Inclusive Growth - Human Rights Management	72
408-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Inclusive Growth - Human Rights Management	72
409-1	Operations and suppliers at significant risk for incidents of child labor	Inclusive Growth - Human Rights Management	72
414-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Innovation Service - Sustainable Supply Chain	47
417-1	New suppliers that were screened using social criteria	Innovation Service - Products and Customer Services	43
417-2	Requirements for product and service information and labeling	No such incidents occurred in 2024	-
417-3	Incidents of non-compliance concerning product and service information and labeling	No such incidents occurred in 2024	-
418-1	Incidents of non-compliance concerning marketing communications	No incidents of complaints regarding infringement of customer privacy or loss of customer data in 2024	-

SASB Content Index - Semiconductor Industry

Topic	Code	Accounting Metric	Category	Disclosure	Corresponding Chapter / Page
Greenhouse Gas Emissions	TC-SC110a.1	Scope 1 GHG emissions: 1. Total emissions from perfluorinated compounds (PFCs).	Quantitative	In 2024, GHG emissions were 83.66% Scope 2 (purchased electricity) and 16.34% Scope 1. Scope 1 emissions primarily consisted of PFCs (97.02% of Scope 1).	Environmental Protection - Energy and GHG Management / P.61
	TC-SC-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Qualitative	PSI actively responds to global carbon reduction trends, integrating climate mitigation and adaptation into management. ISO 14067 carbon footprint verification is expected by 2025; carbon management is driven by the "Environmental Protection Group" under the Sustainable Development Committee.	Environmental Protection - Energy and GHG Management / P.60
Energy Management in Manufacturing	TC-SC-130a.1	1.Percentage grid electricity 2.Percentage renewable.	Quantitative	Total electricity consumption in 2024 was 48,516 MWh, a decrease of 944 MWh from the previous year. Purchased grid electricity accounted for 99.93%; renewable energy accounted for 0%.	Environmental Protection - Energy and GHG Management / P.63
Water Management	TC-SC-140a.1	Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress.	Quantitative	Total water withdrawal in 2024 was 746.246 million liters, down 17.63% from 2023. Water discharge was 551.242 million liters, down 24.03% from 2023.	Environmental Protection - Water Resource Management / P.66
Waste Management	TC-SC-150a.1	Amount of hazardous waste generated, percentage recycled.	Quantitative	Hazardous waste accounted for 40.71% (1,246.47 tons) of total waste. PSI prioritizes recycling: waste cleaning and reuse, acid purification, and heat treatment for inorganic sludge as cement raw materials (95.91% utilization rate).	Environmental Protection - Circular Economy / P.69
Employee Health & Safety	TC-SC-320a.1	Description of efforts to assess, monitor, and reduce exposure of employees to human health hazards.	Qualitative	The company establishes comprehensive annual EHS education and training plans, treating regulatory compliance as a baseline requirement	Inclusive Growth - Safe Workplace / P.85
	TC-SC-320a.2	Total amount of monetary losses as a result of legal proceedings associated with employee health and safety violations	Quantitative	In 2024, there were no monetary losses due to EHS legal proceedings.	-
Recruitment & Talent	TC-SC-330a.1	1.Foreign nationals and 2.Located offshore.	Quantitative	In 2024, foreign national employees accounted for 20%; 0% of employees were located offshore.	Inclusive Growth - Talent Attraction and Retention / P.74

SASB Content Index - Semiconductor Industry

Topic	Code	Accounting Metric	Category	Annual disclosure	Corresponding Chapter / Page
Product Lifecycle Management	TC-SC-410a.1	Percentage of products that contain substances listed in IEC 62474.	Quantitative	The percentage of products containing substances listed in IEC 62474 is 0%.	-
	TC-SC-410a.2	Processor energy efficiency at a system level for: (1) Servers, (2) Desktops, and (3) Laptops.		Not Applicable	-
Materials Sourcing	TC-SC-440a.1	Description of management strategy for risks associated with the use of critical materials	Qualitative	The Company requires all suppliers to sign the "Supplier Commitment Letter." Critical raw material suppliers are categorized into A, B, and C based on their impact on daily operations and production.	Innovation Service - Sustainable Supply Chain / P.45
IP Protection & Competition	TC-SC-520a.1	Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behavior regulations.	Quantitative	In 2024, the Company had no monetary losses due to legal proceedings associated with anti-competitive behavior.	-
Activity Metrics	TC-SC-000.A	Total production	Quantitative	In 2024, the Company's reclaimed wafer production capacity reached an equivalent of 7 million 12-inch wafers.	Governance - Business Performance / P.38
	TC-SC-001.B	Percentage of production from own facilities		100% of the Company's product production comes from its own facilities.	-

Sustainability Disclosure Indicators - Semiconductor Industry

No	Indicators	Type of Indicator	Unit	Annual disclosure	Corresponding Chapter / Page
1	Total energy consumption, percentage of purchased electricity, and renewable energy use	Quantitative	Gigajoules (GJ), percentage (%)	Total electricity consumption in 2024 was 48,516 MWh, a decrease of 944 MWh from the previous year. Grid electricity accounted for 99.93%; renewable energy accounted for 0%.	Environmental Protection - Energy and GHG Management / P.63
2	Total water withdrawal and total water consumption	Quantitative	1,000 m3	Total water withdrawal in 2024 was 746.246 million liters; water consumption was 195.004 million liters.	Environmental Protection - Water Resource Management / P.66
3	Weight and percentage of hazardous waste recycled	Quantitative	Metric tons (t), percentage (%)	Hazardous waste accounted for 40.71% (1,246.47 tons) of total waste. PSI prioritizes recycling: cleaning and reuse, acid purification, and heat treatment for inorganic sludge as cement raw materials (95.91% utilization rate).	Environmental Protection - Circular Economy / P.69
4	Describe the type of occupational accident, number of people, and percentage	Quantitative	Percentage (%), quantity	In 2024, there were 5 major occupational injury cases and 6 minor injury cases.	Inclusive Growth - Safe Workplace / P.90
5	Disclosure of Product Lifecycle Management: Includes the weight of scrapped products and electronic waste and the percentage recycled	Quantitative	Metric tons (t), percentage (%)	Company products belong to customer raw materials; no lifecycle disclosure information is available.	-
6	Description of risk management related to the use of key materials	Qualitative	Not Available	PSI has a complete supplier management process, controlling supply chain risks and strengthening resilience through compliance, risk assessment, onsite audits, and continuous improvement.	Service - Sustainable Supply Chain / P.46
7	Total amount of monetary losses as a result of legal proceedings associated with anticompetitive behavior regulations	Quantitative	NTD	In 2024, the Company had no monetary losses due to legal proceedings associated with anti-competitive behavior.	-
8	Quantity of Main Products by Category	Quantitative	KPCS; Units: NTD 1,000	Reclaimed wafer production capacity reached an equivalent of 7 million 12-inch wafers.	Governance - Business Performance / P.38

Climate-related Information of Listed Companies

Item	Corresponding Chapter
1. Describe supervision and governance of climate-related risks and opportunities by the board of directors and management.	Refer to Environmental Protection - Climate Change Management in this report, pages 54-62. Refer to the 2024 Annual Shareholders' Meeting Report, pages 40-42.
2. Describe how the climate risks and opportunities identified affect the Company's business, strategies, and financial position (short-term, mid-term, long term).	
3. Describe the impact of extreme weather events and transition actions on the Company's financial position.	
4. Describe how the identification, assessment, and management process of climate risks is integrated in the overall risk management system.	
5. If scenario analysis is carried out to evaluate resilience to climate change risks, describe the scenarios, parameters, assumptions, analysis factors, and main financial impact.	
6. If there are transition plans to manage climate-related risks, please describe the content of the plans, as well as the indicators and targets used for identifying and managing physical risks and transition risks.	
7. If internal carbon pricing is used as a planning tool, describe the basis for pricing.	
8. If climate-related goals were set, describe the activities covered, scope of GHG emissions, schedule, and progress each year. If carbon offset or RECs are used to achieve goals, describe the source and amount of offset quota or the number of RECs.	
9. GHG inventory and assurance status, reduction targets, strategies, and concrete action plans. (Table 1-1, Table 1-2)	Refer to Environmental Protection - Energy and GHG Management in this report, page 60. Refer to the Appendix of this report, page 106.

Note: For detailed information, please refer to the Company's official website for the 2023 TCFD Guidance Report: https://www.psi.com.tw/about3.asp

1-1 Recent Two-Year GHG Inventory and Assurance Status

Year	Indicator (note 1.)	Total Emissions (tCO_2e)	Intensity(note 2.) (tCO_2e/NTD Million)	Assurance Provider	Assurance Details
2023	Scope 1	7,120.8969	2.140	LRQA (Lloyd's Register Quality Assurance)	• Scope: Hsinchu factory • Standard: ISO 14064-1:2018 • Opinion: Complies with ISO 14064-1:2018 requirements.
	Scope 2	24,433.1625	7.342		
2024	Scope 1	4,679.7174	1.318	LRQA (Lloyd's Register Quality Assurance)	• Scope: Hsinchu factory& Chung Kang factory • Standard: ISO 14064-1:2018 • Opinion: Complies with ISO 14064-1:2018 requirements.
	Scope 2	23,966.9688	6.748		

Note 1: Scope 1 refers to direct GHG emissions from sources owned or controlled by the company; Scope 2 refers to indirect emissions from purchased electricity, heat, or steam.
Note 2: GHG intensity is calculated based on revenue. Revenues for 2023 and 2024 were NT$ 3,327.7 million and NT$ 3,551.6 million, respectively.

1-2 GHG Reduction Targets, Strategies, and Action Plans

1.GHG Reduction Base Year and Data:

2023 is the base year for GHG reduction, verified by LRQA:

Category 1 (Scope 1): 7,120.8969 tCO_2e, Category 2 (Scope 2): 24,433.1625 tCO_2e

2. Reduction Targets: Reduce GHG emissions by >5% by 2025; reduce carbon by >10% by 2030; achieve Net Zero by 2050.

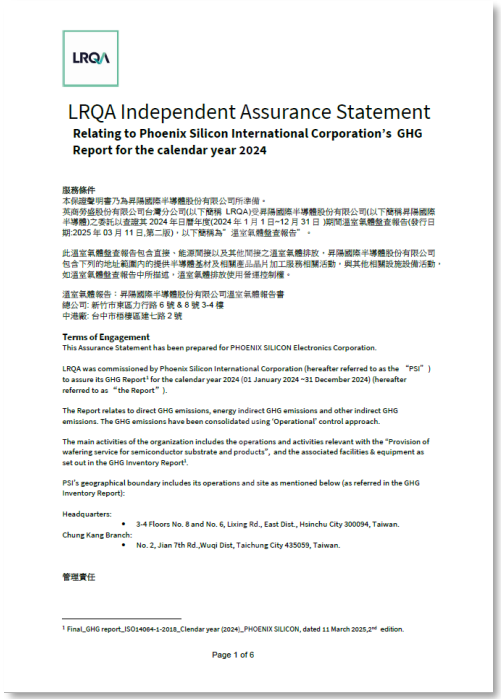
3. Reduction Strategy: Integrate energy conservation and carbon reduction into core operations; combine customer and government resources; actively invest in energy-saving projects; and establish an Environmental Committee for periodic performance reviews.

4. Concrete Action Plans:

- Install perfluorinated compounds (PFCs) treatment equipment with verified removal efficiency >90%.
- Optimize production processes to reduce energy consumption.
- Replace old, high-energy-consuming equipment.

5. Target Achievement Status: The 2024 target was a total reduction (Category 1+2) of ≥ 8%; the actual reduction achieved was 9%.

Greenhouse gas inventory verification by third parties



LRQA Independent Assurance Statement

Relating to Phoenix Silicon International Corporation's GHG Report for the calendar year 2024

服務條件

本保證聲明書乃為昇陽國際半導體股份有限公司所準備。

英商勞盛股份有限公司台灣分公司(以下簡稱 LRQA)受昇陽國際半導體股份有限公司(以下簡稱昇陽國際半導體)之委託以查證其 2024 年日曆年度(2024 年 1 月 1 日~12 月 31 日)期間溫室氣體盤查報告(發行日期:2025 年 03 月 11 日,第二版),以下簡稱為"溫室氣體盤查報告"。

此溫室氣體盤查報告包含直接、能源間接以及其他間接之溫室氣體排放,昇陽國際半導體股份有限公司包含下列的地址範圍內的提供半導體基材及相關產品晶片加工服務相關活動,與其他相關設施設備活動。如溫室氣體盤查報告中所描述,溫室氣體排放使用營運控制權。

溫室氣體報告:昇陽國際半導體股份有限公司溫室氣體報告書

總公司: 新竹市東區力行路 6 號 & 8 號 3-4 樓

中港廠: 台中市梧棲區臨七路 2 號

Terms of Engagement

This Assurance Statement has been prepared for PHOENIX SILICON Electronics Corporation.

LRQA was commissioned by Phoenix Silicon International Corporation (hereafter referred to as the "PSI") to assure its GHG Report[1] for the calendar year 2024 (01 January 2024 ~31 December 2024) (hereafter referred to as "the Report").

The Report relates to direct GHG emissions, energy indirect GHG emissions and other indirect GHG emissions. The GHG emissions have been consolidated using 'Operational' control approach.

The main activities of the organization includes the operations and activities relevant with the "Provision of wafering service for semiconductor substrate and products", and the associated facilities & equipment as set out in the GHG Inventory Report[1].

PSI's geographical boundary includes its operations and site as mentioned below (as referred in the GHG Inventory Report):

Headquarters:

- 3-4 Floors No. 8 and No. 6, Lixing Rd., East Dist., Hsinchu City 300094, Taiwan.

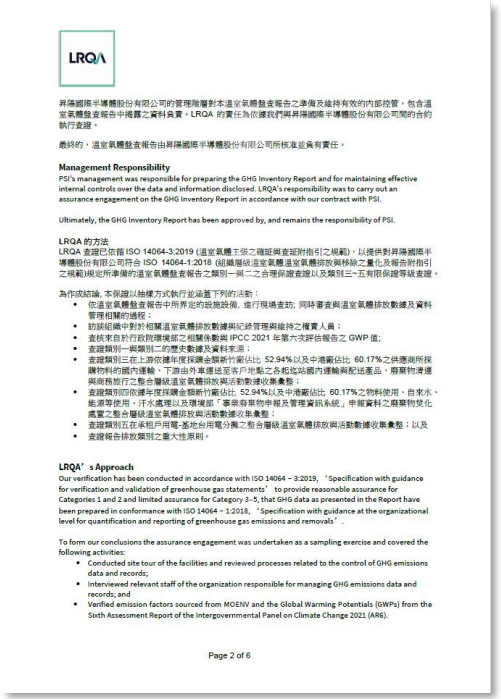
Chung Kang Branch:

- No. 2, Jian 7th Rd.,Wuqi Dist, Taichung City 435059, Taiwan.

管理責任

[1] Final_GHG report_ISO14064-1-2018_Clendar year (2024)_PHOENIX SILICON, dated 11 March 2025,2nd edition.

Page 1 of 6



昇陽國際半導體股份有限公司的管理階層對本溫室氣體盤查報告之準備及維持有效的內部控管,包含溫室氣體盤查報告中揭露之資料負責。LRQA 的責任為依據我們與昇陽國際半導體股份有限公司間的合約執行查證。

最終的,溫室氣體盤查報告由昇陽國際半導體股份有限公司所核准並負有責任。

Management Responsibility

PSI's management was responsible for preparing the GHG Inventory Report and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the GHG Inventory Report in accordance with our contract with PSI.

Ultimately, the GHG Inventory Report has been approved by, and remains the responsibility of PSI.

LRQA 的方法

LRQA 查證已依循 ISO 14064-3:2019《溫室氣體主張之確証與查証附指引之規範》,以提供對昇陽國際半導體股份有限公司符合 ISO 14064-1:2018《組織層級溫室氣體溫室氣體排放與移除之量化及報告附指引之規範》規定所準備的溫室氣體盤查報告之類別一與二之合理保證查證以及類別三~五有限保證等級查證。

為作成結論,本保證以抽樣方式執行並涵蓋下列的活動:

- 依溫室氣體盤查報告中所界定的設施設備,進行現場查訪;同時審查與溫室氣體排放數據及資料管理相關的過程;
- 訪談組織中對於相關溫室氣體排放數據與紀錄管理與維持之權責人員;
- 查核來自於行政院環境部之相關係數與 IPCC 2021 年第六次評告報告之 GWP 值;
- 查證類別一與類別二的歷史數據及資料來源;
- 查證類別二在上游依據年度採購金額新竹廠佔比 52.94%以及中港廠佔比 60.17%之供應商所採購物料的國內運輸、下游由外車運送至客戶地點之各起迄站國內運輸與配送產品、廢棄物清運與商務旅行之整合層級溫室氣體排放與活動數據收集彙整;
- 查證類別四依據年度採購金額新竹廠佔比 52.94%以及中港廠佔比 60.17%之物料使用、自來水、能源等使用,汙水處理以及環境部「事業廢棄物申報及管理資訊系統」申報資料之廢棄物焚化處置之整合層級溫室氣體排放與活動數據收集彙整;
- 查證類別五在承租戶用電-基地台用電分離之整合層級溫室氣體排放與活動數據收集彙整;以及
- 查證報告排放類別之重大性原則。

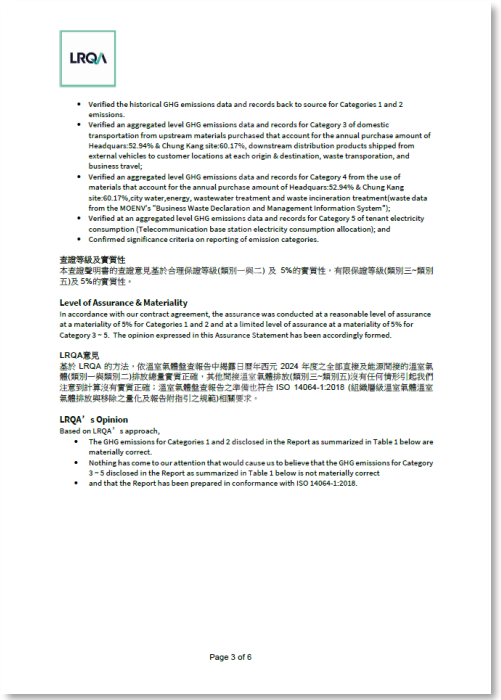
LRQA's Approach

Our verification has been conducted in accordance with ISO 14064 – 3:2019, 'Specification with guidance for verification and validation of greenhouse gas statements' to provide reasonable assurance for Categories 1 and 2 and limited assurance for Category 3-5, that GHG data as presented in the Report have been prepared in conformance with ISO 14064 – 1:2018, 'Specification with guidance at the organizational level for quantification and reporting of greenhouse gas emissions and removals'.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- Conducted site tour of the facilities and reviewed processes related to the control of GHG emissions data and records;
- Interviewed relevant staff of the organization responsible for managing GHG emissions data and records; and
- Verified emission factors sourced from MOENV and the Global Warming Potentials (GWPs) from the Sixth Assessment Report of the Intergovernmental Panel on Climate Change 2021 (AR6).

Page 2 of 6



- Verified the historical GHG emissions data and records back to source for Categories 1 and 2 emissions.
- Verified an aggregated level GHG emissions data and records for Category 3 of domestic transportation from upstream materials purchased that account for the annual purchase amount of Headquars:52.94% & Chung Kang site:60.17%, downstream distribution products shipped from external vehicles to customer locations at each origin & destination, waste transporation, and business travel;
- Verified an aggregated level GHG emissions data and records for Category 4 from the use of materials that account for the annual purchase amount of Headquars:52.94% & Chung Kang site:60.17%,city water,energy, wastewater treatment and waste incineration treatment(waste data from the MOENV's "Business Waste Declaration and Management Information System");
- Verified at an aggregated level GHG emissions data and records for Category 5 of tenant electricity consumption (Telecommunication base station electricity consumption allocation); and
- Confirmed significance criteria on reporting of emission categories.

查證等級及實質性

本查證聲明書的查證意見基於合理保證等級(類別一與二) 及 5%的實質性,有限保證等級(類別三~類別五)及 5%的實質性。

Level of Assurance & Materiality

In accordance with our contract agreement, the assurance was conducted at a reasonable level of assurance at a materiality of 5% for Categories 1 and 2 and at a limited level of assurance at a materiality of 5% for Category 3 ~ 5. The opinion expressed in this Assurance Statement has been accordingly formed.

LRQA意見

基於 LRQA 的方法,依溫室氣體盤查報告中揭露日期半西元 2024 年度之全部直接及能源間接的溫室氣體(類別一與類別二)排放總量實質正確,其他間接溫室氣體排放(類別三~類別五)沒有任何實形引起我們注意到計算沒有實質正確;溫室氣體盤查報告之準備也符合 ISO 14064-1:2018《組織層級溫室氣體溫室氣體排放與移除之量化及報告附指引之規範》相關要求。

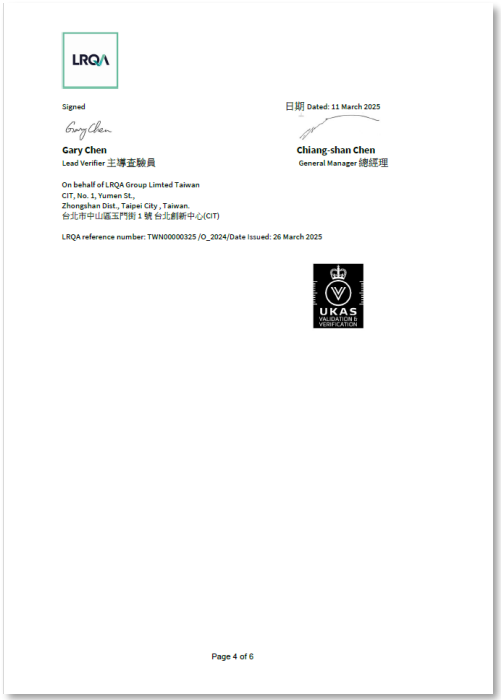
LRQA's Opinion

Based on LRQA's approach,

- The GHG emissions for Categories 1 and 2 disclosed in the Report as summarized in Table 1 below are materially correct.
- Nothing has come to our attention that would cause us to believe that the GHG emissions for Category 3 ~ 5 disclosed in the Report as summarized in Table 1 below is not materially correct
- and that the Report has been prepared in conformance with ISO 14064-1:2018.

Page 3 of 6

Greenhouse gas inventory verification by third parties



LRQA

Signed

Gary Chen
Lead Verifier 主導查驗員

日期 Dated: 11 March 2025

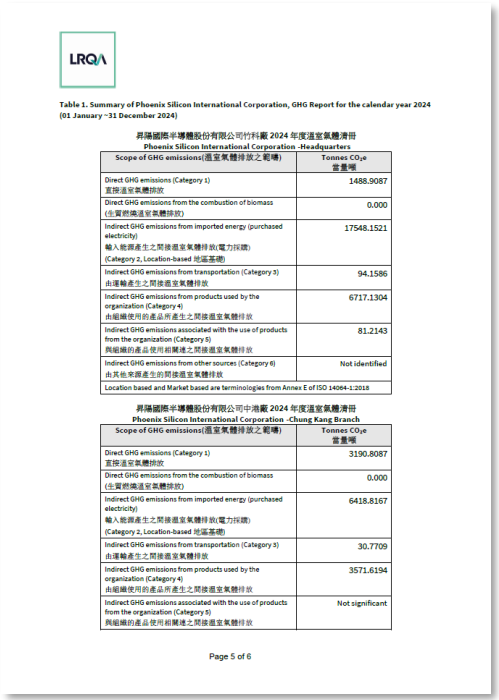
Chiang-shan Chen
General Manager 總經理

On behalf of LRQA Group Limted Taiwan
CIT, No. 1, Yumen St.,
Zhongshan Dist., Taipei City , Taiwan.
台北市中山區玉門街 1 號 台北創新中心(CIT)

LRQA reference number: TWN00000325 /O_2024/Date Issued: 26 March 2025

UKAS VALIDATION & VERIFICATION

Page 4 of 6



LRQA

Table 1. Summary of Phoenix Silicon International Corporation, GHG Report for the calendar year 2024 (01 January ~31 December 2024)

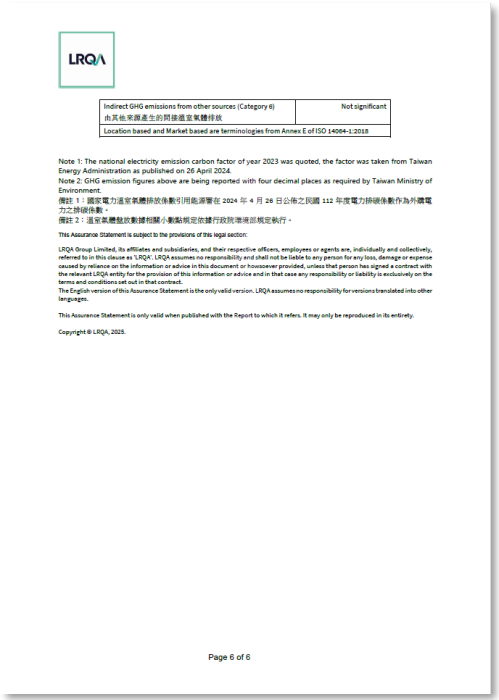
昇陽國際半導體股份有限公司竹科廠 2024 年度溫室氣體清冊
Phoenix Silicon International Corporation -Headquarters

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO_2e 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	1488.9087
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	0.000
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	17548.1521
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	94.1586
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	6717.1304
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	81.2143
Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not identified
Location based and Market based are terminologies from Annex E of ISO 14064-1:2018	

昇陽國際半導體股份有限公司中港廠 2024 年度溫室氣體清冊
Phoenix Silicon International Corporation -Chung Kang Branch

Scope of GHG emissions(溫室氣體排放之範疇)	Tonnes CO_2e 當量噸
Direct GHG emissions (Category 1) 直接溫室氣體排放	3190.8087
Direct GHG emissions from the combustion of biomass (生質燃燒溫室氣體排放)	0.000
Indirect GHG emissions from imported energy (purchased electricity) 輸入能源產生之間接溫室氣體排放(電力採購) (Category 2, Location-based 地區基礎)	6418.8167
Indirect GHG emissions from transportation (Category 3) 由運輸產生之間接溫室氣體排放	30.7709
Indirect GHG emissions from products used by the organization (Category 4) 由組織使用的產品所產生之間接溫室氣體排放	3571.6194
Indirect GHG emissions associated with the use of products from the organization (Category 5) 與組織的產品使用相關連之間接溫室氣體排放	Not significant

Page 5 of 6



LRQA

Indirect GHG emissions from other sources (Category 6) 由其他來源產生的間接溫室氣體排放	Not significant
Location based and Market based are terminologies from Annex E of ISO 14064-1:2018	

Note 1: The national electricity emission carbon factor of year 2023 was quoted, the factor was taken from Taiwan Energy Administration as published on 26 April 2024.
Note 2: GHG emission figures above are being reported with four decimal places as required by Taiwan Ministry of Environment.
備註 1：國家電力溫室氣體排放係數引用能源署在 2024 年 4 月 26 日公佈之民國 112 年度電力排碳係數作為外購電力之排碳係數。
備註 2：溫室氣體盤放數據相關小數點規定依據行政院環境部規定執行。

This Assurance Statement is subject to the provisions of this legal section:

LRQA Group Limited, its affiliates and subsidiaries, and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.
The English version of this Assurance Statement is the only valid version. LRQA assumes no responsibility for versions translated into other languages.

This Assurance Statement is only valid when published with the Report to which it refers. It may only be reproduced in its entirety.

Page 6 of 6

2024 SUSTAINABILITY REPORT (English)

Promise · Sustainable · Innovation