



## GREEN MANUFACTURING AND LOW-CARBON TRANSFORMATION

At ASEH, we are deeply focused on improving our eco-efficiency and protecting the environment through recycling and reducing greenhouse gas emissions, waste generation, wastewater effluent and chemical usage. To that end, we have formulated a comprehensive environmental management system that includes the publication of the company's Environmental Responsibility Policy<sup>1</sup> to accelerate our low-carbon transformation journey. We have embraced green manufacturing across all our global sites, integrating all stages along the manufacturing life cycle from material procurement, design, manufacturing, usage and disposal.

<sup>1</sup> For the Company's Environmental Responsibility Policy, please refer to our website <https://www.aseglobal.com/en/pdf/environmental-responsibility-policy-en.pdf>



## 2025 Key Performance



100%

Identification and assessment  
of climate and natural risks



60%

Implementation of  
water pricing



99.5%

Implementation of  
carbon pricing



1,422

Projects launched to  
reduce GHG emissions



23%

of total electricity consumption  
achieved through renewable  
energy or REC

| SDGs | Business Actions and Contributions                                                                                                       | 2025 Key Aspects            | KPI                                                                                                               | 2025 Target     | Status       | 2025 Performance           | 2026 Target   | 2035 Target     |
|------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------|-----------------|--------------|----------------------------|---------------|-----------------|
|      | • Increasing Water-Use Efficiency and Available Freshwater Supplies                                                                      | Water Resource Management   | Days of production shutdown caused by phase 3 water rationing in Taiwan (water supply reduced by 30%)             | 0 day           | Achieved     | 0 day                      | 0 day         | 0 day           |
|      |                                                                                                                                          |                             | Water withdrawal intensity (water withdrawn/revenue)                                                              | 35% reduction   | Achieved     | 46% reduction              | 38% reduction | 57% reduction   |
|      |                                                                                                                                          |                             | Wastewater discharge intensity (Base year: 2015)                                                                  | 38% reduction   | Achieved     | 56% reduction              | 42% reduction | 62% reduction   |
|      |                                                                                                                                          |                             | Ultra-pure water intensity (Base year: 2015)                                                                      | 16% reduction   | Achieved     | 20% reduction              | 18% reduction | 29% reduction   |
|      |                                                                                                                                          |                             | Process water recycling rate                                                                                      | >70%            | Achieved     | 79%                        | >71%          | >80%            |
|      | • Enhancing Energy Efficiency                                                                                                            | Energy Management           | Percentage of electricity conserved as a result of energy-saving initiatives                                      | 2%              | Achieved     | 4.7%                       | 2%            | 2%              |
|      | • Increasing Global Percentage of Renewable Energy                                                                                       |                             | Renewable energy ratio                                                                                            | 27%             | Not Achieved | 23%                        | 30%           | 57%             |
|      | • Substantially Reducing Waste Generation                                                                                                | Waste and Recycling         | Non-hazardous waste recycling rate                                                                                | >90%            | Achieved     | 98%                        | >90%          | >93%            |
|      |                                                                                                                                          |                             | Hazardous waste recycling rate                                                                                    | >80%            | Achieved     | 84%                        | >80%          | >80%            |
|      |                                                                                                                                          |                             | Hazardous-waste intensity (Base year 2015)                                                                        | 41% reduction   | Achieved     | 52% reduction              | 45% reduction | 66% reduction   |
|      | • Aligning with science based climate targets to substantially reduce emissions associated with our business and supply chain operations | Climate Change <sup>1</sup> | Scope 1 & 2 GHGs intensity (Base year 2015)                                                                       | 10% reduction   | Achieved     | 43.1 % reduction           | 11% reduction | 20% reduction   |
|      |                                                                                                                                          |                             | Scope 1 and 2 GHG absolute emissions (Base year: 2016)                                                            | 37.8% reduction | Not Achieved | 10.2% increase             | 42% reduction | 79.8% reduction |
|      |                                                                                                                                          |                             | Scope 3 GHG absolute emissions (Base year: 2020)                                                                  | 12.5 reduction  | Achieved     | 50% reduction <sup>2</sup> | 15% reduction | 46% reduction   |
|      | • Conserving and Restoring Terrestrial and Freshwater Ecosystems<br>• Protecting Biodiversity and Natural Habitats                       | Biodiversity                | Scope of coverage across our manufacturing facilities for the identification and evaluation of biodiversity risks | 100 %           | Achieved     | 100 %                      | 100 %         | 100 %           |

<sup>1</sup> ASEH had established a 1.5° C-aligned GHG emissions target for Scope 1 and 2, and a Well-Below 2° C (WB2° C)-aligned target for Scope 3. These targets were submitted to the SBTi and validated in 2024

<sup>2</sup> Under the current SBTi framework, companies are required to report Scope 3 emissions for both categories 11 and 12. However, in a recently published report on "Scope 3 Category 11 GHG Emissions: A Sectoral Assessment for the Semiconductor Industry" by SEMI, a global industry organization representing the semiconductor sector, it was ascertained that these categories are not applicable to the OSAT (Outsourced Semiconductor Assembly and Test) industry and should therefore be excluded. If Scope 3 emissions for Categories 11 and 12 are estimated indirectly, total Scope 3 emissions in 2025 would represent a 95.2% decrease compared with the 2020



## 5.1 Climate Leadership

ASEH are steadily implementing low-carbon transformation strategies to enhance climate resilience and fulfil our corporate sustainability responsibilities through concrete actions. ASEH has established clear strategic pillars for low-carbon development and integrated international management frameworks to strengthen internal systems. Through responsible improvements to our production models and close collaboration with value chain partners to co-create green value, ASEH aims to continuously improve resilience in the face of climate change by routinely tracking and evaluating performance. To encourage climate action throughout the organization, ASEH included greenhouse gas intensity targets (measured as GHG emissions per unit of revenue) and water withdrawal intensity targets (measured as water withdrawal per unit of revenue)<sup>1</sup> in the KPIs for designated employees and senior executives<sup>2</sup>. Each year, a third-party agency verifies performance against these targets. Employees who meet the targets are awarded restricted stock units (RSUs) as performance incentives<sup>3</sup>.

Climate change presents ASEH with a wide array of complex challenges and opportunities. Over the years, ASEH has consistently turned crises into opportunities and transformed risks into drivers of innovation. We are proactively expanding our portfolio of low-carbon solutions for global deployment, thereby strengthening our influence in low-carbon development and enhancing the resilience of our value chain. In addition, we are aligning with the Task Force on Climate-related Financial Disclosures (TCFD) and Taskforce on Nature-related Financial Disclosures (TNFD) frameworks to systematically disclose our environmental dependencies, impacts, risks, and opportunities. At the same time, we report on our interim targets and annual performance under the net-zero roadmap.

<sup>1</sup> A continuous reduction of 1% in intensity per year with 2015 as the baseline year

<sup>2</sup> Key employees that are involved in long-term business strategy and future developments, influence business operations, and core technical talents

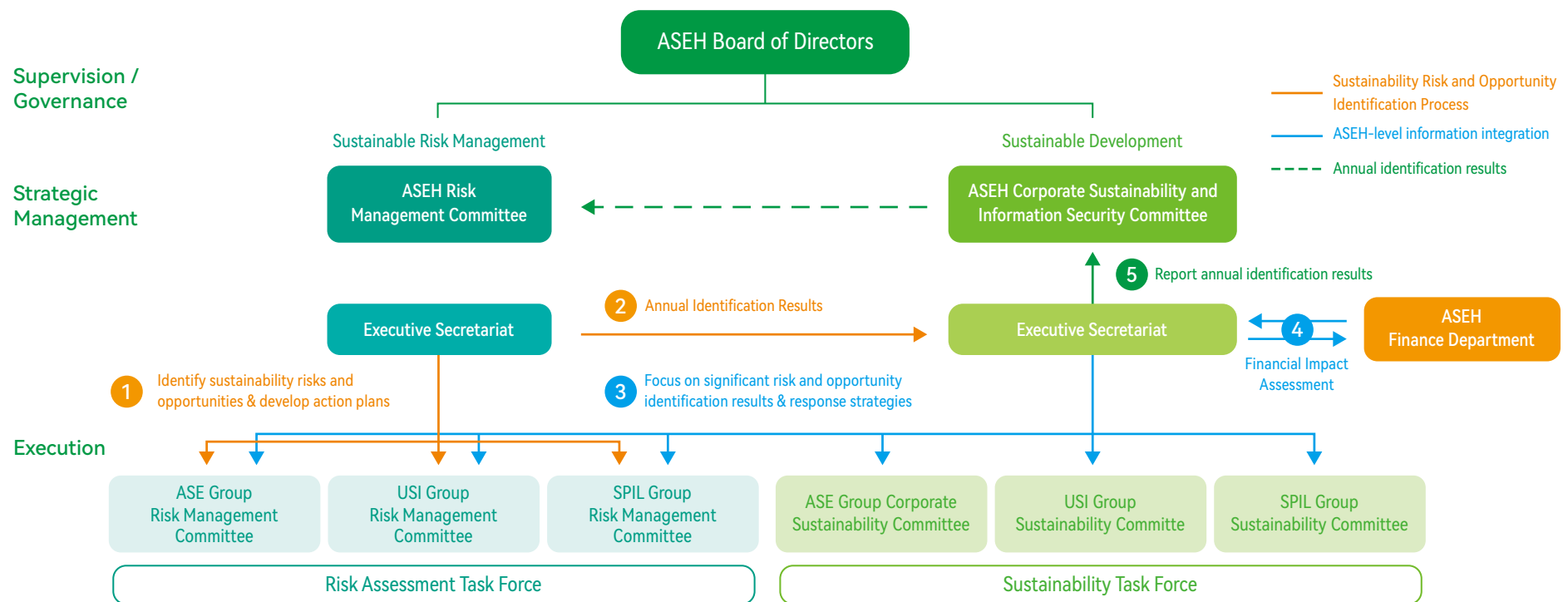
<sup>3</sup> New shares will be issued to employees at no cost, with a total issuance amount of NT\$ 150 million

| 4 Strategic Approaches                  | Principal Methodology                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1<br>Formulating Net-Zero Strategies    | <ul style="list-style-type: none"> <li>• <b>Low-Carbon Products:</b> Implementing our product carbon footprint inventory and reduction efforts, while collaborating across the value chain to deliver viable low-carbon solutions to the global market.</li> <li>• <b>Renewable Energy:</b> Create a diverse low-carbon emission energy framework.</li> <li>• <b>Low-Carbon Transportation:</b> Use low-carbon vehicles to reduce our carbon footprint.</li> <li>• <b>Supply Chain Engagement:</b> Collaborate closely with suppliers to improve their carbon inventory capabilities and implement carbon reduction programs.</li> <li>• <b>Investment in Carbon Credits:</b> Invest in carbon sink and capture technologies to reduce environmental and social costs.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2<br>Comprehensive management framework | <p>ASEH integrates the management of climate change and environmental risks and opportunities into its Enterprise Risk Management (ERM) and IFRS frameworks. Our comprehensive management framework enables us to undertake annual risk tracking that include scenario analysis and simulation to ascertain possible risks, and control such risks within acceptable ranges, maximizing and protecting the company's interests.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3<br>Socially responsible actions       | <div> <p><b>Managing Strategies</b><br/>For risks that have significant impacts to the company's strategy and financial position, the company's top management is responsible for evaluating those risks and identifying opportunities, and providing appropriate response plans and financial strategies.</p> <p><b>Calculating Financial Impact and Administrative Costs</b><br/>Appropriate data estimation methods were selected according to parameters defined through scenario analysis, and used to calculate the actual scale of risks, opportunities and financial impacts. This will further identify the key factors influencing the possible impacts.</p> <p><b>Defining Climate Scenarios</b><br/>Employing a climate change scenario analysis methodology to determine the probability of operational and financial impacts by simulating the changes in various parameters from future timelines and different geographic locations.</p> <p><b>Identifying risks and opportunities</b><br/>Identifying potential climate risks and opportunities based on international trends and industry characteristics. Incorporating the perspectives of internal and external stakeholders to identify key risks and opportunities that could affect the company's operations and finances.</p> <p><b>TCFD Framework and Analysis</b><br/>Analyzing the TCFD framework and recommendations to develop corresponding short, medium, and long-term strategies.</p> </div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4<br>Performance-oriented results       | <p><b>Adaptation:</b></p> <ul style="list-style-type: none"> <li>✓ Adaptation: 100% oversight of the risk analysis and adaptation planning of facilities worldwide.</li> <li>✓ 100% of global facilities have implemented internal carbon pricing to promoted improved energy and resource efficiency and supporting low-carbon transition.</li> <li>✓ Deploying a Business Continuity Management (BCM) plan to strengthen the analysis of potential risks and emergency response mechanisms.</li> <li>✓ Building intelligent energy management systems to mitigate losses from supply disruption.</li> <li>✓ Conducting risk assessments, green procurement and material recycling through sustainable supply chain engagement.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p><b>Mitigation:</b></p> <ul style="list-style-type: none"> <li>✓ Building low-carbon green factories and procuring, developing, or investing in renewable energy.</li> <li>✓ Committing to Science Based Targets and net-zero emission targets.</li> <li>✓ Increasing energy efficiency, promoting circular economy and expanding water reuse.</li> <li>✓ Coordinating the support and promotion of supplier carbon inventory management (ISO14064 and ISO14067).</li> </ul> | <p><b>Strategic and Financial Planning:</b></p> <ul style="list-style-type: none"> <li>✓ Evaluate the impacts of climate risks and opportunities, publicly disclose results annually, and participate in S&amp;P CSA and CDP surveys.</li> <li>✓ Committing to Net Zero targets through low-carbon products, renewable energy, low-carbon transportation, supply chain engagements and carbon credits.</li> <li>✓ Launching sustainability-linked loans with proceeds used on green projects.</li> <li>✓ Developing a long-term value chain partnership blueprint.</li> </ul> |

## Global Climate Risk Management

### Global Climate Risk Management

The Chief Sustainability Officer was appointed by the Corporate Sustainability and Information Security Committee (CSISC) to drive the company's climate objectives and initiatives. The CSO has the responsibility of overseeing and addressing the impact of climate- and nature-related issues on the company's operations. Each year, a report on the progress of target implementation is presented to the board of directors, allowing strategic decisions to be formulated. Related risks and opportunities are duly integrated into the company's management, operations, and business decision-making processes. The Executive Secretariat manages the general administrative affairs which include facilitating communication between committee members and organizing the sustainability resources and technology adoption across all subsidiaries. The combined approaches enable us to bridge vertical and horizontal alignment strategies for advancing climate- and nature-related sustainability.



## Integrated Risk Management

We are focused on integrating sustainability risk management into our business strategy and organizational culture. We conduct identification of climate-related risks and opportunities diligently, consolidating them based on financial materiality from the perspectives of all subsidiaries, and at the corporate and holding company levels. Each operational unit is responsible for managing and responding to these risks, with findings reported to senior management at all levels. This process enhances understanding of how climate change and nature-related issues affect business operations, while reinforcing the connection between executive leadership and functional units. Through this framework, the company is able to effectively identify, assess, monitor, and control various risks, ensuring that risks arising from business activities remain within acceptable thresholds.

On the topic of climate change and the impacts to water resources, we explored both physical and transition risks. These include the assessment of acute and chronic physical risks, policy, legal, as well as technology, market, and reputational factors. We also analyze the climate risks and opportunities based on factors including resource efficiency, energy sources, products and services, market and operational resilience. Each risk is then classified according to its scope of impact, risk type, intensity, occurrence and probability. These findings are further evaluated based on their material impact and prioritized primarily by the severity of impact<sup>1</sup> and likelihood of occurrence<sup>2</sup> on a ranking chart<sup>3</sup>. These processes enable us to identify the most significant climate-related risks and opportunities.

In regard to physical risks, dependencies, and impacts related to climate and nature, assessment of the geographic locations of our global subsidiaries are conducted using data from government and international sources. These tools help identify potential physical risks under various scenarios such as water stress, flooding, landslides, and debris flows. They also assist in identifying whether facilities are located near biodiversity-sensitive areas, providing essential information for subsequent risk and opportunity analyses and strategy development.

| Risks                                                                                |                                                                                                                                                                 | Opportunities                                                                                                                                                                                            |                                                                                                                                                                                                               |                                                                                                                                                                                                                                       |                                                                                                                                                                                                                               |                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Risks                                                                       | Transition Risks                                                                                                                                                | Resource Efficiency                                                                                                                                                                                      | Energy source                                                                                                                                                                                                 | Products and Service                                                                                                                                                                                                                  | Markets                                                                                                                                                                                                                       | Resilience                                                                                                                                                                                                           |
| <ul style="list-style-type: none"> <li>Acute Risks</li> <li>Chronic Risks</li> </ul> | <ul style="list-style-type: none"> <li>Policy risks</li> <li>Legal risks</li> <li>Technology Risks</li> <li>Market risks</li> <li>Reputational risks</li> </ul> | <ul style="list-style-type: none"> <li>Transportation modes</li> <li>Recycled materials</li> <li>Water resource utilization</li> <li>Production processes</li> <li>Energy-efficient buildings</li> </ul> | <ul style="list-style-type: none"> <li>Low-carbon energy</li> <li>Adoption of new technologies</li> <li>Regional microgrids</li> <li>Policy Incentives</li> <li>Participation in the carbon market</li> </ul> | <ul style="list-style-type: none"> <li>Low-carbon Products</li> <li>Research and development innovation</li> <li>Adaptation and solutions</li> <li>Customer behavior transformation</li> <li>Diversification of operations</li> </ul> | <ul style="list-style-type: none"> <li>Finding new business opportunities</li> <li>Obtaining government cooperation</li> <li>Participation in building public infrastructure</li> <li>Expansion of funding sources</li> </ul> | <ul style="list-style-type: none"> <li>Participation in renewable energy projects</li> <li>Energy efficiency improvements</li> <li>Alternative or diversifying resources</li> <li>Supply Chain Resilience</li> </ul> |

## Climate Risks and Opportunities: Identification, Impact and Action

At ASEH, climate-related risks and opportunities are identified across our entire value chain, encompassing upstream suppliers, internal operations, and downstream customers. The analysis covered 110 global consolidated subsidiaries, enabling a comprehensive understanding of overall climate risks and opportunities. In response to these findings, we will continue to formulate more forward-looking and effective strategies to enhance climate resilience and seize potential opportunities for driving sustainable and transformative growth.

<sup>1</sup> The impact severity rating is determined by evaluating three dimensions: financial impact, business continuity impact (BCM), and reputational impact. Each dimension is scored on a scale from 1 to 5, and the highest score among the three is taken as the final impact severity rating

<sup>2</sup> The likelihood of occurrence is categorized into five levels: Extremely Unlikely – Once every 15 to 20 years; Unlikely – Once every 10 to 15 years; Possible – Once every 5 to 10 years; Highly Likely – Once every 1 to 5 years; Almost Certain – Once every year

<sup>3</sup> Scores are assigned on a scale of 1 to 5 for both severity and likelihood, with 1 representing the lowest level and 5 the highest. The significance of each risk or opportunity is ranked by multiplying the impact score by the likelihood score. The top three items with the highest combined scores are prioritized accordingly

| Climate Change | Timeframe of Impact <sup>1</sup>                                                  | Scenario Description                   | Impact Explanation                                                                                                                                                                                                                         | Location in the value chain                                                                                                                                  | Potential Financial Impact                                                                                                               | Financial Impact Assessment (US\$ million)                                                                                                          | Management Approach       | Management Cost (US\$ million)                                                                                                                                                                                                                                                                                                                                                      |       |
|----------------|-----------------------------------------------------------------------------------|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Risk           | Failure to meet renewable energy procurement targets                              | Short-term<br>Medium-term<br>Long-term | Failure to meet customers' low-carbon transition requirements                                                                                                                                                                              | Failure to meet customers' transition requirements may affect market competitiveness                                                                         | <ul style="list-style-type: none"><li>• Company operations</li><li>• Upstream or supply chain</li><li>• Downstream or end-user</li></ul> | <ul style="list-style-type: none"><li>• Increase in direct costs</li><li>• Loss of existing customers</li><li>• Decrease in market demand</li></ul> | 797.84<br>~<br>2,291.65   | 1. Establish a renewable energy procurement platform to comply with local regulations and meet customer requirements<br>2. Monitor energy consumption status and energy plans quarterly and regularly report implementation status to management                                                                                                                                    | 1.44  |
|                | Uncertain physical risks                                                          | Medium-term<br>Long-term               | The high uncertainties of extreme climate and natural disaster events may cause operational disruptions or shipment delays                                                                                                                 | Operational disruptions or shipment delays                                                                                                                   | <ul style="list-style-type: none"><li>• Company operations</li><li>• Upstream or supply chain</li><li>• Downstream or end-user</li></ul> | <ul style="list-style-type: none"><li>• Reduced revenue</li><li>• Increase in operating costs</li></ul>                                             | 2.32~30.66                | 1. Create a business continuity plan (BCP) for all manufacturing sites<br>2. Distribute risks across global operations                                                                                                                                                                                                                                                              | 0.91  |
|                | Failure to comply with energy-related laws and regulations                        | Short-term<br>Medium-term              | Failure to comply with renewable energy-related laws results in the payment of renewable energy-related fees as stipulated by law                                                                                                          | Possible increase in operating costs                                                                                                                         | <ul style="list-style-type: none"><li>• Company operations</li><li>• Downstream or end-user</li></ul>                                    | <ul style="list-style-type: none"><li>• Increase in compliance costs</li></ul>                                                                      | 8.88                      | 1. Actively purchase renewable energy<br>2. Develop/invest in renewable energy systems                                                                                                                                                                                                                                                                                              | 3.11  |
|                | Uncertainties in new energy-saving/ low-carbon technologies                       | Medium-term<br>Long-term               | Investing in hydroelectric power companies may carry the risk of damage to power generation infrastructure due to extreme weather events                                                                                                   | Damage to power generation facilities or operational disruptions due to extreme weather events                                                               | <ul style="list-style-type: none"><li>• Company operations</li><li>• Upstream or supply chain</li><li>• Downstream or end-user</li></ul> | <ul style="list-style-type: none"><li>• Decrease in asset value</li></ul>                                                                           | 0.1~0.58                  | 1. Consider hydrological conditions and extreme climate risks during site selection and design, and continuously maintain and manage facilities during construction and operation<br>2. Base investment decisions on a comprehensive assessment of financial feasibility, investment risks, compliance, ESG and sustainability benefits, as well as synergy with company strategies | 0.14  |
| Opportunity    | Alternative energy/energy diversification                                         | Short-term<br>Medium-term<br>Long-term | Investing in renewable energy business                                                                                                                                                                                                     | Obtaining renewable energy reduces carbon fees                                                                                                               | <ul style="list-style-type: none"><li>• Company operations</li><li>• Downstream or end-user</li></ul>                                    | <ul style="list-style-type: none"><li>• Decrease in operating costs</li></ul>                                                                       | 19.77                     | 1. Invest in renewable energy businesses or joint ventures and supply renewable electricity to subsidiaries                                                                                                                                                                                                                                                                         | 1.92  |
|                | Company carbon reduction targets                                                  | Medium-term                            | Setting carbon reduction targets and implementing reduction initiatives                                                                                                                                                                    | <ul style="list-style-type: none"><li>• Achieving carbon reduction targets can reduce financial risks</li><li>• Market competitiveness is enhanced</li></ul> | <ul style="list-style-type: none"><li>• Company operations</li><li>• Upstream or supply chain</li><li>• Downstream or end-user</li></ul> | <ul style="list-style-type: none"><li>• Increased competitiveness</li></ul>                                                                         | 1,151.72<br>~<br>1,125.11 | 1. Set SBTi net-zero goals and launch five key strategies to fulfill net-zero commitments<br>2. Establish management platforms to monitor subsidiaries' carbon reduction progress on a quarterly basis                                                                                                                                                                              | 69.16 |
|                | Participation in renewable energy projects and adoption of energy-saving measures | Short-term                             | <ul style="list-style-type: none"><li>• Transitioning to low-carbon energy diversifies exposure to energy price volatility</li><li>• Partnership with energy companies provides access to cost-competitive renewable electricity</li></ul> | Acquire low-cost resources or create investment returns                                                                                                      | <ul style="list-style-type: none"><li>• Company operations</li><li>• Upstream or supply chain</li><li>• Downstream or end-user</li></ul> | <ul style="list-style-type: none"><li>• Adaptation to climate change leads to lower operating costs</li><li>• Energy diversification</li></ul>      | 0.04                      | 1. Use wind power, hydropower, solar energy, and other types of renewable power<br>2. Partner with different industries to obtain renewable power at a reasonable cost                                                                                                                                                                                                              | 0.03  |
|                | Participation in the carbon trading market                                        | Short-term<br>Medium-term<br>Long-term | Investing in or developing carbon reduction projects to obtain carbon credits for use in corporate emissions management                                                                                                                    | Selling or auctioning carbon credits can generate carbon trading revenues                                                                                    | <ul style="list-style-type: none"><li>• Company operations</li></ul>                                                                     | <ul style="list-style-type: none"><li>• Increase in non-operating income</li></ul>                                                                  | 2.2~2.93                  | 1. Develop local carbon credit methodologies<br>2. Engage in carbon reduction projects and obtain government-issued carbon credits                                                                                                                                                                                                                                                  | 20.66 |

<sup>1</sup> Short-term (3 years or less), medium-term (4~5 years), and long-term (≥ 6 years)

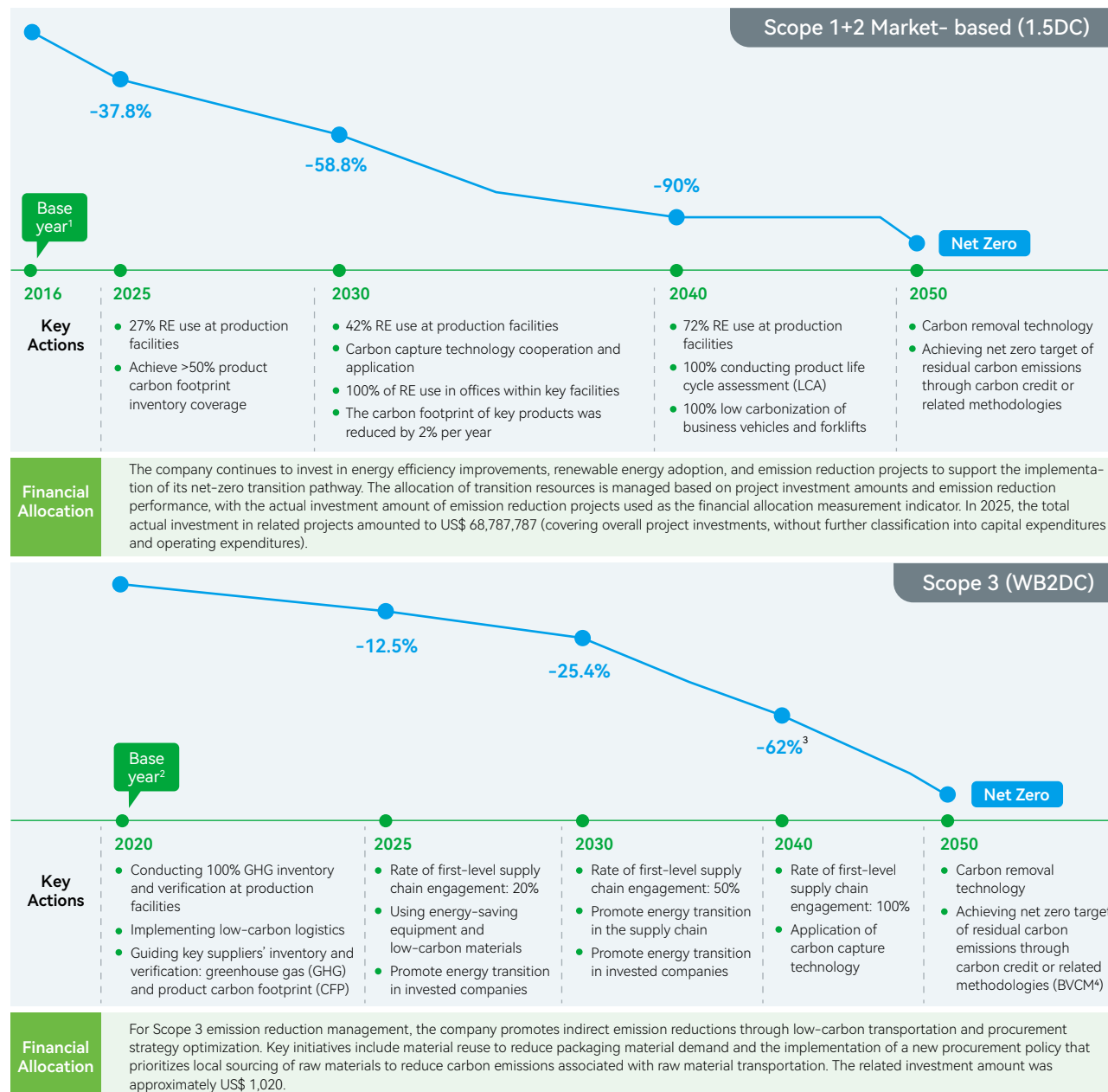
## Scenario Simulation and Adaptive Management

|            | Scenario    | Time      | Parameters Used                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Analysis Results                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |
|------------|-------------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            |             |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Upstream (Supply Chain)                                                                                                                                                                                                                                                                                                                                                                                               | Operational Sites                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Downstream (Customer)                                                                                                                                                                                                                                                                                                                                        |
| Physical   | SSP1-RCP2.6 | 2021-2100 | <ul style="list-style-type: none"> <li>• <b>Overlay Analysis</b> <ul style="list-style-type: none"> <li>- Flooding caused by extreme rainfall of 650 mm over 24 hours</li> <li>- Landslide and geological hazard-prone areas</li> <li>- Potential debris flow stream locations</li> <li>- Extreme Heat</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>• The increasing frequency and intensity of extreme rainfall events, while the proportion of suppliers unable to deliver on time due to flooding has also increased.</li> <li>• The increase in extreme heat events may affect suppliers' production efficiency and supply continuity, while increasing energy costs and potentially driving up raw material costs.</li> </ul> | <ul style="list-style-type: none"> <li>• All operational sites are located outside landslide and debris flow potential zones. However, only 1 site are exposed to flood risks, potentially leading to operational disruptions and losses.</li> <li>• The increase in extreme heat events may affect equipment operation and employee safety, while driving higher air-conditioning energy consumption and operational costs. Under a high-emission scenario, the exposure to extreme heat risks is expected to increase in the future.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>• Flooding may lead to operational disruptions and transportation delays, thereby increasing the risk of delayed deliveries to customers.</li> <li>• Extreme heat event might affect the operational and production stability, potentially impacting product delivery and supply continuity for customers.</li> </ul> |
|            | SSP2-RCP4.5 | 2021-2100 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |
|            | SSP3-RCP7.0 | 2021-2100 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |
|            | SSP5-RCP8.5 | 2021-2100 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |
| Transition | SBT-NZ      | 2025-2050 | <ul style="list-style-type: none"> <li>• <b>Carbon Tax/Fee</b> <ul style="list-style-type: none"> <li>- Taiwanese Carbon fee: Calculated based on the actual average carbon fee collected in 2025, approximately 4.81 US\$/tCO<sub>2</sub>e.</li> <li>- China and overseas sites_SSP1-1.9 carbon price: Approximately 651 US\$/tCO<sub>2</sub>e by 2050.</li> </ul> </li> <li>• <b>Market Risks</b> <ul style="list-style-type: none"> <li>- Approximately 5.28% of customers have low-carbon requirements. Failure to meet these requirements may lead to order transfers or termination of cooperation, with a potential customer loss ratio assumed at 25%.</li> </ul> </li> <li>• <b>Renewable Energy Costs</b> <ul style="list-style-type: none"> <li>- <b>Taiwan:</b> Mainly purchased renewable electricity, with an average cost of 210.4 US\$/MWh.</li> <li>- <b>China:</b> Mainly purchased renewable energy certificates (RECs), with an average cost of 0.61 US\$/MWh.</li> <li>- <b>Other overseas locations:</b> Mainly RECs, with some purchased renewable electricity. The average costs are 4.52 US\$/MWh for RECs and 148.9 US\$/MWh for renewable electricity.</li> </ul> </li> <li>• The average cost of carbon removal is 235 US\$/tCO<sub>2</sub>e.</li> </ul> | <p>Amid the global trend toward carbon management, suppliers may face higher carbon management costs. Some of these costs could be passed on to customers, thereby increasing pressure across the supply chain.</p>                                                                                                                                                                                                   | <p>The carbon tax and market risk remains relatively high during 2025-2030 due to the significant gap in achieving the SBT-NZ target. However, as renewable energy transition progresses and the gap between emissions and the global net-zero pathway narrows, overall risk is expected to gradually decline from 2038 onward, and market risk is expected to be eliminated by 2050. Overall, the cost of implementing the transition strategy is significantly lower than the potential carbon fees and market losses that could result from a 'business-as-usual' (BAU) scenario.</p> <p>Under the existing transition plan, the alignment with the IEA NZE target is approximately 31% or lower. Nevertheless, as ASEH continues to advance renewable energy transition, the overall market risk impact remains lower than that under the BAU scenario.</p> <p>Under the IEA-APS target scenario, the company's current transition strategy already meets the required targets and is not expected to face carbon tax or market risks.</p> <p>Under the IEA-STEPS target scenario, the company's current transition strategy already meets the required targets and is not expected to face carbon tax or market risks.</p> | <p>As stakeholder concern over climate change intensifies and more countries implement carbon tax/fee systems, an increasing number of customers are demanding low-carbon transitions for products and services. Failure to meet these requirements could negatively impact revenue.</p>                                                                     |
|            | IEA-NZE     | 2025-2050 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |
|            | IEA-APS     | 2025-2050 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |
|            | IEA-STEPS   | 2025-2050 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                              |

## Metrics and Targets

ASEH received approval from the Science Based Targets initiative (SBTi) in 2021 for its near-term emissions reduction targets. In 2022, we further committed to netzero emissions, and in 2024, our long-term net-zero target was also validated by SBTi. To support this commitment, ASEH has established clear short-, medium-, and longterm carbon reduction targets (100% coverage). Emissions thresholds have been established for each subsidiary, and introduced internal carbon pricing. By quantifying and assigning value to greenhouse gas emissions, this system not only strengthens internal motivation for decarbonization but also enhances our ability to manage external policy risks. To further drive internal accountability and reductions, GHG emissions intensity and water efficiency have been incorporated into the incentive structure for senior management. From top leadership to employees at each facility, we are working together to advance net-zero transformation.

- <sup>1</sup> The year in which the GHG inventory was first fully completed and independently verified is used as the base year. Scope 1 and 2 (market-based) emissions: 1,763,221 tCO<sub>2</sub>e
- <sup>2</sup> The year in which the GHG inventory was first fully completed and independently verified is used as the base year. Scope 3 emissions: 19,636,385 tCO<sub>2</sub>e. In a recently published report on "Scope 3 Category 11 GHG Emissions: A Sectoral Assessment for the Semiconductor Industry" by SEMI, a global industry organization representing the semiconductor sector, it was ascertained that these categories are not applicable to the OSAT (Outsourced Semiconductor Assembly and Test) industry and should therefore be excluded from Category 11&12. (<https://discover.semi.org/scope-3-category-11-ghg-assessment/download-form.html>)
- <sup>3</sup> With reference to international net-zero scenarios and the UNFCCC Climate Action Pathways, the company regularly reviews and reasonably adjusts its emission reduction pathway
- <sup>4</sup> BVCN: Beyond Value Chain Mitigation (BVCN), these actions include support for the value chain to decrease carbon emissions, carbon removal technology, purchasing carbon credits, etc.





## Net-Zero Actions

To actively implement the science-based emissions reduction targets approved by the Science Based Targets initiative (SBTi), ASEH has clearly defined both near-term and long-term decarbonization goals. We monitor progress through a digital management platform and hold quarterly technical exchange meetings to support five strategic actions, with a core focus on low-carbon product development. These include the use of renewable energy in manufacturing, requiring suppliers to provide low-carbon materials and high-efficiency equipment, promoting decarbonization across land, sea, and air transportation, and investing in carbon credits — all contributing to a phased achievement of transition goals. By fully integrating an internal carbon pricing mechanism across all manufacturing facilities, ASEH internalizes the cost of greenhouse gas emissions to drive internal transformation and deliver increasingly low-carbon products and services to future generations.

## Internal Carbon Pricing

To strengthen climate risk management and identify sustainability transition opportunities, ASEH introduced internal carbon pricing in 2021 as a management tool to integrate climate considerations into strategic decision-making and risk assessment. The mechanism aims to drive low-carbon investments, improve energy efficiency, navigate climate regulations, identify and capture low-carbon business opportunities, and advance the development and implementation of climate-related policies and targets. Currently, carbon pricing is implemented across 99.5% of our facilities, aligning fully with our climate-related strategies and objectives.

Our facilities develop annual budgets based on the gap between their emission reduction targets and actual emissions, and allocate resources to implement Scope 1 and Scope 2 greenhouse gas reduction initiatives. By integrating climate actions with strategic and financial planning, ASEH further strengthens its capability to respond to climate-related risks.

- In line with the concept of “implicit price,” 75.9% of facilities set their own internal carbon prices at 70.06 US\$/tCO<sub>2</sub>e.
- In line with the concept of “shadow price,” 23.6% of facilities set their own internal carbon prices at 9.82 US\$/tCO<sub>2</sub>e.



Management and Supervision  
of the CSISC

Setting Near-Term and Long-Term SBT  
Targets Aligned with Net-Zero Pathway

Developing course of action in 5 key  
areas and a Carbon Reduction KPIs  
Management System

Implementing Carbon Pricing to  
Facilitate Internal Action Plans

Establishing a Green Solutions Platform to  
Foster Consensus and Technical Exchange

Establishment of a Net-Zero Dashboard  
Management Platform for Quarterly  
Monitoring of Progress

Public Disclosure and  
Performance Execution

Net-Zero  
transition

Supply Chain  
Engagement

#### 2030 Key Carbon Reduction Suppliers

- Achieve 100% GHG inventory coverage
- Achieve 80% product carbon footprint inventory coverage

Low-carbon  
Transportation

In 2025, we have already achieved 56% low-carbonization across all transportation modes. We have plans to fully low-carbonize the transport modes within the factories as well as upstream and downstream land transportation by 2045.

Low-Carbon  
Products

Implementing ISO 14067 product carbon footprint and ISO 14045 eco-efficiency assessment, identifying greenhouse gas emission hotspots throughout the manufacturing process, engaging with suppliers to facilitate the development of low-carbon materials and switch to low-carbon materials, and increasing the use of renewable energy in the manufacturing process to deliver low-carbon products and services.

- **2030** : Achieve the scope of product Life Cycle Assessment (LCA) > 50%
- **2040** : Achieve 100% coverage of product carbon inventory
- Reduce the carbon footprint of key products 2% per year

Renewable  
Energy

Energy transition: We plan to increase the proportion of renewable energy use through various approaches, including self-generated electricity, investments and joint ventures in renewable energy projects, corporate power purchase agreements (CPPA), and the procurement of unbundled energy attribute certificates (EACs). Progress is monitored through the platform to reach the 2035 goal whereby 57% of total electricity consumption is from renewable energy sources.

Investment in  
Carbon Credits

- The use of carbon credits forms the last mile in ASEH's journey to net-zero emissions. We anticipate to utilize carbon credits to offset our remaining carbon emissions beyond 2040 with priority placed on carbon removal credits
- ASEH participates in local government voluntary emission reduction programs to obtain the emission reduction credits as a source of carbon offsets. For example, ASEKH has obtained 24,036 tCO<sub>2</sub>e of carbon credits as of 2025.

|             | Upstream and downstream land transportation | On-site trucks | Company vehicles | Forklifts |
|-------------|---------------------------------------------|----------------|------------------|-----------|
| <b>2025</b> | --                                          | 35%            | 22%              | 87%       |
| <b>2030</b> | 10%                                         | 40%            | 50%              | >85%      |
| <b>2035</b> | 30%                                         | 60%            | 75%              | >90%      |
| <b>2040</b> | 60%                                         | 80%            | 100%             | 100%      |
| <b>2045</b> | 100%                                        | 100%           |                  |           |



## 5.2 Energy and Carbon Management

### Energy Management<sup>1</sup>

To effectively manage internal energy usage and increase energy efficiency, ASEH is progressively implementing the ISO 50001 Energy Management System to meet its planned goal of achieving 100% certification. The PDCA (Plan-Do-Check-Act) management model is used to control energy costs and reduce unnecessary energy consumption. We have taken a proactive approach to inculcating an energy saving culture amongst our employees by conducting essential education annually, and holding events or competitions to sow the seeds of sustainable development to support our business growth.

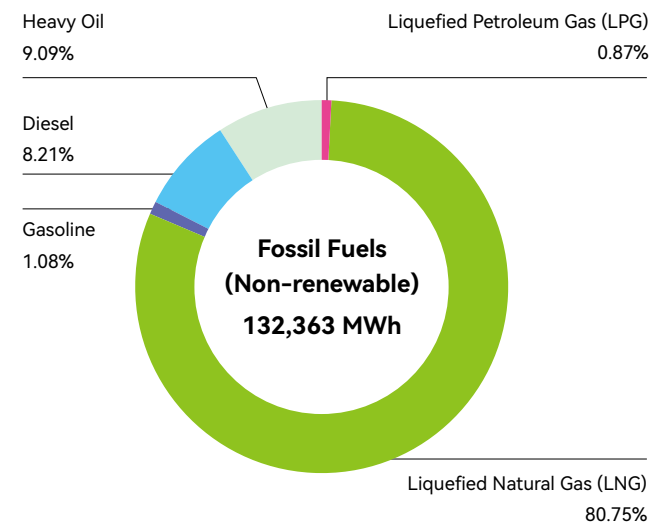
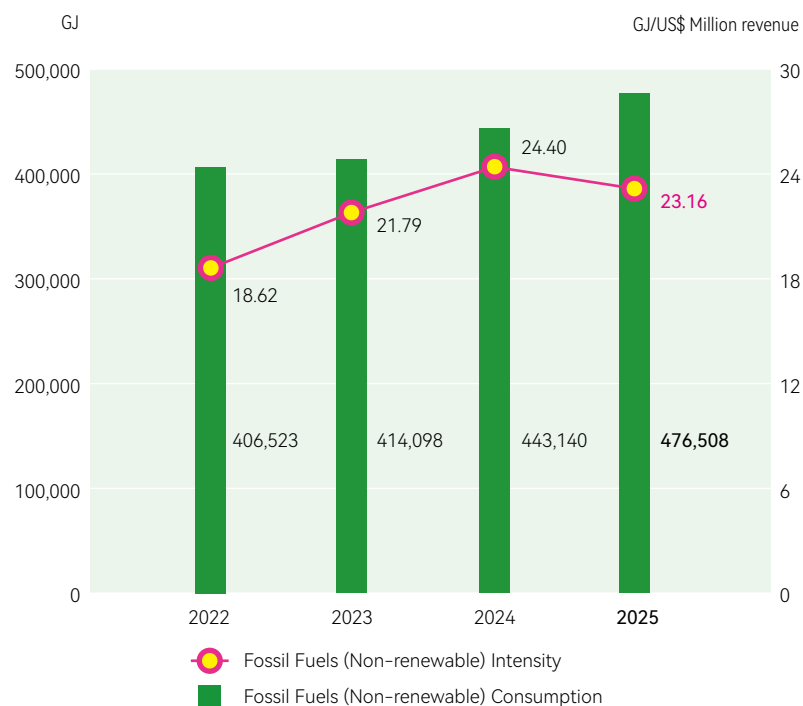


<sup>1</sup> Total energy consumption within the organization = (non-renewable fuel/electricity consumption) + (renewable fuel (electricity) consumption) + (purchased electricity, heating, cooling and steam)

## Fossil Fuels (Non-renewable)

Petroleum gas, natural liquefied gas(LNG), gasoline, diesel, and heavy oil are the main fossil fuels used<sup>1</sup> at ASEH, accounting for a total consumption of 476,508 GJ<sup>2</sup> in 2025. Of this total, LNG accounted for 80.75%, mainly used in kitchens, boilers, and air pollution control equipment, followed by heavy oil used for steam generation. In recent years, our dependency on fossil fuels have been reduced through the gradual introduction of transportation modes and the use of substitute fuels and clean energies.

Fossil Fuels (Non-renewable) Consumption and Intensity



| Fossil Fuels (Non-renewable fuels) | GJ             | MWh            |
|------------------------------------|----------------|----------------|
| Liquefied Petroleum Gas (LPG)      | 4,163          | 1,156          |
| Liquefied Natural Gas (LNG)        | 384,778        | 106,883        |
| Gasoline                           | 5,136          | 1,427          |
| Diesel                             | 39,132         | 10,870         |
| Heavy Oil                          | 43,299         | 12,027         |
| <b>Total</b>                       | <b>476,508</b> | <b>132,363</b> |

<sup>1</sup> Fossil Fuels (Non-renewable fuels) are used in: (a) Facilities: Emergency power generators, boilers, (b) Transport: Stackers, company vehicles, (c) Air pollution preventive equipment

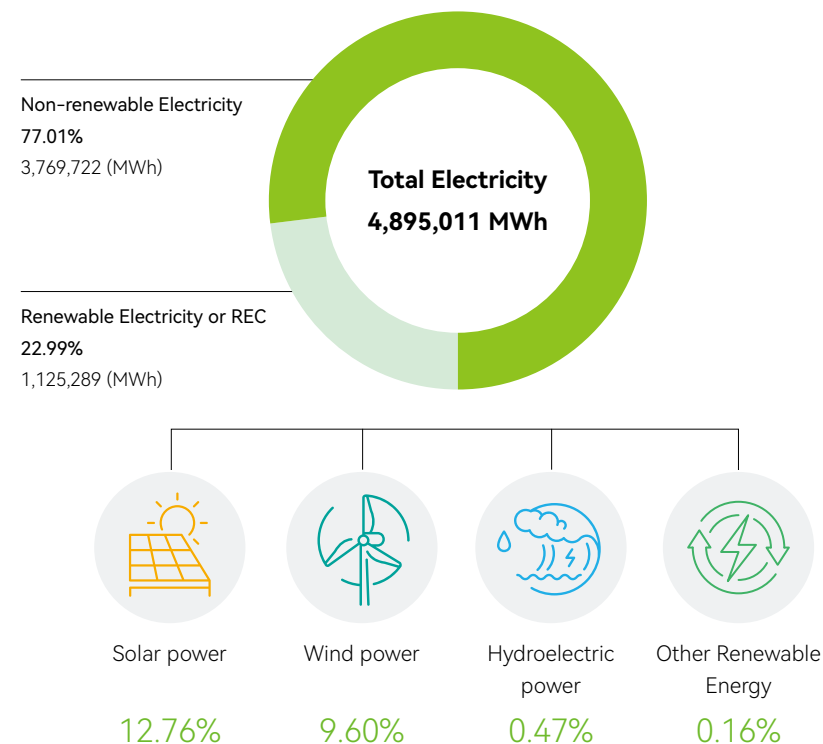
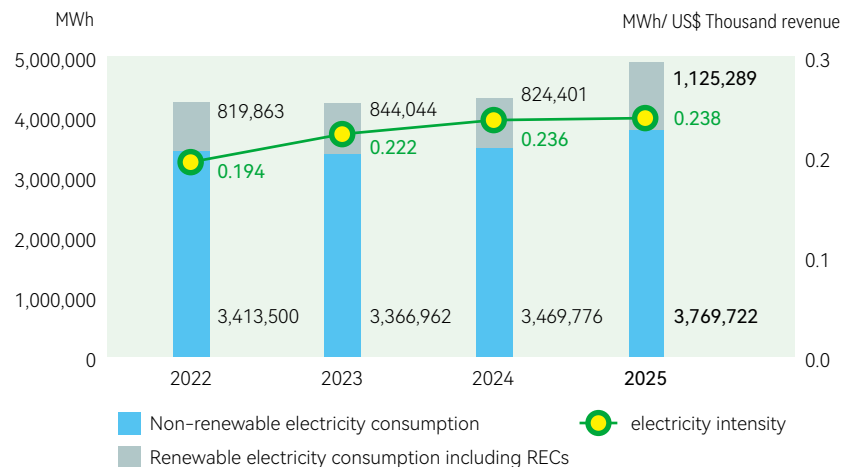
<sup>2</sup> Fuel calorific values are primarily based on those published by local competent authorities. If no relevant data are available, the "Table of Calorific Values of Energy Products" published by the Energy Administration, Ministry of Economic Affairs, Taiwan, is adopted as the basis for conversion. The conversion factor for calorific value units is 1 calorie (cal) = 4.187 joules (J).

"Table of Calorific Values of Energy Products": [https://ea01.moeaea.gov.tw/a0303/02/api/files/m\\_能源產品單位熱值.pdf](https://ea01.moeaea.gov.tw/a0303/02/api/files/m_能源產品單位熱值.pdf)

## Electricity and Renewable Energy Consumption

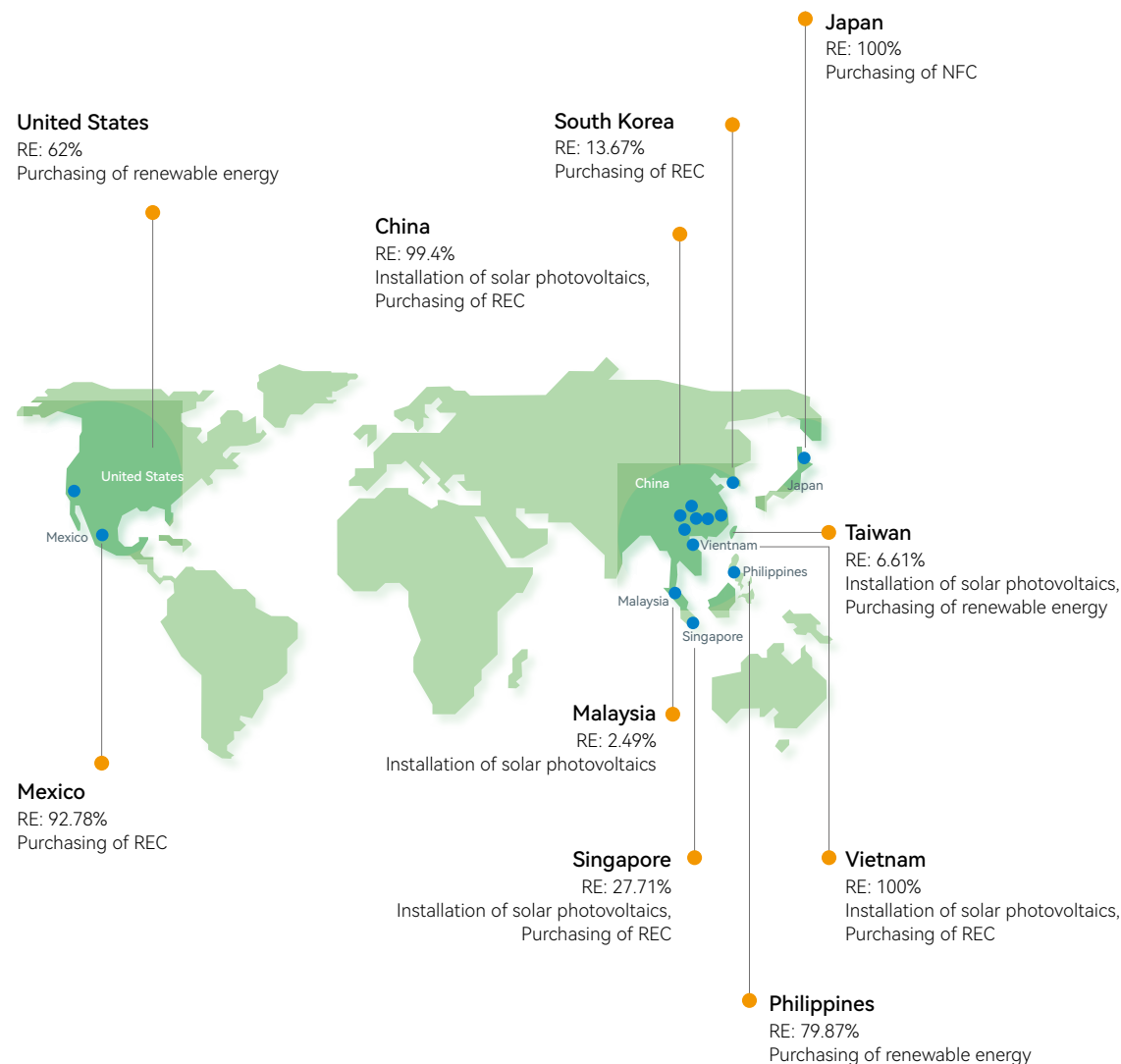
ASEH is increasing the use of renewable energy and developing a diversified power supply portfolio to strengthen its climate resilience. We established the “Renewable Energy Platform” to consolidate the energy procurement of all our three subsidiaries. In addition, we managed to work with the value chain on the collective procurement of renewable energy, which not only increased the proportion of renewable energy used by our partners but also indirectly reduced greenhouse gas emissions overall. In 2025, our total electricity consumption was approximately 4,895,011 MWh, while electricity consumption increase by 13.99% compared with 2024. The electricity intensity per unit of revenue recorded a increase of approximately 0.82%. In line with ASEH’s commitment to the SBTi net-zero by 2050, we are progressively increasing the use of renewable energy through solar power (installed at our facilities), external procurement of renewable energy, and acquisition of RECs. 89.66% of our global facilities used electricity from renewable sources including RECs. Our renewable electricity usage totaled 1,125,289 MWh and accounted for 22.99% of total energy consumption. 10 of our global manufacturing plants obtained 100% of their electricity from renewable energy sources including RECs.

### Electricity Consumption and Intensity



| Unit: MWh      | 624,855 | 469,823 | 22,870 | 7,741 |
|----------------|---------|---------|--------|-------|
| Self-Generated | 9,024   | -       | -      | -     |
| Purchasing     | 272,951 | 48,749  | 3,870  | 7,741 |
| RECs           | 403,240 | 421,074 | 19,000 | -     |

## Renewable Energy<sup>1</sup> Across Global Facilities<sup>2</sup>



## Smart Energy Monitoring and Management

To better manage our energy efficiency, we have established a minimum threshold of a 2% electricity savings relative to the annual power demand at our manufacturing facilities. We are also closely monitoring the energy intensity from non-renewable energy sources and high-energy consuming equipment at our facilities, with the goal of reducing energy usage.

In recent years, we are actively driving 'AI for green manufacturing' initiatives. We have developed an Industrial AI (IAI) platform to manage and effectively reduce carbon emissions and resource consumption.

### • SPIL

Since 2024, SPIL has deployed AI energy-saving measures throughout its manufacturing facilities, improving energy efficiency and reducing carbon.

1. AI-Control for Chilled Water Systems: Using algorithm tools, more than 100,000 operational combinations were analyzed to establish optimal energy models to determine the most energy-efficient operating modes, resulting in reduced energy consumption.
2. AI-Control for Air Compression Systems and Fan Filter Units (FFU): Machine learning algorithms are applied to identify optimal energy efficiency control strategies, reducing equipment energy consumption while maintaining operational requirements.

### • ASE Kaohsiung

1. AI-Control for Chilled Water Systems: Implemented since 2024, smart controls optimize the operating parameters of chillers, cooling towers and cooling water pumps under the most energy-efficient conditions.
2. Smart Management Platform for Air Compression Systems: A smart management platform was established for air compression systems, with baseline energy consumption benchmarks defined by experts at each facility. The system integrates real-time alerts for energy usage deviations and supports optimization strategies to ensure air compressors consistently operate under energy-efficient conditions.

<sup>1</sup> Renewable electricity usage ratio is based on data from all global facilities, including dormitories and warehouses

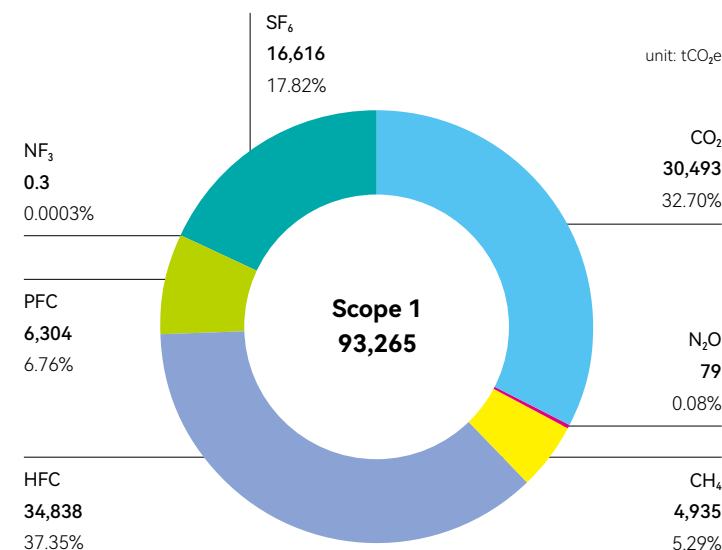
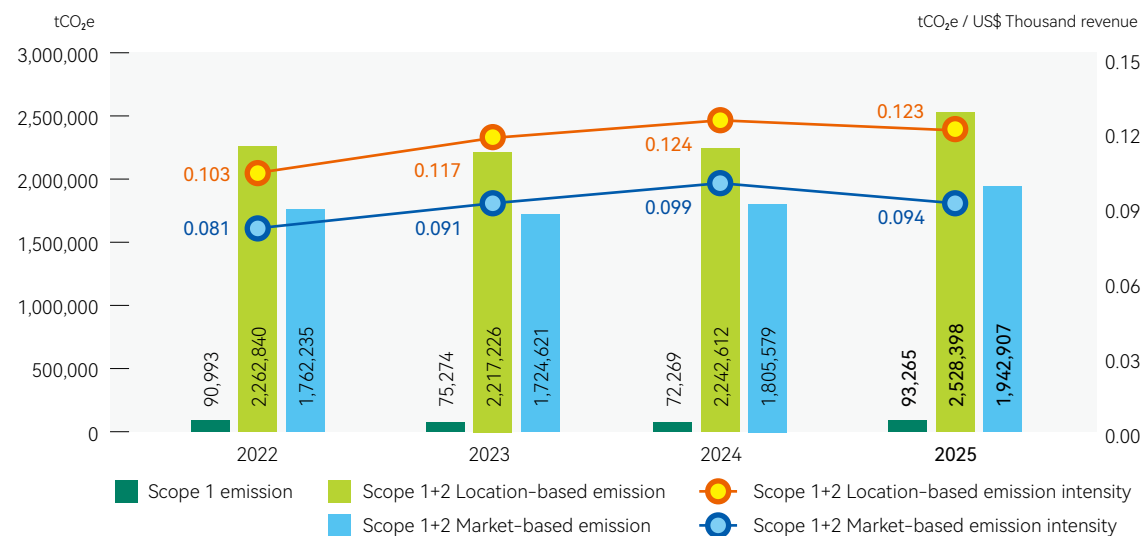
<sup>2</sup> 100% of electricity from renewable energy sources including RECs: (1)ASE: SH(M), WX, JP (2)USI: ZJ, KS, JQ, HZ, MX, HPH (3)SPIL: SZ

## Greenhouse Gas Emissions Management

ASEH has achieved 100% control over greenhouse gas emissions in all of its global sites, following ISO 14064-1 standards. In 2025, the Scope 1 and Scope 2 emissions<sup>1</sup>, calculated based on market-based approaches, amounted to approximately 1.94 million tCO<sub>2</sub>e<sup>2</sup>, with a 43.1% reduction in greenhouse gas intensity per unit of revenue compared to the baseline year 2015. Since the main source of emissions in the industry is electricity usage, continuous efforts have been made to improve energy efficiency. In 2025, 24 sites obtained the ISO 50001<sup>3</sup> certification, covering 85.7% of the total sites. Scope 3 – capital goods, account for 55% of our total emissions. As such, we are prioritizing low-carbon procurement and the adoption of high-energy-efficiency equipment to reduce lifecycle carbon emissions from capital goods. In addition, we are encouraging the use of low-carbon building materials and green building designs for our construction projects to minimize environmental impacts. In response, we provide guidance and support in assessing suppliers' greenhouse gas emissions and product carbon footprints. We also actively engage in various aspects of emissions reduction through technical sharing, cross-industry cooperation, and incentive programs. In recent years, we have also invested in subsidiary companies to assist in greenhouse gas assessments and share emission reduction technologies. Our goal is to enhance the industry's ability to assess emissions across the supply chain, analyze carbon reduction hotspots, and foster collaborations in implementing carbon reduction actions by sharing carbon reduction technologies.

|                           | Activity                                        | Emission (tCO <sub>2</sub> e) |
|---------------------------|-------------------------------------------------|-------------------------------|
| Scope 1                   | Stationary Combustion                           | 26,957                        |
|                           | Mobile Combustion                               | 2,489                         |
|                           | Fugitive Emissions                              | 53,873                        |
|                           | Process Emissions                               | 9,919                         |
|                           | Land use, land use change and forestry (LULUCF) | 27                            |
| Scope 2<br>(Market-based) | Electricity                                     | 1,840,564                     |
|                           | Heating/Cooling/Steam/<br>Compressed air        | 9,078                         |
| Scope 3                   |                                                 | 9,810,299                     |

Greenhouse Gas Emissions and Intensities



<sup>1</sup> The electricity carbon emission factor is calculated based on that of local sites

<sup>2</sup> Greenhouse gas inventory reveals emission scope with operational control and the Global Warming Potential derived from the IPCC Sixth Assessment Report

<sup>3</sup> The overall validity period of the ISO 50001 certifications covers 2023 to 2028. The certification issuance dates and validity periods vary by facilities. For detailed certification dates and validity periods, please refer to the ASEH's official website: <https://www.aseglobal.com/csr/green-transformation/environmental-management-system/>

| Scope 3 Emission Source                                                | Emission (tCO <sub>2</sub> e) | Primary Emission Factor Sources                                                                     | Reduction Courses of Action                                                                                                                                                                                                                                           |
|------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purchased goods and services                                           | 3,643,481                     | SimaPro 10.2.0.3 / Ecoinvent 3.11 / EF Database 3.1 / EXIOBASE                                      | <ul style="list-style-type: none"> <li>• Prioritize the purchase of low-carbon materials/ recycled materials</li> <li>• Encourage the use of renewable energy</li> <li>• Packaging Recycling and Reuse</li> </ul>                                                     |
| Capital goods                                                          | 5,370,475                     | SimaPro 10.2.0.3 / Ecoinvent 3.11 / EF Database 3.1 / EXIOBASE                                      | <ul style="list-style-type: none"> <li>• Prioritize the purchase of low-carbon equipment and build low carbon facilities</li> </ul>                                                                                                                                   |
| Fuel- and- energy- related activities<br>(not include in Scope 1 or 2) | 492,159                       | Carbon Footprint Information Platform / SimaPro 10.2.0.3/ Ecoinvent 3.11 / USLCI+                   | <ul style="list-style-type: none"> <li>• Progressively increase the use of renewable energies</li> </ul>                                                                                                                                                              |
| Upstream transportation and distribution                               | 32,142                        | Carbon Footprint Information Platform / SimaPro 10.2.0.3 / Ecoinvent 3.11 / USLCI+ / Agri-footprint | <ul style="list-style-type: none"> <li>• Replace current plan with low-carbon transportation solutions</li> <li>• Minimize the use of product packaging materials</li> </ul>                                                                                          |
| Downstream transportation and distribution                             | 74,703                        | Carbon Footprint Information Platform / SimaPro 10.2.0.3 / Ecoinvent 3.11 / USLCI+ / Agri-footprint | <ul style="list-style-type: none"> <li>• Establish a platform that integrates upstream and downstream transportation equipment and transportation distances</li> <li>• Prioritize the Use of Local Raw Materials to Reduce Transportation Carbon Emissions</li> </ul> |
| Waste generated in operations                                          | 14,799                        | Carbon Footprint Information Platform / SimaPro 10.2.0.3 / Ecoinvent 3.11 / USLCI+                  | <ul style="list-style-type: none"> <li>• Promote circular economy and adopt an end-of-life recyclable component design</li> </ul>                                                                                                                                     |
| Business travel                                                        | 2,597                         | Carbon Footprint Information Platform / Taiwan High Speed Rail / ICAO / GOV.UK                      | <ul style="list-style-type: none"> <li>• Rationalize business travels</li> <li>• Replace physical meetings with video conferencing</li> </ul>                                                                                                                         |
| Employee commuting                                                     | 40,568                        | Carbon Footprint Information Platform / SimaPro 10.2.0.3 / Ecoinvent 3.11                           | <ul style="list-style-type: none"> <li>• Offer carbon coins to encourage low-carbon commuting</li> <li>• Promote public transportation</li> </ul>                                                                                                                     |
| Upstream leased assets                                                 | 30,383                        | SimaPro 10.2.0.3 / EXIOBASE / EU & DK Input Output Database                                         | <ul style="list-style-type: none"> <li>• Improve energy efficiency</li> </ul>                                                                                                                                                                                         |
| Downstream leased assets                                               | 11,948                        | SimaPro 10.2.0.3 / EXIOBASE / EU & DK Input Output Database                                         |                                                                                                                                                                                                                                                                       |
| Investments                                                            | 97,044                        | Scope 1 and Scope 2 greenhouse gas emissions of investee companies                                  | <ul style="list-style-type: none"> <li>• Providing Guidance on Greenhouse Gas Inventory and Promoting Emission Reduction</li> </ul>                                                                                                                                   |
| <b>Total</b>                                                           | <b>9,810,299</b>              |                                                                                                     |                                                                                                                                                                                                                                                                       |

## Energy Saving and Carbon Reduction Projects

ASEH adopts 4 key approaches in its carbon reduction management; carbon reduction in manufacturing processes<sup>1</sup>, carbon reduction in buildings<sup>2</sup>, low-carbon energy development projects<sup>3</sup>, and operational and value chain decarbonization<sup>4</sup>. In 2025, we invested a total of approximately US\$69 million on 1,422 projects, resulting in energy savings of 4,919,620 GJ and emission reductions of 722,184 tCO<sub>2</sub>e.

| Reduction Scope | Category                                      | Key carbon reduction hotspots                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Carbon Reduction (tCO <sub>2</sub> e) | Investment (US\$) |
|-----------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-------------------|
| Scope 1+2       | ● Carbon reduction in manufacturing processes | ● Scope 1: Vehicle Electrification and Manufacturing Process Emissions Reduction                                                                                                                                                                                                                                                                                                                                                                                                    | 6,337                                 | 53,376            |
|                 |                                               | ● Scope2: Enhancing energy efficiency in processes, equipment, and systems through operational optimization, upgrades, and routine maintenance.                                                                                                                                                                                                                                                                                                                                     | 91,308                                | 10,711,520        |
| Scope 2         | ● Carbon reduction in buildings               | <ul style="list-style-type: none"> <li>Developing innovative smart energy management systems that optimizes energy efficiency.</li> <li>Introducing internal carbon pricing, sharing in-house technologies, and holding energy-saving competitions to encourage proactive plant-wide improvement efforts.</li> </ul>                                                                                                                                                                | 26,152                                | 9,897,810         |
|                 | ● Low-carbon energy                           | ● ASEH's renewable energy platform coordinates centralized procurement, gradually implementing the low-carbon energy transition in phases.                                                                                                                                                                                                                                                                                                                                          | 597,488                               | 48,124,062        |
| Scope 3         | ● Operational and value chain decarbonization | <ul style="list-style-type: none"> <li>Low carbon transport: Encourage employees to switch to electric vehicles for commuting by installing charging and battery swap stations, reducing indirect emissions beyond operational activities.</li> <li>Waste recycling and reuse: Reuse materials to reduce the demand for packaging materials.</li> <li>New procurement policy: Promote local sourcing of raw materials to reduce transportation-related carbon emissions.</li> </ul> | 900                                   | 1,020             |

<sup>1</sup> Carbon reduction in manufacturing processes includes enhanced performance and decarbonization in the manufacturing process, pneumatic system, pure/waste water systems, equipment replacement, motors and drives, automation and smart control system, waste heat and cold recovery

<sup>2</sup> Carbon reduction in buildings includes saving energy in lighting and air conditioning systems

<sup>3</sup> Low-carbon energy includes self-generated renewable energy, purchasing renewable energy and purchasing renewable energy certificates

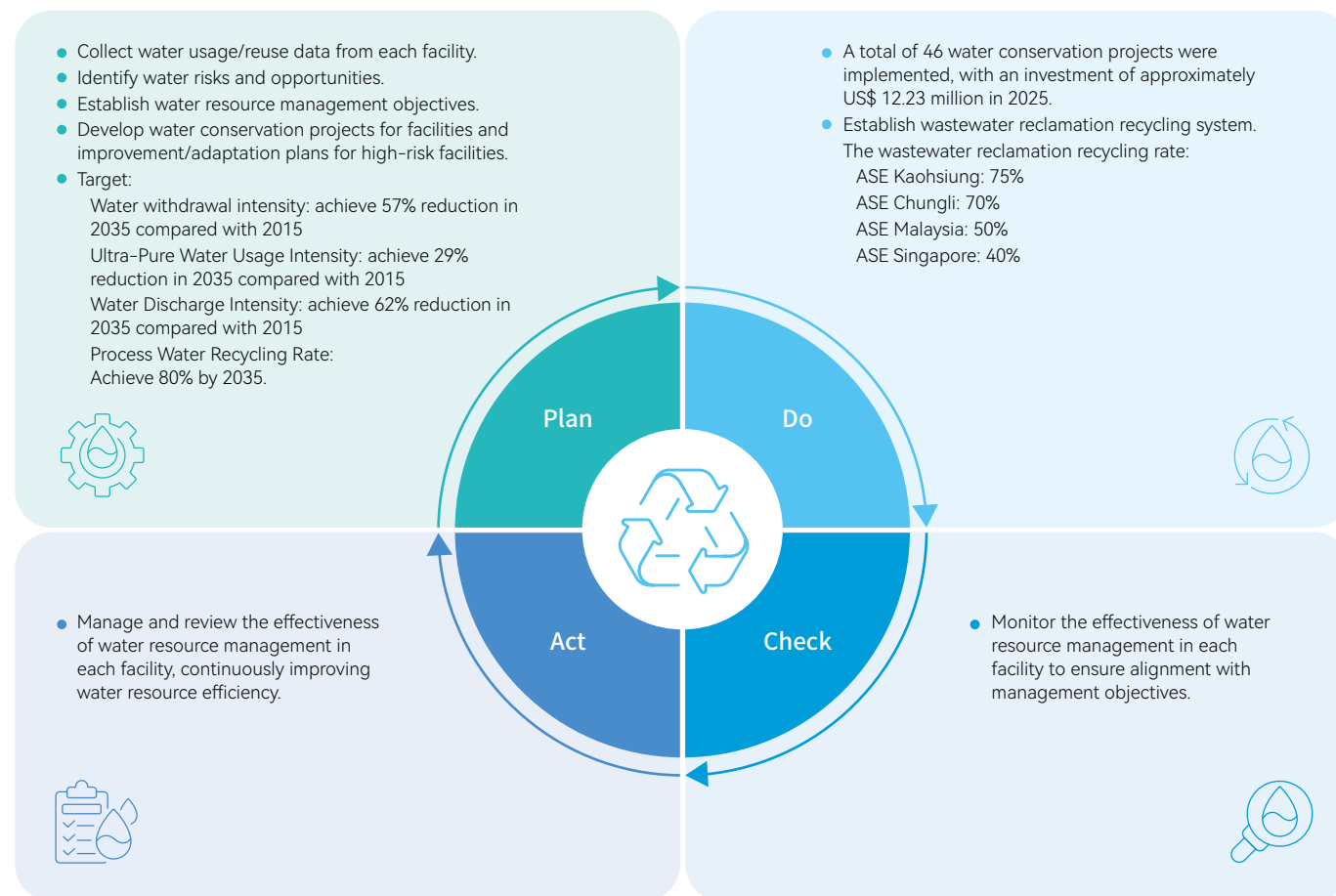
<sup>4</sup> Operational and value chain decarbonization includes Scope 3 reduction measures such as employee commuting, company policies or behavioral changes

| Scope 2 Carbon reduction project    |                                                                                     |        |                                                                                                                                                                        | Investment                   | Performance              |                                            |
|-------------------------------------|-------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------|--------------------------------------------|
| Category                            |                                                                                     | Number | Content                                                                                                                                                                | Total investment fees (US\$) | Energy Saving (MWh/year) | Carbon Reduction (tCO <sub>2</sub> e/year) |
| Lighting System                     |    | 52     | <ul style="list-style-type: none"> <li>Implementing Smart Controls</li> <li>Using High-efficiency LED</li> </ul>                                                       | 241,114                      | 1,908                    | 892                                        |
| Air Conditioning System             |    | 216    | <ul style="list-style-type: none"> <li>Parameters Adjustment</li> <li>Replacing Low-efficiency equipment</li> </ul>                                                    | 8,399,640                    | 48,295                   | 23,224                                     |
| Pneumatic System                    |    | 289    | <ul style="list-style-type: none"> <li>Parameters Adjustment</li> <li>Replacing Low-efficiency equipment</li> </ul>                                                    | 2,375,976                    | 31,938                   | 15,246                                     |
| Enhanced Performance                |    | 558    | <ul style="list-style-type: none"> <li>Optimizing Parameters</li> <li>Refinement of Operational Processes</li> <li>Optimization of Machine Idle Time</li> </ul>        | 1,727,290                    | 123,723                  | 61,198                                     |
| Pure/waste Water Systems            |    | 18     | <ul style="list-style-type: none"> <li>Optimizing Parameters</li> <li>Machine and Equipment Maintenance</li> <li>Water Recycling</li> </ul>                            | 273,374                      | 754                      | 357                                        |
| Equipment Replacement               |    | 36     | <ul style="list-style-type: none"> <li>Process Machine Equipment Replacement</li> <li>Replacement of Old Parts and Materials</li> </ul>                                | 3,033,194                    | 3,663                    | 1,738                                      |
| Motors and Drives                   |    | 130    | <ul style="list-style-type: none"> <li>Replacement of Low-efficiency Motors</li> <li>Installation of Variable Frequency Drives</li> </ul>                              | 3,907,570                    | 16,527                   | 7,875                                      |
| Automation and Smart Control System |  | 35     | <ul style="list-style-type: none"> <li>Installation of Automatic Controllers</li> <li>Implementation of Smart Management in Manufacturing Process</li> </ul>           | 38,094                       | 2,495                    | 1,183                                      |
| Waste Heat and Cold Recovery        |  | 29     | <ul style="list-style-type: none"> <li>Heat Recovery</li> <li>Recycling of Waste Cold</li> </ul>                                                                       | 605,212                      | 11,875                   | 5,703                                      |
| Energy-saving operation strategy    |  | 2      | <ul style="list-style-type: none"> <li>Adjustment of freight or passenger elevator operations</li> <li>Cast Resin Transformer Energy Efficiency Improvement</li> </ul> | 7,867                        | 94                       | 44                                         |

## 5.3 Water Stewardship

### Water Governance

Managing our water resources is a top priority at ASEH, and we aim to continuously improve and optimize the use of water resources efficiently. From establishing management objectives to assessing major areas of water usage, the adoption of ISO 46001 Water Efficiency Management Systems enables us to identify risks and opportunities, and develop water-saving measures, risk mitigation strategies and various action plans.





## Internal Water pricing

ASEH has developed a water pricing framework based on the concept of “absolute sustainability” advocated by the Science Based Targets Network (SBTN). By quantifying the environmental, social and economic externalities generated when business operations exceed regional sustainability and water carrying capacities, we are able to reflect the true value of water resources. Science-based thresholds for ensuring the absolute sustainability of water resources at all our operating locations are established through integrating the soil and water assessment tool (SWAT), reservoir operation models and water resource allocation principles to ascertain the capacity for local sustainable water supply. When actual water consumption exceeds these thresholds, excess consumption is treated as use of water resources exceeding the region’s ecological capacity. External costs from the impact to the quality of human health, ecosystem, industrial and agricultural economy are calculated and adjusted according to the water-use structure of different river basins and water supply areas to reflect regional differences in water resource scarcity and socioeconomic conditions.

To address different management objectives, we have established two internal water pricing scenarios for the Taiwan facility:

### (I) Full external costs ( 26.75 US\$/m<sup>3</sup> )

This scenario considers the total impact across all four dimensions: human health, ecosystem quality, industrial economy, and agricultural economy, to fully reflect the social value of water resources. It serves as the foundation for assessing water conservation investments, capital expenditure decisions and water resource management strategies.

### (II) Environmental and social external costs ( 0.19 US\$/m<sup>3</sup> )

This scenario excludes industrial economic losses, retaining only external environmental and social costs. It serves as the basis for sustainability disclosure, water resource impact assessment and water resource measurement.

ASEH’s internal water pricing framework focuses on the external costs incurred when use exceeds science-based sustainability thresholds. It quantifies the potential environmental, social and economic impacts of the company’s water consumption to ensure that the value of water resources is fully incorporated into corporate management and investment decisions.

In 2026, we will apply the framework to our water resource management:

- To assess the return on investment of water conservation and water recycling projects
- To analyze the cost benefits of water resource-related capital expenditures
- To identify and managing water resource risks across operating locations
- To assess the availability of water resources for new plant site selection and capacity expansion
- To quantify our performance in water resource management and related water conservation outcomes

By converting the benefits of water savings into quantifiable economic value, we are able to reflect not only direct water cost savings, but also the environmental and social benefits created by the company. Continuous improvement efforts in water use efficiency will help us to strengthen climate resilience and advance science-based water resource management and sustainable development goals.



## Risk and Opportunity Management

### Water related Risks and Opportunities

We analyzed 110 locations of subsidiaries included in ASEH's global consolidated financial statements, and analyzed the results to establish more effective and progressive strategies and enhance our ability to respond to water risks, seize potential opportunities, and drive the company's continued growth and transformation.

|             | Water                                                     | Timeframe of Impact <sup>1</sup>       | Scenario description                                                                          | Explanation on potential impact                                  | Location in the value chain                                                                                                          | Potential impact on finance                                                                                                                               | Financial impact Assessment (US\$ million) | Management approaches                                                                                                                                                                                                                                                                                                      | Management costs (US\$ million) |
|-------------|-----------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Risk        | Natural disasters                                         | Short-term<br>Medium-term              | Plant shutdown due to accidents or natural disasters results in delayed shipments             | Losses in revenue due to delayed shipments                       | <ul style="list-style-type: none"> <li>Company operations</li> <li>Upstream or suppliers</li> <li>Downstream or end-users</li> </ul> | <ul style="list-style-type: none"> <li>Increase in indirect costs</li> <li>Increase in capital expenditure</li> <li>Decline in overall revenue</li> </ul> | 0.14-1.69                                  | <ol style="list-style-type: none"> <li>Conduct water risk assessments and diversify water sources to reduce the risk of operational disruptions caused by water shortages/flooding</li> <li>Incorporate water risk into supplier management, and establish multiple supply sources and a safety stock mechanism</li> </ol> | 0.03                            |
|             | Changes in water-related laws                             | Short-term<br>Medium-term              | The uncertainty of water regulations leads to unpredictable compliance risks and expenditures | Additional costs for non-compliance with regulatory requirements | <ul style="list-style-type: none"> <li>Company operations</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Increase in indirect costs</li> <li>Increase in capital expenditure</li> </ul>                                     | 3.41-6.83                                  | <ol style="list-style-type: none"> <li>Establish a regulatory tracking mechanism to assess the impact of policy changes on operations and costs in advance</li> <li>Improve process water efficiency and water recycling capabilities</li> </ol>                                                                           | 105.04                          |
| Opportunity | Water efficiency: Improving water conservation technology | Short-term<br>Medium-term<br>Long-term | Improving water efficiency helps reduce dependence on external water sources                  | Reduced cost of purchased water                                  | <ul style="list-style-type: none"> <li>Company operations</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Reduced operating costs</li> <li>Enhanced brand value</li> <li>Investment opportunities</li> </ul>                 | 3.6                                        | <ol style="list-style-type: none"> <li>Continuously promote water conservation in manufacturing processes and the use of efficient water-saving technologies</li> <li>Improve water efficiency through data monitoring and analysis, and continuously explore water-saving opportunities</li> </ol>                        | 23                              |
|             | Resilience: Alternative or diversified water sources      | Medium-term                            | Seeking alternative water sources reduces water shortage risks and lowers operating costs     | Avoiding revenue losses due to water shortages                   | <ul style="list-style-type: none"> <li>Company operations</li> </ul>                                                                 | <ul style="list-style-type: none"> <li>Reduced operating costs</li> <li>Increased competitiveness</li> <li>Enhanced brand value</li> </ul>                | 338-564                                    | <ol style="list-style-type: none"> <li>Increase wastewater recycling rate and use of reclaimed water to reduce dependence on external water sources</li> <li>Increase water security by establishing other supplies of water, such as reclaimed water, recycled water, and alternative sources</li> </ol>                  | 179                             |

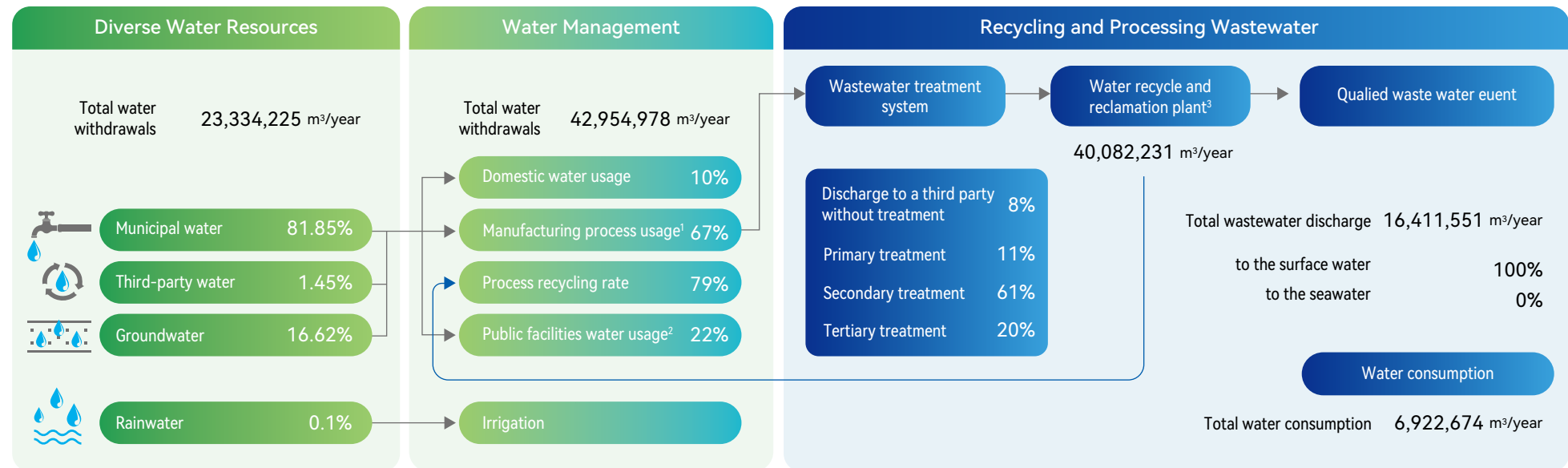
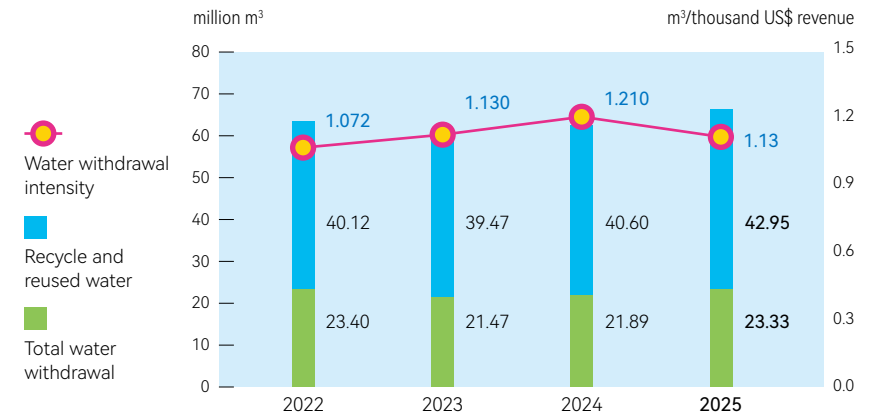
<sup>1</sup> Short-term (within 3 years), medium-term (4-5 years), and long-term (6 years or longer)

## Water Withdrawal and Reuse

ASEH adopts three water use strategies: reduce, reuse, and recycle. The main source of water-use is tap water. Total water withdrawals in 2025 amounted to 23.33 million tons, while water withdrawal increased by 7% compared to the previous year. The water use intensity per unit revenue (including rainwater) was decrease by 6% compared with the previous year, still reaching our goal of a 46% decrease compared to the baseline in 2015.

A total of four manufacturing sites are equipped with wastewater reclamation recycling systems. The robust recycling methodology at the facility in effluent discharge, and significantly alleviated the manufacturing sites' pressure on water consumption and wastewater discharge.

## Water Resource and Water Withdrawal Intensity



Description:

1. Manufacturing process water use includes manufacturing water use cycle, cleaning/grinding water, electroplating water recycling, and other reuse.

2. Public water use includes washing tower discharge, cooling tower discharge, purified/wastewater systems recycling and reuse.

3. Water reclamation includes recycling and renewal of processed water that meets guidelines, supplying the manufacturing water usage cycle.

## Water Saving Projects

In 2025, our successful launch of 46 conservation projects involved US\$ 12.23 million in capital expenditures and operating expenses, which saved a remarkable 1.47 million tons per year. To improve employees' awareness, knowledge, and skills, we generally provide water resource efficiency-related training for employees, a total of training lessons for 7,323 hours, 17,324 people. That will assist employees in discovering water-saving opportunities in daily operations and propose and implement improvement projects. The company implemented an incentive mechanism to encourage employees to propose feasible water-saving solutions, ultimately achieving an 79% process water recycling rate. We remain committed to promoting and investing in water management capabilities taking concrete actions to advance circular economic benefits derived from sustainable water use.

| Water Saving Projects                                                                                                 |           |                                                                                                 | Investment             | Performance             |
|-----------------------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------------------------------------------------------|------------------------|-------------------------|
| Project Type                                                                                                          | Number    | Description                                                                                     | Investment fees (US\$) | Performance (tons/year) |
| Process recycling rate               | 26        | Add a recycling system to process and recycle machine wastewater                                | 8,587,699              | 688,807                 |
| Water recycle and reclamation plant  | 2         | Wastewater reclaim efficiency improvement                                                       | 445,861                | 286,104                 |
| Wastewater recycling                | 13        | 1) Strip grind wastewater reuse<br>2) New construction project for organic wastewater recycling | 3,121,656              | 414,951                 |
| Public facilities water usage      | 4         | Water spray for garden                                                                          | 83,149                 | 72,541                  |
| Domestic water usage               | 1         | Toilet tap and flush water altered to water saver                                               | –                      | 7,272                   |
| <b>Total</b>                                                                                                          | <b>46</b> |                                                                                                 | <b>12,238,365</b>      | <b>1,469,675</b>        |

<sup>1</sup> Key facilities are defined as facilities with both high revenue contribution and significant water consumption

## Wastewater Management

In 2025, 16,411,551 tons<sup>1</sup> of effluent was discharged, and our total water consumption was 6,922,674 tons. We conduct internal water quality tests, while also outsourcing offline sampling and water quality analysis to ensure strict control and ecology management of the aquatic environment. In addition, our effluent management adheres to local regulations and discharge water standards. A number of our facilities have set internal goals that are higher than regulatory requirements by consistently monitoring the effluent quality, and employing AI algorithms to optimize and increase the amount of recycled water and reduce water withdrawal. Currently, there are 15 facilities that collect and classify chemicals used in the manufacturing process, so that each type can be treated independently based on its effluent characteristics, and hence, improving the efficiency of our effluent treatment processes. In order to provide employees with clean water and proper sanitation across our operations, we have adopted the WASH (Water, Sanitation, and Hygiene) approach as well as established wastewater treatment facilities. We will continue to conduct regular health and environmental education to further enhance employees' awareness of water security.



### AI-Driven Dynamic Water Management

Using back-end big data analytics, we monitored in real time various complex water quality indicators and multi-dimensional parameters to conduct in-depth logical reasoning and trend prediction.

The platform provides unit dosage analysis, trend charts, and precise calculations of each plant area, overturning traditional adjustment strategies that rely on human experience. The platform fully embodies the spirit of digital twin and technology-driven operations, integrating field PLC control with back-end AI systems to help management personnel understand at a glance the entire plant's wastewater status, thereby fulfilling our long-term commitment to green semiconductor manufacturing, smart transformation, and environmental resilience.



<sup>1</sup> Three electronic manufacturing services facilities (USI Kunshan, Shenzhen, and Mexico) do not have on-site wastewater treatment facility, so the amount of wastewater discharge is estimated. Others' data is recorded from water meters

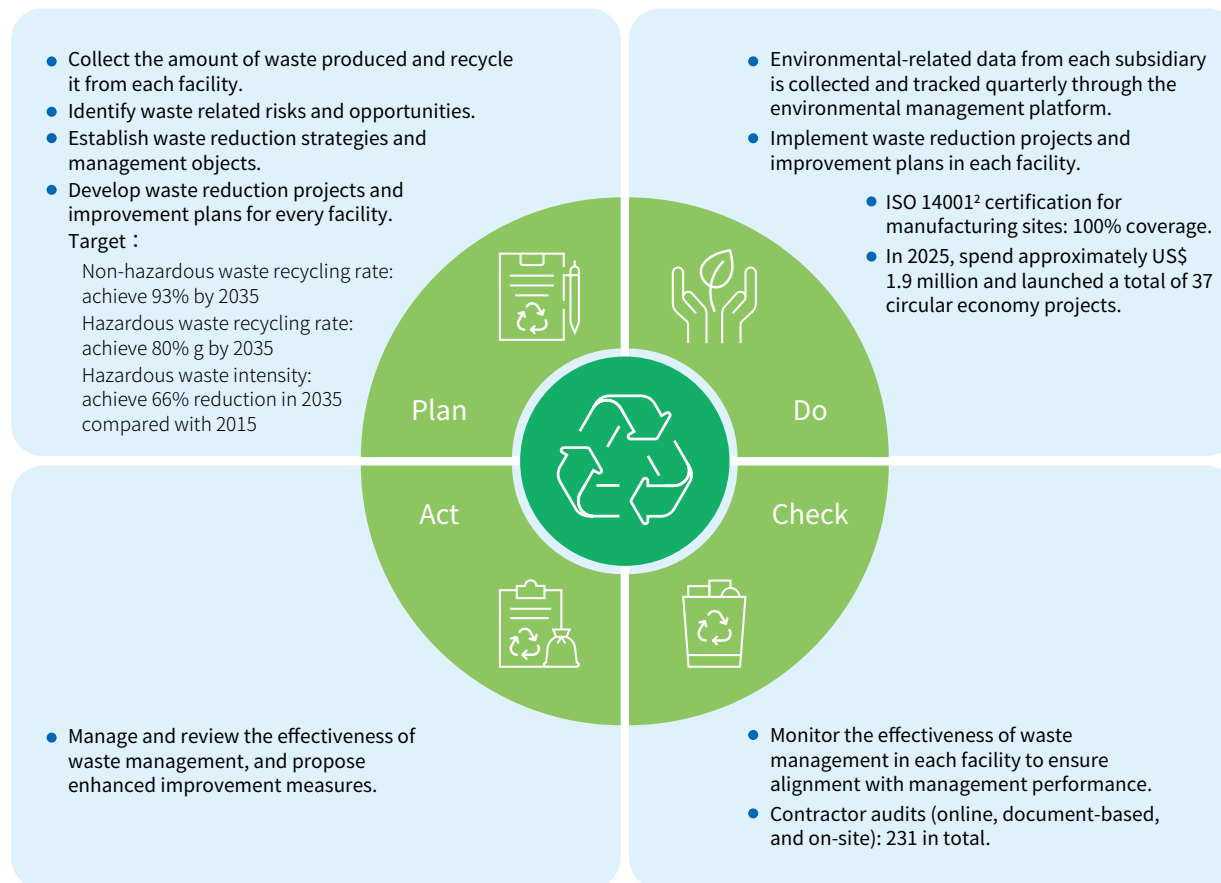


## 5.4 Circular Resources

### Waste Management

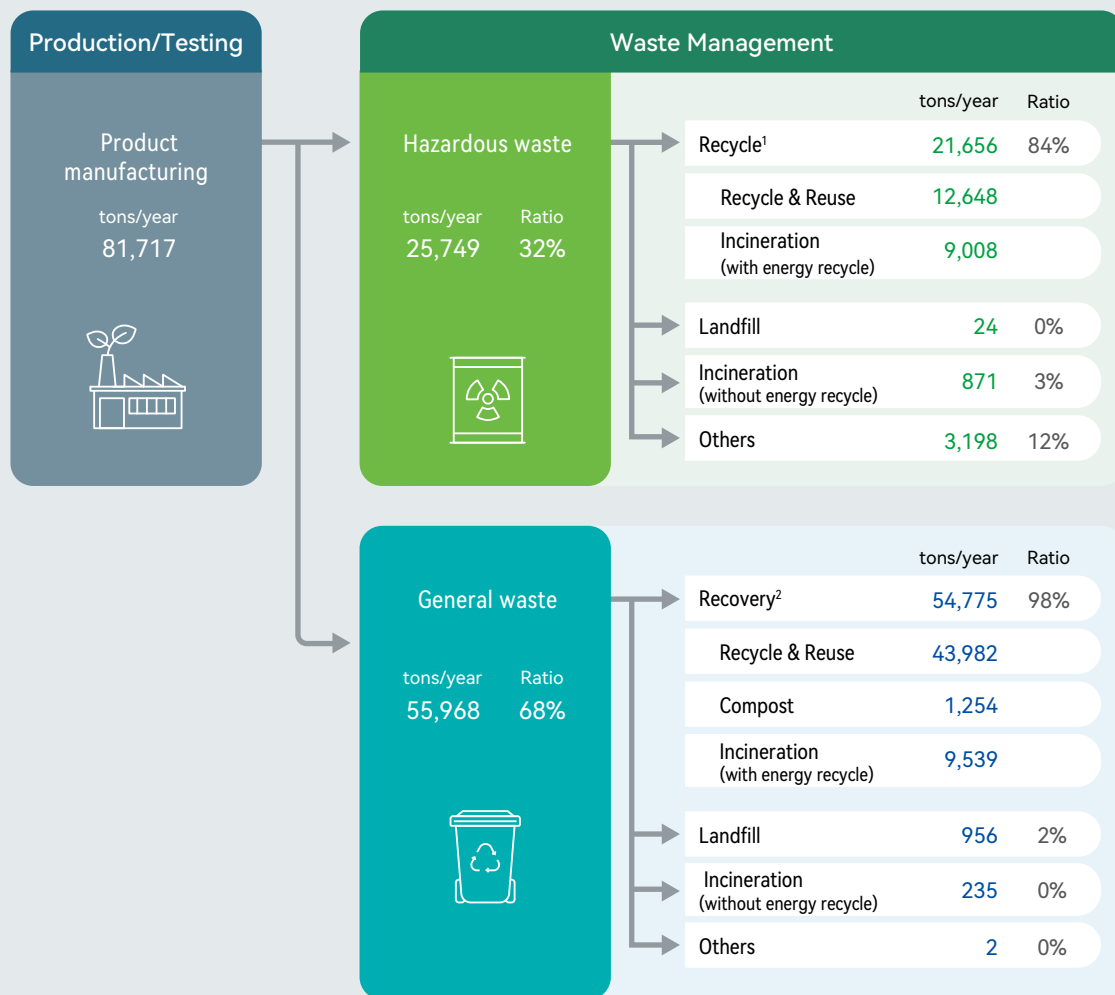
ASEH adopts source reduction measures and prioritizes the use of eco-friendly materials to minimize waste generation and reduce environmental pollution. In 2025, the hazardous waste intensity (hazardous waste generated per revenue) decreased by 52% compared with 2015, resulting in a 98% general and hazardous waste recycling rate which is a 1% increase from the previous year. We also provided employees with education and training on environmental issues, totaling approximately 10,450 training hours for 43,355 participants. This training initiative effectively boosts employees' awareness and understanding of waste reduction, enabling the company to integrate the ethos of waste reduction into its operations and achieving its ultimate goal of zero waste to landfill.

- At our facilities, local government regulations require a near-zero landfill rate for hazardous waste. As a result, less than 0.1% of non-hazardous waste is disposed of in landfills, representing a further reduction compared to the previous year.
- ASE Kaohsiung K21 has achieved UL 2799 Zero Waste to Landfill Platinum Level validation<sup>1</sup>.
- To ensure that waste removal is environmentally friendly and conducted responsibly, we have commissioned qualified local vendors to recycle and process 100% of the generated waste within the border. AI-based automatic monitoring of waste collection vehicle movements is being gradually implemented to ensure that waste handling does not impact the environment.

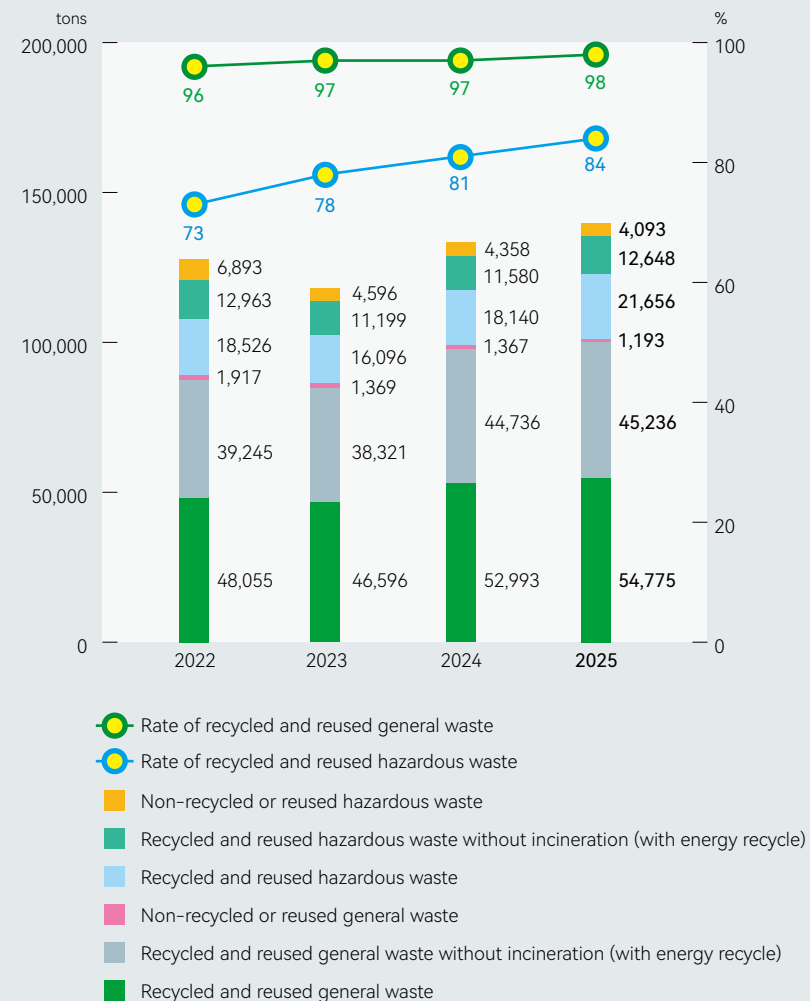


<sup>1</sup> Platinum Level validation : The highest designation; this claim is validated by UL Solutions when a facility can prove that it consistently achieves a landfill waste diversion rate of 100%

<sup>2</sup> The overall validity period of ISO 14001 certifications across the Company spans 2022 to 2028. As the certification issue and expiry dates vary by site, please refer to the Company's official website for detailed certification dates and validity periods:  
<https://www.aseglobal.com/ch/csr/green-transformation/environmental-management-system/>



### Waste Output and Recovery Rate



Description:

- (1) Rate of recycled general waste reached 98% > target recycling rate (90%)
- (2) Rate of recycled hazardous waste in 2025 (84%) was 81% higher than the previous year (3%)
- (3) Rate of recycling of hazardous waste (excluding incineration with recycled energy) was 15%
- (4) As a manufacturing company, all waste generated from our operations is entrusted to qualified and licensed waste collection and treatment contractors for proper handling in accordance with applicable regulations. Since our facilities do not operate any on-site waste treatment facilities, no on-site waste treatment data are available or disclosed

Description:

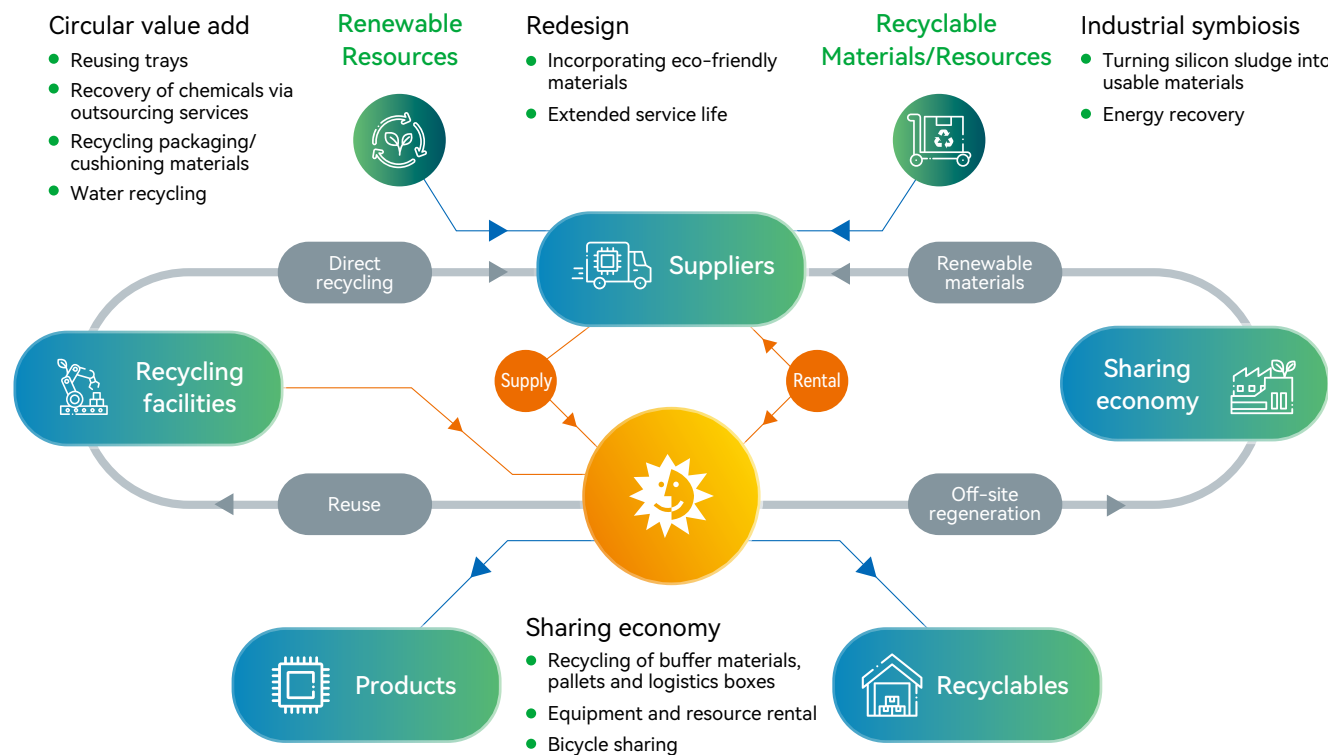
1. Recycled hazardous waste includes incineration (with energy recycle)
2. Recycled general waste includes compost and incineration (with energy recycle)



## Striving Toward a Circular Economy

We collaborate actively with suppliers and business partners across the industry chain to build a semiconductor circular economy through practical actions such as redesign, value-added circularity, recycling and recovery, shared economy, circular agriculture, and industrial symbiosis. In addition, we have formed alliances with organizations in our industry and from other sectors to examine the life cycles of resources and identify areas where resources can be reduced, recycled, and reused to prolong their lifespan, and maximize resource efficiency. In 2025, we spent approximately US\$ 1.7 million and launched a total of 39 circular economy projects, resulting in approximately US\$ 7.9 million cost saving, and the consumption of about 415,858 tons of resource material per year.

### Circular Economy Promotion Blueprint



### Non-hazardous Waste Project and Beneficial Result: 30

| Project Type                                                                      | Description                  | Total investment cost (US\$) | Total annual saving (US\$) | Total substance weight (ton/year) |
|-----------------------------------------------------------------------------------|------------------------------|------------------------------|----------------------------|-----------------------------------|
|  | Energy recycling             | 60,293                       | 2,393                      | 404                               |
|                                                                                   | Packaging material recycle   | 489,443                      | 84,162                     | 3,062                             |
|                                                                                   | Packaging material reduction | 309,053                      | 908,230                    | 717                               |
|                                                                                   | Packaging material reuse     | 438,988                      | 6,877,166                  | 391,869                           |
|                                                                                   | High-Value Material Recovery | 88,712                       | -                          | 11,524                            |
|                                                                                   | Other                        | -                            | -                          | 1,162                             |
| Total                                                                             |                              | 1,341,697                    | 7,871,951                  | 408,739                           |

### Hazardous Waste Project and Beneficial Result: 9

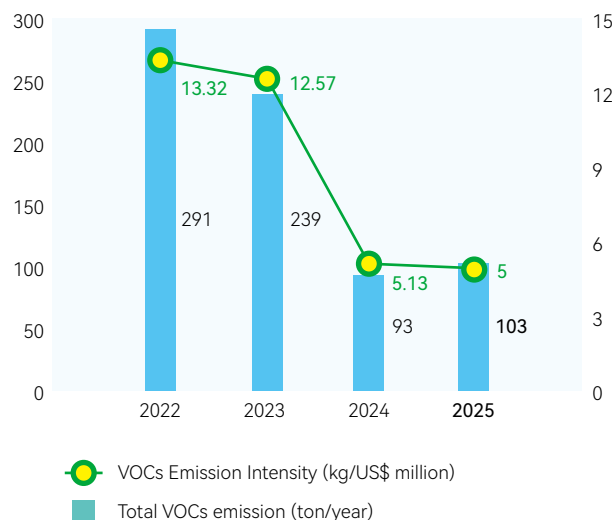
| Project Type                                                                        | Description                                 | Total investment cost (US\$) | Total annual saving (US\$) | Total substance weight (ton/year) |
|-------------------------------------------------------------------------------------|---------------------------------------------|------------------------------|----------------------------|-----------------------------------|
|  | Packaging material recycle                  | 64,201                       | 3,003                      | 1,184                             |
|                                                                                     | Metal-Bearing Waste Minimization & Recovery | 47,028                       | -                          | 5,162                             |
|                                                                                     | High-Value Material Recovery                | 190,062                      | 71,033                     | 773                               |
|                                                                                     | Total                                       | 301,291                      | 74,037                     | 7,119                             |

## 5.5 Air Emissions Control

### Air Emissions Control

Air pollutants emitted in 2025 include VOCs<sup>1</sup>, SO<sub>x</sub><sup>2</sup>, NO<sub>x</sub><sup>3</sup> and particulate pollutants<sup>4</sup>. We adopted the use of wet scrubbers, activated carbon adsorption equipment, condensation equipment, chemical scrubbing, biological scrubbing, UV photolysis, zeolite concentration rotor incineration systems, and other preventive equipment to manage process gases and control the concentration of air pollutant emissions.

VOCs Emission and Intensity



#### Operational Manufacturing



##### Source Management

- Replace existing high VOC concentration materials with clean, low/no VOC content materials
- Strengthen sealed negative pressure environments
- Academic collaborations to optimize treatment efficiency
- Optimization of Scrubber Performance and Operation
- Alternative Raw Material Strategies

#### Preventive Equipment



##### High-efficiency Treatment Equipment

- Wet scrubbers
- Activated carbon adsorption equipment
- Condensation equipment
- Chemical scrubbing
- UV photolysis oxidation
- Zeolite concentration rotor incineration

#### Emissions Monitoring



tons/year

|                                     |     |
|-------------------------------------|-----|
| VOCs                                | 103 |
| SO <sub>x</sub>                     | 30  |
| NO <sub>x</sub>                     | 54  |
| PM <sub>10</sub> /PM <sub>2.5</sub> | 28  |
| Ozone depleting substances          | -   |

<sup>1</sup> VOCs are calculated using public coefficients, and are either directly measured or calculated using mass balance.

<sup>2</sup> SO<sub>x</sub> are calculated using public coefficients, and are either directly measured or calculated using mass balance.

<sup>3</sup> NO<sub>x</sub> are calculated using public coefficients, and are either directly measured or calculated using mass balance.

<sup>4</sup> Particulate pollutants are calculated using public coefficients or calculated using mass balance.

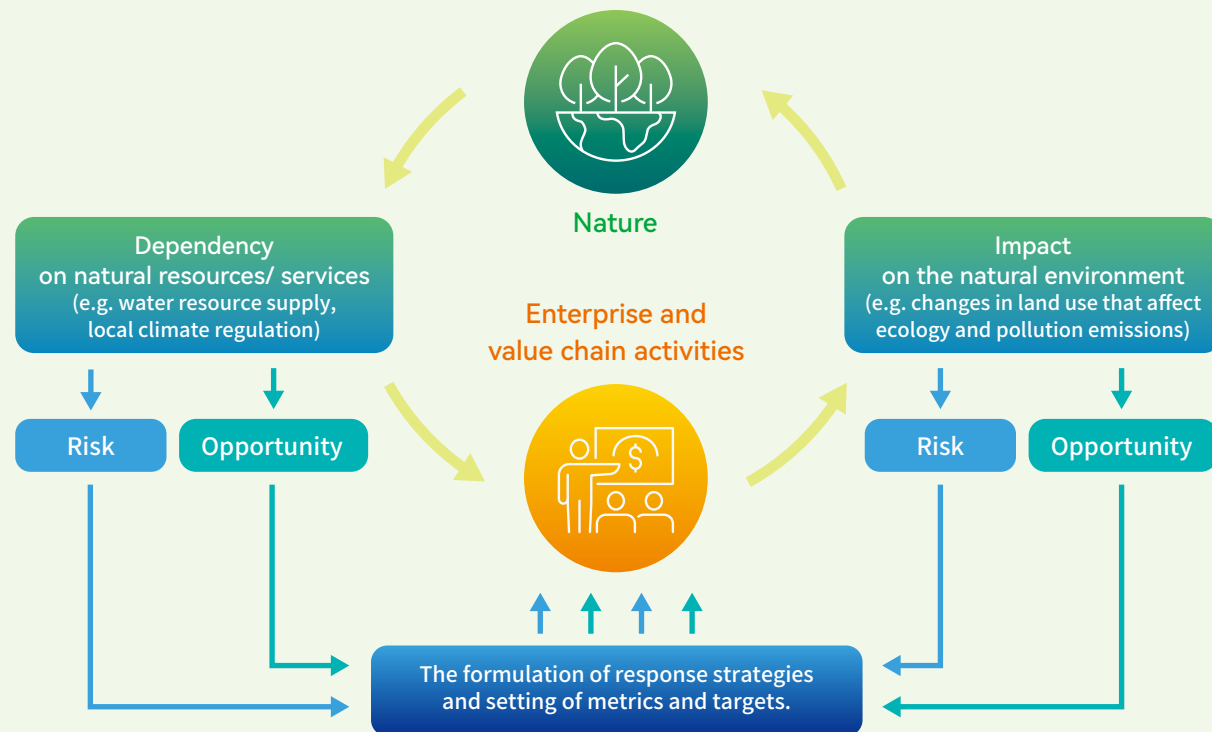


## 5.6 Biodiversity

### Risk assessment

ASEH have adopted the TNFD-LEAP guidance for nature-related issues. The steps involved using data collected to locate the interface between our subsidiaries' global locations with biodiversity-sensitive areas (Locate). Next, we evaluate the dependencies and impacts of our subsidiaries' operational activities on nature (Evaluate) and, analyze corresponding risks and opportunities based on dependencies and impact pathways. Key risks and opportunities are properly assessed (Assess) and response strategies, monitoring indicators and management objectives are devised for priority risks and opportunities. Lastly, we continuously improve on our preparation to respond to nature-related risks and opportunities, and to publicly report on the company's material nature-related issues (Prepare).

#### Dependency, impact, risk, opportunity pathway



| LEAP                                                                                                                                                                   | Response Measures                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>L</b> <br><b>Locate:</b><br>Identify biodiversity-sensitive areas                | A location-specific assessment was conducted for operational sites and suppliers by integrating the World Database on Protected Areas (WDPA) and Taiwan biodiversity mapping data. This assessment identified the connectivity and proximity of 100% of global sites to surrounding ecosystems within a 2-km radius and evaluated their potential impacts on biodiversity <sup>1</sup> . |
| <b>E</b> <br><b>Evaluate:</b><br>Assess dependencies and impacts                    | We designed a questionnaire based on relevance and impact levels to evaluate the ecosystem services that our 28 global manufacturing sites and value chain rely on, as well as the potential nature-related impacts from these operations <sup>2</sup> .                                                                                                                                 |
| <b>A</b> <br><b>Assess:</b><br>Evaluate nature-related risks and opportunities      | We conducted pathway analyses on the top five dependencies and impacts in relation to current site operations, identifying associated nature-related risks and opportunities.                                                                                                                                                                                                            |
| <b>P</b> <br><b>Prepare:</b><br>Develop response strategies and implement actions | Based on the ecological conditions of each site, ASEH is developing tailored response strategies and rolling out phased action plans to mitigate ecological impacts.                                                                                                                                                                                                                     |

<sup>1</sup> For a detailed analysis, please refer to <https://www.aseglobal.com/ch/csr/green-transformation/biodiversity/>

<sup>2</sup> For a detailed analysis, please refer to <https://www.aseglobal.com/ch/csr/green-transformation/biodiversity/>

## Risks, and Opportunities and Response Strategies

To address issues concerning significant dependencies and impacts on nature, we have identified and assessed the potential impact of relevant risks and opportunities on our financial and business operation, as well as formulated corresponding response strategies. We are continuously implementing risk mitigation measures and actively leveraging nature-related opportunities to improve operational performance and reducing our environmental impact. Our goal is to co-exist in harmony with nature and create a sustainable future for all.

| Dependencies on Nature |             | Risks                                                                                                                                                                        |                                                                                                | Opportunities                                                                                                                                       |                                                                                                                                                                                               | Response Strategies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Item                   | Description | Description                                                                                                                                                                  | Financial Impact                                                                               | Description                                                                                                                                         | Financial Impact                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Dependency             | 1           | Natural hazard regulation <sup>1</sup> reduces the impact of heavy rains, floods, and extreme climate events on manufacturing sites and operating activities.                | A decline in natural regulation reduces inherent water storage and flood mitigation functions. | Short-term: equipment damage, production disruption, material loss, and higher disaster recovery costs.                                             | Maintaining and enhancing natural ecosystem functions can strengthen nature's flood control, soil and water conservation capabilities, thereby reducing the impact of extreme climate events. | <ul style="list-style-type: none"> <li>Assess flood-related and extreme climate risks of manufacturing sites.</li> <li>Maintain green spaces, water areas, and natural buffer zones near manufacturing sites.</li> <li>Promote the improvement of rainwater conservation and flood mitigation capabilities.</li> <li>Integrate regional ecological conservation and structural disaster prevention measures.</li> <li>Establish extreme climate early warning and business continuity management mechanisms.</li> </ul> |
|                        |             |                                                                                                                                                                              |                                                                                                | Medium- to long-term: higher capex outlay for flood control, drainage, and climate adaptation, higher insurance costs and risk management expenses. | Medium- to long-term: lower risk of operational disruptions, higher resilience and asset protection capabilities.                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | 2           | Production processes consume high volumes of water resources and depend on the natural environment for a stable and sufficient supply of fresh water to maintain operations. | Regional water supply is unstable.                                                             | Short-term: increased water consumption costs, water management and contingency planning expenses.                                                  | Increasing water efficiency, water recycling rates and reclaimed water usage enhance the resilience and reduce dependence on freshwater resources.                                            | <ul style="list-style-type: none"> <li>Reduce per unit (product) water consumption.</li> <li>Promote water conservation and water efficiency in manufacturing processes.</li> <li>Increase the use of recycled and reclaimed water.</li> <li>Establish water risk assessment and management mechanisms.</li> <li>Continuously monitor water intake and water consumption efficiency.</li> </ul>                                                                                                                         |
|                        |             |                                                                                                                                                                              |                                                                                                | Medium- to long-term: production adjustments and disruptions due to water shortages.                                                                | Medium- to long-term: lower operational risks caused by water shortages.                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                        | 3           | We depend on the natural ecosystems to regulate the microclimate, reducing the urban heat island effect through canopy shading, evapotranspiration and cooling functions.    | High temperatures increase operational load.                                                   | Short-term: increased energy consumption from air conditioning and cooling systems.                                                                 | Enhancing natural microclimate.                                                                                                                                                               | <ul style="list-style-type: none"> <li>Expand greening policies, increase green coverage and plant more trees across manufacturing sites.</li> <li>Strengthen energy efficiency and cooling system management.</li> <li>Monitor high-temperature risks and site-wide microclimate changes.</li> </ul>                                                                                                                                                                                                                   |
|                        |             |                                                                                                                                                                              |                                                                                                | Medium- to long-term: capex outlay related to climate adaptation.                                                                                   | Medium- to long-term: climate resilience and operational sustainability.                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

<sup>1</sup> This includes rainwater harvesting, flood peak attenuation, soil and water conservation, and disaster buffering functions provided by forest, wetland, river, and soil ecosystems

| Impact on Nature |             | Risks                                                                                                                                                                                          |                                                                                                                  | Opportunities                                                                                                                |                                                                                                                     | Response Strategy                                                                                                                                                                                                                                                                                                                                                       |
|------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Item             | Description | Description                                                                                                                                                                                    | Financial Impact                                                                                                 | Description                                                                                                                  | Financial Impact                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                         |
| Impact           | 1           | Improper waste disposal may pollute soil, water bodies and ecosystems, affecting ecological functions and the quality of the natural environment.                                              | Increased pressure on the natural environment.                                                                   | Enhancing waste recycling rate/ waste-to-resource conversion/ circular re-use.                                               | Short-term: increased value of recycled resources.                                                                  | <ul style="list-style-type: none"> <li>Implement waste sorting management.</li> <li>Establish waste tracking and management mechanisms.</li> <li>Engage government-approved waste disposal organizations with resource recovery capabilities.</li> <li>Increase waste recycling and waste-to-resource rates.</li> <li>Implement circular economy strategies.</li> </ul> |
|                  |             |                                                                                                                                                                                                |                                                                                                                  |                                                                                                                              | Medium- to long-term: enhanced customer trust and increased opportunities for sustainable supply chain cooperation. |                                                                                                                                                                                                                                                                                                                                                                         |
|                  | 2           | Using water resources during operations may increase pressure on regional water resources and impact the watershed's hydrological environment and ecosystem.                                   | Competition for regional water resources may intensify.                                                          | Reducing per unit (product) water consumption, improving water recycling efficiency, engaging in water conservation efforts. | Short-term: lower water consumption and management costs.                                                           | <ul style="list-style-type: none"> <li>Ramp up efforts to recycle and reuse process water.</li> <li>Strengthen wastewater treatment and discharge management.</li> <li>Engage in watershed conservation and collaborations.</li> </ul>                                                                                                                                  |
|                  |             |                                                                                                                                                                                                |                                                                                                                  |                                                                                                                              | Medium- to long-term: higher enterprise water resilience and supply chain competitiveness.                          |                                                                                                                                                                                                                                                                                                                                                                         |
|                  | 3           | Indirect energy supplied to run our operations includes the use of fossil fuel and generates greenhouse gas emissions, increasing the impact to the natural environment and climate ecosystem. | Escalating climate change-related risks and the transition to low-carbon energy increase pressure on operations. | Commitment to afforestation/ forest maintenance reduces greenhouse gas emissions and increases biodiversity.                 | Short-term: use of renewable energy.                                                                                | <ul style="list-style-type: none"> <li>Expand the use of renewable energy to reduce impacts on the natural environment.</li> <li>Focus on regional afforestation and maintenance.</li> </ul>                                                                                                                                                                            |
|                  |             |                                                                                                                                                                                                |                                                                                                                  |                                                                                                                              | Medium- to long-term: increase collaboration opportunities to build low-carbon products and green supply chains.    |                                                                                                                                                                                                                                                                                                                                                                         |



## Protection of Biodiversity

ASEH incorporates a mitigation hierarchy with specific actions to address environmental and biodiversity loss. Avoid actions are measures taken to prevent ecological damage, habitat disturbance and pollution emissions throughout the planning, design, and operation phases in the organization. For impacts that cannot be completely avoided, we aim to reduce them through process improvements, pollution control, resource recycling and efficiency enhancement, among other methods. For environmental impacts that have already occurred, we promote habitat restoration, vegetation recovery and ecological improvement initiatives to facilitate the restoration/regeneration of the natural environment. For residual impacts that cannot be eliminated, we adopt appropriate compensation measures in accordance with the mitigation hierarchy principles. Additionally, we continue to advance the transformation of our business models, supply chain management, products and services to mitigate nature-related risks, enhance nature positive value, and strive toward sustainable coexistence between humans and nature.

In collaboration with the ASE Environmental Protection and Sustainability Foundation, the company has actively invested in biodiversity-related projects. We are also working closely with the industry, government and academic sectors to integrate smart technology into ecological conservation efforts. These initiatives help to restore terrestrial, stream, and marine ecosystems, expand biodiversity conservation impacts, enhance ecosystem resilience that ensures biodiversity and climate resilience. As a semiconductor market leader, we are making meaningful contributions toward a nature positive goal and creating a more sustainable ecosystem.

### The ASE Conservation and Restoration Project for Taiwan's Native and Western Honeybee



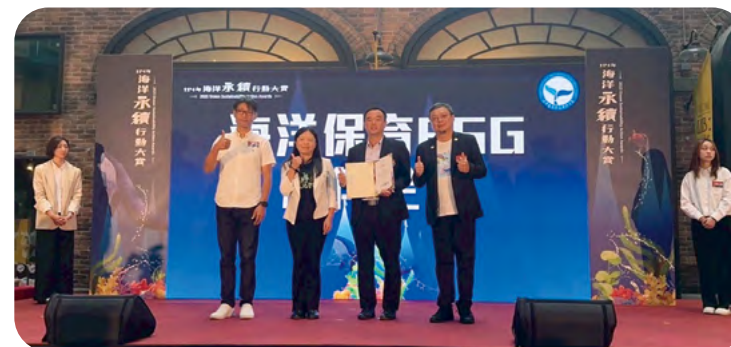
Honeybees play an important role in sustaining biodiversity and agriculture. In recent years, factors such as habitat fragmentation, climate change, pathogens, and anthropogenic management have contributed to a decline in the honeybee population. To strengthen Taiwan's resources for bee conservation and biodiversity resilience, we partnered with academic teams to conduct ecological surveys, disease monitoring, and restoration research on Taiwan's native and western honeybees, promote sustainable beekeeping and habitat environment, advance environmental education, and maintain the health of Taiwan's native bees and their role in ecosystem pollination.

- Providing scientific conservation data for beekeepers and respective agencies to increase efficiency in bee management and disease prevention.
- Building pollinator gardens, restoring native bee habitats, advancing conservation education, and engaging in interdisciplinary collaboration to enhance public awareness and encourage greater involvement in conservation efforts.

### ASE Guardians of the Sea: Operation COTS (Crown-of-Thorns Starfish) Removal

Crown-of-thorns starfish (COTS) are a natural predator of corals. When COTS proliferate in large numbers, they rapidly consume living corals, causing a decline in coral cover and consequently impacting fish habitats, biodiversity, and the overall marine ecological balance. To mitigate the impact of COTS on coral reefs, we launched "Operation COTS Removal" in Penghu Qimei, in partnership with the Ocean Citizens Foundation to protect marine biodiversity and enhance the resilience of marine ecosystems.

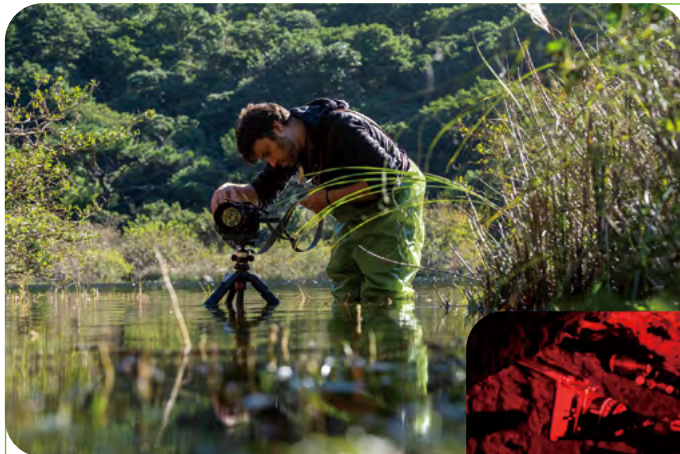
- Setting up an ecological survey team and recruiting volunteers to conduct hotspot surveys and monitoring, and engaging professional ecological divers to carry out removal operations at specific locations to suppress COTS outbreaks and mitigate their harm to coral reef ecosystems.
- Coordinating resources from the government, academic institutions, non-profit organizations and business organizations to integrate marine ecological surveys, volunteer training, and environmental education, and enhance public awareness on the importance of marine conservation and coral reef ecosystems, thereby amplifying impact on ocean sustainability.



### Huangqian Creek Ecological Diversity Restoration Project

The Huangqian Creek Ecological Diversity Restoration Project, a collaboration with a research team from the National Taiwan University, is part of our conservation efforts of local creek ecosystems. The project integrated a range of conservation efforts including habitat improvement, ecological surveys, water quality monitoring, and environmental education, to create a conserved and resilient stream ecosystem that promotes harmonious coexistence between humans and nature.

- Incorporating IoT-based smart monitoring technology for real time collection of critical environmental data such as water temperature, pH, dissolved oxygen, and conductivity. Using these data to build a long-term aquatic environment database. Adopting scientific approaches to monitor and determine stream ecological changes to enhance habitat management and restoration strategies, raising accuracy and efficiency of ecological conservation efforts.
- Promoting stream habitat improvement, biodiversity surveys, and community participation through continuous monitoring of population changes in fish, aquatic insects, and other bioindicators. Gradually restoring the natural ecological functions of streams to enhance aquatic biodiversity and ecosystem resilience, and reinforcing public awareness on the importance of stream conservation and sustainable aquatic environments through environmental education and citizen participation.



### Wild Taipei, a Documentary Film

To raise public awareness of urban biodiversity, we supported the production of the documentary film, Wild Taipei, which documented the lives of precious wildlife animals coexisting with humans in the densely populated city of Taipei. The documentary unveils the hidden lives of native wildlife animals adapting to the urban environment. Cities are not merely spaces for human activity but also vital wildlife habitats if green spaces and ecological corridors are properly maintained. Sharing these stories with audiences in Taiwan and around the world help to foster public understanding of the close connection between humans and nature, and in turn inspire greater biodiversity conservation efforts.

The production team used advanced telephoto lenses and remote photography systems to film precious footage without disturbing wildlife. Through years of patient observation and collaboration with various scientific agencies, the team was able to record the lives of animals in the wild, capturing behaviors and scenes previously undocumented and amassing crucial data for local ecological research.

This initiative is part of ASEH's continuous commitment to environmental education and conservation awareness. The documentary feature will allow more people to learn that protecting biodiversity begins with the care and understanding of their living environment.

## 5.7 Environmental Expenditures and Investments

ASEH adopted the "Industry Guidelines for Environmental Accounting" published by Environmental Protection Administration of Taiwan. We combined our existing accounting systems with environmental control coding to classify our environmental expenditures into categories in accordance with the nature of costs incurred. Our environmental expenditure is calculated and analyzed quarterly to ensure data accuracy and facilitate effective assessment.

### Environmental Costs

ASEH's total environmental costs for 2025 amounted to US\$ 302.5 million, with capital expenditure and expense accounting for 61.44% and 38.56% respectively.

Unit: US\$ million

| Category                                    |                           | Description                                                                                                                                                                           | 2022                |                    | 2023                |                    | 2024                |                    | 2025                |                    |
|---------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|---------------------|--------------------|
|                                             |                           |                                                                                                                                                                                       | Capital Investments | Operating Expenses | Capital Investments | Operating Expenses | Capital Investments | Operating Expenses | Capital Investments | Operating Expenses |
| Operating Cost                              | Pollution Prevention Cost | Air, water, other pollution prevention, etc.                                                                                                                                          | 22                  | 73.9               | 41.7                | 22                 | 73.9                | 20.9               | 177.95              | 27.62              |
|                                             | Resource Circulation Cost | Efficient utilization of resources, waste reducing, recycling, and disposal, etc.                                                                                                     | 39.5                | 7.5                | 16.2                | 39.5               | 7.5                 | 29.3               | 7.30                | 57.99              |
| Upstream/Downstream Cost                    |                           | Green procurement, recycling of used products, etc.                                                                                                                                   | 3.4                 | 7.1                | 0.1                 | 3.4                | 7.1                 | 2.0                | 0.22                | 16.17              |
| Administration Cost                         |                           | Manpower engaged in environmental improvement activities and environmental education, acquisition of external environment licenses/certification, government environmental fees, etc. | 0.5                 | 11.5               | 0.2                 | 0.5                | 11.5                | 11.3               | 0.39                | 14.67              |
| Social Activity Cost                        |                           | Donations to, and support for, environmental groups or activities, etc.                                                                                                               | -                   | 4.0                | -                   | -                  | 4.0                 | 3.6                | -                   | 0.15               |
| Environmental Remediation Cost <sup>1</sup> |                           | Pollution remediation, insurance fees, environmental fines <sup>2</sup> , and litigation costs, etc.                                                                                  | -                   | 0.0002             | -                   | -                  | 0.0002              | 0.01               | -                   | 0.01               |
| Others                                      |                           | Global environmental conservation cost and cost to develop products to curtail environmental impact at the product manufacturing stage, etc.                                          | -                   | 0.1                | -                   | -                  | 0.1                 | 0.03               | -                   | 0.03               |
| Total                                       |                           |                                                                                                                                                                                       | 41.3                | 61.8               | 84.2                | 81.8               | 61.8                | 84.2               | 185.86              | 116.64             |

<sup>1</sup> Environmental Remediation Cost: Environmental liability insurance premiums incurred by ASE Shanghai (Material) and USI Vietnam, as well as non-major environmental fines (less than US\$10,000 per case) incurred at ASE Chungli and USI Nantou

<sup>2</sup> For the year 2025, we were not subjected to any major financial penalties of greater than US\$10,000, or non-financial penalties such as facility shutdown or litigation records. For more details, please refer to Appendix: Environmental Data- F. Environmental Violations

## Environmental Benefits

ASEH records environmental benefits generated from activities that reduce impacts on the environment. Our total environmental benefits for 2025 amounted to US\$97.25 million.

Our estimated environmental capital expenditures for 2026 will be approximately US\$31.14 million. The board of directors has resolved in 2025 to contribute around US\$3.7 million (NT\$100.0 million) through the ASE Environmental Protection and Sustainability Foundation to fund various environmental projects in 2026.

Unit: US\$ million

| Category     | Description                                                           | 2022                   |                   | 2023                   |                   | 2024                   |                   | 2025                       |                   |
|--------------|-----------------------------------------------------------------------|------------------------|-------------------|------------------------|-------------------|------------------------|-------------------|----------------------------|-------------------|
|              |                                                                       | Environmental Benefits | Economic Benefits | Environmental Benefits | Economic Benefits | Environmental Benefits | Economic Benefits | Environmental Benefits     | Economic Benefits |
| Cost Savings | Reduction in costs due to energy saving and carbon reduction projects | 938,236 MWh            | 50.1              | 1,022,276 MWh          | 60.38             | 1,050,966 MWh          | 49.26             | 1,366,560 <sup>1</sup> MWh | 55.25             |
|              | Reduction in water costs due to water saving projects                 | 45,880,154 metric tons | 19.3              | 47,214,933 metric tons | 18.81             | 48,035,891 metric tons | 22.51             | 50,316,518 metric tons     | 24.71             |
|              | Reduction in waste disposal costs due to waste recycling              | 52,207 metric tons     | 13.5              | 49,520 metric tons     | 11.32             | 56,315 metric tons     | 12.54             | 57,884 metric tons         | 17.29             |
| Total        |                                                                       | -                      | 82.9              | -                      | 90.5              | -                      | 84.3              | -                          | 97.25             |

## Sustainable Financing

At ASEH, sustainable financing serves as a strategic catalyst to advance our low-carbon ambition and accelerate business transformation in response to climate change. To demonstrate this commitment, we have concurrently issued two Green Bonds, structured sustainability-linked Loans, and in 2025, signed a sustainability-linked syndicated loan that directly ties our financial terms to the three key ESG dimensions. By directing green capital into initiatives such as energy efficiency improvements, circular resource utilization, and sustainable supply chain development, we aim to strengthen our sustainability performance while collaborating closely with suppliers to embed sustainable practices across the value chain. Going forward, we will continue to assess and pursue green investment opportunities that help drive the global value chain toward a low-carbon, sustainable future.

- **2014:** Advanced Semiconductor Engineering, Inc. issued a 3-year Green Bond with a total value of US\$300 million via indirect shareholding of its subsidiary, Anstock II Limited.
- **2019:** ASEH issued Green Bonds with 3 year (type A) and 5 year (type B) terms respectively at a total value of US\$300 million.
- **2021 to present:** ASEH entered into Sustainability-linked Loans with multiple banks.
- **2025:** ASEH signed a NT\$50 billion Sustainability-Linked Syndicated Loan with 17 financial institutions.

<sup>1</sup> The reduction in electricity by using renewable energy and purchasing I-REC is included