








2023 Winbond UN SDGs Action Report


winbond

We Deliver



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A Message from the Chairman

Winbond is an innovative tech company committed to improving the quality of life for all humanity through technology while ensuring a sustainable Earth. At Winbond, we take an active stance in incorporating corporate social responsibility and sustainability initiatives into our daily operations in accordance with the United Nations Sustainable Development Goals (UN SDGs) and Taiwan Sustainable Development Goals (Taiwan SDGs). To declare our commitment to sustainability through our ESG vision, strategies, and action plans, we are launching our very first UN SDGs Action Report.

Winbond's vision is to "be a hidden champion in providing sustainable semiconductors to enrich human life." After selecting 10 of the UN SDGs as our sustainable development goals and utilizing the three aspects of ESG (environment, society, and governance) as a framework, we made the decision to pursue 21 sustainability goals across 5 major strategies: green product, sustainable supply chain, environmental sustainability, human rights and social inclusion, and corporate governance. In 2023 alone, we launched 14 ESG initiatives that will help us fulfill our long-term commitment to sustainability.

Only when the world is sustainable can a business be truly sustainable. In a similar vein, only when our employees act in sustainable manner can we pass on our sustainable values. Therefore, we are committed to developing green products in a responsible manner and to fostering a workplace that is conducive to life-long learning.

As humans, we will continue explore the endless possibilities that technology will bring in the future, but at Winbond, we will also continue to put our vision of sustainability into practice and work with our partners to realize a better and richer life for all.

"Winbond is an innovative tech company committed to improving the quality of life for all humanity through technology while ensuring a sustainable Earth."



—Arthur Yu-Cheng Chiao
Chairman, Winbond Electronics Corporation





Sustainable
Development Goals

In 2015, the United Nations unveiled the '2030 Sustainable Development Goals' (SDGs), which include 17 goals such as eradicating poverty, mitigating climate change, and promoting gender equality. These goals are meant to guide the actions of governments, local governments, businesses, and civic society over the next 15 years in decision-making, investment, and initiatives. The aim is to create a world where every country achieves lasting, inclusive, and sustainable economic growth, and where everyone has decent work. This world will sustainably manage natural resources, from air to land, from rivers, lakes, and groundwater to oceans. At that time, 193 countries agreed to work towards achieving the 17 SDGs by 2030.

United Nations 17 Sustainable Development Goals

SDG 1 No Poverty: End poverty in all its forms everywhere.

SDG 2 Zero Hunger: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture.

SDG 3 Good Health and Well-Being: Ensure healthy lives and promote well-being for all at all ages.

SDG 4 Quality education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

SDG 5 Gender equality: Achieve gender equality and empower all women and girls.

SDG 6 Clean water and sanitation: Ensure availability and sustainable management of water and sanitation for all.

SDG 7 Affordable and clean energy: Ensure access to affordable, reliable, sustainable and modern energy for all.

SDG 8 Decent work and economic growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

SDG 9 Industry, Innovation and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation.

SDG 10 Reduced inequality: Reduce inequality within and among countries.

SDG 11 Sustainable cities and communities: Make cities and human settlements inclusive, safe, resilient, and sustainable.

SDG 12 Responsible consumption and production: Ensure sustainable consumption and production patterns.

SDG 13 Climate action: Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy.

SDG 14 Life below water: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

SDG 15 Life on land: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

SDG 16 Peace, justice and strong institutions: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.

SDG 17 Partnerships for the goals: Strengthen the means of implementation and revitalize the global partnership for sustainable development.



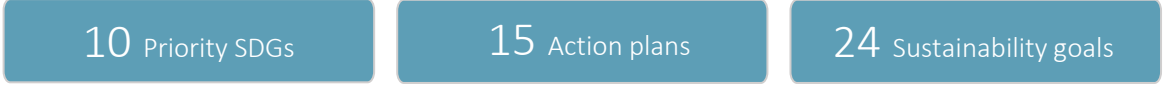
UN SDGs and Disclosures

Based on *Integrating the SDGs into Corporate Reporting: A Practical Guide* issued jointly by the Global Reporting Initiative (GRI) and the United Nations, **Winbond has identified 10 SDGs that are closely related to its operations through 3 stages and 9 steps.** These 10 SDGs now serve as the basis for verifying Winbond’s sustainable development goals and implementing our sustainability initiatives.

In the first stage, we identified the SDGs that are most important to our operations. Then, we evaluated our performance in order to set our sustainability goals, which we incorporated into our sustainability action plans. We will continue to review the implementation of these action plans in the future.

We set 24 sustainability goals corresponding to 10 priority SDGs: SDG 3 (good health and well-being), SDG 4 (quality education), SDG 6 (clean water and sanitation), SDG 7 (affordable and clean energy), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation and infrastructure), SDG 12 (responsible consumption and production), SDG 13 (climate action), SDG 15 (life on land), and SDG 17 (partnerships for the goals). To reach these goals and do our share as a responsible business, we launched 15 sustainability initiatives in 2023. Furthermore, by expressly delineating our sustainability goals, we are taking a step closer to our SDG promise and amplifying our positive impact on society.

- Winbond’s SDG Identification Process -



Stage 1: Identifying priority SDGs targets

10 Priority SDGs

1. Understanding the SDGs and their target
2. Conducting principled prioritization of SDG targets
3. Defining the SDG-related report content



Stage 2: Evaluating and Analysis the performance

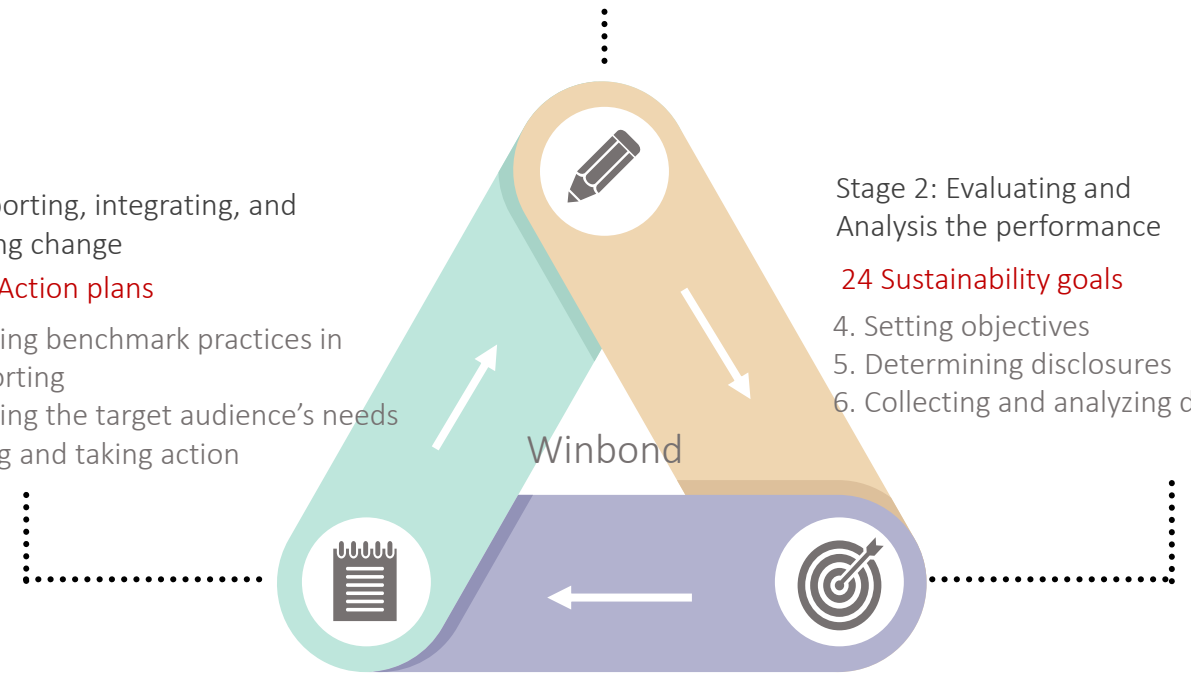
24 Sustainability goals

4. Setting objectives
5. Determining disclosures
6. Collecting and analyzing data

Stage 3: Reporting, integrating, and Implementing change

15 Action plans

7. Considering benchmark practices in SDG reporting
8. Considering the target audience’s needs
9. Reporting and taking action





Winbond's Sustainable Governance

With integrity, dedication, and a drive for innovation, Winbond seeks to enhance its corporate value by staying on top of international trends, giving back to society, and responding to the expectations of our stakeholders. With the UN SDGs and the three aspects of ESG (environment, society, and governance) as a framework, we are implementing our sustainability action plans through five major strategies—green product, a sustainable supply chain, environmental sustainability, human rights and social inclusion, and corporate governance. We hope that by leveraging our core competencies, employees, processes, and technologies, we can build a more sustainable future.



Winbond's Sustainable Spirit

To achieve Winbond's sustainability vision, we formulated five major sustainability strategies which correspond to 10 priority UN SDGs.

Environmental Sustainability



- Objectives: Improving energy efficiency; achieving net-zero
- Corresponding SDGs: SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 15 (Life on Land)

Green Product



- Objective: Developing safe, efficient, and low-energy green products continuously
- Corresponding SDGs: SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action)

Corporate Governance



- Objectives: Enhancing corporate governance functions and realize sustainable value
- Corresponding SDGs: SDG 8 (Decent Work and Economic Growth), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals)

Sustainable Supply Chain

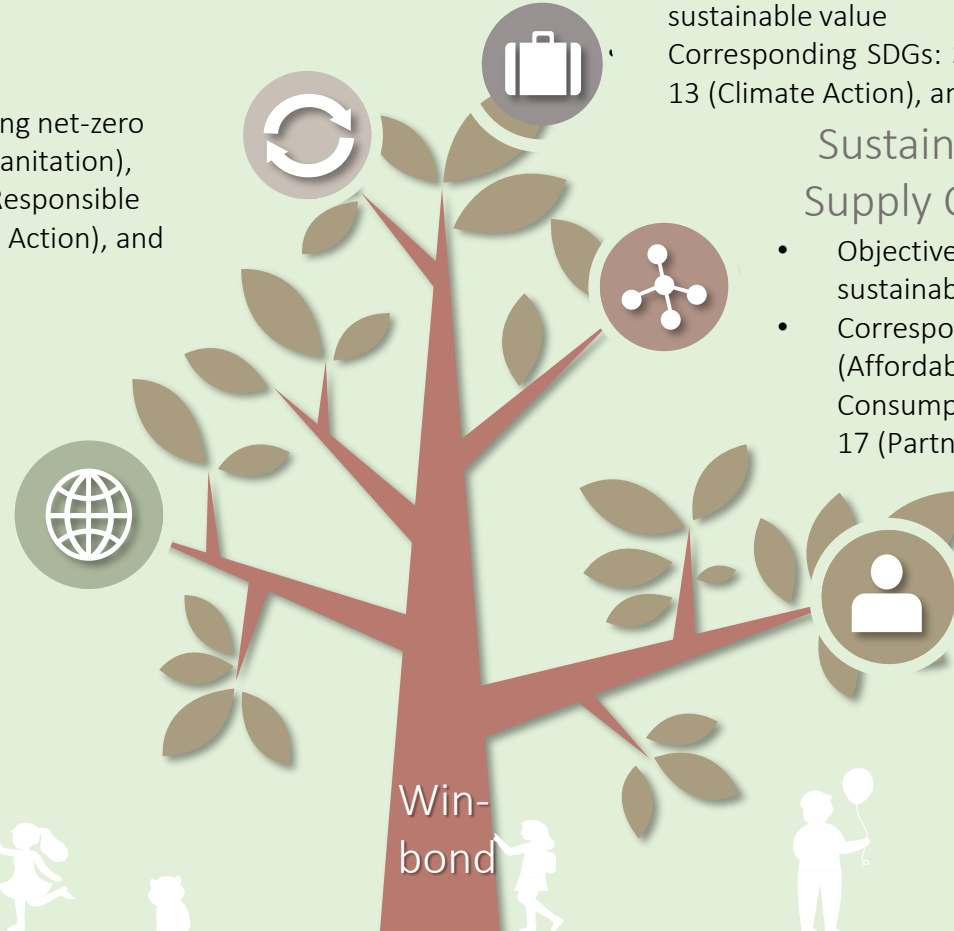


- Objective: Strengthen supply chain collaboration and enhancing sustainable competitiveness
- Corresponding SDGs: SDG 6 (Clean Water and Sanitation), SDG 7 (Affordable and Clean Energy), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 17 (Partnerships for the Goals)

Human Rights and Social Inclusion



- Objectives: Cultivating talent, encourage innovation, and creating a friendly and harmonious workplace
- Corresponding SDGs: SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 17 (Partnerships for the Goals)























Win-
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Winbond's Priority UN SDGs

Winbond's Sustainability Strategies	Material Issues	Upstream ¹	Operations ²	Downstream ³	Corresponding UN SDGs
		Procurement	Design/Assembly	Testing/Clients	
Corporate Governance	Business integrity and corporate governance		v		
	Risk management	v	v	v	 
	Regulatory compliance	v	v	v	
	Productivity and business performance		v		
Green Product	Green product		v		 
	Research, development and innovation		v		
Environmental Sustainability	Energy and Greenhouse Gas management	v	v	v	    
Sustainable Supply Chain	Supply chain management	v			    
Human Rights and Social Inclusion	Talent management	v	v	v	   

Notes: 1. Upstream: Procurement of materials and equipment 2. Operations: Product design, assembly, and marketing 3. Downstream: Packaging, testing, and client-side activities



SDG 3 Good Health and Well-Being

Winbond supports “Ensure healthy lives and promote well-being for all at all ages”

1

Target

Target 3.8: Achieve universal health coverage

“Achieve universal health coverage including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all.”

2

Sustainability Action Plans/Goals

1. Employee health management

- ① > 1,000 employees benefit from health promotion programs
- ② > 1,000 employees receive free vaccines

2. Childbirth encouraging

- ① NT\$6,000 monthly employee childcare stipend (until child reaches the age of 4)
- ② Pregnant Employee Care Program coverage: 100%

3

Achievements in 2023

- Sports promotion campaigns: Total 30,476 employees participated (10,362,995 Kcal burned)
- Free flue shots: Total 1,773 employees received
- Childcare Allowance: Provided NT\$6,000 monthly stipend (total disbursed over NT\$ 330 million between 2011 and 2023)





Highlights

Leading the industry in providing childcare allowances to employees, with a monthly subsidy of NT\$6,000

Winbond firmly believes in creating a workplace environment that supports parenting resources, while also responding to the government’s encouragement of childbirth, effectively mitigating the risk of declining birth rates, and ensuring that every child receives good care and development. To this end, Winbond provides employees with a “Childcare Allowance” of NT\$6,000 per month, subsidized until the age of 4, to provide financial assistance to parents in childcare, further enhancing employees’ happiness and job satisfaction, and significantly improving the return rate of employees on parental leave. This policy reflects our care and support for employees’ families. Such care not only contributes to the personal growth of employees but also promotes the long-term development of Winbond. Winbond is committed to creating a friendly and supportive work environment, allowing every employee to achieve a balance between career and family, and achieve a higher quality of life. We will continue to work hard to introduce more welfare measures that benefit employees and their families, achieving a win-win goal.

Father of 6 Kids

Employee Testimonial “During my 16 years at Winbond, I have gone from being single to getting married and having children. I now have six lovely children, five boys and one girl. I am very grateful for Winbond’s various policies that support employees in achieving a balance between work and family. LOHAS leave and flexible working hours provide more time to spend with our children. The reasonable leave and proxy system also allow us to focus on our children when we are at home. The maternity subsidy provided quarterly for four years greatly alleviates the financial pressure of raising children, making us truly feel that the company values employees’ families and life attitudes. It is genuine and not just a slogan.”



From the implementation in 2011 to the end of 2023, a total of 1,847 children of employees have benefited from this program, with a cumulative disbursement of NT\$ 331,974,559



4 QUALITY
EDUCATION



SDG 4 Quality Education

“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”

1

Targets

Target 4.4: Increase the number of people with relevant skills for financial success

“By 2030, substantially increase in the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship”

Target 4.5: Eliminate all discrimination in education

“By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations”

2

Sustainability Action Plans/Goals

1. Youth education

- ① Investing NT\$10 million in cultivating semiconductor talent

2. Educational resources for the disadvantaged

- ① Annual scholarships for disadvantaged students (benefiting > 1,000 students)

3

Achievements in 2023

- NCKU Semiconductor Program: Investing NT\$10 million in and appointing 20 lecturers, benefiting 360 students
- Fund for Impoverished Students Education Financial Aid: Total 1,023 students benefiting from the Financial Aid



Highlights 1

Fundraising for Financial Aid for Disadvantaged Students' Education

Transforming children's lives through education and empowerment

To provide educational resources for children from disadvantaged families and help them continue with their schooling, Winbond has worked with the Taiwan Fund for Children and Families since 2017 by inviting employees to fundraise for financial aid to support education. From the President through to entry-level employees, our colleagues responded enthusiastically. \$4.092 million was raised by 1,089 employees in 2023, enough to support 1,023 elementary school students for a whole year. Between 2017-2023, we raised NT\$21.464 million in total. In addition to financial aid, the money is also used to offer afterschool coursework counseling, school application counseling, and career counseling to help students catch up with their peers and choose a career that fits their interests and abilities. We hope that every child can develop a sense of confidence by having a positive, formative experience at school.



Highlights 2

Semiconductor Program to Cultivate Next-Generation Talent

360 students took courses on key semiconductor technologies
20 lecturers provided key semiconductor technology and key leadership skills courses

Winbond, upholding its responsibility for the development of Taiwan's semiconductor industry and talent cultivation, invested nearly NT\$ 10 million in 2023 to collaborate with National Cheng Kung University to promote the "Semiconductor Leadership Program." The company assigned industry experts to teach the "Key Semiconductor Technologies and Leadership Practices" course, aiming to reduce the gap between academic learning and practical application. This initiative is expected to help students lead the future semiconductor industry and possess fundamental concepts of artificial intelligence. Winbond also offers quality programs such as scholarships, internship/visit opportunities, guaranteed interview opportunities, and signing bonuses to encourage new-generation talents to join the semiconductor industry.





SDG 6 Clean Water and Sanitation

“Ensure availability and sustainable management of water and sanitation for all”

1

2

3

Targets

Target 6.3: Improve water quality, wastewater treatment, and safe reuse

“By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally”

Target 6.4: Increase water-use efficiency and ensure freshwater supplies

“By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity”

Sustainability Action Plans/Goals

1. Minimizing water risk

- ① The water recovery rate of the whole plant $\geq 80\%$

Achievements in 2023

- Fab-wide water reclamation rate: 82.2%
- 4 billion liters of water conserved during 2019–2023
- Introduction of the ISO 46001 water efficiency management system





Highlights



Water Efficiency Policy

Introduction of the ISO 46001 Water Efficiency Management System in 2023

Winbond's Water Efficiency Policy

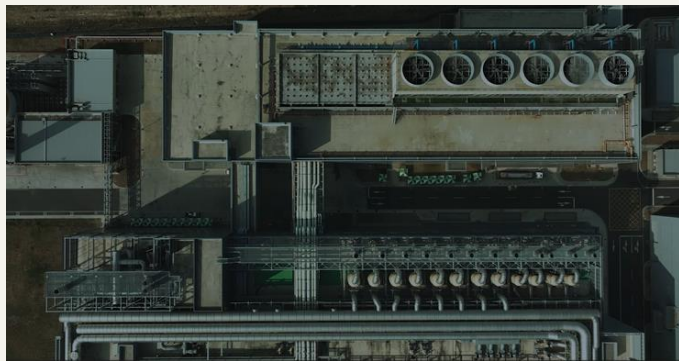


- Engage everyone in water conservation to enhance awareness of water resource management.
- Prioritize water-saving designs and continuously strive to enhance water resource efficiency.
- Recycle and reuse water resources to ensure the attainment of the water efficiency goals.
- Comply with government regulations and conduct regular reviews of water resource management.

To improve management quality and keep up with international standards, Winbond formulated its *Water Efficiency Policy* based on its vision of being “a hidden champion in providing sustainable semiconductors to enrich human life.” We passed the ISO 14046 water footprint audit in 2021 and introduced the ISO 46001 water efficiency management system in 2023. Our Central Taiwan Science Park Fab received ISO 46001 certification in January 2024, and our Kaohsiung Fab is expected to receive certification in H2 2024. Through an ISO 46001-certified water management system, we will be able to effectively mitigate water risks, measure and monitor water usage, reduce water consumption, and make improvements to our operations while minimizing environmental impacts.

To improve water management, we have been actively searching for alternative sources of water such as rainwater collection and water vapor condensation. As of 2023, these two sources of water (1.83 million liters in total) are used primarily for irrigation and secondary uses, which helps minimize our environmental impact in terms of water intensity.

Meanwhile, we have further improved our water reclamation and reuse rate by introducing 6 new water conservation measures in 2023, which allowed us to conserve up to 390,000 m³ of water in the same year. In the five-year period between 2019 and 2023, we saved upwards of 4 billion liters of water, equivalent to 80% of the capacity of Baoshan Reservoir. In 2023 alone, we reclaimed 13.15 million m³ of water (82.2% fab-wide reclamation rate, 90.1% manufacturing water reclamation rate), which meets the environmental impact standards set by the Science Park (fab-wide reclamation rate > 77%, manufacturing water reclamation rate > 85%).



Water conservation and reclamation facilities at Kaohsiung Fab



SDG 7 Affordable and Clean Energy

“Ensure access to affordable, reliable, sustainable and modern energy for all.”

1

2

3

Targets

Target 7.2: Increase global percentage of renewable energy
 “By 2030, increase substantially the share of renewable energy in the global energy mix.”

Target 7.3: Double the improvement in energy efficiency
 “By 2030, double the global rate of improvement in energy efficiency.”

Sustainability Action Plans/Goals

1. **Energy conservation**
 - ① Reduction in electric power consumption of 2–3% year over year between 2023 and 2030
 - ② Reduction in product energy intensity of 1% year over year between 2023 and 2030
2. **Use of renewable energy**
 - ① Increase green energy use at the Central Taiwan Science Park Fab to 90% by 2030

Achievements in 2023

- Total 456,000 MWh conserved between 2019 and 2023
- Green Energy Investment: Total NT\$ 955 million
- Procurement of Green Energy: Onshore Wind Turbines 3.6MW, Solar Power 27MW





Highlights 1

Managing Energy Efficiency Improvement
108 employee-proposed measures across 7 conservation initiatives

In 2023, Winbond implemented 108 employee-proposed measures involving 7 major conservation initiatives, including equipment replacement, facility upgrades, efficiency improvements, waste reduction, process optimization, smart energy conservation, and new machinery design. Some of the measures proposed by employees include the installation of an intelligent AC system, optimization of the MAU (make-up air unit), and use of energy-saving heating belts. In 2022, our power consumption decreased by 107,896 billion joules (30,000 MWh), which is equivalent to the annual power consumption of 8,553 households combined^[Note].

After introducing a project management system, the Central Taiwan Science Park Fab passed the ISO 50001 energy management system certification in 2022. Our new Kaohsiung Fab also introduced ISO 50001 standards in 2023, extending the scope and efficiency of our energy management initiatives. The Fab is expected to be certified in 2024.

Note: Based on the average annual household consumption in 2018 released by Taiwan Power Company (3,504 kWh or 12.6 billion joules)

Highlights 2

Completed the First Renewable Energy Purchase in 2023
Roadmap for realizing our renewable energy goals

Winbond has made a commitment to increase the percentage of renewable energy used at our Central Taiwan Science Park (CTSP) Fab to 90% by 2030, and we are on track with annual increases in renewable energy use in accordance with ISO 50001, with the goal of 100% renewable energy use by 2050. As of 2023, we have introduced solar panels to the CTSP Fab, and we are evaluating the viability of solar power at our Kaohsiung Fab. In the future, we will continue to work with our industry partners to build solar power plants and expand our renewable energy facilities.

Meanwhile, Winbond is actively looking into investment opportunities in renewable energy power plants and green energy procurement. Winbond invested NT\$955 million in 3.6 MW of inland wind power in September 2023, marking Winbond's first ever green energy purchase. We obtained 2,100 MWh of power through the 2023 wind power purchase agreement (annual capacity 8,500 MWh). In November 2023, we announced a NT\$400 million joint-venture deal to establish Kai-Hong Energy Co., Ltd., whose main business will be solar and wind power infrastructure investments in Taiwan. Winbond's role in this joint venture demonstrates commitment to the 2050 global Net Zero goal through green energy investment, and will help Winbond obtain renewable energy power and fulfill its sustainability promises.





8 DECENT WORK AND
ECONOMIC GROWTH



SDG 8 Decent Work and Economic Growth

“Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.”

1

Targets

Target 8.2: Diversify, innovate and upgrade for economic productivity

“Achieve higher levels of economic productivity through diversification, technology upgrading, and innovation, including through a focus on high-value added and labour-intensive sectors”

Target 8.5: Full employment and decent work with equal pay

“By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value”

2

Sustainability Action Plans/Goals

1. Competitive employee remuneration

① Salary level ranks in the top 25% among our competitors

2. Local procurement

① > 35% of key materials sourced locally

3

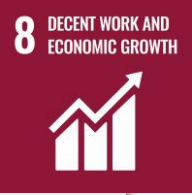
Achievements in 2023

- Remuneration for full-time non-management employees ranked in the top 25% in the industry in 2022
- Selected as a constituent company of TWSE RAFI® Taiwan High Compensation 100 Index
- 37% of critical materials sourced locally
- “Large Leads Small: Working with suppliers to reduce carbon footprint program” : Winbond became the first semiconductor company to receive a full subsidy from Industrial Development Administration (IDA)





Highlights



‘Large Leads Small!’ Major Manufacturers Help SMEs Achieve Carbon Reduction Goals

Winbond became the first semiconductor company to obtain a full subsidy from the IDA (NT\$30 million)

In 2023, Winbond partnered with 13 companies (Powertech Technology Inc., Greatek Electronics Inc., Probe Test System Corp., Lingsen Precision Industries, Walton Advanced Engineering, Inc., Dupont, Resonac, Wonik Quartz Taiean Co., LTD., United Industrial Gases Co., LTD., Hsing Mien Industry CO., LTD., Edwards, Taiwan Puritic Corp. and Mega Union Technology Inc.) to invest more than NT\$200 million into executing three major action plans—“Reduction of Factory Process Gas Emissions,” “Implementation of Lean Electricity and Water Conservation Measures in Factories,” and “Promotion of Greenhouse Gas Inventory and Hotspot Analysis in the Supply Chain.” During the two-year project, we expect to see a gradual increase in these companies’ carbon reduction efforts. It is anticipated that a reduction of about 5,866 metric tons of CO₂e per year will be achieved by 2025, which is equivalent to the carbon sequestration capacity of 14 Da’an Forest Parks annually. We hope that the results will serve as a qualitative and quantitative example for supply chains in the semiconductor industry. It is worth noting that Winbond was the first company in the semiconductor industry to receive a full subsidy (NT\$30 million) from the Industrial Development Administration (IDA), and we were invited by the Ministry of Economic Affairs to attend the 2023 Supply Chain Transformation and Innovation Forum as the semiconductor industry representative to share our experience and achievements in sustainable operations and low-carbon transformation.



Testimonial from Greatek Electronics Inc.

“During the Large Leads Small Carbon Reduction Project, we witnessed the active stance that Winbond is taking in promoting energy conservation and carbon footprint reductions. Their vision and commitment inspired us to make more sustainable choices to create greater commercial value in a way that is socially and environmentally responsible.”

Testimonial from Walton Advanced Engineering, Inc.

“A big thank-you to Winbond’s invitation to join the Large Leads Small Project. We obtained government subsidies to replace energy-intensive equipment so that we can accelerate our energy conservation initiatives. We also identified hot spots for carbon reduction through an ISO 14067 carbon footprint audit. We hope to work together with Winbond towards our shared goal of Net Zero by 2050.”



SDG 9 Industry, Innovation and Infrastructure

“Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation”

1

Targets

Target 9.4: Upgrade all industries and infrastructures for sustainability
 “By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and increased adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities”

Target 9.b: Support domestic technology development and industrial diversification
 “Support domestic technology development, research, and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities”

2

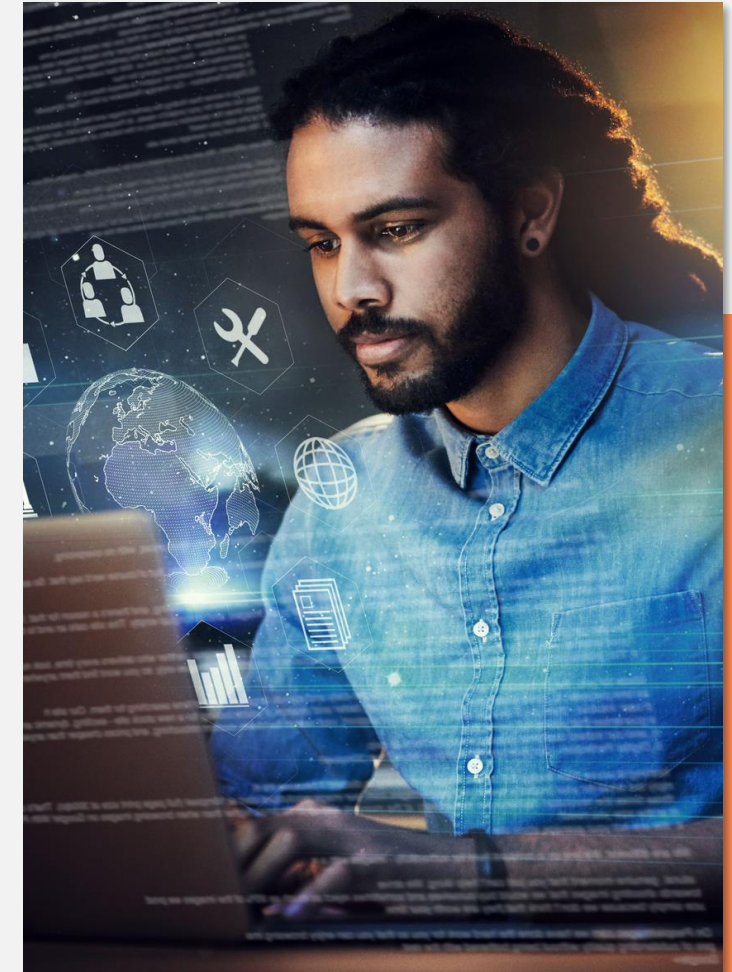
Sustainability Action Plans/Goals

1. **Encouraging innovation**
 - ① 350 new patents globally per year between 2023 and 2030
 - ② R&D expenses account for > 8.5% of operating income between 2023 and 2030

3

Achievements in 2023

- 390 new global patents approved in 2023; total patents reached 4,900
- R&D expenses accounted for 23% of operating income
- Named Top 100 Global Innovator by Clarivate





Highlights 1

Selected as Top 100 Global Innovator by Clarivate

Selected as top 100 in 2023 and 2024 consecutively due to continuous innovation and growth

“Aggressively innovate” is part of Winbond’s core corporate culture. In addition to a whopping 500 invention patents, Winbond was among those chosen from 3,500 candidates as a Clarivate Top 100 Global Innovator because of its industry impact, commercial success, globalization, and technology applications. This international award demonstrates Winbond’s soft power in innovation and global patent management and proves how much the company values R&D investment as a driving force for growth and sustainable operations. Indeed, even in the product design stage, we use low carbon footprint materials to develop green products that are energy efficient, high performance, and low in resource intensity to protect the environment and minimize impacts on the Earth.



Highlights 2

IP Management and Trade Secret Registration System

Winbond received TIPS Grade A Certification

When it comes to strategic planning, Winbond evaluates its corporate goals and R&D resources every year to set Winbond’s annual intellectual property (IP) management goals. We aim to increase the percentage of patents driven by product development strategies to strengthen the link between corporate goals and IP management strategies. As of 2023, Winbond has filed 6,500 patent applications worldwide, 4,900 of which have been approved.

Winbond officially introduced the Taiwan Intellectual Property System (TIPS) into its operations in 2023 and received Grade A certification later in the same year. TIPS helps Winbond setting corporate goals related to IP management policies and targets, foster a culture of innovation, and promote awareness of IP protection among employees. It also encourages employees to come up with creative ideas and produce quality IP that will enhance Winbond’s competitive advantage in a sustainable manner.

In 2022, Winbond incorporated trade secret management into its IP management strategies and began planning for a trade secret registration system. We handed out the Outstanding Trade Secret Awards to encourage employees to register their innovative ideas, with the ultimate goal of strengthening Winbond’s competitive edge. We also migrated our existing technologies to the new trade secret registration system, effectively turning it into an innovation knowledge base for preserving Winbond’s trade secrets. As of 2023, the system contains more than 11,000 entries.



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



SDG 12 Responsible Consumption and Production

“Ensure sustainable consumption and production patterns”

1

Targets

Target 12.7: Promote sustainable public procurement practices

“Promote public procurement practices that are sustainable in accordance with national policies and priorities”

Target 12.8: Promote universal understanding of sustainable lifestyles

“By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature”

2

Sustainability Action Plans/Goals

1. Responsible Procurement

- ① Declaration of Non-Use of Conflict Minerals signing rate: 100%
- ② Winbond Supplier Code of Conduct Commitment Letter signing rate: 100%

2. Promotion of Sustainability Awareness

- ① 80 supplier ESG workshops by 2030

3

Achievements in 2023

- Zero conflict minerals used
- The signing rate of the Winbond Supplier Code of Conduct Commitment Letter reached 100% among our key suppliers
- Total 24 supplier ESG workshops



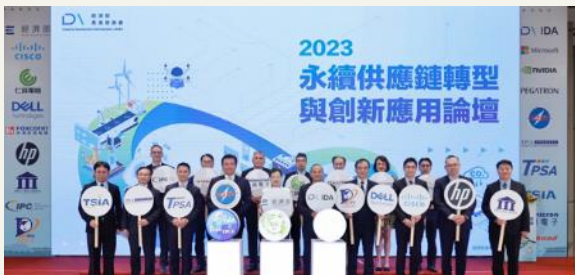


Highlights 1

Winbond Supplier ESG Workshop

Better supply chain management leads to greater sustainability and prosperity for all

Since 2023, Winbond has organized 9,438 hours of supplier ESG workshops, which have been attended by 24 suppliers and 286 people. The workshops offer a venue for meaningful dialogue about reliance on environmental resources, climate change countermeasures, GHG and carbon emissions management, human and labor rights safeguards, corporate governance, business ethics, ESG development and trends, and a wide range of other topics related to the semiconductor industry. Through the workshops, our benchmark suppliers also have a chance to share their own experience and knowledge (such as low GHG-emitting substitutes and human rights due diligence) in ESG management, allowing Winbond to approach sustainable operations from a diverse and inclusive perspective. Internally, the workshops allow our employees stay on top of the latest industry information in terms of sustainable development, which informs Winbond’s planning and implementation of internal supply chain management strategies. Externally, the workshops have gradually become a platform for sustainability disclosures by our supply chain members.



Highlights 2

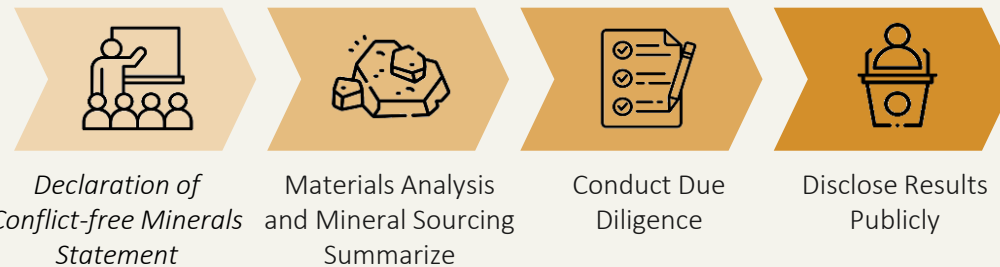
Declaration of Non-Use of Conflict Minerals



100% compliance with the *Declaration of Non-Use of Conflict Minerals*

Winbond is an advocate for the Responsible Business Alliance (RBA) requirements, and we impose them on our supply chain partners. Pursuant to the due diligence guidance issued by the Organization for Economic Co-operation and Development (OECD), Winbond issued the *Declaration of Non-Use of Conflict Minerals*, and we perform regular due diligence audits on our key suppliers for the raw materials required to manufacture our products. We strictly require suppliers to use qualified smelters and regularly check for their certification status. Finally, based on the audit results each year, we prepare an annual *Conflict Mineral Due Diligence Report* for publication. In 2023, the 17 Winbond suppliers that handle tin, tantalum, tungsten, gold (collectively known as “3TG”), cobalt, and/or mica all agreed to and passed the due diligence audit.

Responsible Sourcing Management Process





SDG 13 Climate Action

“Take urgent action to combat climate change and its impacts”

1

Targets

Target 13.1: Strengthen resilience and adaptive capacity to climate-related disasters

“Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries”

Target 13.3: Build knowledge and capacity to meet climate change

“Improve education, awareness-raising and human and institutional capacity for climate change mitigation, adaptation, impact reduction and early warning”

2

Sustainability Action Plans/Goals

1. Minimize weather risks

- ① Zero days of production interruptions due to weather-related hazards
- ② ≥5% reduction in GHG emissions year over year

2. Promote climate change education

- ① Promoting sustainable education
- ② Promoting suppliers co-learning initiative
- ③ Establish cross-functional TCFD project team

3

Achievements in 2023

- Zero days of production interruptions due to weather-related hazards in 2023
- 2.28 million metric tons in CO₂e reduction since joining the Perfluorocarbon Greenhouse Gas Emissions Reduction Project initiated by the World Semiconductor Council in 2006
- Establish sustainable training platform to promote sustainable education
- Total learning hours for the supply chain ecosystem: 16,965 hours





Highlights 1

An Interdepartmental TCFD Team

Enhanced training to promote awareness among employees

As a continuation of our framework of initiatives in 2022, Winbond established an interdepartmental TCFD team made up of approximately 30 employees from 15 different units in 2023. Team members were assigned to different subgroups under the ESG Committee’s direction. Each subgroup then discussed the climate change topics related to the tasks on hand and presented their conclusions at an ESG Committee meeting.

Through educational training, group discussion, and the TCFD platform developed by Winbond in 2023, we selected 7 major and 7 minor risks out of 35 climate risks, as well as 5 major and 7 minor opportunities out of 18 climate opportunities identified by the TCFD team. These risks and opportunities are passed onto the competent units of Winbond for formulation of the corresponding response measures. This process is meant to promote climate change awareness and improve employees’ ability to respond to climate change.



Highlights 2

Net Zero by 2050—Reduction of Direction Emissions

2.28 million metric tons in CO₂e reduction since 2006

To reach its direct emissions reduction goal, Winbond did away with traditional linear thinking and leveraged its innovative culture and creative employees to rethink the possibilities for carbon footprint reductions throughout each product’s life cycle. With cradle-to-cradle design thinking and a collective mindset focused on sustainability, we are fostering a net zero culture within the Company and its subsidiaries through goal setting, digital governance, carbon accounting, system and process formulation, and capital investment. Since joining the Perfluorocarbon Greenhouse Gas Emissions Reduction Project initiated by the World Semiconductor Council in 2006, Winbond has reduced CO₂e emissions by 2.28 million metric tons, which is equivalent to the annual carbon sequestration capacity of 5,907 Da’an Forest Parks.^[Note] We also established a long-term review mechanism to ensure the implementation of our sustainability goals and material improvements in direct emissions reductions.



Note: Based on data released by the Forestry and Nature Conservation Agency, Executive Yuan and the Taipei City Department of Land, Da’an Forest Park can sequester 386 metric tons of CO₂e (25.93 hectares x carbon sequestration coefficient 14.9) per year.





SDG 15 Life on Land

“Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and biodiversity loss”

1

2

3

Targets

Target 15.2: End deforestation and restore degraded forests

“By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally”

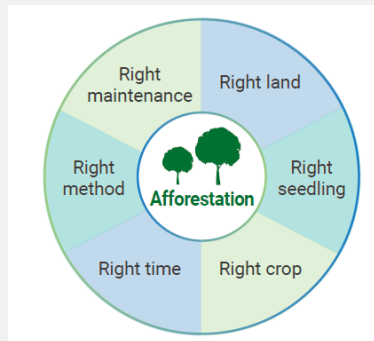
Target 15.4: Ensure conservation of mountain ecosystems

“By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development”

Sustainability Action Plans/Goals

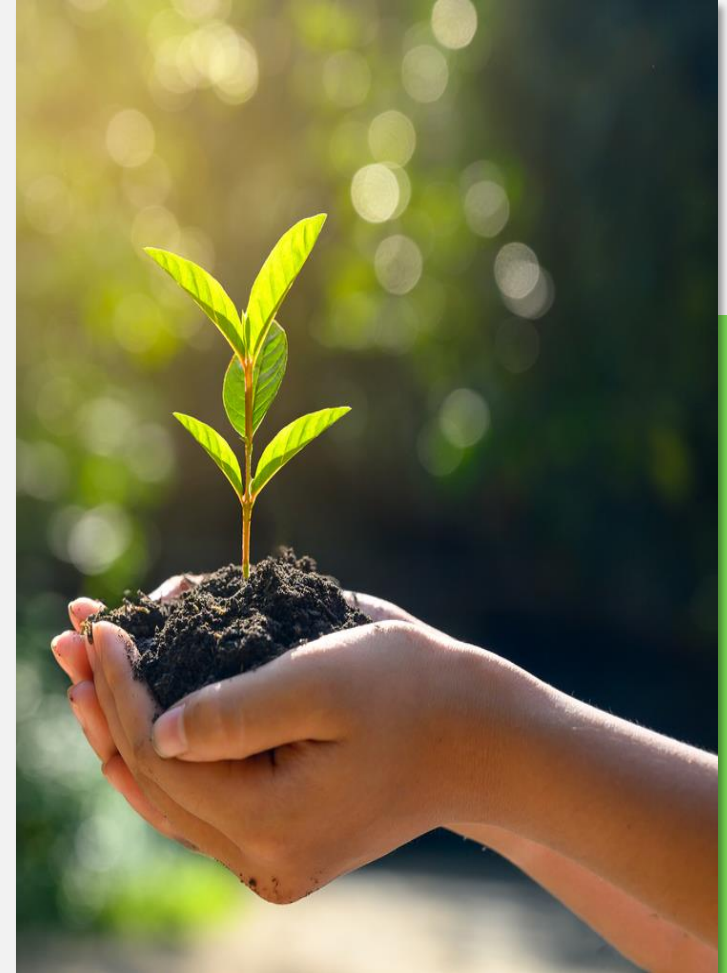
1. Nature-based solutions

- ① 30-year forest afforestation project
- ② > Preservation of 25 species of Theaceae (The tea plant family)



Achievements in 2023

- 1,300 trees planted at the Kaohsiung Fab
- 7,700 trees planted in Chiayi
- 27 out of 42 native Taiwanese Theaceae species conserved
- Conservation of *Spiranthes sinensis* (the Lady's Tresses orchid), an endangered wild plant species





Highlights 1

Nature-Based Solutions—Green Carbon

30-year forest restoration project expected to sequester 1,380 metric tons of CO₂e

Based on advice from our university experts, Winbond developed a 30-year forest afforestation project, carefully choosing the appropriate land, species, seedlings, times, methods, and procedures. Winbond invested considerable time and effort in designing the forestation zone, cultivating seedlings, preparing the land, planting trees, and nurturing the ecosystem just to ensure the comprehensiveness and sustainability of the forest afforestation project. Winbond selected trees that are native to Taiwan and which have high carbon sequestration capacity in the hope of helping enlarge Taiwan’s carbon sink. As part of the 30-year project with National Chung Hsing University (NCHU), the Kaohsiung Fab planted 1,300 native trees in 2023, which collectively have a carbon sequestration capacity of 390 metric tons of CO₂e . Winbond eradicated all alien plant species within its Fabs and replaced them with plants native to Taiwan. Winbond created green spaces within our plants to enhance carbon sequestration, beautify the environment, purify the air, and stabilize the local ecosystem. Furthermore, we took part in the Forestry and Nature Conservation Agency’s tree adoption program. We planted 4 different species of native Taiwan plants across 29,400 m² of state-owned land near the Chiayi-Tainan border. The 7,700 trees planted in this area contribute to an estimated annual carbon sequestration capacity of 990 metric tons of CO₂e. We hope that through the forestation project, we can restore hillside vegetation, foster native species, and improve biodiversity.



Highlights 2

Species Conservation and Breeding Program,

27 out of 42 native Taiwanese Theaceae species conserved as of 2023

The Winbond group has leveraged its resources to initiate the Baoshan Plant Preservation Project to conserve and nurture low altitude plant species native to Taiwan. In the first stage of the project, we are focusing on Theaceae species conservation. We are working with National Chung Hsing University (NCHU) to collect and conserve seedlings, organize eco-education activities, and promote sustainable forestry. In an age of rapid social development and expansion, we hope to conserve a piece of the forest that is educationally, culturally, and ecologically significant.

The Theaceae family is commonly seen in evergreen broad-leaved forests in Taiwan. Rich in economic value, these plants are susceptible to environmental changes. Some species have been subject to various man-made hazards. For example, *Camellia japonica* is often illegally harvested as grafting rootstock or horticultural plants, whereas *Camellia sinensis* is frequently harvested or truncated due to their high value as they can be made into tea and camellia oil. Tea farmers imported a variety of exotic tea species and hybridized them with local species, harming Taiwan’s native Theaceae population. To make matters worse, Theaceae plants grow very slowly, making any damage hard to recover from. Therefore, Winbond has pledged to protect Taiwan's native plants and conserve Theaceae species. There are 42 Theaceae species native to Taiwan, 27 of which have been collected and conserved so far. Of the collected species, 1 is categorized as critically endangered, 1 as endangered, 6 as vulnerable, and another 3 as near threatened.





17 PARTNERSHIPS
FOR THE GOALS



SDG 17 Partnerships for the Goals

“Strengthen the means of implementation and revitalize the global partnership for sustainable development”

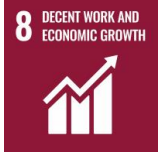
Winbond starts with its own operations, engages employees, customers, suppliers, government agencies, stakeholders/investors, and the community/society, and collaborates with stakeholders to respond to the SDGs and create sustainable value.

Item	Action	Partnership
Promoting Sustainable Development by Green Technology	<ol style="list-style-type: none"> 1. Develop green product 2. Research on green technology 	Customers, employee, suppliers, community/society
Improving Life Quality	<ol style="list-style-type: none"> 1. Provide competitive compensation 2. Health Checkups and Group Insurance Beyond Legal Requirements 3. Afforestation 	Employee, community/society
Increasing Capability	<ol style="list-style-type: none"> 1. Encourage life-long learning 2. Engage in Semiconductor Program 3. Fundraise the Education Financial Aid 	Employee, community/society





- 1,300 trees planted at the Kaohsiung Fab
- 7,700 trees planted in Chiayi
- 27 out of 42 native Taiwanese Theaceae species conserved
- Conservation of *Spiranthes sinensis* (the Lady's Tresses orchid), an endangered wild plant species
- Zero days of production interruptions due to weather-related hazards in 2023
- 2.28 million metric tons in CO₂e reduction since joining the Perfluorocarbon Greenhouse Gas Emissions Reduction Project initiated by the World Semiconductor Council in 2006.
- Building sustainable education platform.
- Sustainable supply chain co-learning hours: Over 16,965 hours.



- Zero conflict minerals used
- The signing rate of the Winbond Supplier Code of Conduct Commitment Letter reached 100% among our key suppliers
- 24 supplier ESG workshops

- Total global patents reached 4,900
- R&D expenses accounted for 23% of operating income
- Named Top 100 Global Innovator by Clarivate



- Sports promotion campaign: 30,476 employees participated, burning 10,362,995 Kcal
- Free flu shots: Total 1,773 employees received
- Childcare Allowance: Provided NT\$6,000 monthly stipend, total disbursed over NT\$ 330 million

- NCKU Semiconductor Program: Invested NT\$10 million in and appointed 20 lecturers, benefiting 360 students.
- Fundraising for Impoverished Students Education Financial Aid: Benefiting 1,023 student

- Fab-wide water recovery rate: 82.2%
- 4 billion liters of water conserved during 2019–2023
- Introduction of the ISO 46001 water efficiency management systems

- 456,000 MWh conserved between 2019 and 2023
- Green energy accounted for 90% by 2030 at the CTSB Fab
- Investment of NT\$955 Million in Green Energy
- Procurement of Green Energy: Onshore Wind Turbines 3.6MW, Solar Power 27MW

- Remuneration for full-time non-management employees ranked in the top 25% in the industry in 2022
- Selected as TWSE RAFI® Taiwan High Compensation 100 Index
- 37% of key materials sourced locally
- “Large Leads Small”: becoming the first semiconductor company to receive a full subsidy and work with suppliers



2023 Winbond Corporate Sustainability Report Chapters/UN SDGs Correspondence Guide

UN SDG	SDG Target	Chapter/Section in the 2023 Winbond Corporate Sustainability Report
SDG 3 Good Health and Well-being	Target 3.7: Universal access to sexual and reproductive care, family planning, and education	5.2 Talent Management; 5.4 Occupational Safety and Health
	Target 3.8: Achieve universal health coverage	5.4 Occupational Safety and Health
SDG 4 Quality Education	Target 4.4: Increase the number of people with relevant skills for financial success	5.5 Social Inclusion
	Target 4.5: Eliminate all discrimination in education	
SDG 6 Clean Water and Sanitation	Target 6.3: Improve water quality, wastewater treatment, and safe reuse	3.2 Water Resource Management
	Target 6.4: Increase water-use efficiency and ensure freshwater supplies	
SDG 7 Affordable and Clean Energy	Target 7.2: Increase global percentage of renewable energy	3.1 Energy and Greenhouse Gas Management
	Target 7.3: Double the improvement in energy efficiency	
SDG 8 Decent Work and Economic Growth	Target 8.2: Diversify, innovate and upgrade for economic productivity	1.3 Productivity and Business Performance; 4.3 Sustainable Supply Chain Impact
	Target 8.5: Full employment and decent work with equal pay	5.2 Human Resources Management; 4.3 Sustainable Supply Chain Impact
SDG 9 Industry, Innovation, and Infrastructure	Target 9.4: Upgrade all industries and infrastructure for sustainability	2.1 Research, Development, and Innovation
	Target 9.b: Support domestic technology development and industrial diversification	
SDG 12 Responsible Consumption and Production	Target 12.7: Promote sustainable public procurement practices	4.1 Sustainable Supply Chain Management Framework; 4.3 Sustainable Supply Chain Impact; 4.4 Conflict Minerals
	Target 12.8: Promote universal understanding of sustainable lifestyles	4.2 Sustainable Supply Chain Risk Assessment; 4.3 Sustainable Supply Chain Impact
SDG 13 Climate Action	Target 13.1: Strengthen resilience and adaptive capacity to climate-related disasters	1.6 Climate Change Management; 3.1 Energy and Greenhouse Gas Management; 3.5 Investment in Environmental Sustainability; 4.3 Sustainable Supply Chain Impact
	Target 13.3: Build knowledge and capacity to meet climate change	
SDG 15 Life on Land	Target 15.2: End deforestation and restore degraded forests	5.5 Social Inclusion
	Target 15.4: Ensure conservation of mountain ecosystems	



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