

2023 Report on Sustainable Development Goals



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SDG Implications for Taipower's Sustainable Development

Taiwan Power Company (Taipower) holds a unique position within the domestic energy industry. In its role as helmsman for the industry, the Company has set its energy business on the path towards sustainable development, and has defined five major themes, or roles to play, in its sustainable development. These include: Provider of Sustainable Power, Leader of Smart Grid Development, Provider of Services for Smart Living, Agent of Environmental Friendliness, and Practitioner of Corporate Social Responsibility. The Company has also aligned its efforts with both the United Nations (UN) Sustainable Development Goals (SDGs) and the Taiwan Sustainable Development Goals (T-SDGs). As Taiwan's main electricity supplier, Taipower is actively addressing the issues of energy transformation and achieving net-zero emissions. As such, the Company is actively developing strategies and taking actions to protect the ecological environment while contributing to Taiwan's energy and ecological sustainability. In 2019, the Company issued a "Taiwan Power Company White Paper on the Environment." The paper was based on the United Nations' 2030 Sustainable Development Goals (SDGs), and identified short, medium, and long-term targets for 2021, 2025, and 2030. Subsequently, Taipower has disclosed implementation results and set goals for internal and external review each year as part of its Environmental Month presentation and as a clear demonstration of the Company's ambition to achieve environmental sustainability. These annual reports reflect changes in the internal and external environment, and present forward-looking environmental strategies and goals developed through annual rolling reviews.

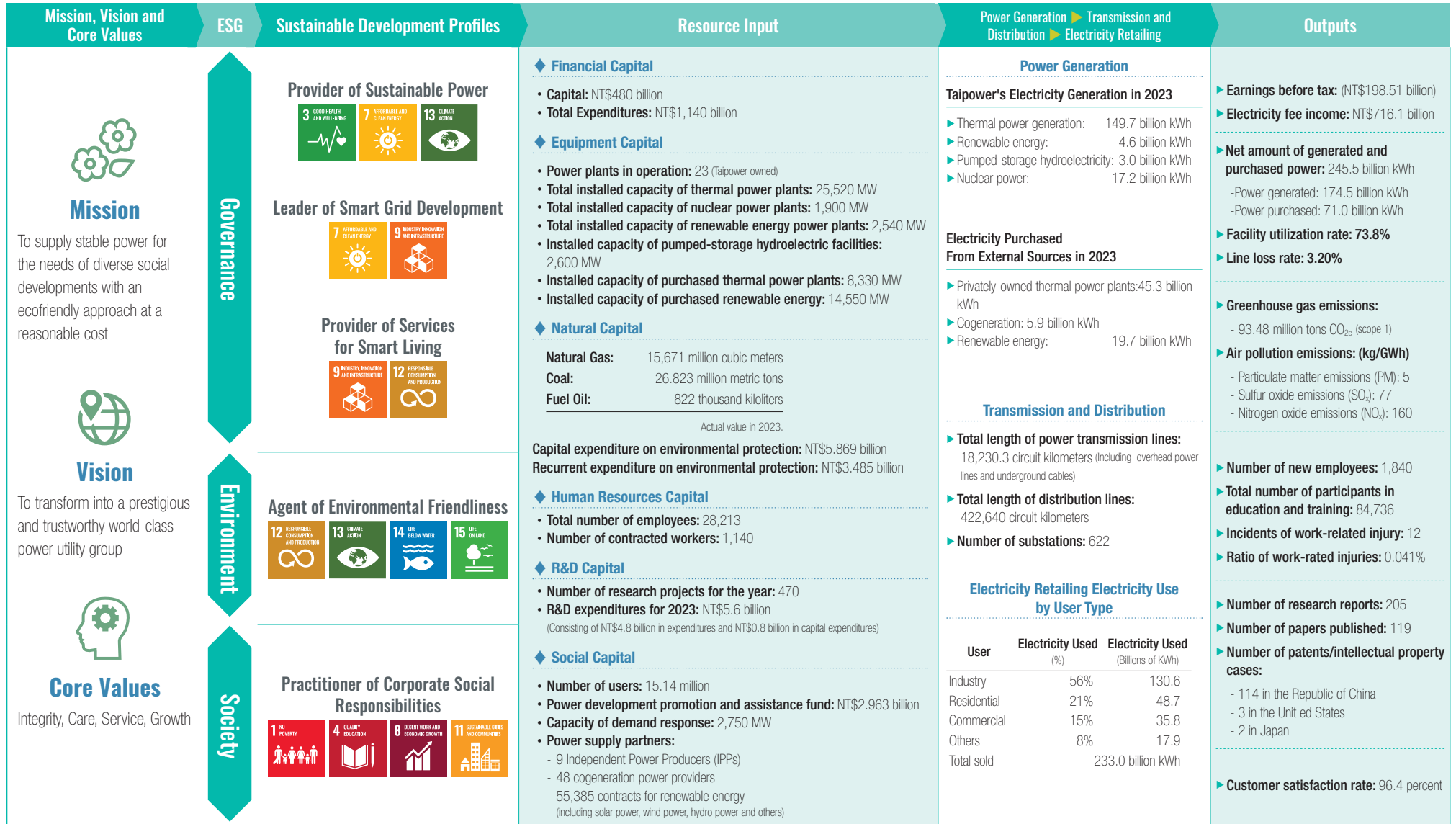
In 2021, Taipower published its first SDG Report. That report made reference to the 2021 World Business Council for Sustainable Development (WBCSD) report titled "Sector Transformation: An SDG Roadmap for Electric Utilities." * Reference was also made to the UN's Sustainable Development Goals Report for 2021**. Taipower's report summarized its own specific 2023 SDG performance in combination with disclosures made through its annual sustainability report which lays out the Company's investments and achievements in the value chain of the power industry and presents its sustainable development plan along with highlights and performance notes for each SDG. Taipower will continue to track the progress of its sustainability initiatives, fulfill its sustainability commitments, and enhance its resilience against emerging risks while capitalizing on emerging opportunities. The Company will also continue to pursue sustainability with a long-term and macroscopic view as it advances toward its goal of becoming a world-class sustainable power company.



*The original English title of the report was "Sector Transformation: An SDG Roadmap for Electric Utilities"




** The original English title of the report was "The Sustainable Development Goals Report 2021"






Taipower's Value Chain and Operational Elements

















Taipower Sustainable Development Plan





In order to focus the future development of Taipower, the Company created a Sustainable Development Plan that identifies five major sustainable development profiles. These include: Provider of Sustainable Power, Leader of Smart Grid Development, Provider of Services for Smart Living, Agent of Environmental Friendliness, and Practitioner of Corporate Social Responsibility. Taipower has also aligned itself with both the United Nations Sustainable Development Goals (UN SDGs) and the Taiwan Sustainable Development Goals (T-SDGs) by establishing sustainability strategies with short, medium and long-term goals. Various strategies have been set with 2030 identified as a key milestone. Metrics and targets have also been formulated using clear and quantifiable methods. Each year, Taipower implements continuous reviews and improvements as key components of its sustainable development.

Development Profiles	Expanding the Pathway	Action Plans	Measurement Indicators	2023 Performance	2030 Targets	Related SDGs	Related T-SDGs
Provider of Sustainable Power	Promoting Gas Expansion and Coal Reduction	Promote low-carbon energy, such as gas-fired power generation, to ensure a stable power supply.	Cumulative capacity of gas-fired power units.	12,829MW	25,924MW	  	T-SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. T-SDG 13: Take urgent action to combat climate change and its impacts.
		Improve efficiency of conventional thermal power units to enhance environmental quality through recycling and reduce fossil fuel consumption.	Average efficiency of in-house thermal power units (excluding purchased power).	41.58%	Higher than 47%		
		Promote carbon-free fuel co-firing plans and introduce carbon fixation technologies to reduce carbon emissions while ensuring a stable power supply.	Introduce ammonia co-firing technology.	A meeting on the Linkou Ammonia Blending Demonstration Project was held on March 13, 2023 to discuss the division of labor between the two parties.	One of the Linkou Power Plant units has successfully completed the demonstration of 5% mixed ammonia use.		
			Introduce hydrogen co-firing technology.	The Hsinta Power Plant's GT3-3 combined cycle gas turbine unit successfully achieved the 5% hydrogen blending efficiency target.	A decision on increasing the hydrogen co-firing ratio will be based on an assessment of domestic hydrogen production capacity and transmission and storage technology.		
		Push forward the construction of pilot fields for carbon capture and storage.	Carbon capture: Completed the bidding process for the carbon capture test plant (6 tons/day) at the Taichung Thermal Power Plant Carbon Reduction Technology Park. A detailed design and construction license application is expected to be completed in 2024. Carbon sequestration: The comparison table for changes in the environmental impact statement of the Taichung Thermal Power Plant Carbon Storage and Injection Project (2,000 tons/year) was revised and approved by the Ministry of Environment. Related bidding documents will be prepared in the future.	Carbon capture demonstration plant planning (1 Mt-CO ₂ /year).			
Mitigate the impact of climate change on power supply through adaptation	Improve the ability to respond to extreme weather.	Completed a parallel research plan for the climate change adaptation of the power generation system, and conducted a climate change risk assessment. Each power plant established standard operating procedures to conduct rolling reviews of related measures each year.	Formulate strategic plans for systems to complete adaptation plans for power facilities (excluding offshore islands).				

Development Profiles	Expanding the Pathway	Action Plans	Measurement Indicators	2023 Performance	2030 Targets	Related SDGs	Related T-SDGs
Provider of Sustainable Power	Developing Renewable Energy	Promote renewable energy power generation plans and expand the development of zero carbon energy.	The accumulated total capacity of Taiwan Power Company.	The accumulated total capacity is 2,563.7 MW.	The accumulated total capacity is 4,522.3 MW.	  	T-SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all T-SDG 13: Take urgent action to combat climate change and its impacts
		While ensuring a stable power supply, increase the proportion of clean energy (renewables, gas) generation in the Taipower system.	Proportion of clean fuel (renewables, gas) generation.	The power generation ratio is 36.5% coal-fired (including 2.4% coal and cogeneration), 44.1% gas, 7% nuclear, 9.9% renewable energy, and 2.5% from other (fuel oil and pumped storage).	The generation ratio of the Taipower system is 30% from coal, 50% from gas, and 20% from renewable sources.		
		Increase the proportion of self-produced energy (renewable energy) and maintain the long-term power supply in order to reduce supply chain risks.	Proportion of power generated from renewable energy in the Taipower System.	The percentage reached 9.9% (approximately 24.3 billion kWh).	The percentage reached 24.1% (approximately 68 billion kWh).		
		Grid connection capacity of the Taipower system.	The system's grid-connected capacity is 17,085 MW.	The system's grid-connected capacity is 41,718 MW.			
Leader of Smart Grid Development	Enhancing Grid Resilience	Establish a smart grid to improve power supply quality and operational efficiency.	Reduction in the line loss rate.	The system-wide line loss rate is 3.20%.	Rolling reviews each year (Refer to the T-SDGs target of 4.21%).	 	T-SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. T-SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.
		Strengthen information security, build a cloud data center, and improve backbone / regional fiber optic communications capabilities.	Information security protection.	<ol style="list-style-type: none"> Expanded intrusion detection systems in program-controlled areas (power distribution and dispatch systems). Introduced KPI and established an evaluation mechanism for information security management. Continued to provide SOC services (including program-controlled site health inspection and isolation test items). Continued to deploy endpoint detection and response (EDR) software for monitoring IT offices. 	Continue to improve the overall security protection capabilities of the smart grid.		
			Cloud data center construction.	<ol style="list-style-type: none"> Completed the civil engineering and building structure for the Changhua Cloud Data Center on November 28, 2023. Awarded a tender for the Yuan-Hsin Cloud Data Center Computer Room Design and Construction Supervision Technical Service Project on July 18, 2023. 	Complete the construction of a third cloud data center (Taichung), which can accommodate 2,000 cabinets.		
		Promote applications of big data and AI on operational and maintenance information for transmission systems to reduce the System Average Interruption Duration Index (SAIDI) value.	National power outage time (SAIDI value).	15.225min / household / year.	Reduce the national power outage time (SAIDI) value to 15.5 min / household per year.		
		Promote smart grids and introduce the construction of IEC 61850 smart substations.	The construction of IEC 61850 smart substations.	Completed 68 substations.	Rolling reviews will be conducted based on the actual construction of IEC 61850 smart substations.		
		Consolidate the information communication and smart management systems, optimize transmission and substation asset management systems, and establish predictive maintenance capabilities.	Continued optimization of the transmission and substation asset management systems.	<ol style="list-style-type: none"> Developed an automatic update function for user permissions in the substation equipment asset management system. Continued to optimize the performance of the transmission equipment asset management system. 	Consolidate the information communication and smart management systems, optimize transmission and substation asset management systems, and establish predictive maintenance capabilities.		

Development Profiles	Expanding the Pathway	Action Plans	Measurement Indicators	2023 Performance	2030 Targets	Related SDGs	Related T-SDGs
Leader of Smart Grid Development	Expanding Energy Storage Applications	Increase the quantity of energy storage equipment built on company-owned sites, and expand the qualified capacity of energy storage ancillary services.	Qualified capacity of energy storage services for cumulative storage built on company-owned sites.	Total of 680.9MW: 1. Self-built 100 MW: (1) The Tainan Salt Field Solar Energy Storage System (20 MW). (2) The Luyuan Energy Storage projects (20 MW). (3) The Longtan Energy Storage (60MW). 2. Ancillary Services: 580.9 MW (1) Bilateral contracts: 15MW. (2) Qualified trading capacity: 565.9MW.	The capacity of energy storage can be increased with the improvement of performance and economic value. Taipower shall implement flexible and continuous reviews based on generation capacity and load conditions.	 	T-SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all. T-SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.
		Plan the IP of the entire fiber optics communication system in Taiwan to increase bandwidth and enhance reliability.	Establishment of an ultra-high-speed round-island optical cable communication management system.	Completed the construction of a round-island, ultra-high-speed IP optical fiber communication system with backbone / regional transmission capacity reaching 100G / 10G.	Establish a communication network system for next-generation communication technology.	 	T-SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all. T-SDG 12: Ensure sustainable consumption and production patterns.
Popularize low-voltage AMI smart meter infrastructure.	Deployment of smart meters.	Completed the deployment of a total of 2.707 million smart meters.	Complete the deployment of a total of 6 million smart meters after a continuous review of deployment benefits.				
Provider of Services for Smart Living	Refinement of Customer Services	Taipower app memberships.	Taipower app memberships.	1.6 million users.	1.5 million users.	 	T-SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all. T-SDG 12: Ensure sustainable consumption and production patterns.
		The number of transactions via new technology payment channels for each period.	The number of transactions via new technology payment channels for each period.	1.5 million transactions / period.	Reach 1.5 million transactions each period.		
		Cloud-based services.	Cloud-based services.	41,000 users / year.	Number of cloud payment receipts will reach 300,000 per year.		
		Provide users with value-added service applications.	Advanced value-added services on the high-voltage user service portal.	Two value-added services ("Batch Production Time-of-Use Rate Trial Calculation" and "Today's Electricity Consumption Dashboard") were completed. A total of 6 value-added services have been completed since 2020.	Add at least 6 additional advanced, value-added services.		
		Number of visits to the Power Consumption Examination Center's website.	Number of visits to the Power Consumption Examination Center's website.	246,000 people.	310,000 people.		
		The proportion of households receiving electricity.	The proportion of households receiving electricity.		Except in cases for which legal restrictions exist, Taipower will provide electricity services and maintain a 100% rate of electricity applications.		
Assist in the promotion of energy management systems (xEMS).	Complete the revision of regulations and establish operating procedures to facilitate joint promotion of energy management services with energy management companies.	Completed the revision of regulations and establishment of operating procedures, and announced a revision to the "Principles for Promoting Cooperation in User Energy Management Services" on November 2, 2023. This expands the scope of promotion to low-voltage users (including B&Bs, shops, factories, and green energy sites) to facilitate cooperation with third-parties and jointly promote energy management services with energy management companies.	Energy management services have been popularized and users are encouraged to participate in ADR to reduce power demand during peak hours, thereby easing the pressure on power supply during peak hours and helping to balance power supply and demand. Taipower will also continue to promote energy conservation services in coordination with the government's net-zero policy.				

Development Profiles	Expanding the Pathway	Action Plans	Measurement Indicators	2023 Performance	2030 Targets	Related SDGs	Related T-SDGs					
Agent of Environmental Friendliness	Enhancing Climate Change Adaptation	Improve mitigation and adaptation capabilities.	Net decrease of emission intensity at thermal power generating units (Greenhouse Emissions) from 2016 levels.	Decreased by 8%.	Decreased by 20%.	   	<p>T-SDG 13: Take urgent action to combat climate change and its impacts.</p> <p>T-SDG 12: Ensure sustainable consumption and production patterns.</p> <p>T-SDG 14: Conserve and sustainably use the marine ecosystems to prevent the degradation of marine environment.</p> <p>T-SDG 15: Conserve and sustainably use terrestrial ecosystems to ensure the persistence of biodiversity and prevent land degradation.</p>					
		Climate adaptation actions.	Completed parallel work for climate change adaptation of the power generation system, and completed renewable energy climate change risk assessment and identification.	Complete the Company's overall climate risk assessment report and communications.								
	Creating a Circular Business Model	Establish a circular business model.	The proportion of wastewater recycled at thermal power plants.					<p>Complete the Circular Economy Demonstration Highlight Project.</p>				
		Five circular economy business models.	Completed and released Taipower Circular Construction Implementation Guidelines.	Complete the Circular Economy Demonstration Highlight Project.								
		Restore marine ecosystems and clean coastal environments.	Marine ecological restoration, conservation and development of marine pastures.	Completed an analysis and research report on the business model for the Linkou Marine Pasture.	Complete construction of one marine pasture around a power plant to facilitate marine ecological restoration.							
		Restore the ecological balance in the vicinity of power facilities and maintain environmental preservation.	Ecological integration plan for power facilities.	Released a video and a project results report on the Hsinta Power Plant's ecological integration.	Complete at least 5 ecological integration plans around power facilities to promote ecological restoration and environmental maintenance at power facilities.							
		Practitioner of Corporate Social Responsibility	Building a Happy Electricity Industry	Improve occupational safety.	Employee injury rates.							<p>T-SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.</p>
				Contract labor injury rates.	Contract labor injury rates.				0.			
Practitioner of Corporate Social Responsibility	Building a Happy Electricity Industry	Establish a happy workplace culture.	Employee satisfaction with internal communications.		Employee satisfaction with internal communication ≥ 65%.	  	<p>T-SDG 1: Strengthen social care services and economic security for the disadvantaged.</p> <p>T-SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.</p> <p>T-SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.</p>					
		Rate of participation in Employees' Heart-to-Heart assistance programs (81 in total) that care for employees.	There were a total of 25 Heart-to-Heart employee assistance programs in 2023 (accounting for 30.86%).	Rate of participation in Employees' Heart-to-Heart assistance programs (81 in total) that care for employees ≥ 30%.								

Development Profiles	Expanding the Pathway	Action Plans	Measurement Indicators	2023 Performance	2030 Targets	Related SDGs	Related T-SDGs
Practitioner of Corporate Social Responsibility	Deepening Social Participation	Deepen social care activities.	Cumulative investments and number of people reached by social care activities.	Invested over NT\$592.6 million and reached over 57,000 people.	Invest NT\$6.6 billion and reach 800,000 people.	   	<p>T-SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all.</p> <p>T-SDG 1: Strengthen social care services and economic security for the disadvantaged.</p> <p>T-SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.</p> <p>T-SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.</p>
			Cumulative investment in electricity discounts for disadvantaged groups; number of beneficiary households.	Discounts of NT\$136.1 million were issued for 169,000 beneficiaries.	Discounts of NT\$960 million with 1.76 million beneficiaries.		
			Cumulative investment in the Power Development and Assistance Fund and the number of beneficiary townships / districts.	Total investment of NT\$3.02645 billion with 126 beneficiary townships / districts.	Total investment of NT\$27.5 billion with 1,100 beneficiary townships/districts.		
		Disseminate accurate energy information.	Cumulative number of people reached by diversified energy education.	Reached over 837,000 Number of visitors.	6.6 million Number of visitors.		
			Cumulative number of people reached by online promotions.	Reached 40.64 million Number of visitors.	231 million people.		
		Promote the preservation and activation of cultural assets connected to the electricity industry.	Sharing of electricity industry cultural assets.	A total of 400 cases of inventorying and documenting electrical industry cultural relics have been conducted.	Launch an online database of historical relics from the electrical industry in 2028 to create a future cultural resource sharing environment and research platform; Continue to promote social communication and education on cultural power.		
			Cumulative number of events or participants in annual cultural asset-themed exhibitions, forums, book series sharing sessions and other related activities.	Held one session on Taiwan's power industry cultural path.	Organize special cultural exhibitions, forums and other related activities, with a total of more than 25 events, or a total of 150,000 participants.		
			Preserved electricity industry cultural sites.	1. The "Taiwan Electricity Heritage Collection Center" was opened in December 2023 and began organizing and digitizing cultural relics.	1. Launch the Yuan-Hsin Literature and History Library in 2030 as a professional site for research, the display of promotions and the preservation of cultural assets by the Company.		
				2. Permanent exhibition halls for electricity cultural relics have been established in Northern, Central, Southern, and Eastern Taiwan.	2. Establish permanent exhibition halls for electrical heritage in the Northern, Central, Southern and Eastern regions of Taiwan in 2030. Commit to the preservation of local electrical literature. Serve as the main base for the Company's other types of exhibition spaces (museum complex).		





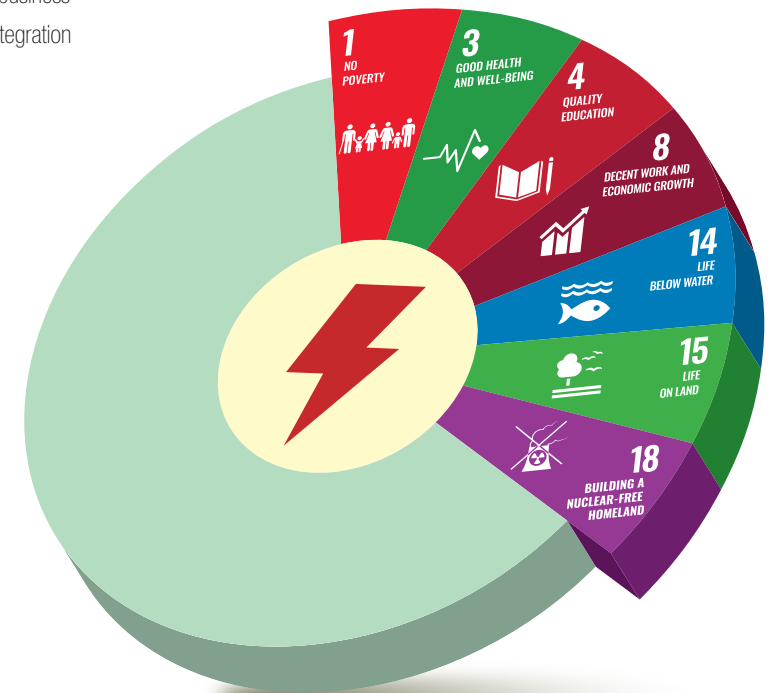
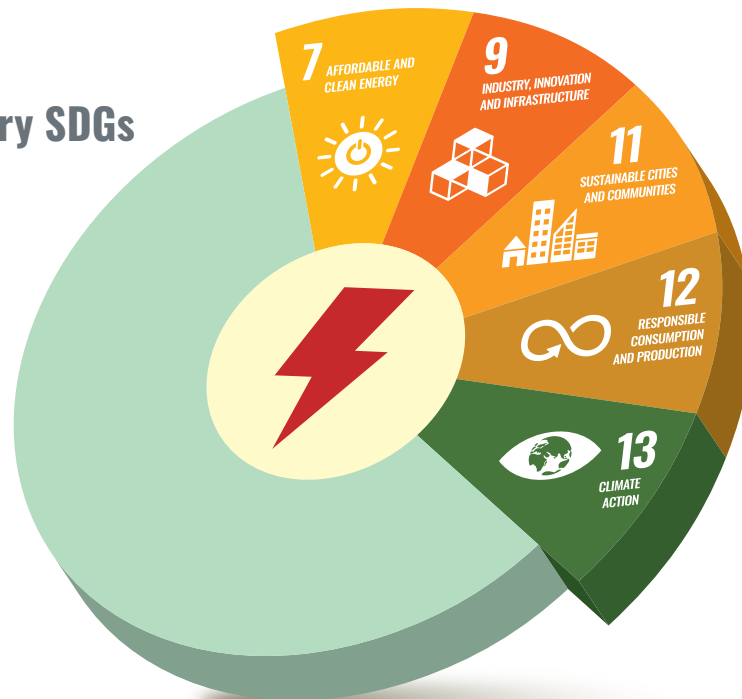
Taipower's Sustainability Projects and SDG Performance

Taipower identified five primary UN SDGs that were most closely related to the Company's operations. These include "SDG 7 – Affordable and Clean Energy," "SDG 9 – Industry, Innovation and Infrastructure," "SDG 11 – Sustainable Cities and Communities," "SDG 12 – Responsible Consumption and Production," and "SDG 13 – Climate Action." Additionally, the Company has included an additional 7 UN SDGs/T-SDGs in its Sustainable Development Plan. These include: "SDG 1 – No Poverty," "SDG 3 – Good Health and Well-being," "SDG 4 – Quality Education," "SDG 8 – Decent Work and Economic Growth," "SDG 14 – Life Below Water," and "SDG 15 – Life on Land." An additional goal has been included by Taipower because of its relevance to the electricity industry and to demonstrate the Company's resolve to work towards meaningful sustainability in its affairs. That goal is designated here as "T-SDG 18 – Building a nuclear-free homeland."

As one of the leading power companies in Asia, Taipower operates on a scale that necessitates the identification of potential risks and future business opportunities that arise from implementing its sustainable development goals. Taipower actively communicates with stakeholders to facilitate the integration of its business strategies with its sustainable development priorities while enhancing core competitiveness and contributing to global sustainability.



Taipower's Primary SDGs



Taipower's Secondary SDGs

Taipower Primary SDGs

7 AFFORDABLE AND CLEAN ENERGY



SDG - 7 Affordable and Clean Energy

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

T-SDG 7 : Ensure access to affordable, reliable, sustainable and modern energy for all



PERFORMANCE HIGHLIGHTS

The national power supply penetration rate has reached **100%**



Proportion of self-produced renewable energy power generation in the Taipower System is **9.9%** (approximately 24.3 TWh)

Wind Power



27 wind farms, **200** wind turbines

Installed capacity of **439.2** MW
Generated **872.1** GWh in 2023
242,000 Households accommodated

Geothermal power generation



1 Geothermal power plant in Yilan Renze

Installed capacity of **0.84** MW
Generated **1.3** GWh in 2023
374 Households accommodated

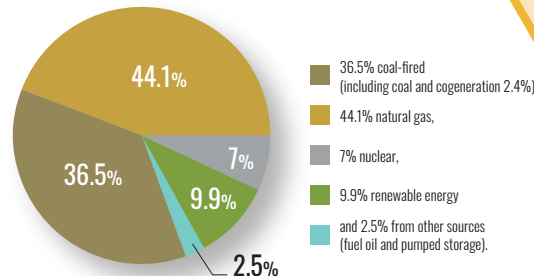
Solar power



56 solar photovoltaic sites

Installed capacity of **287.8** MW
Generated **393.9** GWh in 2023
109,000 Households accommodated

The current power generation ratio



*According to Taipower's open data statistics, the average monthly power consumption for a typical residential user is 300 kWh and the estimated annual power consumption is about 3,600 kWh.

►► Taipower's Sustainable Development Plan for Responding to SDG 7

● Improve Power Supply and Reliability SDG 7.1 T-SDG 7.1

Taipower is proactively assisting the offshore islands in improving their electricity systems to ensure offshore users have access to the same services and quality of electricity as are available on the main island. Currently, generators in Kinmen have sufficient capacity to meet demand. The island's total installed capacity is approximately 113.3 MW, which meets both the current peak power demand of 60 MW, and the expected short-term growth in demand to approximately 65 MW in 2031.



In 2022, Taipower implemented a Wangan Island Microgrid Construction Project in Penghu. The Company plans to build 430 KW of solar photovoltaic power generation, 30 KW of wind power generation, 250 KW of energy storage equipment, and a power management system to assist the diesel generators of Penghu's Wangan Power Plant. This will allow the island to achieve independent management of power generation, energy storage, parallel connection, and power supply, and increase the proportion of renewable energy used on the offshore islands.

● Develop Solar Power Generation SDG 7.2 T-SDG 7.2

In 2008, Phase 1 of the Solar Photovoltaics Project was initiated. By the end of 2023, a total of 56 solar photovoltaic sites with approximately 287.8 MW of capacity had been completed, including the Tainan Salt Field Solar Photovoltaic Project which generates 150 MW of power. Taipower completed the first phase of its green energy project in 2021 and plans to develop additional renewable energy generation systems with a total installed capacity of 115 MW between 2022 and 2027.



● Accelerate Wind Power Generation and Complete Phase 2 of the Offshore Wind Power Project SDG 7.2 T-SDG 7.2

At the end of 2023, Taipower completed its Zhongtun Wind Power Demonstration Project, Phases 1 to 5 of the broader Wind Power Generation Project, Penghu's Huxi Wind Power Project, and Kinmen's Jinsha Wind Power Project. There are currently 18 wind



farms and 179 wind turbines in operation with a total installed capacity of approximately 330 MW. Phase 1 of the Offshore Wind Power Project began commercial operation on December 30, 2021. Construction for Phase 2 of the Offshore Wind Power Project continued to be carried out in 2023, and is expected to complete grid connection in 2025, at which time it will supply 1 billion kWh of green electricity, equivalent to the annual electricity consumption of nearly 240,000 households. The completion of this initiative will reduce carbon emissions by approximately 500,000 tons annually.

● Develop Hydropower and Geothermal Power Generation SDG 7.2 T-SDG 7.2

Taipower has planned a number of small-scale hydroelectric projects at various sites. These include the Hushan Small Hydropower Project, the Jiji South Bank #2 small Hydropower, and the First Phases of other small hydropower projects across Taiwan. Together with the addition of four diesel generators at the Zhushan Branch Plant of the Hsieh-ho Power Plant these projects will have a total installed capacity of 30.8 MW. Thus far, the Jingshan Small Hydropower Project at the Liyutan Reservoir began commercial operations in September 2022, while the remaining projects are all scheduled to begin commercial operations between 2023 and 2024. In addition, Taipower is actively developing diverse renewable energy sources, by combining its power generation expertise with CPC Corporation's drilling technology to jointly develop geothermal power in Renze, Yilan. This project was officially launched on October 24, 2023, and currently generates approximately 4.7 GWh of green electricity annually, the equivalent of the annual electricity consumption of nearly 1,200 households.



● Conduct Research on Vehicle-to-Grid Power SDG 7.A T-SDG 7.1

In 2019, Taipower started research on the use of electric vehicles, charging and exchange stations as providers of auxiliary services to the grid. The concept was verified in 2020 with the successful transmission of electricity from vehicles to the grid and the establishment of an automatic frequency modulation ancillary service. In 2021, Taipower partnered with Gogoro, the domestic leader in electric scooter manufacturing and services, to build the world's first electric scooter Vehicle-to-Grid (V2G) battery exchange station. In the future, apart from meeting demand from electric scooters, battery exchange stations are expected to transform into decentralized energy storage stations throughout the country. This will effectively convert them into "virtual power plants" when needed. This will strengthen grid stability and help to create smart cities.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



SDG - 9 Industry, Innovation and Infrastructure

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

T-SDG 9 : Build affordable, safe, environmentally friendly, resilient and sustainable transportation

T-SDG 8 : Promote inclusive and sustainable economic growth, full and productive employment, and decent work for all



PERFORMANCE HIGHLIGHTS

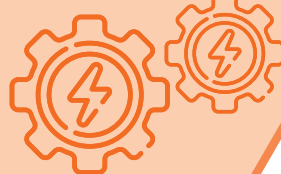
Completed the installation of **170** km of optical cables, **62** sets of transmission equipment, and provided **2,904** communication circuits in 2023



As of the end of 2023, Advanced Metering Infrastructure (AMI) consisted of **2.707** million installations representing **79.2%** of the country's power consumption information



The ratio of power recoveries for downstream automated feeders (within **5** minutes) reached **56%**



The construction of **68** IEC 61850 smart substations was completed in 2023



Real-time monitoring of renewable energy reached **6.3** GW in 2023



The Network Management System developed, tested and integrated an entire IP Multi-Protocol Label Switching (MPLS) system (Phases 1 to 4) was completed in 2023



▶▶ Taipower's Sustainable Development Plan for Responding to SDG 9

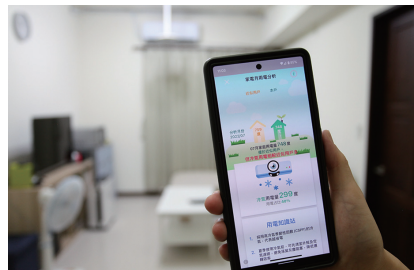
● Strengthen the Infrastructure of the Power Grid SDG 9.1

The overall strategy of strengthening the resilience of the power grid was adopted as part of Taipower's Power Grid Resilience Enhancement Project which seeks to move towards net-zero emissions from electricity by 2050. The project includes three main themes, ten aspects, and a total of 91 sub-projects with a total cost of NT\$564.5 billion. The project is divided into three stages of 2 years, 5 years and 10 years. These stages are focused on "dispersing" key equipment and reducing the risks of a concentrated power grid, "strengthening" existing equipment to improve safety and stability; and "preventing" domino effects from incidents to prevent widespread blackouts and improve all aspects of the power system's resiliency.



● The Taiwan Power App - AMI Creates Impressive Services SDG 9.4 T-SDG 8.12

Taipower combined mobile digital technology and big data applications from smart meters (AMI) to launch an exclusive Taipower mobile app. The app creates an integrated platform that provides features such as applications for services, electricity bill inquiries, case management, and push notifications. It also offers an AMI service section in coordination with the deployment of smart meters. As of the end of December 2023, the number of users reached 1.6 million and the number of bound customer numbers was 2.177 million (including 372,000 low-voltage AMI accounts). Taipower continues to improve the app's functionality to enhance the convenience of e-services.



● Launch an Energy Trading Platform SDG 9.4 T-SDG 8.13

Taipower officially launched its first Energy Trading Platform in 2021, and, in so doing introduced private generation resources into the market. The platform utilizes the Day-ahead Ancillary Service Market trading arrangement to offer three tradable commodities: frequency responsiveness reserve, real-time reserve, and supplementary reserve. Following the launch of the Day-ahead Ancillary Services Market, Taipower actively developed and launched a

second trading market – a Capacity Reserve Market. As of the end of 2023, 74 companies with a total installed capacity of 935.7 MW participated.

● Small Amounts of Green Electricity Assist SMEs with Energy Transition SDG 9.4 T-SDG 8.13

In 2023, the annual transaction volume of the green electricity trading market reached 1.73 TWh. Subsequently, Taipower launched a Small Amount Green Electricity Sales Pilot Program to provide domestic enterprises with diverse green electricity options and invigorate the green electricity trading market. A self-installed green electricity capacity of approximately 50 GWh was anticipated by the end of 2023. This capacity is sold by tender in batches on the Green Electricity Matching Platform of the National Renewable Energy Certification Center, Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs. Taipower is now planning to implement a Green Electricity Distribution Sandbox Project on a trial basis. For single enterprises with several different plants, the Sandbox's inclusion of a flexible distribution mechanism will minimize the problem of residual electricity, and help enterprises obtain and use green electricity more effectively.



● Power Plant Renewal and Expansion SDG 9.4 T-SDG 8.12

Taipower is prioritizing the development of renewable energy in coordination with the government's energy transition policy, and plans to gradually reduce coal consumption and carbon emissions by reducing the use of existing subcritical coal-fired units and constructing new gas-fired units. The use of these reliable new gas-fired units will ensure system stability. At this time, the feasibility of retaining older equipment for emergency operation is being evaluated with consideration to national security.



11 SUSTAINABLE CITIES AND COMMUNITIES



SDG11 - Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable

T-SDG 11 : Make cities and human settlements inclusive, safe, resilient and sustainable



PERFORMANCE HIGHLIGHTS



The Provincial Highway
26 Underground Cabling and
Tree Planting Project 2.0

In 2023, the
Company sponsored
4,000 neighborhood
work projects and made
approximately NT\$**100** million
in donations



Taipower
Headquarters
invested approximately
NT\$**428,000**
in art rentals, events
and exhibitions



In 2023, the
capital expenditure on
environmental protection
was approximately
NT\$**5.869** billion. Recurring
expenses associated with environmental
protection were about
NT\$**3.485** billion



Taipower continues
to inventory and preserve
cultural assets. Thus far,
there have been about **400**
internal inventories, along with the
associated archiving, digitization, and
packaging of cultural relics



In 2023, Taipower
organized **12** charitable
and promotional events,
including the Caring Train,
Ball Fun Power Camp,
and the Taipower Cup
Tournament



►► Taipower's Sustainable Development Plan for Responding to SDG 11

● Implement Vehicular Electrification and Decarbonization SDG 11.2 T-SDG 11.2

In response to domestic development trends and the government's policy of promoting electric vehicles, Taipower is shifting from its role of power facilitator to becoming an active participant. In order to help the public better understand electric vehicle power consumption, statistics have been provided to 1,665 units and at 13 locations. A total of 51 charging stations have also been completed as of the end of December 2023.

In November 2023, Taipower announced a tender for enhancing the functionality of its Distributed Renewable Energy Advanced Management System (DREAMS). The Company is also developing a charging facility integrated management demonstration system. Subsequently, four charging stations, located and operating in Northern, Central, and Southern Taiwan, have been selected as demonstration sites.



● Cultural Contributions and Inventory of Cultural Assets SDG 11.4 T-SDG 11.4



2023. It is the first cultural relics center established by a state-owned enterprise. The cultural relics center has four core functions: it serves as a professional collection center, establishes a sharing platform, provides access to digital collections, and acts as a cultural exchange center.

Taipower is gradually developing a Taiwan Power Industry Cultural Pathway. The Pathway is based on an inventory of the cultural assets of Taiwan's power industry, and is gradually fostering discourse and an implementation framework. This has allowed Taipower to find more potential anchor points for the industry's cultural pathway, so that a complete network can be planned with different themes. Taipower is continuing the process of inventorying and preserving cultural assets, and completed a cultural relics center in July

● The Provincial Highway 26 Underground Cabling and Tree Planting Project 2.0

SDG 11.5 T-SDG 11.5

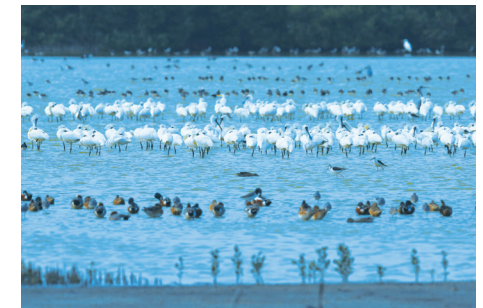


The Hengchun area of Pingtung County is often seasonally hit by typhoons and heavy winds. These weather events often break tree branches and crush power lines, causing power outages and road safety concerns. In July 2022, Taipower, in a joint effort with the Directorate General of Highways, Chunghwa Telecom, and the Forestry Bureau, mobilized its entire workforce to conduct an underground cabling project along the 141-kilometer-long Provincial Highway 26 Road. This project aimed to transform the road into a Scenic Provincial Highway while ensuring a more reliable power supply. The Provincial Highway 26 Road Underground Cabling and Tree Planting Project-2.0, which was originally projected to be accomplished in sections over a 10-year period, was successfully completed within a remarkable 160-day timeframe. This accomplishment will greatly mitigate the area's frequent seasonal and weather-related power outage problems.

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● Implement Environmental Impact Assessments SDG 11.6 T-SDG 11.6

Taipower strives to minimize its impact on the environment, and actively carries out effective environmental impact management. The Company minimizes the impact of development activities on the environment and the surrounding community through the framework of pre-development assessments and communication, public reviews, post-assessment improvement plans, and continuous monitoring during construction. A clear measure of Taipower's commitment to environmental protection is seen in the approximately NT\$5.869 billion spent on environmental protection, with a further NT\$3.485 billion in reoccurring expenses spent in 2023.



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



SDG12 - Responsible Consumption and Production

Ensure sustainable consumption and production patterns

T-SDG 12 : Promote the green economy and ensure sustainable consumption and production models



PERFORMANCE HIGHLIGHTS

The wastewater-reclamation ratio at thermal power plants reached **75.5%**



Completed and released **"Taipower Circular Construction Implementation Guidelines"**



The value of auctioned scrap cables and other metals in 2023 was **NT\$1.503 billion**



Total coal ash production in 2023 was **2.089 million tons**

Taipower's Power-Saving Service Team visited **4,527** customers in 2023, with an estimated resulting power saving of **106.23 GWh**



In 2023, the reuse rates for coal ash production and desulfurized gypsum were **94.8%** and **100%**, respectively.



Provided communities and organizations with power-saving advocacy services. A total of **1,449** sessions were held and attracted **160,000** participants

►► Taipower's Sustainable Development Plan for Responding to SDG 12

● Research, Develop, and Promote Coal Ash Reuse and Recycling SDG 12.2 T-SDG 12.2

In 2023, the production of coal ash reached approximately 2.089 million tons with a reuse rate of 94.8%. Taipower has been actively involved in the research, development, and promotion of coal ash reuse technologies while working to strengthen its coal ash production management. The Company aims to achieve diversified reuse for its coal ash, increase reuse rates and add value in alignment with the government's goals of reducing waste and promoting a green energy and carbon reduction agenda.

● Innovative R&D of Crossarm Utility Pole Materials SDG 12.4 T-SDG 12.4

Currently, about 10 million crossarm utility poles remain in use in Taiwan. To improve safety for construction workers, Taipower developed an innovative thermoplastic polymer for crossarms. The use of these new crossarms has the additional benefit of solving the problems of corrosion and rot that were common on older light steel and wooden crossarms. The robustness of the new polymer will save up to NT\$250 million in maintenance costs over ten years. This serves as an excellent example of the implementation of the core ESG sustainability values of environmental protection, social responsibility, and company management.



● Work to Realize Sustainability and Jointly Build an ESG Supply Chain SDG 12.7 T-SDG 12.7

As a state-owned enterprise and the largest electricity provider in Taiwan, Taipower has long been committed to corporate sustainability. While fulfilling its social responsibilities, it continues to cooperate with national sustainability policies and respond to national sustainability trends in hopes of driving the power equipment industry supply chain towards sustainability. Beginning in 2023, Taipower officially included its supply chains within the scope of its sustainability management, and began using the Materials Department as its demonstration unit. The Company has taken action to upgrade its supply chain management to sustainable supply chain management. As of 2023, the Company has signed supply chain contracts for digital collaboration with 6 banks, including Taipei Fubon Bank, Mega Bank, Bank of Taiwan, Chang Hwa Bank, Taiwan Business Bank, and Land Bank. The total contracted value of supply chain financing is approximately NT\$1.78 billion and the contracts will strengthen financial support for



suppliers. At the same time, Taipower began implementing supplier ESG management for company-level materials on a trial basis. This has entailed learning about patterns of the material supply chain through procurement analysis, upgrading QCDS to QCDS (C-carbon and cost, S-sustainability), and will ideally lead smaller companies to enhance the capabilities of their supply chain partners, thereby allowing the entire industry to jointly develop an eco-friendly and socially responsible supply chain.

● Demand Side Management Measures SDG 12.8 T-SDG 12.a

Taipower's demand-side management is primarily driven by demand response and energy conservation. The Company seeks to create an atmosphere of energy-saving, promote demand response, and encourage energy-saving practices within the general public. By inspiring a collective drive towards energy conservation, Taipower hopes to reduce peak loads and promote energy efficiency as a nationwide movement. This will drive changes in societal behavior, and encourage active participation by the entire population in energy conservation and carbon reduction. Analysis suggests that if time-of-use (TOU) rates are not implemented in 2023, the peak load at night will increase by 1.23 GW when compared to 2021 (old time zone) levels. In 2023, energy-saving analysis and guidance was provided to 251 companies across various industries. For example, after an art center in Taichung underwent energy-saving analysis by the Company, the manufacturer gradually switched to high-efficiency air conditioning equipment, thereby saving up to 216 MWh of electricity every year.



13 CLIMATE ACTION



SDG13 - Climate Action

Take urgent action to combat climate change and its impacts

T-SDG 13 : Take urgent action to combat climate change and its impact



PERFORMANCE HIGHLIGHTS

Emission intensity at thermal power generating units (GHG emissions) in 2023 decreased from 2016 levels by **8%**



Completed a parallel research plan for the climate change adaptation of the power generation system and established an independent management mechanism for each power plant

Completed a parallel research plan for the climate change adaptation of the power generation system in 2023, and conducted a climate change risk assessment



The gross thermal efficiency of thermal power plants (LHV, gross) increased year on year, from

46.26% in 2022

to **46.63%** in 2023.



Released a video and project results report on the Hsinta Power Plant's ecological integration in 2023



Taipower Secondary SDGs

1 NO POVERTY



SDG1 - No Poverty

End poverty in all its forms anywhere

T-SDG 1 : Strengthen social care services and economic security for the disadvantaged



PERFORMANCE HIGHLIGHTS

Invested NT\$ **3.026** billion in power development and operational assistance funds that benefited **126** townships/districts



Invested NT\$ **136** million in preferential electricity rates for disadvantaged groups that benefited **169,000** households



The Seeds of Hope Cultivation Project reached **68** college students and served **320** school-age children in 2023



Invested NT\$ **593** million in social care activities that reached approximately **57,000** people



Taipower's Sustainable Development Plan for Responding to SDG 1

Light Up Student Dreams SDG 1.4 T-SDG 1.3

To fulfill its corporate social responsibility, give back to society, and improve public welfare by caring for the disadvantaged, Taipower has offered scholarships since 1990. The scholarships help outstanding students from impoverished households in areas around power plants to pursue their dreams. Over the past 30 years, Taipower has provided a total of approximately NT\$2 billion to nearly 500,000 students.

End-of-Year Care Program for Isolated Seniors SDG 1.3 T-SDG 1.3

Since 2005, all of Taipower's power plants and district business offices have invited elderly people that live alone to gather for a celebratory meal. Each unit also assists the elderly residents with shopping for Lunar New Year goods and delivers care packages to them. The program is one way that Taipower exercises its corporate social responsibility, and serves to help isolated, elderly people to enjoy the holidays. Through the COVID-19 pandemic, the annual event was replaced with individual interactions to reduce the risk of large gatherings. Staff accompanied elderly residents on shopping excursions and provided them with Lunar New Year dishes and gift vouchers for daily necessities. Staff also assisted with cleaning homes. Approximately 4,000 participants were involved in these activities.



Seeds of Hope: The Hope Cultivation Project SDG 1.4 T-SDG 1.4

Since 2005, Taipower has been providing summer job opportunities for underprivileged indigenous college students from Taitung, Hualien, and Pingtung Counties. This initiative aims to alleviate the financial burden on participating students. The program reached 68 college students and served 320 school age children in 2023. The program illustrates Taipower's commitment to deeply engage with indigenous communities, not only by providing students with opportunities for personal growth and development, but also by strengthening their connections to their hometowns and allowing them to give back to their communities.

Purchasing Products for Groups with Disabilities SDG 1.5 T-SDG 1.5

Each year, Taipower purchases souvenirs for distribution at its annual general meeting. In 2023, Taipower worked with the Maria Social Welfare Foundation to produce these souvenirs. Works of art created by people with disabilities during art therapy were knit into eco-friendly socks using eco-friendly yarn. This facilitated the recycling and reuse of approximately 140,000 PET bottles and created job opportunities for 30 people with disabilities.

3 GOOD HEALTH AND WELL-BEING



SDG3 - Good Health and Well-being

Ensure healthy lives and promote well-being for all at all ages

T-SDG 3 : Ensure healthy lives and promote well-being for all at all ages



▶▶ Taipower's Sustainable Development Plan for Responding to SDG 3

● Load Reduction in Response to Air Pollution Levels SDG 3.9 T-SDG 3.9

One example of Taipower's environmental commitment can be found in its reduction of coal use. Since November 2017, power plants have reduced the load of thermal-power (coal, fuel) units when system supply is secure. Reductions include both voluntary and autonomous actions. In 2023, load reductions occurred 1,690 times, bringing the cumulative number of reductions to 7,372 as of the end of December 2023. This cumulative total represents a reduction of 74,729.21 GWh.



● Taipower's Occupational Health Services SDG 3.8 T-SDG 3.4

Taipower works to ensure worker health and safety through its "Regulations Governing Labor Health Protection." The Company employs or contracts medical personnel to take charge of on-site health services, occupational disease prevention, and other health protection matters. As of December 2023, 66 of the Company's units had arranged for contract physicians to create a friendly workplace environment by providing on-site health services, and also assisting in labor health protection and health management.

● Health Screening Activities SDG 3.8 T-SDG 3.4

To help employees at Taipower's headquarters understand their individual health conditions, Taipower and Taipei City Hospital's Zhongxiao Branch jointly held a "Health Screening Activity." Through the event a total of 198 people received screening: 16 were screened for oral cancer, 23 for colorectal cancer, 51 people took Pap smears, and 23 people had mammograms while 48 people received health screenings, and 37 people were tested for hepatitis B and C.

● On-the-job Training in Occupational Safety and Health SDG 3.8 T-SDG 3.4

Taipower provides employees with the safety and health training necessary to perform their work and prevent disasters in accordance with regulatory requirements. The Company also hopes to open employees' minds about occupational safety and health management and implement it in daily life.



PERFORMANCE HIGHLIGHTS

In 2023, the emission intensity of air pollution

decreased

68.5%

compared to 2016.



As of 2023, **66** units had arranged for contract physicians to provide health services



Load reductions (both voluntary and through autonomous action) occurred

1,690 times.

4 QUALITY EDUCATION



SDG4 - Quality Education

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

T-SDG 4 : Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



PERFORMANCE HIGHLIGHTS



The Taipower TV / YouTube Channel accumulated more than **5** million views in 2023. The Taipower Facebook page currently has more than **260,000** followers, with a total reach of nearly **40** million in 2023.



The Firefly Children's Reading Project promoted education in remote areas and served **4,500** people in 2023.



D/S ONE

has attracted over **210,000** visitors and gained more than **35,000** followers on Facebook.



In 2023, Taipower organized **1,449** power conservation community events that attracted about **160,000** participants.

Taipower's Sustainable Development Plan for Responding to SDG 4

Taipower TV / YouTube Channel and Facebook Page SDG 4.7 T-SDG 4.6

The Taipower TV / YouTube Channel was established on May 1, 2013. In 2023, it accumulated more than 5 million views. The Taipower Facebook page currently has more than 260,000 followers, and reached a total of nearly 40 million people in 2023. The page's content was reposted 4,377 times in online news and 21,548 times on Facebook, and generated a total of 60,241 responses.



Smart Hands-On Electricity Generation At Taipower D/S ONE SDG 4.7 T-SDG 4.6

Taipower has established the nation's first renewable energy exhibition hall – Taipower D/S ONE. The hall is connected to the Banqiao Triple Transportation Junction by an elevated corridor and was designed to meet international standards and become a significant and engaging educational venue for learning about renewable energy.

Reading Promotion: The Firefly Children's Reading Project SDG 4.2 T-SDG 4.2

In 2007, Taipower established multiple after-school programs for children in remote areas of Hualien and Taitung Counties as a means of promoting ethics and art education. Taipower uses mobile library vans, summer reading camps, and year-end Angel Club activities to provide underprivileged children in remote areas with assistance and resources. The Company seeks to reduce the gap between urban and rural resource availability, and served about 4,500 people in 2023.

Community Power-Saving Campaigns SDG 4.7 T-SDG 4.6

Taipower provides free electricity-saving promotion services to communities and associations. These services consist of gatherings where electricity saving can be encouraged, knowledge and experience related to electricity saving can be shared. Effective electricity-saving techniques, such as the use of high-efficiency energy-saving products and suggestions for improvements in electricity use by public facilities can also be promoted.



8 DECENT WORK AND ECONOMIC GROWTH



SDG8 - Decent Work and Economic Growth

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

T-SDG 8 : Promote inclusive and sustainable economic growth, full and productive employment, and decent work for all



PERFORMANCE HIGHLIGHTS

Internal Human Resource Training Program

had a total of **84,000** participants complete on-the-job training in 2023.



The Taipower Olympics

2023 Skills Competition

attracted **72** units and a total of **1,210** contestants.



In 2023, **99.2%** of employees were covered by collective bargaining agreements, and a total of **12** collective bargaining agreement meetings were held.



▶▶ Taipower's Sustainable Development Plan for Responding to SDG 8

● Full Employment and Equal Pay for Equal Work SDG 8.5

Taipower salaries and bonuses are based on the level of position held and are not differentiated by gender or other factors. In 2023, the salary ratio between males and females was 1.49:1.4:1 compared to the local average salary. The ratio for pay by gender, when based on the same position and level, is approximately 1:1 for general employees and 1:1 for management positions.

● On-the-Job Training T-SDG 8.5

Taipower has a complete talent training system. The Taipower Training Center formulates and implements training for core competencies through the system and in accordance with employee needs. The center also integrates training and application throughout the system, thereby ensuring talent retention.

● Labor-Management Communication and Collective Bargaining SDG 8.8 T-SDG 8.7

To facilitate labor-management communication, Taipower provides multiple channels for employees to express their opinions and needs. The Company continuously strives to create a labor-management environment that fosters satisfaction and trust. Taipower regularly organizes labor-management meetings, keynote speeches, and training courses. Taipower has also signed a collective bargaining agreement with the Power Labor Union. To date, 99.2% of employees are covered by the collective bargaining agreement. A total of 12 collective bargaining agreement meetings were held in 2023.

● Taipower Olympics – 2023 Skills Competition SDG 8.2 T-SDG 8.2

Taipower promotes "innovation, inheritance, and techniques" through organized skill competitions. There are 34 categories of competition which include both traditional core technologies of the power industry and innovations such as big data applications. By 2023, the annual competition was in its 55th year. The skills competitions cultivate employees' teamwork abilities and encourage them to develop innovative and valuable new business models.



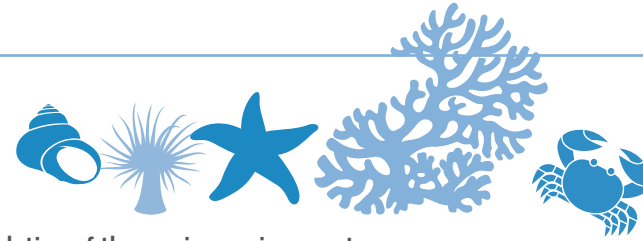
14 LIFE BELOW WATER



SDG14 - Life Below Water

Conserve and sustainably use the oceans, seas and marine resources for sustainable development

T-SDG 14 : Conserve and sustainably use marine ecosystems, and prevent the degradation of the marine environment



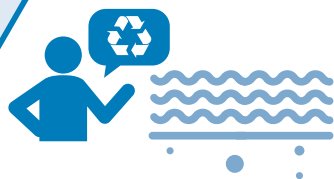
PERFORMANCE HIGHLIGHTS

Released fish fry at thermal power plants and offshore wind farms. A total of **6** releases were held in 2023, with a total of **1.6** million fish fry released.

The Linkou Marine Pasture Project has farmed more than **10** species of fish and **3** species of macroalgae

Taipower has been jointly cleaning up beaches for 30 years. In 2023, a total of **26** units and local organizations, including power plants and districts business offices from across Taiwan, joined together to clean up beaches. More than **6,500** people joined together to clean up beaches in **15** coastal areas across **10** counties and cities.

Statistics show that in the past 10 years, Taipower has conducted more than **150** beach cleanups, deployed more than **70,000** employees, and removed a total of nearly **238** tons of garbage, the equivalent of about **12,000** large bags of garbage, thereby reducing carbon emissions by about **490** tons.



Taipower's Sustainable Development Plan for Responding to SDG 14

Fish Fry Releases at Offshore Wind Facilities and Power Plants SDG 14.2 T-SDG 14.2

Taipower releases fish fry into the sea near thermal power plants and offshore wind farms. In 2023, about 1.6 million fry were released into the waters near the Taichung, Datan, Linkou, Hsinta, and Tonghsiao plants.

Marine Pasture Project SDG 14.2 T-SDG 14.2

Marine pastures use cultivated algae to absorb carbon dioxide and make feed for farmed fish. Taipower's marine pasture project helps the Company to develop a circular economy and promote eco-friendliness. The warm water discharged by power plants is utilized for year-round farming and to improve the efficiency of power plant resource use.



The Hsieh-ho Renewal Plan Implements Marine Protection and Strives to Achieve a Zero Net Loss of Corals SDG 14.2 T-SDG 14.2

When building gas storage tanks in Keelung, Taipower considered local opinions and the need to protect marine ecology. The Company subsequently altered its planned land reclamation area eastward to the turning basin in the original development area. This move will significantly reduce the size of the reclaimed area. It will also aid in the preservation of the submerged breakwater coral and the area occupied by the local Great Scallop (*Pecten maximus*) population – both issues of concern to various stakeholders. The revised plan puts into action the goals of SDG 14 – Ocean Sustainability, and will allow for a zero net loss of coral.

Guarding the Coast for 30 Years! Taipower's 2023 Joint Beach Cleanup SDG 14.2 T-SDG 14.2

Taipower began supporting World Cleanup Day in 1994 and has since organized a joint beach cleanup before the Mid-Autumn Festival every year. The event has been held for 30 years as of 2023, and a total of 26 units and local organizations, including power plants and districts business offices from across Taiwan, joined together to clean up beaches. More than 6,500 people jointly cleaned up beaches in 15 coastal areas across 10 counties and cities. Statistics show that in the past 10 years, Taipower has conducted more than 150 beach cleanups, deployed more than 70,000 employees, and removed a total of nearly 238 tons of garbage, the equivalent of about 12,000 large bags of garbage, thereby reducing carbon emissions by about 490 tons and contributing to environmental sustainability.



15
LIFE
ON LAND

SDG15 - 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

T-SDG 15 : Conserve and sustainably use terrestrial ecosystems to ensure the persistence of biodiversity and prevent land degradation



PERFORMANCE HIGHLIGHTS

The nesting box utilization rate in the pole area of the Taixi Land-based Wind Power Plant in Yunlin reached **96%** and 95% in the windbreak forest area reached **95%**



Released a video and project results report on Hsinta Power Plant's ecological integration.

Planted a total of nearly **280,000** trees

▶▶ Taipower's Sustainable Development Plan for Responding to SDG 15

● Hsinta Power Plant's Yongan Wetland [SDG 15.1](#) [T-SDG 15.1](#)

Taipower has reduced the area of the Yongan Wetland slated for development in order to avoid hot spots for bird habitats. The overall plan for the area now includes a 41.25-hectare wetland protection zone, a 15-hectare ecological buffer zone, a green belt, and conservation lands. Two-thirds of the area is reserved for environmental protection, while water level adjustment methods are used to increase bird diversity, and scientific management is used to make it a suitable habitat for diverse species of animals and plants. Currently, there are more than 130 species of birds, 20 species of fish, 50 species of shellfish, and 30 species of dragonflies. Hsinta Power Plant will use the "Coastal Wetland Ecological Corridor Bird Paradise" as a blueprint for preserving the flood prevention and bird diversity functions of the Yong'an Wetland, and encouraging in-depth and sustainable cooperation with communities to eliminate invasive species and restore habitats while gradually implementing ecological protection actions when building power plants, and cooperating with partners to promote and strengthen environmental education.



● Afforestation on Arbor Day [SDG 15.2](#) [T-SDG 15.2](#)

Taipower supports greenhouse gas (GHG) reduction and environmental greening by jointly implementing afforestation projects with county and city governments, township offices, and schools. A total of approximately 226,000 trees have been planted. Taipower has also planted more than 50,000 trees on the land of its power plants, and nearly 280,000 trees have been planted. In 2023, Taipower's reduced its thermal power generation emissions by 320,000 tons, which is the equivalent to planting more than 30 million trees or approximately 822 times the annual carbon absorption of Daan Forest Park.



● Taixi Wind Power Plant Bat Nesting Boxes [SDG 15.5](#) [T-SDG 15.5](#)

The Taixi Wind Power Plant uses the "Green Pearl of Ecological Conservation on the West Coast" as a blueprint for its vision of improving ecological integration by tracking the progressive migration of bat nesting box use, deepening local partnerships to shape Taipower's positive image, and preserving bat ecology and stable wind power generation. Between July 2020 and October 2023, 40 inspection surveys were completed, and, in that time, a total of 1,566 bats have used nesting boxes. The nesting box utilization rate in the electric pole area reached 96%, while usage in the windbreak forest area reached 95%.

18 BUILDING A NUCLEAR-FREE HOMELAND



T-SDG18 - Building a Nuclear-Free Homeland



PERFORMANCE HIGHLIGHTS

The operating license for Reactor 1

at the Second Nuclear Power Plant expired on December 27, 2021, and the unit entered the decommissioning stage.

The operating license for Reactor 2

at the Second Nuclear Power Plant expired on March 14, 2023, and the unit entered the transitional stage for decommissioning the following day.



Taipower joined the Nuclear Procurement Issues

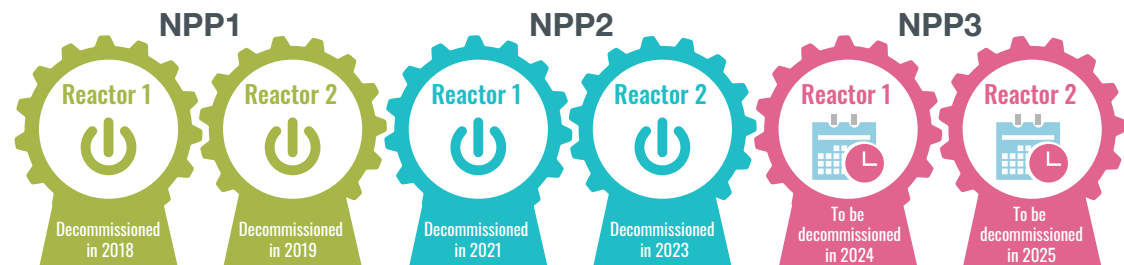
Corporation (NUPIC) of the United States and regularly participates in meetings to obtain the latest information from the international community



▶▶ Taipower's Sustainable Development Plan for Responding to T-SDG 18

● Taipower's Nuclear Power Plant Decommissioning Schedule T-SDG 18.1

Taipower is decommissioning its nuclear power plants in accordance with the government's nuclear-free homeland policy. Taipower has stopped all uranium procurement as the current uranium inventory is sufficient for the operation of nuclear power plants until they are decommissioned. A total of three nuclear power plants have been commissioned in Taiwan. The estimated and actual decommissioning schedule is as follows:



● Ensure Nuclear Power Safety with Defense-in-Depth T-SDG 18.4

Taipower adheres to the concept of defense-in-depth form managing matters related to nuclear energy. This requires the highest standards of design, construction, and supervision of quality control for nuclear energy facilities during the design phase. Subsequently, to ensure the safety of nuclear energy there are four lines of defense, (1) prevention, (2) mitigation, (3) emergency preparedness, and (4) ultimate response guidelines (strategy) to minimize risk.

● Nuclear Energy Management and Incident Response Mechanisms T-SDG 18.4

Nuclear accidents at Taipower are divided into three categories based on the potential degree of impact: (1) Emergency alert, (2) Plant emergency, (3) General emergency. Taipower conducts an emergency response plan drill at each operating/decommissioned nuclear power plant every year. The drills can be divided into "in-plant drills" or "nuclear safety drills." The nuclear safety drill is conducted by Taipower in cooperation with the competent authority and is held at a different nuclear power plant every year. During the drill, a general mobilization is conducted with the central and local governments, military police, and medical institutions. Nuclear power plants that do not participate in the nuclear safety drill that year conduct in-plant drills. Taipower invites experts and scholars to form drill assessment teams, in addition to representatives from competent authorities, to evaluate the response measures of these drills so that the emergency response plans and actions can be gradually improved.

CONCLUSION

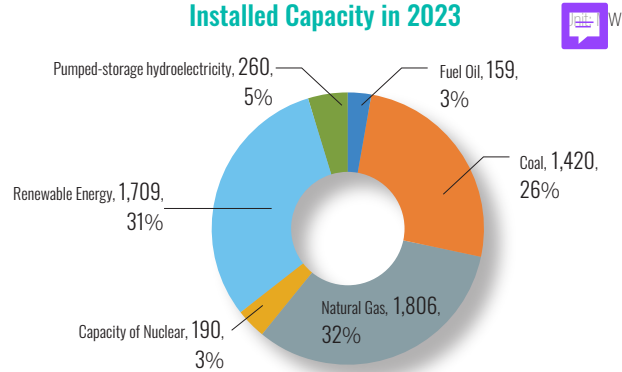
As one of the leading companies in the Asian power industry, Taipower has developed sustainable development plans to fulfill its SDGs and is ahead of schedule in addressing important sustainability issues such as energy transformation, digital transformation, and developing a circular economy. However, a comprehensive observation of sustainable development trends has shown that there remain many uncertainties and emerging risks for the future of the power industry. Taipower must adopt open and innovative approaches to increase the resilience of the Company and to face future challenges.

Taipower is committed to pushing forward sustainable development and has established a sustainable development plan. The plan begins with five development themes that determine the Company's short, medium, and long-term sustainable development goals and actions. Moreover, Taipower is devoted to communicating with stakeholders, and has spared no effort in pursuing sound environmental, social, and corporate governance. In the future, Taipower will continue to maintain its enthusiasm with a vision of "transforming into a prestigious, trustworthy world-class power utility group," while continuing to expand its sustainable influence.

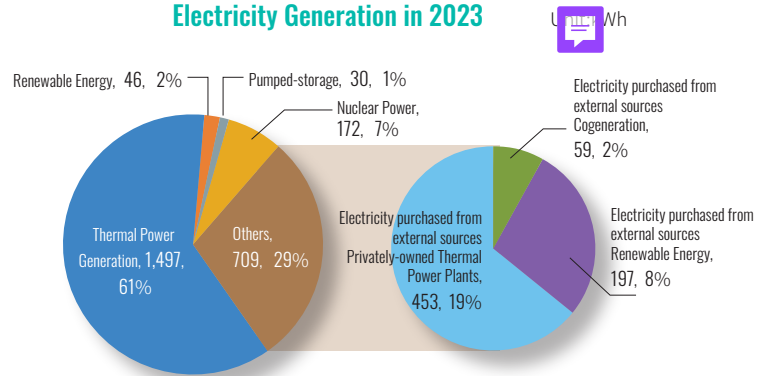


APPENDIX

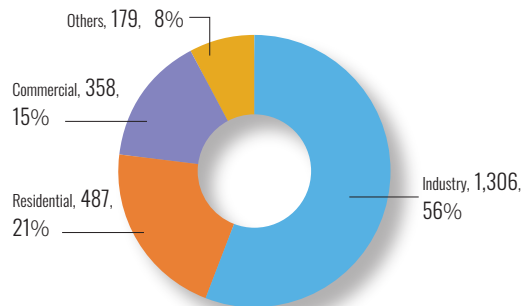
Installed Capacity in 2023



Electricity Generation in 2023



Electricity Retailing in 2023



Financial Performance from 2021 to 2023

Year	Total assets	Operating revenue	Pre-tax profit (loss)	Equity
2021	2,205,847	620,970	22,348	350,932
2022	2,325,603	661,878	(227,217)	127,351
2023	2,565,450	780,984	(198,510)	132,177

Notes:

1. Taipower is a state-owned enterprise and, according to law, its final accounts are subject to review and certification by the National Audit Office. At the time of publication, the financial performance for 2023 has not been reviewed and certified by the Office and is thus reported according to the numbers resulting from audits by certified public accountants.
2. The numbers for 2021 and 2022 have been reviewed and finalized. Following the completion of this process, there have been some changes to the disclosures made in the 2021 and 2022 Sustainability Reports.

Power Reliability and Performance from 2021-2023

		2021		2022		2023	
		Target	Performance	Target	Performance	Target	Performance
The average duration of outages (minutes / household • year)	Working blackout	12.213	11.732	12.176	11.298	12.103	11.292
	Outage blackout	4.487	4.644	4.424	3.638	4.398	3.933
	Total	16.7	16.376 (43.516) ¹	16.6	14.936 (91.285) ²	16.5	15.225
The average number of outages (times / household • year)	Working blackout	0.064	0.059	0.064	0.057	0.065	0.056
	Outage blackout	0.196	0.174	0.196	0.124	0.195	0.130
	Total	0.26	0.233 (0.864) ¹	0.26	0.181 (0.467) ²	0.26	0.186

Notes:

1. Excluding the power outage incidents on May 13 and May 17, the average interruption frequency per household in 2021 was 0.233 (times/household, year), and the average interruption duration per household was 16.376 (minutes/household, year).
2. Excluding the power outage incident on March 3, the average interruption frequency per household in 2022 was 14.936 (times/household, year), and the average interruption duration per household was 0.181 (minutes/household, year).

