2023
Sustainability Report

台灣電力公司
Taiwan Power Company

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Among the large-scale international sustainable development conferences related to sustainable development held around the world every year, the "United Nations Conference of the Parties on Climate Change (COP)" is undoubtedly one of the most noteworthyeye-catching focuses. The 28th Conference of the Parties (COP28) be held at the end of 2023 wasis the first to review time the carbon reduction performance and gaps of each country was reviewed since the Paris Agreement was signed. While It has been somewhat affected by the escalating geopolitical conflicts, . However, the conference produced the first preliminary results for the first time to conduct a global inventory of the carbon reduction process, and achieved goals for the energy transition. The conference's three major consensuses, including a doubling of global renewable energy by 2030, doubling energy efficiency and transitioning away from fossil fuels through a fair, of orderly and equal transformation, are were still a big step forward for the world on its journey the path towards mitigating the climate crisis. In order to aligncomply with the aforementioned international trends and comply with the energy transformation policy of the government, Taipower has adopted strategies to expand green energy, relegate duce the use of coal to a backup and while bridging to gas usebridging, and at the same time promote net-zero emissions from electricity in stages from the supply side, power grid side and demand side. In addition, iIn order to meet the imperative of ensuring needs ofa stable power supply, the Company is it also strengthening s the resilience of the power grid and further buildings power facilities while creating ecological co-prosperity.

Moving Towards Net- Zero Emissions and Accelerating Green Transition

Taipower is following the government's net-zero transition pathway. In terms of planning for future energy supply and demand, Taipower the Company considers three major trends that are affecting of changes power demand: driven by economic growth, the transformation and electrification of all aspects of society, and the zero-carbonization of the power supply. Underlying all of these considerations is the need to in planning to ensure a stable and sufficient energy supply of electricitysource of electricity. On the supply side, in addition to devoting itself to the development of renewable energy, Taipower is also actively promoting the a carbon reduction transformation of at its thermal power plants. Simultaneously, the Company is conducting technological research on converting low-carbon energy into zero-carbon energy through approaches such as carbon capture, utilization and storage technology for gas-fired units, and working with major international manufacturers such as Siemens, Mitsubishi, IHI, and GE through memorandums of cooperation to conduct demonstrations and related technical exchanges for gas-fired / hydrogen and coal-fired / ammonia power generation, as well as other new energy applications in existing generator sets. Taipower is also cooperating with Academia Sinica on decarbonized hydrogen-burning technology. In terms of practical promotion, the demonstration target of 5% hydrogen co-firing in gas units at the Hsinta Power Plant has been achieved. In the future, the proportion of hydrogen will be gradually increased to continue effectively reducing carbon emission as technology progresses from mixed firing to dedicated firing. On the power grid side, Taipower is continuing to promote the integration of renewable energy into the grid. This will necessitate the ongoing introduction of smart grid technology, and the strengthening of the grid's resilience. On the demand side, energy storage will be added and grid construction measures will be taken in addition to planning various energy-saving initiatives, such as those proposed for energy conservation, modified consumption and diagnosis. Time of use rates are also used to smooth the load gap between peak and off-peak hours. All of these diverse measures are illustrative of the Company's multi-pronged approach to building a net-zero electricity emissions blueprint for 2050.

Implementing Power Grid Upgrades and Realize the Blueprint for Resilience

In response to the threat of extreme weather and the growing share of total generation provided by renewable energy, Taipower has proposed a ten-year Construction Plan for Enhancing Power Grid Resilience". With a total budget of NT$564.5 billion in 2022, the plan focuses on dispersion of key equipment to reduce the risk of power grid concentration, strengthening to improve safety and stability, and defense against the spread of blackouts to avoid widespread failures. Together the plan's three points of focus will improve the resilience of the power system in all aspects. The plan further entails 10 major strategies and is divided into three stages of 2 years, 5 years, and 10 years. As of the end of December 2023, 22 sub-projects have been completed, mainly focusing on power grid construction. These include new transmission lines, substation facilities, and energy storage systems, as well as the renewal of existing substations. The completion of these projects has helped to decentralize the power gridpower supply risks, reducing cross-regional power transmission, and providing capacity for growing domestic and commercial power consumption.

The growth in renewable energy has also created an urgent need to allow private, renewable energy to be smoothly connected to the grid. Taipower is complying with the Renewable Energy Development Act by actively implementing projects that strengthen renewable energy grid connection and facilitate the effective use of renewable energy in hotspot counties and cities with development models and concentrated sites that have

potential. In addition, the Company is supporting industrial development by adding power distribution nodes that can directly supplied major electricity users, such as industrial parks. Taipower anticipates that its development of a more complete power grid environment will meet the electricity needs of high-tech parks and the public so that the development of sustainable energy can be accelerated.

Constructing Power Facilities and Promote Ecological Integration

As Taiwan's main electricity supplier, Taipower is actively facing the issues of energy transition and net-zero emissions. Yet, the Company is also actively developing strategies and actions for the sustainable development of Taiwan's ecological environment. In developing power sources, Taipower adheres to the principle of "minimizing damage, maintaining the original landscape and native species." The Company consequently carries out ecological inventory taking and planning for regions, building power facilities that are integrated with the local ecology, helping to maintain biodiversity, and practicing ecological conservation. Taipower has completed surveys of ecological resources at five potential sites for power plants and is gradually implementing related ecological conservation plans. As of 2023, Taipower completed the installation of bat nest boxes at the Taixi Wind Power Plant. The Company has also developed a patent for water level control at the Kaohsiung's Hsinta Power Plant that will help transform the Yongan Wetland into a bird paradise. The Dajia River Power Plant's combination of water and land ecological protection and restoration led to the awarding of Ministry of Environment certification as an environmental education facility certification. Since biodiversity is the foundation of human survival, environmental protection has attracted public attention and become an important social responsibility that Taipower is committed to fulfilling.

Future Prospects

In its role at the helm of the domestic energy industry, Taipower is actively connecting the energy industry to the ESG issues faced in corporate operations, and the United Nations Sustainable Development Goals (UN SDGs). The Company is seeking to be eco-friendly at a reasonable cost, while providing the stable power required for the diverse development of society. In the future, Taipower will continue to follow climate risks and conduct climate change impact assessments, promote its Task Force on Climate-related Financial Disclosures (TCFD) and increase its transparency through the Sustainability Development Committee and corresponding working groups, and value diversity, equality, and inclusion (DEI). The Company will use specific action plans and measurement indicators to guide the direction of the its business strategies, in order to align its operations with both the UN SDGs and the "Taiwan Sustainable Development Goals" (T-SDGs), and to gradually achieve the goal of sustainable development.

Chairman

Tseng , Wen-SHeng

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This is the 18th annual Sustainability Report of the Taiwan Power Company (hereinafter referred to as Taipower or the Company). The contents of this Sustainability Report have been compiled from data submitted by relevant units of the Company. The Company follows the GRI Sustainability Reporting Standards published by the Global Reporting Initiative (GRI), the SASB Standards published by the Sustainability Accounting Standards Board (SASB) and TCFD Recommendations when compiling reports and disclosing information. Taipower has appointed Crowe Taiwan to perform a limited assurance engagement on the selected subject matter information based on the International Standard on Assurance Engagements 3000 (Revised), and the Assurance Engagements Other Than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. The Report was approved by unit managers, the President and the Chairman before publication.

Taipower continues to fulfill its responsibilities to communicate with stakeholders. The Company has integrated the five major themes of its sustainable development into the contents of each chapter to demonstrate its role in the sustainable development of the power industry. The chapters 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 Responsibilities.

Reporting Period

This report covers the period from January 1 to December 31, 2023. To ensure complete disclosure and comparability, the report includes past data as well as information from 2024. Any inconsistency in the reporting period will be noted.

Scope of the Report

This report covers the main entities in Taipower's operations in Taiwan but does not include subsidiary or investee companies. The scope of the information and data includes Taipower's business development, social responsibility and environmental sustainability issues and achievements.

Contact Taipower

Taipower has established a "Taipower Sustainability" section on its website to fully explain its performance results on various sustainability issues to stakeholders. The Company has also formulated a questionnaire to ensure smooth communication with stakeholders. Interested parties may download Taipower's Sustainability Report in either Chinese or English languages from the website. The section about "Information Disclosure" on Taipower's official website is updated regularly to provide the latest statistics on various aspects of management, power generation and the environment. The Company welcomes comments and suggestions on this Sustainability Report. Your feedback is highly appreciated and will help to better meet your expectations in the next Sustainability Report which will be published in the third quarter of 2025. Please feel free to contact us.

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Taipower's Value Chain and Operational Elements

Mission, Vision and Core Values

Mission

To supply stable power for the needs of diverse social developments with an ecofriendly approach at a reasonable cost

Vision

To transform into a prestigious and trustworthy world-class power utility group

Core Values

Integrity, Care, Service, Growth

ESG

Governance

Environment

Society

Sustainable Development Profiles

Provider of Sustainable Power

Leader of Smart Grid Development

Provider of Services for Smart Living

Agent of Environmental Friendliness

Practitioner of Corporate Social Responsibilities

Resource Input

Financial Capital

- **Capital:** NT$480 billion
- **Total Expenditures:** NT$1,140 billion

Equipment Capital

- **Power plants in operation:** 23 (Taipower owned)
- **Total installed capacity of thermal power plants:** 25,520 MW
- **Total installed capacity of nuclear power plants:** 1,900 MW
- **Total installed capacity of renewable energy power plants:** 2,540 MW
- **Installed capacity of pumped-storage hydroelectric facilities:** 2,600 MW
- **Installed capacity of purchased thermal power plants:** 8,330 MW
- **Installed capacity of purchased renewable energy:** 14,550 MW

Natural Capital

Natural Gas:	15,671 million cubic meters
Coal:	26.823 million metric tons
Fuel Oil:	822 thousand kiloliters

Actual value in 2023.

Capital expenditure on environmental protection: NT$5.869 billion
Recurrent expenditure on environmental protection: NT$3.485 billion

Human Resources Capital

- **Total number of employees:** 28,213
- **Number of contracted workers:** 1,140

R&D Capital

- **Number of research projects for the year:** 470
- **R&D expenditures for 2023:** NT$5.6 billion
  (Consisting of NT$4.8 billion in expenditures and NT$0.8 billion in capital expenditures)

Social Capital

- **Number of users:** 15.14 million
- **Power development promotion and assistance fund:** NT$2.963 billion
- **Capacity of demand response:** 2,750 MW
- **Power supply partners:**
  - 9 Independent Power Producers (IPPs)
  - 48 cogeneration power providers
  - 55,385 contracts for renewable energy
    (including solar power, wind power, hydro power and others)

Power Generation ▶ Transmission and Distribution ▶ Electricity Retailing

Power Generation

Taipower's Electricity Generation in 2023

- Thermal power generation: 149.7 billion kWh
- Renewable energy: 4.6 billion kWh
- Pumped-storage hydroelectricity: 3.0 billion kWh
- Nuclear power: 17.2 billion kWh

Electricity Purchased From External Sources in 2023

- Privately-owned thermal power plants:45.3 billion kWh
- Cogeneration: 5.9 billion kWh
- Renewable energy: 19.7 billion kWh

Transmission and Distribution

- **Total length of power transmission lines:** 18,230.3 circuit kilometers (Including overhead power lines and underground cables)
- **Total length of distribution lines:** 422,640 circuit kilometers
- **Number of substations:** 622

Electricity Retailing Electricity Use by User Type

User	Electricity Used (%)	Electricity Used (Billions of KWh)
Industry	56%	130.6
Residential	21%	48.7
Commercial	15%	35.8
Others	8%	17.9
Total sold		233.0 billion kWh

Outputs

- **Earnings before tax:** (NT$198.51 billion)
- **Electricity fee income:** NT$716.1 billion
- **Net amount of generated and purchased power:** 245.5 billion kWh
  - -Power generated: 174.5 billion kWh
  - -Power purchased: 71.0 billion kWh
- **Facility utilization rate: 73.8%**
- **Line loss rate: 3.20%**
- **Greenhouse gas emissions:**
  - 93.48 million tons CO_{2e} (scope 1)
- **Air pollution emissions: (kg/GWh)**
  - Particulate matter emissions (PM): 5
  - Sulfur oxide emissions (SO_x): 77
  - Nitrogen oxide emissions (NO_x): 160
- **Number of new employees:** 1,840
- **Total number of participants in education and training:** 84,736
- **Incidents of work-related injury:** 12
- **Ratio of work-rated injuries:** 0.041%
- **Number of research reports:** 205
- **Number of papers published:** 119
- **Number of patents/intellectual property cases:**
  - 114 in the Republic of China
  - 3 in the Unit ed States
  - 2 in Japan
- **Customer satisfaction rate:** 96.4 percent

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	3 GOOD HEALTH AND WELL-BEING 7 AFFORDABLE AND CLEAN ENERGY 13 CLIMATE ACTION	**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.	3 GOOD HEALTH AND WELL-BEING 7 AFFORDABLE AND CLEAN ENERGY 13 CLIMATE ACTION	**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
			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.		
		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).		
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%).	7 AFFORDABLE AND CLEAN ENERGY 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**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.	1. Expanded intrusion detection systems in program-controlled areas (power distribution and dispatch systems). 2. Introduced KPI and established an evaluation mechanism for information security management. 3. Continued to provide SOC services (including program-controlled site health inspection and isolation test items). 4. 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.	1. Completed the civil engineering and building structure for the Changhua Cloud Data Center on November 28, 2023. 2. 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.	1. Developed an automatic update function for user permissions in the substation equipment asset management system. 2. 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.	7 AFFORDABLE AND CLEAN ENERGY 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	**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.
Provider of Services for Smart Living	Implementing Digital Transformation	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.	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	**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.		
	Refinement of Customer Services	Provide users with value-added service applications.	Taipower app memberships.	1.6 million users.	1.5 million users.		
			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.	41,000 users / year.	Number of cloud payment receipts will reach 300,000 per year.		
			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.	246,000 people.	310,000 people.		
			The proportion of households receiving electricity.	100%	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%.	13 CLIMATE ACTION 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 14 LIFE BELOW WATER 15 LIFE ON LAND	**T-SDG 13:** Take urgent action to combat climate change and its impacts. **T-SDG 12:** Ensure sustainable consumption and production patterns. **T-SDG 14:** Conserve and sustainably use the marine ecosystems to prevent the degradation of marine environment. **T-SDG 15:** Conserve and sustainably use terrestrial ecosystems to ensure the persistence of biodiversity and prevent land degradation.
			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.	75.5%	85%		
			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.	0.20	≦ 0.1	8 DECENT WORK AND ECONOMIC GROWTH 1 NO POVERTY 4 QUALITY EDUCATION 11 SUSTAINABLE CITIES AND COMMUNITIES	**T-SDG 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all. **T-SDG 1:** Strengthen social care services and economic security for the disadvantaged. **T-SDG 4 :** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. **T-SDG 11:** Make cities and human settlements inclusive, safe, resilient and sustainable.
			Contract labor injury rates.	0.31	≦ 0.18		
		Establish a happy workplace culture.	Employee satisfaction with internal communications.	84%	Employee satisfaction with internal communication ≥ 65%.		
			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.	8 DECENT WORK AND ECONOMIC GROWTH 1 NO POVERTY 4 QUALITY EDUCATION 11 SUSTAINABLE CITIES AND COMMUNITIES	**T-SDG 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all. **T-SDG 1:** Strengthen social care services and economic security for the disadvantaged. **T-SDG 4 :** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. **T-SDG 11:** Make cities and human settlements inclusive, safe, resilient and sustainable.
			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. 2. Permanent exhibition halls for electricity cultural relics have been established in Northern, Central, Southern, and Eastern Taiwan.	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. 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).		

Sustainability Performance

Environment

- In order to protect air quality, the Company has undertaken 1,690 instances of load reduction (both voluntary and through autonomous action)
- 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
- Approximately 1.6 million fish fry were released into the sea near power plants and offshore wind facilities in 2023.
- In 2023, the emission intensity of air pollution decreased 68.5% compared to 2016

Society

- In 2023, the total number of participants in Taipower training programs reached 84,736
- In 2023, the total number of participants in health and safety training programs reached 80,106
- In 2023, 897 health and safety-related seminars were held for contractors, with a total of 32,386 participants
- In 2023, 99.2% of all employees were covered by the collective bargaining agreement
- In 2023, there were 4,000 neighborhood care projects and approximately NT$100 million in donations

Governance

- In 2023, Taipower received the highest rating "Excellent" in the Corporate Governance Evaluation of State-Owned Enterprises conducted by the Ministry of Economic Affairs
- As of the end of 2023, the Advanced Metering Infrastructure (AMI) consisted of 2.707 million installations
- Taipower won the Taiwan Corporate Sustainability Report Gold Award, Taiwan Corporate Sustainability Excellence Award, Creative Communication Leadership Award, Information Security Leadership Award, and Gender Equality Leadership Award at the 2023 Taiwan Corporate Sustainability Awards (TCSA)
- The Company completed the installation of 170 km of optical cables, set up 62 sets of transmission equipment, and provided 2,904 communication circuits in 2023

Analysis of Material Topics and Communication with Stakeholders 3-1 3-2 3-3

Analysis of Material Topics

Taipower's materiality analysis in 2023 was conducted according to the 2021 GRI Universal Standards and AA 1000 SES, and referenced international sustainability trends by comparing important sustainability reports of the power industry in various countries in the current year and previous year, as well as the latest industry materiality map released by the SASB. Taipower integrated material issues of the power, solar power, wind power, and biomass fuel industries, and took them into consideration when selecting sustainability topics. Ultimately, 22 sustainability issues were selected. Based on the double materiality principle proposed by the EU, which uses actual/potential and positive/negative impact as the criteria and dimensions, Taipower verified 11 material sustainability issues.

Compared with the previous year, four new material topics have been added this year: Energy Efficiency, Safety Management and Crisis Response, Worker Health and Safety, and Talent Management and Development. The inclusion of these new topics illustrates the great importance Taipower attaches to energy efficiency and providing a stable supply environment.

1 Understand organizational context → 2 Identify actual and potential impacts → 3 Evaluate the significance of impacts → 4 Prioritize significant impacts → 5 Confirmation of material topics

▶ 1. Understand organizational context

▸▸Identifying Stakeholders

Taipower has spared no effort in building mechanisms that develop mutual trust and communication with its stakeholders. A survey was conducted to identify the main groups of stakeholders for each of the Company's business units in accordance with the five principles outlined in the AA1000 SES Stakeholder Engagement Standards (2015). Taipower's ten most significant stakeholder groups were identified to ensure thorough coverage of all stakeholders who are relevant to different aspects of Taipower's operations. Reviews on a yearly basis are conducted and adjustments are made as necessary.

▸▸Identifying Sustainability Issues

In response to the impact of climate change on the world, Taipower is constantly facing changes and challenges in business operations, especially on issues such as domestic energy transition, renewable energy development, and net-zero transition. Taipower collected information on the sustainable development policies of domestic and foreign benchmark companies and international comprehensive power companies, and invited experts and scholars to hold consultation meetings. The Company simultaneously sent out two-stage expert questionnaires according to principles of the "Delphi method" to identify 22 sustainability issues suitable for Taipower.

Stakeholder Party	Party
Board of Directors	Directors
Shareholders	All shareholders
Employees	Employees and the Union
Partners	Contractors, IPPs, suppliers and technology exchange partners
Government / Competent Authorities	The Ministry of Economic Affairs, the Energy Administration, the Department of State-owned Enterprise Affairs, the Ministry of Environment, the Nuclear Safety Commission, the Legislative Yuan and local government agencies
Public Representatives	Legislators and elected village/township representatives
The Media	Printed, electronic and online media
Private Organizations	Environmental conservation groups, enterprise associations, academics
Customers	General and large-scale customers
Residents / the General Public	Residents near facilities and the general public

▶ 2. Identifying Actual and Potential Impacts

▸▸The Degree of External Impact

Taipower distributed questionnaires to stakeholders and invited them to assess their level of concern for each issue, so as to understand how concerned each party was about the Company's sustainability issues. A total of 463 stakeholders participated in 2023, including employees (228 questionnaires), general users and major users (139 questionnaires), shareholders (20 questionnaires), suppliers and contractors (44 questionnaires), government agencies, competent authorities, elected representatives, media, and non-governmental organizations (12 questionnaires), and communities (20 questionnaires).

▸▸Impact on the Company's Operations

Taipower reviewed the actual and potential positive and negative impacts on the economy, environment, and people (including human rights) caused by its operating

activities and business relationships. Actual impacts are those that have already occurred, while potential impacts are those that may occur but have not yet occurred. After discussions with external experts and consultants, 22 positive and negative impacts were determined.

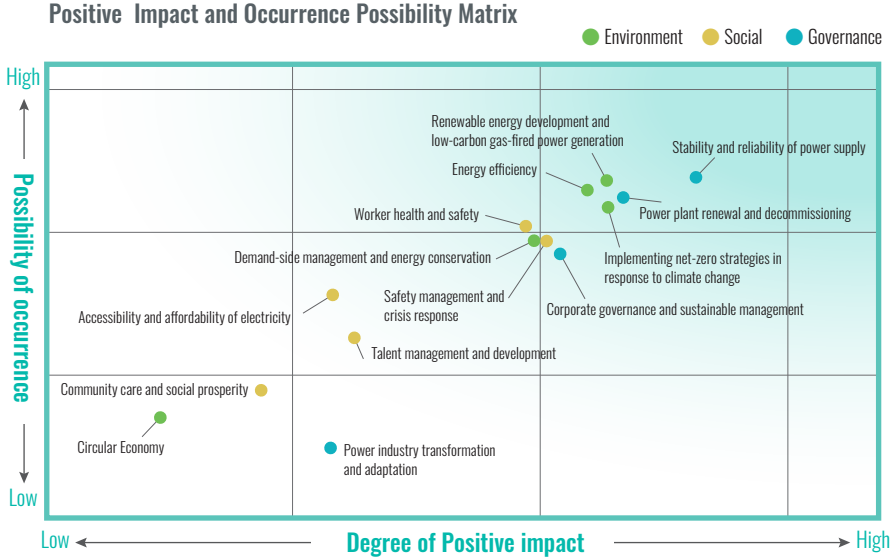
▶ 3. Evaluating the Significance of Impacts

Taipower has established a materiality analysis process with three dimensions: degree of stakeholder concern, impact on organizational operations, and impact on sustainable development. Since Taipower's facilities are spread across Taiwan, in order to avoid biased analysis results due to differences in sample numbers, the Company selected 14 material issues based on the overall degree of concern of all stakeholders and issues with a significant increase in degree of concern compared with the previous year. Subsequently, sixty-eight of Taipower's senior managers measured the impact of material issues on organizational operations (revenue growth, customer satisfaction, employee engagement, and operational risks). The materiality matrix was drawn, using "degree of impact" as the X-axis and "frequency/possibility of occurrence" as the Y-axis, to produce materiality analysis results.

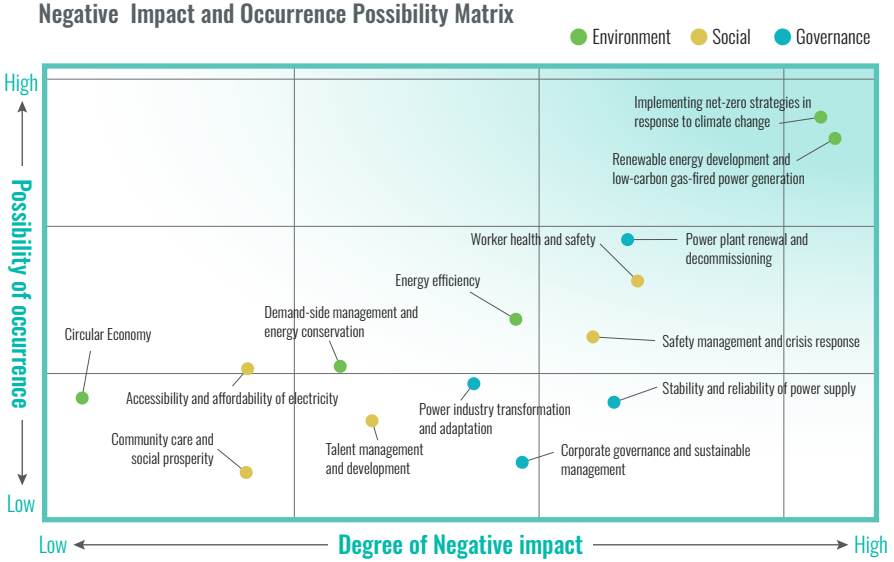
▶ 4. Prioritizing Significant Impacts

Based on results of the materiality matrix, the Company summarized the materiality of various sustainability issues and ranked the issues by materiality using the product of the X-axis and Y-axis, and identified 11 material issues that fall within the scope of this report through communications with stakeholders. Taipower's Sustainable Development Committee examined the results of material issue identification, and verified that they were in line with the context of sustainability and full disclosure.

Positive Impact and Occurrence Possibility Matrix



Negative Impact and Occurrence Possibility Matrix



Sustainability issues with significant positive impact:

Environment (E): Renewable energy development and low-carbon gas-fired power generation, energy efficiency, implementing net-zero strategies in response to climate change, demand-side management and energy conservation.

Social (S): Safety management and crisis response, worker health and safety, accessibility and affordability of electricity, talent management and development.

Governance (G): Stability and reliability of power supply, power plant renewal and decommissioning, corporate governance and sustainable management.

Sustainability issues with significant negative impact:

Environment (E): Implementing net-zero strategies in response to climate change, renewable energy development and low-carbon gas-fired power generation, and energy efficiency.

Social (S): Worker health and safety, safety management and crisis response.

Governance (G): Stability and Reliability of Power Supply.

▶ 5. Confirmation of material topics

Taipower's Sustainability Development Committee is convened by the chairman every year. All vice presidents attend the meeting, and external experts are invited to review and provide feedback on the sustainable development plans and material topics proposed by the Sustainability Task Force. The Sustainable Development Committee reports its implementation status to the Board of Directors every year. For material risk events or policies, the committee promptly reports on impact management and response to the Board of Directors.

▸▸Material topic management

Material Topic	Materiality to Operations	Description of Impact ⊕ Positive impact ⊖ Negative impact	Value chain impact boundaries				GRI Standards	SASB Disclosure Topic	Management Approach and Corresponding Chapters
			Within Taipower	Customer	Partners	Other Social Relationships			
Governance									
Stability and Reliability of Power Supply	Maintain a good energy structure and power grid to continue to provide users with stable and reliable power services.	⊕Provides power for production activities, commercial operations, and normal operation of infrastructure, and ensures power supply for daily use. ⊖The instability and unreliability of power supply may lead to production interruptions and losses for users, affecting businesses and creating uncertainty for investments.	☑	☑	☑	☑	Economic: 203 Indirect economic impact	Grid resilience	2.2.1 A Stable Power Supply and Generation System 2.2.2 A Robust Transmission and Distribution System 2.3.1 Promoting Power Transformation
Power Plant Renewal and Decommissioning	Renewal and expansion of power plants, and planning and implementation of decommissioning.	⊕In response to the replacement and decommissioning of existing units, and long-term growth of power load, it will improve the overall operating performance and competitiveness of power plants. ⊖Power plant renewal, construction, and decommissioning may face higher development costs due to stricter regulatory restrictions and community engagement.	☑	☑		☑	Economic: 203 Indirect economic impact	-	2.2.1 A Stable Power Supply and Generation System 2.2.2 A Robust Transmission and Distribution System
Corporate Governance and Sustainable Management	Implementation of corporate governance, promotion of integrity measures, anti-corruption, and transparency of corporate management, following the principles of professional ethics and integrity, striving to integrate sustainable development with operating strategies, strengthening the sustainability governance structure, and implementing sustainability strategies, risk management, and strengthening personnel risk awareness and corporate resilience, thereby increasing corporate value.	⊕Sustainable development strategies help the Company increase long-term value, drive innovation, and enhance competitiveness. ⊖If incidents of dishonesty or corruption occur due to poor corporate governance performance and failure to implement ethical corporate management, it will directly damage the Company's reputation and the rights and interests of relevant stakeholders.	☑		☑	☑	General Disclosures: Governance and compliance with laws and regulations Economic: 203 Indirect economic impact 205 Anti-corruption	-	1.1.2 Business Performance 1.2.1 Governance Framework 1.2.3 Integrity and Compliance
Environmental									
Renewable Energy Development and Low-carbon Gas-fired Power Generation	Develop renewable energy and clean energy with low air pollution and low carbon emissions.	⊕Increasing the proportion of renewable energy can improve domestic energy independence and reduce carbon emissions in line with the net-zero policy. ⊖Renewable energy is easily affected by seasons and weather, thereby affecting power supply stability.	☑		☑	☑	Economic: 203 Indirect economic impact Environmental: 305 Emissions	GHG emissions and energy/resource management	1.3.2 Moving Towards Net-Zero Emissions 2.3.1 Promoting Power Transformation 2.3.2 Diversification of Renewable Energy Development 3.1.1 Environmental Policy and Goals
Energy Efficiency	Effectively improve the power generation efficiency of thermal, nuclear and renewable energy units.	⊕Using more efficient units and equipment will generate more power. ⊖Poor efficiency may increase carbon emissions, thereby creating the risk of carbon charges.	☑	☑			Economic: 203 Indirect economic impact Environmental: 302 Energy	-	2.2.1 A Stable Power Supply and Generation System 3.1.2 Energy Resource Management

Material Topic	Materiality to Operations	Description of Impact (⊕ Positive impact / ⊖ Negative impact)	Value chain impact boundaries: Within Taipower	Customer	Partners	Other Social Relationships	GRI Standards	SASB Disclosure Topic	Management Approach and Corresponding Chapters
Environmental									
Demand-side Management and Energy Conservation	Implement "ADR" and "energy saving" - various ADR load management measures, implement diverse Time-of-Use (TOU) rates, adjust and implement new TOU plans on a trial basis, organize energy-saving incentive activities, and organize energy-saving promotions.	⊕ Suppressing the system's peak load will reduce power supply costs and improve power margins and stable supply reliability, so as to accelerate energy transition and build an electrified society. ⊖ If users cannot be guided to change their electricity consumption behavior, it might result in energy waste.	☑	☑			Economic: 203 Indirect economic impact Environmental: 302 Energy	User efficiency and demand	4.1.1 Smart Grid Action Plan 5.1.1 Demand Side Management Measures 5.2.1 Promoting an Electricity-saving Society
Implementing Net Zero Strategies in Response to Climate Change	In the context of the trend of net-zero emissions, take inventory of GHG and carbon emissions, identify climate change risks, and set carbon reduction goals to respond to potential impacts of climate change risks in the future.	⊕ Identify climate change risks and set carbon reduction targets to mitigate the impact of climate change risks. ⊖ Implementing net-zero strategies may result in higher operating costs.	☑	☑	☑	☑	Economic: 201 Economic performance Environmental: 305 Emissions	GHG emissions and energy/resource management	1.3.2 Moving Towards Net-Zero Emissions 1.4.1 Taipower Actively Responds to Climate Change Risks in the Long-term 2.3.2 Diversification of Renewable Energy Development 3.2.1 GHG Management
Social									
Safety Management and Crisis Response	Carry out routine safety management of internal facilities (hardware) and establish an emergency response policy to prevent related accidents.	⊕ Reduces the overall cost of incidents and improves the Company's reputation and trust. ⊖ If attention is not paid to the routine safety management of internal facilities (hardware) and the establishment of an emergency response policy, project progress will be delayed when an accident occurs.	☑	☑	☑	☑	Economic: 203 Indirect economic impact	Nuclear safety and crisis management	1.2.2 Risk Management 2.1.2 Increase Adaptive Capabilities 6.3.1 Occupational Safety and Health
Worker Health and Safety	Manage occupational safety (system) of employees and contractors to prevent the Company's employees and contractors' employees from suffering occupational injuries.	⊕ Create a friendly workplace environment and improve the Company's employee engagement and employees' physical and mental health. ⊖ Failure to pay attention to the occupational safety (system) management of employees and contractors may increase the Company's risk of negative news, damage the Company's reputation, and increase fines.	☑			☑	Social: 403 Occupational safety and health	Healthy and safe workplace	6.3.1 Occupational Safety and Health 6.3.2 Labor-Management Communication and Collective Bargaining
Accessibility and Affordability of Electricity	Increase the penetration of electricity services and maintain affordable electricity prices to stably meet the domestic needs of Taiwanese people.	⊕ Provides power for basic living needs and ensures that more people (including remote and disadvantaged groups) can obtain the electricity services they need without financial constraints. ⊖ Providing affordable electricity to different users through electricity price subsidies, and the high cost of setting up and maintaining power facilities in remote areas may reduce operating income.	☑	☑		☑	Economic: 203 Indirect economic impact	Energy affordability	1.1.2 Business Performance 2.2.2 A Robust Transmission and Distribution System 5.1.1 Demand Side Management Measures
Talent Management and Development	Talent attraction and recruitment, salary and training planning, facilitating women's employment participation rate and improving professional competency development for women, and focusing on the development of a workplace with diversity, equality and women's employment equality.	⊕ Establish a complete talent training system and a workplace with equal employment for women to facilitate the Company's sustainable operation and development. ⊖ If employees are not treated fairly or the evaluation and promotion processes are perceived as unfair, morale may be affected, leading to dissatisfaction which will affect the organization's morale, work efficiency, and increase employee turnover.	☑			☑	Social: 401 Employer-employee relations 404 Training and education	-	6.2.1 Talent Management and Development 6.2.2 Employee Rights and Benefits

Communication with Stakeholders

2-28 2-29

Stakeholder Communication Performance

Taipower values stakeholder voices and communicates with them through multiple channels. In addition to listening to and collecting suggestions about Taipower's sustainable development, the Company incorporates stakeholder suggestions into management measures and operational behavior optimization projects in order to respond to appeals and expectations. As of 2023, the total number of visits to the Taipower Sustainable Development Webpage has reached 630,000, fully demonstrating Taipower's performance and achievements in various sustainability issues.

In order to strengthen the effectiveness of communication with stakeholders, Taipower began actively participating in the Asia-Pacific Sustainable Action Expo in 2022. This provided the Company with an opportunity to demonstrate its sustainability actions and results to the outside world. The 2023 Asia-Pacific Sustainable Action Expo was held at the Taipei World Trade Center from July 21 to 23. Taipower participated in the exhibition under the theme of "Sustainable Action, Net-Zero Electricity." In addition to again displaying the highlights of its ESG achievements, the Company demonstrated the transformational challenges faced by the electricity industry, and how Taipower had accelerated low-carbon transition on the supply side, power grid side, and demand side to move towards the goal of net-zero electricity. The exhibition also provided interesting games for the public to deepen their understanding of sustainability issues and energy knowledge through interactive play. This allowed the Company to engage in interaction with the public while promoting and strengthening awareness of the issues faced. The three-day expo attracted more than 30,000 visitors and was the subject of nearly 460 media reports. Taipower specifically was the subject of positive reports by nearly 10 media sources. During the expo, information about the exhibition that was posted on Taipower's Facebook page received nearly 700 likes and was shared over 500 times, showing the public's recognition and positive response to Taipower's communication of sustainability issues.

Stakeholder Engagement Performance in 2023

Net-Zero Emissions

To build a consensus on net-zero emissions within the Company and accelerate related planning, a Net-Zero Electricity Promotion Meeting mechanism was established, and related units are regularly invited to discuss net-zero strategies, track and manage key strategic items, and analyze future paths. A total of 10 meetings were held in 2023.

Corporate Transformation

Communication in this domain includes reporting progress to the Board of Directors, timely meetings with the Workers' Union, conducting communication and advocacy seminars for employees at various levels and units of the Company, as well as providing employee education and training for the union. Over 250 such events were held from 2017 to 2023. In the future, various communication activities will continue to be carried out as the transformation process progresses.

Internal Communication

External Communication

(Inter-agency communication, participation in forums, exhibitions)

Net-Zero Emissions

- Actively participated in the formulation of various energy-related regulations and sub-laws by the competent authorities, and participated in a total of 7 stakeholder meetings related to energy regulations.
- Held a total of 8 net-zero promotion meetings with the Ministry of Economic Affairs.
- Hosted the third general assembly and forum for the Taiwan Industry-Academia Technology Alliance for Energy Digital Transformation.
- Hosted the 2023 Taishin Net-Zero Electricity Summit.
- Hosted the 2023 Energy Vision Summit."
- Hosted the 2023 Net-Zero City Expo."
- Hosted the 2023 Kaohsiung Smart City Summit & Expo."
- Hosted the 2023 SDG Asia Expo.
- Hosted the 2023 Taiwan Climate Action Expo.
- Hosted the TASS Sustainable Taiwan Expo.

Corporate Transformation

Timely meetings and correspondence with superior authorities to explain the Company's transformation plans and progress, and promptly contacting relevant authorities to seek explanations and suggestions for addressing difficulties and clarifications regarding transformation plans. In the future, communication channels with external stakeholders will be kept open as required by the transformation process.

Stakeholders	Topics of Concern	Frequency and Methods of Engagement	2023 Engagement Performance	Related Measures
Board of Directors	■ Energy efficiency. ■ Corporate governance and sustainable management. ■ Stability and Reliability of the Power Supply.	vIn principle, one regular Board and Functional Review Committee meeting is held per month ■ At least one Audit Committee meeting is held per quarter. ■ Ongoing continuing education for directors (including independent directors). ■ Annual Board performance evaluations.	■ Held 16 Board of Directors' meetings, 11 Investment Project and Business Plan Review Committee meetings, and 5 Land Review Committee meetings ■ Held 7 Audit Committee meetings. ■ Directors (including independent directors) receive professional training on corporate governance. The average training time for re-elected directors is 9.65 hours, and the average training time for new directors is 13.25 hours. ■ The performance evaluation for 2023 was conducted in accordance with the Board Performance Evaluation Guidelines, and the results were disclosed on Taipower's official website.	■ Regularly reported to the Board of Directors on progress highlights. ■ Conducted timely reporting on projects.
Shareholders	■ Stability and Reliability of the Power Supply. ■ Worker Health and Safety. ■ Safety management and crisis response. ■ Accessibility and Affordability of Electricity. ■ Corporate governance and sustainable management.	■ Shareholders' meeting. ■ Taipower's official website and Market Observation Post System (MOPS).	■ The Annual General Meeting was held on June 16, 2023. ■ Relevant information was disclosed on both the Public Information Observation Station and in the Corporate Governance/Shareholders section of Taipower's official website.	■ Communicate status with shareholders through the minutes of the regular shareholders' meeting.
Employees	■ Power industry transformation and adaptation. ■ Corporate governance and sustainable management. ■ Talent management and development.	■ On-the-job training. ■ Labor-management meetings. ■ Communication discussions.	■ On-the-job training at the Training Institute, training programs organized by each unit, and external training had a total of 84,736 participants. ■ Held 12 labor-management meetings. ■ Convened 15 labor-management communication meetings for each system.	■ Organized corporate-level labor-management meetings and labor-management communication meetings for each system. ■ Collected proposals from union member representatives or branch directors, and implemented them after discussions and resolutions at meetings.
Partners	■ Renewable energy development and low-carbon gas-fired power generation. ■ Corporate governance and sustainable management. ■ Implementing net-zero strategies in response to climate change.	■ Irregular consultation meetings.	■ Preliminary discussions with IPPs on procurement after contract expirations.	■ Actual topics of communication: The inclusion of environmental assessments or impacts during the renewal of contracts, additional investment in equipment improvement projects, costs, service life, and the signing of pure capacity contracts. ■ Measures taken: Discussion is continuing with IPPs on procurement matters for after contract expirations.
Government Agencies/ Competent Authorities	■ Implementing net-zero strategies in response to climate change. ■ Environment Impact Management. ■ Renewable energy development and low-carbon gas-fired power generation. ■ Demand-side Management and Energy Conservation. ■ Energy efficiency. ■ Accessibility and Affordability of Electricity.	■ Board of Directors' meetings. ■ Official documents. ■ Submission of various work schedules. ■ Cooperating and participating in meetings. ■ Smart generation and dispatching forum meetings. ■ Project communication meetings.	■ Important motions from monthly board meeting agendas were submitted to the competent authority in advance. ■ The minutes of monthly board meetings were submitted to the competent authority.	■ Provided relevant information and attended review meetings in accordance with government regulations and requirements.
Elected Representatives	■ Renewable energy development and low-carbon gas-fired power generation. ■ Demand-side Management and Energy Conservation. ■ Talent management and development. ■ Human rights, diversity, and inclusiveness. ■ Management and financial performance. ■ Power Plant Renewal and Decommissioning.	■ Attendance at committee meetings of the Legislative Yuan as a non-voting participant. ■ Coordination meetings and public hearings. ■ Provide relevant explanatory information on the Company's business. ■ Take the initiative to visit legislators.	■ Executives at the level of vice president or above attended 80 sessions at the Legislative Yuan as non-voting participants. ■ Supervisors and staff at all levels attended and provided information for coordination meetings and public hearings held by the Legislature Research Office a total of 1,259 times throughout the year. ■ Executives at the level of vice president or above had a total of 71 communication sessions with legislators throughout the year.	■ Arranged senior executive visits to elected representatives to explain important business and establish good communication channels while building mutual trust. ■ Actively responded to queries from elected representatives and provided written information in due course, attended public hearings and coordinated to fulfill the supervision responsibilities of elected representatives. ■ Attended public hearings and coordination meetings to explain the implementation of the Company's business plans, and to create a good atmosphere for discussion and maximizing results.

Stakeholders	Topics of Concern	Frequency and Methods of Engagement	2023 Engagement Performance	Related Measures
The Media	■ Renewable energy development and low-carbon gas-fired power generation. ■ Power industry transformation and adaptation. ■ Implementing net-zero strategies in response to climate change. ■ Demand-side Management and Energy Conservation. ■ Stability and Reliability of Power Supply. ■ Power Plant Renewal and Decommissioning.	■ Press releases. ■ Printed media. ■ Public hearings/Explanatory meetings. ■ On-site visits/Commissioner visits. ■ Taipower's official website. ■ Market Observation Post System (MOPS).	■ Published a total of 61 press releases and 144 instant explanations on issues related to power supply and demand, renewable development, power development projects, environmental protection, and sudden major events. These provided immediate external clarification or proactively release information to the media for dissemination. ■ News materials were proactively released in response to issues of concern to the outside world. Materials covered popular science information, electricity-saving measures, stories of emergency repair personnel during typhoons, and recruitment information for new personnel. The efforts emphasized Taipower's commitment to science education and humanistic care. ■ Implemented a spokesperson system to promptly respond and promote important Taipower policies in addressing societal concerns related to people's livelihoods.	■ Proactively offered complete press packages for media coverage on the Company's important business strategies and external concerns. Information demonstrated the Company's specific actions in response to government policies and social expectations. ■ Immediately clarified any misunderstandings in response to external concerns or emergencies, such as power supply and energy policy issues, Taipower's financial issues, and regional power outages and emergencies, and issued press releases and instant explanations when necessary to promptly communicate with the public. ■ Arranged media interviews on diverse issues to improve the Company's positive image.
Non-governmental Organizations	■ Environment Impact Management. ■ Power industry transformation and adaptation. ■ Implementing net-zero strategies in response to climate change.	■ Convene briefing sessions. ■ Proactive visits. ■ Participation in relevant forums and activities. ■ Taipower's Official Website. ■ Taipower publications.	■ Meetings were held according to project needs. ■ Published Taipower's monthly publication. ■ Disclosed the latest corporate information on Taipower's official website.	■ Visited non-governmental organizations based on project needs to gain insight into public sentiment and needs, and engaged in friendly interactions with stakeholders.
Users	■ Demand-side Management and Energy Conservation. ■ Digital transformation and information security. ■ Stability and Reliability of the Power Supply. ■ Service and product satisfaction. ■ Implementing net-zero strategies in response to climate change. ■ Accessibility and Affordability of Electricity. ■ Environment Impact Management.	■ Customer opinion box. ■ Specialist visits. ■ Occasional newsletters.	■ The customer opinion box received 5,677 letters. ■ Conducted advocacy to promote the usage of high-efficiency electrical appliances and power conservation techniques. A total of 1,449 meetings were held with about 160,000 participants. ■ The power-saving activity series has been organized for 11 consecutive years. ■ Taipower's Power-Saving Service Team visited 4,527 customers with a resulting estimated power savings of 106.23 GWh.	■ Collected data for energy-saving advocacy campaigns: Each year, a schedule is set for advocacy sessions, which are carried out by regional business offices to promote the use of energy-efficient appliances and energy-saving techniques among users, thereby effectively conveying energy-saving knowledge. ■ Collected data for energy-saving events: Continuously organized activities to embed energy-saving education through entertaining methods, ensuring that energy-saving knowledge takes root and becomes a nationwide trend. ■ Collected data for user visits by the energy-saving service teams: Each year, a targeted number of household visits is set, and regional business offices are responsible for assessing the potential for energy-saving and promoting demand response measures to achieve the desired visitation benefits.
Residents/The General Public	■ Stability and Reliability of the Power Supply. ■ Accessibility and Affordability of Electricity. ■ Community care and prosperity.	■ The Taipower Facebook page. ■ Public information on the official website.	■ The Facebook page had nearly 40 million views. ■ The Information Disclosure section of Taipower's official website discloses information from six major categories to explain the Company's current operational status. The categories include: power supply and demand, management, power generation information, customer information, environmental information, and engineering information. ■ The sustainable development website provides information on the Company's sustainable development-related performance. ■ The Corporate Governance section of Taipower's official website discloses information related to corporate governance and ethical corporate management.	■ The themes of Taipower's Facebook page include explanation of important company policies, electricity-saving, electrical safety, and electricity knowledge, and the latest citizen services and activities. ■ In terms of policy promotion, the Company explained its reinforcement of grid resilience, electricity price plans, the Hsieh-ho Power Plant's transition to gas, information on restoring power during typhoons, and measures Taipower's is taking on the net-zero goal through infographics and text.

Awards and Recognition

Sustainable Development

The 2023 Asia Responsible Enterprise Awards (AREA)

Won Enterprise Asia's "Green Leadership" and "Social Welfare Development" Awards.

The 2023 Taiwan Sustainability Action Awards (TSAA)

The project "Tainan Salt Field Solar Energy Storage for Grid Stabilization" won the "Gold Award" in the "SDG 7 Affordable and Clean Energy" category.

The 2023 Taiwan Corporate Sustainability Awards (TCSA)

Won the Taiwan Institute for Sustainable Energy's Corporate Sustainability Report Gold Award, Taiwan Corporate Sustainability Excellence Award, Creative Communication Leadership Award, Information Security Leadership Award, and the Gender Equality Leadership Award.

The Ministry of Economic Affairs, Energy Administration's 2023 Excellent Solar Photovoltaic System Awards

The Tainan Salt Field Solar Power project won the 10th "Excellent Ground-mounted System Award".

The 2023 Presidential Hackathon

Taipower's "Green Project Alliance" won the highest honor, the "Excellent Team Award," based on the concept of generating your own green electricity.

Business Management

The 20th National Brand Yushan Awards (2023)

Awarded the 2023 Yushan Award in Outstanding Enterprise Category.

2023 "Happy Enterprise Event" from 1111 Job Bank

Won the "Gold Award" in the manufacturing industry for the third consecutive year (2021-2023).

Innovation in Engineering

2023 Taiwan Innotech Expo (TIE)

The R&D results for "Hydrogen Energy Recycling and Reuse of Thermal Power Plants," "The Taichung Carbon Reduction Technology Park Interactive Display Model," and the "Building a Low-Carbon Green Homeland" projects were displayed. Taipower also participated in the invention competition with the theme "Strengthening Power Grid Resilience to Ensure Stable Power Supply," and won 3 gold and 1 bronze medal.

2023 Asian Power Awards

Won 2 awards at Asian Power Magazine's "2023 Asian Power Awards".

- The "Taichung Power Plant's No. 5-10 Air Pollution Control Equipment Improvement Project" won the "Power Plant Upgrade of the Year (Taiwan Award)".
- The "Hsinta Power Plant's Gas Generator Unit Renewal and Reconstruction Project" won the "Gas Power Project of the Year (Taiwan Award)".

The 23rd Golden Quality Awards for Public Construction Projects from the Execuive Yuan's Public Construction Commission and the 2023 Public Construction Quality Awards from the Ministry of Economic Affairs

The "Hsinta Power Plant Gas Unit Renewal and Reconstruction Project's Natural Gas Pipeline Transmission System Project" received an "Excellent" rating in the facilities category of the "Gold Quality Award for Public Construction Projects." It also received the "High Distinction" designation in the facilities project category at the Public Construction Quality Awards.

2023 Ministry of Labor Excellent Project Golden Safety Award

The "Hsinta Power Plant Gas-fired Unit Renewal and Reconstruction Project's Cooling Water Circulation System Project" achieved "High Distinction" at the 17th Excellent Project Golden Safety Awards from the Ministry of Labor.

Social Co-Prosperity

The 2023 Sports Activist Awards

Won the Gold Award in the Sponsor Category, the Long-term Sponsor Award, and the Gold Award in the Promotion Category from the Sports Administration, Ministry of Education.

2023 – The 16th Arts and Business Awards

Won the Gold Award, the Creativity Award of the Year and the Cultural Sustainable Development Award from the Ministry of Culture.

Received the Excellence Award in the public sector's evaluation of the establishment of workplace childcare facilities in 2023

Took First Prize at the 2023 Buying Power Social Innovative Products and Services Procurement Awards

Working Together to Realize Sustainability and Jointly Build an ESG Supply Chain

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 also continues to cooperate with national sustainability policies and to respond to national sustainability trends, in hopes of driving the power equipment industry chain towards sustainability. Starting from 2023, Taipower will officially include supply chains in the scope of its sustainability management. The Materials Department will serve as a demonstration unit and company-level materials will be a demonstration subject for upgrading supply chain management to sustainable supply chain management.

Quality Commitment

Taipower's greatest responsibility and obligation is ensuring the availability of a stable power supply. The quality of power equipment provided by suppliers is one of the key elements in ensuring a stable power supply. The Materials Department conducts a re-evaluation of qualified suppliers every three years. The re-evaluation process makes reference to the ISO 9001 quality management system, and integrates 4 inspection services to ensure that the supplier's quality, cost, delivery, and service (QCDS) comply with Taipower standards.

Material Suppliers' Conference

Taipower held a materials supplier conference on October 3, 2023. Executives were invited from the Taiwan Electric Wire & Cable Industries Association, the Taiwan Electrical and Electronic Manufacturers' Association, and 30 key equipment (cables, transformers, switches) suppliers to exchange and share sustainability trends, concepts of sustainable supply chain management, and future implementation plans, building a consensus and gaining more inspiration to support sustainable development actions, and jointly start a new chapter of ESG.

Sustainable Supply Chain Management Strategies and Implementation Framework

Analyze the driving forces of sustainable procurement and identify risk issues

Understand the relevant driving forces and core themes, analyze the risk issues faced by each procurement category, and establish management actions based on analysis results to avoid related risks.

Empower procurement personnel to promote sustainability

Integrate sustainable procurement into the organizational culture through organizational competencies and empowerment, and identify stakeholders, sustainability risks and opportunities to set procurement management priorities, key indicators and disclosure performance.

Sustainable Supply Chain

Establish a sustainable procurement policy and introduce sustainability factors into the management process

Establish clear policies, with senior management responsible and assign dedicated units to manage and implement them. Incorporate sustainability issues and considerations into the procurement management system.

Optimize procurement processes and establish sustainable procurement strategies

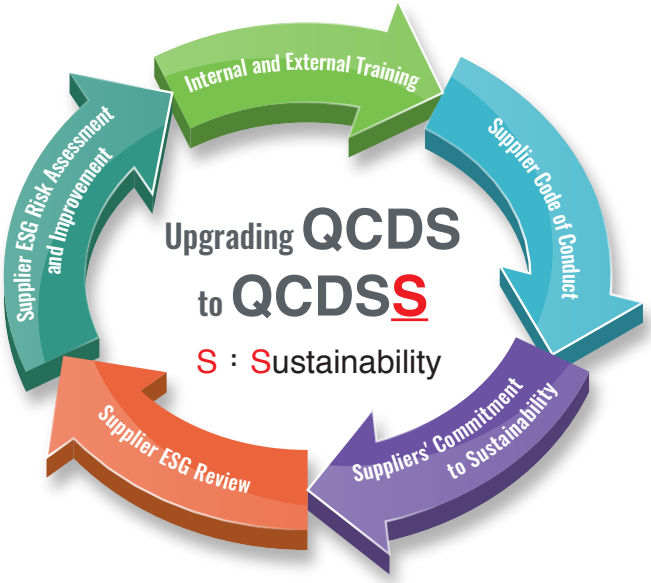
Summarize organizational assessment information through sustainability risk assessment, life cycle cost analysis, organizational needs, and market analysis, establish a sustainable procurement strategy, and simultaneously optimize the procurement process.

Internal Training

Starting in June 2023, Taipower organized internal sustainable supply chain training, supply chain lifecycle workshops, workshops on material topics and stakeholder identification for procurements, supplier sustainability questionnaire briefings, supplier sustainability review training, experience exchange meetings after reviews, and explanations of sustainability risk assessments. The purpose is to improve employee understanding and operational capabilities of sustainability issues, in hopes of working with suppliers on the road to a sustainable transition the future.

Sustainability Vision

Stability, resilience, and sustainability are Taipower's new expectations for its own supply chain management. As of 2023, Taipower has signed supply chain digital collaboration contracts with 6 banks, including Taipei Fubon Bank, Mega Bank, Bank of Taiwan, Chang Hwa Bank, Taiwan Business Bank, and the Land Bank. The total contract amount of supply chain financing is approximately NT$1.78 billion. This will strengthen financial support for suppliers. At the same time, Taipower began to implement supplier ESG management for company-level materials on a trial basis, learned about patterns of the material supply chain starting from procurement analysis, upgraded QCDS to QCDSS (C-carbon and cost, S-sustainability), and hopes to lead smaller companies to enhance the capabilities of supply chain partners, jointly developing an eco-friendly and socially responsible supply chain.



Future Implementation Plan

There are three major goals for promoting sustainability in the material supply chain:

1. Support the government's policies of net-zero emissions and large enterprises leading small enterprises
2. Manage supply chain ESG risks to ensure a stable power supply
3. Realize Taipower's sustainability vision and corporate social responsibilities

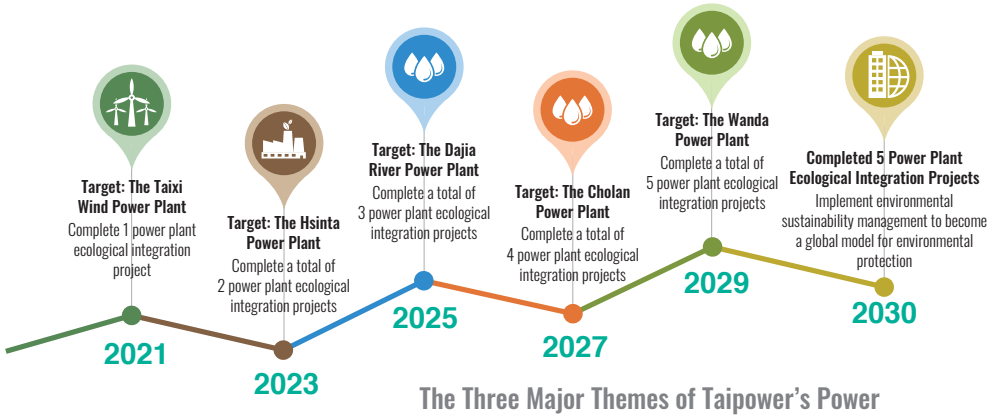
Under these three major goals, and based on the trial-basis performance of the Material's Department's sustainable supply chain management initiatives, the following measures will be implemented in the future:

- Expand the scope of supplier ESG reviews in phases, actively guide suppliers to improve their core capabilities, and reduce the risk of business suspension.
- Establish a supplier sustainability review and risk assessment process that is suitable for Taipower, and set it as an internal standard.
- Raise ESG requirements for suppliers according to the latest sustainability issues and trends, and step up ESG management in the supply chain.
- Continue to improve employee understanding of sustainability and management capabilities through internal training.
- Continue to organize supplier engagement activities to enhance exchanges with suppliers and influence them.
- Use digital management platforms to improve the efficiency and results of supplier sustainability management.

Constructing Ecological Power Plants that can Thrive Together with Nature

Taipower's power plants are both reliant on the natural resources provided by their surrounding ecosystems, and the cause of negative environmental impact and "Not In My Backyard" (NIMBY) reactions by the public. Consequently, Taipower proposed an environmental white paper to build an ecological integration strategy with nature-based solutions and to implement ecological integration projects for power facilities as an adaptation measure. At the corporate level, Taipower implements Other Effective Conservation Measures (OECMs) that contribute to progress on T-SDGs, the Pathway to Net-Zero Emissions, and the United Nations Convention on Biological Diversity's 30 x 30 goal.

Taipower has evaluated 15 potential power plants using indicators based on the natural environmental (habitat, biology, and ecosystem improvement), social manpower (internal and external stakeholders), and the economy (countable and uncountable benefits). Subsequently, the Taixi Wind Power Plant, the Hsinta Power Plant, the Dajia River Power Plant, the Cholan Power Plant, and the Wanda Power Plant were selected as target power plants for implementing medium to long-term ecological projects. Taipower invested NT$240 million and the efforts of nearly 20,000 workers between 2021 and 2023. The result was the completion of ecological resource surveys and the formulation of development strategies for all 5 power plants. In addition, as of 2023, the Company has completed the installation of bat nesting boxes at the Taixi Wind Power Plant. Moreover, the Hsinta Power Plant in Kaohsiung developed the adjoined Yongan Wetland into a bird hotel, the Cholan Power Plant developed an ecological hydropower plant with fireflies and purple crow butterflies, the Wanda Power Plant began ecological projects for Taiwan soybeans, Wushe blood-spotted longhorn beetles, and Chinese tailless leaf-nosed bats, and the Dajia River Power Plant received certification as an Environmental Education Facility for its combined projects on water and land ecological protection and rehabilitation.



Organizing Implementation

The process of ecologically integrating power facilities is being implemented from the top down by the Board of Directors. The Board of Directors reviewed and approved Taipower's environmental policy white paper. After it was signed by the chairman and announced to the public, it was handed over to the Sustainable Environment Steering Committee of Taipower's Sustainability Development Committee, which is responsible for coordination and management of the overall action plan and performance. To ensure the feasibility of the plan's direction and to make refinements, Taipower established an ecological conservation expert group in September 2023. The group is chaired by the chairman, and works to implement OECMs at the corporate level, and carries out expert consultations, on-site surveys, discussions, and action plans.

The Three Major Themes of Taipower's Power Plant Ecological Integration Projects

Environmental Education

Items	Planning		The Taixi Wind Plant		The Dajia River Plant (Hydopower)		The Hsinta Power Plant (Thermal)	
	Year	Number of Participants	Year	Number of Participants	Year	Number of Participants	Year	Number of Participants
Environmental Education	2023	509	2023	0	2023		2023	146
	2022	753	2022	0	2022	642	2022	86
	2021	1,831	2021	0	2021	1,614	2021	
Other Environmental or Neighborly Activities	2023	1,068	2023	50	2023		2023	6,000
	2022	327	2022	0	2022	38,803	2022	4,748
	2021	30	2021	50	2021	39,826	2021	1,573

*The number of beneficiaries is the number of participants in environmental education courses or activities organized by the Dajia River, Hsinta and Wanda facilities

Leveraging Strengths to Restore Biodiversity and Engineering to Ensure Ecological Integration

Taipower leverages its construction expertise to plan facility integration policies from an engineering perspective. When designing new or improved power facility sites, the natural characteristics and cultural background of each region need to be integrated to formulate an integrated plan that is tailored to local conditions. For areas affected by natural disasters involving rivers and slopes, the causes of disasters should be systematically analyzed, and the design must minimize interference with the ecological environment and maximize benefits for residents. For new facility construction projects, four strategies – avoidance, reduction, mitigation and compensation – must be sequentially evaluated. Evaluation is conducted at each stage of the project and efforts are made to integrate the project structures into the local ecological environment, so as to reduce the impact of the project on the environment. For existing facility improvement projects, work is based on biological data and the migration, reproduction and foraging requirements of habitat dependent species. The design must allow animals to escape, provide passageways for movement, and avoidance, and compensate for habitat requirements. These measures facilitate the natural restoration of the ecological environment after interference from construction projects, and make the area a safe habitat for animals.

The Wanda Power Plant

Diverse and Cross-Domain Popular Science – New Lifestyles with Smart Power

As Taipower embraces the era of net-zero green electricity, a stable power supply remains the Company's primary mission and responsibility. Taipower is accelerating its work on the utilization of green electricity, the proper allocation of power supply, and the strengthening of the power grid's resilience. The Company is currently facing the growing impact of extreme weather, while public demand for electricity has also increased. Due to resource limitations, there is a need to learn to coexist in harmony with the natural environment, to cherish and save energy, and to reduce carbon emissions. In the past few years, Taipower has been committed to communicating information on electricity to the public in a variety of ways. For example, the Taipower D/S ONE exhibition center, the kW Design Awards, and KidWind Challenge all serve as a popular-science channels for learners at all levels,. These human-centered designs have been applied to power services with excellent reviews, and have become an important part of Taipower's process of self-innovation.

Taipower's Workplace Visitation Program for Youth

Taipower is constantly trying to engage in dialogue with students and citizens of all ages in various ways to help the public gain a accurate understanding of energy and electricity, and encourage the lessons of environmental and energy education to take root from an early age. To facilitate public understanding of the importance of power construction and to facilitate two-way dialogue between society and the Company, Taipower was the first state-owned enterprise to implement a workplace visitation program for youth. The program follows three main themes: energy transition, power grid resilience, and ecological conservation. There are a total of seven visiting routes in Northern, Central, and Southern Taiwan, and young people from colleges and universities are invited to visit Taipower sites to understand the key issues of energy transition and future energy development.

Taipower's Workplace Visitation Program for Youth

The program was launched in mid-October 2023 and ended at the end of March 2024.

The total number of tours reached 117, with approximately 4,000 teachers and students from colleges and universities participating.

Power Grid Resilien

Energy Transition

Route 1 New Taipei City, Taipei City

Taipower D/S ONE + Daan Substation Underground Tunnel

Route 2 Taichung City, Changhua County

The Taichung Power Plant + The Changhua Coastal Dual Green Energy Center

Route 3 Miaoli County

The Tunghsiao Power Plant + The Gaomei Wetland Wind Turbine Avenue

Route 4 Keelung City

The Hsiehho Power Plant + The National Museum of Marine Science and Technology
The site of a former Taipower thermal power plant in Northern Taiwan

Route 5 Nantou County

The Mingtan Power Plant + Sun Moon Lake

Ecological Conservation

Route 6 New Taipei City

The Linkou-BaihePower Plant + The Taiwan Power Research Institute Shulin Site

Route 7 Kaohsiung City

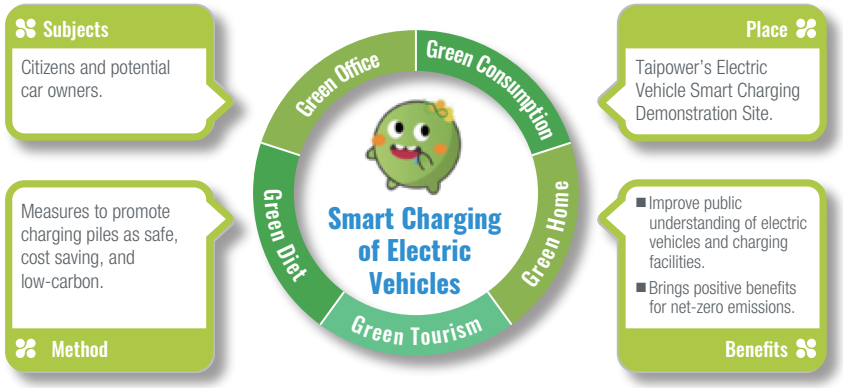
The Hsinta-Feiniao Power Plant + Longan Wetland

Smart Hands-On Electricity Generation – At Taipower D/S ONE

Taipower established the nation's first renewable energy exhibition hall – Taipower D/S ONE. The hall is connected to the Banqiao Transportation Triple Junction by an elevated corridor and was designed to meet international standards and to become a significant and engaging educational venue for renewable energy in the country. Since its official opening in 2020, D/S ONE has actively represented a green, smart, future by promoting energy education among students and teachers at all levels. It has been selected as one of the "Top 10 Popular Science Bases" by the Ministry of Education and has been recognized with the First Prize for Educational Promotion by Far Eastern Group's Corporate Social Responsibility Awards. D/S ONE recently received international groups, such as the Department of Latin American and Caribbean Affairs of the Ministry of Foreign Affairs, Korea Electric Power Corp, and Japanese guests of Taiwan Design Research Institute, from the Institute of Technology, and is committed to becoming a world class renewable energy exhibition hall. As of the end of 2023, D/S ONE had attracted over 210,000 visitors and gained more than 35,000 followers on Facebook. In the future, D/S ONE will continue to spark creative energy and create value by implementing green energy education in diverse forms and collaborating with various resources.

Creating a Green Energy and Low-Carbon Environment

According to the government's Pathway to Net-Zero Emissions by 2050, electric vehicles will become increasingly dominant and will impact people's habits and lives. Taipower is committed to providing support for electric vehicle power to create a friendly environment for the electrification of transportation vehicles and to increase the number of charging facilities, thereby minimizing one major source of anxiety about electric vehicle range. Currently, for example, the public and potential car owners are often concerned about whether there are adequate charging facilities for electric vehicles. This brings environmental issues and the right to "transportation" into conflict. Therefore, it is necessary to comprehensively plan the installation of dedicated electricity meters in residential and commercial buildings, and to establish electric highways to ensure electrical safety, aesthetic appearance, and charging needs are met. It will also guide users to install Energy Management Systems (EMS) to disperse charging during off-peak hours, reduce the burden on the power grid, and build and improve support facilities to effectively change green consumption and electricity use behaviors.



Electricity Steward of the Taipower App

Through digital transformation, Taipower's service delivery has evolved from physical services provided through 24 branch offices, 264 service offices, and 2 customer service centers to a digital mobile service channel – the Taipower app. The app is bound to the customer number to provide simple and convenient electricity bill inquiry and payment services. The app is also combined with AMI technology to monitor electricity consumption information, record consumption during peak and off-peak periods, and compare customers' own electricity consumption with average consumption in the same area or by the same industry. It also has an optimized residential electricity consumption analysis function. Through this function, push notifications will help users adjust their electricity consumption in a timely manner and independently manage their electricity consumption.

To achieve the goal of net-zero emissions, the government, Taipower, enterprises, and the public must fully participate in energy production, consumption, and balancing mechanisms. Moreover, electricity saving must be elevated from a behavior to an attitude and lifestyle. Saving electricity does not have to mean living like an ascetic monk. Taipower hopes to provide digital mobile services and to promote energy education in an easy-to-understand way that guides users to change their electricity consumption behaviors through price signals or by providing incentives. It is our hope that by making small changes together, we as a society can embrace a new pattern of electricity saving, and so, do our part to contribute to the environment.

1 Taipower and Sustainability

Suitable for the following stakeholders: Shareholders, Board of Directors, Employees, Partners, Government Agencies, Media, Non-Governmental Organizations, Users

Development Vision

Taipower aspires to become an outstanding and trustworthy world-class power utility group. The Company has implemented sustainable governance, and continues to refine its environmental, social, and governance policies to increase its sustainability and resilience. Following the latest amendments to the Electricity Act, Taipower committed to overcoming the challenges of transformational change within the power industry. It began developing supportive measures to meet these transformational needs and planning to transform into a power generation and transmission, distribution and electricity retailing utility. It also moved towards adopting a parent-subsidiary control and group financial management model. Now, the Company is actively promoting energy transition while remaining accountable for providing a stable power supply. Through the process of its corporate transformation, Taipower will strengthen its communication and cooperation with stakeholders. The Company will also internalize suggestions and feedback about operations from those stakeholders while gradually embracing the wave of new power industry trends. Sound corporate governance and management strategies are the foundation of corporate value creation. For this reason, Taipower is committed to responding to risks and opportunities, and continues to refine its business strategies. Moving forward, it will continue to strengthen internal auditing and control, and implement mitigation and adaptation measures that proactively address potential risks and opportunities. Taipower will also continue to closely adhere to legal requirements and to practice a spirit of integrity to ensure its stable operation and long-term development. The Company discloses various types of information on an ongoing basis, and enhances the value of its sustainable supply chains through cooperation with its suppliers.

Performance Highlights

- Taipower has an excellent record of successfully issuing green bonds. As of the end of 2023, it has issued 14 tranches with a total of NT$68.15 billion in green financing.
- In 2023, Taipower received the highest rating of "Excellent" in the Corporate Governance Evaluation for State-Owned Enterprises conducted by the Ministry of Economic Affairs.
- The average attendance rate was 99.1% for board meetings and 100% for Audit Committee meetings in 2023.
- The Board of Directors and various functional committees all scored excellent and above in their performance reviews for 2023.
- In 2023, 14 anti-corruption meetings were convened for employees with approximately 1,088 participants. According to an accompanying questionnaire, 98.6% of participants were satisfied with the meetings and 99.9% thought it was helpful.
- In 2023, 251 anti-corruption publicity activities were held with 6,839 participants (accounting for 24% of all employees).
- In 2023, 12 issues of an electronic publication on anti-corruption were published with a total of 48,642 views. In the accompanying questionnaire, more than 97.1% of viewers were satisfied, of whom 71.9% were "highly satisfied".

1.1 Taipower's Management Strategy

1.1.1 Taipower Profile 2-1 2-6

Established on May 1, 1946, Taipower is a state-owned power industry group that operates in the generation, transmission, distribution, and the sale of electricity sectors. According to the regulations of the Electricity Act, Taipower is responsible for providing a stable electricity supply. Revenue from electricity sales accounted for 91.7% of the Company's total revenue in 2023. As of 2023, the installed capacity in the Taipower System (including Independent Power Producers) was 55.44 GW, consisting mainly of thermal power generation with hydroelectricity and renewable energy. In terms of transmission and distribution, Taipower's system has 622 substations, and the total length of power transmission lines reached 18,230.3 circuit kilometers (including overhead power lines and underground cables) while its total length of distribution lines reached 422,640 circuit kilometers in 2023.

In response to the recent global shift toward sustainability and the development of future electricity markets, Taipower has undergone an organizational transformation. In January 2016, the Company established four business divisions: the Power Generation Division, the Nuclear Power Division, the Transmission System Division, and the Distribution and Service Division. Following the establishment of these divisions, the headquarters and business divisions adopt a combination of centralized policymaking and decentralized operational management, in an effort to transform from a government agency into a highly efficient enterprise. In the future, Taipower will continue to abide by the requirements of the Electricity Act by transforming itself into a holding company with subsidiaries, which aim to promote market competition, enhance business operation efficiency, and promote corporate sustainability. This will allow Taipower to become a prestigious and world-class power utility group that provides its customers with services of the highest quality.

Note: Circuit Kilometers = Number of Cir cuits * Circuit Length (Kilometers)

Core Values

To successfully operate in the power industry, Taipower must contend with the trilemma of energy security, environmental sustainability, and affordable pricing. In response to global climate change, domestic energy transition, and competition resulting from the liberalization of the electricity market, Taipower revised its mission, vision, and core values in 2015. The changes are expected to guide the Company's business direction, change the mindsets of its employees, and allow it to move toward becoming a superior and sustainable power business group.

- **Our Mission: To supply stable electricity for the diversified development of society in an environmentally- friendly manner and at a reasonable cost.**
- **To transform into a prestigious, trustworthy and world-class po wer utility group.**
- **Integrity, Care, Service, and Growth.**

Founded	May 1, 1946
Coverage	Taiwan, Penghu, Kinmen and Matsu areas
Headquarters	Taipei City
Capital (NT$)	$479.9 billion
Shareholding	97.89% government-owned; 2.11% privately owned
Total assets	2,565.4 billion
Operating revenue	781 billion
Number of employees	28,213
Number of users	15.14 million
Installed capacity	55.439 GW in the Taipower system (32.563 GW are Taipower-owned)
Net amount of generated and purchased power	245,500 GWh

As of 2023/12/31

Management Strategy

Taipower is responsible for providing stable electricity in a manner that is environmentally-friendly and cost-effective, and for providing the fundamental conditions required for the development of public livelihoods and economic growth in a diverse society.

Each year, Taipower conducts reviews to ensure compliance with the latest amendments to the Electricity Act. The Company also considers a range of other factors such as green energy, carbon reduction, energy conservation, and the stability of the power supply when formulating its management policies. After reviewing its current business status, it analyzes and summarizes various essential background factors that affect the operation and formulates ten "overall strategies" to set its business direction in the next five years, and to reinforce scenario assumptions for the sixth to tenth years..

In order to promote and implement these strategies, specific action plans are discussed after the "overall strategy" is formulated by the CEO and the Vice President of each business unit and system. Subsequently, the Company sets corporate goals that are classified according to key performance indicators. The implementation status of each goal is then incorporated into the Company's target and review systems for management and control. Under the framework of the Plan-Do-Check-Act (PDCA) corporate management cycle, continuous adjustments and improvements are made to enhance the growth of Taipower's sustainable operations.

Taipower's Power Plants and Power Grid

1.1.2 Operational Performance 203-1 203-2

Sustainable Operation Goals and Financial Performance

In recent years, Taipower has been actively strengthening its business constitution, implementing goal setting and performance management appraisals, and annually reviewing indicator items to meet its overall operating objectives. In terms of financial performance, Taipower will maintain reasonable electricity rates and diversified management practices to achieve the multiple goals of a stable power supply, energy conservation, carbon reduction, and financial stability as it responds to changes in power generation, sales structures, fuel price volatility, and uncertainty in electricity rate adjustments. Taipower's financial performance from 2021 to 2023 was as follows:

Financial Performance from 2021 to 2023

Unit: NT$ millions

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.

Long-Term Financial Planning

■ Seeking government capital increases or subsidies

Taipower is seeking to enhance the Company's net worth with sufficient internal funds so that its budget can be increased. Additionally, the Company is striving to secure sufficient government budget allocation so that investment can be made in essential construction projects. In 2023, Taipower issued new shares for a cash capital increase in the amount of NT$149.9 billion. In 2024, Taipower pursued the issuance of new shares for a cash capital increase in the amount of NT$100.1 billion. That capital increase was approved in the extraordinary shareholders meeting on February 23, 2024.

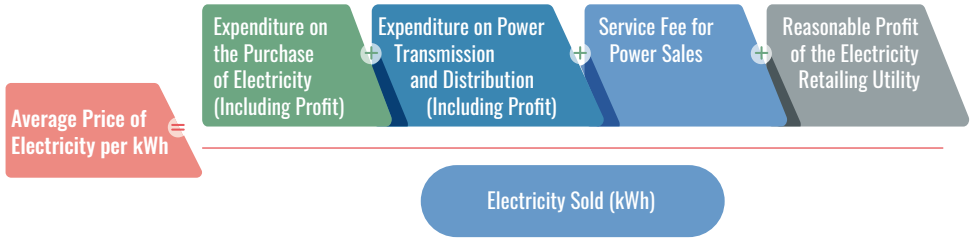
Diversify funding channels to reduce funding costs

The Company is working to increase flexibility by utilizing various funding channels to attain low-cost sources of capital and raise necessary funds in a timely manner. It is also working to realize opportunities for government assistance to reduce funding pressure. Taipower actively promotes sustainable development and net-zero carbon reduction, and current financing has been assessed as not being affected by the Green Finance Action Plan 3.0. In addition, Taipower continues to issue green bonds and expand the scale of green bond issuance in coordination with green investment planning and the government's green finance policy.

Electricity Tariff Review Mechanisms

In accordance with Article 49 of the Electricity Act, the competent authority lays out calculation formulas and adjustment mechanisms for the electricity tariff. During the review process, Taipower may propose plans for the electricity tariff, and the tariff can subsequently be adjusted after approval is obtained from the Electricity Tariff Examination Council. The process allows electricity prices to immediately reflect international fuel price volatility and Taipower's business performance, and reasonably reflect on operating costs to make electricity prices more reasonable.

The Electricity Retailing Utility Enterprises' formula for determining the electricity tariff is described below:



The electricity tariff is reviewed for adjustment twice a year, typically in April and October. In principle, increases and decreases cannot exceed 3% for each adjustment. However, when the cost of the electricity supply continues to rise or fall sharply, the Electricity Tariff Examination Council may adjust the electricity tariffs based on the status of the electricity tariff stability reserve.

The Ministry of Economic Affairs convened the first Electricity Tariff Examination Council in March 2023. Since fuel prices were still at a high level in 2023, the electricity tariffs should have been adjusted to reflect costs. Consequently, a decision was made to increase the average electricity tariff by 11%. Despite this, in consideration of people's livelihoods, a need to stabilize prices, and a desire to reduce the impact of price hikes on industries that are lowering their electricity consumption, the electricity tariff was not increased for residences with electricity consumption below 700 kWh, small businesses with electricity consumption below 1,500 kWh, and agricultural, fishing or school users.

In the second half of 2022, the increase in electricity tariffs for industries that lowered their electricity consumption by more than 10% was halved. The adjusted overall average electricity price of NT$3.1154 per kWh was implemented on April 1, 2023.

After the aforementioned electricity price adjustment, the Ministry of Economic Affairs convened a second Electricity Tariff Examination Council in September 2023. Although the average fuel price was still higher than before the Russo-Ukrainian War, the council felt that international fuel prices would likely follow a slow, downward trend. Additionally, the government provided financial support in 2023, and a budget was allocated to increase capital of Taipower in 2024. As a result, the council decided to not adjust the electricity tariff to maintain price stability. At the same time, the freeze on electricity tariffs that had been in place since July 2022 for high-voltage users, such as department stores, cinemas, gyms, and restaurants, was canceled.

Since electricity prices are interlocked with commodity prices and inflation, Taipower serves as a "wave-absorbing block" in response to the rise in international fuel prices. In this role, it slows the increase in electricity prices from the source to avoid having a multiplier effect on commodity prices, thereby blocking a tsunami of imported inflation for the country. This has reduced Taiwan's inflationary pressure in comparison to other countries and allowed the Consumer Price Index (CPI) to be effectively controlled below 3 percent. Consequently, electricity prices do not reflecting costs, and so Taipower is continuing to seek approval for reasonable tariff adjustments that take into consideration the latest international fuel prices and electricity prices in other countries.

The Average Prices of Residential, Industrial, and Commercial Electricity from 2021 to 2023

NT$ /kWh

Category of Power Consumption	2021	2022	2023
Residential	2.5110	2.5571	2.6048
Industrial	2.4592	2.6309	3.1076
Commercial	3.1861	3.2447	3.5015
Other	2.6353	2.8596	3.2364

Note: Other refers to electricity consumption that occurs outside the three aforementioned items. This includes street lights, schools, government institutions, and other non-business electricity consumption.

Affordable Clean Energy

Taiwan's residential and industrial electricity prices rank fifth and third lowest globally. Moreover, Taipower has maintained long-term stability in operations while ensuring a high quality and reliable power supply. The Company has achieved this, in part, by actively developing emerging energy industries such as solar and wind power generation and promoting the transition to cleaner energy sources to protect the environment and improve people's quality of life. Additionally, Taipower actively promotes the development of green energy to achieve energy transformation and sustainable development goals.

Diversified Management and Strategies

Taipower must also evaluate opportunities to enter emerging energy-related industries when appropriate. The Company seeks to remain aligned with the global energy trends, and particularly energy transition and net-zero emissions. This allows the Company to fulfill its responsibility of ensuring stable power supply. At present, Taipower has successfully initiated entrepreneurship in areas such as:

- power operations
- nuclear techniques
- maintenance
- research and training
- communications
- real estate
- cultural innovation

It has also moved forward with reinvestment businesses such as:

- coal and mine development
- cogeneration
- wind power training

In 2023, Taipower generated NT$5.125 billion in income from these diversified activities.

Diversified Business Income in The Past Three Years

2021	2022	2023
3.1 billion	8.3 billion	5.1 billion

Note: Diversified income in 2023 was lower than in 2022, primarily because of a decrease in income from coal sales income following the stabilization of international coal utilization due to reinvestment in coal mine development businesses.

Land Revitalization

Taipower established a Land Revitalization Project Team that was charged with reviewing land planning and utilization cases, continuously promoting, supervising, and evaluating revitalization plans and efforts to attract investment. Currently, the Team is focusing on multi-purpose land use for substations in metropolitan areas, participation in joint urban renewal ventures or the urban renewal of idle land, and the promotion of land revitalization through bidding and setting land use rights for large areas to increase the Company's income. In 2023, the team conducted 8 project team meetings, including working group sessions.

Taipower's Transformation Planning

Core Transformation Concept

The most recent amendment of the Electricity Act was promulgated by presidential order on January 26, 2017. According to Article 6 of the Act, Taipower was required to undergo a transformation into a holding company by January 2023 and to establish separate power generation, transmission, distribution and sale subsidiaries. However, after reviewing the development status of the electricity market, the electricity regulatory authority was permitted to request that the Executive Yuan grant a postponement of the implementation date of up to January 2026. As the international energy situation became increasingly turbulent in recent years, and Taipower assumed responsibility for the new 2050 net-zero target, the deadline was subsequently extended to January 2026.

The transformation of Taipower from an integrated power company to a power business group is the first of its kind for a state-owned company. It is also an organizational transformation that is unprecedented in scale. Taipower has adopted "Strengthening the Foundation" and "Seeking Development" as its two core philosophies as it transforms into a power holding group.

Strengthening the Foundation

As a state-owned power utility group, Taipower plays important roles in providing a stable power supply, air pollution reduction, energy transformation, net-zero emissions, and the electric industry development components of the national policy objectives. As subsidiaries of the Taipower Group, the Power Generation Company and the Transmission, Distribution and Retail (TD&R) Company will strive to fulfill the statutory requirements with respect to the scopes of their businesses. The holding company will play a strategic coordinating role and integrate its subsidiaries to accomplish the missions of the Taipower Group.

Seeking Development

The Electricity Act has fully opened up a range of choices for renewable power, and the electricity market may also be further opened. In the face of the increasing number of private operators joining the electricity market, Taipower Group must not only consolidate its existing businesses but also explore new growth areas by combining external resources with greater efficiency and flexibility to facilitate the Group's sustainable development.

In order to integrate the group's strengths across subsidiaries and create operational synergy, the parent company will be designed to perform the functions of group policy making, strategic coordination, and resource integration. Taipower plans to govern its subsidiaries through a "strategic control" model that takes into account both the group's overall efficiency and business flexibility. In addition, it will establish an effective governance structure and system through the appointment of directors and supervisors, a strategic target system, personnel organization, risk management, budgeting and accounting mechanisms, and internal auditing of subsidiaries.

The Current Status of Transformation in Taipower

Under the three premises of "stable organization, sound finances, and aligned operations," Taipower is preparing for the transition into a financial holdings company and subsidiaries. In addition to seeking external experience through outsourced research projects and benchmarking with other companies, a "Company Transformation Promotion Meeting" has been established. The meeting is held by the Chairman and has various preparatory groups to plan organizational, financial, and operational matters through internal discussions within the Company. Implementation results to date are as follows: In terms of organization, the department-level organizational framework has been completed for all three companies, and regulations have been drafted for the division of responsibilities within the Group. In terms of finances, a separate financial accounting system has been developed, and principles for the ownership of assets and liabilities have been planned. Methods for transferring liabilities and connecting cash flows have also been discussed. In terms of operations, the interface between the parent company and subsidiaries has been reviewed for after the transformation and related plans have been formulated in hopes of maintaining business flexibility and group synergies while ensuring a stable power supply and smooth energy transition.

Progress and Achievements in 2023

After the recent amendment to the Electricity Act, the structure of the electricity market changed, posing significant challenges for Taipower's operations. The Company has subsequently been active in taking measures to adapt, prepare, and plan, which are explained in the following:

1. Adapting to the liberalized electricity market and Taipower's support for new business opportunities

A. Provide all users with the option of using green electricity
B. An electricity trading platform was established in July 2021. As of the end of 2023, 74 operators with a total capacity of 935.7MW are participating on the platform.
C. The annual transaction volume of the green electricity trading market reached 1,730 GWh in 2023.
D. A total of 120 power generation companies (based on company names) were participating in electricity wholesale and direct supply as of December 2023. These included 2 hydropower companies, 97 solar power companies, and 21 wind power companies.
E. The "Green Electricity Distribution Sandbox Project" was implemented in October 2023.

2. Balancing energy transition and a stable power supply, Taipower's new statutory responsibilities

A. Added new statutory businesses such as electricity carbon emission control and reserve capacity.
B. Submit "reserve capacity" preparation plans and achievement reports every year to ensure long-term power supply stability.
C. An electricity industry regulatory agency has been designated to manage and supervise the electricity market, establish electricity price stabilization mechanisms, maintain stable electricity prices, and avoid significant fluctuations.

1.2 Corporate Governance

1.2.1 Governance Framework

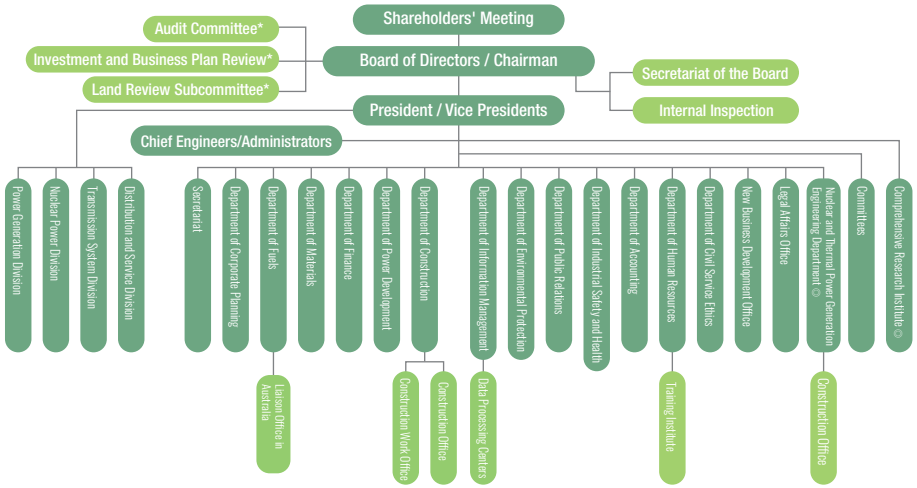
2-9 | 2-10 | 2-11 | 2-15 | 2-17 | 2-18 | 2-19 | 3-3

Material Topics: Corporate Governance and Sustainable Management

Policy	To supply stable power for the needs of diverse social developments with an eco-friendly approach at a reasonable cost.
Management Approach	❶ Implement corporate governance, promote integrity measures, anti-corruption initiatives, and transparency of corporate management. Follow the principles of professional ethics and integrity, strive to integrate sustainable development with operating strategies, strengthen the sustainability of governance structures, and implement sustainability strategies, and risk management, while strengthening personnel risk awareness and corporate resilience, thereby increasing corporate value. ❷ Continue to seek to lift policy tasks and make electricity prices more reasonable.
Action Plans	❶ Improve Ranking in the Corporate Governance Evaluation. ❷ Maintain reasonable electricity prices and diversify business practices.
Actual Performance in 2023	❶ In 2023, we were honored to receive the highest rating of "Excellent" in the Corporate Governance Evaluation for State-Owned Enterprises conducted by the Ministry of Economic Affairs and recognition of other achievements. ❷ The pre-tax loss in 2023 was NT$198,510 million, and the amount affected by the implementation of major policies was NT$235,628 million.
Targets in 2030	Establish short, medium, and long-term goals for key SDGs. In addition to regularly reviewing targets every year, the issue of increasing or decreasing targets based on major international issues are addressed. At the same time, Taipower's overall strategies, action plans, and specific measures are formulated through rolling reviews of future business strategies every year. This has become an element of Taipower's sustainable development. The Company aims to become aligned with international sustainable development trends, to have electricity price increases reflect rising costs, and to continue to implement sustainable development.

Taipower has a corporate governance code of practice, which includes governance principles such as protecting the rights and interests of shareholders, strengthening the functions of the Board of Directors, giving full play to the functions of the audit committee, respecting the rights and interests of stakeholders, and improving information transparency. Taipower currently has 16 departments and offices along with four business divisions that include the Power Generation Division, the Nuclear Power Division, the Transmission System Division, and the Distribution and Service Division. The Company has also established various subordinate units and committees to meet its business needs.

Taiwan Power Company - Organizational Structure Chart



Notes: 1. ◎ Indicates that this unit is not under the direct supervision of the General Administration Department.
2. The head of the Research Institute reports directly to the General Manager.
3. * Indicates is a functional committee. The functions of these committees can be explored in the "Corporate Governance Report" section of Taipower's 2024 Annual Shareholder Meeting Report.

Board of Directors

The Structure of the Board of Directors

According to Taipower's Articles of Association, the Board of Directors consists of 15 directors that are elected at the shareholders' meeting. In accordance with the provisions of the Securities and Exchange Act, the Board shall reserve three seats for independent directors, who also make up the Audit Committee. The Board of Directors shall elect five managing directors from among its members, one of whom must be an independent director. The term of service for directors (both independent and managing) is two years, and they are eligible for reelection. According to the Administrative Law of State-Owned Enterprises, at least one-fifth of the directors of each state-owned enterprise that represent state capital shall be recommended by the labor union. Thus, Taipower's Board of Directors consists of 15 directors, including five managing directors (one of whom serves as an independent director), three independent directors, and three labor directors.

Diversity of Board Members

Article 20 of Taipower's Corporate Governance Best Practice Principles expressly states that the composition of the Board of Directors must take into consideration diversity of gender, age, and expertise, and that board members must have the general knowledge, skills, and competencies required to perform their duties. Overall, Taipower's directors are diverse in terms of expertise, gender, and age. The current term directors (June 2023 to June 2025) are described below:

Members of Taipower's Board of Directors in 2023

Title	Name	Position	Gender	Age (year old)			Professional Background					Attendance Rate
				41-50	51-60	61-70	Electric Energy	Public Policy	Sustainable Development	Finance and Accounting	Law and Land Administration	
Acting Chairman (Managing Director)	Tseng, Wen-Sheng	Vice Minister, Ministry of Economic Affairs	Male		●		✔	✔	✔			100%
Managing Director	Wang, Yao-Ting	President, Taiwan Power Company	Male			●	✔	✔	✔			94%
Managing Director	Lin, Faa-Jeng	President, National Applied Research Laboratories	Male			●	✔	✔	✔			100%
Managing Director	Chang, Tien-Chin	Chair Professor, Department of Environmental Engineering, Chung Yuan Christian University	Male			●	✔	✔	✔			100%
Managing Director (Independent Director)	Chou, Shya-Li	Vice President, Taiwan Institute of Economic Research	Female			●	✔	✔	✔	✔		100%
Director (Independent Director)	Liu, Chia-Wen	Professor, Department of Accounting, National Taiwan University	Female		●			✔		✔		100%
Director (Independent Director)	Liu, Chih-Wen	Distinguished Professor, Department of Electrical Engineering, National Taiwan University	Male		●		✔	✔	✔			100%
Director	Lin, Tze-Luen	Spokesperson, Executive Yuan	Male		●		✔	✔	✔			94%
Director	Chiang, Yau-Chi	Professor, College of Maritime Law and Policy, National Taiwan Ocean University	Female	●				✔	✔		✔	100%
Director	Chuang, Ming-Chih	Director, Department of General Planning, Ministry of Economic Affairs	Male		●		✔	✔	✔			100%
Director	Guo, Xiao-Rong	Director, Northern Region Branch, National Property Administration, Ministry of Finance	Female		●			✔			✔	100%
Director	Luo, Cui-Ling	Director, Department of Economic Law, Ministry of Economic Affairs	Female		●			✔			✔	100%
Director (Labor Director)	You, Zheng-Da	Section Chief, Chiayi Branch Sales Office, Taiwan Power Company	Male		●		✔	✔	✔			100%
Director (Labor Director)	Yang, Chen-Hsiung	Specialist, Hsinchu-Taoyuan Power Supply District Operations Office, Taipower	Male		●		✔	✔	✔			100%
Director (Labor Director)	Huang, Wen-Feng	Shift Supervisor, Taichung Power Plant, Taipower	Male		●		✔	✔	✔			100%

Disclosure and Transparency of Corporate Governance Information

Taipower's official website has a Corporate Governance section that provides information for shareholders on information such as the shareholders' meeting and Board of Directors. The Company prepares an annual report in accordance with laws and regulations, and discloses it on the Market Observation Post System (MOPS).

Continuing Education for Directors

Taipower is a publicly offered company, but is not listed on either the Taiwan Stock Exchange (TWSE) or the Taipei Exchange (TPEx). Despite this, the Company actively arranges continuing education opportunities for directors to assist them in effectively implementing sound corporate governance. The training is conducted in accordance with regulations and is consistent with the continuing education system of the Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE and TPEx Listed Companies. In 2023, re-elected directors completed an average of 9.65 hours of training, while new directors undertook an average of 13.25 hours of training. The continuing education courses, forums, and seminars covered corporate governance topics, including finance, corporate social responsibility, technology, regulations, management, and environmental protection. All directors met the standards in the abovementioned guidelines.

Mechanism to Avoid Conflicts of Interest

According to Taipower's board meeting policy, for any proposals in which directors (including independent directors) or the juridical person they represent are an interested party, the director shall explain the critical content of their interest at the meeting. When their interest is likely to harm the interests of Taipower, directors shall not participate in the discussion and avoid voting on the proposal. They are also unable to act on behalf of another director. Prior to each board meeting, reminders of these conflict-of-interest recusal rules are stated in-meeting notifications.

Board Performance Evaluation Policy

Taipower established the Taiwan Power Company Guidelines for Board of Directors Performance Evaluations, which includes performance evaluations of the entire Board of Directors and of individual board members. The overall performance evaluation of the Board of Directors includes the degree of participation in company operations, improving the quality of board decisions, board composition and structure, selection and continuing education of directors, and internal control. At the end of each year, the performance of the board (including the Audit Committee, the Investment and Business Plan Review Subcommittee, and the Land Review Subcommittee) is evaluated based on the evaluation procedures and indicators specified in the Guidelines. Performance evaluation results are reported to the Board of Directors before the end of March the following year. Both the board and its various functional committees achieved a performance rating of “excellent” or higher in 2023. The results were publicly disclosed in the "Corporate Governance/Board of Directors" section of Taipower's official website.

The performance evaluations of individual board members are conducted in accordance with the Operational Guidelines for Independent Directors in Enterprises under the Ministry of Economic Affairs and the Management Guidelines for the Appointment of Directors, Supervisors, and Other Important Positions in Citizen-Owned Enterprises and Foundations under the Ministry of Economic Affairs and Its Subordinate Agencies. At the end of year, individual directors conduct self-evaluations following the established procedures and provide them to the Ministry of Economic Affairs as a reference for assessment and nomination purposes.

Remuneration Policy for Directors

Taipower is a state-owned enterprise, and hence, the standards for remuneration of its directors, including tthe Chairman, are set by the competent authority (the Ministry of Economic Affairs) and reported to the shareholders' meeting in the absence of a Remuneration Committee. Apart from monthly compensation, independent directors may not collect earnings distributions, year-end bonuses, or other forms of compensation. As directors designated by the labor union fall under the category of Taipower employees, their compensation is determined in accordance with the Basic Principles of Employee Compensation Authorization for State-Owned Businesses and the Management Guidelines Governing Remuneration for Employees of Subordinate Units under the MOEA. They may not collect the same remuneration as other directors. In 2023, the remuneration for Taipower directors (including the Chairman, independent directors, and labor directors) constituted -0.006% of the Company's net income after tax.

Corporate Governance Officer

When formulating Taipower's Guidelines for the Appointment of a Corporate Governance Officer, Taipower referenced the Financial Supervisory Commission's Corporate Governance 3.0 - Sustainable Development Blueprint and the Corporate Governance Evaluation Indicators and Recommendations of the Ministry of Economic Affairs for subordinate agencies. The Board of Directors appoints a corporate governance officer as the highest-level supervisor of corporate governance matters in accordance with the Guidelines. The corporate governance officer assists directors with compliance, continuing education, data required by directors to perform their duties, and oversees corporate governance-related matters. In 2023, Taipower's corporate governance officer received 34.5 hours of continuing education (exceeding the minimum 12 hours of training required). The courses completed were all within the scope of the Securities and Futures Bureau's training system and certificates were obtained.

1.2.2 Risk Management

Risk Management Mechanism

In response to external risks and opportunities in its business operations, Taipower constantly strives to effectively identify risk factors and develop rapid and effective response strategies. To strengthen risk management, after reviewing the details of the power outage on March 3, a Risk Control Center was established. The center consists of expert teams from the generation, nuclear, transmission, and distribution systems. The center monitors critical risks, enhances supervision and control based on risk levels, and works to prevent large-scale power outages from occurring. Furthermore, in facing the challenges of medium and long-term sustainable development, such as energy transition and the COP28 low carbon and climate change response, Taipower has directed its efforts to the power source, the power grid, and to the demand side. Practically, this has included increasing gas usage, reducing coal dependency, expanding green energy, and introducing zero-carbon fuels such as hydrogen and ammonia for co-firing. Taipower is also strengthening its power grid engineering and establishing energy storage systems while implementing strategies such as demand response and energy conservation. The aim is to gradually achieve the goal of net-zero emissions in the power sector. The Company will continue to implement risk control measures and raise risk awareness among its personnel. It will employ a rolling process of risk identification, assessment, review, and response to mitigate potential risks and reduce operational risks.

Risk Management Policies

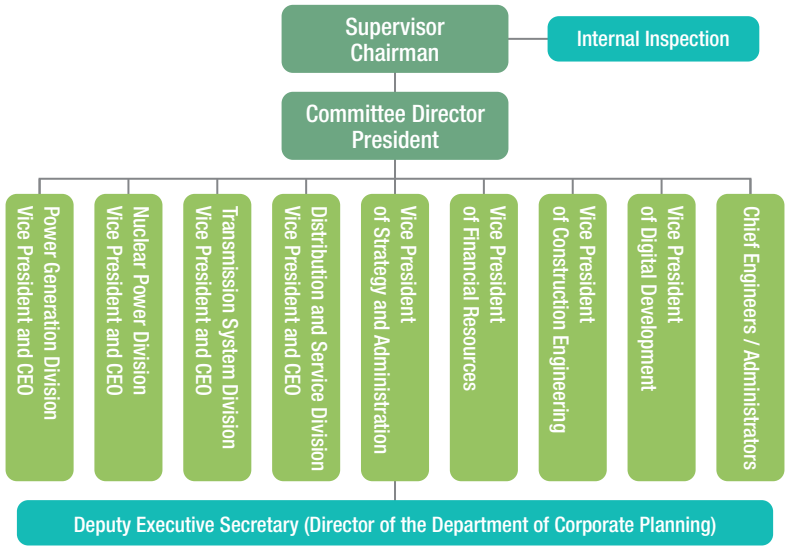
Taipower has established four risk management policies as guidelines for organizational risk management. They are as follows:

- **Provide the necessary resources to establish, maintain and continually improve the effectiveness of the risk management system in order to reduce operational risks.**
- **Promote risk management organization and the implementation of risk assessment, risk management, risk monitoring and risk communication.**
- **Ensure that employees have the ability to perform risk management, create a supportive work environment, and shape a risk-managing culture.**
- **Strengthen communication between staff and stakeholders, raise staff awareness of risk management and thoroughly implement related policies.**

Risk Management Steering Committee

In Taipower's risk management structure, the Chairman acts as a supervisor, the President acts as a committee director and the Risk Management Commission operates as a task force. The Commission is composed of the CEOs from the four major divisions (Power Generation, Nuclear Power, Transmission System, and Distribution & Service) and their VPs along with the Chief Engineers/Administrators from the four major systems (Strategic Administration, Financial Resources, Construction & Engineering, and Digital Development). The Chief Engineers/Administrators are also members of the commission. The Vice President in charge of the Department of Corporate Planning serves as the executive secretary with a deputy executive secretary that assists with the relevant staffing and administration of the Commission.

Taipower's Risk Management Organization Structure



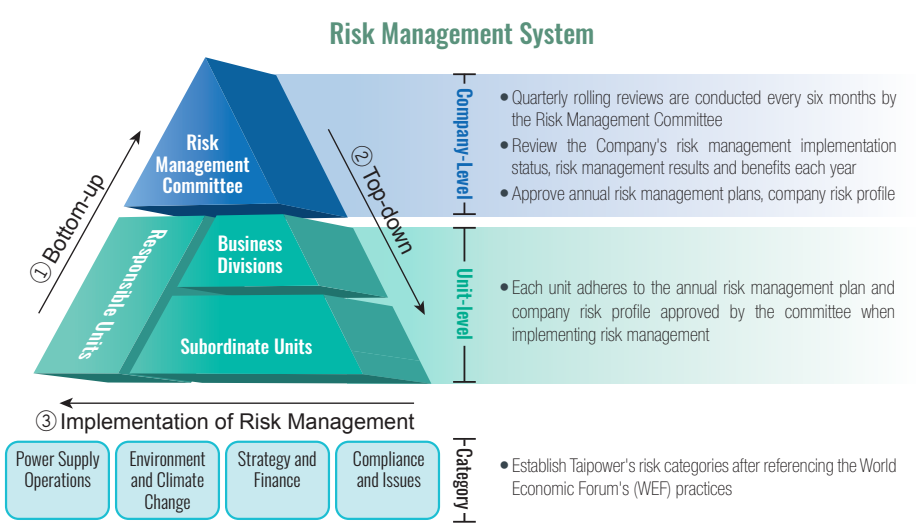
Risk Management Process

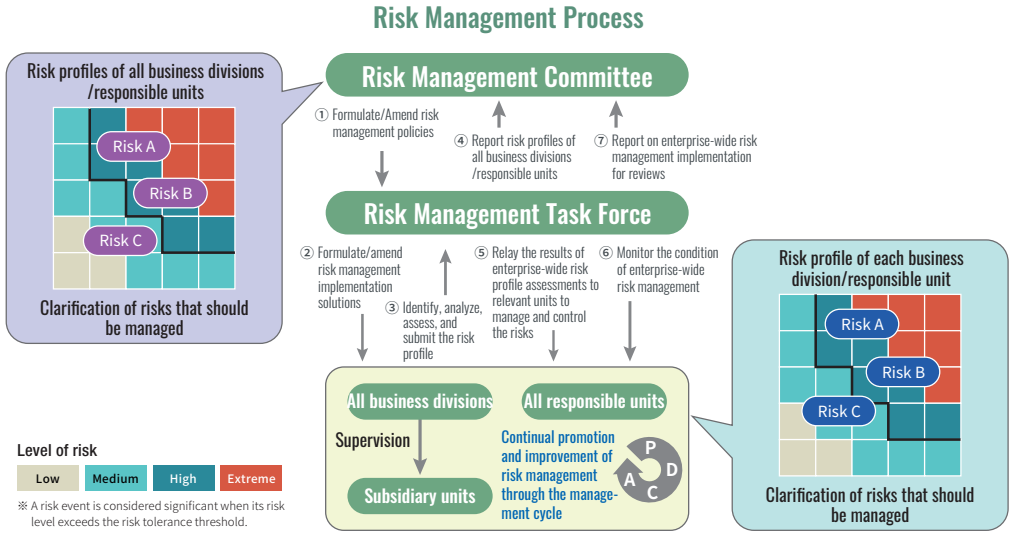
1.Risk Management System

Taipower conducts integrated risk management, with risk assessments covering various dimensions, including: finance, legal compliance, environment, and power supply operations. In order to implement comprehensive risk management, operations are divided into two levels: corporate level and unit level, with rolling reviews every quarter, and a Risk Management Committee meeting held every six months to review the implementation of risk management and review and approve risk management plans. Risk management reports have been made to the Board of Directors every year since 2015.

2.Risk Management Process

When Taipower was first establishing a risk management framework, the Risk Management Committee formulated risk management policies that were approved by the Board of Directors, and then Department of Corporate Planning formulated risk management implementation plans as guiding principles for each unit of the Company as it worked to carry out risk management. The Company's risk management plans are formulated both from the bottom-up and then the top-down. Each first-level unit continues to examine changes in risks of their operations, the Company's overall strategy, and the overall goals. After this risk assessment, company-level risk events and a residual risk portfolio are reported from the bottom-up. After staff units comprehensively evaluate internal and external environmental conditions and compare them with international risk trends, plans are submitted to the Risk Management Committee for review and approval and then issued to each unit for implementation.





■ Risk Assessment and Identification

In conducting risk identification and analysis, Taipower will take the following factors into consideration: (1) Issues of concern to stakeholders, (2) Major issues that affect the Company's operations and safety, (3) New policies or changes due to major incidents, (4) Incidents tracked by the supervising agency or affairs that the competent authorities have deemed worthy of specific attention.

■ Risk Events and Response Measures

Taipower uses its risk assessment mechanism to monitor potential risks. When an incident is classified as extremely high risk, it will be listed as a top priority. Incidents classified as high-risk are the second priority and may require specific plans so that the necessary resources are provided to ensure issues are resolved. Risks at the medium level are not a top priority, but need to be monitored continually by the responsible departments. Low-level risk indicators are handled in accordance with general procedures.

In 2023, Taipower identified 13 risk events. Each risk event had its own risk scenario and corresponding control measures planned in advance. The effectiveness of control measures and any changes to the situation are reviewed on a continuous basis to improve the effectiveness of prevention beforehand and response afterward. Through this systematic risk management, Taipower is able to analyze risks and sustainability issues, strengthen risk awareness, master opportunities, and move toward its vision of sustainability.

Risk Category	Risk Identified
Power Supply Operation Risks	■ Critical power infrastructure security and resilience compromised ■ Short-term imbalance between supply and demand ■ Medium and long-term major power generation projects behind schedule ■ Medium and long-term major transmission and substation projects behind schedule
Environment and Climate Change Risks	■ Impact of environmental pollution ■ Lower-than-expected carbon emission reduction
Legal Compliance and Issue Risks	■ Severe safety and health accidents ■ Negative news expansion ■ Violation of major regulations ■ Outbreaks of labor-management disputes and employee protests
Strategic and Financial Risks	■ Accrual of losses resulting in greater impacts to the Company's operations ■ Insufficient cultivation of core technology ■ Failure of protection in the information system

Risk Control Center

The Risk Control Center was established in response to the 303 Incident(occurring on March 3 in which the nationwide power outage), to ensure the ongoing stability of the power supply. The four major improvement goals are to strengthen stability of supply, focus on on-site operations, control horizontal communications, and manage immediate risks. The scope of control includes the power supply, the power grid, renewable energy, private power plants, and fuel supply and interfaces. Contents include potential risk factors for maintenance and testing by each unit, construction, troubleshooting, power outage operations, and relay coordination.

Strengthen Stable Supply Issues

A three-layer and five-level control mechanism was implemented to prevent large-scale power outages caused by a single human error or protection mechanism failure.

Focus on On-Site Operations

Before work: Control potential risks in daily operations.

During work: Eliminate human errors in work.

After work: Immediate feedback, review, and guidance.

Control Horizontal Communications

The Risk Control Center holds company-level risk control meetings every day to horizontally communicate about high-risk work for the next 24 hours (including holidays).

Manage Immediate Risks

Established a risk management communication group, 24-hour risk supervision, and real-time supervision and guidance from business divisions and the Risk Control Center.

Risk Assessment and Response

Risk Events and Response Measures

Negative news stories about Taipower during 2023 included: Taipower's financial issues, power supply stability and reliability issues, regional power outages, and questions about power construction or policies. Taipower has taken the following actions in response to the negative news:

1. Quickly clarified any misunderstandings in response to external concerns or emergencies and issued press releases and "instant explanations" when necessary to communicate with the public and prevent the spread of false information.
2. In response to regional power outages, information on power restoration is immediately updated for the media, and the cause of power outages and the Company's improvement actions are explained in a timely manner to minimize the damage of negative news.
3. Implemented a spokesperson system to respond to issues that are the focus of media attention or may trigger subsequent developments.
4. Actively arrange media interviews on various topics, and arrange for a spokesperson to respond to negative public opinions and explain the Company's position to create balance in reporting.

1.2.3 Integrity and Compliance 2-27 205-1 205-2 205-3

Ethical Corporate Management

Taipower's ethical corporate management philosophy centers on implementing "sincere management and independent management," internally promoting ethical standards, externally abiding by laws and regulations, fulfilling corporate responsibilities, and promoting anti-corruption.

The Ethical Code

All Personnel

All Taipower employees shall abide by laws and regulations such as the Code of Ethics for Personnel under the Ministry of Economic Affairs and the Directions on Lobby Registration and Checks for the Executive Yuan and its Subordinate Agencies. Any employee who requires clarification on any ethical issue or has legal compliance-related questions may consult specialists from Taipower's Department of Civil Service Ethics, with full protection of their rights and interests.

Procurement Personnel

Taipower's procurements shall abide by the Company's Ethical Guidelines for Procurement Personnel, and the Points of Attention for Interaction between Procurement Personnel and other Businesses. The Company offers frequent training for its procurement personnel to help them perform their duties fairly, honestly and in compliance with pertinent laws and without giving, asking, or expecting favors. Taipower has also established an Anti-Corruption and Legal Affairs Office to offer consultation services. The Company emphasizes fair and open procurement processes in order to improve procurement efficiency, performance, and quality.

Management

Taipower seeks to ensure that reviews for individuals with administrative liabilities or suspected in fraud or bribery cases are dealt with in a timely, effective and fair manner. As such, the Company reviews the administrative liabilities of both individuals involved in fraud/bribery and their managing supervisors to ensure the implementation of Taipower's integrity management.

Anti-Corruption Measures

As a state-owned enterprise, Taipower executes specific policies and measures from the Executive Yuan's National Integrity Building Action Plan. The Company also plans and implements anti-corruption work, builds consensus with the private sector on anti-corruption, and sets the highest standards for itself.

Taipower Anti-Corruption Related Regulations:

- Taiwan Power Company Notes for Interactions between Procurement Personnel and Vendors
- Taiwan Power Company Guidelines for the Establishment of a Procurement Sampling Inspection Task Force
- Taiwan Power Company Plan for the Promotion of Anti-Corruption in the Current Stage
- Taiwan Power Company Notes for Holding Personnel and their Supervisors Accountable for Administrative Liabilities

The Promotion of Anti-Corruption Campaigns

Taipower's Department of Civil Service Ethics is one of the units that implements Taipower's ethical corporate management policy, and is responsible for the promotion, implementation, and coordination of anti-corruption, reform, avoidance of conflicts of interest, corruption and legal affairs, and confidential information. It reports an overview of integrity work to the Board of Directors every year. For violations of laws and regulations and negative news, Taipower will analyze the causes of the incident, processes, and loopholes in internal control and supervision, and ask the unit involved in the case to submit a review report and suggestions for reforms to the unit supervisor for approval and the follow-up of subsequent handling. In addition, Taipower has stepped up the promotion of anti-corruption laws and regulations, and compiled cases in the monthly electronic publication on anti-corruption for all employees, so as to establish a proper understanding and awareness of anti-corruption concepts among employees and to prevent the recurrence of similar incidents.

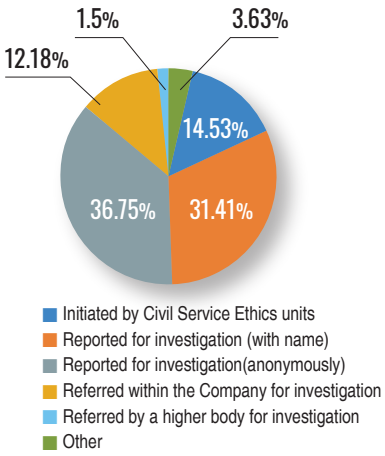
The Implementation Plan for Taipower's Anti-corruption Procurement Platform

Taipower established an anti-corruption platform to improve risk prevention, incorruptibility, public-private cooperation, administrative transparency, national supervision, and other factors that help ensure that procurement projects can be completed on schedule and at the appropriate quality. The platform has been particularly pertinent for the Company's large-scale procurement efforts associated with High-Calorific Coal Spot Purchases in 2023 and the Second Phase of the Offshore Wind Power Project with its Wind Farm Material Procurement with Installation. The anti-corruption platform established a transparent procurement system that facilitates cross-domain cooperation, ensures compliance and appropriateness of various decisions and operations, avoids disputes, and increases audit frequency. In the future, we will improve the planning and execution of procurement in order to prevent undue external interference by utilizing information disclosure, organizing business liaison meetings, visiting and inviting integrity agencies to visit, and inviting prosecutors to give presentations.

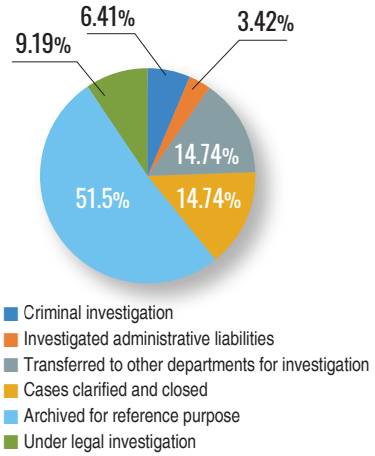
Cases Investigated in 2023

There were 468 ethical investigation cases closed in 2023. They were categorized according to the source of each case, as shown in the figure below. Among them, the ratio of "anonymously reported" cases remains high at 36.75%. Nevertheless, provided the content of reports is specific and has verifiable information, Taipower conducts proper investigations.

Sources of Corporate Ethics Cases in 2023



Handling of Corporate Ethics Cases in 2023



Cases in Which Employees Are Charged with Regulatory Violations

In 2023, one Taipower employee was prosecuted for violating the Anti-Corruption Act. The employee was accused of accepting bribes in exchange for leaking information on specific terms and budget amounts before the announcement of a procurement process. In response to the above incident, Taipower reiterated its anti-corruption position and approach. In accordance with its anti-corruption policy, Taipower will reinforce integrity education and training and anti-corruption related advocacy for its employees and vendors to prevent the recurrence of similar incidents.

Internal Risk Control

TThe internal control system is designed and implemented by the management . The first and second lines of defense are reviewed, adjusted, and improved on a continuous basis according to risk identification and self-assessment results. To further confirm the effectiveness of the internal control system, a third line of defense was established. In accordance with the Financial Supervisory Commission's Regulations Governing the Establishment of Internal Control Systems by Public Companies and the Enforcement Rules for Internal Inspection of National Corporations under the Ministry of Economic Affairs, Taipower's Internal Inspection Office of the Board of Directors devised and executed an Annual Inspection Plan in 2023.

The Annual Inspection Plan identifies risks for units based on the implementation results of the corporation-wide Taipower Risk Management Plan, the result of the previous inspection, and important recent business. Units selected for patrol inspection were chosen because of risk assessment results. The inspected items in 2023 included: internal control management and self-regulatory mechanisms, risk management, effect and efficiency of major operational target projects, information, communication and reporting, compliance with relevant laws and regulations, items required by the Board of Directors/Audit Committee/Inspection Office of the Board, and corrections or instructions from superior authorities.

In 2023, patrol inspections took place at 59 units. There were also an additional 17 special project inspections. The Company then completed an annual internal control system self-assessment report. The scope of the assessments included all of Taipower's operating units, allowing the Board of Directors and the President to assess the effectiveness of the Company's overall internal controls. The report also served as the primary basis for the Company's 2023 Annual Internal Control System Statements.

Future improvements in internal auditing are proposed as follows:

(I) Assistance in implementing internal control audits and the control of high-risk matters

1. Assist the Business Division in promoting internal control audits, verify the risk issues identified by the Business Division or the issues presented by the CEO. Hold an annual internal control audit review meeting to share and exchange information.
2. Strengthen the inspection and tracking of high-risk internal control issues by using patrol inspections, project inspections, and the internal control information platform. Assist the management in implementing internal control over high-risk issues.

(II) Examine immediate responses to risks, reinforce prevention management, and enhance the value of inspections

1. Conduct project inspections based on outlined preventive mechanisms for power outage incidents, continuously monitor the progress of relevant units, strengthen control measures for high-risk internal control issues, and conduct in-depth investigations based on significant corrective actions from higher authorities such as the Audit Department and Control Yuan, to assess the improvements made by each unit.
2. Align with Taipower's 2023 annual goals of stable power supply, grid resilience, financial sustainability, and net-zero emissions. Develop inspection directions and focus areas to assist units in preventive management and enhance operational efficiency.

Compliance

Taipower is a state-owned public utility and its operations are governed by the Company Act, the Securities and Exchange Act, and other general laws and regulations, in addition to the Administrative Law for State-Owned Enterprises and the Electricity Act. Consequently, Taipower's organization, accounting, auditing, budgeting, business planning, utility rates, and development and management of electricity resources must be approved by the Ministry of Economic Affairs. Specifically, the Ministry's State-owned Enterprise Commission is responsible for supervising and managing the various operations at Taipower. The Bureau of Energy is the regulatory authority for the electricity industry, and is responsible for communicating and transmitting relevant instructions to other ministries, such as the National Development Council, or the National Audit Office. The implementation of corporate policies must comprehensively account for the provisions of various laws and regulations and their impacts on policy development.

Legal Compliance and Awareness Campaigns

In an effort to boost employee awareness of the Company's legal affairs and to ensure compliance, the Legal Affairs Office organizes multiple sessions of its "Practical Legal Issues – Case Studies and Solutions Seminar" at different units along with other training events each year. The office also provides legal consultation services to help units address and resolve legal issues in their operations and to ensure that all employees abide by the pertinent regulations.

Administrative Fines for Labor Issues

In 2023, there were 3 labor penalty cases due to violations of the Labor Standards Act. Details are as follows:

1. In one case, the "full attendance bonus," "remote location allowance" and "hazardous work allowance" were not included in the calculation of hourly wages, resulting in insufficient payment of wages for extended working hours on rest days and holiday. A fine of NT$40,000 was subsequently imposed. Taipower has filed an appeal in accordance with administrative remedy procedures for the case, and will propose response strategies based on the outcome of the appeal to defend the Company's rights and interests.
2. I two cases, a failure to include the "full attendance bonus" in the calculation of hourly wages, resulted in insufficient payment of wages for extended working hours on rest days. A fine of NT$50,000 was imposed in each case. Taipower filed appeals in accordance with administrative remedy procedures for the cases. One case is currently going through an administrative lawsuit after its appeal was rejected. In the other case, the Supreme Administrative Court ruled against Taipower in the final verdict on October 19, 2023.

Administrative Fines for Industrial Safety

Taipower received 18 penalties for industrial safety in 2023. Case details are as follows:

- Failure to implement work communication and adjustments.
- Failure to inspect the workplace.
- Failure to use insulated protective equipment, protective devices, and facilities.
- Failure to inform labor about the working environment or hazardous factors in advance.
- Failure to set up necessary safety and health equipment and measures.

Taipower has reduced fines due to industrial safety by strengthening work safety inspections, implementing management by walking around, its use of CCTV for inspections, and training and promotion. The Company has filed appeals for some cases, and requests for approval were submitted to pay administrative fines for industrial safety.

In the future, Taipower will continue to participate in the Ministry of Labor's Inter-Ministerial Platform Conference on Disaster Reduction at State-owned Public Enterprises and in the Ministry of Economic Affairs' Disaster Reduction Working Group. The Company will also continue to participate in quarterly conferences to discuss and review

matters related to industrial safety and disaster reduction and will promote the implementation of occupational safety and health in its business.

■ Administrative Fines Due to Environmental Protection Issues

In 2023, Taipower received 3 environmental fines, with a total cost of NT$500,000. While fines increased from the previous year, results remained better than the annual target.

The highest environmental protection fine in 2023 was connected to the Company's visual monitoring of whales and dolphins during the environmental impact assessment stage of the Phase 1 of the Offshore Wind Power Project. Effectively, the areas of actual monitoring and investigation were not consistent with the monitoring route stated in the environmental impact assessment document, in violation of Article 17 of the Environmental Impact Assessment Act. Taipower was thus fined NT$300,000. To this end, Taipower has formulated Guidelines for the Management and Inspection of Environmental Monitoring Operations, and strengthened its management and supervision of monitoring contractors to ensure that environmental monitoring operations are consistent with the contents of environmental impact assessment documents.

Environmental fines are particularly prone to negative evaluation by the general public and seriously affect the Company's image and operations. Therefore, the following proactive actions for environmental protection will be taken to effectively prevent environmental fines and maintain the Company's image:

- ☑ Implementation of an environmental management system and follow-ups on items that did not meet requirements.
- ☑ Supervision of environmental protection for on-site operations.
- ☑ Simultaneous handling of environmental fines each year.
- ☑ Carry out air pollution improvements for existing units.
- ☑ Set prices for individual environmental protection facilities and require proper implementation.
- ☑ Continuously provide guidance to thermal power plants and engineering units to improve their operational processes that do not comply with environmental regulations. Unit supervisors and deputy supervisors have also been asked to strengthen on-site environmental protection management by walking around and verifying compliance with environmental protection regulations.

2021~2023 Number of Sanctions and Penalties Amounts

Year	2021	2022	2023
Number of Fines	7	3	3
Penalties Amounts (Thousand NTD)	5,384.5	330	500

Note: The number of penalties in the table excludes policy-related penalties. The statistics for the past three years are as follows:
In 2021, there were three policy-related fines in the amount of NT$650 thousand.
In 2022, there was one policy-related fine in the amount of NT$600 thousand.
In 2023, there was zore policy-related fine in the amount of NT$0 thousand.

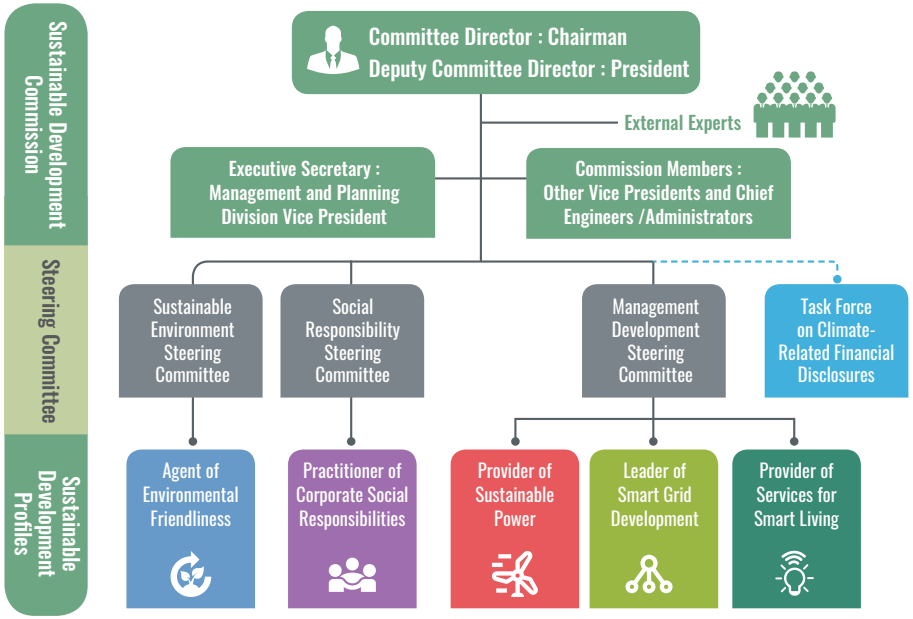
1.3 Sustainable Strategy

1.3.1 Organizational Structure of the Sustainable Development Commission (SDC) 2-9 2-12 2-13 2-14 2-16 2-24

The Sustainable Development Commission (SDC)

Taipower set up a Sustainable Development Commission (SDC), with the Chairman of the Company's Board of Directors as the SDC's Chairman, the Company's President as the SDC's Deputy Chairman, and Vice Presidents and the professional Chief Engineers/Administrators as committee members. The SDC has three subordinate steering committees and one task force: the Management Development Steering Committee, the Sustainable Environment Steering Committee, and the Social Responsibility Steering Committee and the task force on Climate-Related Financial Disclosures Project Group. Each committee and task force is convened by a Deputy General Manager.

Structure of the Sustainable Development Commission



Key Tasks of the SDC

Management Development Steering Committee

The committee is currently focused on planning management direction and executing its implementation. Management direction is set by establishing a vision, management structures and by implementing business plans. In terms of company structure, plans have been implemented for energy transformation, organizational transformation, digital transformation, and diversification management.

Sustainable Environment Steering Committee

The committee steers Taipower's green corporate image and promotes low-carbon environmental development in order to fulfill the Company's environmentally-friendly corporate mission. Taipower is committed to providing green power and building a green corporate image through environmental policy formulation, environmental goal setting, and environmentally friendly actions.

Social Responsibility Steering Committee

The committee works to strengthen Taipower's corporate humanism and social welfare. It implements the Company's people-oriented business philosophy and corporate citizenship actions. Through cultural and employee assistance activities, Taipower demonstrates its commitment to social responsibility. The Company is committed to expanding its social involvement and proactively reaching out to the public.

Task Force on Climate-related Financial Disclosures (TCFD)

The task force strengthens the response and disclosure of information related to climate change to achieve sustainable development, including establishing suitable management processes for climate-related risks and opportunities, conducting assessment and analysis of the impact of climate change on the Company's financial position, and formulating climate-related response strategies, in hopes of efficiently using it in capital allocation and decision-making, and to achieve the purpose of communicating with stakeholders.

Operating Mechanisms and Performance of the SDC

Through its 3 steering committees , the SDC analyzes changes in the external environment and policies relating to management development, environmental sustainability, and social responsibility. The TCFD was added in 2023 to strength response to climate change, plan the Company's direction for sustainable development, identify the Company's material topics, and to implement sustainability matters on this basis, while tracking the results of short, medium, and long-term goals.

Actual Performance of the SDC and its Steering Committee in 2023

Name of Meeting	Responsibilities	Actual Performance in 2023
Sustainable Development Commission	Planning the Company's long-term sustainable development, establishing material topics and approving the Company's Sustainable Development Blueprint.	Convened 1 meeting
All of Steering Committee	Formulating the Sustainable Development Plan and short, medium and long-term goals.	Convened 3 meeting
Task Force on Climate-Related Financial Disclosures	Strengthen response and information disclosure on climate change.	Convened 1 meeting

The Role of the Highest Governance Body in Overseeing the Management of Impacts

Taipower's Board of Directors attaches great importance to sustainable development and the expectations and needs of stakeholders. It supervises the management as it collects opinions from internal and external stakeholders through multiple channels, and identifies high, medium and low-impact issues of concern to stakeholders based on the materiality analysis process. The issues are then divided into governance, environmental, and social categories to develop relevant risk assessments and formulate relevant risk strategies. In addition, environmental and climate change risks are taken into consideration in keeping with global sustainable development trends and government policies. The Board of Directors asks the management to submit a report or provide relevant documents for major domestic and overseas sustainable risk events and in response to trends.

In the process of implementing corporate sustainability, the Risk Management Committee also conducts risk assessments on environmental, social or corporate governance issues related to the Company's operations and establishes relevant risk management policies or strategies. The implementation status of these efforts is annually reported to the Board of Directors.

The sustainability report and its meeting materials are provided to each director for review. According to the Company's Sustainable Development Committee Charter, the Sustainable Development Committee is responsible for reviewing the sustainability report. The authenticity of information disclosed in the report has been verified by external parties. The report is released to the public after being approved by the head of each unit, the President, and the Chairman.

1.3.2 Moving Towards Net-Zero Emissions 3-3 305-1 305-4

Material Topics: Implementing net-zero strategies in response to climate change

Policy	Actively develop renewable energy and implement decarbonized energy technologies according to the Pathway to Net-Zero Emissions by 2050, and steadily move towards net-zero emissions in stages.
Management Approach	Inventory of GHG and carbon emissions, identify climate change risks, and set carbon reduction goals to respond to potential impacts of future climate change risks.
Action Plans	1 Reduce GHG and carbon emissions 2 Continue to identify climate change risks
Actual Performance in 2023	1 Emission intensity at thermal power generating units (GHG emissions) in 2023 decreased 8% from 2016 levels 2 In 2023, the emission intensity of air pollution decreased 68.5% compared to 2016 2 Completed the parallel research plan for climate change adaptation of the power generation system in 2023, and conducted a climate change risk assessment
Targets in 2030	1 Emission intensity at thermal power generating units (GHG emissions) in 2030 will have decreased 20% from 2016 levels 2 In 2030, the emission intensity of air pollution will have decreased 75% compared to 2016 3 Issue a TCFD report before 2030

Sustainable Economic Activities Reference Guidelines

In aligning with the government's 2050 net-zero carbon emissions policy goal, one of Taiwan Power Company's (Taipower) main objectives is climate change mitigation. This goal is consistent with the content of the "Sustainable Economic Activities Reference Guidelines" promoted by the Financial Supervisory Commission (FSC). The guidelines refer to both "general economic activities" and "forward-looking economic activities." Taipower's achievements on the net-zero pathway, including the development of renewable energy, research and construction of hydrogen technologies, smart grid and energy storage technology research and system installation, and research and innovation in carbon capture, utilization, and storage technologies, all meet the criteria for sustainable economic activities outlined in the guidelines.

Timetable for Net-Zero Emissions

In facing the challenge of climate change, Taipower actively cooperates with the government's net-zero emission strategy and pathway planning, and formulates short, medium, and long-term implementation plans based on the Ministry of Economic Affairs' "First Low Carbon, Then Zero Carbon" strategic framework and current technology development trends in Taiwan and overseas:

1 Short-term (to 2025) Implement energy transition, maximize mature technologies, prioritize the expansion of renewable energy and related projects for grid connection and to strengthen the power grid, and invest in the construction of energy storage systems to mitigate the intermittent nature of renewable energy. Implement low-carbon gas-fired power generation projects and increase the proportion of natural gas-fired power generation by using gas-fired multiple-cycle units, which have rapid start-stop capabilities, as replacements for high-carbon-emission coal-fired power generation units.

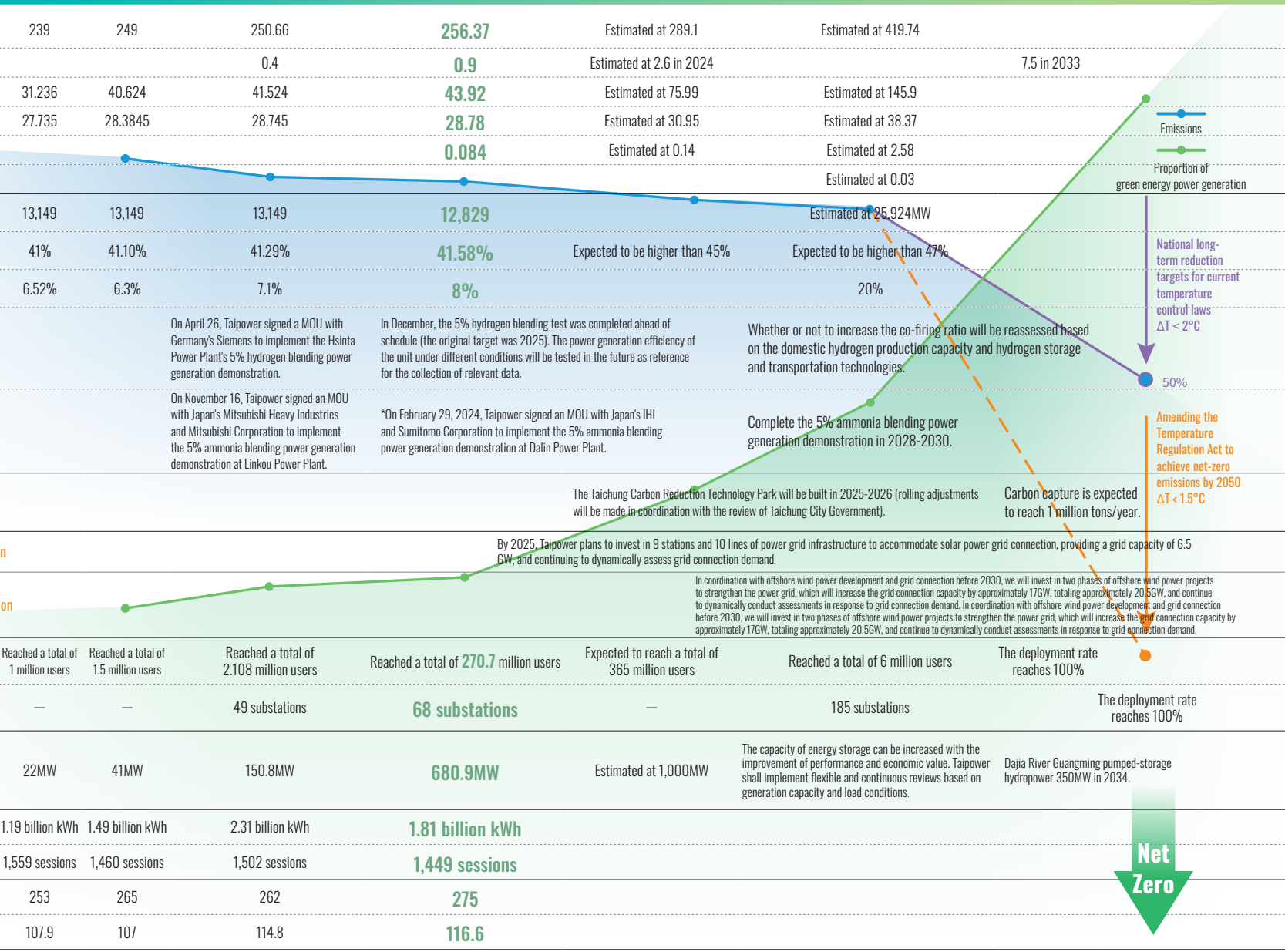
2 Mid-term (2025-2030) On the basis of the current energy transition, continue to implement green expansion, increase gas, and reduce coal, strengthen the scale and system resilience of renewable energy grid integration, and strengthen energy storage systems in response to the possible curtailment of wind and solar power and insufficient system inertia. At the same time, prepare for the R&D and demonstrations of forward-looking net-zero technologies.

3 Long-term (2030-2050) In the net-zero transition stage, Taipower will face the maximum grid connection of renewable energy and the maturity of carbon-free power technology. Hydrogen energy, ammonia energy, carbon capture and storage (CCS), geothermal energy, and marine energy will be commercialized on a large scale. In response to renewable energy becoming the main source of power generation, the power grid will need to gradually evaluate the introduction of new power grid technologies, such as long-lasting energy storage and low-inertia system frequency control.

Energy transition → Net-zero transition

Low carbon first → Net-zero later

Aspect	Strategy	Metric	2020	2021	2022	2023	2025	2030	2035	2050
Supply	Expand green energy	Accumulated total capacity of renewable energy (10,000 kW)*	239	249	250.66	256.37	Estimated at 289.1	Estimated at 419.74		
		Accumulated hydropower (10,000 kW)			0.4	0.9	Estimated at 2.6 in 2024		7.5 in 2033	
		Accumulated wind power (10,000 kW)*	31.236	40.624	41.524	43.92	Estimated at 75.99	Estimated at 145.9		
		Accumulated solar power (10,000 kW)*	27.735	28.3845	28.745	28.78	Estimated at 30.95	Estimated at 38.37		
		Accumulated geothermal power (10,000 kW)*				0.084	Estimated at 0.14	Estimated at 2.58		
		Accumulated marine energy (10,000 kW)						Estimated at 0.03		
	Gas bridge	Cumulative capacity of gas-fired power units (MW)	13,149	13,149	13,149	12,829		Estimated at 25,924MW		
		Average efficiency of in-house thermal power units (excluding purchased power)	41%	41.10%	41.29%	41.58%	Expected to be higher than 45%	Expected to be higher than 47%		
		Emission intensity at thermal power generating units (GHG emissions) decreased % from 2016 levels	6.52%	6.3%	7.1%	8%		20%		
		Introduction of hydrogen co-firing technology			On April 26, Taipower signed a MOU with Germany's Siemens to implement the Hsinta Power Plant's 5% hydrogen blending power generation demonstration.	In December, the 5% hydrogen blending test was completed ahead of schedule (the original target was 2025). The power generation efficiency of the unit under different conditions will be tested in the future as reference for the collection of relevant data.		Whether or not to increase the co-firing ratio will be reassessed based on the domestic hydrogen production capacity and hydrogen storage and transportation technologies.		
		Introduction of ammonia co-firing technology			On November 16, Taipower signed an MOU with Japan's Mitsubishi Heavy Industries and Mitsubishi Corporation to implement the 5% ammonia blending power generation demonstration at Linkou Power Plant.	*On February 29, 2024, Taipower signed an MOU with Japan's IHI and Sumitomo Corporation to implement the 5% ammonia blending power generation demonstration at Dalin Power Plant.		Complete the 5% ammonia blending power generation demonstration in 2028-2030.		
	Carbon fixation technology	Carbon Capture and Storage (CCS)					The Taichung Carbon Reduction Technology Park will be built in 2025-2026 (rolling adjustments will be made in coordination with the review of Taichung City Government).		Carbon capture is expected to reach 1 million tons/year.	
Grid	Toughen	Strengthen solar photovoltaics grid connection				By 2025, Taipower plans to invest in 9 stations and 10 lines of power grid infrastructure to accommodate solar power grid connection, providing a grid capacity of 6.5 GW, and continuing to dynamically assess grid connection demand.				
		Strengthen offshore wind power grid connection					In coordination with offshore wind power development and grid connection before 2030, we will invest in two phases of offshore wind power projects to strengthen the power grid, which will increase the grid connection capacity by approximately 17GW, totaling approximately 20.5GW, and continue to dynamically conduct assessments in response to grid connection demand. In coordination with offshore wind power development and grid connection before 2030, we will invest in two phases of offshore wind power projects to strengthen the power grid, which will increase the grid connection capacity by approximately 17GW, totaling approximately 20.5GW, and continue to dynamically conduct assessments in response to grid connection demand.			
	Intelligent	AMI smart meter	Reached a total of 1 million users	Reached a total of 1.5 million users	Reached a total of 2.108 million users	Reached a total of 270.7 million users	Expected to reach a total of 365 million users	Reached a total of 6 million users	The deployment rate reaches 100%	
		Accumulated number of IEC 61850 smart substations completed	—	—	49 substations	68 substations	—	185 substations		The deployment rate reaches 100%
	Energy storage	Installed capacity of self-built energy storage project site and ancillary service procurement	22MW	41MW	150.8MW	680.9MW	Estimated at 1,000MW	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.	Dajia River Guangming pumped-storage hydropower 350MW in 2034.	
Demand	Electricity-saving	Energy saving by residences and primary and secondary schools	1.19 billion kWh	1.49 billion kWh	2.31 billion kWh	1.81 billion kWh				
		Number of energy-saving promotional activities	1,559 sessions	1,460 sessions	1,502 sessions	1,449 sessions				
	ADR	Application to suppress chartered capacity (10,000 kW)	253	265	262	275				
		Suppress peak load capacity (10,000 kW)	107.9	107	114.8	116.6				



Note: 1.*Including reinvestment capacity. 2. This table complies with forward-looking economic activities in the FSC's Guidelines for the Determination of Sustainable Economic Activities.

In order to implement phased net-zero emissions from electricity generation, Taipower has planned three strategic directions for the power supply side, the grid side, and the demand side. When technically feasible, Taipower invests resources into expanding green energy, gas bridging, and carbon fixation technology on the power supply side to gradually achieve net-zero emissions. Under the goal of ensuring a stable power supply, Taipower focuses its efforts on making the power grid more resilient, and intelligent while developing energy storage. It is also working to maximize grid connections for renewable energy. As electricity consumption and electrification increase, Taipower is implementing electricity-saving and demand response on the demand side. Key points for each of the three dimensions are as follows:

The Power Supply Side

Expand Green Energy

Mature Green Energy: Actively participate in the development of offshore wind power and solar photovoltaic projects and expand the development of green energy through diverse development and collaboration with different stakeholders.

Forward-Looking Energy: Plan the development of geothermal and marine energy power generation technologies in the medium to long term. Search for sites with development potential and establish integrated green energy systems for the energy independence of offshore islands.

Gas Bridge

Gas Expansion and Coal Reduction: Before 2025, the Company will use combined-cycle gas-fired units, which are fast to build, fast to start and fast to stop. The units also have low levels of carbon emissions. The gas units will replace old coal-fired units that are inefficient and have high carbon emissions, in order to reduce the electricity carbon emission factor.

Fuel Substitution: In the future, the mixed combustion of hydrogen (gas-fired units) and ammonia (coal-fired units) and dedicated combustion technology will be gradually put into use. Mixed combustion demonstrations will be planned, and the introduction will be gradually expanded.

Carbon Fixation Technology

Carbon, Capture, Utilization, and Storage (CCUS): The Company is currently engaged in laboratory-scale testing, and has a keen understanding of the obstacles associated with financing and capture procedure suitability that would affect large-scale implementation. Consequently, Taipower is working to produce ongoing technical and economic risk assessments, develop new capture procedures and advanced adsorbents to reduce energy loss, while ensuring coal-fired units continue to operate. At present, available evidence sopports the use of post-combustion capture using solvents.

The Grid Side

Strengthening

Create a friendly green electricity grid connection environment, continue to strengthen power grid projects, and share grid resources to ensure that domestic grid-connected renewable energy is maximized.

Smart Technology

Continue to build smart grids, use smart applications of data and technology to assist in smart dispatching and the operation of the power supply and power grid. Strengthen energy management services and improve energy efficiency, and plan and connect diverse demand-side management resources to meet the power system's resilience requirements as the proportion of renewable energy increases.

Energy Storage

1. Short to Medium-Term: In response to the intermittency problems caused by the large amount of green electricity connected to the grid, Taipower has built project sites, procured ancillary services through the electricity trading platforms, and widely incorporated energy storage equipment to stabilize system frequency, improve dispatch flexibility, and achieve the goal of ensuring stable power supply.

2. Long-Term: To overcome the renewable energy load gap that exists between day and night times, Taipower will introduce long-lasting energy storage, plan new variable frequency pumped-storage hydropower, introduce hydrogen production technology when appropriate, and use excess electricity from renewable energy to produce green hydrogen for power generation and industrial applications. Taipower will also shift loads to alleviate tensions over supply and demand.

The Demand Side

Electricity-Saving

To alleviate the pressure of net-zero emissions on the supply side due to future power demand growth, Taipower planned various energy-saving measures, including energy-saving power consumption diagnosis, digital smart services, and the Taipower app, combined with smart and digital innovation tools that allow users to manage their electricity consumption. This in turn saves energy and reduces electricity demand.

ADR

To balance load changes and maintain the stable operation of the power system, new time zones differentiated rates will be developed on the demand side, and electricity bill deduction incentives will be provided to encourage users to adjust their electricity consumption habits and time periods, thereby achieving demand response load shifting.

Net-Zero Emissions Implementation Performance

• The Tainan Salt Field Solar Energy Storage System

Taiwan's first photovoltaic and energy storage site was officially opened on January 6, 2023. Taipower partnered with United Renewable Energy to build that first energy storage system at the Tainan Salt Field with an installed capacity reaching 20MW. The system can store 20 MWh, which is equal to the electricity consumption of approximately 40,000 household users for one hour.

• The Geothermal Power Plant in Yilan's Renze Township

Taipower combined its power generation expertise with CPC Corporation's drilling technology to jointly develop geothermal power in Renze. The project was officially launched on October 24, 2023. It generates approximately 4.7 GWh of green electricity annually, the equivalent of the annual electricity consumption of nearly 1,200 households.

•Decarbonized Hydrogen-Burning technology

Taipower and Academia Sinica signed a Memorandum of Understanding on Cooperation in the Development and Application of Carbon Reduction and Green Energy Technology on February 1, 2023, and will jointly promote decarbonized hydrogen-burning power generation technology. A presentation was held on November 14, 2023, setting a milestone for generating the first kWh from decarbonized hydrogen-burning technology, which was achieved through the production of decarbonized hydrogen and the testing and verification of a 65kW hydrogen blending micro gas turbine.

• Hsinta's 5% Hydrogen Blending Power Generation Demonstration Unit

Taipower used a gas turbine at the Hsinta Power Plant as a hydrogen blending demonstration unit, and completed verification of 5% hydrogen blending (by Vol) in December 2023. During the process, Taipower tried to increase the co-firing ratio to 10%, and will subsequently test the unit's power generation efficiency under different conditions.

•The Longtan 60MW Energy Storage System

Taipower teamed up with the major domestic electric machinery company, TECO Electric and Machinery Co., Ltd. The Company also partnered with the world's largest energy storage system integration company, Fluence, to build 25 40-foot energy storage containers at the Longtan ultra-high voltage substation. Using more than 10,000 lithium battery modules, the substation is also equipped with transformers and a power regulation system. The resulting energy storage system has an installed capacity of 60MW/80MWh, which meets the electricity consumption needs of about 8,000 households for a whole day.

1.4 Climate Action

1.4.1 Taipower Actively Responds to Climate Change Risks Over the Long Term 201-2 305-1

Climate change has caused severe consequences such as shifts in climate patterns, rising sea levels, impacts on ecosystems, and water shortages. It has had a profound impact on the global economy, environment and society, and has become the most important sustainable development issue. According to the annual Global Risks Reports published by the World Economic Forum (WEF), the risk of "natural disasters and extreme weather events" and "failure to mitigate and adapt to climate change" have ranked at the top of short and long-term risk perception assessments for many years.

As a provider of sustainable power, agent of environmental friendliness, and practitioner of corporate social responsibility, Taipower has long paid attention to the impact of climate change on its operations. The Company disclosed its concerns about the greenhouse effect and the Kyoto Protocol in its 2007 Sustainability Report, along with an overview of GHG emissions, response strategies, and related actions. In the 2009 Sustainability Report, the Company began disclosing information on risks and opportunities arising from climate change in accordance with GRI standards.

In reporting, Taipower refers to the WEF report on risk management. Starting in 2020, Taipower began conducting climate risk identification and assessment from both mitigation and adaptation aspects, along with conducting rolling reviews of extreme climate response actions. In 2022, Taipower started the planning and implementation of net-zero carbon reduction actions from the power supply side, power grid side, and demand side, and incorporating "net-zero carbon reduction actions" into risk management to ensure the achievement of net-zero emission from electricity, in addition to its continuing efforts on environmental and climate change issues.

In the 2022 Sustainability Report, Taipower also began to disclose information according to the TCFD framework in order to apply scientific methods to identify and respond to the impact of climate change on corporate operations, and to facilitate engagement with multiple stakeholders.

The report this year (2023) further references the Sixth Assessment Report (AR6) of the United Nations Intergovernmental Panel on Climate Change (IPCC) and the climate projections and policy scenarios of the International Energy Agency (IEA). The report presents Taipower's governance strategies and climate actions under the challenge of climate change from the four main aspects in the TCFD framework: governance, strategy, risk management, and metrics and targets.

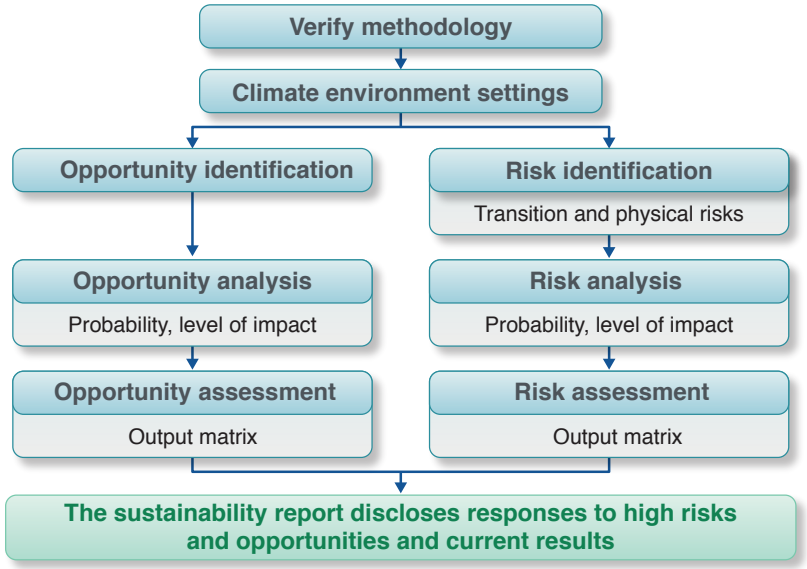
1.4.2 Climate Change Governance

Taipower continues to include climate change-related issues in the discussions of its Sustainable Development Committee. In terms of risk management mechanisms, the Risk Management Committee reviews environmental and climate change risks on a rolling basis every year. Both committees report to the Board of Directors every year and are supervised and guided by the Board of Directors. In addition, the TCFD Task Force was established under the Sustainable Development Committee according to the committee's instructions in August 2023. The task force conducts assessments and analysis of the impact of climate change on the Company's financial position and business performance, and establishes strategies for climate-related financial disclosures. It also deepens communication with stakeholders. The task force is supervised by the committee's executive secretary, and the Planning Department is responsible for integration, calling together related units to discuss implementation when appropriate. As of May 2024, the task force has convened 2 working meetings and 2 communication meetings.

1.4.3 Climate Change Strategy and Risk Management

Taipower discloses and manages climate risks and opportunities in accordance with the TCFD framework. This process is as shown in the figure below. The "Task Force on Climate-related Financial Disclosures" is supervised by the executive secretary of the National Council for Sustainable Development (the Vice President in charge of the Planning Department) and convenes internal units to identify and analyze climate risks and opportunities. After assessment, it formulates and discloses corresponding strategies, indicators, goals, and current implementation results for high-risk events and high-potential opportunities related to transition and physical risks.

Taipower's Climate Risk and Opportunity Management and Disclosure Process



Environment Settings of Climate and Related Policies

Taipower uses the IPCC and TCCIP downscaled climate scenario data for Taiwan, as well as the IEA's global climate policy trends and Taiwan's climate policy, as the basis for setting the climate and related policy environment for the identification, analysis, and assessment of climate risks and opportunities.

The climate scenario environment setting of physical risks is based on the worst-case scenario of global warming (SSP5-8.5) in the IPCC AR6, and the downscaled climate data for Taiwan (future climate forecast uses both AR5 or AR6 data) of the worst-case scenario of global warming (SSP5-8.5) in Taiwan's TCCIP. Specifically, from the perspective of medium and long-term risks, it assumes that the world and Taiwan cannot successfully achieve the net-zero emission target by 2050, and the global average temperature rises by 2 to 4 degrees Celsius by the middle of the century, resulting in extreme high temperatures, an increase in total rainfall, an increase in days without rainfall, and a change in typhoon patterns (anything that strikes Taiwan is a strong typhoon), which in turn increases the risk of disasters. The extreme weather and climate patterns are assumed to have an impact on Taipower's operations.

The climate scenario environment setting for transition risks and climate-related opportunities is based on international benchmarks such as the UN SDGs, Nationally Determined Contributions (NDCs) under the United Nations Framework Convention on Climate Change (UNFCCC), and the IEA 2050 Net-zero Policy, as well as Taiwan's own domestic policies, such as the T-SDGs, Taiwan Roadmap for Net-zero Emissions by 2050, the Twelve Key Strategies, the recent amendment to the Climate Change Response Act, and sustainable financial measures. Specifically, it assumes transition changes under the aforementioned policies from the perspective of medium and long-term transition risks or climate-related opportunities. Therefore, if Taipower is to achieve net-zero emissions by 2050, it must reducing thermal power generation and promote the construction and application of low-carbon and carbon-free electricity, energy storage systems, carbon neutrality technologies while maintaining the delivery of a stable power supply.

Identifying Climate Risks and Opportunities

Taipower's "TCFD Task Force" convenes communication meetings that invite relevant internal units to discuss and identify risks and opportunities. In terms of transition risks, a total of 9 risks were identified in 4 categories, including policies and regulations, technology, markets, and reputation.

List of Taipower's Climate Transition Risks

Category	Risks
Policies and Regulations	Increase in cost of GHG emissions.
Technology	● The progress of net-zero carbon reduction technology applications does not meet expectations. ● Insufficient development of net-zero carbon reduction technologies.
Markets	● Increase in operating costs for sustainable and net-zero transitions. ● Reduced market competitiveness. ● Imbalance between power supply and demand.
Reputation	● Increase in climate-related labor-management disputes and employee protests. ● Increase in climate-related external stakeholder litigation and protests. ● Continued expansion of negative, climate-related news.

A total of 6 physical risks were identified in immediate and long-term categories. Immediate physical risks focus on the impact of extreme weather events, while long-term physical risks focus on the impact of changes in climate patterns on Taipower's long-term development plan. Taking operating costs as an example, the risk "Increase in short and medium-term operating costs" focuses on immediate risks such as repairing or rebuilding assets damaged by extreme weather, or increases in asset insurance costs. The risk "Increase in long-term operating costs" considers the impact of changes in climate patterns on long-term equipment maintenance costs.

Eleven climate opportunities were identified in 5 categories, including: resource efficiency, energy sources, markets, products and services, and resilience.

List of Taipower's Physical Climate Risks

Category	Risks
Immediate	● Compromised security and resilience of critical power infrastructure. ● Project scheduling delays. ● Increased short and medium-term operating costs.
Long-Term	● Long-term power facility development planning becomes more difficult. ● Project planning becomes more difficult. ● Increased long-term operating costs.

List of Taipower's Climate Opportunities

Category	Opportunities
Resource Efficiency	● Improved system efficiency. ● Implementation of circular economy.
Energy Sources	● Diversified energy sources.
Markets	● Business model innovation. ● Use of public sector support measures. ● Increased climate-related financing opportunities. ● Increased transactions on the green electricity market.
Products and Services	● Increased trading volume on the electricity trading platform.
Resilience	● Improved climate governance. ● Enhanced grid resilience. ● Higher supply chain resilience.

Climate Risk and Opportunity Analysis

Taipower's "TCFD Task Force" gathers together internal units to analyze the probability and level of impact of climate risks and opportunities through questionnaires.

There are two methods for measuring the probability of occurrence: qualitative and quantitative, and the measurement is divided into five levels. The principle for measuring the level of impact is integrated with the existing risk management mechanism. It incorporates financial measurement principles, such as business operations, cost increases, long-term cost increases, and the measurement is divided into five levels. Opportunities are examined from the perspective of business practices, and whether climate-related opportunities can improve climate governance, business opportunities, or financial performance is determined based on experience. The measurement of opportunities is also divided into 5 levels.

Assessment of Climate Risks and Opportunities

Climate risks and opportunities are assessed by analyzing questionnaires filled out by each unit. The highest risk assessment result among the responses from each unit is used as the analysis result. As with the existing risk management mechanism, the purpose is to prevent risks from occurring. In the climate opportunity assessment, the average of the responses from each unit is used as the analysis result. This allows for the seeking out of opportunities for steady development.

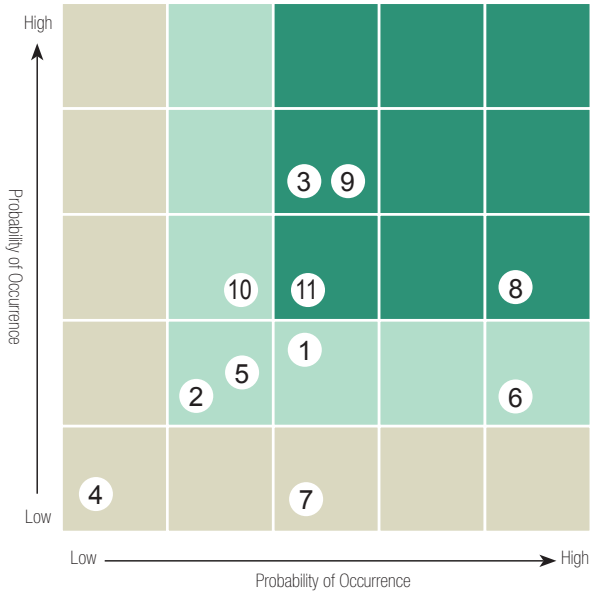
After assessing transition risks and physical risks, the overall climate risk matrix is as follows:

Overall Climate Risk Matrix

Risk Category	Number	Risk
Transition Risk	1	Increased cost of GHG emissions
	2	The progress of net-zero carbon reduction technology applications does not meet expectations
	3	Insufficient development of net-zero carbon reduction technologies
	4	Increased operating costs for sustainable and net-zero transitions
	5	Reduced market competitiveness
	6	Imbalance between power supply and demand
	7	Increased climate-related labor-management disputes and employee protests
	8	Increased climate-related external stakeholder litigation and protests
	9	Continued expansion of climate-related negative news
Physical risk	10	Critical power infrastructure security and resilience compromised
	11	Project scheduling delays
	12	Increased short and medium-term operating costs
	13	Long-term power facility development planning becomes more difficult
	14	Project planning becomes more difficult
	15	Increased long-term operating costs

In terms of climate opportunities, the climate opportunity matrix is as follows:

Climate Opportunities Matrix



Number	Opportunities
1	Improved system efficiency
2	Implementation of circular economy
3	Diverse energy sources
4	Business model innovation
5	Use of public sector support measures
6	Increased climate-related financing opportunities
7	Increased transactions on the green electricity market
8	Increased transaction volume on the electricity trading platform
9	Improved climate governance
10	Enhanced grid resilience
11	Higher supply chain resilience

The Company's climate risk and opportunity assessment results are provided as a reference for risk management plans and are a source for risk identification. Taipower uses this as a basis for conducting rolling reviews of risk management plans.

1.4.4 Metrics, Targets and Climate Action

Climate Vision, Goals, and Evaluation Indicators

Taipower remains committed to sustainable development and its net-zero transition. The Company pursues climate actions in accordance with its vision, goals and sustainable development plan. For details of Taipower's plan for achieving net-zero emissions, and related schedules, strategies and indicators, please see the description in "1.3.2 Moving Towards Net-zero Emissions." For details on GHG inventory and management, please see the description in "3.2.1 Greenhouse Gas Management."

Climate Risks and Opportunities: Responses and Results

Taipower's response measures to climate risks and opportunities, and their results are listed in the following table:

Climate Transition Risk Response Measures and Results

Transition Risks	
High Climate Risk	**Response Measures and Related Results**
Increase in cost of GHG emissions	✔ Taipower submits suggestions for legal amendments in order to seek reasonable and appropriate carbon reduction requirements. ✔ Continuous attention is paid to the progress of legal amendments and the collection of information in Taiwan and overseas.
The progress of net-zero carbon reduction technology applications does not meet expectations	✔ Continuous promotion of research on emerging renewable energy power generation technologies and the collection of information on domestic and overseas research on power generation technologies related to emerging renewable energy, and participation in exchange activities.
Increase in operating costs for sustainable and net-zero transitions	✔ Currently, Taipower's main source of green electricity is purchased. Since purchase costs remain high, this is an area for continued improvement in the future. ✔ Continuous development of new green electricity sites and carrying out of the renovation and reconstruction of existing sites. ✔ In response to the green electricity needs of small and medium-sized enterprises, Taipower launched the Small Amount Green Electricity Sales Pilot Plan. ✔ The initial cost of emerging renewable energy, hydrogen energy, ammonia energy, and CCS technology applications is relatively high. Taipower mainly develops demonstration projects with small capacities.
Imbalance between power supply and demand	✔ Optimize the renewable energy forecast model and introduce external forecast systems to reduce the risk inaccuracies derived from single forecasts. Self-researched forecast data is combined with other data sources through cooperation with private companies, etc. ✔ In acknowledging the intermittent nature of renewable energy, Taipower is developing energy storage technology, and plans to increase distributed, fast-response power sources, and dispatch flexibility. The Company is also planning dispatch measures from the demand side.

Physical climate risk response measures and results

Physical risks	
High climate risk	**Response measures and related results**
Project progress falls behind schedule and planning becomes more difficult	✔ In the early stages of project planning, climate condition analysis is included in feasibility studies. ✔ When purchasing or constructing renewable energy equipment, set temperature, seismic resistance, and wind resistance requirements are included in the specifications. ✔ Manage and track project progress in accordance with Executive Yuan regulations, and set specific project milestones. ✔ Adjust construction methods and long-term project planning on a rolling basis based on climate conditions.
Increase in short, medium, and long-term operating costs	✔ Taipower will adjust its equipment procurement strategy, as well as construction, operation, and maintenance methods on a rolling basis based on climate conditions. ✔ Continue to review the most suitable renewable energy operation and maintenance methods to improve overall efficiency.
Long-term power facility development planning becomes more difficult	✔ According to the latest review by the Energy Administration, after the new units begin operating, the reserve capacity rate will be increased to about 20%, and will be able to respond to the impact of rising temperatures on the units. ✔ Formulate a gas bridging strategy that will use gas-fired combined cycle units as critical infrastructure.

Climate Opportunity response measures and results

Climate opportunities	
High climate opportunities	**Response measures and related results**
Diverse energy sources	✔ Actively develop different types of renewable energy. ✔ Evaluate implementation in coordination with the government's hydrogen energy promotion strategy and the development of international hydrogen production technologies.
Transaction volume of electricity trading platform increases	✔ Actively guide the private sector to provide ancillary services for distributed power sources through the electricity trading platform, in order to increase supply and respond to the risk of power supply and demand imbalances.
Improve climate governance	✔ In recent years, climate change-related strategies such as "Towards Net-zero Emissions" and "Creating a Friendly Environment" have been included in the Company's ten overall strategies. The business strategy for 2024-2028 has been developed and related action plans are being implemented. ✔ Established the "Net-zero Electricity Promotion Meeting" mechanism. ✔ Regularly participate in the Net-zero Promotion Meeting of the Ministry of Economic Affairs.
Higher supply chain resilience	✔ The supply chain ESG management mechanism has gained recognition and support from suppliers, and will gradually expand its scope of application in the future. ✔ Implement diverse strategies for property procurement and integrate digital applications. ✔ In the future, Taipower will continue to employ its "buyback mechanism" for power generation accessories and equipment to activate , recycling, and reusing idle assets.
Other	✔ Develop and apply energy storage technology in response to the grid connection of large amounts of renewable energy. ✔ Seek incentives or support measures related to the net-zero policy, such as: Policy-related financing, demonstration incentives, subsidies, relaxation of regulations and standards, carbon fee discounts, and other incentives. ✔ Increase the reuse rate of economic resources, such as: wastewater, coal ash, and desulfurized gypsum waste recycling, and waste cable bidding, in response to net-zero emissions. ✔ Develop a distributed power grid to support the grid connection of large amounts of renewable energy. ✔ Research and develop circular economy related technologies, through circular engineering, resource reuse technology, cultural and creative product development. ✔ Develop and apply power grid reinforcement measures in response to extreme weather events.

1.5 Sustainable Supply Chain

As a state-owned enterprise, Taipower manages all types of suppliers in accordance with the requirements of laws and regulations. Suppliers must satisfy all environmental, social, and other legal requirements for all services and materials they provide. The Company uses these regulatory criteria to select appropriate partners during its tendering and evaluation processes.

1.5.1 Supplier Management 2-6

Taipower's suppliers include providers of fuel, materials, and equipment necessary for power generation and as well as suppliers of external electric power. The Company monitors the potential risks associated with suppliers with different characteristics and manages their quality, output, and impact on the environment and society. Management of different types of suppliers is described as follows:

Fuel Supplier Management

The main fuels used in Taipower's thermal power plants are natural gas, coal, and fuel oil. Nuclear power plants also require nuclear fuel. Taipower adheres to the four strategies of energy supply diversification, long-term supply contracts, safe inventories, and stable coal transportation to ensure stable fuel supplies. The Company provides power plants with fuel promptly and at a suitable quality and quantity to ensure the safety and stability of the power supply. Detailed measures and actions are described below:

Energy Supply Diversification

Natural Gas (LNG)

- Supplied by CPC; Continual tracking of CPC's sources of supply.
- CPC has long-term contracts with sources in Qatar, Australia, Papua New Guinea, and the United States to achieve the goal of energy supply diversification.

Coal

- Caps are set on coal originating from each single coal source country and supplier for long-term contracts.

Fuel Oil

- Fuel oil is supplied by CPC Corporation.
- Diesel fuel is supplied by both CPC Corporation and Formosa Petrochemical Corp.

Nuclear

- Nuclear fuel processing is spread out across 2-3 suppliers.

Long-Term Supply Contracts

By signing various long-term contracts, Taipower is able to reduce uncertainty in procurement and achieve a steady fuel supply.

Natural Gas (LNG)

- Taipower has signed long-term supply contracts such as its natural gas supply agreement and the Datan contract with CPC Corporation.

Coal

- Long-term contracts account for 75-85%, and remaining demand is met by spot contracts.

Fuel Oil

- Signed long-term contracts with CPC Corporation and Formosa Petrochemical Corporation to guarantee security of the fuel supply.

Nuclear

- Given that current long-term contracts and inventories of uranium are sufficient to accommodate demand, uranium procurement has been suspended.
- Signed long-term contracts for all nuclear fuel enrichment services.

Safe Inventories

Natural Gas (LNG)

- In accordance with the stipulations of the Taipower and CPC Contract and the Early Warning Mechanism for LNG Supply and Demand, Taipower urges CPC to maintain ready LNG inventories of more than 80,000 and 100,000 tons that supply the Yongan and Taichung Power Plants respectively.
- Corresponding responses are planned with CPC for potential accidents and established terms are agreed to by both parties.

Coal

- The law requires that coal inventory must be sufficient for at least 30 days of the average daily amount consumed in the previous year.
- Taipower has adopted 45 days of inventory as its planned basis for 2023, in which one day of inventory is defined as the average daily usage of coal in the previous year.

Fuel Oil

- The operating stock of fuel oil is 140,000-190,000 kilotons.
- The diesel inventory is determined in response to the specific supply and transmission conditions at each power plant.

Nuclear

- One batch of nuclear fuel stock is prepared for each unit of nuclear power plants. However, in order to ensure the efficiency of fuel use, the last batch for each unit is excluded.

Stable Coal Transportation

Taipower's coal carriers transported approximately 4.77 million tons of coal with a 19% shipping ratio in 2023. The self-management of coal transportation ensures stable fuel supply and dispatching.

Fuel Procurement Policy

Natural Gas (LNG) Procurement

In response to the current energy transition policy, Taipower's thermal power generation has entered an era of primarily using gas with coal as support. As a result, the steady supply of natural gas has a critical influence on the stability of electricity supply. At this stage, all of Taipower's natural gas is supplied by the CPC Corporation (hereinafter referred to as CPC). Hence, Taipower is actively working with CPC to establish an even more complete contact mechanism to cope with the impacts of the external environment on the electricity supply.

Taipower will diversify its sources of natural gas procurement in the future. In addition to purchasing LNG from CPC, Taipower plans to construct its own LNG receiving terminals for the Taichung and Hsieh-ho Power Plants. Related feasibility studies have been approved by the government and the government's approval has been granted to purchase LNG from the international market to be used by newly constructed gas-fired power generation units at the Taichung, Hsieh-ho and Tunghsiao Power Plants. This not only enables Taipower to have greater autonomy in its sourcing of LNG to reduce the overall cost of fuel procurement but also works to the Company's advantage in power dispatching and providing system characteristics that increase LNG supply stability and safety.

The Natural Gas Supply and Demand Contact Mechanism and Early Warning System for Taipower and CPC

Frequency	Means of Communication
Annually	• Each year before the end of May, Taipower sends revised data to CPC if monthly estimates for gas consumption in the second half of the year require revision. • Each year before August 20, Taipower sends CPC monthly estimates of total gas consumption and maintenance schedules for all gas units for the following year. • Each year before the end of October, Taipower officially informs CPC of any revisions to its monthly estimates of total gas consumption.
Quarterly	• Both parties take part in a quarterly supply coordination meeting to discuss relevant issues on LNG usage.
Monthly	• Before the 25th of every (N) month, Taipower should send the "Planned Daily Gas Consumption Table" for the next two (N+2) months and the planned monthly gas consumption letter for the next three (N+3) months to CPC, so that CPC and foreign suppliers conduct "45-day/90-day shipping schedule confirmation" operations and require CPC to properly schedule according to Taipower's needs.
Daily	• CPC updates its LNG usage and inventory notice by no later than 12:00 a.m. every day (including holidays) through fax or email. • Prior to 4:00 p.m. on each workday, Taipower faxes its Daily LNG consumption estimates for the next fortnight to CPC. If the gas usage for the next fortnight affects LNG supply and the shipping schedule cannot be changed, CPC will contact Taipower and ask for appropriate adjustments to the daily estimates on LNG usage for the following two weeks.
Under Special Circumstances	• If a planned CPC's gas pipeline project is expected to affect the normal gas supply to Taipower, work should be scheduled during holidays whenever possible. CPC should also provide written notification to Taipower in advance, allowing Taipower to cooperate while ensuring the safety of power supply is not compromised. • As Taipower is responsible for supplying power to CPC's Yongan and Taichung LNG storage systems, in the event of power outage/rationing that affects the supply of LNG, Taipower will coordinate with CPC first to make optimal arrangements.

Coal Procurement

For coal procurement, Taipower established a cross-departmental Coal Procurement Review Task Force that draws its members from the Materials, Accounting, and Procurement Departments, and Legal Affairs Office, as well as external experts in energy, economics, and legal affairs. Flexible coal procurement strategies are formulated through discussions and advice received during meetings, in order to provide a suitable amount of high-quality coal to coal-fired power plants at the right time, while meeting environmental protection requirements and minimizing procurement costs. The coal stock was maintained at 45 days in 2023. Besides meeting the requirements of the Energy Administration Act (more than 30 days), it also ensures the availability of coal to stabilize the power supply, and prevent crises caused by supply chain interruptions or material shortages.

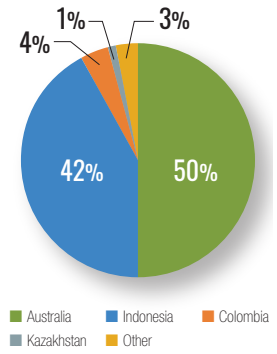
Fuel Oil and Diesel Procurement

Taipower currently purchases fuel oil exclusively from CPC Corporation, but acquires diesel from both CPC Corporation and the Formosa Petrochemical Corporation. Both contractors have ample supply capability and conform to the relevant governmental laws and regulations. The quality of fuel oil and diesel both meet environmental protection requirements. Appropriate operating stocks of fuel oil and diesel are determined based on the supply and transportation conditions of each power plant. The Hsieh-ho Power Plant will be decommissioned at the end of 2024, leading to a significant decrease in fuel consumption. After the closure, the remaining power demand will come exclusively from offshore island power plants.

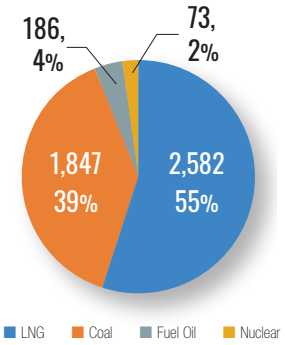
Nuclear Fuel Procurement

The procurement of nuclear fuel involves the purchase of uranium and subsequent processing services for conversion, enrichment, and fabrication. To comply with the government's nuclear-free homeland policy, Taipower has suspended uranium procurement as the current inventory is sufficient for the operation of nuclear power plants until they are decommissioned. Demand for Nuclear fuel processing services will exist until 2025, and has been covered by long-term contracts.

Proportion of Coal Source Countries in 2023



Proportion of Fuel Expenditures in 2023



Unit: billion, %
Data source: 2023 self-prepared final accounts

Suppliers of Materials and Equipment

The Materials Supply Chain

Taipower provides professional internal training and consultation on issues associated with the Government Procurement Act. The training ranges from front-end material numbering, supplier capability reviews, and the establishment of qualified supplier lists and management to requisition and demand management, procurement, acceptance, and logistics operations. Taipower is also actively implementing supply chain digitalization and has established Enterprise Resource Planning (ERP), a Supply Chain Management (SCM) platform, and a Warehouse Management System (WMS) to achieve internal and external network collaboration and to construct a comprehensive system.

The Equipment Supply Chain

Taipower used ISO 9001 to integrate its evaluation/re-evaluation/inspection/feedback steps on defects when executing supplier management and auditing. This ensures the quality, cost, and delivery of power-related equipment and devices provided by suppliers. Taipower also revised relevant regulations to establish a quality assurance program for electrical equipment. The Company requires suppliers to develop the capacity to design and supply qualified products and to prevent noncompliance throughout the production process from design to service.

Electricity Suppliers

To ensure a stable supply of electricity and to enhance economic vitality and flexibility, the government lifted restrictions on private power producers and adopted Taipower's avoidable cost generation as a pricing principle. Starting in 1996, Taipower was permitted to purchase thermal electricity generated by independent power producers (IPPs) in accordance with an announcement from the Ministry of Economic Affairs that allowed for the establishment of private power plants. The process works as follows: the Ministry of Economic Affairs first conducts qualification reviews. Qualified operators then submit their electricity prices for bidding before Taipower signs a contract with the winning bidder.

For the purchase of electricity generated through cogeneration and renewable energy, the procedure is governed by the Enforcement Rules of the Cogeneration System and the Renewable Energy Development Act. Taipower is obligated to purchase the electricity wholesale, but is not required to follow the bidding procedures outlined in the Government Procurement Act.

However, as of January 2017, following the promulgation of the most recent amendments to the Electricity Act, the Ministry of Economic Affairs will no longer permit privately-owned power plant license applications. Taipower's power supply capacity will now be determined by the electricity industry's regulatory authority when assessing the power supply. When there is electricity demand, a procurement procedure will be initiated. Contracts will be reviewed and the starting price for bidding will be set. Then public bidding will be handled following the provisions of the Government Procurement Act. A public meeting will be held to explain the bidding process to potential suppliers that are interested in bidding. The bidding will be closed and finalized after a qualification and specification review, as well as bargaining and comparing prices.

As of the end of 2023, Taipower has contracts with 9 independent power producers (IPPs), 48 co-generation power providers, and additionally has 55,385 contracts for solar, wind, hydropower, and other forms of renewable energy. A full 71,000 GWh of electricity was purchased from external sources in 2023.

1.5.2 Creating a Sustainable Supply Chain

2-6 204-1 308-1 414-1 414-2

Supply Chain Management Mechanisms

To ensure the quality of materials used, maintain power supply safety, and improve procurement efficiency, Taipower's procurement activities comply with the Government Procurement Act. The Company's Instructions to Tenderers and Contract Terms comply with relevant laws and regulations regarding human rights, environmental protection, labor safety and health, labor rights, human trafficking, and protection for people with disabilities and indigenous people, which are also included in the tender documents. Current sustainability requirements on suppliers are mainly for the purpose of communication and cooperation. Engagement activities such as document signing show Taipower's determination to promote a sustainable supply chain. Taipower aims to become an excellent, reliable, and sustainable world-class power group. The Materials Department was used as a demonstration unit to upgrade its supply chain management to sustainable supply chain management starting in 2023.

■ Process of Screening Selectively Tendered Materials, Equipment, and Qualified Suppliers

Regulations Governing the Review of Supplier Manufacturing Capacity are published on Taipower's corporate website

Suppliers file online applications for manufacturing capacity reviews

Taipower conducts reviews of suppliers' manufacturing capabilities through onsite inspections and document screening

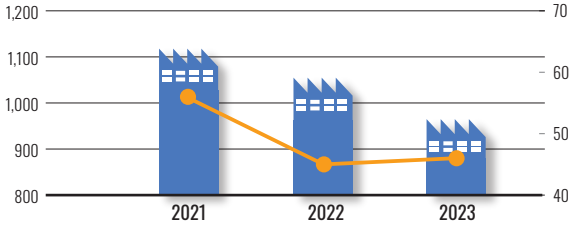
Interim inspection rules: In accordance with standard norms for company materials and in view of the nature of the products concerned, semi-finished products are inspected. If any items are found to be unsuitable, the supplier must improve the entire batch and accept a second inspection

Taipower has established General Principles of Reviewing Supplier Equipment Manufacturing Capacity in Selective Tendering and Review of Supplier Capability as a supplier selection mechanism. Suppliers wishing to participate in a bidding process must first obtain a Certificate of Manufacturing Capacity. In 2023, Taipower strengthened its auditing of material suppliers. Among 133 qualified suppliers in selective bidding, 37 were re-evaluated, which accounted for 27.8%. All results of supplier re-evaluation subsequently met Taipower's requirements. In addition, the Company conducted inspections during the manufacturing process and on-site audits of suppliers a total of 438 times.

■ Domestic Purchase

In 2023, Taipower received a total of 3,236 material procurement tenders from 965 domestic suppliers and 46 foreign suppliers, for a total of 1,011 suppliers. A total of approximately NT$139.1 billion in tenders was awarded. Domestic tender awards totaled approximately NT$116.2 billion and accounted for approximately 84% of the Company's procurement of property. Among them, the tenders awarded through selective bidding accounted for approximately NT$103 billion, or 74% of the company's property procurement, with a total of 72 contractors. The tenders awarded through other bidding methods accounted for approximately NT$36.1 billion, or 26% of the Company's property procurement.

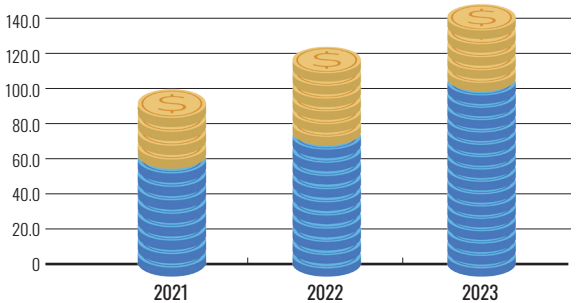
Domestic Suppliers from 2021 to 2023



	2021	2022	2023
Domestic suppliers	1,118	1,055	965
Foreign suppliers	56	45	46

Selective and Other Bidding Processes from 2021 to 2023

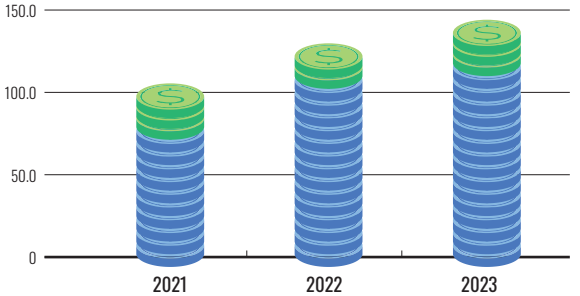
Unit: NT$ billion



	2021	2022	2023
Selective bidding	30.7	41.5	36.1
Other bidding	52.7	71.8	103.0

Domestic and Foreign Procurement Bidding Amounts from 2021 to 2023

Unit: NT$ billion



	2021	2022	2023
Domestic procurement bidding	9.6	13.7	22.9
Foreign procurement bidding	73.8	99.6	116.2

Bidding Evaluation for Primary Power Generation Equipment Suppliers of Thermal Power Plants

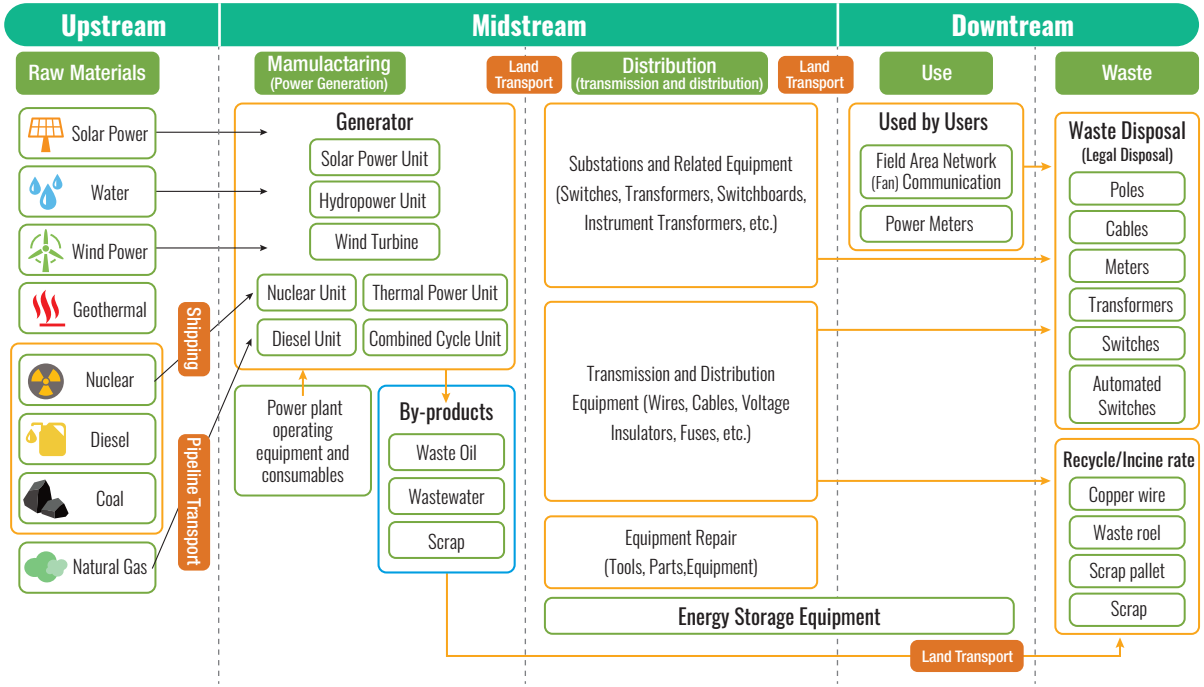
Taipower employs a restricted bidding process to recruit technical service consulting firms. Under the evaluation criteria titled "vendor's understanding of service matters," Taipower incorporates environmental regulations with the aim of selecting consulting firms that possess comprehensive knowledge of environmental regulations and the latest developments. This facilitates the consideration and inclusion of the latest environmental regulations and environmental impact assessment commitments in the bidding specifications for primary power generation equipment.

Taipower has placed environmental chapters in its bidding specifications for the procurement of primary power generation equipment or associated facility construction projects. Contractors are required to follow construction site management practices and comply with environmental laws and regulations such as the Air Pollution Control Act, the Water Pollution Control Act, the Waste Disposal Act, the Marine Pollution Control Act, and the Environmental Impact Assessment Act. The specifications also stipulate that a certain percentage of the contract amount (environmental protection fees) must be allocated exclusively for environmental protection measures. The objective is to minimize the environmental impact of the construction process through a framework of environmental protection regulations.

Supply Chain Management for Major Materials

Taipower role in the power system supply chain mainly consists of performing power generation, transmission, and distribution roles, but also covers services and maintenance in the electricity consumption stage for some users. Consequently, company-level materials are mainly needed to provide services for midstream distribution (power transmission and distribution) and downstream consumption by users. Therefore, the main activity of the Materials Department is to purchase related equipment and products and to ensure that their quality and specifications meet Taipower's needs.

For classification management, Taipower divides its company-level materials into 7 categories and 3 groups based on the functions of the purchased items, and with reference to Taiwan's industry classification (divided into subcategories) and SASB's classification methods. Moreover, Taipower referenced the questionnaire released by the DJSI in 2023 to identify major suppliers based on needs for supply chain management.



Material Supply Chain Sustainability Assessment Action

To implement effective ESG management of company-level material suppliers, Taipower appealed to the spirit of ISO 20400's Sustainable Procurement - Guidance to identify material sustainability issues related to material suppliers. The Company then put forward management requirements for suppliers based on those material sustainability issues. The identification results are shown in the table below:

Issue\Category	Transformers and Inverters	Electronic Control Equipment and Materials	Metal Instruments	Cables	Telecommunications and Communications Equipment
Corporate Governance	Material				Material
Human Rights					
Labor Standards	Material	Material		Material	
Environmental Issues (including climate change)	Material		Material	Material	
Fair Operating Practices	Material	Material			
Consumer Rights (including quality control)	Material	Material		Material	Material
Community Engagement and Development					Material

Note: Suppliers not listed are classified as having no significant sustainability issues identified.

Based on the results of material issue identification, Taipower formulated a Code of Conduct for Material Suppliers and a Sustainability Commitment for Taipower's Material Suppliers, which cover major international sustainability indicators and were distributed to suppliers starting from the end of 2023. In the first phase, all key suppliers (12) have signed the documents and participated in the supplier ESG documentary review, and 2 were selected for on-site reviews. The raw scores obtained after the reviews were completed are used in the sustainability risk assessment. The overall process is shown in the figure below:

Supplier ESG Review and Risk Assessment Improvement Roadmap

Major Supplier Sustainability Risk Assessment Process

A weighted scoring system is used for the identification of major suppliers. The following items are taken into consideration and different weightings are used in calculating the scores:

Percentage accounted for by the procurement amount

① Percentage of total purchase amount accounted for by a single supplier
② Percentage of the purchase amount of suppliers in the category accounted for by the individual supplier

Taipower's industry-specific material risks: Unstable power supply due to

① Products imported from overseas (overseas suppliers)
② Only a single supplier for products with specific requirements
③ Only a single supplier for a specific category of products

ESG Materiality

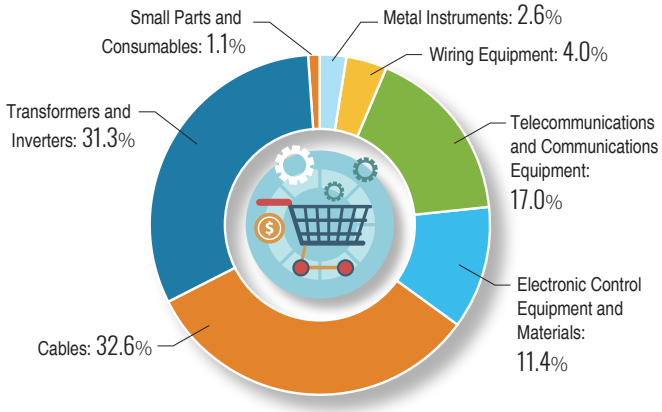
① Does this type of supplier have higher governance risks
② Do such suppliers have higher social risks
③ Do such suppliers have higher environmental risks

The purchase contract is not shorter than 2 years

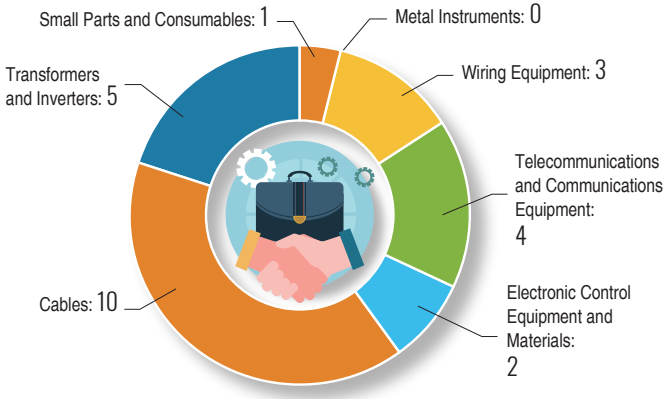
Material Supply Chain Management Indicators and Performance

Taipower analyzed the procurement distribution of company-level materials according to the major supplier sustainability risk assessment process, and the distribution of 25 major suppliers is shown in the figure. The purchase amount from major suppliers accounted for 83.1% of all procurements, and the amount directly purchased from local suppliers in Taiwan accounted for 98.4%. The remaining 1.6% of overseas procurement categories were for specific types of cables, wires, and voltage insulators.

Distribution of Company-Level Material Purchases



Distribution of Major Suppliers



2 Provider of Sustainable Power

Suitable for the following stakeholders: Shareholders, Board of Directors, Employees, Partners, Government Agencies, Elected Representatives, Media, Users, Residents

Development Vision

A stable supply of electricity is crucial to public livelihood, industry, and economic development. By continuously providing a stable power supply throughout Taiwan, Taipower plays a vital role in the nation's overall economic development. As energy transition continues, the proportion of renewables used will rise. As renewable use increases, unstable nature of their generation will make meeting future electricity demands challenging.

Taipower is eagerly developing diversified energy sources on the supply side. It has prioritized three major areas of development: renewable energy, low-carbon gas, and the renewal of coal-fired power plants with ultra-supercritical (USC) generation units. These measures are expected to stabilize the electric system. Other measures include improving the reliability of power generation, transmission, substations and distribution. Meanwhile, Taipower is continuing to make good use of opportunities in power dispatching and constantly upgrading its thermal power generating units to increase the proportion of gas-fired energy. Taipower will continue to implement its energy transition goals and enhance the Company's operational capabilities and market competitiveness.

Performance Highlights

- Strengthened the power transmission and substation systems. The total investment in the 7th Transmission and Substation Revision Project will be about NT$236.9 billion (by 2025). At the end of 2023, substation capacity had reached 16,207.85 KVA (93.94%) and 1,879.82 circuit kilometers (98.94%) of lines had been completed.
- In 2023, the total length of underground transmission cable reached 4,891.343 circuit kilometers.
- The gross thermal efficiency of all thermal power plants has increased year on year, from 46.26% in 2021 to 46.63% in 2023.
- In 2023, wind power generated 872.1 GWh, solar power generated 393.9 GWh, and geothermal power generated 1.3 GWh of electricity.
- The progress of renewal, expansion and new thermal generating unit projects in 2023 was as follows: Phase 1 of the Tung Hsiao Power Plant (99.91%), the Tatan Power Plant (97.06%), the Taichung Power Plant (37.78%), the Hsinta Power Plant (72.01%), the Hsieh-ho Power Plant (23.65%), Phase 2 of the Tung Hsiao Power Plant (8.69%), the Talin Gas Power Plant (8.49%).

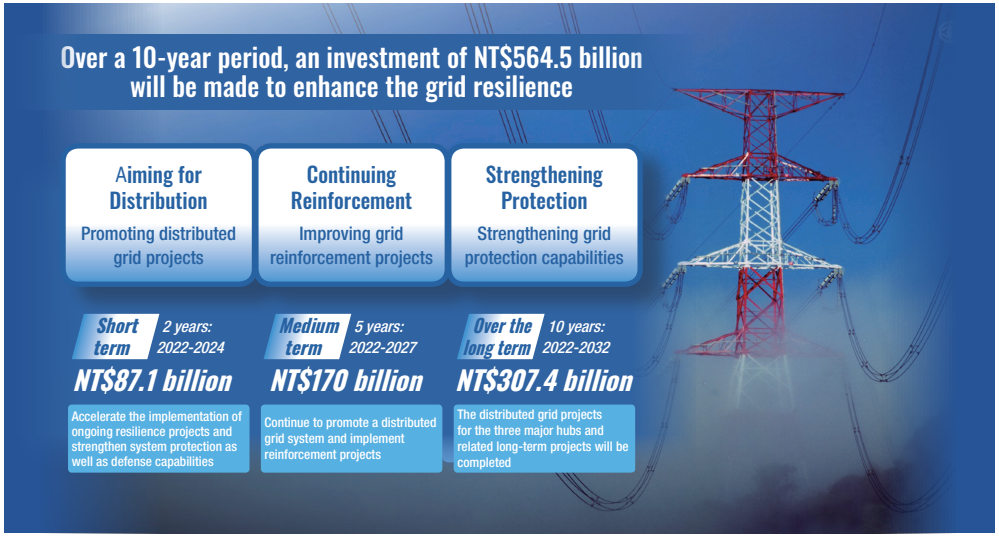
2.1 Building Resilient Electricity

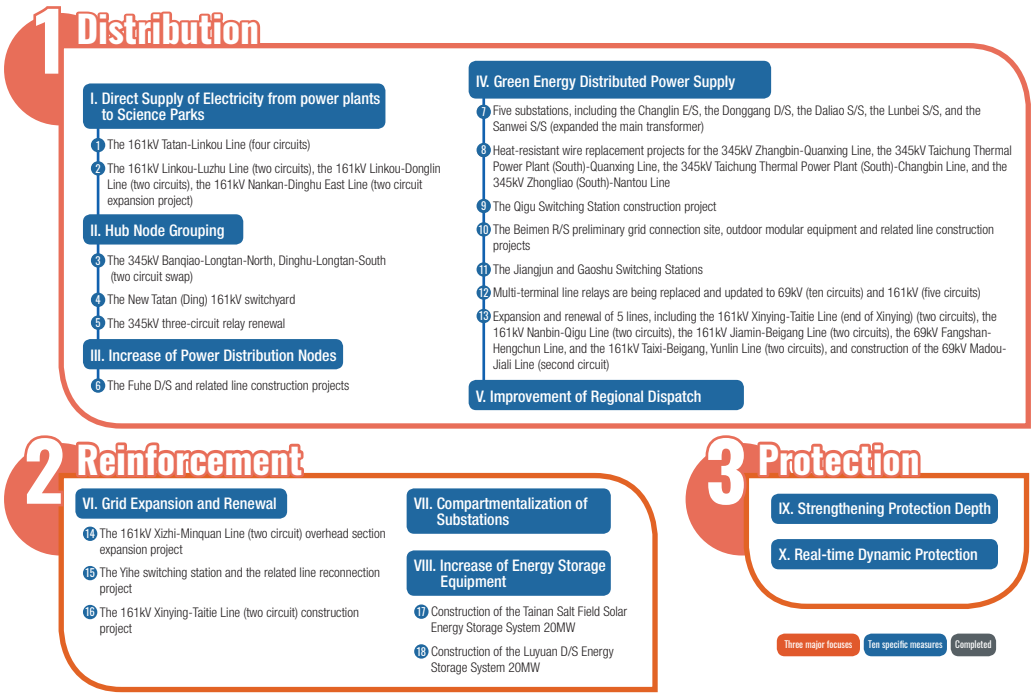
2.1.1 Construction Plan for Strengthening Power Grid Resilience

Projects for Strengthening Grid Resilience

Taipower proposed a Grid Resilience Strengthening Construction Plan as part of its efforts to move towards net-zero emissions from electricity in 2050. The core concept behind the plan is that decentralizing the power grid is effectively synonymous with building a strong power grid. Through the plan, Taipower will move forward with a dual-track structure of regional resilience and national integration, while continuing to strengthen system defense capabilities to eliminate the potential risk of incidents. Taipower proposed 5 action plans based on the overall strategy of strengthening power grid resilience. These included: promoting distributed grid projects, improving grid reinforcement projects, strengthening grid protection capabilities, improving the power supply ability and reliability, and developing forward-looking technology. Taipower formulated specific measures for implementation of each element of the plan.

The Grid Resilience Strengthening Construction Plan incorporates three major focuses, which are further divided into 10 specific measures consisting of a total of 91 sub-projects valued at NT$564.5 billion in total investment. Currently, about NT$376.1 billion of that investment has been planned and implemented. Taipower further formulated a Phase 1 Project to Strengthen the Power Grid (8 sub-projects), which was approved by the Executive Yuan on September 23, 2023. As of the end of December 2023, 22 sub-projects have been completed.





As the Grid Resilience Strengthening Construction Plan is implemented, Taipower is progressively adding power transmission and transformation equipment. In 2023, the Company continued work on its Plan for Replacement of Old Power Supply Units of the Transmission System Division in the Next Ten Years, and introduced maintenance homogenization, took inventory of equipment weaknesses, inspecting potential equipment to identify risks in advance and maintained or replaced equipment to improve equipment reliability.

The Grid Resilience Strengthening Construction Plan

Taipower is moving forward with a dual-track structure of regional resilience and national integration to lower the risk of an overly concentrated power grid. This includes five specific measures: direct supply of electricity from power plants to science parks, a distributed green energy power supply, hub node grouping, increasing power distribution nodes, and improvement of regional dispatch. Taipower integrated the concept of local generation and nearby utilization into its power grid planning, enabling the direct supply of natural gas-generated power to science parks and industrial parks. Increasing the integration capacity of offshore wind power in the northern region and solar power in the southern region will reduce the concentration of power sources and facilitate the effective utilization of renewable energy, and ultimately achieve the goal of net-zero carbon emission. In addition, the construction of additional switching yards at important hub substations will help mitigate the risks associated with a centralized power supply. Furthermore, the construction of new substations and the addition of new power distribution nodes is necessary to enable independent operation of regional power grids, accelerate power restoration and minimize the scope and impact of large-scale power outages.

2.1.2 Increase Adaptive Capabilities

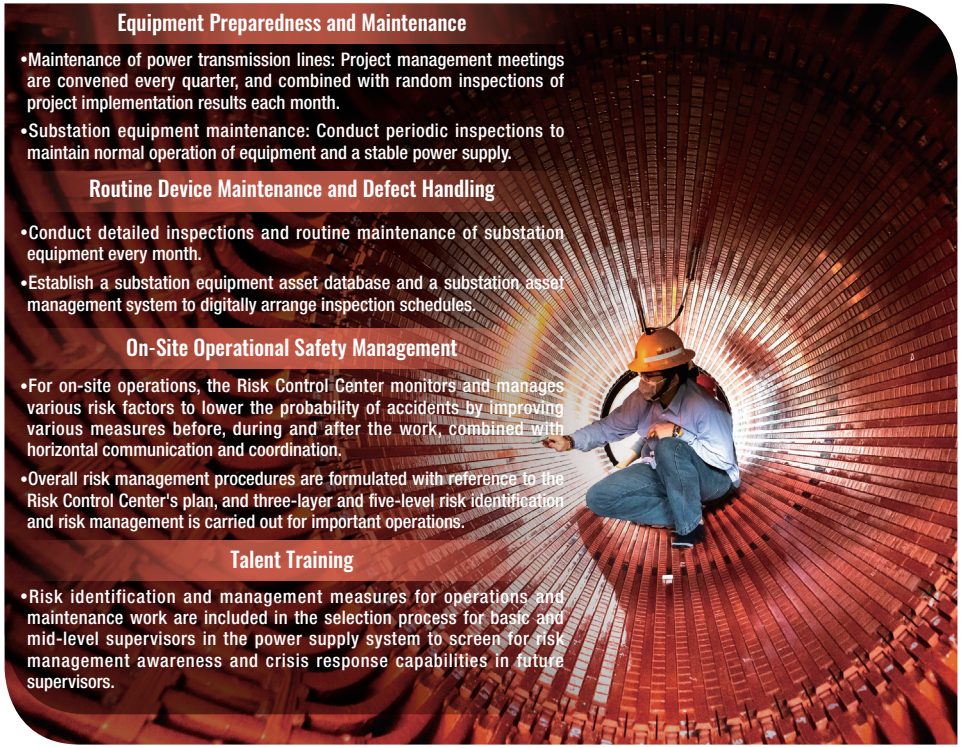
Strengthen Disaster Prevention, Response, and Recovery Capabilities

Natural disasters are a significant challenge for Taipower's operations. In terms of internal management, Taipower has a complete disaster prevention and emergency response system, with comprehensive disaster prevention policies and regulations. In addition to all kinds of disaster education and training, random checks are conducted so that all units can effectively and promptly respond to natural disasters and major power supply outages. In terms of external response, before a typhoon strikes, Taipower's branch offices strengthen residents' disaster prevention preparedness through local mass media (including radio and cable TV), leaflets, correspondence, or phone calls. During the disaster, Taipower collects and analysis information on the situation through the feeder adopter disaster information collection mechanism, the Company's official website, the Taipower app, the 1911 hotline, and contact with borough wardens. Taipower then mobilizes personnel to perform emergency repairs, and issues at least one local press release every day to explain the progress of power restoration and emergency repairs.

Taipower's Disaster Rescue and Reconstruction Management Policy and Implementation Powers and Responsibilities

Execution time	Management strategy and refinement	Executive Unit
Twice a year	Every year (in January and April), Taipower holds Extraordinary Disaster Prevention and Review Meetings to review deficiencies and areas for improvement in disaster prevention and response from the previous year. The meetings aim to establish a disaster prevention plan for the current year and confirm the organization and command system for disaster prevention and response.	All branch offices
Once a year	Inventories are conducted of manpower, vehicles, and equipment data for each regional operational office (including contractors) to facilitate integrated scheduling and utilization of manpower and equipment. Various types of disaster prevention and response promotions, education sessions, and drills are conducted to enhance proficiency in disaster prevention and response operations.	Department of Distribution and all branch offices
Before typhoons	Pre-typhoon preparedness meeting review the government's forecasted information (projected typhoon paths and intensities) to identify mountainous areas or outlying islands that may become isolated due to road closures or the suspension of ferry services. Personnel, machinery, and materials are then deployed in advance to facilitate the prompt repair of power facilities and reduce disaster losses.	Department of Distribution and all branch offices
When a disaster occurs	Through the Emergency Response Task Force, the mutual support mechanism is activated in a timely manner, swiftly mobilizing manpower and equipment to handle disaster repairs and the restoration of electricity. The task force cooperates with the disaster relief efforts of various levels of government, sets up forward command posts, and provides timely information on disaster situations, repair progress, and instructions for user cooperation. This information is made available for local governments and opinion leaders to reference and take appropriate measures, and provides necessary assistance and shortens the time required for disaster recovery.	All branch offices
No warning throughout the year	Enhanced communication and coordination operations are conducted for reporting distribution system disaster situations. Regular training sessions are held for various types of disasters and emergency event alerts, and unannounced drills are implemented to improve the timeliness of disaster notifications.	Department of Distribution

Strengthen Substation Facilities



Ensuring Nuclear Power Safety

Taipower adheres to the concept of defense-in-depth to ensure the safe operation of its nuclear power plants. Taipower aims to:

- Ensure that nuclear power facilities have the highest standards of design, construction, supervision, and quality control in accordance with regulatory mandates. Additionally, geographical considerations are taken into account for each unit's equipment. Potential natural disasters, such as earthquakes, tsunamis, typhoons, and floods, are evaluated in detail to provide defense-in-depth thinking that can cope with burst outages.
- Utilize multiple physical barriers that are designed to prevent leakages of fission products from nuclear reactors.
- Employ different and redundant security systems that are well maintained and in operation. These systems must be tested regularly according to regulations to maintain a high degree of readiness to respond to any contingency.

In practice, Taipower's approach to defense-in-depth incorporates the following four lines of defense:

Defense-in-Depth

The 1st Line of Defense (Prevention)	The 2nd Line of Defense (Mitigation)	The 3rd Line of Defense (Emergency Preparedness)	The 4th Line of Defense (Strategy)
Evaluations and prevention are conducted in advance based on various extreme conditions.	Disaster mitigation is executed to prevent the leakage of radioactive materials from nuclear power plants.	If disaster mitigation fails to prevent external leakages of radioactive materials, protective actions will be taken to reduce radiation exposure outside the plant.	Specific Major Incident (SMI) Guidelines were developed as a basis for decision-making and operations, and are based on current design benchmarks for earthquake resistance and tsunami prevention at nuclear power plants, emergency operating procedures and severe nuclear outage handling guidelines. In normal times, the guidelines serve as a standard for personnel training and drills.

Level of Nuclear Accident Impact

Taipower has joined the United State-based Nuclear Procurement Issues Corporation (NUPIC) and regularly participates in meetings. This allows the Company to obtain audit information on purchase vendors for each nuclear power plant. This helps ensure the quality and safety of equipment and components. Taipower also abides by the Enforcement Rules of the Nuclear Materials and Radioactive Waste Management Act. The Company submits reports on radioactive waste treatment, storage, and final disposal to the competent authority, along with annual reports on operations, radiation protection, and environmental radiation monitoring. Nuclear accidents are divided into three categories based on the potential degree of impact:

Emergency Alert	Plant Emergency	General Emergency
The safety condition of nuclear reactor facilities has already or is likely to significantly deteriorate, but it is not yet necessary to carry out public protection actions against nuclear accidents.	A major failure has already or is likely to occur in the safety function of a nuclear reactor facility, and may require public protection actions against nuclear accidents.	The core of a nuclear reactor facility has severely deteriorated or melted, the integrity of the containment has already or is likely to be lost, and it is necessary to carry out public protection actions against nuclear accidents.

Actual Drill Performance

Taipower conducts an emergency response plan drill at each operating/decommissioned nuclear power plan every year. The drills can be divided into either in-plant drills or nuclear safety drills. The nuclear safety drills are conducted by Taipower in cooperation with the competent authority and are held by one of the nuclear power plants in turn every year. As part of the annual event, a general mobilization drill 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 instead. Taipower invites experts and scholars to form a drill assessment team, along with representatives from competent authorities, to evaluate the response measures of these drills so that the emergency response plans and actions can be gradually improved. In 2023, for example, Nuclear Safety Exercise No. 29 conducted a joint simulation in August, and a live drill was performed in the Second Nuclear Power Plant and its surrounding emergency planning area in September. The First and Third nuclear Power Plants also conducted an emergency preparedness drills in July and November, respectively.

2.2 Improving Power Supply Stability

2.2.1 A Stable Power Supply and the Generation System 3-1 203-1 203-2

Material Topics: Stability and Reliability of Power Supply

Policy	Maintain a good energy structure and power grid to continue to provide users with stable and reliable power services.
Management Approach	To improve the stability and reliability of the power supply, Taipower has formulated a comprehensive management approach, including a sound equipment maintenance strategy, improvement of operation and maintenance skills, and strengthening of risk management measures.
Action Plans	❶ Strengthen the transmission network. ❷ Continue to power plant construction, renewal, and expansion. ❸ Reduce the national power outage time.
Actual Performance in 2023	❶ The 7th Transmission and Substation Project has completed 16,207.85 kVA of power transformation (93.94%) and 1,879.82 circuit kilometers of lines (98.94%) by the end of 2023. ❷ In 2023, the replacement of 46 old iron towers and 41.2 km of ground conductors was completed. Additionally, 12.7 circuit kilometers of oil-filled cables were also replaced. ❸ In 2023, the national power outage time (SAIDI value) was 15.225 min/household per year.
Targets in 2030	❶ Complete the three major hub node distribution projects and their related long-term projects in 2027 to 2032. ❷ Report "progress milestones" for the replacement of old towers, old ground wires, and oil-filled cables during periodic meetings. ❸ Continue to reduce the national power outage time (SAIDI value).

Material Topics: Energy Efficiency

Policy

Effectively improve the power generation efficiency of thermal and renewable energy units.

Management Approach

1. Taipower's hydropower and thermal power plants actively implement energy saving measures and formulate energy conservation plans every year with the intention of improving operating equipment and adjusting equipment operating modes.
2. Taipower's efforts to improve the power generation efficiency of renewable energy units mainly focuses on the establishment of an integrated operation and maintenance management system. In response to the intermittent nature of renewable energy, Taipower has developed a solar and wind power generation prediction system that can provide power generation predictions for renewable energy units in the next 48 hours. These can then be referenced for dispatching.

Action Plans

1. Improve the average efficiency of in-house thermal power units (excluding purchased power).
2. Decrease the line loss rate.
3. Increase the proportion of clean fuel (renewables, gas) generation.
4. Increase the proportion of self-produced power generation (Renewable energy) in the system.

Actual Performance in 2023

1. The average efficiency of in-house thermal power units (excluding purchased power) was higher than 41.58% in 2023.
2. The system-wide line loss rate in 2023 was 3.20%.
3. The system's power generation ratio consisted of 36.5% coal-fired (including 2.4% coal and cogeneration), 44.1% gas, 7% nuclear, 9.9% renewable energy, and 2.5% from other sources (fuel oil and pumped storage) in 2023.
4. The proportion of self-produced power generation (renewable energy) in the System was 9.9% (approximately 24.3 billion kWh) in 2023.

Targets in 2030

1. The average efficiency of in-house thermal power units (excluding purchased power) will be higher than 47%.
2. The line loss rate rolling reviews will be conducted each year (with a target of 4.41% after referencing the T-SDGs).
3. The generation ratio of the Taipower system will consist of 50% gas, 30% coal, and 20% renewable energy.
4. The proportion of self-produced power generation (renewable energy) in the system will reach 24.1% (approximately 68 billion kWh).

Stable Power Supply and Installed Capacity

In recent years, Taiwan's power consumption has repeatedly reached record highs. Since Taipower is responsible for ensuring a stable power supply, this has meant continuously implementing power source development projects. Through new units and the addition of renewable energy, as well as Time of Use (TOU) rates, Demand Response, and response measures for peak hours at night, Taipower has maintained a reserve capacity of above 8% during peak hours. The Company continues to refine its traditional unit dispatching strategy, and also combines demand side management measures, such as TOU rates and ADR, to increase overall power supply stability. With regards to nuclear power plants, main management measures include analyzing and reviewing operational weaknesses that are identified by each nuclear power plant, strengthening the management of activities during major maintenance periods, implementing equipment improvements and upgrades, and reviewing unplanned incidents that have occurred during the year.

Total Amount and Composition of Power Generation from 2021 to 2023

	2021		2022		2023	
	Billion kWh	Percentage	Billion kWh	Percentage	Billion kWh	Percentage
Net Amount of Power Generated and Purchased	248.8	100.0%	250.7	100.0%	245.5	100.0%
Amount of Power Generated	189.1	76.0%	188.3	75.1%	174.5	71.1%
Pumped Storage Hydro	3.2	1.3%	3.1	1.2%	3.0	1.2%
Thermal	155.2	62.4%	156.0	62.2%	149.7	61.0%
Nuclear	26.8	10.8%	22.9	9.1%	17.2	7.0%
Renewable Energy	3.9	1.6%	6.3	2.5%	4.6	1.9%
Amount of Purchased Power	59.7	24.0%	62.5 Note	24.9%	71.0 Note	28.9%
Privately-Owned Thermal	42.7	17.1%	43.7	17.4%	45.3	18.5%
Renewable Energy	11.9	4.8%	15.3	6.1%	19.7	8.0%
Cogeneration	5.1	2.1%	3.4	1.4%	5.9	2.4%

Note: Detailed items are not equal to the total due to rounding, and the round-off difference is not adjusted.

Total Amount and Composition of Power Generation from 2021 to 2023

Unit: %

Unit		Energy Type	2021	2022	2023
Thermal	Steam	Coal	89.12	85.71	85.79
		Oil	92.74	89.67	86.19
		LNG	82.33	94.09	90.40
	Combined Cycle	LNG	88.13	89.49	90.44
Hydro		Hydro	96.09	95.37	96.77

Note: 1.Thermal power unit availability = 1 - The power supply affected by the unit during the period/the number of hours during the period/the maximum net output of the unit
Average availability of thermal power plants = Σ (unit availability × maximum net output of the unit) / Σ maximum net output of the unit
2.Hydropower unit availability = (Operating hours + Standby hours)/Total hours in a year
3.Annual availability of hydropower plant = Arithmetic mean of annual availability of units

Average Availability Rates for Nuclear Power Plants from 2021-2023

Unit: %

Year	NPP1		NPP2		NPP3	
	Reactor 1	Reactor 2	Reactor 1	Reactor 2	Reactor 1	Reactor 2
2021	-	-	50.43[2]	98.02	88.09	88.85
2022	-	-	-	88.95	87.64	99.67
2023	-	-	-	80.83[3]	99.36	88.49

Note: 1.Annual availability of nuclear power units = Annual grid-connected generation hours/Total hours in a year.
2.Reactor 1 of Nuclear Power Plant 2 (NPP2) was originally scheduled to remain shut down from February 25, 2021 until the expiration of its license on December 27, 2021 due to a full fuel pool. However, in order to maximize the supply efficiency of the nuclear fuel before decommissioning, the reactor's life was extended until July 2, 2021 in a decreased power operation mode. It was then overhauled and maintained until the expiration of the operating license on December 27, 2021. The reactor has now entered the decommissioning stage.
3.The operating license of 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.

Improve Power Supply Reliability

Taipower is committed to improving the management efficiency of the power system, focusing mainly on improving unit availability. This requires preventive maintenance, regular inspections and improvements to the weaknesses of generator units to prevent potential problems and effectively reduce the unit failure rate. Taipower has a complete power dispatch and reliability management mechanism. Specific action plans are as follows:

The Power Dispatch and Reliability Management Mechanism

Regular Review and Analysis	Execution method	• Conduct regular electromechanical system incident review meetings. • Conduct regular power dispatch system incident review meetings.
	Execution status	• Conduct regular electromechanical system incident review meetings. • Conduct regular power dispatch system incident review meetings every two months.
Risk Management Implementation	Execution method	• Given the impact of different power incidents on power dispatching reliability and stability, power shortages affecting system stability and safety were listed as risk control events. Risk levels were determined according to the degree of impact and measurement standards in different scenarios. Relevant measures were also formulated for tracking and control. • Quarterly follow ups on reviews and execution. • Conduct a general review at the end of the quarter and set future control objectives.
	Execution status	• Propose management measures for short-term power supply and demand imbalance risk events in 2024. • Report the implementation status of power shortages affecting system stability and safety in 2023 and review risk changes on a rolling basis.
Personnel Training	Execution method	• Online dispatchers trained and conducted license certification examinations for new dispatchers. • Licensed personnel may renew their licenses after completing a certain number of retraining hours every three years.
	Execution status	• Organized 2 Power Dispatch Seminars and 1 Power System Reactive Power and Voltage Adjustment Seminar. The training targeted on-duty or operations-related personnel from dispatch centers (central, regional, distribution), power plants, IPPs, and ultra-high voltage substations with a total of 99 participants. • A total of 7 senior dispatchers and 4 dispatchers were approved for license renewals in 2023.

Taipower actively implements the power supply management mechanisms listed in the table above. This approach helps to ensure a stable power supply throughout Taiwan. Despite this, ensuring reliable power supplies for offshore islands is more challenging because they are not connected to the main island's grid. Therefore, Taipower is proactively assisting the offshore islands in improving their electric systems to ensure offshore users have access to the same electricity quality and services as are available on the main island. For example, the electric system in the Kinmen area has been improv ed by adopting the group operation model for generators and substations in the area. This resolves problems with overly concentrated units and lines at the Tashan Power Plant. It also helps to avoid complete blackouts in the area should an electrical system outage occur.

Taipower's currently uses the System Average Interruption Duration Index (SAIDI) and the System Average Interruption Frequency Index (SAIFI) as performance indicators for power supply reliability. The SAIDI was 15.225 minutes and the SAIFI was 0.186 times in 2023. Taipower has implemented the Distribution System Resilience Project in recent years, and the number of power outages due to distribution accidents has dropped by nearly 25% compared with 2022. Taipower will continue to implement the Distribution System Resilience Project and a comprehensive feeder automation system, striving to achieve fewer power outages and faster recovery, and exerting every effort to reduce the impact of power outages on the public.

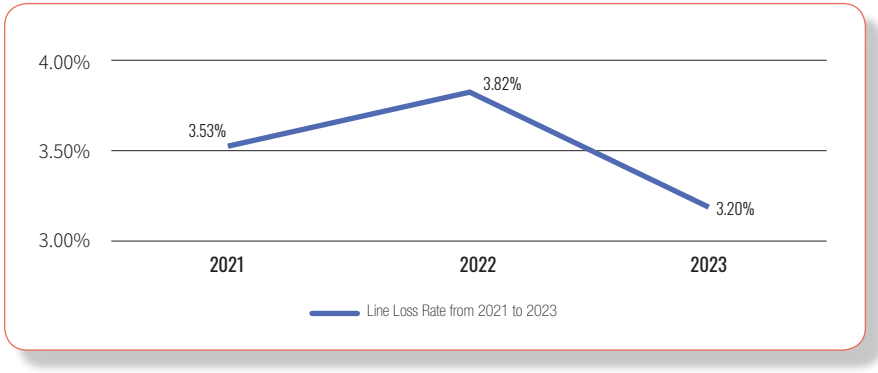
Power Reliability and Performance from 2021-2023

		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

Note: 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).

Line Loss Rate from 2021 to 2023



Guidelines and Planning for Future Power Plant Construction, Renewal, and Expansion Projects

Material Topics: Power Plant Renewal and Decommissioning	
Policy	In response to the decommissioning of existing units and long-term growth of power load, Taipower will improve the overall operating performance and competitiveness of power plants, and reduce carbon dioxide and other air pollution emissions.
Management Approach	Renewal and expansion of power plants, and planning and implementation of decommissioning.
Action Plans	Power generation equipment improvement projects, gas-fired combined cycle units and energy storage unit renewal, expansion, and new addition plans.
Actual Performance in 2023	The progress of renewal, expansion and new addition gas-fired combined cycle unit projects in 2023 was as follows: the Tung Hsiao Power Plant Renewal and Expansion Project (99.91% completed), the Tatan Power Plant Expansion Project (97.06% completed), the Taichung Power Plant New Gas-fired Unit Project (37.78% completed), the Hsinta Power Plant Gas-fired Unit Renal and Reconstruction Project (72.01% completed), the Hsieh-ho Power Power Plant Renewal and Expansion Project (23.65% completed), the Tung Hsiao Power Plant Phase II Renewal and Expansion Project (8.69% completed), and the Dalin Power Plant Gas-fired Unit Renewal and Reconstruction Project (8.49% completed).
Targets in 2030	In coordination with the government's expanded use of natural gas power generation as a bridging energy source for energy transition, the capacity of new gas-fired units is expected to be increased by approximately 22.76 GW between 2023 and 2029.

"Stabilizing the power supply" is an important principle of Taiwan's energy transition policy when implementing power development plans. Taipower has set a transition path of increasing gas, reducing coal, developing green, and non-nuclear, and regularly reviews national power supply and demand on a rolling basis. Taipower plans the addition of new power sources based on the growth of electricity demand and the decommissioning of existing units, so as to ensure stable power supply. Taipower also plans to add new gas-fired combined cycle units and energy storage units to reduce the use of coal, in hopes of maintaining reasonable reserve capacity and providing sufficient electricity to support economic development.

2.2.2 A Robust Transmission and Distribution System

3-3 | 203-1 | 203-2

Material Topics: Accessibility and Affordability of Electricity	
Policy	Increase the penetration of electricity services and maintain affordable electricity prices to stably meet the domestic needs of Taiwanese people.
Management Approach	Taipower continues to strengthen the power grid to make the power supply more stable, thereby reducing the risk and cost of unexpected power outages, consequently cutting maintenance costs incurred through impacts on power supply, thereby achieving affordable power for grid-connected users or companies
Action Plans	Increase the National power supply penetration rate.
Actual Performance in 2023	The national power supply penetration rate has reached 100%.
Targets in 2030	Increase the power supply penetration rate in a few remote areas, such as those that are inaccessible to construction machinery and vehicles due to a lack of roads.

Improving the Accessibility of Power

In order to comply with the Electricity Act and exercise social responsibility by maintaining the public's rights and interests through the provision of a stable power supply, Taipower has established 24 branch offices, 24 service centers, 264 service offices, and 2 customer service centers to coordinate with local public construction And people apply for electricity and other power supply facilities to increase the popularity of power supply and ensure that people have equal access to and the right to the electricity services they need.

Currently, only a few remote areas have no electricity supply. This is typically due to limited access that inhibits the movement of construction equipment and engineering vehicles to the sites and makes the placement of poles difficult. Additionally, setting up electricity in some remote areas may have an impact on the local environment and natural landscape. With the exception of these remote areas, the national power supply penetration rate has reached 100%.

Continue to Implement the Distribution System Resilience Project

The grid is a connective hub between the power generator and the customer. A sound power grid can effectively reduce the possibility of power outages. Over the years, Taipower has built a dense network around the country to ensure that people are able to conveniently access and use electricity. Regular maintenance of related facilities is an important part of maintaining a stable power supply. Taipower will continue to promote plans that increase the power grid's resilience, replace old facilities and lines in order to reduce the line loss rate year by year, and to maintain the high-quality supply of electricity.

Taipower implemented the "Distribution System Resilience Project" from 2018 to 2022, targeting four major systems: distribution lines, secondary substation equipment replacement, feeder automation expansion, and smart substation construction. Following the completion of the project, the annual number of accidents and average accident power outage time have been significantly reduced. Building on the benefits of the Power Distribution System Resilience Project in the stability power supply of the system, a five-year (2023-2027) upgrade and improvement project was formulated for the power distribution system, including the replacement of secondary substation equipment and improvement of exposed 69kV equipment, the replacement of distribution line equipment, the full automation of distribution feeders, moving lines underground for disaster prevention, and the improvement (voltage change) of the distribution system.

Power Grid Construction Projects Implemented in 2023

Power Transmission and Transformation and Regional Power Grid Project	Substation Reconstruction Project	Offshore Wind Power Grid Enhancement Project	Science Park Ultra High Voltage Project
• Northern Region Phase I and Phase II Power Grid Projects. • Central Region Phase I Power Transmission and Transformation Project. • Southern Region Phase I Power Transmission and Transformation Project. • Construction of the Songhu Ultra-High Voltage Substation under the 7th Transmission and Substation Project.	• Substation Renovation and Reconstruction Phase I.	• Phase 1 of the Offshore Wind Power Grid Strengthening Project.	• STSP Ultra-high Voltage Substation Expansion. • The Baoshan Ultra-High Voltage Substation Construction Project.

Increasing the Reliability of Power Distribution

To reduce the cost of generation and increase power supply capacity, the distribution and sales system utilizes a target value for the distribution line loss rate that is allocated by the Department of System Operations. Branch offices are instructed to find improvements for lines and for anti-distortion measures to reduce network losses. Additionally, in consideration of the distribution system's adaptability and wheeling capabilities in the event of outages, Taipower has formulated distribution system planning guides and established management targets to reduce feeders with currents exceeding 300A.

All branch offices and the Department of Distribution regularly conduct high voltage outage review meetings on assessments and improvements in power supply reliability. They review the average outage performance of the distribution system, the causes of major outages, and formulate improved countermeasures to determine the best improvement strategy for each outage situation. The Company also conducts yearly reviews of possible risk factors that affect the stability and reliability of the power supply. These reviews include risk management controls for the following year. Implementation performance is then tracked and reviewed regularly.

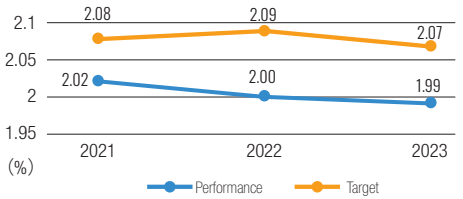
In addition, Taipower regularly organizes on-the-job education and training for maintenance personnel and dispatchers to advance their professional skills and strengthen maintenance capabilities. Taipower is also working to strengthen its auditing operations by evaluating and examining equipment operation periodically, and by overseeing each branch's outage prevention and improvement plans to reduce the possibility of human negligence and improper operation.

As Taiwan moves towards energy transition and a new generation of power supply systems, Taipower has accelerated the automation of its distribution feeders. This not only helps to improve the quality of the power supply but also enables fault detection. Through the remote control of on-site automatic switches, outage areas can be quickly isolated to reduce the scale of power failures. In 2023, power in 57% of areas downstream of automated feeders (not the failure area) was restored within 5 minutes. As of the end of 2023, 32,000 automated switches were monitored and the number of automated feeders reached 9,045 (a penetration rate of about 90%). The automation of all feeders is expected to be achieved in 2025.

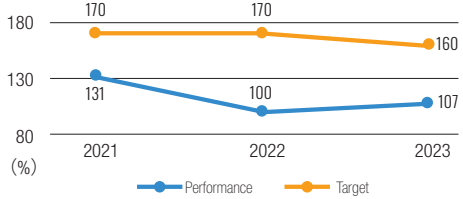
Distribution Feeder Automation Installations from 2021-2023

Performance	2021	2022	2023
Feeder Automations (Number)	7,969 lines	8,384 lines	9,045 lines
Switch Automations (Number)	1,422 units	2,180 units	2,670 units
Proportion of Accidents for which Power was Restored Downstream of Automated Feeders within 5 Minutes	45%	49%	57%

Distribution Line Loss Rate from 2021 to 2023



Reduction of Feeder Lines with Currents Exceeding 300A from 2021 to 2023




The Longtan Ultra-High Voltage Substation is the most important power hub in northern Taiwan.

2.3 Implementing Energy Transition

2.3.1 Promoting Power Transformation

Power Transition as a Response to Policy and Public Opinion

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, while ensuring system stability with a reliable gas supply for new gas-fired units. Additionally, the feasibility of retaining older equipment for emergency operation is being evaluated based on national security considerations. The direction of planning is as follows:

Prioritize the Development of Renewables and Create a Friendly Grid Connection Environment

Actively promote offshore and land-based wind power, solar photovoltaic, geothermal, and small and micro hydropower facilities.

Actively Promote Gas-Fired Generation Projects and Build Natural Gas Receiving Terminals

Construct natural gas receiving stations in the Taichung and Keelung (Hsieh-ho) Ports, and expand the construction of natural gas unloading and receiving facilities together with CPC Corporation.

Coal-Fired Units Serve as Vital Backups

Continue to update the environmental protection equipment of existing coal-fired power plants, evaluate the feasibility of replacing old equipment under the premise of ensuring power supply, and consider using eco-friendly coal to control air pollution and carbon emissions from the source to power generation.

Short, Medium, and Long-Term Plans for Energy Transition

Taipower's power planning aims to achieve a reasonable reserve capacity of 15% to maintain reliable and stable power supply in the power system. The actual nighttime reserve capacity of Taipower's system was 14.7% in 2023. The annual power generation structure consists of 36.5% coal-fired (including 2.4% coal and cogeneration), 44.1% gas, 7% nuclear, 9.9% renewable energy, and 2.5% from other sources (fuel oil and pumped storage). The percentage accounted for by Taipower's gas-fired generation surpassed that of coal-fired generation in 2019. As gas-fired generation projects are successively commencing commercial operation, progress is steadily being made towards the 2025 target of 50% gas-fired generation.

Short-Term Actions

Since Taiwan is small and densely populated, land for power plants and lines is difficult to obtain. With the prevalence of the not-in-my-backyard (NIMBY) sentiment and concerns over greenhouse gas emissions attracting intense attention from the general public, the progress of plant construction has been greatly hindered and takes a long time. Additionally, some of the existing nuclear power plants have been shut down prematurely, causing power supply shortages and making it difficult to plan the addition of conventional thermal power sources to replace them in the short term. To reduce the risk of power shortages, the following response measures were proposed:

- Utilize the power generation characteristics of renewable energy and improve dispatch strategies
- Strengthen various demand-side management measures to depress peak power demand
- Ensure the stable operation of existing units and that the construction of new power generation units remains on schedule

Medium-Term Measures

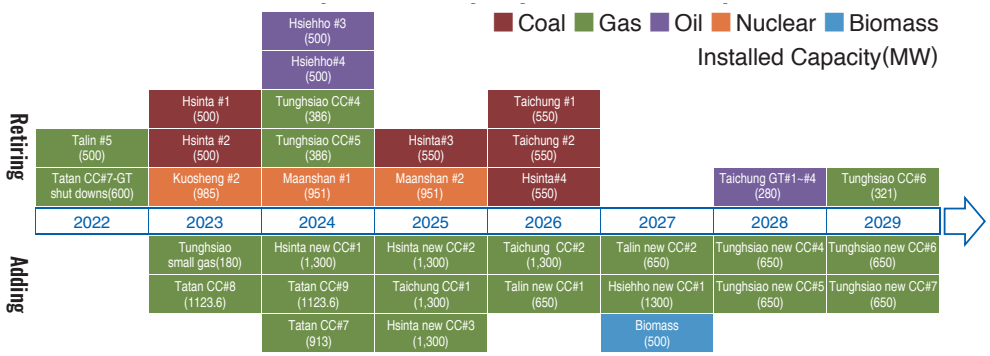
Taipower continues to push forward with replacing its old plants with new thermal power plants. To facilitate the balance of power supply in Taiwan, improve generation efficiency, and work in conjunction with the government's low-carbon sustainability policy, Taipower has implemented renewal and expansion projects in Northern, Central, and Southern Taiwan. At present, the renewal and expansion projects are aimed at wind, solar, thermal, hydropower, and biomass power generation.

Long-Term Power Development

1. Due to growing power consumption and the successive decommissioning of various units, Taipower has planned its long-term power development projects until 2029 in coordination with the government's energy transition policy and internal and external environmental conditions. The plan is shown in the figure below:

2. The proportion of renewable energy has been increased in line with the national energy policy. In addition, the thermal generation structure has been adjusted from primarily coal with gas as support to primarily gas with coal as support, effectively using gas to replace coal. As a result, the future power generation fuel structure will be dominated by natural gas. According to the power development plan, the Hsinta Power Plant will sequentially decommission its existing coal-fired units and all its new units will be gas-fired. Gas-fired units will also be installed at the Hsieh-ho, Tatan, Tung Hsiao Phase 2, Taichung, and Talin Power Plants. This measure will ensure both air quality and a stable power supply. After the new gas-fired units at the Taichung and Hsinta Power Plants are completed and begin commercial operation, some of the existing coal-fired units will be converted to standby.

Taipower Company Power Development Plan 2023



Remark: According to Report of the assessment to energy referendums on Jun 21th, 2023 by the MOEA.

Implementing Vehicular Electrification and Decarbonization

In response to the government's implementation of the electric vehicle policy and the domestic interest in developing electric vehicles, Taipower has altered its mindset and role from that of a power facilitator to an active participant, and has formulated the following response strategies:

Short Term	Medium to Long-Term
• Establish an electric vehicle charging demonstration site at the Taipei Regional Office to simulate usage situations such as those at public charging stations, commercial buildings, and collective housing, and to implement energy management system (EMS) technology for smart charging control. • Starting from March 1, 2022, the charging facilities in new collective housing construction projects are approved to use dedicated meters for power supply. • Encourage users to use EMS charging management to charge during off-peak periods, in order to suppress peak loads and reduce users' electricity bills.	• Implement Time of Use (TOU) rates, Demand Response events, ancillary service instructions, and load capacity signals to conduct functional verification of charging control, Vehicle-to-Grid (V2G) uses, and communication interface compatibility. • Establish a forecast model for the construction of public charging piles through the travel model, and use it as a reference for subsequent grid strengthening in response to the growth of power consumption by electric vehicles.

To help the public better understand information related to the electricity consumption of electric vehicles, Taipower has not only produced multimedia materials, such as promotional videos and brochures for external reference, but also appointed contact persons for the electric vehicle business at its 24 branch offices across Taiwan to provide the public and charging service providers with consulting services. Taipower mobilized employees at each branch office to promote electricity use to local governments, associations, manufacturers, community management committees, and citizens, promoting electricity use at 1,665 units as of the end of December 2023. A total of 51 charging piles were completed at 13 locations as of the end of December 2023. Taipower's Department of Distribution awarded a tender in January 2024 in response to the need to enhance functions of the Distribution-level Renewable Energy Advanced Management System (DREAMS) and cooperated in developing a charging facility integrated management demonstration system. Taipower plans to subsequently select four charging stations that are currently operating in Northern, Central, and Southern Taiwan to serve as demonstration sites.

2.3.2 Diversification of Renewable Energy Development

3-3 203-2

Material Topics: Renewable Energy Development and Low-Carbon Gas-Fired Power Generation

Policy	In line with the government's 2050 net-zero emission policy, Taipower will move towards short-term low-carbon and long-term zero-carbon goals, and actively promote the installation of offshore and onshore wind power, solar photovoltaics, geothermal power generation, and small and micro hydropower. Zero-carbon renewable energy and low-carbon gas-fired power generation will become the main sources of power, and the use of old coal-fired units will be reduced. Taipower continues to track international forward-looking energy developments so they can be introduced in a timely manner. At the same time, Taipower is strengthening the construction of the power grid and creating a grid connection friendly environment for the private sector to develop renewable energy, which will maximize the development of renewable energy.
Management Approach	Develop renewable energy and clean energy with low air pollution emissions.
Action Plans	❶ Increase carbon-free renewable energy and low-carbon gas-fired power generation unit capacity. ❷ Increase capacity for renewable energy grid connection.
Actual Performance in 2023	❶ Installed capacity of renewable energy: The accumulated total capacity is 2,537.5 MW. ❷ Capacity for renewable energy grid connection: The system's grid-connected capacity is 17,085 MW.
Targets in 2030	❶ Installed capacity of renewable energy: The accumulated total capacity is 4,522.3 MW. ❷ Capacity for renewable energy grid connection: The system's grid-connected capacity is 41,718 MW.

Promoting Renewable Energy

In terms of stimulating renewable development, Taipower has adopted ease of grid connection, demonstration and leadership, and system stability as its three main strategies.

- **Ease of grid connection:** Taipower will strengthen grid infrastructure, provide sufficient feeder capacity, boost the growth of renewable capacity, and assist privately built renewable generators with connecting to the grid smoothly.
- **Demonstration and leadership:** In addition to continuing to invest in renewable developments such as solar, onshore and offshore wind power, Taipower will participate in advanced high-tech energy demonstration projects. The Company will take the initiative to cooperate with industry, government, and academia in development, and then lead the private sector by promoting renewable investment through media publicity, education, and skill development.
- **System stability:** Despite the intermittent nature of renewable generation, Taipower is maintaining system

stability and security while raising the penetration rate of renewables through technologies such as smart generation and dispatching, demand-side management, and energy storage facilities.

In response to government policies, Taipower will continue to work on raising the proportion of renewable energy and researching and developing potential renewable sources. Through these actions, the Company hopes to lower carbon emissions and produce more sustainable electricity for users in Taiwan.

The Current Status of Renewable Energy

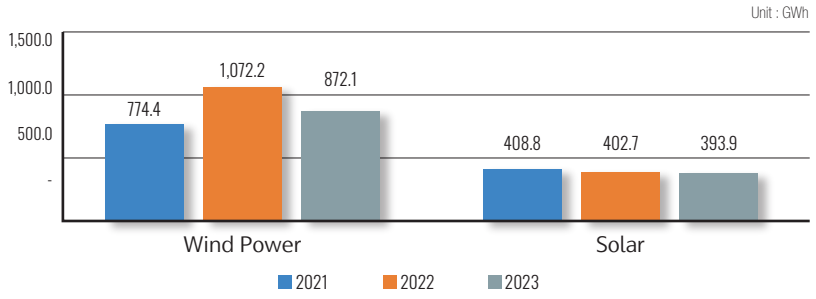
As the scale of green power production increases, so will the demand for grid connections. Taipower is laying the foundation to meet this need as part of its energy transition policy. In 2021, it finalized Phase 1 of the Green Energy Project and is scheduled to develop a renewable generation system with a total installed capacity of 115 MW between 2022 and 2027. The system will include solar photovoltaic and onshore wind power. Regarding the current status of renewable energy development, solar and wind power are the main focuses of work. In 2023, wind power generation reached 872.1 GWh and solar photovoltaic generation reached 393.9 GWh.

Renewables Generation Status

	Deployments	Installed Capacity (MW)	Generation in 2023 (GWh)	Number of Households Accommodated
Wind Power	27 Sites 200 Units	439.2	872.1	242,000
Solar	56 Sites	287.8	393.9	109,000
Geothermal Power	1 Site	0.84	1.3	374

Note: 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.

Power Generation from 2021 to 2023



Taipower will continue to play a leading role in the renewable power industry. In addition to hydropower generation, which has a century of history, the Company has also developed a complete plan for wind and solar power in recent years. Taipower is also investing in R&D for emerging fields, such as geothermal and biomass energy. The current development status of renewables promoted by Taipower is as follows:

The Current Status of Renewable Energy in 2023

Hydropower	The planned plant sites include the first phases of small hydropower projects across Taiwan and the Wanli Hydropower Projects, with a total installed capacity of 65.553 MW, which are expected to commence commercial operation in 2024. In addition, Jingshan Small Hydropower Project at the Liyutan Reservoir, Hushan Small Hydropower Project, and ChiChi Nanan 2 Small Hydropower Project have begun commercial operation in September 2022, February and June 2023, respectively.
Onshore Wind Power	Since 2000, Taipower has been pursuing wind power development. By the end of 2023, the Company had completed the Jhongtun Wind Power Demonstration Project, Phases 1 to 5 of the Wind Power Generation Project, Penghu's Huxi Wind Power Project, and Kinmen's Jinsha Wind Power Project. There are currently 18 wind fields and 179 wind turbines in operation with a total installed capacity of approximately 330 MW.
Offshore Wind Power	Phase 1 of the Offshore Wind Power Project implemented by Taipower deployed 21 offshore wind power generators off the coast of Fangyuan Township, Changhua County with a total installed capacity of about 109.2 MW. The project began commercial operations on December 30, 2021. Furthermore, construction of the "Offshore Wind Power Second Phase Project" has continued in 2023 and expected to complete grid connection and power generation in 2025.
Solar power	Phase 1 of the Solar Photovoltaics Project was initiated in 2008, and approximately 287.8 MW had been completed as of the end of 2023, including the Tainan Salt Field Solar Photovoltaic Project, the largest photovoltaic site in Taiwan that generates 150MW of power.
Geothermal power generation	The Yilan Renze Geothermal Generation Project was jointly implemented with CPC Corporation and has an installed capacity of 0.84 MW. It completed grid connection and began power generation on May 24, 2023.
Marine energy	Taipower plans to implement marine energy power generation at Green Island as a demonstration pilot project. A preliminary research project was implemented in 2023 to record wave observations at Green Island and evaluate the feasibility of wave power generation in the actual sea area. The feasibility assessment is scheduled to be completed in 2024, and will used as a reference for evaluating marine energy development.
Biomass power generation	As Taiwan transitions to net-zero emissions, there is an urgent need to increase the number reliable and stable low-carbon energy sources. Wood pellets are a carbon-neutral fuel used internationally in mature technologies in commercial operations. Taipower is currently looking into the feasibility of a biomass power generation project. The study is expected to be submitted to the Ministry of Economic Affairs for review in September 2024.

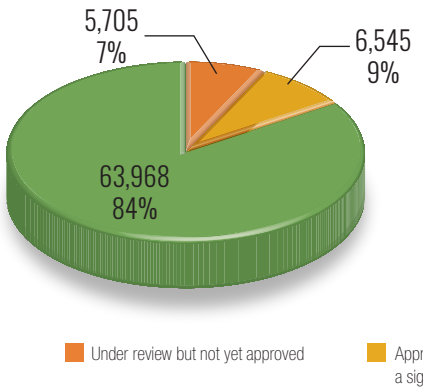
The Current Status of Renewable Energy Grid-Connections

Taipower is cooperating with the government to promote the development of renewable energy. While ensuring the safe operation of the grid, Taipower has adjusted its grid connection strategy with reference to technology and the latest international development trends. It has also considered financial operating conditions that meet the demands of renewable grid-connection expansion. The number of applications for various types of solar power plants and the corresponding accumulation of capacity are as follows (as of February 22, 2024):

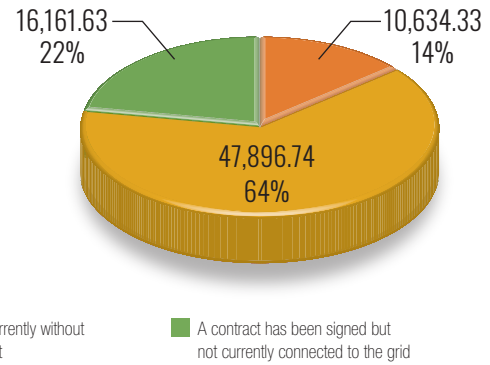
Accumulated Number of Cases and Installed Capacity of Various Types of Solar Power

Case Status	Cases (Number)	Capacity (MW)
Grid-Connected Cases	63,189	12,741.93
Official Power Purchase Cases	57,490	10,219.42

Solar Power Accepted Cases



Solar Power Accepted Capacity (MW)



Under review but not yet approved

Approved but currently without a signed contract

A contract has been signed but not currently connected to the grid

Committed to Renewable Energy Efficiency

To improve the efficiency of renewable energy power generation, Taipower conducts regular preventive maintenance and inspections to reduce unit failure rates. The Company also selects components that use materials with low-carbon footprints to reduce its environmental impact. Taipower has reduced the power consumption of plants by strengthening the maintenance of ventilation and air-conditioning equipment in renewable energy power plants and by installing energy-saving control equipment.

Taipower's ongoing efforts to improve renewable and low-carbon energy efficiency fall mainly into the two following areas:

1. Establishing an integrated operation and maintenance management system to store operation and maintenance records, such as failures of renewable energy power generation and its ancillary equipment, maintenance records, and preventive maintenance plans, in a database. On this basis, further analysis and statistics of unit operation and maintenance data can be carried out in order to reduce failures, shorten troubleshooting time, and increase equipment availability.
2. The development of a solar and wind power generation prediction system to mitigate the effects of the intermittent nature of renewable energy. The system can provide power generation predictions for renewable energy units in the next 48 hours, which can be referenced for dispatching.

Average Availability Rates of Renewable Energy from 2021 to 2023

	2021	2022	2023
Availability Rate of Wind Power (%)	92.61	92.10	88.17
Capacity Factor of Solar Power (%)	16.44	16.16	15.83

Note 1:
Annual Wind Power Availability Rate = Unit Generating Hours (Including Standby Hours)/Annual Number of Hours
Solar Power Capacity Factor = Annual Power Generation of Units/Device Capacity * Year-Round Hours

Note 2:
In the past three years (2021-2023), due to the natural decline of solar photovoltaic module power conversion and the number of onshore wind turbines that are more than 15 years old (53.6% by 2023), there has been a downward trend in availability. This is a reasonable and normal reflection of the equipment life cycle.

Upgrading Renewable Energy Technologies

Green Island Wave Power Generation Pilot Project	After evaluating the current development trends and maturity of marine energy, the preliminary evaluation determined that oscillating water column (OWC) wave power generation is the most feasible. A field test will be conducted in a pilot project in the northeastern coastal waters of Green Island (water depth of 10-20 meters), where wave energy will be surveyed to assess power generation potential.
Research and Analysis of Forward-Looking Geothermal Technology	In coordination with the government's plan to launch forward-looking geothermal development work in 2035, Taipower hopes to use professional teams to explore geothermal resources in Gengziping, Shenao, and Lile, and to analyze the applicability of forward-looking geothermal technology in the area through international development cases and the introduction of technology companies. Recommendations will then be provided for future development. The evaluation results can be used as a basis for the next stage of geothermal development decisions at each site, and capabilities will gradually be accumulated for developing forward-looking geothermal energy.
Offshore Wind Farm Cooperative Development Investigation and Research Project	The Energy Administration plans to promote floating demonstration wind farms with an installed capacity of 100MW. Taipower engaged in related research in coordination with the policy to investigate the suitability of coastal areas from Taoyuan in the north to Pingtung in the south for the development of fixed/floating offshore wind farms (the water depth must be of about 30 to 90 meters). The Company has also analyzed sites based on power generation potential, technical capabilities, risk management and legal issues. This will assist Taipower in evaluating the feasibility of self-development and cooperative development of offshore wind farms.

Response Measures for Renewable Energy Challenges

Renewable and low-carbon energy sources are limited by the natural environment and seasonal changes, and their intermittent and unpredictable characteristics cannot be ignored. Taipower combines solar photovoltaic sites with energy storage systems to help stabilize the system frequency and provide a real-time reserve. It uses the fast charging and discharging characteristics of the energy storage systems to help regulate the grid connection of solar photovoltaic power generation, reducing the system fluctuations caused by the seasonal and weather impact on renewable energy, and thereby maintaining grid stability. Additionally, excess solar power generated during the day can be stored in energy storage systems and then used during nighttime peak demand or in emergency power situations, providing immediate stable power and allowing for critical repair time in urgent restoration scenarios. This approach enhances the stability of renewable energy supply.

Taipower will adopt a diversified development strategy in response to the development challenge of increasing renewable and low-carbon energy in the future. For example, due to the difficulty of obtaining land for solar power, Taipower will mainly build rooftop or complex sites (co-generation sites with agriculture and fishery) on its own land in the future. In terms of onshore wind power, wind fields available for development are approaching saturation, so Taipower will focus on decommissioning and renewal in the future. In terms of offshore wind power, in the third phase of offshore wind power block development, Taipower is limited by its status as a state-owned enterprise and cannot be as flexible as private developers for meeting development requirements. Therefore, Taipower learned from international experience and switched to the model of international offshore wind power developers entering new markets by forming alliances with offshore wind power developers. This brings both competition and opportunities for Taipower, which has learned about bidding processes through alliances and cooperation, and led to standardizing subsequent offshore wind farm investment criteria. In the future, Taipower will maintain the competitiveness of offshore wind power development through reinvestment and strategic investment, and will engage in forward-looking technology research, such as floating offshore wind power, geothermal, and marine energy, thereby continuing to expand Taipower's renewable energy development.

Since government policy has placed a strong emphasis on solar photovoltaic power, Taipower must meet the demand for large-capacity, ground-based, solar photovoltaic grid connections as soon as possible. Branch offices located in the grid-connected hot zones actively visit local governments and solar photovoltaic installation operators. The offices guide installation operators to integrate with the grid through a centralized deployment method to avoid wasting Taipower's investment. Meanwhile, Taipower has continued to both implement its distribution-grade power grid reinforcement project that will enable increased renewable grid-connections and to promote short, medium, and long-term model plans.

3 Agent of Environmental Friendliness

Suitable for the following stakeholders: Government Agencies Public Opinion Groups and Users

Development Vision

As an energy enterprise, Taipower must face the challenge of maximizing its beneficial impacts while minimizing its negative effects. As the economy develops, Taipower must continually increase the energy supply while pursuing cleaner energy and a low-carbon transformation. The Company will continue to work with society and enterprises to seek more energy and eco-efficient solutions as it pursues carbon value and environmental sustainability. In doing so, Taipower hopes to increase its environmental sustainability at a pace that is in step with economic development.

Taipower has responded to issues of air quality and climate change by adjusting its energy structure, increasing its proportional use of gas and renewables, and improving pollution prevention equipment, while increasing the efficiency of various energy resources. To achieve the goals outlined in its Environmental White Paper for 2025, Taipower will continuously work to mitigate the environmental impacts of various power facilities and work earnestly to live up to its commitment to environmentally-friendly operation.

Performance Highlights

- In 2023, the Company's capital expenditure on environmental protection was approximately NT$5.869 billion. Recurring expenses associated with environmental protection were about NT$3.485 billion.
- In 2023, the reuse rate for coal ash production and desulfurized gypsum were 94.8% and 100% respectively.
- In 2023, Taiwan's power plant loads were voluntarily and autonomously reduced 1,690 times.
- Approximately 1.6 million fish fry were released into the sea near power plants and offshore wind facilities in 2023.
- In 2023, the emission intensity of air pollution decreased by 68.5% when compared to 2016.

3.1 Strengthening Environmental Management

3.1.1 Environmental Policy and Goals 305-4

As the electric power industry pursues operations, it must consider energy quality, safety, and environmental sustainability. Taipower's corporate mission is to ensure a stable supply of electricity for the diversified development of society in a cost-effective and environmentally-friendly manner. The Company also aspires to transform itself into a prestigious, trustworthy world-class power utility group. As such, the Company is actively responding to the major environmental issues and development trends faced by the energy industry.

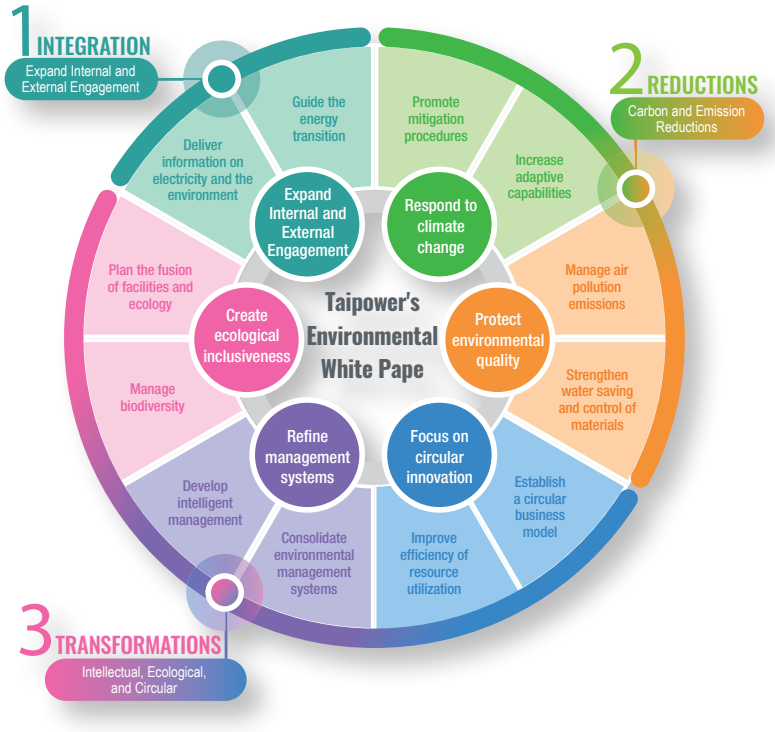
In alignment with the United Nations Sustainable Development Goals (SDGs) and the international vision for achieving carbon-neutrality by 2050, Taipower has formulated a White Paper with a forward-looking mindset. The White Paper fully elaborates on Taipower's strategic objectives and outlook and seeks to maintain a consensus on sustainability and a commitment to environmental policy.

The Environmental White Paper explores six major strategic aspects and 12 corresponding dimensions for strategic development. Moreover, the Paper presents a basis for follow-up through the implementation of sustainable environmental management. Through development goals and action plans, Taipower integrates its business divisions to achieve the benefits of "one integration" (internal and external), "two reductions" (carbon and emission reductions), and "three transformations" intelligence, ecology, circularity). Through this multi-pronged approach, Taipower will create environmentally friendly power facilities, a comprehensive model for environmental protection, and a sustainable and inclusive power generation, transmission, distribution, and sales enterprise system.

Refinement of the Environmental Sustainability Strategy

Taipower conducts a range of activities that are both environmentally friendly and encourage community building. These include beach cleanups, fish fry releases, green space adoptions, and artificial reef developments. Additionally, in implementing its environmental policies, Taipower conducts environmental education, carefully evaluates environmental factors before power plant expansions and unit additions, and undertakes in-depth communication with local stakeholders to ensure legality and compliance. Through these measures, the Company achieves win-win situations for society, the environment, and Taipower.

Unfolding the Specific Contents of Taipower's Six Major Strategic Aspects and Twelve Strategic Dimensions



Taipower Environmental Policy - Short, Medium, and Long-Term Goals

Strategy	Key Strategic Dimensions	2023 Goal (Short-Term Goals)	Achievements in 2023	2024 Goals	Medium-Term Goals (by 2025)	Long-Term Goal (by 2030)
Respond to Climate Change	Promote mitigation procedures	Net greenhouse gas emission intensity of thermal power units will be reduced by 7.1% as compared to 2016 levels.	Net emission intensity of thermal power units has been reduced by 8% as compared to 2016 levels.	Net emission intensity of thermal power units will be reduced by 8.5% as compared to 2016 levels.	Net greenhouse gas emission intensity of thermal power units will be reduced by 15% as compared to 2016 levels.	Net greenhouse gas emission intensity of thermal power units will be reduced by 20% as compared to 2016 levels.
Protect Environmental Quality	Manage air pollution emissions	Air pollution emission intensity will be reduced by 55% compared to 2016.	Air pollution emission intensity has been reduced by 68.5% compared to 2016 levels.	Air pollution emission intensity will be reduced by 62% compared to 2016.	Air pollution emission intensity will be reduced by 70% compared to 2016 levels.	Air pollution emission intensity will be reduced by 75% compared to 2016 levels.
Focus on Circular Innovation	Establish a circular business model	Formulated the "Taipower Circular Construction Implementation Guidelines".	Completed the "Taipower Circular Construction Implementation Guidelines".	Submitted plans for the application of micro-surface asphalt concrete in road paving plan.	Implement a circular resource supply model.	Complete the establishment of a circular economy system.

Strategy	Key Strategic Dimensions	2023 Goal (Short-Term Goals)	Achievements in 2023	2024 Goals	Medium-Term Goals (by 2025)	Long-Term Goal (by 2030)
Refine Management Systems	Develop intelligent management	Intelligent management and service coverage will reach 58% (Including the cumulative deployment of smart meters in 2.5 million households, representing 78% of total national power consumption).	Intelligent management and service coverage reached 62.07% (Including the cumulative deployment of smart meters in 2.707 million households, representing 79.2% of total national power consumption).	Intelligent management and service coverage will reach 63% (Including the cumulative deployment of smart meters in 3.15 million households, representing 81.1% of total national power consumption).	Intelligent management and service coverage will reach 65% (Including the cumulative deployment of smart meters in 3.65 million households, representing 81.8% of total national power consumption).	Intelligent management and service coverage will reach 82% (Including the cumulative deployment of smart meters in 6 million households, representing 85% of total national power consumption).
Create Ecological Inclusiveness	Plan the fusion of ecology and facilities	Released a video and project results report on the Hsinta Power Plant's ecological integration.	Released a video and project results report on the Hsinta Power Plant's ecological integration.	Completed the printing of fish species models for fish ways at the Dajia River Power Plant, ecological corridor training, ecological surveys of the upstream and downstream areas of the Tianlun Dam, and analysis and determination of biological migration seasons and ecological habits.	Establish at least three ecologically inclusive plans for power facilities.	Establish at least five ecologically inclusive plans for power facilities.
Expand Internal and External Engagement	Deliver information on electricity and the environment	Annual communication of environmental protection information will reach 560,000 people.	Annual communication of environmental protection information will reach 1.13 million people.	Annual communication of environmental protection information will reach 630,000 people.	Annual communication of environmental protection information will reach 700,000 people.	Annual communication of environmental protection information will reach 750,000 people.

To align with the Company's formulated environmental policy and fulfill its commitments to the public, Taipower has taken into consideration international sustainability trends, social sentiments, legal circumstances, as well as its operational status and plans. Through a collaborative approach that integrates departments and units, each unit has developed feasible, forward-looking, and representative short, medium, and long-term strategic goals and action plans based on their respective business attributes. By constructing and implementing these strategic plans, we aim to ensure that each business unit follows the directions outlined in the Environmental White Paper. This will effectively realize the Company's vision of becoming a green enterprise and translate its goals into tangible actions.

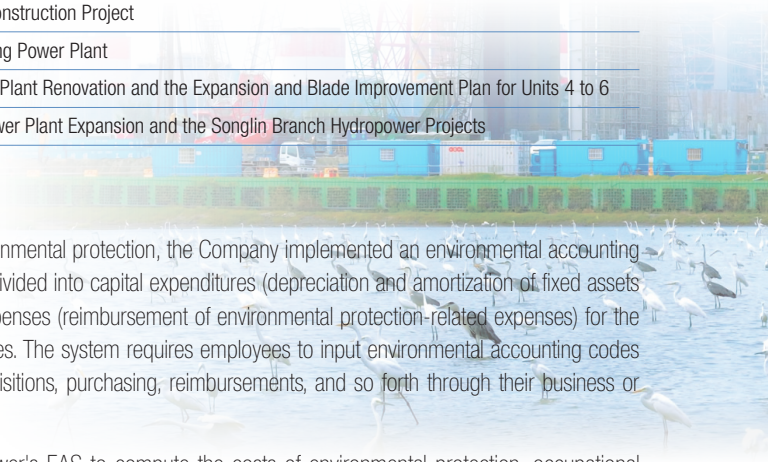
Implementing Environmental Impact Assessments

To ensure a stable power supply, Taipower continues to develop and renovate various electrical facilities throughout Taiwan so that its hardware is well appointed and sound. The development of power facilities is highly related to local environments and communities. Improper management may result in water, air and soil pollution, noise or vibrations, waste, damage to natural resources and social, cultural or economic landscapes.

Consequently, Taipower has always been cautious about the impact of its operations on the surrounding environment and society. It has also adhered to a principle of minimizing its negative influence on the environment and sought to actively carry out effective environmental impact management. Through predevelopment assessments and communication, public reviews, post-assessment improvements to plans, and a framework for continuous monitoring during construction, the impact of development activities on the environment and the surrounding community is minimized.

The Development Plan (Approved by the Ministry of Environment for Future Reference in 2023)

- A decommissioning plan for nuclear power plant No. 2
- Maritime facility dredging during the course of the Linkou Power Plant Renovation and Expansion Project
- Maritime facility dredging during work on Units 2 and 3 of the Linkou Power Plant Expansion Project
- The Dalin Power Plant Gas-fired Unit Renovation and Reconstruction Project
- A carbon storage test site at Units 9 and 10 of the Taichung Power Plant
- Environmental Impact Statement for the Tunghsiao Power Plant Renovation and the Expansion and Blade Improvement Plan for Units 4 to 6
- The first environmental impact analysis for the Wanda Power Plant Expansion and the Songlin Branch Hydropower Projects



Environmental Accounting

To accurately evaluate Taipower's investment in environmental protection, the Company implemented an environmental accounting system (EAS) in 2008. Environmental accounting is divided into capital expenditures (depreciation and amortization of fixed assets related to environmental protection) and recurring expenses (reimbursement of environmental protection-related expenses) for the collection of environmental protection related expenses. The system requires employees to input environmental accounting codes for specific tasks or activities such as purchase requisitions, purchasing, reimbursements, and so forth through their business or accounting systems.

All operations are managed and compiled by Taipower's EAS to compute the costs of environmental protection, occupational safety, and health for each unit. Information is also compiled in the environmental accounting management system to make reimbursements more convenient and to accurately evaluate Taipower's investments in environmental protection expenditures. This system indicates that, in 2023, Taipower's environmental protection capital expenditure was approximately $5.869 billion and its recurring environmental protection expenses were about $3.485 billion.

3.1.2 Energy Resource Management

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Fuel Usage Management

In order to be environmentally friendly, Taipower has chosen to use fuels with low-ash, low-sulfur, and low-nitrogen content. The Company's policy seeks to stabilize the use of coal, and gradually shift from coal to gas. Taipower will also continue to build and upgrade gas-fired units and related facilities to minimize pollutant emissions from thermal power generation.

Taipower's Use of Fuels from 2021 to 2023

TYPES	2021	2022	2023
Gas (millions of cubic meters)	15,846	16,395	15,671
Coal (millions of tons)	28.295	28.115	26.823
Fuel Oil (1,000 kiloliters)	1,054	933	822
Nuclear Fuel (10,000 pounds)	128.66	115.83	70.18

Sulfur Hexafluoride (SF_6) Reduction

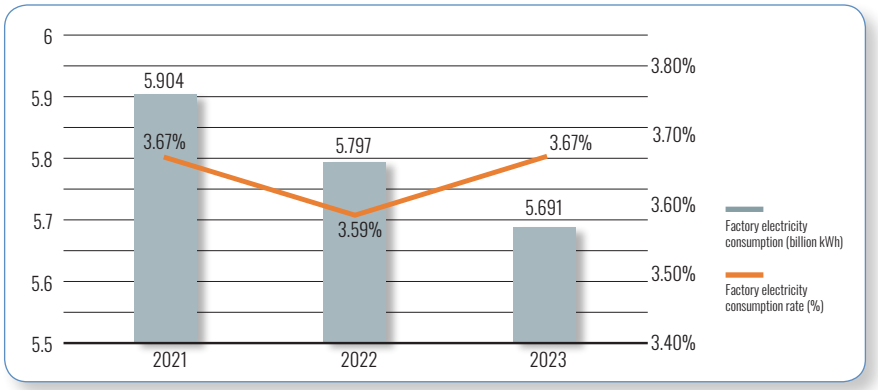
Sulfur hexafluoride (SF_6) is a greenhouse gas with an extremely high global warming potential. After long-term use, the gas gradually escapes into the atmosphere. Nevertheless, as it is an essential insulating material for power equipment it is widely used in Taipower's substation equipment for power generation, transmission, and distribution. In response to this issue, Taipower has continuously promoted reduction methods. Taipower units that manage substation equipment have SF_6 maintenance management procedures. Relevant units carry out SF_6 reclamation and purification work as part of procedures for overhauling substation equipment. After the equipment is overhauled, the purified SF_6 is backfilled into equipment to reduce greenhouse gas emissions. This allows for the recycling of SF_6, mitigates climate change problems and achieves the goals of establishing a circular economy and resource regeneration.

Improving the Energy Efficiency of Operations

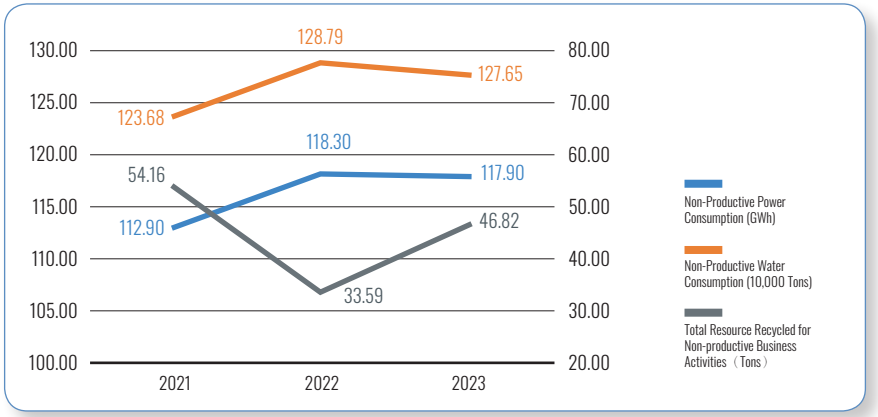
Taipower has established a Material Flow Management Information System to monitor the energy, resources and waste inputs and outputs of each unit. Every year, it sends letters to each unit to fill in system-related information so that a greater understanding can be developed of the waste-related management status of each unit. In the future the Company will continue to take inventory of energy and resource inputs and outputs in the value chains of power generation, transmission, distribution and sales, and will also plan and expand related strategies to improve the efficiency of energy and resource use.

In 2023, Taipower continued to give impetus to power-saving in conjunction with the Executive Yuan's Electricity Efficiency Management Plan for Government Agencies and Schools by setting a goal of zero growth in annual power consumption compared to the previous year. Moreover, Taipower carries out water conservation work in accordance with the Ministry of Economic Affair's Water Saving Normalization Action Plan. The General Management Office will coordinate these efforts to drive other branches and power plants to implement various measures that constitute a comprehensive energy-saving and carbon-reduction scheme. Taipower will also track its energy and resource consumption (for water, power, fuel, and paper) on a monthly basis and conduct annual assessments to identify units with excellent performance.

In-Plant Power Consumption Status of All Thermal Power Plants from 2021 to 2023



Total employee consumption and resource recycling within the scope of Taipower



Note: 1. Statistics of resources recycled from the Taipower Headquarters building
2. Recycled resources include: Paper, tin and aluminum cans, other metal products, plastic containers, glass containers, etc.

The Effectiveness of Non-Production Resource Management

ITEM	MEASURES IN 2023
Water-Savings	• Prioritizing the use of equipment with water efficiency labels was the first priority along with the effective use of rainwater resources (for toilet flushing, watering plants) to reduce tap water consumption. • In line with the Water Saving Normalization Action Plan, Taipower actively promoted the installation of water-saving equipment and the replacement of old, water-consuming equipment in offices, at construction sites, and in employee dormitories. • Promote water-saving measures at each unit through water-saving advocacy, water management, pipeline facility leak inspection, and rainwater reclamation and reuse.
Power-Savings	• When purchasing electrical appliances, priority is given to products with an energy label or highly efficient products with energy efficiency levels of 1 or 2. • When purchasing air conditioners, models with higher Cooling Seasonal Performance Factor (CSPF) values are considered. • While maintaining air conditioners, the outlet water temperature of central air conditioning chillers was moderately increased. • An energy management system was established to monitor and analyze electricity consumption data. • Actively replaced older, energy-consuming equipment (air conditioners, lighting fixtures, etc.) in various offices. • The indoor temperature of each office is controlled at 26-28°C, and circulator fans are used. • Air conditioning chillers are shut down half an hour before regular working hours are finished, while ice water circulation and air flow are maintained. • Non-official electrical appliances are not used in office spaces. • The elevators in the buildings of each unit use a power-saving operation management and control mode, and the energy-consuming equipment and office machines in each office operate in a power-saving mode.
Fuel-Savings	• Implemented car-pooling measures in vehicle dispatch, and strengthened vehicle maintenance and inspection to reduce fuel consumption. • Allocated a budget to accelerate the replacement of fuel vehicles with electric vehicles and to increase the frequency of existing electric vehicle use. • Vehicle fuel consumption for the headquarters in 2023 was reduced by 1,207 liters when compared to 2022.
Paper-Savings	• Continued to implement paper-reduction through measures such as the electronic exchange of official documents and online approvals, with performance reaching over 70% and 85%, respectively. • Advocated for employee use of double-sided printing to save 2.86 million sheets of paper

In the future, Taipower will continue to replace old energy-consuming electrical equipment that has reached the end of its service life. With the goal of not increasing power consumption compared with the previous year, it will implement appropriate controls within a reasonable range and introduce energy-saving equipment to reduce energy consumption while avoiding impacting the quality of the office environment. Taipower has also allocated a budget to accelerate the replacement of fuel vehicles with electric vehicles and to increase the frequency of existing electric vehicle use.

3.2 Environment Impact Management

3.2.1 GHG Management 305-1 305-4 305-5 305-7

Greenhouse Gas Emissions

Along with many in the global energy industry, Taipower is committed to developing high-efficiency power generation technology. In recent years, the Company has been actively engaged in energy transition. Through the development of low-carbon power, Taipower continues to reduce its carbon emission factors. The Company is also reducing greenhouse gas (GHG) by using cleaner energy sources and providing cleaner power for industries and individuals in Taiwan. With regards to thermal power generation, Taipower currently focuses on two main directions:

Gas Expansion and Coal Reduction	Gas-Fired Unit Upgrades
The proportion of gas was increased again in 2023, and the pattern of primarily using gas with coal as support was continued. The proportion of gas used is higher than that of coal.	Old gas-fired combined-cycle units are gradually being phased out and replace with new-type combined-cycle gas-fired units that have better generation efficiency.

Taipower's main sources of greenhouse gas emissions include power generation, coal yards, fuel-consuming equipment such as vehicles and engines, insulating gases used in electrical switches, and refrigerants used in air conditioning systems. In order to calculate the Company's GHG emissions, Taipower requests that relevant units compile an inventory and carry out internal verification and supervision every year. In addition, the Company engages a third party to conduct external verification of its GHG emissions from thermal power generation. Taipower disclosed to the public that its Scope 1 GHG emissions for its thermal power units (coal, fuel, and gas-fired) was 93.48 million tons, with a GHG emission intensity of 0.621 kg/kWh in 2023.

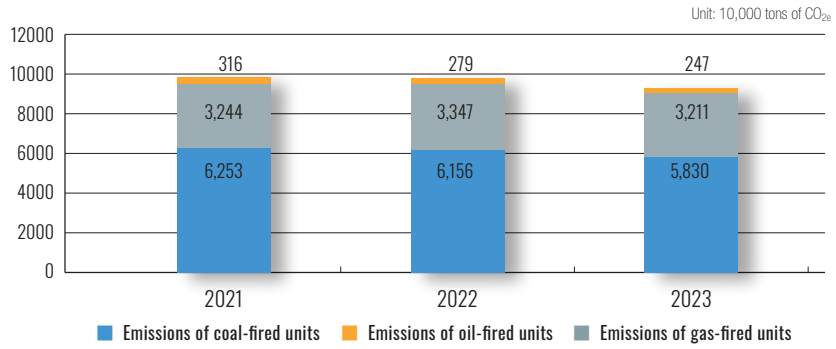
Greenhouse Gas Emissions from 2021 to 2023

Unit: 10,000 tons of CO_{2e}

YEAR	CO_2	CH_4	N_2O	SF_6	HFC	PFCs	NF_3
2021	9,808	26	32	8	3	0	0
2022	9,775	25	31	12	3	0	0
2023	9,286	27	26	8	1	0	0

Note: Since Taipower is the main power company in the country, the Company's total emissions calculation only includes direct emissions and does not include indirect energy emissions to avoid double counting.

Emissions of Thermal Power Units from 2021 to 2023



Strengthening Air Pollution Emission Reduction

Taipower considers the benefits of overall air quality improvement and continues to improve air pollution from its thermal power plants through an approach of load reduction in the short-term, environmental improvement in the mid-term, and construction of new gas-fired units in the long-term. This approach balances the need for a stable power supply with environmental protection.

In recent years, the issue of air pollution has been of great concern to the public. As such, Taipower has continued to actively manage air pollution through various plans and management methods. Taipower implements environmental protection dispatching and voluntarily and autonomously reduces loads during periods of poor air quality. Moreover, Taipower uses the best available control technology to process PM, SO_X, and NO_X. To control the air pollutant emissions generated by the operation of each power plant, Taipower chooses to use low-ash and low-sulfur fuels and is switching to clean energy in its fuel selection. In addition, continuous flue gas emission monitoring instruments have been installed in the smoke fontanels of various thermal power plants to accurately assess the concentration of pollutants in the flue gas, maintain equipment efficiency in the best state, and minimize the emission of air pollutants.

The Actual and Regulatory Values of Major Air Pollutants from 2021 to 2023

Unit: kg/GWh

YEAR	PM		SO_X		NO_X	
	Actual Value	Regulatory Value	Actual Value	Regulatory Value	Actual Value	Regulatory Value
2021	6	61	98	312	188	393
2022	5	60	84	277	169	359
2023	5	58	77	263	160	331

Note: The regulatory value is calculated by estimating the total air pollution emissions for each thermal power unit based on the emission standards, and then dividing the result by the gross electric power generation of all thermal power plants in the current year.

Management of Stationary Emissions

■ Short-Term responses – Coal-fired unit loads are reduced during periods of poor air quality and the dispatching of gas-fired units is prioritized

One example of Taipower's environmental commitment can be found in its reduction of coal use. Since November 2017, coal-fired thermal power plants have undertaken environmental load reductions, when system supply is secure. Reductions include both voluntary and autonomous actions. The cumulative frequency of load reductions reached 1,690 times by the end of December 2023, with a total load reduction of 74,729.21 GWh.

Principles for Load Reductions in Response to Air Pollution Levels

Reduction Action	Criteria for Taking Action	Action Planning
Voluntary Load Reductions	The Ministry of Environment's Taiwan Air Quality Monitoring Network releases a daily air quality index (AQI) forecast at 4:30 p.m. for each air quality area. Reductions can take place if any area reaches a level one warning (red) or above (AQI>150).	If the power supply is assessed to be safe, coal-fired power plants located upwind of the affected air quality area will reduce their loads in advance during the off-peak hours at night (such as 12 midnight to 7 a.m.).
Autonomous Load Reductions	Autonomous load reductions can be triggered when the AQI readings for of one third of stations in an air quality area reach level one or above (red) on the Ministry of Environment's real-time Taiwan Air Quality Monitoring Network.	If the power supply is secure, coal-fired, or oil-fired power plants in the air quality area are assigned to reduce loads.
Mandatory Load Reductions	When the air quality reaches serious deterioration levels (AQI > 200, 300, 400).	The emission reductions of each power plant must be in accordance with the Emergency Control Regulations for the Serious Deterioration of Air Quality. The actual reduction must reach 10%, 20%, or 40% of the daily permitted emissions.

Load Reductions in 2023

Load Reduction Action	Frequency of Load Reductions (Times)	Reduced Load Amounts (10 MWh)		
		Annual Overhauls (Maintenance)	Non-Annual Overhauls (Maintenance)	Total
Voluntary Load Reductions	1,664	766,036	1,242,429	2,008,465
Autonomous Load Reductions	26	8,020	12,932	20,952
Mandatory Load Reductions	0	0	0	0
Total	1,690	774,056	1,255,361	2,029,417

■ Mid-Term approach – Compile an inventory, update and improve existing control equipment, and plan the installation of high efficiency air pollution control equipment

Taipower has taken an inventory and subsequently carried out the renewal and improvement of existing control equipment. Additionally, the Company plans to install high-efficiency air pollution control equipment, and to enhance the removal efficiency of control equipment as much as possible through operational practices.

Taipower will introduce more advanced and efficient air pollution prevention and control equipment, install equipment in new power plants and renew equipment in existing plants to effectively reduce emissions. It will also set up automatic continuous monitoring equipment so that flue gas emissions can be effectively monitored by all sectors. Taipower also plans to invest a total of NT$69.229 billion from 2017 to 2025 to implement a total of 9 air pollution improvement projects at thermal power plants. As of the end of 2023, 7 projects have been completed and the remaining 2 projects are in progress. They include the improvement and upgrading of the air pollution control equipment for units #5-#10 of the Taichung Power Plant and the construction of a second indoor coal bunker. These projects are expected to be completed in 2024 and 2025, respectively. After all the planned improvements are completed, the Company expects PM reductions of 398 metric tons, SOx reductions of 7,118 metric tons, and NOx reductions of 15,460 metric tons.

■ Long-Term approach – A Power Source Shift from "Primarily Coal with Gas as Support" to "Primarily Gas with Coal as Support"

The proportion of renewable energy has been increased in line with the national energy policy. In addition, Taipower has adjusted the focus of its thermal generation structure from primarily coal with gas as support to primarily gas with coal as support. According to the power development plan, all thermal plants, with the exception of the ultra-supercritical coal fired units at Linkou and Dalin, will operate gas-fired units. Additional gas-fired units are being added at the Hsiehho, Tunghsiao, Tatan, Taichung, and Hsinta plants. These measures will ensure both improved air quality and a stable power supply. After the new gas-fired units at the Taichung and Hsinta plants are completed and begin commercial operation, some of the existing coal-fired units will be decommissioned or converted to a standby role, which will have a further positive effect on maintaining air quality.

The Management of Mobile Emission Sources

According to Environmental Protection Administration (EPA) analysis, diesel trucks account for the largest proportion of emissions from among the various kinds of mobile pollution sources. This has led Taipower to make an inventory of its large diesel vehicles that meet phase one and phase two environmental protection standards. The Company is also cooperating with the EPA to replace older vehicles. It is estimated that 67 kg of PM2.5 emissions will be eliminated for each old large diesel vehicle removed from service. Additionally, large diesel vehicles that meet phase three standards are equipped with exhaust filters to reduce pollution. It is expected that this will reduce PM2.5 emissions by about 10 kg per year for each phase three diesel vehicle.

The Management of Fugitive Emission Sources

Taipower's emission sources primarily consist of coal mines and construction sites. In addition to complying with the Management Regulations for Construction Project Air Pollution Control Facilities promulgated by the Ministry of Environment. Taipower has also formulated Promotion and Management Guidelines on Environmentally Friendly Measures for Green Construction Sites and Guidelines for Fines Imposed on Contractors for Violating Environmental Protection Clauses in Contracts. Taipower incorporates the above standards into its contracts based on the characteristics and needs of individual cases, and requires contractors to perform in accordance with their contracts in order to reduce fugitive emissions from construction projects.

The Tunghsiao Power Plant

3.2.2 Improving Water Resource Use Efficiency

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Water Resources Management

Taipower closely tracks the Ministry of Environment's wastewater discharge standards and follows the progress of amendments to relevant laws and regulations, in order to remain in compliance. Each power plant follows the ISO 14001 management system when collecting and identifying regulations, and conducts regular compliance checks. For example, 24 new control items were added to the effluent standards for power plants at the end of 2017. New ammonia nitrogen control items were added in 2021, and control limits were tightened on the effluent of the flue gas desulfurization and for coal-fired units on mercury, arsenic, and selenium. In 2019, the Water Pollution Control Measures and Test Reporting Management Regulations were also amended, requiring periodic test reporting on wastewater according to the announced items and frequency. If power plants violate the effluent standards, they will be punished according to law. Power plants formulate related plans for the risks that may arise from amendments to laws and regulations, such as increasing the frequency of testing and decreasing pollution emissions at source by process control. In the long-term, Taipower will optimize or evaluate the need for additional treatment equipment to improve wastewater treatment efficiency.

Power Plant	Water Consumption for Generation at Taipower's Thermal Power Plants in 2023 (Unit: m^3)		
	Volume of Tap Water	Volume of Desalinated Water	Total
Hsieh-ho	259,966	3,948	263,914
Linkou	547,049	0	547,049
Tatan	468,965	0	468,965
Tunghsiao	611,181	0	611,181
Taichung	4,022,245	0	4,022,245
Hsinta	1,993,485	0	1,993,485
Dalin	143,397	267,440	410,837
Nanbu	105,245	0	105,245
Jinshan	0	44,002	44,002
Tashan	0	21,896	21,896
Total	**8,151,533**	**337,286**	**8,488,819**

Taipower Water Consumption Statistics from 2022 to 2023

TYPES		UNIT	2022	2023
Total water consumed	Thermal Power	m^3	9,503,885	8,488,819
	Nuclear Power	10,000 tons	3.65	24.11
Water Intensity	Thermal Power	ton /GWh	58.82	52.17
	Nuclear Power	ton /NT$ millions	3.36	4.06

Wastewater Reuse

Taipower upholds the concept of water conservation to become friendlier to the environment and reduce water use. Taipower utilizes rainwater collection (including power plants and dormitories) and wastewater reuse projects to reduce the use of tap water inside power plants through comprehensive planning. For many years, Taipower's thermal power plants have implemented measures for rainwater reclamation and wastewater reuse. The main uses of the recycled water are green irrigation, furnace bottom sealing, bottom ash water, and dust suppression for coal piles in coal yards. These measures have become normal water use principles for thermal power plants. Taipower records the daily usage of demineralized water in unit operations. If there is any abnormality, Taipower investigates immediately, and implements water conservation. The Company encourages employees to sincerely cherish water resources and develop habits for water conservation. In addition, advanced wastewater treatment equipment has been included in future new unit development plans, striving to pursue the goal of "zero discharge of wastewater", thereby gradually increasing the recycling and reuse of wastewater at thermal power plants.

Reclaimed and Reused Wastewater in Thermal Power Plants from 2021 to 2023

Unit: tons

	2021	2022	2023
Reuse of Rainwater	115,476	61,292.7	50,513
Reuse of Effluent and Wastewater from Processes and Boiler Blowdowns	2,436,777	2,385,843	2,037,828

Note: Flue gas desulfurization (FGD) wastewater is not reused as it contains a high salt content, which is likely to cause equipment corrosion and soil salinization. As such it is not included in the calculation of wastewater volumes

3.2.3 Waste Management 306

Taipower has taken mitigation and improvement measures to minimize the impact of waste generated at the various stages of power generation, transmission, distribution, and sale. The following outlines the measures exercised for each type of power generation.

Mitigation and improvement measures for major waste generated by each power generation type

Type	Main Waste	Environmental Impact of Waste	Materiality Narrative	Mitigation and Improvement Measures
Thermal Power	Wastes and by-products are generated after fuel use, and include coal ash (fly and bottom ash) and desulfurized gypsum.	Coal ash (fly and bottom ash) is the industrial waste generated after fuel combustion. Improper storage may affect air quality and human health and can also have an impact on nearby ecosystems.	Thermal power (including gas and coal) accounts for approximately 78.5% of Taipower's total generated and purchased power. As such, industrial waste and by-products produced after fuel use must be disposed of properly.	1.Taipower has formulated an air pollution management strategy for thermal power plants. For example, coal-fired thermal power plants are equipped with dust collection equipment to remove particulate pollutants in their smokers, and flue gas desulfurization equipment is installed to remove sulfur oxides from flue gas and to improve air quality. 2.Sulfur oxides combined with a limestone slurry produce desulfurized gypsum ($CaSO_4 + 2H_2O$) through chemical reactions such as absorption, neutralization, oxidation, and crystallization. This can be reused in the cement and fireproof board industries.
Nuclear Power	Main wastes can be divided into either high or low-level radioactivity categories. Low-level radioactive wastes include radioactive waste resins, waste liquids, residues, radiation protection clothing, and parts that are generated during regular operations, equipment maintenance, or improvement projects at the nuclear power plant. High-level radioactive waste refers to the used nuclear fuel withdrawn after the operation of the nuclear power plant.	Radioactive material has a long half-life. If it is handled carelessly, it may affect human health and pollute the surrounding environment's soil and water resources.	If radioactive waste is improperly disposed of, the degree of harm and the scope of its impact could be enormous. Moreover, because radioactive materials have a long half-life, the impact time may last for tens or hundreds of years.	Taipower actively handles, disposes, and manages radioactive waste appropriately to effectively isolate it from the environment. Please refer to the Waste Management Mechanism section to learn more about Taipower's plans for high and low-level radioactive wastes.
Hydropower	Decommissioned units and equipment.	There is no waste produced during the power generation process, and the product life cycle of units and equipment is relatively long, resulting in low environmental impact.	The power generation processes of hydro, wind, and solar power units rely on natural resources, and unit life cycles are lengthy, so there is no materiality at present.	Regarding renewable energy equipment that may be decommissioned, Taipower will entrust a compliant disposal company to carry out waste cleaning and transportation and will evaluate the reuse of resources to minimize environmental impact.
Wind Power				
Solar Power				

The accumulation of coal ash also has potential hazards. Consequently, Taipower takes steps to control ash levels effectively. Fly ash is measured at the angle of repose of the full silo, and the load combination is carried out by considering wind force, seismic force, soil transverse force, silo wall ring stress, temperature stress, and other factors. The Company also considers extreme situations, such as an empty silo with a full silo adjacent to it, by analyzing and confirming that the bearing force, deflection, displacement, subsidence, angular variables, and other items are sufficient to minimize potential hazards. Coal ash accumulation is classified according to the degree of potential hazard as follows:

Diameter, Height, and Level of Fly Ash at Coal-fired Power Plants

Power Plant	Linkou	Taichung	Talin	Hsinta
Number of Silos	2	10	2	4
Diameter (m)	16.5	12~15	16	17
Height (m)	36	20	26.6	24
Control Ash Level (m)	28	10	22	20

Business Waste Management Mechanisms

Taipower's on-site units handle waste generation, storage, removal, and online reporting operation procedures in accordance with the relevant provisions of the Waste Disposal Act. In addition to properly classifying and storing waste in accordance with the Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste, qualified vendors are commissioned for removal and disposal according to the regulations. Information on waste is reported online for management using a triplicate form when leaving the factory, and the whereabouts of waste is tracked in accordance with the Regulations Governing Determination of Reasonable Due Care Obligations of Enterprises Commissioning Waste Clearance. Both the unit and the contracted waste removal company are jointly responsible for avoiding illegal disposal. For nuclear energy-related waste, Taipower has short, medium, and long-term planning schemes in accordance with its responsibilities for the treatment, storage, and disposal of high and low-level radioactive waste.

Nuclear Energy-Related Waste Disposal Methods

	Short-Term	Medium-Term	Long-Term
Storage and Disposal Processes for Low-Level Radioactive Waste	Before 1996, waste was sent to the Lanyu low-level radioactive storage yard for temporary storage. Since 1996, it has been temporarily stored in low-level radioactive storage depots at power plants.	A temporary storage facility is planned for the medium term and material will be transported to the facility for storage.	Transportation from short-term or mid-term temporary storage facilities to a final disposal site.
Storage and Disposal Processes for Used Nuclear Fuel	In keeping with international norms, used nuclear fuel is stored in a dry storage facility after temporary storage in a used nuclear fuel pool.		

Utilization of Industrial Waste

Reuse of Coal and Desulfurized Gypsum in 2023

Waste	Reuse Practice	2023 Production	2023 Reuse Volume	2023 Reuse Ratio
Coal Ash	Taipower has encouraged its engineering units to use fly ash in civil construction projects and for filling trenches. This raises the volume and utilization rate of fly ash and reduces the environmental burden. Coal ash is also sold for use as a building material.	2.089 million tons	1.981 million tons	94.8%
Desulfurized Gypsum	Desulfurized gypsum is used by local cement and fire-retardant board makers.	0.273 million tons	0.273 million tons	100%

Sale of Industrial Waste

Other waste generated during Taipower's operations, such as waste cables and metal waste, is disposed of through public bidding. In accordance with the regulations of the competent authority, qualified vendors are commissioned for removal and disposal according to regulations. Information on waste is reported online for management using a triplicate form when leaving the factory. In accordance with the Regulations Governing Determination of Reasonable Due Care Obligations of Enterprises Commissioning Waste Clearance, units must bear joint and several responsibilities with the commissioned waste disposal company to avoid illegal disposal.

Taipower handles centralized bidding for waste cables and wires from each branch office to reduce the risk of environmental impact caused by the improper disposal of industrial waste. Taipower signs contracts for the sale of reusable steel reels from branch offices to cable and wire suppliers, which can be reused in the next delivery, thereby establishing material recycling and a circular economy mechanism to reduce the waste of resources. Taipower also continues to auction scrapped items online to reduce the generation of business waste, thereby reducing the impact on the environment and fulfilling the corporate responsibility of being eco-friendly and protecting the ecosystem.

Sales Volumes and Amounts for Taipower's Industrial Waste from 2021 to 2023

Item	2021	2022	2023
Coal Ash Output (10,000 tons)	234	217.8	208.9
Volume of Scrap Cable and Other Metal (1,000 tons)	10.758	10.097	8.621
Value of Scrap Cable and Other Metal ($100 million)	18.345	16.427	15.03

3.3 Creating a Circular Business Model

3.3.1 Practicing Circular Economics

Taipower has completed research on circular economies, and continues to take inventory of potential materials based on energy and resource inputs and outputs of the power industry value chains for generation, transmission, supply, and distribution. Taipower continues to implement circular economy action plans based on the Circular Economy Strategy Blueprint for subsequent planning and implementation. In the future, the Company will continue to update the implementation strategies of the blueprint on a rolling basis, and to create circular economy action plans to facilitate subsequent implementation. To facilitate the implementation of circular construction, Taipower released the Taipower Circular Construction Implementation Guidelines in 2023. After implementing the guidelines on a trial basis, feedback from each unit will be collected for review and inclusion in guideline updates. Taipower will also continue to evaluate the feasibility of buildings as candidates for circular construction. Broadly, the Company has taken the following specific measures to improve resource efficiency and reduce its environmental impact in 2023:

Research, Development and Promotion of Coal Ash Reuse and Recycling

Taipower's coal ash output in 2023 reached approximately 2.089 million tons. In response to the government's promotion of resource recycling and reuse, the Company has actively invested in R&D and promoted coal ash reuse technology over the years. It has also reinforced coal ash production management. Moreover, coal ash from coal-fired thermal power plants can be used to partially replace cement as a concrete cementing material, so most of the Company's coal ash is sold for external reuse as a building material. The process has become an excellent example of waste resource recycling.

Implementation of Circular Construction

In light of the significant power infrastructure and volume of equipment that Taipower has, if the concept of "circular construction" can be introduced in early design, procurement, construction, operation, and even decommissioning, it will not only improve the efficiency of energy and resource use, but also reduce construction waste, which is key to realizing a circular economy. To facilitate the transition to circular construction, Taipower held a Workshop on Circular Construction Benchmarking in October 2022. Through a combination of workshops and on-site visits trainees are inspired to come up with ideas for promoting circular construction at future facility sites. Additionally, Taipower held a Seminar on Circular and Sustainable Construction Projects in August 2023. The program strengthened the concept of circular construction among employees, built consensus, and led to the development of Taipower Circular Construction Implementation Guidelines that facilitate the introduction and practical application of circular construction concepts, and will therefore help Taipower plan and implement circular construction practices.

Promote facility upgrades, innovate and develop alternative materials for cross arms

3.3.2 Creating Ecological Inclusiveness

Taipower is committed to minimizing its negative impact on the surrounding environment during its operations while maximizing its positive influence on society and the environment. In addition to carrying out community activities in the vicinity of its power plants, such as beach cleanups, fish fry releases, green space adoptions, and formulating ecological inclusiveness projects, Taipower continues to promote environmental education and to carefully evaluate environmental factors before power plant expansions or the addition of units. Moreover, Taipower conducts in-depth communications with local stakeholders to ensure legality and compliance and to achieve win-win situations for society, the environment, and the Company.

Taipower carries out fish fry releases in the marine areas adjacent to thermal power plants and offshore wind farms. A total of six releases were held in 2023, including activities in the waters near the Taichung, Tatan, Linkou, Hsinta, and Tunghsiao plants, as well as at offshore wind facilities. A total of about 1.6 million fry were released. Taipower has also invested funds in coral restoration, established heat-resistant coral nurseries in response to climate change, improved coral transplantation technology, and developed off-site coral cultivation. In the future, Taipower will continue to build and develop sustainable and friendly ecological power sites with the vision of realizing one program per power plant.

Ecological Field Execution Sequence Planning

Taixi Wind Power Plant Bat Nesting Boxes

The Taixi Land-based Wind Power Project is Taipower's first ecological integration project. Taipower has set up four wind turbines in the windbreak forest along the north embankment of reclaimed land in Taixi, Yunlin County. During the background investigation in the environmental impact assessment stage, over 600 bats were discovered in the areas surrounding the wind turbine site. These included Pipistrellus abramus, Scotophilus kuhlii, Miniopterus fuliginosus, and Myotis formosus. Taipower subsequently referenced foreign case studies and set up bat nesting boxes on electric poles along roads in the surrounding area and in the southern windbreaks. This created an ecological corridor for bats and implemented the ecological conservation concept of habitat compensation as bats were gradually guided to nest in the windbreaks and away from wind turbines, thereby reducing the impact of power development on bats. The Taixi Wind Power Plant uses the "Green Pearl of Ecological Conservation on the West Coast" as its blueprint for tracking the progressive migration bats to nesting boxes, deepening local partnerships to shape Taipower's positive image, and preserving bat ecology and stable wind power generation – in short, realizing an effective ecological integration.

Hsinta Power Plant's Yongan Wetland

The Yongan Wetland was originally the Wushulin Salt Field built during the Japanese colonial period. In 1984, as the salt industry went through a transformation and the property rights were transferred to Taipower for power development. In addition to retaining the county-designated Wushulin Salt Co., Ltd. historic site, Taipower tried to reduce development in the area and to avoid bird habitats when undertaking necessary development. The Company also planned a 41.25-hectare wetland reserve, a 15-hectare ecological buffer zone, a green belt, and a conservation area, thereby reserving two-thirds of the area as environmental protection land. As of 2020, the construction of new gas-fired combined cycle units at the Hsinta Power Plant had started. In addition to using eco-friendly construction methods, the total power generation capacity was 3.9 GW. Upon completion, the units will provide high-quality low-carbon electricity. The Hsinta Power Plant will use the "Coastal Wetland Ecological Corridor Bird Paradise" as its blueprint for preserving the flood prevention and bird diversity functions of the Yongan Wetland, and in carrying out in-depth and sustainable cooperation with communities to eliminate invasive species and restore habitats, gradually implementing ecological protection actions when building power plants, and cooperating with partners to promote and strengthen environmental education.

Dajia River Power Plant and Ma'an Ecological Park

The Dajia River Power Plant will continue to improve its ecological integration with the "Central Taiwan Blue Ribbon River of Life" as its blueprint for conducting environmental education site certification management and cooperation with NGO volunteers, fish way optimization and improvement of the overall environmental education system of viewing windows, strengthening partnerships in promoting ecological engineering lectures, and developing power plant cultural creativity to participate in international promotional activities.

Cholan Power Plant

The Cholan Power Plant conducted an ecological survey of the plant area in 2022. It will use the "Sweet shallow mountain corridor on the west side of the Central Mountain Range" as its blueprint for taking inventory of ecological resources and identifying habitats of indicator species, pursuing sustainable management of eco-friendly facilities and measures for water conservation by the power plant, gradually developing an ecological corridor environmental education site, and establishing stable partnerships to jointly protect the shallow mountain ecosystem.

Wanda Power Plant

The Wanda Power Plant Environmental Education Station was completed and opened in 2014. Taipower converted an old post office building next to the plant into an environmental education station, thereby creating Taiwan's first ecological green electricity environmental education facility. The station provides detailed introductions to the culture and rich natural ecology of flora and fauna around the Wanda Power Plant, along with the principles of hydropower generation, and the Plants efforts at species restoration. It passed the environmental education facility site certification in 2017 and won the Excellence Award at the National Environmental Education Awards competition in 2018.

4 Leader of Smart Grid Development

Suitable for the following stakeholders: the Board of Directors, Government Agencies, Elected Representatives, Media, and Users

Development Vision

Technology is changing our world at an astonishing pace. The wave of artificial intelligence (AI), rapid changes in information and communications technology (ICT), breakthroughs and innovations in big data, blockchain, and cloud technology have all overturned the business models of the past and revolutionized many industrial applications. Taipower is committed to using research and innovation to propel the development of low-carbon electric power. The Company actively invests in smart grid deployment, introduces new technologies, improves its management efficiency, and increases its operational effectiveness. It has also applied itself to meeting the important infrastructural demands of renewable energy.

Taipower is in alignment with the government's policies and plans. In the short term, the Company is focused on enhancing operational flexibility, developing a stable power supply network with a high proportion of renewable energy, and strengthening its flexible dispatching capabilities for grid supply, demand, and outages. In the medium term (by 2025), the Company will be focused on reinforcing grid resilience and establishing a safe and highly adaptable grid that can respond to climate change. In the long term (by 2030), Taipower will have implemented reforms in the electricity industry, increased the prevalence of low-carbon energy, devoted itself to the development of a safe and reliable grid, and propelled open and transparent information and fair market transactions.

Performance Highlights

- By the end of 2023, there had been more than 2.707 million AMI installations encapsulating 79.2% of the nation's power use information.
- Ranked 2nd in the world by the Smart Grid Index (SGI) of Singapore's SP Group in 2023.
- In 2023, the real-time monitorable capacity of renewables reach ed 6.3 GW.
- A total of 170 kilometers of optical cables, 62 sets of fiber optic communication systems, and 2,904 communication circuits were deployed.

4.1 Strengthening the Smart Grid

4.1.1 The Smart Grid Action Plan

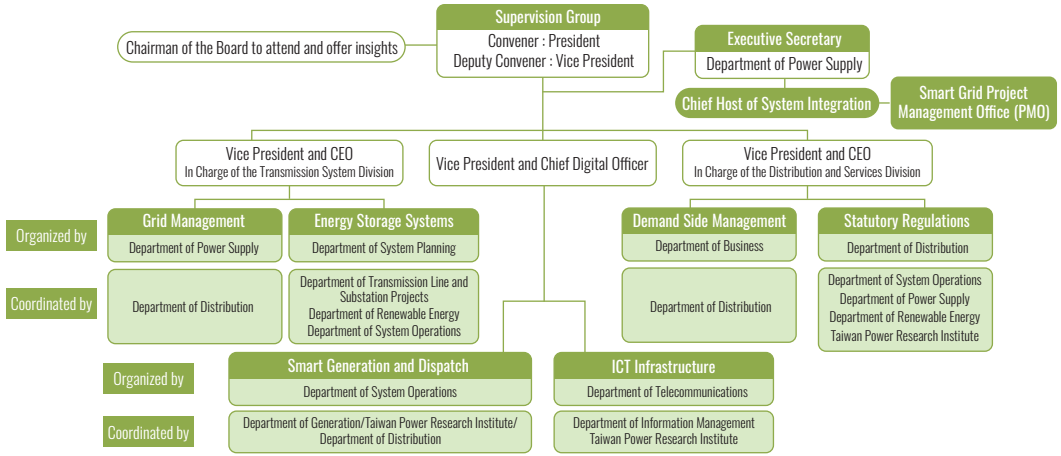
Smart grids are vital to driving energy transition, leading industrial transformation and new economic development. Taipower is proactively reducing the impact of renewable energy generation's intermittency by enhancing grid resilience, and strengthening and consolidating power transmission and distribution systems. Additionally, the Company is committed to improving disaster prevention and troubleshooting capabilities while increasing the system's supply and demand performance, incorporating load management methods and enhancing user participation opportunities through progressively building a stable and effective smart grid.

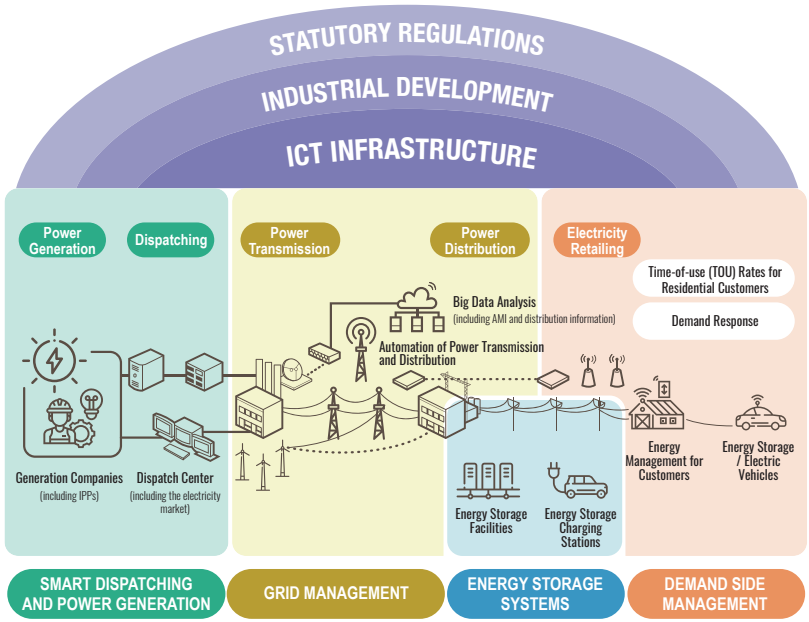
In developing the smart grid, the priority objectives are: (1) responding to the challenges of renewable energy grid connections, (2) strengthening the resilience of existing grids to enhance power supply quality in the face of extreme climate, and (3) encouraging user participation in energy conservation to improve power system operating efficiency. In response to the broader Smart Grid General Plan, Taipower formed an internal Smart Grid Task Force with the Company's President as convener. Regular meetings with relevant units are held to review projects, execution status, and future planning directions.

Smart Grid Action Plan

On March 27, 2020, Taipower began to carry out smart grid construction in accordance with The Smart Grid Master Plan as approved and amended by the Executive Yuan's Bureau of Energy. The plan is oriented towards problem-solving and system integration, and is divided into 7 key strategic areas, 21 specific practices, and 14 checkpoint objectives. Taipower is mainly responsible for six of those areas, along with 17 of the specific practices, and 13 of the checkpoint targets. The Company continuously implements and reviews its performance in these areas to strengthen its energy management and grid resilience.

Smart Grid Task Force





The Smart Grid General Planning Framework

Key Strategic Areas (7 items)	Specific Practices (21 items)
Smart Dispatching and Power Generation	• Establish a renewable energy generation monitoring system • Establish an energy trading platform • Establish a big data damage monitoring system for the boiler tubes of coal-fired units • Undertake ancillary service demand research
Grid Management	• Apply and promote transmission system data in planning, operations, and maintenance • Apply and promote feeder automation system data
Energy Storage Systems	• Construct an Energy Storage System at a Taipower site • Establish an ancillary service procurement mechanism
Demand Side Management	• Establish a low voltage Automated Meter Infrastructure (AMI) • Apply AMI data • Review electricity price structures and run trials on dynamic prices • Review and run trials on various demand response schemes
ICT Infrastructure	• Enhance security of the smart grid information program • Enact a smart grid data application plan • Establish an upgrade plan for backbone/regional fiber optics communication systems • Introduce an electrical IoT communication system to the plan
Industrial Development	• Expand product and system services (Industrial Development Bureau) • Drive enterprises to participate in the electricity market (Industrial Development Bureau)
Statutory Regulations	• Review current electricity-related regulations (Bureau of Standards, Metrology and Inspection) • Refine renewable generation system interconnection technology (Taipower) • Develop national standards for smart grids and establish an equipment testing platform (Bureau of Standards, Metrology and Inspection)

The Construction of a Smart Grid

Taipower is developing a smart grid in three stages: The first, Smart Grid 1.0, focused on infrastructure development. The second, Smart Grid 2.0, emphasizes practical operational models, and will ultimately lead the third stage, or Smart Grid 3.0, when the energy market opens up and the efficient integration of energy is achieved thereby enabling widespread applications. Currently, Taiwan is in the second stage of smart grid implementation, which emphasizes ensuring the stable operation of the power system, enhancing power supply quality, and encouraging user participation in energy conservation.

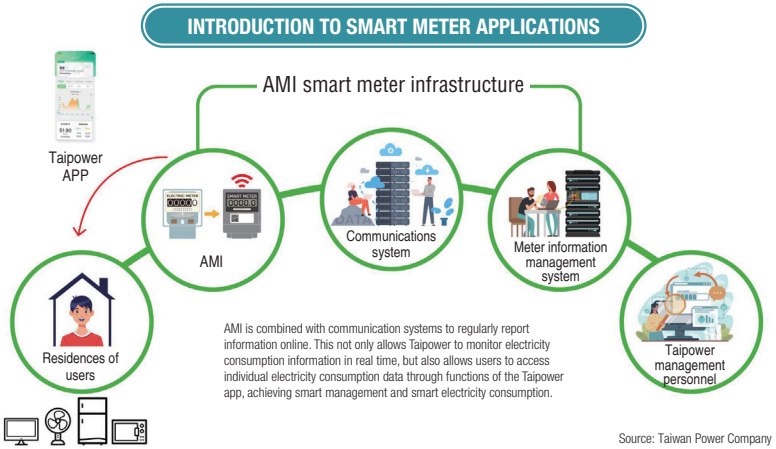
Since the proportional increase in renewable energy generation, there has been a significant system load discrepancy due to the integration of intermittent renewables into the grid. The success of this integration requires a more flexible grid and the ability to stabilize the power supply quality through flexible scheduling. Taipower utilizes advanced technologies such as 5G, AI, IoT, and blockchain to integrate distributed energy resources while pursuing power system optimization. Through the digital integration of power resources, Taipower aims to create a digital energy Internet with a smart grid at its core.

Strengthening Communication Infrastructure

Taipower utilizes innovative digital technologies to drive smart operations in line with the trends of digital transformation and is actively enhancing its communication infrastructure by constructing an Ultra-High-Speed IP Fiber-Optic Communication System with backbone/regional transmission capacity reaching 100G/10G. The completion of this system will greatly aid the Company in meeting the communication and transmission bandwidth requirements of future applications, such as the smart grid, 5G, AI, and IoT, and will ultimately strengthen the stability of the power supply. Taipower is currently planning an Optical Transport Network (OTN) in response to the high transmission bandwidth required by the big data platform of Taipower's future cloud data center.

To ensure a stable power grid and a reliable power supply, Taipower actively strengthened the communication systems at power plants, ultra-high-voltage substations, primary substations, secondary substations, distribution substations, and service centers in 2023. This includes laying 170 kilometers of optical cables, setting up 62 sets of transmission equipment, and providing 2,904 communication circuits for protection relays, dispatching lines and feeder automation systems. These will facilitate the effective operation, monitoring, protection, load balancing, and other related operations of the entire power grid.

In response to the large bandwidth required for digital transformation and the upward trend of communications, Taipower continues to build optical fiber communication systems to support the new communication needs of subsequent applications, such as AI and IoT.



Source: Taiwan Power Company

4.1.2 Smart Grid Applications

Vehicle-to-Grid (V2G) Technology

Taipower Partnered with Gogoro to Build the World's First Electric Scooter V2G Battery Exchange Station

As a result of the trends of energy transition, working to achieve net-zero-carbon emissions, and the increasingly widespread adoption of electric vehicles, the effective conversion of substantial electricity demand into power supply poses a significant challenge. To meet this challenge, Taipower, in addition to actively pursuing the development of renewable energy sources, is exploring innovative approaches beyond the conventional paradigm of large-scale power plant construction. By leveraging emerging technologies, Taipower aims to introduce diverse power sources. As part of this effort, Taipower collaborated with Gogoro, a prominent electric scooter manufacturer, to establish the world's first electric scooter battery swapping station featuring Vehicle-to-Grid (V2G) functionality in 2021. This pioneering initiative expands upon the internationally acclaimed battery swapping business model by incorporating the added capability of bidirectional power transmission. Consequently, it not only facilitates the creation of a decentralized energy storage virtual power plant but also fosters enhanced grid stability and cultivates novel business models for electricity trading, thus fostering a mutually beneficial future.

Electric vehicles have batteries that can be regarded as small energy storage units. The core concept is to use the available power of the batteries in electric vehicles combined with charging piles that have charging and discharging functions to send electric power back to the grid during peak hours, thereby relieving peak loads and establishing a controllable source of backup power. When a disaster occurs, the battery can also be transformed into emergency backup power source to provide key household facilities with electricity.

Developing Microgrid and Energy Storage Integration Technology

A "microgrid" combines power generation, energy storage and energy management. It can regulate the power flow when connected in parallel with utility power, and can also operate as an island by becoming self-sufficient when utility power is abnormal. The optimal power supply solution is based on the intensity of sunshine. When there is a power outage, the microgrid acts like a micro power supply system, which can be "self-sufficient" and is not affected by the external power outages. A disaster prevention microgrid is targeted at areas that are prone to become isolated when disasters occur. It uses solar photovoltaics, energy storage batteries, and diesel generators to provide power. Under the control of an energy management system, it can provide an independent power supply for more than 72 hours when a disaster occurs, maintaining basic life-saving electricity and provide local residents with safe shelter.

The first large-scale micro-grid on one of Taiwan's offshore islands formally began operating on Qimei, Penghu in 2018. Taipower implemented the Penghu Wangan Island Microgrid Construction Project in 2022. Taipower intends to install 430 kW of solar photovoltaic power generation, 30 kWh of wind power generation, 250kWh energy storage equipment, and a power management system to assist the diesel generators of Penghu's Wangan Power Plant. The system can achieve independent management of power generation, energy storage, parallel connection, and power supply, and increases the proportion of renewable energy used on offshore islands, thereby lowering the cost and carbon emissions of power generation, and moving towards the ideal of a low-carbon or even zero-carbon island.

The Plan to Develop Kinmen into a Low-Carbon Island

Taipower continues to promote smart grids and uses Kinmen as a smart, low-carbon demonstration island. To improve the stability of power supply in the Kinmen area, Taipower continues to build smart substations and strengthen the distribution automation system to significantly reduce the occurrence of power supply incidents. Smart meters have been installed for all users in the Kinmen. Current generators in Kinmen are more than able to meet demand with a current total installed capacity of approximately 113.3 MW. Since the current peak power demand in Kinmen is about 60 MW, and the future peak demand (in 2031) is expected to be about 65 MW, capacity is also sufficient to meet future needs. In the future, Taipower will continue to increase the green energy capacity of the area and will simultaneously strengthen the resilience of the power grid to continue improving the quality of the power supply.

Kinmen Xiaxing Energy Storage Case Site

Penghu Jianshan Power Plant

4.2 Enhancing the Green Energy Power Grid

4.2.1 Microgrid Promotion

In response to the government's energy independence policy and the development of related green energy applications, Taipower has planned energy storage systems in remote tribal areas and offshore islands, to demonstrate how energy storage equipment can help improve power supply capabilities, power stability, and disaster prevention in remote areas. At present, energy storage systems have been installed in 2 places including on Taitung's Lanyu Island and Penghu's Wangan Island.

The newly added energy storage systems are incorporated into the regional microgrid infrastructure. When the power supply of the upstream transmission system is unstable, the rapid charging and discharging capabilities of the energy storage systems are utilized along with solar panels and generators in the region to ensure a stable voltage source to meet regional load requirements. Taipower has planned regional microgrids at the county, city and township levels throughout Taiwan. The Company aims to complete systems in Taoyuan's Bengang, Miaoli's Xiaonan, Taichung's Guanlian, Yunlin's Yungang, Chiayi's Xinwen, Tainan's Nanhua, Kaohsiung's Meinong, and Pingtung's Xinwen areas during 2023 and 2024. The completion of these eight secondary substations (S/S) will effectively achieve the goal of installing microgrids at the township level.

Renewable Energy Grid Connection Policy

■ Increasing Offshore Wind Power Grid Connection Capacity

The sea area off the coast of Central Taiwan has excellent conditions for developing wind power. In coordination with the government's process for offshore wind power selection and bidding in 2020-2025 and the Phase One Zonal Development Policy for 2026-2031, Taipower took stock of the existing grid's approximately 3.5 GW capacity for grid connection. As this capacity was insufficient to support the connection demand, the Company undertook the strengthening of the power grid to increase the grid connection capacity by approximately 17 GW, to a total capacity is approximately 20.5 GW.

■ Increasing Solar Photovoltaic Grid Connection Capacity

The scorching sun in Central and Southern Taiwan is a precious natural resource. In the past, sunlight was an essential element in the development of the local salt industry. Today, the economic viability of salt has declined, but the sun continues to be essential in the development of solar photovoltaics. Taipower has planned 9 renewable energy substations and 10 power transmission and transformation lines to accommodate the growth of solar power. These projects will be completed between 2022 and 2025, and will add an additional 6.5 GW of grid connection capacity.

Integrating Regional Green Energy Planning for Direct Delivery to Power Consumption Centers

Taipower plans to build a new ultra-high voltage substation and 345kV ultra-high-voltage circuits in Liuke to supply green energy from solar photovoltaic sites to the Southern Taiwan Science Park. Taipower also plans to build a new ultra-high voltage substation and 345kV ultra-high voltage line in Beimiao, so that the green energy from the offshore wind farms of Central Taiwan can directly reach the Hsinchu Science Park. By setting up direct power supply to power consumption centers, the grid becomes more distributed.

The Luyuan Energy Storage System

4.2.2 Improving the Accuracy of Renewable Energy Generation Prediction

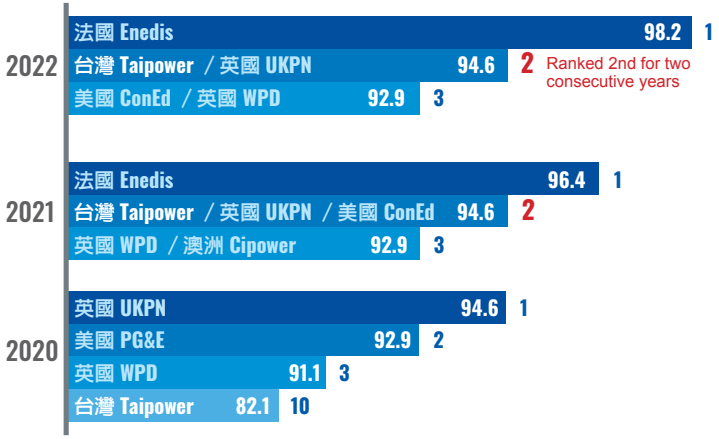
In response to energy transition and the adjustment of the power supply structure, it is necessary to transition and upgrade existing power grids and power generation equipment, so that the actual power generation of power plants can be monitored in real time. Since renewable energy generation is highly dependent on weather, the power supply it generates is not as stable as that provided by traditional power plants. Consequently, it is necessary to establish a robust monitoring system. Effective management and dispatching are also important issues in the development of a smart grid. Additionally, Taipower will introduce a real-time monitoring system for coal-fired units as equipment upgrades are made. This will help to reduce unit failure rates and shorten maintenance times that are necessary because of abnormal furnace tubes. In the future, smart dispatch and power generation will mainly be implemented with the goal of increasing efficiency of energy use, and efforts will be directed towards increasing the proportion of renewable energy that is connected to the grid while improving power plant efficiency and reliability. Distribution-level Renewable Energy Advanced Management Systems (DREAMS) and Automated Meter Infrastructure (AMI) will be integrated with projection and forecast information to facilitate the grid connection of enough renewable energy to constitute 20% of the energy supply. Taipower has formulated key work items to create an optimized Energy Management System (EMS). These include consolidating existing renewable energy generation and establishing an information management platform, an electricity trading platform, and a coal-fired unit big data monitoring system. This will entail a total investment of NT$1.742 billion.

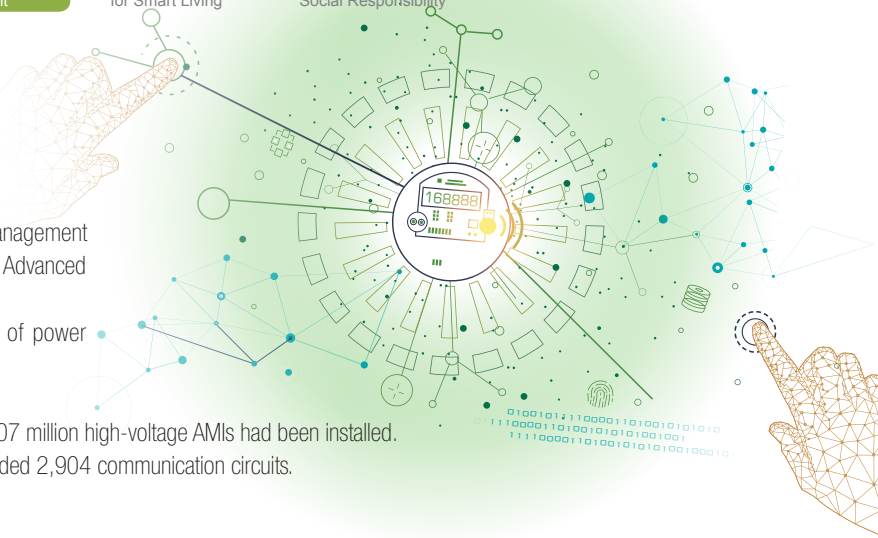
Taipower has also engaged in cross-border collaboration with Reactive Technologies Limited (RTL), a British innovative energy technology company, to undertake in a five-year, real-time power system inertia measurement project. The project will help improve the power system's real-time monitoring and prediction capabilities and strengthen power supply stability. Currently, a real-time measurement system for frequency change rates has been deployed at 10 sites including at Taipower's service centers in Northern, Central, and Southern Taiwan. The project is expected to go online next year along with new energy storage sites to measure real-time inertia.

The Smart Grid Index (SGI)

The Singaporean Smart Grid Index (SGI) is an international assessment of smart grid development. It evaluates the progress of power companies in implementing smart grid initiatives based on seven main themes: customer empowerment and satisfaction, cybersecurity, renewable energy, integration of distributed energy resources, power reliability, data analysis and monitoring, and control. The research covers the Asia-Pacific region, Europe, and the Americas. The report surveyed a total of 94 power companies from 39 countries worldwide. Enedis, a subsidiary of the French electricity holding group EDF, achieved the highest score of 98.2 and secured the top position. Taipower and UK Power Networks (UKPN) tied for second place with scores of 94.6. Taipower has consistently maintained its position on the list, outperforming other well-known Asian power companies from Japan and South Korea.

The Smart Grid Index (SGI) Rankings From 2020-2022





Smart Grid Performance in 2023

Taipower experienced several major achievements this year within the five fields under its purview. They are described as follows:

1. Smart Dispatch and Power Generation: The Company consolidated existing renewable energy generation and established an information management platform, created platforms for power market trading and coal-fired unit big data monitoring, and introduced a Distribution-level Renewable Energy Advanced Management System (DREAMS). A total of 6.3 GW of renewable energy was monitored in real-time in 2023.
2. Grid Management: Plan, operate, and maintain a transmission data system, and consolidate information to strengthen the management of power transmission and distribution assets. In 2023, the average failure time of transmission system equipment was 0.34 hours/year.
3. Energy Storage Systems: The capacity of energy storage systems reached 680.9 MW in 2023.
4. Demand-Side Management: Taipower is targeting potential power-saving users through its deployment of AMI. By the end of 2023, a total of 2.707 million high-voltage AMIs had been installed.
5. ICT Infrastructure: Completed the installation of 170 kilometers of optical cables, set up 62 sets of optical fiber communication systems, and provided 2,904 communication circuits.

Smart Grid Performance and Targets

Review Objectives		2024 Goals	2023 Performance	2025 Goals (Approved by the Executive Yuan)
1. Real-Time Monitorable Capacity of Renewables (GW)		9	6.3 (2.6 Wind and 3.7 Solar Photovoltaics)	16.5
2. Accuracy of Renewable Forecasts (Day-ahead / hour-ahead error rate %)	Wind Power	13/6.5	8.92/1.82	10/5
	Solar Photovoltaics	12/6	3.35/1.87	10/5
3. Ancillary Service Reserve (MW)	Regulation Reserve	1,000	1,005	1,300
	Real-Time Reserve	1,100	1,150	1,100
	Supplemental Reserve	1,100	1,196	1,100
4. Number of Electrical and Mechanical Accidents (Times/year)		16	2	15
5. Equivalent Unavailability Factor (EUF) of Coal-Fired Power Plants (Total hours of equivalent tube rupture outage)		Under 1.35% (Under 118 hours / unit / year)	0.00% (0 hours/unit/year)	1.2% (105 hours/unit/year)
6. Average Time for Transmission System Equipment Failures (Hours / year)		1.425	0.34	1.42
7. The Ratio (%) of Power Recovery Outages for Downstream Automated Feeders (within five minutes)		58%	56%	70%
8. Capacity of Energy Storage Systems (MW)		657 MW	680.9 MW	590 MW
9. AMI Smart Meter Infrastructure (cumulative number of households)		3 million households	2.707 million households	3 million households (2024)
10. AMI User Power Use Data Available Online for Inquiries (hours)		Within 5 hours	Within 5 hours	Within 4 hours(2 hours for TOU customers)
11. Participation in Demand Response Schemes (GW)		2.75 GW	3.0 GW	2.8 GW
12.Increase in Backbone/Regional Fiber Optic System Bandwidth (gigabits per second, Gbps)		Regional 10 Gbps optimization	• Network management system integrated testing and development of the entire IP-MPLS system (Phases 1 to 4) was completed in September 2023. • Procurement specifications for a next-generation optical transport network (OTN) were revised the based on reference materials provided by companies participating in the request for proposals.	Regional 10 Gbps(Completed in 2023)
13.Install the IDS		Completed the construction of 1 power distribution and dispatch center	8 sites have been constructed and included in SOC monitoring	Complete all dispatch centers(32 sites)
14.Smart Grid Output Value (Industrial Development Bureau)		Accumulated 368 billion(40.3 billion for the year)	Accumulated 339.3 billion (43.3 billion for the year)	Accumulated 400 billion(43 billion for the year)

Note: According to the "National Power Resource Supply and Demand Report for the Year 2022" published by the Energy Administration in July 2023, Taipower has set a target of installing 1,000 MW of energy storage batteries by 2025.

5 Provider of Services for Smart Living

Suitable for the following stakeholders: Board of Directors, Government Agencies, Elected Representatives, Media, and Users

Development Vision

With the goal of serving as Taiwan's provider of services for smart living, Taipower is working to make power services smarter and immediately accessible by introducing new 5G and AIoT technologies and equipment to meet user needs. At present, Taipower is pursuing both demand response and energy conservation as key elements of its demand side management. Demand response analyzes power supply data through smart meter deployment, so the electricity consumption of users can be better understood. This makes the match between power supply and demand more immediate, and effectively guides customers to use electricity through the time-of-use rates. Energy conservation efforts are principally aimed at avoiding the unnecessary waste of electricity. Taipower has implemented power-saving incentive measures and built multiple information transmission channels so that the public can participate in the work of energy conservation and carbon reduction. By creating an atmosphere of power saving, we hope to drive the collective effect of power saving by all people, so that the suppression of peak loads, energy saving and power saving will become a national movement and create a win-win situation for the power industry, customers and the environment.

Taipower continues to promote and refine its various demand response measures. In line with its deployment of smart meters, the Company will develop diverse demand response solutions to help reduce net nighttime loads and combine the automatic demand response solutions of smart home appliances and energy management systems with real-time prices that dynamically reflect the power supply situation and encourage users to manage electricity consumption more flexibly. Demand response uses monthly operation planning, day-ahead economic scheduling, same-day economic dispatch, and less than 15 minutes and other diversified ways of providing flexibility to adjust power system dispatching. As efforts continue, the demand response participation target is expected to reach 3.0 GW by 2030.

Performance Highlights

- Implemented Time-of-Use (TOU) rates to stimulate the management of public power consumption, and cumulatively suppressing the peak load by 1.23 GW in 2023.
- Promoted demand bidding and bolstered user participation to suppress peak loads and implemented demand-response load management measures on the highest load days throughout 2023 and effectively reduced peak loads by 1.17 GW.
- Provided communities and associations with power-saving advocacy services. A total of 1,449 sessions were held in 2023, attracting 160,000 participants.
- In 2023, Taipower's 1911 customer service hotline received more than 1.724 million calls. The proportion of calls that were answered within 20 seconds was 98.33%.
- In 2023, a total of 5,677 cases were received through the user suggestion box and 4,609 dedicated services were provided for corporate customers.
- In 2023, there were 5,329 participants in the “Power-Saving Reward Points” Power Saving Day Challenge on Taipower's app. The program led to 2,811 instances of electricity saving, and a total of 1,675.09 kWh of electricity were saved.

5.1 Implementing Digital Transformation

5.1.1 Demand Side Management Measures 3-3 203-2 302-5

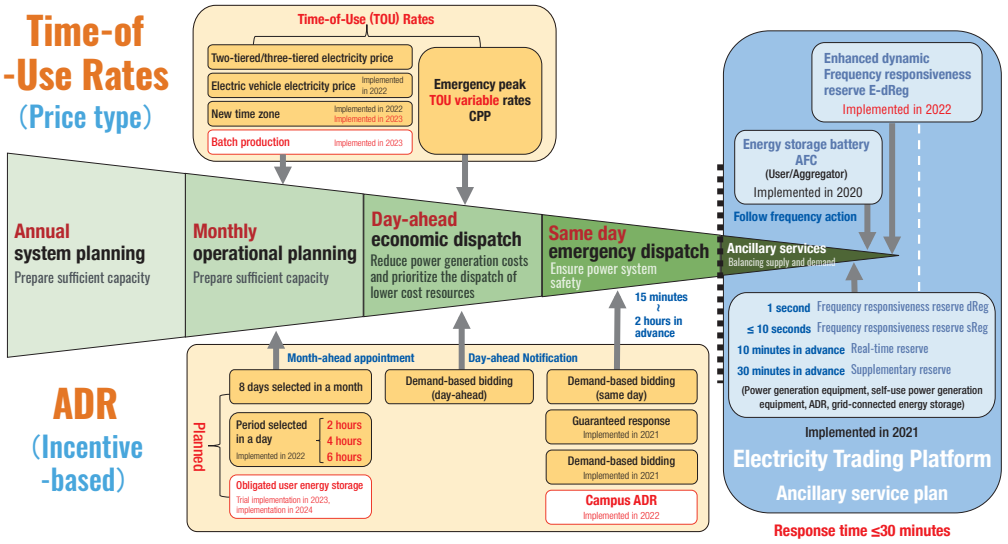
Material Topics: Demand-side Management and Energy Conservation

Policy	Taipower actively implements electricity demand-side management, through implementing various Automated Demand Response (ADR) load management measures, offering diverse Time-of-Use (TOU) rates, organizing energy-saving incentive activities, and organizing various energy-saving promotions that guide users to manage electricity consumption and achieve a win-win situation for the electricity industry, the environment and the broader public.
Management Approach	Implement ADR and energy saving through various ADR load management measures, implementation of diverse TOU rates, adjustment and implementation of new TOU plans on a trial basis, and the organization of energy-saving incentive activities and promotions.
Action Plans	❶ Utilization of ADR. ❷ Power Saving Rewards Performance.
Actual Performance in 2023	❶ Utilization of ADR: In 2023, ADR covered 2.7 GW of power. The actual performance value was calculated from the highest monthly participation in ADR measures and ancillary services (in December), and was found to be at 3.01 GW. ❷ Power Saving Rewards Performance: Electricity consumption was reduced by 1,810 GWh.
Targets in 2030	Participation in ADR will reach 3 GW.

According to Article 47, paragraph 4 of the Electricity Act, the Electricity Retailing Enterprise shall draft an annual incentive program that encourages and assists users to save electricity. The plan will be submitted to the electricity industry regulatory authority for review. Taipower focuses on demand-side management, with demand response and energy conservation as its two main driving directions. The Company seeks to create an energy-saving atmosphere, promote demand response, and encourage energy-saving practices among the general population. By generating a collective drive for energy conservation, it is hoped that peak loads will be reduced and energy efficiency will be promoted as a nationwide movement. This will drive changes in societal behavior, and encourage the active participation of the entire population in energy conservation and in carbon reduction efforts.

Automated Demand Response (ADR)

Taipower has been implementing Automated Demand Response (ADR) load management measures since 1987, and provides incentives to encourage users to cooperate in reducing peak power consumption, or to shift peak power consumption to off-peak hours, including pre-agreed load reduction periods (8 days selected in a month or periods selected in a day). The Company also takes immediately action to reduce loads when power supply is near capacity (guaranteed response, flexible response), and offers demand bidding measures (economic, reliable, combined) so that users can determine a preferential prices through bidding. Additionally, campus air conditioners



are subject to an automatic demand response and combined with energy management systems that assist schools in smart energy saving.

Time-of-Use Rates

Time-of-Use (TOU) rates are different rates set for different periods of time. They reflect different power supply costs at different times, and guides users to reduce peak electricity consumption or shift electricity consumption to off-peak periods. Taipower has now used TOU rates for more than 40 years since they were first employed in 1979. At present, there are a total of 16 TOU rates, and all kinds of customers have TOU rates they can choose from. Among them, TOU rates have been fully applied to high-voltage users since 1989, while low-voltage users are free to choose whether they want to participate or not. In line with the deployment and application of AMI, Taipower introduced Residential and Commercial Simple Time-of-Use (TOU) Rates in 2016. In May 2021, the Company further launched Standard Three-Tiered TOU Rates for Lighting and Three-Tiered TOU Rates for Low-Voltage Electricity users to provide multiple options. In May 2022, Taipower introduced Electric Vehicle Charging and Swapping Facility Pricing to cater to the growing demand for electric vehicles. Together, these pricing plans offer users a diverse range of choices.

Power Consumption Category	Total Customers (Households)	TOU Customers (Households)	Ratio (%)
Meter-rated lighting for non-businesses	13,760,167	76,382	0.56%
Meter-rated lighting for businesses	1,047,257	136,982	13.08%
Low-voltage electricity users	309,329	39,810	12.87%
High-voltage electricity users	24,913	24,913	100.00%
Ultra-high-voltage electricity users	701	701	100.00%
Total	15,142,367	278,788	1.86[note]

Note: 1. If only potential customers (i.e., those using >800 kWh per month for residential and >1,600 kWh per month for small stores) are considered, time tariffs account for about 22% of the total number of customers.

2. With the exception of contracted light and contracted power (which are billed on a capacity basis without seasonality), the rest of the electricity tariff is applied seasonally. The proportion of users affected is 99%.

The increasing use of renewable energy has led to changes in the peak and off-peak hours within the power system. Correspondingly, Taipower has adjusted the pricing signals for peak and off-peak periods, so that users can electricity consumption during nighttime peak hours. Additionally, co-generation plants can be called upon to generate electricity during peak hours at night. These altered measures were officially implemented in 2023 and a summary of the new structure is as follows:

1. Implemented New Periods for TOU Rates	2. Expanded the Summer Electricity Price Period for High-Voltage Users	3. Introduced TOU Rates for Batch Production
The peak and off-peak hours of TOU rates were officially adjusted in January 2023 to provide correct electricity price signals that guide users to shift or reduce electricity consumption during peak hours at night. Since its implementation, over 1 GW of peak electricity consumption has been shifted during summer nights, which is equal to the power generation of two thermal power units.	Starting from January 2023, the electricity prices for non-summer months will be reduced, and the period of higher electricity prices for high-voltage users during summer months will be extended by one month. The price difference between summer months and non-summer months will guide major electricity users to adjust their production schedules and increase electricity savings.	Time-of-Use rates for batch production were offered in November 2023. Based on their own electricity consumption patterns, users could select the most advantageous rate. According to statistics, as of the end of 2023, 290 users had selected TOU rates and the shift in peak electricity consumption at night reached 77 MW.

Demand Side Management Measures

Measure		Description	Applicable Customers	Results
TOU Rates	TOU rates have been used since 1979	The rates reflect the cost of electricity during different periods and encourage off-peak electricity use to reduce energy consumption during peak hours.	Optional for meter-rated lighting and low-voltage customers; applicable to all high-voltage customers	Recent evaluation indicates 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 with 2021.
	Launched Simplified Residential/Commercial TOU rates in 2016	Provides more diverse rates for residential/commercial customers. Price signals are used to guide users to reduce electricity consumption during peak hours, thereby reducing peak load.	Residential, small shops and low-voltage customers	
	Added new three-stage TOU rates for standard and low-voltage meter-rated lighting in 2021			
Demand Response Load Management Measures	Implemented Power Consumption Reduction Measures in 1987	Provides reduced rates as incentives to encourage customers to reduce electricity consumption during peak hours or to shift to off-peak hours, to reduce system peak loads.	Either (super) high-voltage customers with more than 100 kW of dedicated capacity as specified in their contracts (could include factories and educational institutions or schools)	The 2023 peak load day (July 6) exceeded the low peak load by 1.17GW kilowatts.
	Implemented Air Conditioner Duty Cycling Load Control Measures in 1991 (These ended on December 31, 2022)	Central air-conditioning systems were paused for 15 minutes in every 60 minutes of operation. Packaged air conditioning systems were paused for eight minutes with 22 minutes of operation to suppress peak loads.	Non-productive customers (e.g., office buildings, schools)	
	Implemented Demand-Based Bidding Measures in 2015	Through user-defined feedback pricing, more autonomy is given to customers to reach their power-consumption mitigation potential and to improve system loads. This reduces the demand for new power development and minimizes the risk of power shortages.	Users that are frequently above high-voltage usage levels	
	Implemented new Demand-Based Bidding Measures – a Joint Solution – in 2017	Allows customers to apply for Demand-Based Bidding in groups.	Users that are frequently above high-voltage usage levels	
	Implemented emergency response measures and pact-guarantees in 2021	In line with load reduction in cases of emergency, the system improved demand-side resilience.	Users that are frequently above high-voltage usage levels	
	Implemented flexible nighttime reductions from 2022	Offers flexible suppression options for different hours during nighttime peak periods to encourage users to reduce power consumption.	Users that are frequently above high-voltage usage levels	
Power-Saving Service Team		Monthly visits to high-voltage users. Teams use high-voltage AMI data analysis and simple equipment diagnostic questionnaires (for air-conditioning equipment, motors, lighting equipment, etc.) that help users grasp power consumption, inventory power saving potential, and promote Demand Response Measures to maintain a stable power supply.	Users that are frequently above high-voltage usage levels	❶ In 2023, Taipower's Power-Saving Service Team visited 4,527 users with an estimated power saving potential of 106.23GWh. ❷ In 2023, energy-saving diagnosis and guidance was provided to 251 companies from various industries. For example, after an art center in Taichung underwent energy-saving diagnosis, the manufacturer gradually improved efficiency and eventually switched to high-efficiency air conditioning equipment, which has the potential to save 216 MW of electricity every year.
Community Energy Saving Campaigns		Provides free power-saving advocacy services for communities and associations. Taipower uses assemblies to promote power-saving, share energy-saving related knowledge and experiences. The Company advocates proper power-saving techniques, the use of high-efficiency energy-saving products (e.g., LED lighting), and provides electricity improvement recommendations for public facilities.	Local communities and associations	A total of 1,449 seminars were organized in 2023, with approximately 160,000 participants.

Current Status of Electric Vehicle Planning

Taipower has referenced the practices of the international power industry to integrate electric vehicle charging and swapping needs, with the goals of facilitating the construction of charging pile infrastructure and creating a niche for the development of the electric vehicle market. At the same time, taking into account the stability of the power system, Taipower launched an Electric Vehicle Charging and Swapping Facility Electricity Price in 2021 with three main features. These include a low basic fee, high price differences, and long off-peak periods. The service is suitable for users of charging and swapping facilities with high power demands and contracted capacity, such as for charging piles in the parking lots of collective housing buildings (such as building management committees), electric vehicle charging stations (such as public parking lots or Tesla private charging stations), and electric scooter battery exchange stations (such as those operated by Gogoro).

In line with the government's policy of promoting the electrification of vehicles, Taipower has gradually relaxed standards of application for vehicle charging equipment in collective housing. Special electricity prices have also been formulated for electric vehicle charging equipment in hopes of jointly creating an electric vehicle-friendly environment. According to statistics, as of December 31, 2023, Taipower had accepted a total of 3,929 electric vehicle power applications. Among these, 2,815 have completed the power transmission inspection and 1,114 have not yet started power transmission. Of the cases that have not yet started power transmission, 140 have exceeded six months since the date of application for reasons that are not connected to Taipower. The relevant electricity applications, special prices, and selection of TOU rates are listed below:

	Number of New Installations	Number of Cases that Have Begun Power Transmission	Number of Cases that Have Not Begun Power Transmission	Percentage of Electricity Not Yet Transmitted (%)
Electric Vehicle Charging Equipment	3,929	2,815	1,114	28.35
Choose Exclusive Electricity Price for Electric Vehicles	459	321	138	30.07
Select TOU Rate	1,283	1,012	271	21.12

5.1.2 Accelerating Digital Transformation

Energy and digital dual-axis transitions have become important global trends. Taipower has formulated a clear development blueprint for digital transformation that focuses on four key areas: platform construction, data governance, talent cultivation, and innovative applications. As of the end of 2021, two major infrastructure projects – the island-wide fiber-optic communication system and the big data platform – had been completed, establishing a solid foundation for Taipower's future digital transformation. The Company is building a cloud data center to facilitate digital transformation and in response to the increasing demand for power grid information security. Taipower is also improving its fiber optic communication capabilities in backbone areas by establishing information security policies and introducing international standards, thereby improving information security and strengthening the resilience of the power grid.

Data is King	Focus on Talent	Based on Information Security
Use new technologies, such as AI, big data, and IoT, to collect and analyze relevant data on customers, markets, products, and competitors to improve decision-making efficiency and accuracy.	Cultivate and introduce employees with digital skills to enable them to become intelligent creators, and provide a platform for collaboration and learning to stimulate innovation and progress.	Establish data governance and information security mechanisms to protect the data security and privacy of the Company and its customers, and to prevent losses from cyberattacks and information security incidents.

The Introduction of 5G Service Applications

Taipower has identified a number of projects that can utilize 5G technology to offer application services. In collaboration with the Kaohsiung Asian New Bay Area 5G AIoT Innovation Park project, the a 5G AIoT Promotion Office was established at the Southern Power Plant in 2021 to conduct verification of power applications related to 5G AIoT. Taipower uses innovative 5G AIoT technology applications to provide on-site workers with mobile and fixed audiovisual equipment that simplifies on-site operating procedures through video and reduces the risk of incorrect operation by personnel. This project is being implemented in three phases.

Mobile App Development

Taipower combined mobile digital technology with AMI big data applications to launch the exclusive Taipower mobile app. The app provides an integrated service platform that offers applications for services, electricity bill inquiries, case management, and push notifications. It also provides an AMI service section in conjunction 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 customer numbers bound was 2.177 million (including 372,000 customer numbers for low-voltage AMI accounts). Taipower continues to improve the app's service functions (by measures such as using Citizen Digital Certificates to simplify application procedures, accepting mobile payments to provide multiple payment methods, and adding an electricity consumption warning notification to remind users to make timely adjustments to their electricity consumption) to improve the convenience of e-services for electricity consumers.

5.1.3 Guarding Information Security 418-1

Product Liability and Personal Information Protection

Taipower's various tariffs are set in accordance with relevant government laws and policies. The processing of customer billing information and the cutting off of electricity due to overdue bills are therefore managed in compliance with the Personal Data Protection Act and the Electricity Act. Taipower also conducts annual reviews of all necessary fields in its personal information files and systems, and revises relevant business rules. As for the confidentiality of customer-related data, Taipower has formulated mechanisms and operational methods that accommodate different targets. Each unit of The Company follows the operating regulations in handling information to ensure the security of customers' personal information throughout the course of business execution. To prevent service personnel at local offices from inadvertently disclosing user's personal information in violation of relevant regulations, while also considering the need for convenient services, specific procedures have been established for verifying the identities of applicants and inspecting identification documents when users or their authorized representatives make inquiries or print electricity usage information through channels such as in-person visits, phone calls (or faxes), or online platforms. This ensures compliance with legal requirements and protects user privacy. For critical databases, Taipower has established a Database Activity Monitoring System. The system inspects the database and protects it through real-time monitoring and event analysis. Monthly reports of exception records are generated and sent to maintenance staff for review. In 2023, the results of the quarterly reviews were "normal," and there were no violations of regulations due to the provision and use of products and services.

The Information Security Plan

Taipower has established an information security risk management structure that covers company-level and unit-level risk management. It complies with the Company's risk management policies when conducting risk identification, assessment, management, and monitoring and reduces the impact of information security risks on the Company's operations, thereby facilitating the Company's sustainable development. Taipower's information security policy was developed in referenced the international standard ISO 27001, and covers all aspects of information system inventory, risk assessment, supplier management, and information security incident reporting.

In response to the growing demand for large-scale renewable energy grid connections, Taipower is also actively constructing and developing a smart grid, and strengthening that smart grid's information security management through the following:

1. Instituted a Smart Grid Information Security Project, implemented an Intrusion Detection System (IDS) Pilot Project and an application promotion plan, and incorporated it into monitoring conducted by the Security Operation Center (SOC). Taipower continues to improve its overall information security capabilities for the power grid, and has currently deployed 13 OT field intrusion detection systems. Installation of the IDS in OT sites of dispatch centers at all levels are expected to be completed in 2025.
2. The Smart Grid Data Application Project: Establish a Common Information Model (CIM) management system and build a big data analysis and data sharing platform.
3. The Backbone/Regional Optical Fiber Communication System Upgrade Project: In response to smart grid development needs, the project enhanced optical fiber communications and related applications.
4. The Electricity IoT Communication System Implementation Project: The implementation method for building an electricity IoT (enterprise private network) is an optimized combination of self-building and cooperation with or leasing from telecom operators. Analysis of relevant benefits and applications will be reviewed on a rolling basis.

Information Management Performance Indicators and Achievements

Management Aspects	Management Policy and Action Plans	Actual Performance in 2023
Information Security	• Response measures for the Cyber Security Management Act. • Carry out overall information strategy planning and overall information system development structure. • Strengthen critical information infrastructure protection, information infrastructure, information security, and personal data protection. • Share information on the Company's information security and carry out information security joint defense work.	After inspection, the results for 2023 were all found to be normal. There were no violations of laws or regulations.
Customer Privacy Data	• Take inventory of and review personal data files and systems every year. • Establish a confidentiality mechanism to ensure that customer information is not leaked or misused. • Establish a Personal Data File Security Maintenance and Management Team to be responsible for formulating and implementing the Personal Data Protection and Management Guidelines and the Personal Data File Security Maintenance Plan and Personal Data Processing Methods after Business Termination. • Comply with operating regulations of each unit for handling personnel information, and establish an audit mechanism for important databases. • Control the exchange of data with external organizations, as well as conflicts between permissions and functions in personal data-related systems. • Information related to users' electricity consumption will only be provided or inquired about with the user's consent or legal authorization, and the applicant's identity will be proactively verified. • Strengthen the storage and processing of electricity registration forms, and assign dedicated personnel to be responsible for the transfer of records between departments. • Limit the way users can access electricity bill information on the Internet, and display reminders and save audit trails when accessing user information internally.	After inspection, the results for 2023 were all found to be normal. There were no violations of laws or regulations.

5.2 Promoting Energy Conservation

5.2.1 Promoting an Electricity-Saving Society 302-5

In order to encourage the practice of energy conservation, Taipower has employed power-saving incentives since July 2008. The Company continues to introduce new measures to maintain customer motivation and prompt additional power-saving over the long term. In order to increase user interaction and the effectiveness of voluntary power saving, a registration mechanism was introduced in 2018. Customers who sign up through the website, customer service hotline, or at a service counter will receive a reward of NT$0.6 per kWh of electricity saved; the lowest reward received by users that receive monthly bills was NT$42. The lowest reward received by users that receive bills every two months was NT$84. Taipower will continue to organize electricity saving activities on the Power Instant app, so that users who complete the activities can redeem rewards, enter raffles, or deductions on their electricity bills. The app serves to promote key concepts in energy conservation among the public and to foster a culture of habitually saving electricity. At the same time, Taipower also continues to organize power-saving service teams and various community power-saving promotion meetings, provide customized energy-saving diagnostic services for major electricity users, use gatherings to promote power saving, and plan power-saving activities with various themes, so that power-saving education can be deepened.

Power Savings Reward Performance from 2021-2023

Year	Amount of Electricity Saved (Billions of kWh)	Reward Amount for Saving Electricity (NT$100 million)	Carbon Dioxide Emission Reduction (10,000 tons)	Equivalent Number of Daan Forest Parks (for CO_2 absorption capacity) in One Year
2021	1.49	11.9	74	1,894
2022	2.31	17.0	114	2,933
2023	1.81	14.5	90	2,302

Notes: 1. Calculated based on the 2022 electricity emission coefficient of 0.495 kg CO_2e/kWh announced by the Energy Administration, Ministry of Economic Affairs in August 2023 and the 2020 Energy Bureau report on Daan Forest Park's absorption of 389 metric tons of CO_2 each year.

2. Performance data on power-saving rewards is derived from the statistical data of customers who have logged in and completed power-saving reward activities (4.53 million customers by the end of 2023).

3. The calculation of electricity consumption reduction for the current year is based on the previous year, which is also the base year.

5.2.2 Refinement of Customer Services 2-26

Taipower places great emphasis on issues of concern to the general public. Through diverse channels, the Company maintains bilateral communication with its customers and improves service quality by following customer suggestions. In addition, Taipower facilitates customer inclusion by attempting to resolve all service hindrances caused by language, culture, and literacy-related issues. Taipower's customer services are now available in Mandarin Chinese, Taiwanese, Hakka, and English to cater to customers' power service needs in the language of their preference.

Engagement Channel

■ Taipower's Official Website

In order to increase public awareness of issues affecting the electricity industry, Taipower has disclosed 32 items of information on its official website under six categories. These include Management, Power Generation Information, Power Supply and Demand, Customer Information, Environmental Information, and Engineering Information. These disclosures allow the public to browse online and gain a greater understanding of the actual operations of the company.

■ Taipower TV – YouTube Channel

Taipower TV was established on May 1, 2013. The channel's planning, filming, post-production editing, uploading and marketing are conducted entirely in-house to create internet videos tailored for different target audiences. As of 2023, the channel had accumulated 5 million views on YouTube. The main focus of the content is to promote Taipower's stable supply of power and net-zero initiatives. Other topics include the causes of regional blackouts, projects to enhance grid resilience, energy storage at the Tainan Salt Fields, the Songhu Substation, the Taiwan-Penghu Submarine Cable, offshore wind power, the power trading platform, green energy development, and various measures aimed at convenience or energy-saving. The content is presented in diverse styles to allow for greater communication effectiveness. Additionally, important meetings, forums, and press conferences organized by Taipower are released to the public in real-time through this platform.

■ The Taipower Fan Page on Facebook

The Taipower Fan Page on Facebook currently has over 260,000 followers and has had more than 40 million views as of 2023. The themes of posts include electricity knowledge, power saving, power safety, items of convenience, and activities. In addition, the main promotion in 2023 focused on strengthening the resilience of the power grid, electricity price plans, converting Concorde Power Plant to gas, instant power restoration information during typhoons, Taipower's efforts to achieve net zero, and power conservation. Taipower efforts on social networks make information more readily available. They also allow numerous to directly receive Taipower's messaging, which improves the effectiveness of communication. The content of the posts was also actively quoted by major media outlets. In 2023, posts were cited 4,377 times in online news and 21,548 times on Facebook, creating a total of 60,241 views.

User Communication and Management

Taipower has formulated Guidelines for Handling Customer Petitions that safeguard the rights and interests of its customers by ensuring that their suggestions or appeals receive fair and reasonable resolutions and remedies in a timely manner. The Company's commitment to this enhances the quality of services provided by the company and builds a positive image. Users are encouraged to express their opinions on various business measures, service attitudes, public interests, or the protection of their rights and interests through diverse communication channels provided by the Company.

District Service Offices

Taipower has established a closely-linked service network across Taiwan that offers over-the-counter applications for various power and consultation services. These offices are responsible for the construction and maintenance of power supply lines within their service areas and for accommodating customer needs with speedy and convenient responses. They are also responsible for the establishment of direct communication and the maintenance of good interactions with customers.

Each year, Taipower holds a seminar with the Taiwan Electrical Engineering and Industrial Association to facilitate two-way communication and consensus-building with contractors in the electrical engineering industry. The seminar helps address electricity application issues for the public and businesses while also promoting Taipower's important business initiatives. The seminar for the year 2023 was successfully held on November 22, 2023, at the Nanfang Manor Resort.

Feedback Channels

Taipower has established the 1911 customer service hotline, an online service counter, and the Taipower e-Counter app to meet various user service needs through multiple channels.

Customer Feedback Channels

Customer Feedback Mailbox	Customer Service Hotline	Dedicated Customer Service
A customer feedback mailbox was established on the corporate website to provide a smooth and effective feedback channel for the immediate processing of customer opinions, thereby improving service quality and satisfying customer demands.	The hotline provides round-the-clock service all year round. It handles electricity billing and business inquiries, acceptance of electricity applications, and interactions about the repair of power supply line equipment to improve service satisfaction.	In order to reinforce customer-oriented services, Taipower provides dedicated visitation services to group enterprises and corporate customers that are categorized as high-voltage users (above 1,000 kw), national trade associations with high power consumption, science parks, and service windows in industrial zones under the Ministry of Economic Affairs. These facilitate the maintenance of good communication channels with customers.
The customer suggestion mailbox received 5,677 messages in 2023.	In 2023, more than 1.724 million calls were answered, and 98.33% of calls were answered within 20 seconds.	In 2023, there were a total of 4,609 visitations performed for customers.

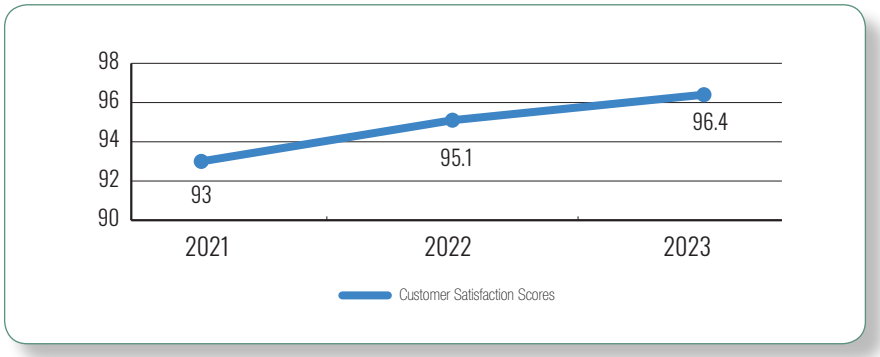
Customer Satisfaction

Taipower conducted an opinion survey amongst general, medium and large customers in 2023. The scope of the survey included service quality, Taipower's corporate image, customer feedback, and overall customer satisfaction. In recent years, customer satisfaction has remained above 90% – a strong indication that Taipower's various service initiatives are being recognized by users. User dissatisfaction and suggestions from the annual customer satisfaction survey results, as well as from those who were not satisfied with the responses they received through the monthly user opinion mailbox questionnaire, will be comprehensively reviewed by the Company. Improvements will be organized and compiled for reporting and follow-up action. In the future, Taipower will continue to handle customer service-related business in accordance with the Ministry of Economic Affairs' Implementation Plan for Improving Service Efficiency and will continue to strengthen communication with its users to improve services.

2023 Survey Objectives, Period and Areas

Survey Objectives	Period	Survey Facets
1. General users: low-voltage users who have had business contact with Taipower in the past year. **2. Medium and large users:** users with a contracted capacity of more than 100 kW.	October 25 - December 8, 2023.	• Service quality. • Corporate image of the company. • Feedback from customers. • Overall customer satisfaction.

Customer Satisfaction Scores from 2021-2023



6 Practitioner of Corporate Social Responsibility

Suitable for the following stakeholders: Board of Directors, Shareholders Employees Government Agencies, Elected Representatives, Residents

Development Vision

Taipower conducts operations in every corner of Taiwan. The Company interacts with internal and external stakeholders through multiple channels and continually strengthens its partnerships within society to allow for collective growth and prosperity. In addition to its core power industry operations, Taipower promotes science and environmental education, cultural asset preservation and revitalization, and community care as it cultivates a brand image that reflects is role as a practitioner of corporate social responsibility. Talent development is the cornerstone of sustainably developed companies. So, in addition to continuously improving its talent management policies for recruitment, training and development, utilization and retention, Taipower has introduced new technologies and action plans that enhance training and occupational health and safety measures. The Company also continuously strengthens its protection of employee and contractor rights to create a healthy and happy workplace.

Taipower is committed to communicating with stakeholders and discloses necessary information under the principles of openness and transparency to meet the expectations of those stakeholders. Taipower also approaches social welfare through the development and promotion of culture, art, sports, and other essential elements of Taiwanese society. While coping with organizational transformation, Taipower has continuously invested in personnel development and training and provided its staff with career development resources, comprehensive remuneration and retirement care. In terms of industrial safety, Taipower will continue to improve occupational safety management as it pursues the goal of zero occupational safety incidents and creates a friendly, safe, and happy workplace for its employees.

Performance Highlights

- In 2023, Taipower's Department of Transmission Lines and Substation Projects participated in the public sector's evaluation of the establishment of workplace childcare facilities and won the Excellence Award.
- In 2023, the total number of participants in educational training reached 84,736.
- In 2023, the total number of participants in health and safety training reached 80,106.
- In 2023, 897 health and safety-related seminars were held for contractors, with a total of 32,386 attendees.
- In 2023, 99.2% of all employees were covered by collective bargaining agreements.
- In 2023, there were 4,000 neighborhood care projects and approximately NT$100 million in donations.
- In 2023, approximately NT$428,000 was invested in artwork leases, exhibitions and performances.
- In 2023, charity events organized by Taipower reached 57,000 individuals.

6.1 Human Rights, Diversity, and Inclusiveness

6.1.1 Human Rights Policy 2-23 2-25 406-1

Taipower is committed to supporting and adhering to internationally recognized human rights standards, such as those outlined in the United Nations Universal Declaration of Human Rights, the UN Global Compact, and International Labor Organization conventions. These standards are incorporated into its operational activities. As an important public utility, Taipower must respect and protect the human rights of all stakeholders, including its employees, and strive to prevent any potential human rights violations.

Human Rights Policy

Taipower's Human Rights Policy

To fulfill its commitment to respecting the human rights of internal and external employees, Taipower established a "Human Rights Policy" and related regulations and measures that help create a safe, equal, non-discriminatory, and harassment-free working environment for all. Taipower is committed to safeguarding the human rights and related interests of its employees. The Company firmly believes that every employee should receive fair and humane treatment and respect. Its actions in this regard include protecting the human rights of internal employees in the workplace, ensuring equal treatment and rights for all internal employees, establishing a friendly working environment, providing a safe and healthy workplace, respecting the employee right to freedom of association, promoting labor-management harmony, and protecting the personal information of employees.

To ensure that human rights policies are implemented throught the Company, Taipower offers both general training courses and plans related general education courses covering topics related to gender mainstreaming (gender equality policy and practices, the Convention on the Elimination of All Forms of Discrimination against Women, sexual harassment and sexual assault prevention, etc.), international human rights conventions (including human rights education, and respect and protection of the basic rights and interests of people with disabilities), workplace health, safety, and ethics. Appropriate courses are arranged to equip new employees with relevant concepts and to promote the requirements of laws and regulations for different situations. In addition, during the training period, online courses from the online academy (including gender mainstreaming, introduction to safety and health, and other related topics) are supplemented and included in performance evaluations.

In line with its human rights policy, Taipower planned an Experience Sharing on Corporate Human Rights Improvement course in 2024 to increase employee respect for human rights and basic freedoms. In accordance with laws and regulations on sexual harassment prevention, and collective bargaining agreements, Taipower plans and organizes annual training courses on employee assistance for employees and officers at different levels along with courses on labor relations, and labor law. These courses work in conjunction with the heart-to-heart system. The training courses improve knowledge and skills that are fundamental to realizing the organization's stable development.

Taipower has established an e-learning platform, called the Taipower Online Academy, that provides employees with diverse learning channels and a convenient learning environment. The platform has a series of sections to address issues such as Gender Mainstreaming and Sexual Harassment Prevention. These feature courses on CEDAW related concepts, provide an overview of rights and interests that are protected by conventions. . Information is also provided on issues related to sexual harassment prevention. In addition, Taipower requires participants in entry, middle, and senior manager training courses to take a series of courses related to sexual harassment prevention, and incorporates the topic into study reports for all levels of manager training courses. These measures are aimed at influencing personnel at all levels through a top-down approach.

Taipower's Human Resource structure is diverse. Based on the core concepts of diversity, equity, and inclusion (DEI), Taipower not only provides professional training at various training sites, but also has various units conduct training on their own along with external training courses, in order to help employees from different backgrounds continue to improve and develop. As of 2023, there were 1,391 courses covering diverse subjects including professional technology, information, language, management knowledge, communication psychology, and health management. Employees can use and learn through these courses independently at anytime and anywhere.

Management Measures for Important Human Rights Issues

Taipower conducted a preliminary human rights risk identification and assessment in 2022. The results of that evaluation were integrated into the 2022 human rights due diligence results. The subsequent action plans are shown in the table below:

Important Topics of Concern	Specific Policies	Management and Mitigation Measures
Non-Discriminatory Promotion	Equalization of rights and benefits for employees in the workplace	1. The salary and benefits for internal employees of Taipower, as well as the work rules, are reported to and approved by the Board of Directors. 2. Promotion and attendance-related regulations, and the Taipower information security policy to protect employee personal information are determined by the President.
Privacy Protection	Protection of the personal information of employees	Establish personal data-related rules, plans, and processing methods, and establish a Personal Data File Security Maintenance and Management Team
Protection of Work and Labor Conditions / Forced Labor	Establishment of a friendly working environment for employees	If it is necessary to work outside normal working hours, normal working hours may be extended with the consent of the labor union. Wages for the extended working hours are paid in accordance with the Labor Standards Act, and employees may, alternatively, choose to take compensatory leave instead.
Right to Family Life - Not Compromising the Right to Family Life	Implementation of a gender-friendly workplace and provision of childcare support and benefits, emphasize the balance between family and work for employees	1. Established the Personnel Difficulties and Matters of Grievance Processing Guidelines 2. Formulated the Measure to Reduce Working Hours by One Hour Per Day for Employees Raising Children Under 3 Years Old. Employees are still paid for the flexible reduced working hours, which exceed the benefits required by Article 19 of the Gender Equality in Employment Act. This measure includes three options: delaying the start of work by one hour, getting off work one hour early, or delaying the start of work and getting off work early by half an hour each.
Right to Health - Measures to Protect Health / Providing Occupational Safety Training	Establishment of a friendly working environment for employees	1. Establish qualifications and measures for labor health service medical personnel and related personnel in accordance with the Regulations Governing the Labor Health Protection and Occupational Health and Safety Education and Training Rules. 2. Various types of safety and health training and on-the-job training are planned and implemented each year for the safety and health management work of business units
Personal Freedom and Safety	Providing a healthy and safe workplace for employees	Set up a hotline and mailbox for sexual harassment complaints, regularly publish e-newsletters on sexual harassment prevention, and implemented a Heart-to-Heart (EAP) system to help employees adapt to work and solve physical and mental difficulties.

6.1.2 Diversity and Inclusion in the Workplace

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To help employees balance family and work, Taipower provides a diverse range of leave types. These include menstrual leave, family care leave, matrimonial leave, maternity, prenatal check-up, spousal prenatal check-up, and paternity leaves. In addition, in response to the government's childcare goal of reducing the pressures of work and childcare faced by dual-income families, Taipower took the lead in providing benefits in excess of those mandated by Article 19 of the Gender Equality in Employment Act starting from March 1, 2022. These measures provide support for families with children under the age of 3 by reducing work by one hour per day. Employees continue to receive wages for the reduced hours, and are eligible to apply reduced working hours until the day before their child turns 3 years old.

To create a gender-friendly workplace, the Company provides childcare measures and subsidies, breastfeeding rooms and equipment, and has established policies and measures to prevent sexual harassment in the workplace, a safe and friendly workplace and prevent workplace violence or bullying. Policies are also in place to ensure equal pay and treatment. Additionally, the Company attaches great importance to the workplace safety of pregnant women and gender-friendly toilets have been established. Taipower has also has worked to achieve the goal of having no less than one-third of any gender in decision-making organizations. Female supervisors are also actively promoted with the ratio increasing year by year. These measures show Taipower's spirit and determination to actively create a gender-friendly workplace.

Female and Male Employee Pay Ratio

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

The Male, Female and Average Local Salary Ratio

Note: Since the Directorate-General of Budget, Accounting and Statistics releases the salary statistics for the previous year in December, the ratio of Taipower's salary to the local average salary in 2023 was calculated based on the 2022 statistics from the Directorate-General of Budget, Accounting and Statistics.

Ratio of Females to Males in Management 405-1

Taipower is a public power company, and on-site power technical work is often carried out in working environments with high and low voltage electrical hazards, high temperatures, high levels of noise, and at high altitudes. The high-risk and physical demands of these jobs necessitate high physical standards and requirements, so on-site work is predominantly performed by male employees. As a result, the gap between male and female middle-level and senior managers is slightly higher than the gap between the all-male and female employees.

Taipower has a total of 5,188 managers (including entry, middle-level, and senior managers) in 2023, of which 891 are female. There is a 66.0% gap between male and female middle-level and senior managers (83.0% male : 17.0% female), while there is a 65.6% between all male and female employees (82.8% male : 17.2% female).

However, in the past three years, the percentage of female middle-level and senior managers has risen from 16.2% to 17.0%. This is because all Taipower units provide information on the gender ratio to the supervisor responsible for filling job vacancies. In addition, Taipower continues to use screening (selection) briefings and video recordings to illustrate the valuable roles that women can play, along with offering a range of incentives to create a workplace environment that is friendly to women (such as unpaid parental leave and childbirth subsidies). As a result, the number of female employees has increased each year, and the percentage of female managers has also increased.

Specific Results of Diversity and Inclusion in the Workplace

Gender Equality Leadership Award

Taipower won the Taiwan Corporate Sustainability Award (TCSA) for Gender Equality Leadership for the first time in 2023. The award recognizes Taipower's efforts to promote gender equality and women's empowerment, through measures that include diversifying board membership (females account for 1/3), increasing the percentage of female employees (increased by 1,624 in the past 10 years), establishing flexible working hours, and offering friendly maternity measures (such as childcare service centers).

Parenting Measures

In 2023, the Company implemented measure to reduce working hours by one hour per day for employees raising children under 3 years old, with the number of users reaching 1,900.

Childcare Support And Welfare

In order to provide childcare support and welfare, the Company established childcare facilities and other appropriate childcare measures in accordance with laws and regulations, and adopted multiple welfare policies and measures, such as allocating 0.01% of welfare funds to subsidize employee care for children under 6 years old. The dedicated funds are used for specific purposes, and employees can receive a childcare subsidy of NT$6,000 for each child. These measures serve to improve and protect employee welfare.

High-Quality Childcare Environment

In order to provide support for the children of Taipower employees and increase employee willingness to use childcare service, the Company worked in conjunction with the Ministry of Education and a non-profit organization that was commissioned to operate the childcare service centers to jointly create a high-quality, safe childcare environment. Five of the childcare service centers received scores of over 90 points in the Ministry of Education's performance evaluation. Parental satisfaction with the childcare service centers was also nearly perfect. In the future, Taipower will continue to uphold its commitment to taking care of its employees so that its employees can work with peace of mind. Consequently, the Company will continue to invest resources to create high quality childcare service centers with good reputations, and to create a childcare-friendly workplace.

Excellence Award For Childcare Facilities Evaluation

Participated in the public sector's evaluation of the establishment of workplace childcare facilities in 2023 and received the Excellence Award in the Workplace Mutual Aid and Childcare Service Centers division from the Executive Yuan's Directorate-General of Personnel Administration.

Gold Award For Happy Enterprise

Taipower has long been committed to improving employee happiness, workplace rights, employee career development, and fulfilling its corporate responsibilities. As such, Taipower won the Gold Award in the manufacturing industry category at the Happy Enterprise voting event organized by the 1111 Job Bank for three consecutive years (2021-2023).

6.2 Building a Happy Electricity Industry

6.2.1 Talent Management and Development

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Material Topics: Demand-side Management and Energy Conservation

Policy	Attract and recruit talented human resources, remuneration and training, formulate welfare measures, and provide a comprehensive retirement system and care.
Management Approach	Recruit talented human resources through multiple channels and continue to consolidate power technologies and pass on skills.
Action Plans	❶ Enter campuses sooner to cultivate talent for the power industry. ❷ Formulate and implement annual training plans to stabilize talent cultivation and development. ❸ Focus on special training in response to trends such as risk management and net-zero. ❹ Continue to implement the mentoring mechanism.
Actual Performance in 2023	❶ Strengthen industry-academia collaboration, scholarship selection, and other channels. ❷ With regards to employee training satisfaction in 2023, satisfaction with teaching methods and effectiveness was 4.84, satisfaction with teaching materials and content was 4.81, satisfaction with learning results was 4.79, and satisfaction with educational benefits for current work or future development was 4.77. ❸ A Comprehensive Power Technology Practical Workshop was held from February to June 2023 to improve the professional knowledge and skills of new technical personnel. A total of 35 on-the-job training courses were offered. ❹ A New Employee Mentor System Questionnaire Survey found that average satisfaction of new employees with mentors reached 92.8%.
Targets in 2030	❶ Satisfaction with annual on-the-job training in terms of "teaching methods and effectiveness," "teaching materials and content," "learning results," and "benefit to current work or future development" all reached 4.7 (inclusive) or above. ❷ Continue to investigate the implementation status of the mentor system and conduct rolling reviews based on feedback from new employees. Also organize mentor training courses to enhance the effectiveness of mentoring, in hopes of achieving satisfaction rates of 94% or above among new employees.

Employee Human Rights Policy

Taipower is facing major issues such as energy transformation, low-carbon sustainability, and smart grids. Effectively dealing with these issues requires acquiring the appropriate human resources talent for future development while maintaining stable power supply. Taipower is developing the necessary talent pool by reviewing the core technical skills of employees then filling talent gaps by recruiting the necessary electricity specialists through diversified pathways. The Company also employs various training systems and measures that allow it to pass on electrical technology knowledge and experience from older to younger employees, and to enhance the professional and cross-disciplinary skills of its staff. As the green economy has risen to prominence in the digital era, Taipower has utilized both internal and external training resources to strengthen its renewable energy talent. The Company has now developed the necessary talent for business development and promotion to ensure that it can effectively achieve its goals for recruitment, training and development, along with the utilization and retention of human resources. This approach allows the Company to resolve a wide range of human resources challenges. The relevant strategies are as follows:

Taipower's Human Resources Recruitment, Training and Development, Utilization and Retention Strategies

Recruitment

- Balanced and rational human resource planning and systematic appointments.
- Diversified personnel recruitment to satisfy human resource demands; increased recruitment channels, including examinations for staff, contract staff, PhD-level employees; scholarships for undergraduate, graduate, vocational and high school students; vocational and industrial-school cooperation programs.

Training & Development

- Fortified essential techniques in each division and promoted core operations.
- Developed innovative cultivation modes to improve effectiveness in organizational learning.
- Promoted company-wide (all business divisions) succession plans for supervisors and to build up the talent pool.
- Utilized online resources to promote lifelong learning.
- Strengthened the rationality of allocation, development and application of human resources.

Utilization

- Effective distribution and management of personnel appointment budgets.
- Improved the personnel system to make human resource deployment flexible and effective.
- Implemented job duty rotations and performance evaluations.
- Made good use of statistical analysis to provide a supervisory decision-making reference.
- Strengthened the effectiveness of the human resources departments of the business divisions.
- Conducted internal promotion interviews and provided internal promotion channels to promote outstanding employees.

Retention

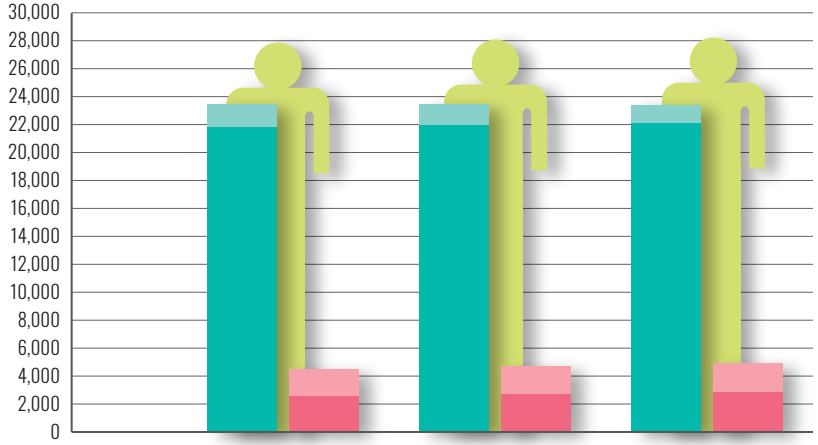
- Provided employees with public health insurance, subsidies for medical expenses for injuries incurred when executing job duties and health checkups through welfare policies.
- Established labor education courses and implemented recreational activities so that employees could adjust their lifestyles for the sake of their physical and mental wellbeing.

Structure of Human Resources

■ Employment Categories

Taipower does not employ non-citizens. In terms of employee types, Taipower employees are all full-time or irregular workers. The Company does not employ any temporary, part-time, or employees without guaranteed hours.

The Total Number of Employees and the Ratio of Male/Female Employees from 2021-2023



Year		2021		2022		2023	
Total Employees		27,860		28,079		28,213	
Local Employees	Male ● + ●	23,392	84.0%	23,416	83.4%	23,349	82.8%
	Female ● + ●	4,468	16.0%	4,663	16.6%	4,864	17.2%
Direct Personnel	Male ●	21,790	78.2%	21,883	77.9%	22,017	78.1%
	Female ●	2,544	9.1%	2,712	9.7%	2,853	10.1%
Indirect Personnel	Male ●	1,602	5.8%	1,533	5.5%	1,332	4.7%
	Female ●	1,924	6.9%	1,951	6.9%	2,011	7.1%

Note: 1. Data acquisition is based on the payroll dated to December 2023.
2. Direct employees are personnel who fall under the categories of technical, sales and marketing employees at onsite departments. Indirect employees are personnel responsible for administrative support, including document processing, business affairs, general affairs, and accounting, etc.
3. Decimal points have been rounded.
4. Total employees = direct personnel + indirect personnel
5. Taipower employees are all located in Taiwan, and no employees are located abroad.

Statistics by Employee Category in 2023

Employee Category	DOMESTIC EMPLOYEES					
	Male		Female		Total	
	Number of Employees	Ratio (%)	Number of Employees	Ratio (%)	Number of Employees	Ratio (%)
Permanent Employees	23,349	82.8	4,864	17.2	28,213	100%
Temporary Employees	0	0	0	0	0	0%
Full-Time Employees	23,349	82.8	4,864	17.2	28,213	100%
Part-Time Employees	0	0	0	0	0	0%
Employees Without Guaranteed Hours	0	0	0	0	0	0%

Note: 1. Permanent employees do not sign fixed-term contracts. As long as the substance of their work is continuous, employees may continue to work unless they are laid off or voluntarily resign. Severance pay is available, and the employer is required to contribute to labor pension funds.

2. Temporary employees only sign fixed-term contracts in exceptional circumstances. Positions are for temporary, short-term, seasonal, or specific work. Upon the expiration of the contract, the employee must leave and cannot continue to work unless the employer is willing to renew the contract. No severance pay is available, but the employer is required to contribute to labor pension funds.

3. Full-time employees: According to Article 30, Paragraph 1 of Taiwan's Labor Standards Act, regular working hours must not exceed 40 hours a week and eight hours a day.

4. Part-time employees: Employees whose working hours do not meet the conditions of full-time employees (40 hours a week and eight hours a day) are considered part-time employees. The legal rights of part-time employees are the same as those of full-time employees, except that basic wages and holidays can be reduced and are proportional to their working hours.

5. Employees without guaranteed hours: Taiwan's Labor Standards Act has not yet defined these positions. Here, they are defined as contract-based workers for whom the employer does not guarantee minimum working hours. Elsewhere, these employees are said to be part of the "gig-economy." These workers were original defined as free, part-time workers who performed work on a short-term basis and received a lump sum payment. Examples might include delivery personnel working through a sharing economy platform.

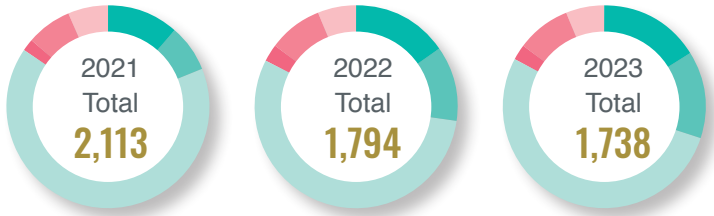
6. Data acquisition is based on the payroll dated to December 2023.

Number, Age, and Gender Distribution of Employee Recruitments/Resignations

Number of New Employees

	2021 Male	2021 Female	2022 Male	2022 Female	2023 Male	2023 Female
Under 30	1,148	295	1,034	262	845	275
31-50	451	207	482	235	469	223
Over 51	20	4	13	2	22	6
Total	1,619	506	1,529	499	1,336	504

Number of Departing Employees



	2021 Male	2021 Female	2022 Male	2022 Female	2023 Male	2023 Female
Under 30	244	44	278	48	282	45
31-50	160	152	213	156	240	148
Over 51	1,381	132	991	108	918	105
Total	1,785	328	1,482	312	1,440	298

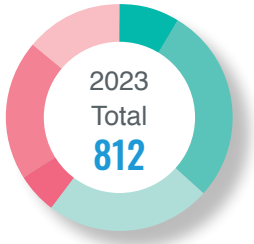
Note: 1. The number of new employees includes the number of reinstatements.

2. The number of departing employees includes both those on extended leave without pay and retirees.

3. The statistics for each year represent the number of recruits and employee resignations from January to December of the current year.

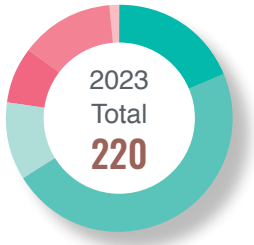
Diversified Employee Numbers, Age and Gender Distribution

Number of Employees with Disabilities



	Number of Employees with Disabilities		Total Employees		Ratio (%)	
	Male	Female	Male	Female	Male	Female
Under 30	72	46	4,216	1,187	1.71%	3.88%
31-50	226	163	13,239	2,641	1.71%	6.17%
Over 51	193	112	5,894	1,036	3.27%	10.81%
Total	491	321	23,349	4,864	2.10%	6.60%

Number of Aboriginal Employees



	Number of Aboriginal Employees		Total Employees		Ratio (%)	
	Male	Female	Male	Female	Male	Female
Under 30	41	18	4,216	1,187	0.97%	1.52%
31-50	105	29	13,239	2,641	0.79%	1.10%
Over 51	24	3	5,894	1,036	0.41%	0.29%
Total	170	50	23,349	4,864	0.73%	1.03%

Outsourced Workforce

As of the end of December 2023, Taipower's outsourced workforce included both service and labor contractors. In 2023, there were 1,140 outsourced workers working in jobs connected to cleaning, document processing, telephone operations, driving and other services.

Note:

1. The number of outsourced workers does not include workload packages (where workload package refers to the outsourcing or procurement of labor work, technical services, equipment operation, and equipment maintenance or other services through means other than labor and service manpower outsourcing.)
2. The 2023 outsourced manpower data has been taken from the report "Labor Contracting Situation in the Fourth Quarter of 2023".

Workers Who are Not Employees

Non-Employed Workers	Number of People (Persons)	Contractual Relationship	Type of Work
Volunteers	323	None. These are retired Taipower staff (in volunteer roles).	• Sports advocacy (cheering for Taipower's sports teams). • Offering guidance at branch office service counters.

Human Resource Training

Based on the attributes of the job system, Taipower has formulated a talent training system for classifying and evaluating positions (as shown below). The Taipower Training Center formulates and promotes the implementation of various core functional trainings pathways based on the aforementioned talent training system and employee training needs. The talent training system offers an integration of training and employment to achieve the goal of talent retention; it also works in conjunction with a mentoring system to coach new employees. In addition to passing on experience, professional abilities and knowledge of core technologies, mentors can provide new employees with more work and life provide support and guidance to increase the stability of new recruits.

The relevant training results for 2023 are as follows:

Training Type	Training Subject		Number of Participants in 2023	Subtotal	Total
Development Training	New dispatch personnel orientation training		652	1,087	84,736
	Fundamental development training		435		
On-the-Job Training	Professional training	Organized by the Training Institute	11,658	81,810	
		Organized by other units	65,787		
		External training	4,365		
Manager Training	On-the-job training for managers		1,234	1,836	
	Skill cultivation for managers		602		
Cooperative Education	Recommendations for graduate school		3	3	

6.2.2 Employee Rights and Benefits 2-20 2-21 401-2 401-3

Employee Compensation Policy

Taipower is a state-owned enterprise and the salary system of its employees works in accordance with the Personnel Expenses and Salary Management Guidelines for Enterprises under the Ministry of Economic Affairs. The total amount of personnel expenses, including employee salaries, benefits, and insurance premiums must be within the limit on personnel expenses approved that year. Employee salaries are based on a salary point system. In conjunction with the position classification system, the salary points for each job level and the salary point conversion standards approved for that year are used to calculate the salary standards for each job level. Additional pay is determined based on the region, the hazardous nature and rarity of the position. Taipower personnel salary increases should be handled along with the annual salary adjustment margins for military personnel, civil servants, and teachers, and are submitted to the Board of Directors for approval. They are then reported to the Ministry of Economic Affairs for review, in order to maintain market competitiveness.

Average employee salary ratio in 2023

Note: 1. Employee salary expenses usually include recurring and non-recurring wages, such as base salary, overtime pay, salary, and bonuses.
2. Employee benefit expenses include salaries, labor and health insurance, pensions, and other employee benefit expenses, after deducting remuneration for Directors.
3. The term "non-managerial position" refers to positions other than manager and above (inclusive).
4. The term "non-managerial position" refers to positions other than manager and above (inclusive).

Annual Total Compensation Ratio from 2021-2023

Year	2021	2022	2023
Highest-Level Individual Annual Total Compensation (in NTD)	3,054,035	2,680,014	3,181,036
Percentage Increase in Total Compensation for the Highest-Level Individual	-0.05%	-12.25%	18.70%
Annual Total Compensation for All Other Employees (in NTD)	30,506,083,958	30,949,872, 881	31,428,226,577
Median Percentage Increase in Total Compensation for All Other Employees	2.90%	5.96%	4.66%

Note:

1. The highest-level individual in 2021 was the Chairman, while the highest-level individual in 2022 and 2023 was the General Manager. On March 8, 2022, Taipower underwent a transition of the Chairman and General Manager positions between the outgoing and incoming of individuals. The incoming Chairman's position was temporarily filled by a Deputy Minister from the Ministry of Economic Affairs and was consequently unpaid. The incoming General Manager was promoted from the position of Deputy General Manager, resulting in a significant reduction in the total annual remuneration for the highest-paid employee. After a salary increase in 2022, it will return to the original level in 2023.
2. Compensation includes monthly salary, work-related benefits, and performance bonuses.

Employee Performance and Evaluation Policy

Taipower follows the relevant regulations in conducting employee performance evaluations. Supervisors at each level evaluate the performance of their subordinates in seven major categories, determine the evaluation results and award performance bonuses within a prescribed period. Taipower will continue to use and establish performance-based reward mechanisms that reward units or employees for excellent performance or dedication to work. Taipower hopes to enhance employee commitment and performance while improving operational performance and a sense of honor within teams. The main implementation strategies for employee performance evaluations and performance-based reward mechanisms are as follows.

Employee Performance Evaluation	Performance Management by the Responsible Units	Instant Reward Mechanism
• Full-time employees of Taipower who meet specific conditions. • Supervisor on all levels shall perform evaluations for the seven major categories of professional ability, work performance, teamwork, work attitude, moral integrity, management skill, and leadership skill.	• Reasonably distribute bonuses based on employee contribution and performance. • 40% of the total performance bonus is allocated as each unit's efficiency bonus and is distributed according to the performance grades of the responsible units.	• 2% of the total performance bonus is allocated to business unit heads as distributable bonuses. • 50% of incentive bonuses are given as immediate rewards as determined by the Chairman, President, and Vice Presidents. • 50% of incentive bonuses are allocated and distributed by unit supervisors according to various reward procedures and principles.

Employee Rights and Benefits

Taipower actively promotes employee rights and welfare measures in accordance with legal regulations to ensure and enhance employee welfare. Through diverse welfare policies and measures, Taipower aims to improve and safeguard employee welfare.

In 2023, Taipower held a total of 47 labor-management meetings and briefings. Additionally, the Company included childcare for children under the age of three as a reason for granting leave without pay. For employees with children under 3 years old, Taipower implemented measures such as reducing working time by one hour, thus exceeding the requirements of Article 19 of the Gender Equality in Employment Act. Taipower also provides childcare subsidies for employees with children under 6 years old. These measures help the Company create a family-friendly environment in the workplace. In addition, to promote public childcare services in line with national policies, Taipower has established Workplace Mutual Aid and Childcare Service Centers in seven locations throughout Northern, Central, and Southern Taiwan. The centers provide childcare for children aged 2 to 6.

Key Employee Benefits and Care

Diversified Career Development Resources	• Provide comprehensive training resources. • Ensure that employees acquire the competencies required for their careers.
Salary Guarantees	• Transparent salary system. • Comprehensive performance incentive system.
Retirement Care	• Establishing a comprehensive retirement care system and placing relevant rights and interests on a dedicated website, as well as organizing farewell activities for retirees to help them adapt to retired life in a timely manner.
Multiple Protections	• Provision of public health insurance. • Medical subsidies for work-related injuries. • Health Screening. • Recreational Programs.

In the future, Taipower will continue to enhance its welfare policies by implementing diverse health care measures and will foster employee self-improvement through activities like employee trips and empowerment programs. It will collaborate with relevant organizations, such as the Taiwan Power Union and the General and Branch Sub-Committees of the Taipower Employees' Welfare Committee, to organize recreational activities across different regions and cities that aim to enhance and safeguard employee welfare.

6.3 A Sound Working Environment

6.3.1 Occupational health and safety

3-3 | 203-2 | 403-1 | 403-2 | 403-3 | 403-4 | 403-5 | 403-6 | 403-7 | 403-9

Material Topics: Safety Management and Crisis Response

Policy	Taipower's Safety and Health Management Policy 1 Abide by laws and observe discipline: Comply with safety and health regulations and meet standards and requirements. 2 Life is priceless, take the initiative to care: Ensure work safety and promote physical and mental health. 3 Intrinsically safe – Prevent problems before they occur: Strengthen environment and equipment safety and implement hazard prediction measures. 4 Involve all employees in continuous improvement: Everyone is responsible for safety and health, and the pursuit of industrial safety will never end.
Management Approach	Taipower has formulated relevant guidelines for occupational health and safety management with regards to training and advocacy, inspection and supervision, operational safety, protective gear management, fire safety, traffic safety, health management, accident handling, rewards and punishments, and contractor management. The guidelines help achieve health and safety policies and goals, prevent occupational incidents, and ensure the health and safety of all employees.
Action Plans	1 Reporting procedures for various disasters and emergencies. 2 Guidelines for handling industrial safety accidents.
Actual Performance in 2023	1 In 2023, Taipower held approximately 160 disaster prevention and emergency response drills with around 12,000 participants in total. 2 Statutory training related to occupational health and safety, the "Zero Accident Campaign," and Interactive Hazard Identification Training were conducted at training institutes and external training organizations. There were over 1,274 sessions of statutory occupational health and safety-related training, with approximately 80,106 participants.
Targets in 2030	1 Continue to provide legally mandated occupational health and safety training through internal and external training institutions, , promote interactive hazard identification education and training on industrial safety, explore potential hazard risks through accident and deficiency case summaries and on-site operation scenarios, and improve on-site personnel risk assessment and hazard identification knowledge and skills. 2 Continue to implement third-party audits, to use the third-party audit mechanism of external occupational health and safety experts to identify internal risk items or blind spots that are difficult to find, and to strengthen safety and health management measures.

Material Topics: Worker Health and Safety

Policy	Systematically manage the occupational safety of employees and contractors to prevent workers from suffering occupational injuries.
Management Approach	Taipower conducts hazard identification and risk assessments for its employees. The Company also places controls on unacceptable risk items. In addition to annual reviews and evaluations, risk assessments will be adjusted and updated, and procedures for necessary control measures shall be determined in the event of non-routine circumstances.
Action Plans	Establish guidelines and measures according to the Occupational Safety and Health Act.
Actual Performance in 2023	❶ Employee injury rate of 0.2. ❷ Contract labor injury rate of 0.31.
Targets in 2030	❶ Employee injury rate ≤ 0.1. ❷ Contract labor injury rates ≤ 0.18.

Health and Safety Management Policy

■ Aspects, Basis, and Practices of Industrial Safety Management

Taipower has established key points and measures for occupational health and safety management to prevent and mitigate significant negative occupational health and safety impacts, as well as those from related hazards and risks directly related to the organization's operations, products or services.

Guidelines for handling industrial safety accidents: If incidents occur involving employees or contractors, Taipower will report the accident within one hour in accordance with regulations by submitting an accident report. The Company shall also send personnel to conduct accident investigations and accident reviews. The Company shall then pursue situation improvements, and deploy preventive countermeasures in parallel at each unit to prevent similar incidents. Furthermore, the Company shall compile statistical analysis reports for the occupational safety management in each unit. When a severe occupational incident affects employees or contractors, it should be reported to the local labor inspection agency within eight hours in accordance with regulations.

Reporting procedures for various disasters and emergencies: Superior authorities and Taipower supervisors at all levels immediately access relevant information through various communication tools after the occurrence of a disaster, so that relevant units can be promptly directed to handle and mitigate damage.

Dimension	Management Method	Management Bases/Practices	
Regulatory	Training	• Procedures for Training and Utilizing Occupational Health and Safety Personnel from Affiliated Units	
	Auditing and Supervision	• Management Enforcement of Procedures through Inspections by Supervisors at All Levels	
	Operational Safety	• Enforcement Procedures for Operational Safety Standards	• Enforcement Procedures for Consultative Organizations in Joint Operations
	Personal Protective Equipment Management	• Management Procedures for Personal Protective Health and Safety Equipment	
	Incident Handling	• Occupational Safety Accident Handling Procedures	• Guidelines for Assisting Employees in Handling Industrial Incidents
	Rewards and Punishments	• Procedures for Punishment of Health and Safety Regulation Violations	• Procedures for Rewarding Excellent Health and Safety Performance
	Contractor Management	• Procedures for Health and Safety Counseling • Procedures for Penalizing Contractor Violations of Contractual Health and Safety Requirements	• Procedures for Additional Training on Contractual Health and Safety Requirements following Contractor Violations
Onsite Execution	Before Job Task Starts	• Industrial Safety Communications and Hazard Notifications • Pre-Work Training Workshops	• Review Lists for Operating Personnel
	During Job Progress	• Health and Safety Check-ins for Operating Personnel • Executing TBM-KY and Making Records	• Implementing Automatic Inspections • Auditing Health and Safety Measures
	Operational Equipment and Machinery Inspection	• Regular Inspections and Confirmations of Machinery • Dedicated Notebooks or Files for Inspection Records	• Building Coordination and Control Mechanisms

The Percentage of Workers (whose work or workplaces are subject to organizational control) in a Formal Health and Safety Committee Composed of Labor and Management

■ The Occupational Health and Safety Management System

The Occupational Health and Safety Committee shall have at least seven members. In addition to the President, who is an ex-officio member, and labor representatives, the President shall appoint members based on actual needs. The committee shall hold at least one meeting every three months. According to Article 12-2 of the Occupational Safety and Health Management Regulations, if the number of workers in the first category of business is 200 or more, the employer shall establish an occupational health and safety management system suitable for the business unit in accordance with the national standard CNS 45001 or above. Taipower has established an Occupational Health and Safety Management System in accordance with regulations. The Company completed CNS 45001 certification for 47 units in 2020 (including the headquarters), all of which have adopted the Plan-Do-Check-Act (PDCA) circular management model on a continuous basis.

The Occupational Health and Safety Management System above covers all workers in all workplaces, including employees, contract laborers, volunteers (including self-employed workers) at hydrothermal power plants, nuclear power plants, branches, power supply district operation offices, engineering units, and other units.

Strategy for Occupational Safety Performance and Refinement

In 2023, Taipower workers that experienced work-related injuries or diseases were mainly affected by falling objects, electrification, contact with high or low temperatures, stabbing, cutting, and scratching. Taipower's Occupational Health and safety Management System incorporates Hazard Identification and Risk and Opportunity Assessment Procedures to reduce risks through measures such as elimination, substitution, engineering controls, labels/warnings, management controls, use of personal protective gear, etc. These measures are adjusted or updated, when necessary, through meetings and discussions that determine compulsory control measures, and other refinements or improvements.

Statistics on Serious Work-Related Injuries in 2023

Worker Category	Employees			Construction Contractors
Gender	Male	Female	All Genders	All Genders
Total Number of Work Hours	48,138,598	9,859,713	57,998,311	53,499,080
Deaths Caused By Occupational Injuries (Number of People)	2	0	2	4
Deaths Caused By Occupational Injuries (Rate)	0.008	0	0.006	0.014
Severe Occupational Injuries (Number of People)	10	0	10	13
Severe Occupational Injuries (Rate)	0.041	0	0.034	0.048
Recordable Occupational Injuries (Number of people)	12	0	12	17
Recordable Occupational Injuries (Rate)	0.049	0	0.041	0.063
False Alarms (Number of People)	3	0	3	11
False Alarms (Rate)	0.012	0	0.010	0.041

Note: 1. Employees: Includes both dispatched and employed personnel

2. Contractors: Includes both contracted labor and self-employed workers

3. Total Working Hours: The total working hours of male and female employees at Taipower are calculated based on the overall total working hours according to the male to female ratio of Taipower employees

4. Rate of Death Caused By Occupational Injuries = (Number of deaths caused by occupational injury/Total hours worked) × 200,000 (refers to the rate per 100 employees based on 40 working hours per week for 50 weeks per year)

5. A Severe Occupational Injury is defined as an occupational injury that results in death or an injury that prevents a worker from returning to a pre-injury state of health within six months. This year, construction contractors didn't compile total person-work hours according to gender, so the data is unavailable. The statistical methods for this item will be improved in the future

6. Rate of Severe Occupational Injury (excluding deaths) = (Severe occupational injuries/Total hours worked) × 200,000

7. Rate of Recordable Occupational Injuries = (Number of recordable occupational injuries/Total hours worked) × 200,000

8. False Alarms refer to accidents related to or occurring in the course of work that cause no loss and do not involve casualties.

Analysis and Statistics of Occupational Injuries in 2023

Type of Worker	Total	Contact with High or Low Temperatures	Falls	Electric Shocks	Collapses	Stabbing, Cutting, Scratching	Struck	Trip
Employees	12 cases 2 deaths 10 individuals disabled	5 cases 5 individuals disabled	3 cases 3 individuals disabled	3 cases 1 deaths 2 individuals disabled	1 case 1 deaths	0 case	0 case	0 case
	Injury rate by accident category	42%	25%	25%	8%	0%	0%	0%
Contractors	17 cases 4 deaths 13 individuals disabled	5 cases 2 deaths 3 individuals disabled	2 cases 2 individuals disabled	3 cases 2 deaths 1 individuals disabled	2 cases 2 individuals disabled	2 cases 2 individuals disabled	2 cases 2 individuals disabled	1 cases 1 individuals disabled
	Injury rate by accident category	29%	12%	17%	12%	12%	12%	6%

Note: 1. Disaster Type Injury Rate = Number of casualties of the specific disaster type/Number of casualties of the entire year x 100%

2. The occupational injury data for Taipower employees does not include non-commuting traffic accidents that affected 16 people

In the event of a false alarm involving a Taipower employee or contractor, the department head or head of the host department at the site where the incident occurred shall serve as a convener and form a Unit Investigation Team that includes representatives of the Occupational Safety Department and the Taiwan Power Labor Union Branch to take charge of the investigation. If necessary, a member of the Department of Civil Service Ethics that is embedded in the unit may be invited to conduct a joint investigation. The unit where the incident occurred shall submit an Occupational Safety Accident Report within three working days from the day after the incident occurred. In extraordinary circumstances, a preliminary report may be submitted and later supplemented with relevant information.

Emergency Response Policy

Taipower conducts regular emergency response educational drills to practice responding to industrial safety accidents and improve emergency response capabilities. When any form of industrial safety accident affects employees or contractors, all units follow the Guidelines for Handling Industrial Safety Accidents and immediately engage in necessary first aid and rescue, promptly notify relevant units, and send personnel to conduct investigations. Subsequently, the Company conducts accident reviews to implement preventive measures in relevant units (departments) and conduct responsibility review meetings to discuss and weigh the responsibilities of relevant personnel.

Risk Assessment and Management

Taipower conducts hazard identification and risk assessments for its employees. The Company also places controls on unacceptable risk items. Risk assessments are subject to annual reviews and evaluations, and are adjusted and updated. Procedures for necessary control measures are determined for the event of non-routine circumstances such as:

Key Areas Of Improvement In Occupational Safety And Health Management

- A change or addition to the operating methods.
- A change to the working environment.
- The occurrence of an occupational accident.
- A change in the infrastructure, equipment, or raw materials provided by the organization or other units in the workplace.

In 2023, Taipower held approximately 160 disaster prevention and emergency response drills with around 12,000 participants in total. Additional statutory training related to occupational health and safety, such as training for occupational health and safety administrators or other supervisors, as well as the "Zero Accident Campaign" and Interactive Hazard Identification Training, were conducted at training institutes and external training organizations. In 2023, there were over 1,274 sessions of statutory occupational health and safety-related training, with approximately 80,106 participants.

To further enhance communication and coordination on safety and health matters with contractors, each unit holds safety and health consultation meetings (briefings or coordination meetings) before commencing contracted projects involving engineering work or goods and services of an engineering nature. Regular or irregular joint operation agreement meetings are also organized. These meetings involve relevant personnel from the department, representatives from other departments involved in joint operations, workplace supervisors of contractors, subcontractors, and occupational safety personnel. The meetings are convened to communicate and coordinate on work-related matters. Additionally, depending on the safety and health performance of contractors, each unit organizes occupational health and safety education training or seminars for the staff of contractors, and invites relevant personnel from the contractors to participate in an effort to assist the contractors in enhancing their safety knowledge and abilities. In 2023, Taipower held approximately 897 safety and health promotion meetings with contractors, with a total of 32,386 participants.

For units with a large number of industrial safety accidents or violations (including increased fines), Taipower seeks to improve and manage contractor performance by strengthening industrial safety inspections, conducting management by walking around, using CCTV to view results, issuing improvement notices, or imposing fines in accordance with the contract. In addition, Taipower has established Standard Operating Procedures for Public Opinion Reporting. For news media reports that have major deviations (reporting major or erroneous public opinions) that are sufficient to affect public opinion and Taipower's image, Taipower can quickly and effectively put forward a consistent response and immediately clarify erroneous reports to avoid the expansion of disputes.

Strategy for Future Refinement

Taipower's occupational injuries in the past ten years can be divided into three major categories: contact with high temperatures, electric shocks, and falls. Further investigation suggest that most injuries are caused by a series of factors: not executing or implementing risk assessments, workers not following procedures during tasks or lacking crisis awareness, a failure to implement the three basic tenets of occupational safety on-site, changes in management, failure to comply with standard operating procedures when working, failure to use protective equipment, lack of horizontal contact, or failure to properly control entry and exit of personnel.

In addition to continuing the current occupational health and safety management measures, the following key areas of improvement in occupational health and safety management will be given attention in the future:

Key Areas Of Improvement In Occupational Safety And Health Management

- Increase the weight of hazard identification training: Establish scoring standards for interactive hazard identification training in each unit to supervise its implementation by all units (including contractors). Include interactive hazard identification training in the annual performance indicators of each business department.
- Apply innovative technology, incorporate AI recognition in CCTV, and expand fall prevention virtual reality (VR) somatosensory training.
- Utilize a third party inspection mechanism: A total of 46 inspections were conducted by external occupational health and safety experts in 2023 through the third-party inspection mechanism.

Occupational Health Services

To promote the labor health service system and protect workers' welfare, the Regulations Governing the Labor Health Protection require business entities that employ 50 or more workers or have more than 50 laborers involved in tasks associated with special health hazards to employ or contract medical personnel that conduct on-site health management, occupational disease prevention, and other health protection matters. As of December 2023, 66 units of the Company had arranged for contracting physicians to provide on-site health services. Another 66 units have put in place nurses (50 units use full-time nurses, while 16 units use contract nurses). The medical personnel of these on-site health services assist in the analysis and evaluation of health examination results, determining proper work assignments, performing high-risk labor evaluations and case management, ensuring maternal health protection, and fostering work-related disease prevention. They also assist in implementing business promotions for things like labor health protection and health management to create a friendly workplace environment.

Taipower provides monthly health consultation and health promotion activities, including health lectures, influenza vaccination campaigns, cancer screenings, and physical fitness tests. In 2023, approximately 1,166 health consultations and health promotional activities were conducted. Additionally, employees can receive 8 hours of free psychological counseling and guidance per year through the Heart-to-Heart program to alleviate work-related stress and improve quality of life.

Health and Physical and Mental Care

Taipower recognizes that employee physical and mental well-being, coupled with excellent technical skills, are essential to achieving the Company's primary goal of ensuring a stable power supply. In December 1988, Taipower followed the model of "Teacher Chang's Voluntary Service" and established the "Heart-to-Heart" program internally. The program involves assigning Employee Assistance Officers to each unit and establishing external professional resources to implement an Employee Assistance Program (EAP). The program aims to assist in cultivating employee "soft power" at a spiritual level. In addition to organizing activities such as lectures, book clubs, and grassroots forums, Taipower also provides each employee with up to eight hours of funded counseling referral service per year. The Employee Assistance Program is designed to address work-related, personal, and emotional difficulties or problems faced by employees, with the goal of stabilizing organizational operations and enhancing company performance.

6.3.2 Labor-Management Communication and Collective Bargaining 2-25 2-30

Taipower attaches great importance to the voices and needs of all its professional partners. The Company provides channels for expressing diverse opinions, and actively responds to relevant suggestions to continuously create a labor-management environment that makes employees feel satisfied and builds trust in the Company.

Communication Performance

Communication Channels	2023 Performance
Labor-Management Conferences	Taipower holds regular labor-management conferences to foster effective communication. There were 12 labor-management conferences held at company and sub-system levels; interaction and communication between labor and management took place in the meetings.
Training	Various training courses are provided for employees on an ongoing basis so that staff can acquire vocational skills and communicate with the Company.
Intranet Websites	Provide company information and content and set up sections that are related to themes that employees care about (such as disclosure of business information, latest news, new personnel, transfer information, and employee rights). Content provided helps to achieve effective of internal information transmission.

Negotiations on Collective Agreements

In 2013, Taipower signed a collective agreement with the Power Labor Union. Following revisions to the Labor Standards Act, labor representatives and management reviewed and revised relevant provisions from the original collective agreement. The amended and renewed agreement was signed in March 2021. This agreement is periodically discussed at ongoing meetings. A total of 12 management-labor will be held in 2023. In addition to discussing revisions to the contents of some chapters, additional provisions will be discussed for chapters aimed at Labor-management Negotiation and Cooperation, Retirement and Resignation and Welfare, Training, and Health and Safety.

Number and Ratio of Employees Covered by the Collective Agreement

Item	2021	2022	2023
Total Employees	27,860	28,079	28,213
Number of Employees in the Union (people)	27,639	27,878	27,988
Number of Employees in the Union (%)	99.2%	99.3%	99.2%

Note: The provisions of the Company's collective agreement on labor conditions offer protection to all employees and are handled in accordance with government decrees, through superior authorities, and in alignment with relevant regulations at the Company.

Performance and Implementation of the Grievance System

Taipower's Guidelines for Processing Matters of Grievance Concerning Working Personnel help deal with issues that cannot be resolved through the Company's administrative system. The guidelines cover the following:

1. Employees who must adjust their job duties or be transferred to other departments, units, or regions due to personal or family reasons.
2. Employees who have been going through major changes or crises within their families and require the Company's involvement.
3. Employees who are not satisfied with the Company's systems and measures, or those who have filed complaints regarding contracting or oversight of construction projects, financial and procurement matters, or hand-over inspections.
4. Investigations and handling of other complaints.

Grievances and complaints filed by employees are handled by the Personnel Difficulty and Grievance Processing Team of the employee's unit. If the team is unable to handle the case or if the outcome is not acceptable to the employee involved, he or she may file an appeal with the Personnel Difficulties and Matters of Grievance Processing Committee.

In response to the trend of gender mainstreaming, policies and measures for the prevention and control of sexual harassment have been formulated, and the company has established channels for accepting sexual harassment complaints. If employees encounter sexual harassment, they should file a complaint with the Company's Sexual Harassment Complaint Review Committee, and the Company will carry out a complaint investigation and potentially undertake disciplinary actions.

If employees have any objections to their annual assessment results, in accordance with the Appraisal Measures for Personnel of Public Institutions Affiliated to the Ministry of Economic Affairs and Taipower's Notes on Annual Assessment Operations for Personnel Managers in Each Unit, they may within one month from the date of receiving written notification of the assessment results, submit a detailed report that narrates the reasons behind their objections and file a reply with supporting documents.

Taipower Sexual Harassment Grievance Channel

The Company is subject to sexual harassment complaints through the following contact channels:

Grievance hotline: (02) 2366-7730

Grievance e-mail: a960601@taipower.com.tw

6.4 Deepening Social Participation

6.4.1 Cultural Contributions

Taipower began to inventory and preserve cultural assets (other than buildings) in 2016 to preserve its history and enact a philosophy of sustainable development. To facilitate the process, the Company established a Cultural Heritage Preservation and Maintenance working group with the Vice President of Strategy and Administration serving as the convener of meetings. The working group dealt with the preservation of items that were important to cultural heritage, operations, and maintenance, with the goal of promoting preservation, research, and communication with society. Taipower adopted the strategies of research before display and exchanges, phased development, and rolling adjustment for its reviews of different cultural and historical data. The Company conducts interviews for oral history, and inspects, preserves, and displays the resulting cultural and historical data to promote resource sharing and activation, and as a means of fulfilling its corporate social responsibility.

Localization and Revitalization

Through the provision of electricity, power companies drive domestic industrial and economic development. In the process, companies like Taipower create tangible historical sites and intangible shared memories for the people of Taiwan. As social development and cultural preservation have become higher priorities in the public domain, Taipower has shifted from a development-oriented development model to one that integrates cultural preservation, creative thinking, the humanities, public welfare, and literature. The pursuit of this model has helped Taipower to make friends and to improve its corporate image among citizens.

■ Planning for the Power Industry Cultural Trail

To achieve the goal of prospering along with the community, Taipower is gradually developing a Taiwan Power Industry Cultural Pathway. Based on its inventory of power industry cultural assets, the Company is gradually building discourse and an implementation framework for a power industry cultural pathway. Throughout the process, Taipower has identified potential anchor points for the cultural pathway, so that it can plan a complete network of cultural pathways with different themes and development potentials. Taipower has strengthened its resource integration and interactions at different levels to create a cultural trail that belongs to Taipower, and thereby facilitate the sustainable preservation and provide motivation for the management of the power industry's heritage.

As such, Taipower continues to maintain and repair the cultural heritage of the power industry. Moreover, the Company encourages the industry to connect its cultural and historical archives with social resources. The Company also promotes co-prosperity with local communities and helps the general public discover or rediscover the culture of Taipower. By combing through the economic, social, and cultural interactions between the historical development of the local power industry and local communities, we are able to completely transfer local cultural and historical knowledge. Taipower has established local cultural archive exhibitions that are available to the general public through a reservation system. These exhibitions provide local communities with educational arenas and museums that activate the promotion, inheritance and deepening of local knowledge.

Taipower's main achievements in organizing cultural activities in 2023 were as follows:

Inventory of Cultural Assets: Taipower continues to inventory and preserve its cultural assets. Currently, there have been a total of about 400 cases of internal inventory taking, archiving, digitization, and packaging of cultural relics. In 2023, efforts were associated with the Department of System Operations and Blueprints from the Japanese Colonial Period.

Oral History Interviews: To preserve the intangible cultural assets of the power industry, oral history interviews were conducted in 2023. A total of 16 elderly veterans of the power industry were interviewed. The related audio, video, and transcripts of the interviews have been retained in the cultural heritage collection management system, and a video of interview highlights will be produced. A results presentation is expected in March 2024.

At 16th Arts and Business Awards ceremony held by the Ministry of Culture on November 16, 2023, Taipower won its fourth consecutive Award of the Year for Creativity. This year's award recognizes the Taipower Cultural and Creative Project on Decommissioned Transformer Boxes and Sun Moon Lake Sediment Reproductions. The Company also won the Cultural Sustainable Development Award for its Taiwan Power Industry Cultural Pathway Planning Project, and was further recognized with a Permanent "Gold" Award."

Planning and Establishment of a Cultural Relics Center: The cultural relics center was completed in July 2023. It is Taiwan's first cultural heritage collection center of a state-owned enterprise. Based on the cultural asset inventory, the cultural relics center has four core functions: it serves as a professional collection center, establish a sharing platform, access to digital collections, and cultural exchange center.

■ Design Innovation in Electrical Literature

To convey Taipower's efforts in promoting cultural heritage preservation and to share the history of Taiwan's power development, c, we continue to collaborate with internal and external teams. Through various types of curations, we showcase power cultural assets and Taipower's progressive power intelligence. In 2022, the Company collaborated with the National Taiwan Museum to organize a special exhibition titled "Island-Power Life – The Era of Taiwan's Power." The series of promotional activities were extended in 2023 under a theme titled "A Century of Mutual Prosperity - Recovery of Renewable Energy." Both initiatives encouraged people to extend their understanding of energy related science through engaging with and learning from electrical literature and stories from the power industry,

Professional Electricity Curation – "Power Up! The Age of Electricity In Taiwan"

Taipower has held electricity-themed exhibitions since 2017 and continues to present valuable cultural resources from the power industry through multiple forms. In 2022, Taipower was invited to jointly present a special exhibition titled "Power Up! The Age of Electricity in Taiwan" with the National Taiwan Museum, the oldest museum in Taiwan. The exhibition is planned as a permanent exhibition for long-term display and interaction with the public. To expand the popularity of the special exhibition and bring more people into the exhibition hall, Taipower and the National Taiwan Museum will cooperate in the Special Exhibition Promotion Project with renewable energy as the main theme starting from August 2023. Related events will include power plant tours, sharing events, and electricity workshops, that utilize professional tour guides at the special exhibition. Through the exhibition, visitors will explore stories from the power industry and will extend their understanding of popular science related to energy.

The Promotion of Popular Science Education on Energy

Taipower Electric Power Workplace Youth Experience Visiting Program

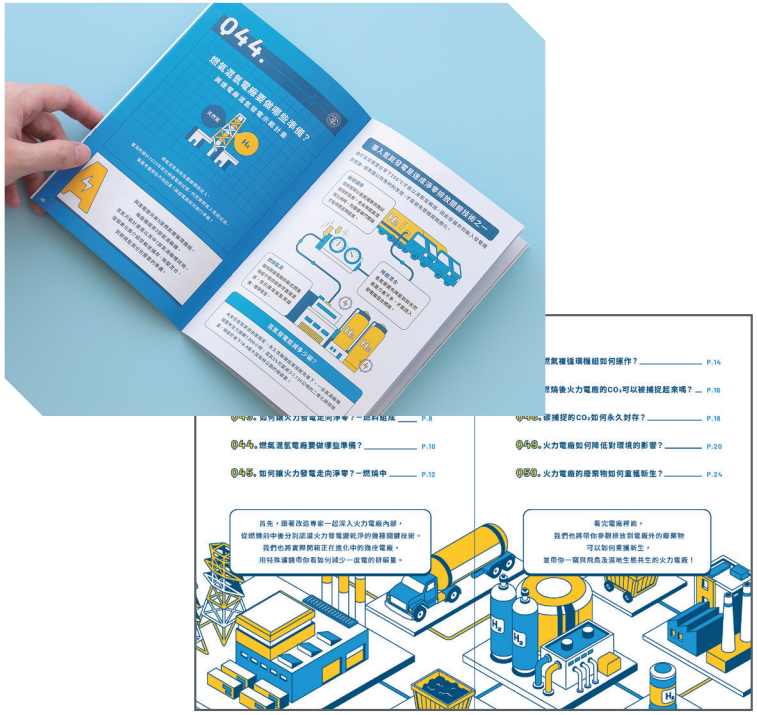
Taipower actively breaks down barriers and invites teachers and students from various colleges and universities to explore the electric power field. The Company's front-line engineers translate professional terms and convey electric power knowledge and information into simple and easy-to-understand terms, thereby guiding these students to understand the electric power profession, energy transformation, along with issues like net zero electricity and ecological conservation. The visitation program also takes into account the impacts of declining birth rates and external competition, and the difficulties of talent recruitment and retention in recent years. In addition to the important task of facilitating communication, Taipower also uses the program to recruit talented human resources.

Scientific Education – Popular Science Train Tours the Island in 2023

Taipower cooperated with the National Science and Technology Council and Taiwan Railway Corporation to have net-zero themed trains tour 29 train stations in 17 counties and cities in Taiwan. The trains reached about 20,000 students with popular science knowledge and trained high school students from 4 schools to become green energy seed instructors at the Company's D/S One exhibition hall. Students subsequently delivered D/S One green energy lesson plans in the carriages. During the event, a booth with energy games was also set up at the Banqiao Train Station to promote renewable energy knowledge.

Electric Power Made Easy – Taipower's Popular Science Knowledge Handbook

The "Taipower Popular Science Knowledge Handbook" project began with the simple aims of deepening the quality of electric power education, providing communication materials about the electric power field, and establishing communication with students from junior high school up. An external design team was used to translate complex electricity issues into easy-to-understand graphics and text. The handbook project uses a Q&A format and answers 50 frequently asked questions over five volumes. The contents topics cover electricity knowledge, renewable energy development, electricity trading and dispatching, energy storage technology and smart grids, and thermal power plant transformation and net-zero carbon reduction. The first printing of 1,000 sets was used for visitors to important power sites. Electronic versions and briefing versions were also prepared for internal and external download so that the pace of promotion could be increased.



Smart Hands-on Electricity Generation –Taipower D/S ONE

Taipower D/S ONE held a net-zero technology exhibition at the NTU Sports Center in August of 2023. Devices with augmented reality functions were provided to attract the participation of individuals from industry, government, and academia. In September, the Green Light Bulb Emerging Designer Exhibition was held, and projects from four teams that were closely connected to electricity issues were selected to exhibit their designs. This allowed guests to get a closer look electricity through a creative lense. In November, the 2023 Taiwan Science Festival at the National Taiwan Science Education Center allowed the public to play games that fostered a greater understanding of the principles surrounding net-zero, sustainability, and power generation. In December, Taipower and Q-Square co-organized a Special Exhibition on Solar Energy Storage so the public could learn about photovoltaics and energy storage.

Delivering Knowledge Through Design – kW Design Award

To engage the public while promoting electricity and energy-related issues, Taipower has launched the kW Design Awards. The Company has called for creative ideas from high school, vocational school and college students as well as from members of society at large. Submissions are accepted in three categories: Communicative Design, Multimedia Design, and Creative Product Design. The event has so far attracted more than 30,000 participants and nearly 25,000 submissions. In 2023, it reached students from a total of 22 colleges, universities and high or vocational schools through campus tours, and held 3 promotional briefings in Northern, Central and Southern Taiwan with a total of 1,515 participants. This year's theme was "WATT'S NEXT," and participants were invited to consider the infinite future possibilities for electricity from the seven key solutions to achieving net-zero electricity. The seven key solutions include: wind, solar, thermal, marine, hydrogen, storage, and sinks, as well as renewable energy and daily electricity consumption.

Save Energy, Love the Earth, and Start from a Young Age – Taipower's Interactive Storytelling Campaign

Since 2011, Taipower has been conducting interactive storytelling campaigns targeting children aged 4 to 6 in kindergartens. The campaign aims to promote concepts of electrical safety and energy conservation to the young children. In 2023, a total of 63 sessions were held in kindergartens near Taipower's power plants, substations, and service centers in the Northern, Central, and Southern regions of Taiwan. Approximately 6,300 students and teachers participated in these sessions. The Company partnered with Taichung's Chungyo Department Store and Kaohsiung's Dream Mall to host events, but also, for the first time, cooperated with the Ministry of Health and Welfare's North Region Children's Home, which provides long-term care for orphans and poor children, and the Chensenmei Social Welfare Foundation, which tutors children with intellectual disability, to organize charity performances. The goal was not only to convey to children the concepts of saving energy and loving the Earth, but also to build good relationships with external groups, government agencies, and village chiefs.

Investment in Cultural and Artistic Activities

From 2018 to 2023, Taipower invested in art bank painting rental activities and performances to provide steady support and encouragement to young Taiwanese artists and performers. Through these professional exhibitions, the overall artistic and cultural atmosphere of the office space has improved and staff have been subtly influenced and transformed from the inside out. The exhibits are also accessible to the general public.

Statistics on Painting Rentals and Exhibition Activities

2023	33 Number of cases	Painting Rentals NT$147,651
	8 Number of cases	Art Gallery NT$30,000
	5 Number of cases	Exhibitions and Activities in the Grand Hall NT$250,400
2022	84 Number of cases	Painting Rentals NT$545,575
	14 Number of cases	Exhibitions and Activities in the Grand Hall NT$206,797
2021	72 Number of cases	Painting Rentals NT$467,248
	2 Number of cases	Art Gallery NT$25,000
	13 Number of cases	Exhibitions and Activities in the Grand Hall NT$109,000

Taipower hopes to the quality of local cultural relic exhibition halls through upgrades to software and hardware. Ideally, the halls can be used as bases for connecting with local cultural, historical, and community organizations. These connections can then be used to promote the greater integration of cultural resources from various power fields with historical contexts of local development to create value through the enhanced preservation, maintenance, display, education, and value-added applications. Paths can subsequently be formed through the connections between local cultural exhibition halls in Northern, Central, Southern, and Eastern Taiwan, and then combined to create a broader cultural pathway with identification systems and indicators. The broader cultural pathway will allow for a deepening of connections through curation, experiential activities, and education – which can subsequently be leveraged for use in tourism marketing with the goal of revitalization local economies and tourism.

TPCreative: A Circular Economy Brand

TPCreative is organized around the concept of circular economies and works to develop cultural and creative products that incorporate Taipower elements from reclaimed and decommissioned materials that are produced in the process of power generation. TPCreative draws people closer to the Company through commodity sales and enhances the Company's corporate image. TPCreative achieved the following in 2023:

1. The "Decommissioned Transformer Box and Sun Moon Lake Sediment Reproduction Project" was recognized with the "Creativity Award of the Year" at the Ministry of Culture's 16th Arts and Business Awards.
2. The "Sun Moon Lake Sediment Manhole Cover Coaster and Water Cup Product and Packaging Design" jointly planned with "2 by Wu&Chen" was recognized with two stars in the "Design Aesthetic Innovation Category" of the 2023 Food Innovation Awards.
3. The Taiwan Design Research Institute (TDRI) invited TPCreative to participate in the "2023 Bangkok Design Week" held by the Thailand Creative & Design Center (TCDC). Taipower's decommissioned transformer box pads and Sun Moon Lake sediment manhole cover coasters were exhibited.
4. TPCreative participated in the "Sustainability: Sensing & Insight" online seminar on sustainability issues as a brand sharer. The seminar was held on the innovation platform of the Hyundai Motor Group, and TPCreative introduced its practical experiences and outcomes in developing decommissioned materials.
5. The DIY course "Decommissioned Electric Meter Seal Lock Workshop" was jointly offered with Miniwiz. The course utilizes Miniwiz's expertise in plastic reuse to creatively recreate Taipower's decommissioned seal locks. Participants can experience first-hand how decommissioned electric power materials can be used to make mobile phone charging trays.
6. The "A Cup of Chill" marketing campaign was launched in cooperation with Cama Café. The campaign promotes TPCreative's cultural and creative brand through cross-industry co-branding. During the campaign, the Cama flagship store created a coffee tasting experience that was matched with sediment manhole cover coasters. The campaign was then extended and TPCreative participated in the Songyan Market at the Songshan Cultural and Creative Park.
7. The "Decommissioned Transformer Box" and "Sun Moon Lake Sediment" product series were exhibited in "From Waste to Worth" organized by The Place Taipei.
8. TPCreative was invited to set up a booth in the sustainability market at the marathon at the "2023 Standard Chartered Taipei Charity Marathon."

6.4.2 Management of Charity Events

Taipower is committed to combining social resources to fulfill its social responsibilities. The Company holds to and shares the business principles of integrity, care, service, and growth. Consequently, it actively encourages employees to participate in volunteer and community service activities that enhance Taipower's corporate image. The Company organized a "Taipower Volunteer Service Team," which mainly focuses on four major themes: energy conservation and carbon reduction services, community services, social and humanistic care, and environmental protection. The charity activities organized by Taipower in 2023 reached 57,000 people.

Public Welfare and Sponsorship

Taipower drives Taiwan's economic development and continues to strengthen its partnerships to generate symbiosis and mutual prosperity within society by continuously investing in cultural, artistic, and charitable activities. This has deeply ingrained the public image of Taipower as a practitioner of corporate social responsibility. Electric power construction causes changes and impacts regional environments, so neighborly work and projects are responsible for strengthening good interactions with surrounding areas to achieve the purpose of mutual prosperity. Neighborly projects adopt the strategy of pursuing local public welfare activities. For this, management priorities include emergency relief, living assistance for low-income households, welfare for the elderly and people with disabilities, education, culture, and other public welfare initiatives. In 2023, Taipower undertook 4,000 neighborhood care projects and collected approximately NT$100 million in donations.

Taipower compiles the approved projects for each unit every month and discloses the information on the official website: https://info.taipower.com.tw/tc/index.aspx

The Candied Hawthorn Troupe Presented the “Return to Electric Mountain” Children's Play

Taipower strongly believes in both the importance of electricity education, and that the electricity industry should take a pivotal role in the delivery of that education. Consequently, Taipower cooperates with children's theater groups to communicate the importance of developing diverse electricity sources and fully utilizing energy in a simple, effective and entertaining way.

End-of-Year Care Program for Isolated Seniors

Since 2005, all of Taipower’s power plants and district business offices have invited elderly people that live alone to gather for a special Lunar New Year meal. The units also deliver care packages and arrange for the seniors to buy specialized seasonal goods around the Lunar New Year. These programs help the Company to fulfill its corporate social responsibility and also help isolated, elderly members of the community to enjoy the holidays. During the COVID-19 pandemic, the Company modified the programs to reduce the risk of large gatherings. Rather than holding large events, the Company focused on individual interactions such as accompanying elderly individuals on shopping trips to purchase New Year goods, supplying and delivering Lunar New Year dishes, providing gift vouchers for use in acquiring daily necessities, and providing assistance with cleaning homes. Approximately 4,000 participants were involved in these activities.

Seeds of Hope: The Hope Cultivation Project

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 burdens of participating students. It does this by providing approximately 75 summer job opportunities every year. In 2023, the program assisted 68 college students and served 320 school age children. The program is illustrative of Taipower's commitment to deeply engaging with indigenous communities. Through the program, students are not only provided with opportunities for personal growth and development, but also encouraged to strengthen their connections to their hometowns and to give back to their communities.

Reading Promotion: The Firefly Children's Reading Project

In 2007, Taipower established multiple after-school programs to promote ethical and art education among children in remote areas of Hualien and Taitung Counties. 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. Through the program, the Company seeks to reduce the gap between urban and rural resource availability and helps children improve their knowledge and skills. About 4,500 people were served by the project in 2023. Moreover, through the 2023 Firefly Children's Reading Project, a total of 150 teachers and students from eight tutoring classes for children from disadvantaged families in Taitung and Hualien gathered at Baosang Junior High School's activity center in Taitung City, to engaged in a "Together, Electricity Showdown" – a fun competition based on eight processes of producing electricity. The event received positive coverage from local media.

Taipei's "Satoyama" Event and Prayer Events

"Satoyama" is a cultural event that combines art, religion, and regional revitalization. The event has received positive reviews from all sectors. Taipower also cooperated with the U-Theatre Culture & Arts Foundation to participate in Zhinan Temple's Mountain and River Festival. The event, called "Holding a Lantern to See the Heart – The Thousand Step Prayer," asked participants to join a ceremony for passing on the "electric and fire heart lamp." Holding the eternal heart lamp made from the secondary magnetic pipe casing of Taipower's discarded transformer, participants walked the thousand step trail, and in so doing, formed an action art display that conveyed images of the power grid connecting civilization while coexisting with the environment.

In 2023, President Wang, Yao-Ting led over 80 managers to participate in the event. The prayer process not only brought spiritual cleansing, but also deepened the Company's relationship with local communities, and strengthened Taipower's image as a sustainable company that thrives together with nature.

Cultivating Sports and Exerting Social Influence

Taipower is dedicated to promoting grassroots sports and giving back to society through various charitable and promotional events. These included events such as the Caring Train, Ball Fun Power Camp, and the Taipower Cup Tournament. These activities have deepened the Company's involvement in grassroots sports. Through long-term training and competitions, many outstanding star players have been nurtured over the years. This has led to impressive performances by Taipower's sports teams in various arenas. Team members have achieved numerous victories and even earned spots on national teams. Taipower has become a cradle for national athletes, bringing honor to both the Company and the country. It is undoubtedly one of the most supportive enterprises for ball sports in the nation.

■ Elevating the Level of Sports Performance

Taipower has established a comprehensive career support system for players that not only focuses on competition, practice, and community service activities but also on nurturing players' professional skills. This prepares them for a career within Taipower after their athletic careers conclude. The lifelong employment system allows players to focus on rigorous training without worrying about the future. It encourages them to strive for greater glory on the field, so they can leave a mark as outstanding athletes in the domestic sports arena while strengthening the nation's athletic capabilities, effectively fulfilling the government's goals of promoting sports policy.

■ Rooted in the Grassroots Level of Sports

To enhance the level of domestic sports and to deepen grassroots sports development, we have been actively conducting Caring Train programs and providing coaching on ball skills in remote and underprivileged areas. During the summer vacation, each sports team organizes Fun Electric Camp activities, where players teach children various ball sport techniques, help them to develop positive sports habits, improve their physical fitness, help them learn teamwork, and foster a spirit of sportsmanship. These initiatives aim to promote nationwide sports activities and cultivate talented athletes. Additionally, we hold the "Taipower Cup" competition to provide a competitive platform for discovering future sports stars. Through these events, students have the opportunity to showcase their skills, learn from each other, and master professional techniques and sportsmanship thereby nurturing the future of national sports. Along with diverse sports-related public welfare activities like the Caring Train, FunPower Camps, and Taipower Cup, the Company is positively influencing the promotion of Taiwan's sports culture.

FunPower Camps

FunPower Camps are summer activities organized by Taipower. Each camp provides students with a fun experience in various sports. Taipower athletes (from baseball, badminton, volleyball, soccer, and basketball players) serve as coaches in the camps to interact with and guide the students. The camps have been held since 2016. For the first time, 6 teams were integrated to hold 10 large-scale camps during summer vacation, setting the tone as the first year of FunPower Camps with a total of about 2,500 elementary school students participating. In response to the high expectations of students and parents, Taipower continued to organize FunPower Camp activities the following year, and increased the number of camps to 12 with the number of participants increasing to 3,600, and received enthusiastic feedback. However, the camps were suspended due to the COVID-19 pandemic in 2020-2022, and were not resumed until 2023. The number of camps was maintained at 12, continuing to inject energy into Taiwan's sports. Through these activities, Taipower aimed to provide children with a joyful and fulfilling summer while promoting grassroots sports, elevating the level of sports in Taiwan, and fostering a sports culture in society.

The Caring Train

Recognizing the lack of educational and sports resources in remote areas, Taipower, as a responsible corporation, has been actively involved in the Caring Train program. In addition to participating in various competitions, the Company's sports teams regularly visit remote areas and organizations that serve the disadvantaged to deliver love and hope to every corner of Taiwan. In 2023, the teams visited 16 schools to provide guidance in various sports and to share player experiences. For example, the baseball team visited Guangfu and Beishi Junior High Schools, along with Beishi Elementary School in Taichung City and Miaoli Junior High School in Miaoli County to coach young baseball players. The men's volleyball team went to Yuanli Senior High School in Miaoli County, Fangliao Elementary School and Saijia Elementary School in Pingtung County, and the women's volleyball team went to Minquan Elementary School and Minsheng Elementary School in Namasia District, Kaohsiung City, Beichen Elementary School and Beigang Senior High School in Yunlin County to interact with young players. The women's badminton team went to Jinlung Elementary and Linkou Elementary School in New Taipei City to introduce the sport of badminton to elementary school students. The soccer team went to Zhonghe Elementary School, Heping Elementary School, and Xincheng Elementary School in the Heping District of Taichung City to teach elementary school children soccer skills and inspire student interest in learning through entertainment. These efforts show that Taipower actively supports the government's promotion of sports for all.

The Taipower Cup

Since 2018, Taipower has been promoting the sports culture of ball games in Taiwan by encouraging widespread participation in sports and fostering physical and mental well-being by holding the first Taipower Cup Volleyball Tournament. The highly anticipated Fourth Taipower Cup Volleyball Tournament was held in 2022, and gathered teams from 32 elementary schools in 3 counties and cities including Tainan, Kaohsiung, and Pingtung to compete on the same field. In 2023, the Fifth Taipower Cup Volleyball Tournament hosted teams from 36 elementary schools in 3 counties and cities, including Tainan, Kaohsiung, and Pingtung.

In 2019, the Company's soccer team organized the 1st Taipower Cup Soccer Invitational Tournament at the Hsinta Power Plant. Nine elementary school teams were invited to participate. In 2020, 2021, 2022, and 2023, the second, third, fourth, and fifth soccer invitational tournaments were held, with 12 elementary school teams participating each year.

The inaugural Taipower Cup Basketball Invitational Tournament was held in 2020. Six elite, HBL high school girls' basketball teams were invited to compete. The second, third, and fourth basketball invitational tournaments were held in 2021, 2022, and 2023. It is worth mentioning that the fourth tournament not only invited senior high school trams, but also expanded to junior high school teams, providing participating teams with the opportunity to improve through competitive play in preparation for the upcoming HBL and JHBL challenges.

Through these events, Taipower players pass on their professional skills and passion for sports, cultivating discipline and team spirit among young players. These efforts have garnered widespread praise and positive responses from the public, allowing the community to recognize Taipower's dedication to promoting sports.

GRI Standards Index

Statement of Use	Taiwan Power Company Limited has reported content for the period of January 1, 2023 to December 31, 2023, in accordance with the GRI guidelines.
GRI Standard Used GRI 1	GRI 1: Foundation 2021
Applicable GRI Sector Guidelines	No applicable GRI sector guidelines.

GRI Standards	GRI Items	References	Page/URL
GRI 2: General Disclosures (2021)			
The Organization and Its Reporting Practices			
GRI 2: General Disclosures (2021)	2-1 Organizational details	1.1.1 Taipower Profile	27
	2-2 Entities included in the organization's sustainability reporting	Reporting Principles	4
	2-3 Reporting period, frequency and contact point	Reporting Principles	4
	2-4 Restatements of information	NA	-
	2-5 External assurance	Assurance Statement	121
Activities and Workers			
GRI 2: General Disclosures (2021)	2-6 Activities, value chains and other business relationships	1.1.1 Taipower Profile 1.5.1 Supplier Management 1.5.2 Creating a Sustainable Supply Chain	27 48 51
	2-7 Employees	6.2.1 Talent Management and Development	97
	2-8 Workers who are not employees	6.2.1 Talent Management and Development	97
Governance			
GRI 2: General Disclosures (2021)	2-9 Governance structure and composition	1.2.1 Governance Framework 1.3.1 Organizational Structure of the Sustainable Development Commission (SDC)	31 39
	2-10 Nomination and selection of the highest governance body	1.2.1 Governance Framework	31
	2-11 Chair of the highest governance body	1.2.1 Governance Framework	31
	2-12 Role of the highest governance body in overseeing the management of impacts	1.3.1 Organizational Structure of the Sustainable Development Commission (SDC)	39
	2-13 Delegation of responsibility for managing impacts	1.3.1 Organizational Structure of the Sustainable Development Commission (SDC)	39
	2-14 Role of the highest governance body in sustainability reporting	1.3.1 Organizational Structure of the Sustainable Development Commission (SDC)	39
	2-15 Conflicts of interest	1.2.1 Governance Framework	31
	2-16 Communication of critical concerns	1.3.1 Organizational Structure of the Sustainable Development Commission (SDC)	39
	2-17 Collective knowledge of the highest governance body	1.2.1 Governance Framework	31
	2-18 Evaluation of the performance of the highest governance body	1.2.1 Governance Framework	31
	2-19 Remuneration policies	1.2.1 Governance Framework	31
	2-20 Process to determine remuneration	6.2.2 Employee Rights and Benefits	101
	2-21 Annual total compensation ratio	6.2.2 Employee Rights and Benefits	101
Strategy, Policies and Practices			
GRI 2: General Disclosures (2021)	2-22 Statement on sustainable development strategy	Statement from the Chairman	2
	2-23 Policy commitments	6.1.1 Human Rights Policy	95
	2-24 Embedding policy commitments	1.3.1 Organizational Structure of the Sustainable Development Commission (SDC)	39
	2-25 Processes to remediate negative impacts	6.1.1 Human Rights Policy 6.3.2 Labor-Management Communication and Collective Bargaining	95 107
	2-26 Mechanisms for seeking advice and raising concerns	5.2.2 Refinement of customer services	92
	2-27 Compliance with laws and regulations	1.2.3 Integrity and Compliance	36
	2-28 Membership associations	Communication with stakeholders	16
Stakeholder Engagement			
GRI 2: General Disclosures (2021)	2-29 Approach to stakeholder engagement	Communication with stakeholders	16
	2-30 Collective bargaining agreements	6.3.2 Labor-Management Communication and Collective Bargaining	107
GRI 3: Material Topics (2021)	3-1 Process to determine material topics	Analysis of Material Topics and Communicating with Stakeholders	12
	3-2 List of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
Stability and Reliability of Power Supply			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-1 Infrastructure investments and services supported	2.2.2 A Robust Transmission and Distribution System	60
	203-2 Significant indirect economic impacts	2.2.1 A Stable Power Supply and Generation System 2.3.1 Promoting Power Transformation	57 62
Diversification of Renewable Energy Development			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-2 Significant indirect economic impacts	2.3.1 Promoting Power Transformation 2.3.2 Diversification of Renewable Energy Development	62 63

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GRI 305: Emissions (2016)	305-4 GHG emissions intensity	1.3.2 Moving Towards Net Zero Emissions 2.3.2 Diversification of Renewable Energy Development 3.1.1 Environmental Policy and Goals	41 63 68
Power Plant Renewal and Decommissioning			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-1 Infrastructure investments and services supported	2.2.1 A Stable Power Supply and Generation System 2.2.2 A Robust Transmission and Distribution System	57 60
Energy Efficiency			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-2 Significant indirect economic impacts	2.2.1 A Stable Power Supply and Generation System	57
GRI 302: Energy (2016)	302-1 Energy consumption within the organization 302-4 Reduction of energy consumption	3.1.2 Energy resource management	70
Implementing Net Zero Strategies in Response to Climate Change			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 201: Economic Performance (2016)	201-2 Financial implications and other risks and opportunities due to climate change	1.4.1 Taipower actively responds to climate change risks in the long term	44
GRI 305: Emissions (2016)	305-1 Direct (Scope 1) GHG emissions	3.2.1 GHG Management	71
	305-4 GHG emissions intensity	1.3.2 Moving Towards Net Zero Emissions 3.2.1 GHG Management	41 71
Safety Management and Crisis Response			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-1 Infrastructure investments and services supported	2.1.2 Increase adaptive capabilities	56
	203-2 Significant indirect economic impacts	1.2.2 Risk Management 6.3.1 Occupational Safety and Health	34 102
Corporate Governance and Sustainable Management			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-2 Significant indirect economic impacts	1.1.2 Operational Performance 1.2.1 Governance Framework	28 31
GRI 205: Anti-Corruption (2016)	205-1 Operations assessed for risks related to corruption 205-2 Communication and training about anti-corruption policies and procedures 205-3 Confirmed incidents of corruption and actions taken	1.2.3 Integrity and Compliance	36

GRI Standards	GRI Items	References	Page/URL
Worker Health and Safety			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 403: Occupational Health and Safety (2016)	403-1 Occupational health and safety management system 403-2 Hazard identification, risk assessment, and incident investigation 403-3 Occupational health services 403-4 Worker participation, consultation, and communication on occupational health and safety 403-5 Worker training on occupational health and safety 403-6 Promotion of worker health 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships 403-9 Work-related injuries	6.3.1 Occupational Safety and Health 6.3.2 Labor-Management Communication and Collective Bargaining	102 107
Demand-Side Management and Energy Conservation			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-2 Significant indirect economic impacts	5.1.1 Demand Side Management Measures 4.1.1 Smart Grid Action Plan	87 81
GRI 302: Energy (2016)	302-5 Reductions in energy requirements of products and services	5.2.1 Promoting an Electricity-saving Society	91
Accessibility and Affordability of Electricity			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 203: Indirect Economic Impacts (2016)	203-1 Infrastructure investments and services supported	2.2.2 A Robust Transmission and Distribution System	60
	203-2 Significant indirect economic impacts	1.1.2 Operational Performance 5.1.1 Demand Side Management Measures	28 87
Talent Management and Development			
GRI 3: Material Topics (2021)	3-3 Management of material topics	Analysis of Material Topics and Communicating with Stakeholders	12
GRI 401: Employment (2016)	401-1 New employee hires and employee turnover 401-2 Benefits provided to full-time employees that are not provided to temporary or parttime employees 401-3 Parental leave	6.2.1 Talent Management and Development 6.2.2 Employee Rights and Benefits	97 101
GRI 404: Training and Education (2016)	404-2 Programs for upgrading employee skills and transition assistance programs		

SASB Materiality Map for the Industry

Topics	Code	Accounting Metric	Reference	Page	Corresponding Content
Activity Metric	IF-EU-000.A	Total number of users	Taipower's Value Chain and Operational Elements	5	Total number of users: 15.14 million
	IF-EU-000.B	1. User power supply 2. Customer power consumption (sold) by percentage	Taipower's Value Chain and Operational Elements	5	1. User power supply 233 billion kWh: Industrial: 130.6 billion kWh, Residential: 48.7 billion kWh, Commercial: 35.8 billion kWh, Other: 17.9 billion kWh 2. Customer power consumption (sold) by percentage: Industrial: 56%, Residential: 21%, Commercial: 15%, Other: 8%
	IF-EU-000.C	1. Total length of power transmission lines 2. Total length of distribution lines	Taipower's Value Chain and Operational Elements	5	1. 18,230.3 circuit kilometers of transmission lines in 2023 2. 422,640 circuit kilometers of distribution lines in 2023
	IF-EU-000.D	Total power generation	2.2.1 A Stable Power Supply and Generation System	57	The total power generation of 174.5 billion kWh was composed of 149.7 billion kWh (85.8%) of thermal generation, 17.2 billion kWh (9.9%) of nuclear generation, 3.0 billion kWh (1.7%) of pumped-storage hydropower generation, and 4.6 billion kWh (2.6%) of renewable generation
	IF-EU-000.E	Total power purchased	2.2.1 A Stable Power Supply and Generation System	57	Total power purchased: 71 billion kWh
Greenhouse Gas Emissions and Energy Resource Planning	IF-EU-110a.1	1. Gross global Scope 1 emissions 2. Emissions-limiting regulations and emissions-reporting regulations	3.2.1 GHG Management	71	1. Scope 1 GHG emissions of 93.48 million tons of CO_{2e} 2. No regulations on emission limits and disclosures
	IF-EU-110a.2	Greenhouse gas (GHG) emissions associated with power deliveries	3.2.1 GHG Management	71	CO_{2e} Emissions of 92.88 million tons of CO_{2e} in 2023
	IF-EU-110a.3	Discussion of long- and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	3.2.1 GHG Management	71	Regarding the short, medium, and long-term strategies and objectives of Taipower's management of scope 1 emissions, please refer to 3.2.1
	IF-EU-110a.4	1. The number of customers served in markets subject to the Renewable Proportion Standard (RPS), and 2. RPS target percentage completion by market	-	-	Given Taiwan's renewable energy and other sources of electricity are all connected to the grid and mixed with other sources of electricity, it is impossible to distinguish renewable users from other users independently
Air Quality	IF-EU-120a.1	Air emissions of the following pollutants: (1) NOx (2) SOx (3) PM Percentage of each in or near areas of dense population	3.2.1 GHG Management	71	(1) NO_X: 160 kg/GWh (2) SO_X: 77 kg/GWh (3) PM: 5 kg/GWh The emission ratio in densely populated areas is 100%
Water Resources Management	IF-EU-140a.1	1. Total water consumed 2. Water intensity	3.2.2 Improving Water Resource Use Efficiency	73	1. The total water consumption of thermal power plants was 8,488,819 cubic meters; the total water consumption of nuclear power plants was 241,100 tons 2. The water intensity of thermal power plants was 52.17 tons /GWh; the total water consumption of nuclear Power plants was 4.06 tons /NT$ millions
	IF-EU-140a.2	Number of incidents of non-compliance associated with water quantity and/or quality permits, standards and regulations.	1.2.3 Integrity and Compliance	36	There were no violations of water resources regulations by Taipower in 2023
	IF-EU-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks.	3.2.2 Improving Water Resource Use Efficiency	73	Please refer to 3.2.2 for information on water resources management

Topics	Code	Accounting Metric	Reference	Page	Corresponding Content
Coal Ash Management	IF-EU-150a.1	Amount of coal combustion residuals (CCR) generated; percentage recycled	3.2.3 Waste Management	74	The total coal ash production in 2023 was 2.089 million tons, with a reuse rate of 94.8%
	IF-EU-150a.2	Total number of coal combustion residual (CCR) impoundments, broken down by hazard potential classification and structural integrity assessment	3.2.3 Waste Management	74	For detailed reporting on coal ash accumulation, please refer to 3.2.3 for a table titled, "Diameter, Height, and Actual Controlled Ash Levels of Fly Ash Silos at Various Coal-fired Power Plants"
Energy Affordability	IF-EU-240a.1	Average retail electric rate for (1) residential, (2) commercial, and (3) industrial customers	1.1.2 Operational Performance	28	In Taiwan, users are not differentiated based on 500 MWh, 1000 MWh of use. The average retail electricity prices are as follows for specific groups of users: (1) residential 2.6048 (dollars/kWh), (2) commercial 3.5015 (dollars/kWh), (3) industrial 3.1076 (dollars/kWh)
	IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	5.1.1 Demand Side Management Measures	87	
	IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	-	-	In 2023, Taipower cut off power to 50,125 households due to non-payment, and the percentage reconnected after payment within 30 days will be 100%.
	IF-EU-240a.4	Discussion of impact of external factors on customer affordability of electricity, including the economic conditions of the service territory	1.1.2 Operational Performance	28	Taipower is committed to reducing energy costs and environmental impact through continuous technological innovation and energy transformation, and providing stable and affordable power services. Taiwan's residential and industrial electricity prices are the fifth-lowest and third-lowest in the world, respectively.
Workplace Health and Safety	IF-EU-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	6.3.1 Occupational Health and Safety	102	1. Total Recordable Incident Rate (TRIR) of 3.4% 2. Fatality rate of 0.6% 3. Near-Miss Frequency Rate (NMFR) of 1%
User Efficiency and Demand	IF-EU-420a.1	Proportion of electricity revenue from (1) decoupling (2) loss revenue adjustment mechanism (LRAM) rate structure	-	-	Not applicable. (LRAM is the profit calculation system adopted by the US power industry)
	IF-EU-420a.2	Percentage of electric load served by smart grid technology	3.1.1 Environmental Policy and Goals 4.2.2 Improving the Accuracy of Renewable Energy Generation Prediction	68 84	Smart meters covered 79.2% of the country's electricity consumption information
	IF-EU-420a.3	Customer electricity savings from efficiency measures, by market	5.2.1 Promoting an Electricity-Saving Society	91	A total of 1.81 billion kWh of electricity were saved in 2023
Nuclear Safety and Crisis Management	IF-EU-540a.1	Total number of nuclear power units, broken down by results of most recent independent safety review	-	-	Not applicable. This metric requires that the number of nuclear power plants must be classified according to the US NRC Action Matrix Column. Currently, there are only 2 nuclear power plants in operation in Taiwan
	IF-EU-540a.2	Description of efforts to manage nuclear safety and emergency preparedness	2.1.2 Increase Adaptive Capabilities	56	Regarding Taipower's measures to ensure nuclear energy safety, please refer to 2.1.2 for details
Grid Resiliency	IF-EU-550a.1	Number of incidents of non-compliance with physical or cybersecurity standards or regulations	1.2.3 Integrity and Compliance	36	3 labor penalties, 12 work safety penalties, and 3 environmental protection penalties
	IF-EU-540a.2	1. System Average Interruption Duration Index (SAIDI) 2. System Average Interruption Frequency Index (SAIFI) 3. Customer Average Interruption Duration Index (CAIDI)	2.2.1 A Stable Power Supply and Generation System	57	1. System Average Interruption Duration Index (SAIDI) of 15.225 2. System Average Interruption Frequency Index (SAIFI) of 0.186 3.The SAIDI/SAIFI formula for the Customer Average Interruption Duration Index (CAIDI) may not be synchronized with the power supply reliability, and so, cannot faithfully represent the performance of power supply reliability in use. Consequently, the evaluation has not been adopted

Index for TCFD Contents

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	Management's role in assessing and managing climate-related risks and opportunities	1.2.2 Risk Management 1.3.1 Sustainable Development Organizational Structure 1.4.2 Climate Change Governance	34 39 44
Strategy	Short, medium, and long-term climate-related risks and opportunities identified	1.4.3 Climate Change Strategy and Risk Management	45
	Climate-related risks and opportunities that impact the organization's business, strategy, and financial planning	1.4.3 Climate Change Strategy and Risk Management	45
	The resilience of the organization's strategy, taking into consideration different climate-related scenarios	1.4.3 Climate Change Strategy and Risk Management	45
Risk Management	Process for identifying and assessing climate-related risks	1.4.3 Climate Change Strategy and Risk Management	45
	Management process for climate-related risks	1.4.3 Climate Change Strategy and Risk Management	45
	Processes for identifying, assessing, and managing climate-related risks and integration into the organization's overall risk management system	1.4.3 Climate Change Strategy and Risk Management	45
Metrics and Targets	The metrics used by the organization to assess climate-related risks and opportunities	1.3.2 Moving Towards Net Zero Emissions 1.4.4 Metrics and Targets and Climate Action	41 47
	Scope 1, Scope 2, and Scope 3 (if applicable) GHG emissions and related risks	1.4.4 Metrics and Targets and Climate Action 3.2.1 GHG Management	47 71
	The targets used by the organization to assess climate-related risks and opportunities and performance in achieving the targets	1.4.4 Metrics and Targets and Climate Action	47

INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT

To Taiwan Power Company,

We have been engaged by Taiwan Power Company ("the Company" or "Taipower") to perform assurance procedures on the sustainability performance information identified by the Company (see Appendix 1) and reported in the 2023 Taipower Sustainability Report ("the Report"), and have issued a limited assurance report based on the results of our work performed.

Management's Responsibilities

Management is responsible for the preparation of the sustainability performance information disclosed in the ESG report in accordance with the GRI Standards published by the Global Reporting Initiative (GRI), and for such internal control as management determines is necessary to enable the preparation of the sustainability performance information that is free from material misstatement, whether due to fraud or error.

Our Responsibilities

We planned and conducted our work on the sustainability performance information in the Report in accordance with the International Standard on Assurance Engagement 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board to issue a limited assurance report on the preparation, with no material misstatement in all material respects, of the Report. The nature, timing and extent of procedures performed in a limited assurance engagement are different from and more limited than a reasonable assurance engagement and, therefore, a lower assurance level is obtained than a reasonable assurance.

Limited Assurance Procedures

We applied professional judgment in the planning and conduct of our work to obtain evidence supporting the limited assurance. Because of' the inherent limitations of any internal control, there is an unavoidable risk that even some material misstatements may remain undetected. The procedures we performed include, but not limited to:

- Obtaining and reading the Report in 2023;
- Inquiring management and personnel involved in the preparation of the Report to understand the policies and procedures for the preparation of the Report;
- Analyzing and examining, on a test basis, the documents and records supporting the sustainability performance information.

Independence and Quality Controls

We have complied with the independence and other ethical requirements of the Norm of Professional Ethics for Certified Public Accountant in the Republic of China, which contains integrity, objectivity, professorial competence and due care, confidentiality and professional behavior as the fundamental principles. In addition, the firm applies Statement of Quality Management Standard 1 "Quality Management for Public Accounting Firms" issued by the Accounting Research and Development Foundation of the Republic of China, and accordingly requires the firm to design, implement and operate a system of quality management, including policies or procedures regarding compliance with ethical requirements: professional standards, and applicable legal and regulatory requirements.

Inherent Limitations

The subject intonation included non-financial information, which was under more inherent limitations than financial information. The information may involve significant judgment, assumption and interpretations by the management, and the different stakeholders may have different interpretations of such information.

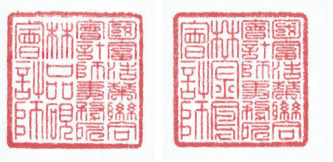
Conclusion

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the sustainability performance information in the Report in 2023 is in all material respects, not prepared in accordance with the above mentioned reporting criteria.

Other Matters

The maintenance of the Company's website is the responsibility of the management. We shall not be responsible for conducting any further assurance work for any change of the sustainability performance information or the criteria applied after the issuance date of this report.

Crowe (TW) CPAs
Taipei, Taiwan
Republic of China
June 12,2024



Attachment

No.	Corresponding Chapter	Page	Information on Assurance Subject	Applicable Baseline
1	1.3.2 Moving Towards Net Zero Emissions	41	The air pollution emission intensity was reduced by 68.5% compared to the base year (2016)	Comparison of air pollution emissions from Taipower's thermal power plants
2	2.2.1 A Stable Power Supply and Generation System	57	The System Average Interruption Duration Index (SAIDI) is 15.225 and the System Average Interruption Frequency Index (SAIFI) is 0.186	Statistics on the reliability of Taipower's system-wide power supply
3	2.3.2 Diversification of Renewable Energy Development	63	Installed capacity of renewable energy in 2023: The accumulated total capacity is 2,537.5 MW, the capacity for renewable energy grid connection is 17,085 MW	Statistics of Taipower's renewable energy installed capacity
4	3.2.1 GHG Management	71	Air pollution emissions (1) NO_X: 160kg/GWh (2) SO_X: 77 kg/GWh (3) PM: 5 kg/GWh	Taipower thermal power plant emission statistics
5	3.2.3 Waste Management	74	Total coal ash production in 2023 was 2.089 million tons, with a recycling rate of 94.8%	Taipower Coal-fired Waste and Recycling Statistics
6	5.2.1 Promoting an Electricity-Saving Society	91	Electricity consumption was reduced by 1.81 billion kWh in 2023	Taipower's monthly electricity consumption comparison and energy saving statistics
7	6.1.2 Diversity and Inclusion in the Workplace	96	In 2023, Taipower implemented the Measure to Reduce Working Hours by One Hour Per Day for Employees Raising Children Under 3 Years Old, with the number of users reaching 1,900	Statistics on the number of Taipower employees who utilized working hour reduction for childcare
8	6.3.1 Occupational Safety and Health	102	In 2023, the total recordable incident rate (TRIR) was 3.4%, the fatality rate was 0.6%, and the near miss frequency rate (NMFR) was 1%	Statistics of occupational injuries among Taipower employees

台灣電力公司
Taiwan Power Company