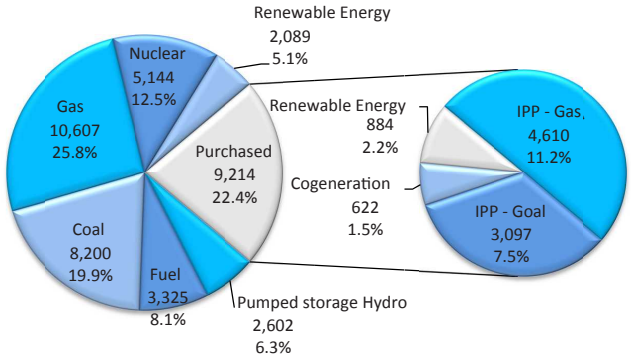
2014 A powerful future for you

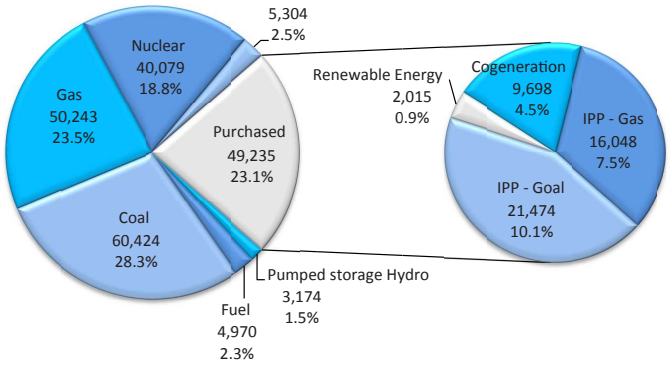
Taiwan Power Company Sustainability Report

Corporate Highlights

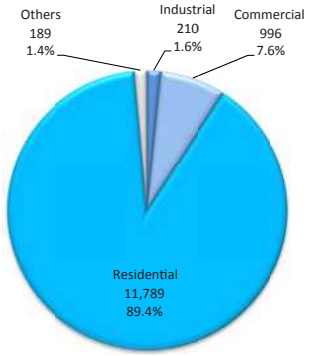
Installed Capacity (41,181 MW)



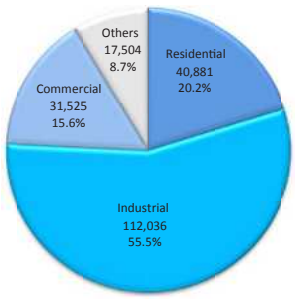
Power Generation (213,429 GWh)



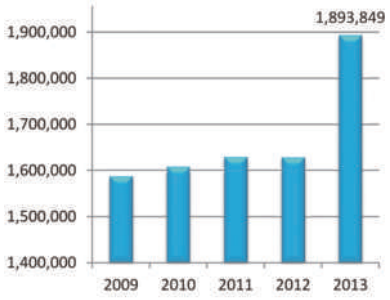
Customers (13,184 Thousand)



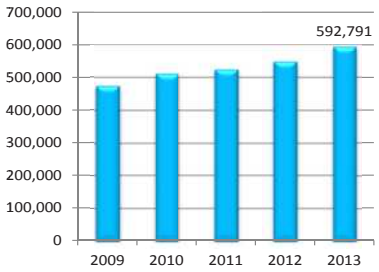
Sales (201,945 GWh)



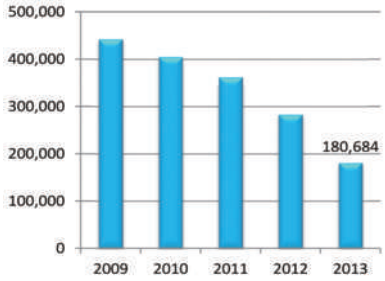
Total Assets (million)



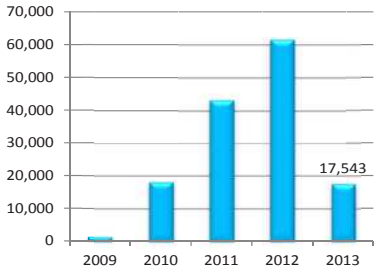
Operating Revenues (million)



Stockholder's Equity (million)

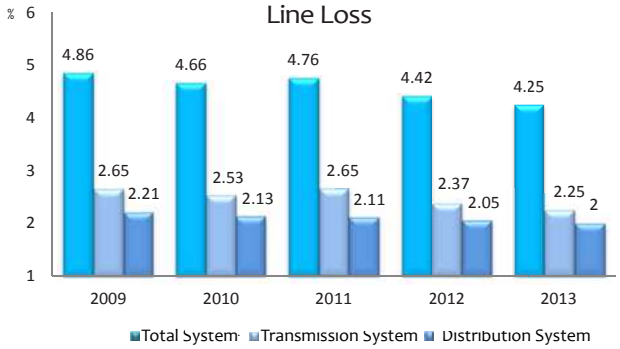


Loss Before Income Tax (million)

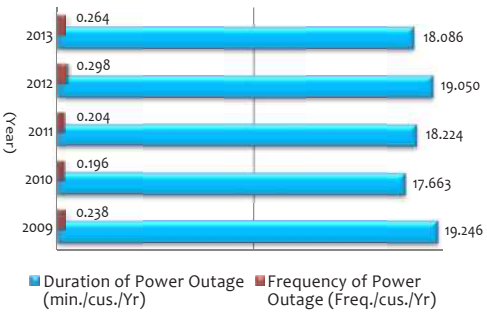


Note: Figures above have been audited by accountants using the ROC GAAP established in 2012 and the IFRS established in 2013.

Line Loss



Power Outage Duration and Frequency



Editorial Policy

This is the eighth issue of the annual Sustainability Report published by Taiwan Power Company ("Taipower"). Like before, this edition of the report follows the G3.1 guidelines of the Global Reporting Initiative (GRI) as well as the accountability principle standards (APS) set forth in the AA1000APS (2008). The information compiled and discussed here is based on three principles: inclusivity, materiality and responsiveness, and has been verified by SGS-Taiwan to meet the GRI A+ application standards.

Sustainability is about fully considering the future; therefore, Taipower Sustainability Report 2014 is focusing on the theme-"A powerful future, for you". The purpose of the report is to further disclose Taipower's response to various critical issues via the "preparing for the future" perspective by recognizing stakeholders and critical issues as a starting point, demonstrating Taipower's efforts in promoting a sustainable development to the public and the stakeholders.

Period Covered by the Report

From January 1 to December 31, 2013 (For the sake of complete disclosure, some major issues in this report also cover data in 2012 and part of 2014).

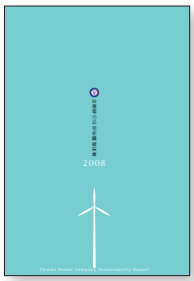
Scope of the Report

This report covers data and information regarding sustainability issues and achievements within the areas of management, social responsibility and environmental sustainability.

Inquiries

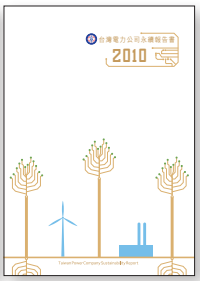
The complete report (in the PDF format) can be downloaded from Taipower's website (http://www.taipower.com.tw/). In addition, Taipower has a dedicated webpage of Sustainable Development to communicate with stakeholders about its performance on sustainability issues. The Information Disclosure section of Taipower's website contains information related to this report and statistical data from the past years. We will be very glad if you have any feedback regarding Taipower Sustainability Report. Allow us to better meet your requirements by providing us with the information that you require in the next Sustainability Report projected to be published in the third quarter of 2015, you can contact us by the following methods:

Taiwan Power Company
Contact: Department of Corporate Planning
Address: 12F No. 242 Sec. 3 Roosevelt Rd., Taipei, Taiwan (R.O.C.), 10016
Telephone: 02-2366-6463 E-mail: d0030302@taipower.com.tw
Website: http://www.taipower.com.tw/



Sustainability Report 2008/ Published August 2008

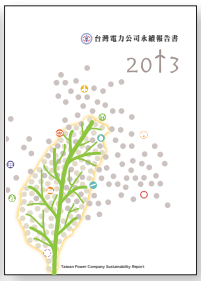
Sustainability Report 2009/ Published August 2009



Sustainability Report 2010/ Published August 2010

Sustainability Report 2011/ Published August 2011

Sustainability Report 2012/ Published August 2012



Sustainability Report 2013/ Published August 2013

PRINTED WITH SOY INK This report uses FSC certified paper and environmentally friendly soy ink.

2013 Awards

World Bank "Doing Business 2014" Appraisal

● "Getting Electricity" Index

Taipower ranked 7th place globally and 5th in Asia out of 189 economies for the "Getting Electricity" Index in Year 2013, according to World Bank's "Doing Business 2014".

The Asian Power Award

Taipower gained 3 awards in 2013 at the 9th Asian Power Awards organized by Asian Power Magazine, displaying Taipower's efforts in mastering core technologies, preventing environmental impacts and ensuring power stability, thus achieving international recognition. The awards include:

● "Environmental Upgrade of the Year" Silver Award

Awarded the "Nanpu Power Station Unit 3 NO_x Reduction Plan" that reduced the NO_x emission of the Nanpu Power Station Unit 3 through the development of automated combustion tuning technology.

● "Transmission and Distribution Project of the Year" Bronze Award

The Jianan Department of Power Supply won this award with the "Tainan Science Park E/S- A Successful Case in Preventive Maintenance Management" by improving the control standards of the Tainan Science Park main transformer insulating oil gas total monitor, taking appropriate shutdown prevention measures, blocking abnormal expansion of equipment from causing large-scale power outage disasters.

● "Smart Grid Program of the Year" Award

The Taichung Power Supply Operating Department won the Smart Grid Program of the Year award with the "Development and Establishment of a Data-Management Platform for the Monitoring of Lightning Arresters." This research automatically determines anomalies in the lightning arrester with the "Data-Management Platform for the Monitoring of Lighting Arresters", allowing maintenance staff to obtain the complete lighting arrester operation information within the shortest length of time.

Public Works Gold Medal Award

The 13th Public Works Gold Medal Award was awarded by Committee Chairman Chen Shi-Shuenn. Chief Engineer Huang Shupei represented Taipower and received the award. At the award ceremony, Vice President of Executive Yuan-Mao Chi-Kuo and Public Works Committee Chairman Chen Shi-Shuenn expressed hope that the construction industry will adhere to the co-existence of public works construction and ecological conservation philosophies, to ensure that the Public Works Gold Medal Award can be honored and sustained.

● Excellent Facilities Award

The "Third Nuclear Power Plant Newly-Built 161kV Gas Insulated Switchgear and Accessory Equipment Project" and one of the seven Taipower transmission projects "Gaogang-Wujia-Kaohsiung 345kV Underground Cable Lines Subsidiary Electromechanical Turnkey Project"

● Excellent Construction Award

"Xinmin Power User Service-Level Patrol Service Center Attached Underground Distribution and Substation Facility Combined Office Building Construction Project (Civil Works Turnkey)"

Promotion and Selection of Projects and Personnel with Excellent Occupational Safety and Health

The Executive Yuan Council of Labor Affairs selected and publicly promoted projects and personnel with excellent occupational safety and health in order to encourage public works project implementation safety and health management.

- Nominated Award
  "Economic and Trade D/S Construction Project (Civil Works Turnkey)" and "Changhua-Hsinchu D/S Civil Works Design/Construction Turnkey Project" of the 7th Power Transmission and Substation Project.

Hsinchu City Construction Project-Excellent Environmental Project

Organized by the Environmental Protection Bureau of Hsinchu City, it hopes to achieve the benchmark of construction projects and excel in various pollution prevention works through promotional activities.

- Excellent Award
  "Zhuyuan E/S Export 161kV Cable Lines Tunnel Road Turnkey Project"

26th National Unity Circle Competition

The Industrial Development Bureau, Ministry of Economic Affairs promotes unity circle activities to unleash the spirit of team improvement, strengthening team quality. The "National Unity Circle Competition" was specially organized publicly to raise the overall standards of activities and to strengthen international competitiveness through mutual observation and communication.

- Perfection Category "Silver Tower Award"
  The Qinjin Circle's "Reduction of Construction Period of Taichung Power Plant High and Medium Pressure Steam Turbine Inaugural Upgrading Project" improvement case won the award. Improvement results include the large-scale improvement of construction efficiency, reducing the construction period from 81 days to 64 days, saving over $100 million labor costs.

Taiwan Corporate Sustainability Awards

- "Outstanding Award" for the Service Industry Category
  In 2013, Taipower won the Outstanding Award for Service Industry Category of the "Taiwan Corporate Sustainability Awards" held by the Taiwan Institute for Sustainable Energy. Chairman Hwang Jung-Chiou attended the award ceremony on November 29, 2013 to receive the award from Vice President Wu Den-Yih.

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1. Profile of Taipower

1.1 Profile of Taipower

Taiwan Power Company ("Taipower") was established on May 1, 1946. It is a vertically integrated power utility company. Its business scope includes: generation, transmission, distribution and sales. Since its establishment, Taipower has always upheld the spirit of stable operations and is committed to provide power to Taiwan, Penghu, Kinmen and Mazu. Taipower's contribution to the country's overall economic growth is crucial.

As of the end of 2013, the total installed capacity of Taipower and IPPs reached 41,180 MW. The major energy sources comprise mainly thermal and nuclear, combined with hydro and renewables. Taipower is closely linked to people's lives with a functional power grid which includes 598 substations and the length of transmission and distribution totaling 369,000 km (3,915 km of extra high voltage transmission, 13,139 km of primary, secondary transmission, and 351,474 km of distribution power).

Taipower is a public utility that endeavors to improve business performance. Facing with the volatile situation of the economy and the society, Taipower needs the public support in order to achieve sustainable development.

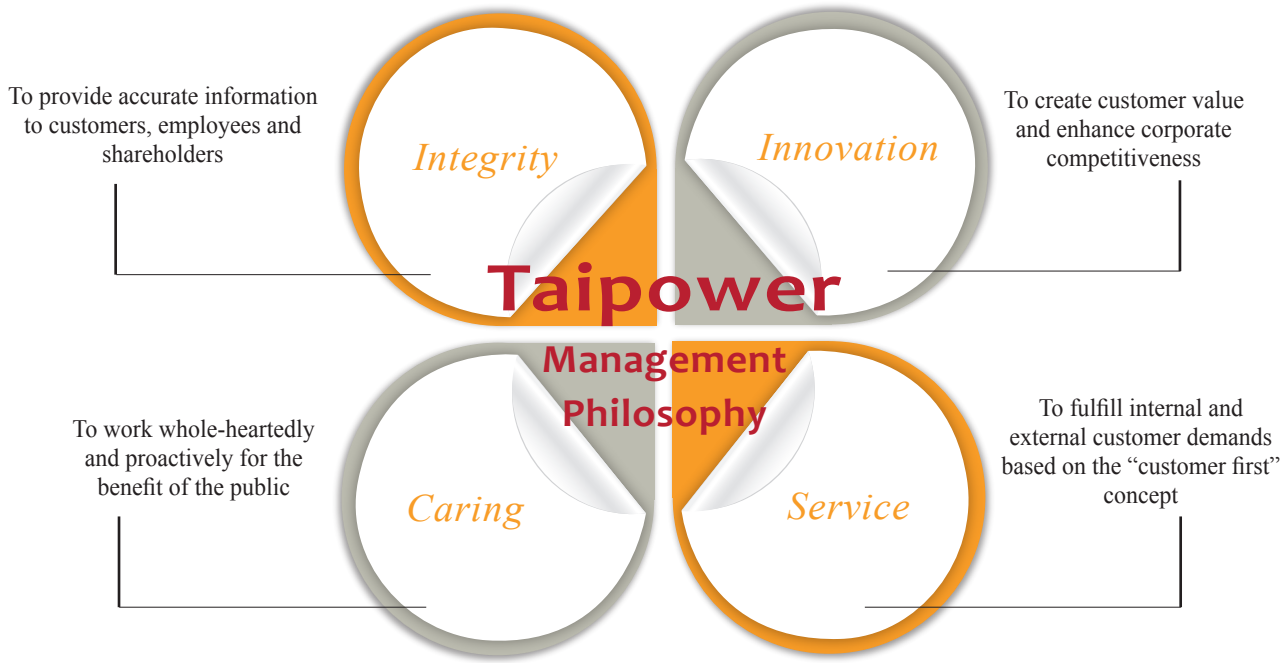
Founded:	May 1, 1946
Coverage:	Taiwan, Penghu, Kinmen, Matsu areas
Capital:	NT$330 billion
Stock:	96.92% government-owned, 3.08% private-owned
Total Assets:	NT$1,893.849 billion
Employees:	26,629
Customers:	13.184 million
Installed capacity:	Taipower System: 41,181 MW (31,968 MW Taipower-owned)
Power generated and purchased:	213,429 GWh
Energy sales:	201,945 GWh

Plant Average Availability

Unit	Energy Type	Average Availability
Thermal (Steam Power)	Fuel	89.45
	Coal	90.94
	LNG	87.16
Thermal (Combined Cycle)	LNG	89.48
Hydro	Hydro	92.46
Nuclear	Uranium	90.53

Note:

- Thermal Unit Availability = (1 – Period Unit Impact on Power Supply/No. of Hours/Unit Max. Net Output)
- Thermal Plant Average Availability = Σ (Unit Availability * Unit Max. Net Output) / ΣUnit Max Net Output
- Hydro Unit Availability = (Operation Period + No. of Standby Hours) / Annual No. of Hours
- Nuclear Various Units Annual Availability = Annual No. of Hours of Parallel Power Generation / Annual Total No. of Hours
- Hydro and Nuclear Power Plant Annual Availability = Arithmetic Mean of Unit Annual Availability



Taiwan Power Company's corporate culture is "people-first" and "the pursuit of excellence", "integrity" and "caring" are the management philosophy of "people-first", "innovation" and "service" are the management philosophy of "the pursuit of excellence".

Taipower Mission | To offer diverse services to satisfy customers’ demands, to promote the nation’s competitiveness and to protect the interests of employees and shareholders.

Taipower Vision | To become a prestigious and world-class power utility group.

1.2 Letter from the Chairman

Taiwan Power Company (TPC) continued facing many operational challenges in 2013 such as rising international fuel costs, persistent concern of people over nuclear safety, the difficulties in promoting power construction, and the influence of the topic of reasonable tariff schedules and the situation of Lungman Nuclear Power Plant construction. These problems continuously pose severe issues for Taipower to move towards sustainable management; fortunately, with the dedication of our employees, proactively creating value, reducing costs and promoting management changes, improving social communications, we have gone through the most difficult period, moving towards a future of organizational change.

Taipower encourages our colleagues to sufficiently disclose information to let the public understand the actual status of the power industry. Taipower also seeks to improve communication with its stakeholders, providing them with a better understanding of Taipower, building an awareness, and avoiding misunderstandings. On the other hand, Taipower leads employees to actively improve management efficiency and sustainable environmental development, and move towards fulfilling corporate social responsibility. Through hard working, Taipower had excellent achievement in the areas of business, environment and society in the past year, instances are:

- Taipower reached 201.9 TWh of energy sales in 2013, an increase of 1.8% from 2012. Although the pre-tax loss was NT$17.5 billion, the loss rate had dropped significantly from NT$61.6 billion in 2012. This shows that we have been moving in the right track and are steadily moving towards transformation.
- Negotiating with IPPs for the purchase and sale of electricity, Taipower finally completed the contract revision with IPPs in August 2013 that enabled the cost of electricity purchased to be reduced by NT$1.54 billion after numerous setbacks and over 100 rounds of negotiations. The total cost of electricity purchase was reduced by NT$2.49 billion approximately for the contract duration.
- For the sake of earth, Taipower carries out eco-environmental conservation over the years. In 2013, Taipower successfully remediated the growth of a rare and unique Taiwan-oriented soy bean, and organized a “Phytoremediation Campaign for Ultra-Rare Taiwanese Soy Bean” on 14 June, 2013.
- In 2013, Taipower continued to promote the Seed of Hope – Cultivating Hope Projects with A Kernel of Wheat Foundation, Taitung Christian Hospital, Hualien Mennonite Christian Hospital, and Heng Chun Christian Hospital, assisting underprivileged aboriginal tertiary students from Taitung, Hualien and Pintung on internship opportunities back in their hometowns during the summer break, enabling them to earn their tuition fees while providing service to their own hometowns.
- For providing information related to 22 “information disclosure zones” such as generation, power supply and demand, and tariffs and so forth on the official website, Taipower initiated the “Network Repair System” being an alternative as 1911 hotline were overloaded during typhoon seasons. The “Taipower Video” and Taipower social network were also set up to share the news about Taipower with the public.
- Our business received many rewards in 2013. Taipower received the “Transmission & Distribution Project of the Year” and “Smart Grid Project of the Year” awards for the Asian Power Award and the Excellence Awards in Buildings and Facilities at the 13th Public Works Gold Medal Award. Our “Sustainability Report 2013” also obtained the “Outstanding Award” Service Industry Category for the “Taiwan Corporate Sustainability Report Award” organized by the Taiwan Institute for Sustainable Energy.

Taipower’s current work focuses not only on continuing to ensure the company’s stable operations, but also on advancing business improvement planning on various levels. Five major task forces were established in 2012, including the Coal Procurement Review Task Force, Land Vitalization Task Force, Material Control Task Force, Long-Term Financial Planning and Capital Expenditure Control Task Force, and Human Resource Development Task Force. In response to mid-to-long-term developments, Taipower established the Power Planning Task Force and Power Industry Liberalization Coping Strategies Unit in 2013, accelerating the promotion of business reform, displaying Taipower’s efforts and changes to its stakeholders.

In the future, TPC will continue advancing and do our best to reform, moving towards issues concerning our stakeholders. The focus of future operations is summarized as follows:

Improving Performance

Taipower's pre-tax surplus prior to 2006 was a profit-earning positive figure, but facing financial losses annually thereafter due to the soaring fuel costs. Although the pre-tax financial loss for 2013 had already been greatly reduced, but in order to break even, or even to make a profit, Taipower adopts the cost-effective philosophy like suspending or postponing less urgent construction projects like warehouses or administrative buildings to reduce capital investment and interest expenditure. To improve performance, we try all possible methods to reduce costs, such as consolidating materials specifications, advancing spare control, reducing materials inventory and limiting annual investment according to our financial status.

Strengthening Customer Relationship Management

Nowadays, enterprise operations emphasize not only production and quality, but also a customer-oriented business philosophy. Taipower employees should devote themselves in order to earn customer satisfaction. They should also have mindsets that cater to diverse requirements and services of customers. In addition, employees should interact with the public from time to time. Our people in each power plant and construction unit should actively care for the under-privileged ones in the surrounding areas and take part in charity programs for homeless elderly people. We encourage employees to participate in voluntary services. This allows Taipower to fulfill its social responsibilities and offer creative and diverse services, and maintain good and long-lasting relationships with customers.

Promoting Green Enterprises

In the past, Taipower established the "Energy Saving Carbon Reduction Promotion Conference" in 2011 in response to the extreme global climate change, with a greater emphasis on the installation of environment-friendly power facilities. Currently, it is implementing the "Green Enterprises Creativity Platform" to strengthen the interaction with the public on energy saving and carbon reduction. Taipower engages in creating a low-carbon society and promoting the best carbon reduction strategies as its major concerns.

Actively Responding to Liberalization Challenges

The liberalization of the power industry is both a societal expectation and a government policy. In order to strengthen the company competitiveness after the liberalization of the power industry, developing divisionalization is Taipower's current critical work. However, turning to divisionalization, Taipower's first priority is to proceed unbundling/accounting independence. Being divided into generation, transmission and sales units enables Taipower to strengthen the cost-effectiveness sense of all units, and thus Taipower will able to compete with other opponents.

Planning Human Resource Development, Ensuring the On-Site Transference of Technologies

Over the years, the turnover of Taipower's fulltime employees has reached a peak. In order to ease the concentrated turnover of experienced professionals with technical expertise, Taipower has requested the Ministry of Economic Affairs for an earlier hiring initiative. Coping in advance with the training of future employees, Taipower plans to hire more employees for 2015-2017 than the number of retired people. Taipower will also assist junior and senior employees in learning how to get along with each other. A mentoring system will also be implemented so that experience can be passed on well.

Taipower engages in transforming itself from an "Institutional Entity" that obeys government policy into a "Corporate Entity" that aims for efficiency and performance. To mitigate Taipower's depreciating financial status, Taipower strives to remove political pressure and promote the reasonable tariff schedules, and continues to strengthen business improvements. We transform from a production-oriented corporate to a service-oriented one. In addition to fulfilling the demand of power supply, we also manage to improve power quality to ensure the sustainable development of Taiwan's power industry. We are looking forward to overcoming all difficulties and challenges that Taipower has faced through the support of the public, creating higher enterprise value, and safeguarding the rights of all stakeholders.

Sincerely,

Chairman

1.3 Power Development and Power Grid Map

Completion date of each new extra high voltage substation

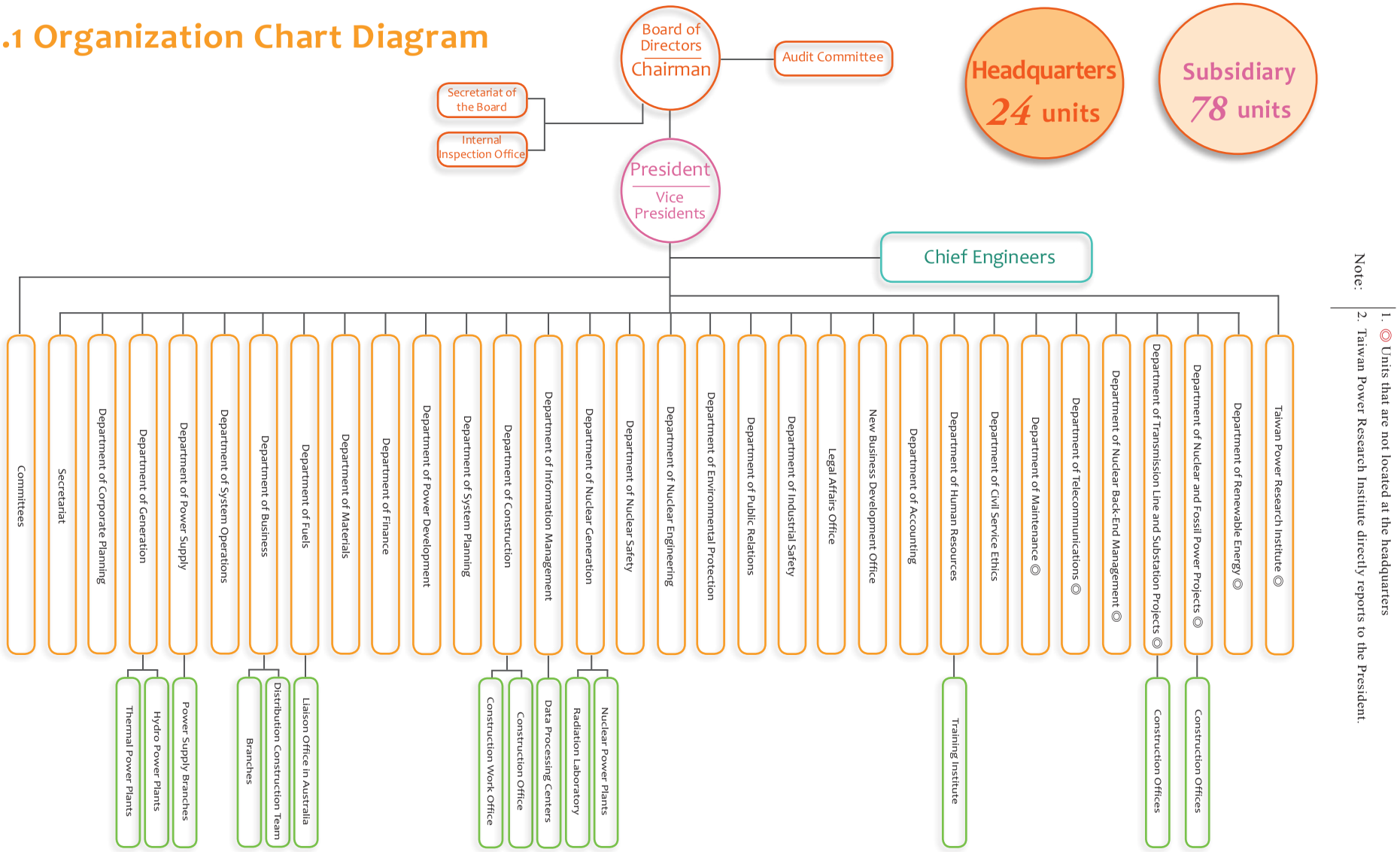
Wujia: 14 January 2013

Kaohsiung: 15 August 2013

1.4 Organization Chart of Taipower

Taipower has 102 units, of which 24 units locate at the headquarters, and are responsible directly to the president and vice-presidents. The other 78 units are subsidiary units, but 7 of them are under the direct supervision of vice-presidents/president (marked with ◎).

1.4.1 Organization Chart Diagram



Note:
1. ◎ Units that are not located at the headquarters
2. Taiwan Power Research Institute directly reports to the President.

1.5 Corporate Governance

With an attitude of accountability, Taipower's sound corporate governance and risk management system continue to promote enterprise moral education, to strengthen information transparency and to improve the company's sustainable management performance.

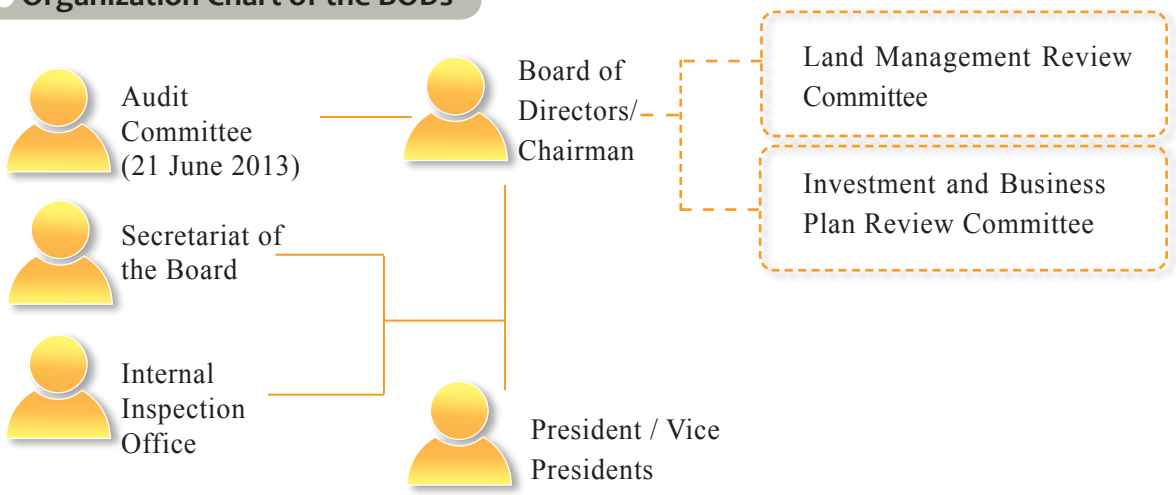
1.5.1 Corporate Governance and Corporate Ethics

◆Strengthen the Function of the Board of Directors

Organization of the Board of Directors

According to Taipower regulations, the Board of Directors (refers as "BODs") consists of 15 directors (1 female), including 5 managing directors, 3 independent directors (all male with 1 managing director), and 3 labor directors. At the Shareholders' Meeting held on 21 June 2013, an independent 3-member director's audit committee was set up to replace the supervisors.

Organization Chart of the BODs



Board of Directors Members

Job Title	Name	Remarks
Board Chairman (Managing Director)	Hwang Jung-Chiou	Assigned by MOEA
President (Managing Director)	Chu Wen-Chen	Assigned by MOEA
Managing Director	Chang Tzi-Chin	Assigned by MOEA
Managing Director	Wu Sou-Shan	Assigned by MOEA
Managing Director (Independent Director)	Ma Kai	Nominated by the MOEA
Director (Independent Director)	Tsai Yann-Ching	Nominated by the MOEA
Director (Independent Director)	Chen Hsin-Hung	Nominated by the MOEA
Director	Wu Tsai-Yi	Assigned by MOEA
Director	Ma Hsiao-Kan	Assigned by MOEA
Director	Lee Min	Assigned by MOEA
Director	Lin Chien-Yuan	Assigned by MOEA
Director	Chou Li-Fang	Assigned by MOEA
Director	Wu Cheng-Tai	Labor Union Representative sent by MOEA
Director	Lin Wan-Fu	Labor Union Representative sent by MOEA
Director	Liu Han-Tung	Labor Union Representative sent by MOEA

Note: 1. Directors of the Board were all elected via the 2013 stockholder's conference.
2. MOEA: Ministry of Economic Affairs,R.O.C.

Enhance the Function and Effectiveness of the Board of Directors

Board of Directors (Including Audit Committee) Operations

A board meeting is convened every month. It reviews and discusses director department reports, and the board chairman hosts the meeting. The results of relevant issues will be proposed at the next board meeting. A total of 15 board meetings were held in 2013, and attendance reached 94.42%.

Audit Committee

According to Taipower regulations, an independent 3-member directors' audit committee was formed to replace the supervisors at the shareholders' meeting held on 21 June 2013 to select the directors. The audit committee reviewed important issues such as the related financial reports of the company, amendments to the internal control system, declaration of internal control and disposal of assets, capital raising and derivative transactions and so forth. Two audit committee meetings were held to screen the company's financial reports and internal control system amendments of the first half of 2013. According to the regulations, any disagreements or reservations should be reported by the BODs and published on the "Market Observation Post System". Attendance reached 93.1%, with no disagreements or reservations.

Board of Directors Project Review Meeting

The Taipower Board of Directors established the "Land Review Conference" and the "Investment and Business Plan Review Conference", reporting important issues to the BODs audit committee in accordance with the "Board of Directors & Managers Responsibilities Table", and providing suggestions before execution. This improves procedural efficiency and performance of the BODs. A total of 11 "Land Review Conferences" and 9 "Investment and Business Plan Review Conferences" were held in 2013.

Managing Directors Meeting

The Managing Directors Meeting was held, as the BODs adjourned, to accelerate the issuance of corporate bond, etc. Seven Managing Directors Meetings were held in 2013.

◆Strengthening shareholders meeting efficiency

Taipower conducted a shareholders meeting on 21 June, 2013. According to laws and regulations, the shareholders meeting acknowledges and discusses Financial and Business Reports 2012, Corporate Bond Issuance Report 2012, Revised Taipower Constitution No. 2 Business Operations Scope, and Taipower BODs (including independent directors) election.

◆Disclosing Corporate Governance Information

Information on the organizational structure and operations of the BODs (including the audit committee) are released on the Taipower "Board of Directors website" and the "Corporate Governance" section of the company website, complying with the regulations. It also disclosed in the Taipower Shareholders' Meeting Report 2014, and submitted to the "Market Observation Post System". According to the Executive Yuan Financial Supervisory Commission's "Points to Note for Disclosing Company Information", business operationsand financial affairs were disclosed on the "Market Observation Post System" as well.

◆Emphasizing Corporate Integrity

Measures Against Corruption

Three cases of corruption were investigated by the Agency Against Corruption, Ministry of Justice. The Risk Management Task Force held a meeting and resolved to add "Employee Corruption" to the company's 2014 Risk Management Checklist. In addition to alerting actions, concrete methods of preventing violation and corruption are stated as follows:

- Implementing Taipower "Interaction between Procurement Personnel and Company Considerations". Employees will be quickly corrected when they are found to have violated regulations.
- Actively uncovering at-risk businesses or personnel (e.g . procurement units or service personnel with close interaction with the public and companies), applying preventive alert measures.
- Requesting each government ethics department to coordinate in applying for accounts with the units (Government e-Procurement System users) to grasp unusual tender information, properly proposing preventive measures to prevent violations.
- Government ethics office to collate unusual cases in a timely manner or to handle cases according to superior government ethics office agencies, informing procurement units to activate the alert system, developing effective preventive actions, implementing executions, preventing violations.

Anti-Corruption Training

- The "Interaction between Procurement Personnel and Company Considerations" will be fixed to maintain the professional and incorrupt image of procurement personnel. The integrity education and conflict of interest avoidance will be strengthened and promoted according to Taipower's "Current Strengthening of Integrity Promotion and Implementation Project".
- Taipower handles anti-corruption (Ordinance on Integrity) training and advocacy communication according to the business category, quality of employees and environmental characteristics:

Category of Training and Advocacy	Contents
Employee Training	Employee training sessions regarding ethics-related laws and regulations etc.
Free Brochure	Published books and printed material about the relevant Laws and Regulations were made available to employees. Compilations of these materials were also distributed to units as internal publications and brochures.
Verbal Propagation	Invited specialists held seminars and gave lectures about the relevant Laws and Regulations to gatherings of staff.
Audio-Visual Propagation	Company policy and the Laws and Regulations were also disseminated by audio-visual means.
Other Propagation	Awareness campaigns and quiz contests were held and a range of pictures and posters were also used.

- Achievements in 2013

  a. 62 units held campaigns focusing on “Education and Training in Integrity”. A total of 279 related promotional campaigns and training courses on Laws and Regulations were held.

  b. Audio-visual means such as electronic billboards, online sharing areas, marquees, electronic signage and e-mail were used and meeting opportunities were also taken to promote integrity-related ordinances. There were 1,067 sessions held and 64,350 members participated. These included all our employees and non-executives).

◆Anti-Corruption Movement

Implementing Integrity and Ethics Incidents Signed Notification Report

According to the Executive Yuan’s “Integrity and Ethics Directions for Civil Servants” and the Ministry of Economic Affair’s “Ethics Code for Employees of the Ministry of Economic Affairs”, the total number of integrity and ethics incidents in 2013 in each unit of Taipower was 123, including receiving gifts, meals, requests and canvassing and so on . All registered cases can be handled on a timely and appropriate context and used as basis according to the regulations. No cases of violations were uncovered.

Awarding Integrity Section

The nominations for the “2012 Ministry of Economic Affairs Integrity Role Model Award” included a total of 5 cases and 5 employees recommended by 5 units, of which 1 case and 1 employee belonged to the “Anti-corruption Prevention Provincial Public Treasury”, who was nominated by Taipower to participate in the MOEA Integrity Role Model Award and won the election.

Social Participation Section

Taipower’s “Promoting Social Participation and Integrity Anti-Corruption Advocacy Implementation Plan” was established in August 2013, with school teachers and students as its main target audience. The plan integrates Taipower’s Northern Exhibition Hall and Southern Exhibition Hall, and various hydro power plants, accepting teachers and students of each school level. During group visits, integrity and ethics personnel handle integrity and anti-corruption advocacy, inspiring teachers, students and the public with anti-corruption and integrity awareness. A total of 7 sessions with 495 participants were held.

1.5.2 Business Strategy and Strategy for New Business Development

Energy prices remain high all over the world and Taipower's tariff schedule failed to reasonably reflect the fuel costs. Although Taipower continues to promote various cost cutting measures, completing the second stage of tariff adjustment on 1 October 2013, the accumulated losses still amounted to NT$208.4 billion in 2013. This was a serious threat to the financial health of Taipower.

Without compromising eithers its obligation to supply power or maintain stability, Taipower has progressively established the "Coal Procurement Review Committee", "Land Vitalization Task Force", "Material Control Task Force", "Long-Term Financial Planning and Capital Expenditure Control Task Force", "Human Resources Development Task Force", "Power Planning Task Force", and "Power Industry Liberalization Coping Strategies Task Force" etc. in 2012 and 2013 to take charge of promoting various business improvement measures including reducing costs, increasing returns, promoting capital vitalization, enhancing fuel procurement performance, slowing down fixed assets investment, lowering the stocks of fuel and material, and striving to be released from its political mission, with the expectation of achieving business efficiency by becoming a "Corporate Entity" rather than an "Institutional" one. Taipower aims to achieve maximum business efficiency and sustainable company growth with appropriate investments, reasonable costs and efficient business operations.

Taipower has been working hard to move towards a consumer-oriented "service" by keeping its operating information transparent to the public to establish good communication links with society and the public and to gain public trust and support.

◆Business Strategy

The overall business strategy is established based on the changes in the business environment each year. The "Promoting Business Re-engineering" strategy was added to the overall business strategies in October 2013 in response to Taipower's major reform. With respect to the company approach to business, five fully comprehensive strategies have currently been adopted: "Creating Value", "Reducing Costs", "Proper Exercise of Social Responsibility", "Improving Customer Service", and "Promoting Business Reengineering". The related measuring indicators, strategies and plans of action have also been established to facilitate planning focus for the future.

◆Strategy for New Business Strategy

As to new business development, Taipower expands its business domain under the principle of "expanding the core power business, enhancing capacity, and managing side businesses" by promoting various new businesses to improve financial performance. Current side businesses include: colliery mining with Bengalla in Australia, outsourcing training services, land development, property management, contracted operation and maintenance of electricity, contracted external maintenance and research and experimentation etc. Re-investments include: The Taiwan Stock Exchange Corporation, the Taiwan Cogeneration Corporation, the Australia Bengalla Coal Mine Company Pty Ltd, the Australia Bengalla Agricultural Company Pty Ltd, and the Australia Bengalla Coal Sales Company Pty Ltd. In addition, new businesses currently under progressive discussion include those concerning education, leisure and fiber rental etc. Please refer to the chapter on "Improving Financial Depreciation" for results in related business implementations.

1.5.3 Business Improvement

◆Goals and Results of Business Improvement

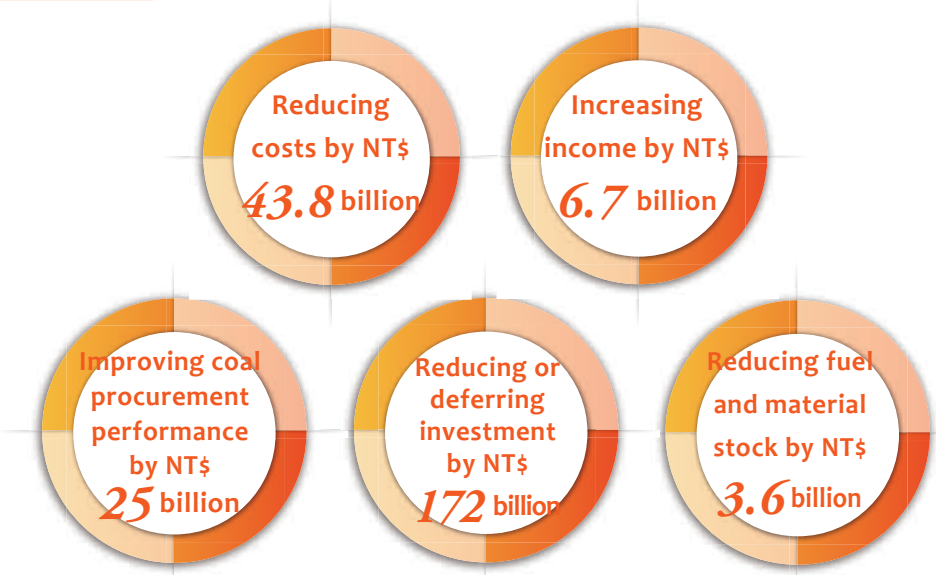
Starting from April 2012, Taipower carried out comprehensive reviews of its various businesses in accordance to the "Taipower and CPC Corporation Business Improvement Team" operation launched by the Ministry of Economic Affairs. The "Taipower Company Business Improvement Review Report" was proposed in June 2012, with plans for annual rolling reviews of business improvement targets and coping behavior from 2012 to 2016.

To achieve the target of business improvement and improving its financial structure, Taipower has established the above-mentioned 7 task forces ("Coal Procurement Review Committee", "Land Activation Task Force", "Material Control Task Force", "Long-Term Financial Planning and Capital Expenditure Control Task Force", "Human Resources Development Task Force", "Power Planning Task Force", and "Electricity Liberalization Coping Strategies Task Force") to cope with related important issues. Each of the panels has both internal and external members who provide more macroscopic and pro-active ideas and opinions. Meetings are held regularly to actively promote behaviors related to business performance improvement.

The business improvement targets of 2013 have all been reached with all our employees working whole-heartedly. In the future, we will continue to work hard to enhance reform so that the society can realize it more, and continue to strengthen communication and information transparency to gain the trust and support of the society towards Taipower.

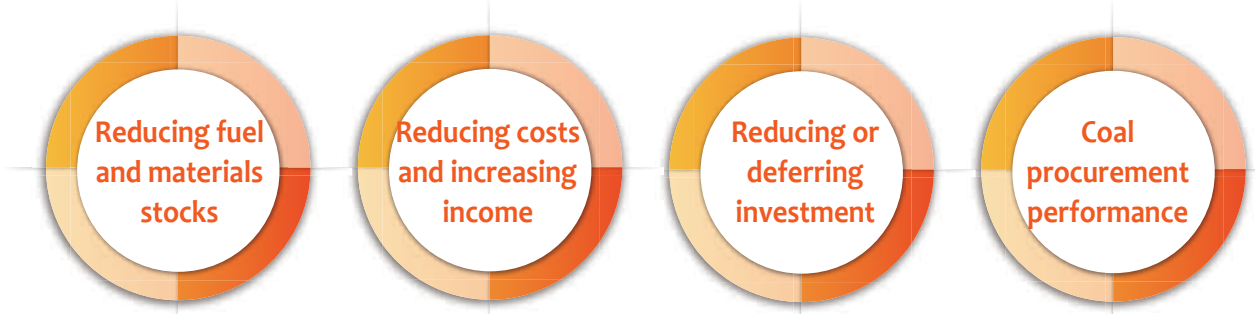
Business Improvement Goals for 2012 ~ 2016

Business improvement targets undergo rolling reviews annually; therefore, some data may differ from the data listed last year. The "Taipower Company Business Improvement Target Revision" that was approved by the 9th committee meeting of MOEA's "Taipower and CPC Corporation Business Improvement Team" on 10 July 2013 are as follows:



2013 Results

Taipower started carrying out business improvements in July 2012, while results from 2013 are available, the data difference between the reports of this year and 2012 are significant:



Actual amount:
NT$ 2.8 billion
(Target: NT$2.2 billion)

Actual amount:
NT$ 17 billion
(Target: NT$9.064 billion)

NT$ 88.4 billion
reduced and deferred from the budget
(Target: NT$85.3 billion)

NT$ 5.5 billion
saved
(Target: NT$5 billion)

1.5.4 Compliance and Related Regulations

As a state-owned company, Taipower's business adheres to Act Governing the Management of State-owned Enterprises. Therefore, establishments related Taipower units, accounting, auditing, budget, business planning, public industry rates, and long-term purchase and sales contracts must gain the approval of the head authority. The Ministry of Economic Affairs is Taipower's head authority for its target industries, with a subsidiary state-owned committee that monitors and manages Taipower's various businesses, and transmits related commands of other divisions, including the MOEA Bureau of Energy, Executive Yuan's National Development Council and the National Audit Office etc.

In addition, Taipower must handle issues according to this regulation or relevant rules, which comprise Government Procurement Act, Accounting Act, Electricity Act, etc. Implementing organizational transformation, Taipower needs to consider restrictions from regulations such as the State-owned Business Act, Government Procurement Act, Accounting Act, Electricity Act, Budget Act, and Government Accounting Act, etc.

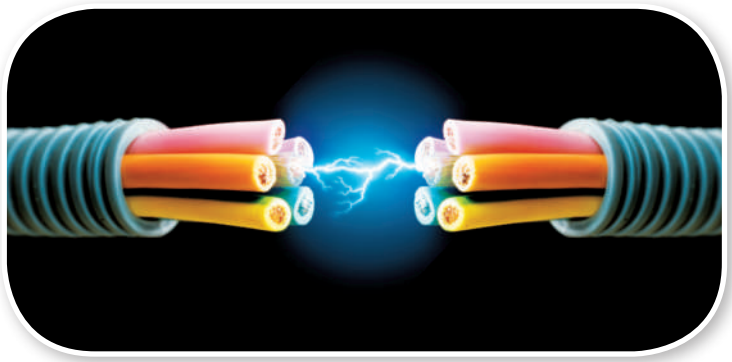
1.5.5 Risk Management Process and Risk Reduction Measures

To cope with the changeable internal and external management environment and to understand and manage possible operational risks, Taipower has launched the "Risk Management Implementation Plan ." Taipower identifies, analyzes, evaluates and handles all the factors involved with risks to manage uncertainty. In 2013, fifteen risk items were subject to risk control.

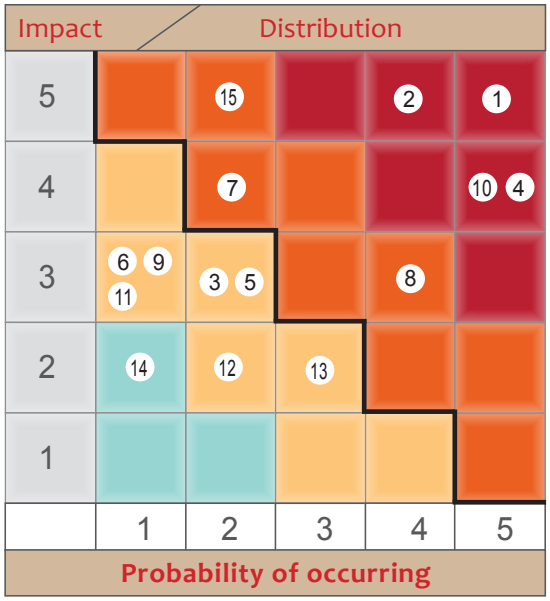
Taipower's risk identification covers long- (over 10 years), mid- (within 3-10 years), and short-term (within 1-3 years) risk events. We dynamically monitor short-term risk events. In the event of unexpected risk scenarios, the monitor system will be immediately adjusted and implemented.

Company-level risk events are also frequently faced by all units. The risk management promotion task force reports annually. If the level of risk events or scenarios drops below the tolerance, and stays in the L zone (low risk index) consecutively for 2 years, except for risk events or scenarios that are regulated by superiors or receive the special concern of the public, they must be removed from the annual risk paradigm. Once evidence indicates that the risk event or scenario will not recur in 3 years, it should be removed from the annual risk paradigm. If the events' risk level exceeds the L zone again, they are obliged to add into the annual risk paradigm.

The risk management committee dynamically reviews the company-level risk paradigm and results annually in response to internal and external changes in environmental regulations. The Internal Inspection Office bases on the annual risk management plan to review all units on the spot.



In 2013, Taipower's extra-high and high operational risks included "Losses caused by the underestimated tariff rate" and six other items under priority sheets. Risks below the tolerance line are continuously monitored by the charging units to reduce the incidence and impact of potential risk events.



Remarks:
1. Black line in bold represents the risk tolerance line.
2. Definition of Colors
   - Very High
   - High
   - Medium
   - Low

Risk Items

1. Losses caused by failure of the tariff rate to reflect the rising fuel costs.
2. Power construction impeded.
3. Aging workforce structure preventing the passing on of technology.
4. Dispute on 2nd phase tariff schedule adjustment.
5. Power supply reliability and safety.
6. Release of radioactive materials from nuclear power plants caused by natural disasters.
7. Delays of interim fuel storage facilities for spent nuclear fuel.
8. Accidents related to employee safety and health.
9. Environmental events having an adverse impact on company image.
10. Lungmen construction failed to meet quality and budget on time.
11. Hacking of the information system.
12. The outbreak of labor-management disputes and employees' protests.
13. Damage to power equipment caused by natural disasters.
14. Lack of operational windfarms.
15. Dispute on Lungmen Nuclear Power Plant

Specific scenarios and management of risk incidents for stakeholders are as follows:

Risk Items	Risk Scenario	Risk Management
Losses caused by failure of the tariff rate to reflect the rising fuel costs	● Operating loss, failed to gain reasonable profits, debt ratio close to 92%, financial depreciation, accumulated losses exceeded company's capital by half. ● Huge capital needed for power construction but self-owned capital insufficient. ● Imbalanced international coal supply market causes the volatile prices. ● Rising oil price also causes natural gas price to surge.	● Include "Business Improvement Objectives" into future management strategies and annual objective control system. ● Establish "Long-Term Financial Planning and Capital Expenditure Control" task force. ● Adjustments to the proportion of spot purchases and long-term contracts upon market situation. ● Accurate calculation of oil and gas demand, avoid unexpected procurement.
Release of radioactive materials from nuclear power plants caused by natural disasters	● Water injection ability affected by damaged power equipment. ● Removal of residual heat affected by the loss of final heat sink. ● Reactor core cooling affected by the loss of water supply to the reactor.	● Seismic assessment and reinforcement design of gas turbine foundations and plants, daily oil tanks. ● Purchase and set up sprinkling systems, connect to firefighting water tanks to provide sprinkling function for fuel pool cooling. ● Improve long-term cooling and recovery equipment with water resistance.
Damage to power equipment caused by natural disasters	● Damage to transmission equipment caused by natural disasters. ● Damage to distribution equipment caused by natural disasters.	● Implement report drills, safety procedures or dynamic drills and preventive management measures. ● Improve disaster report correspondence, and propose disaster report simulation drills.

Risk Items	Risk Scenario	Risk Management
Damage to power equipment caused by natural disasters	● Damage to hydro power generation equipment caused by natural disasters. ● Damage to thermal power generation equipment caused by natural disasters.	● Prevent reservoir silting, remove sediment and protect catchment areas in accordance with the government's water resource policy to ensure sustainability. ● Conduct typhoon-prevention preparation work annually for thermal plants, pre-check before the typhoon season each year, and proceed non-periodically check.
Dispute on Lungmen Nuclear Power Plant	Impact on company in the event of construction termination or sequestration: ● Large amount of financial loss ● Increased risk of power rationing ● Increased cost of power generation, large increase in tariff hike pressure ● Large-scale increase in carbon emission ● Dispute on derivatives compliance ● Disruption to construction area and power plant labor	Strengthen social communication to help the public understand the importance and safety of Lungmen Nuclear Power Plant, including: ● Responding and analyzing public opinions ● Establishing an information sharing system ● Holding forums ● Visiting Lungmen Power Plant ● Strengthening mutual trust with local governments. ● Relevant measures should be prepared for future reactivation.

Taipower has effectively reduced the impact of risk incidents through the implementation of the above risk control measures.

1.5.6 Operational Mechanism for Sustainable Management

Taipower holds that sustainable development of the power industry should be based on energy security, economic development, and environmental protection. These include:

- Utilize limited natural resources efficiently. Maximize national economic development and social prosperity with the minimum power development and efficient management.
- Balance energy security, economic development, and environmental protection with power development.
- Fulfill corporate social responsibility and create a better future together with our stakeholders through a business philosophy of integrity, caring, innovation, and service.

In order to promote business development, protect the ecological environment, fulfill our corporate social responsibility and encourage sustainable development-related work, Taipower set up the Sustainable Development Committee. Its mission and organizational chart are as follows:

- Long-term corporate strategic planning and integrated management improvement.
- Environmental protection and ecological maintenance strategic planning.
- Corporate social responsibility strategic planning and promotion.
- The report on future corporate strategic planning and sustainability.
- Other resolutions and follow-up management and control actions.

The Sustainable Development Committee is comprised of a Management Development Team, a Sustainable Environment Team, and a Social Responsibility Team. Each team is chaired by appropriate directors and Vice Presidents are in charge of the relevant units.

Regular business related to each team will be operated individually based on Taipower's administrative procedures; for businesses involving more than one unit, the convener of the involved teams should hold meetings to settle disputes. Important issues concerning corporate strategy and future development should be submitted to the Sustainable Development Committee for consideration. The Sustainable Development Committee convenes meetings annually. Additional meetings are convened if necessary. A total of 3 meetings were convened in 2013.

Future Development Paradigm

A High-Efficiency Power Operator

- Planning the best low-carbon energy source mixture, improving efficiency of resource usage.
- Accelerating the replacement of old facilities in existing power plants.
- Introducing high-efficiency generation facilities and technologies.
- Securing the fuel supply and improving fuel-purchasing performance.
- Strengthening operation management in hydro and thermal power plants.
- Enhance the performance of operation and safety of nuclear power plant to ¼ of WANO members.
- Partnering with domestic IPP vendors.

A Smart Grid Builder

- Becoming a domestically indispensable power transmission and distribution operator.
- Establishing a smart power grid and enhancing the power grid with the functions of self-monitoring, self-diagnosing, and self-recovering, to be in line with the development of advanced power electronics technology.
- Making good use of the smart ammeter infrastructure feature to enable customers to use power more smartly and reach the goal of voluntary power conservation.

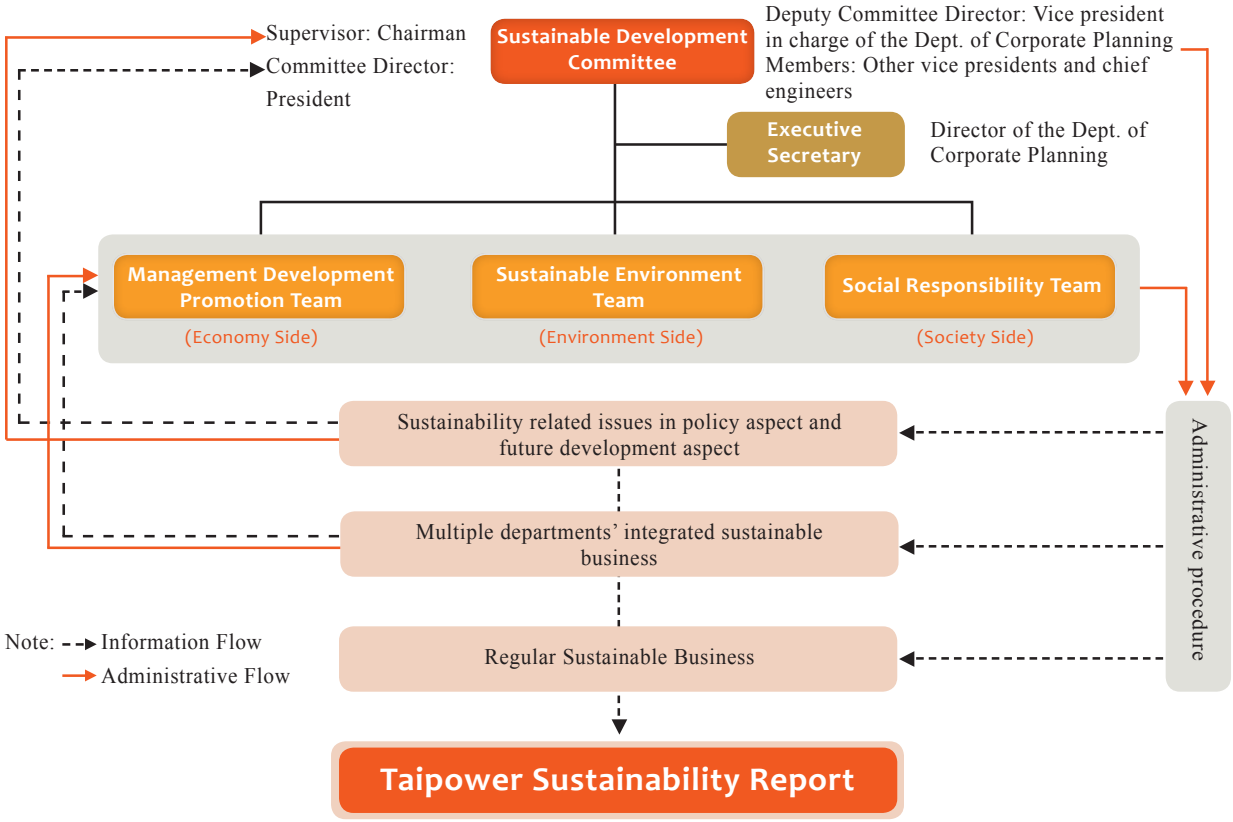
A High-Quality Power Provider

- Innovative value-added services to satisfy customers' multiple power demands.
- Creating various channels to establish interactive communication pathways with customers.
- Strengthening demand control to improve resource efficiency.
- Enhancing customer-relationship management to enhance customer satisfaction.
- Reducing duration and frequency of power outage to raise power supply reliability.
- Promoting unit transformation, moving towards business division direction development in response to electricity liberalization.

A Practitioner of Corporate Social Responsibility

- Focusing on the company's governance and establishing its corporate ethics.
- Cultivating social caring activities and co-existing and co-prospering with the local communities (including organizing voluntary service teams).
- Establishing proactive, mutual caring and disciplinary industrial safety culture.
- Responding to the national energy saving carbon reduction policy to shape a culture of societal energy saving.
- Strengthening social communication and mutual faith, gaining trust and support.

Sustainable Development Committee and Operational Mechanism



Taipower convenes "Future Business Strategies" preparation meetings annually to decide on the company's major business topics, and to serve as a reference for the proposal of the annual sustainable report's "Critical Sustainable Issues". The "Future Business Strategies" is planned as the company's long-term development major work direction. Due to its high repetition with the sustainable development movement plan, it is replaced by the company's future business strategy planning since 2013.

1.6 Overview of Taipower Management Performance and Achievements in 2013

1.6.1 Key Management Performance and Achievements in Recent Years

◆ Key Management Performance Indicators

Taipower has implemented the key performance indicators and corresponding objectives set by the overall strategic dimensions of the Sustainable Development Committee through the Responsibility Center system. Despite the important company reform in 2013, where a fifth dimension "Promoting Company Reform" was added to the original four dimensions of overall strategy, however, the key performance indicators of 2013 followed the overall strategy of 2012. Therefore, the following key performance indicators only include the original four dimensions. For information on "Promoting Company Reform", please refer to the chapter on "Coping with the Liberalization".

Taipower tracks the objective implementation results on a quarterly basis, and the President regularly holds tracking/reviewing meetings to monitor objectives that have not been achieved.

Dimension	Key Performance Indicator	2012 Actual	2013 Target	2013 Actual	Accomplishment
Creating Value	1. Pre-tax Income (NT$100 Million)	-620.69	≥ -223.44	-175.43	☺
	2. Renewable Energy Generated				
	2.1 Water Power Generated (excluding pumped-storage) (GWh)	47.075	≥ 36.999	45.391	☺
	2.2 Wind Power Generated (GWh)*	—	≥ 8.517	7.478	☹
	3. Profits through Assets Revitalization*				
	3.1 Rental Income and Wall Advertising (NT$100 Million)	—	≥ 1.89	1.90	☺
	3.2 Income from Land Surface Right Royalties (NT$100 Million)	—	≥ 4.80	13.00	☺
Reducing Cost	4. Fuel Procurement Performance				
	4.1 Coal Procurement Performance (%)	-9.19	≤ -7.5	-9.38	☺
	4.2 Reducing Coal Inventory (No. of Days)*	—	≤ 36	34	☺
	4.3 Cost Reduction of Construction Materials Procurement (NT$100 Million)*	—	≥ 7	7.72	☺
	4.4 Reducing Materials Inventory (NT$100 Million)*	—	≥ 4	5.98	☺
	5. Improving Unit Operation Performance				
	5.1 Improving Thermal Plant Operation Performance				
	5.1.1. Heat Consumption Rate for Coal-Fired Units (kcal./kWh)	2,407	≤ 2,415	2,408	☺
	5.1.2 Heat Consumption for Fuel Combined Cycle Unit (kcal./kWh)	1,932	≤ 1,943	1,921	☺
	5.1.3 Heat Consumption for Thermal Unit (kcal./kWh)	2,240	≤ 2,239	2,223	☺
	5.2 Nuclear Power Plant Excluding Overhaul Capacity Factor (%)	99.95	≥ 100.51	100.38	☹

Dimension	Key Performance Indicator	2012 Actual	2013 Target	2013 Actual	Accomplishment
Reducing Cost	6. Power Purchase Control				
	6.1 IPP Coal-fired Power Purchase (GWh)	221.4	≥ 205.9	214.74	☺
	6.2 IPP Fuel Cost (NT$/kWh)	4.12	≤ 4.63	4.47	☺
	6.3 Co-generation Power Purchase (GWh)*	—	≥ 94.53	96.97	☺
	7. Operation and Maintenance Fee Control (Score/kWh)*	—	≤ 34.25	33.00	☺
	8. Energy Operation Performance				
	8.1 Line Loss (%)	4.42	≤ 4.69	4.25	☺
	8.2 Economic Dispatch Performance (NT$/kWh)	1.58	≤ 1.98	1.67	☺
	9. Occupational Safety Performance – Aggregate Disaster Index	8.81	≤ 7.91	7.70	☺
Fulfilling Corporate Responsibility	10. No. of Nuclear System Safety Performance Indicator Signals	White Signal=0 Yellow Signal=0 Red Signal=0	White Signal=3 Yellow Signal=0 Red Signal=0	White Signal=0 Yellow Signal=0 Red Signal=0	☺
	11. Greenhouse Gas Control Performance (grams/kWh)				
	11.1 Total Strength of Equivalent CO_2 Emissions from Generated Power	508	≤ 544	496	☺
	11.2 Strength of Equivalent CO_2 Emissions from Thermal Units	713	≤ 751	706	☺
Strengthening Customer Service	12. Social Communication*				
	12.1 Tariff Schedules Issues				
	12.1.1 Communication Activities (No. of Activities)	—	≥ 1,200	4,664	☺
	12.1.2 No. of Brochure Advertisements	—	≥ 8	11	☺
	12.1.3 No. of Internet Issue Shaping	—	≥ 25	30	☺
	12.1.4 No. of Episodes of Internet, Radio, Audio-Visual Platform Programs Recorded	—	≥ 52	57	☺
	12.2 Lungmen Nuclear Power Plant Issue				
	12.2.1 No. of International Nuclear Issue Forums	—	≥ 1	4	☺
	12.2.2 Communication and Advocacy Production (No. of Types)	—	≥ 10	27	☺
	12.2.3 Communication with Legislative Yuan Committee/Parliamentary Group (Freq.)	—	≥ 30	53	☺
	12.2.4 No. of Communication with Agencies/Media	—	≥ 24	129	☺
	12.2.5 No. of Communication with the Public	—	≥ 24	181	☺
	12.2.6 No. of Communication with Gongliao/Shuangxi Districts	—	≥ 45	45	☺
	13. Customer Satisfaction (Score)	85.5	≥ 86.1	85.7	☹
	14. Improving Quality of Power Supply - Feeder Automation (No.)	500	≥ 500	512	☺
	15. Power Supply Reliability – Period of Forced Outages (min./customer.year)	19.050	≤ 18.9	18.086	☺

Note: 1. ☺ represents objective accomplished ☹ represents objectives not accomplished

2. * marks an item added in 2013.

◆ Management Performance Indicators in Recent Years

Item	Unit	2009	2010	2011	2012	2013
1. Line Loss Rate	%	4.86	4.66	4.76	4.42	4.25
2.Power Supply Reliability						
(1) SAIDI	min./customer.year	19.246	17.663	18.224	19.050	18.086
(2) SAIFI	freq./customer.year	0.238	0.196	0.204	0.298	0.264
3.Employee Productivity[1]						
(1) Sales per employee	GWh/employee	8,027	8,548	8,792	8,755	8,852
(2) Customers per employee	customer/employee	552	560	557	567	586
4. Nuclear Power Plant Operating Efficiency						
(1) Power Generated	GWh	39,981	40,029	40,522	38,887	40,079
(2) No. of Automatic Emergency Stop	freq./unit	0.17	0	0	0.33	0.67
5. Total operating efficiency of thermal plants						
(1) Gross Thermal Efficiency (LHV)	%	41.94	42.52	42.51	42.98	43.27
(2) No. of Electromechanical Accidents	freq./unit	0.38	0.46	0.47	0.49	0.37
6. Environmental Protection Improvement						
(1) Particulate Pollutants	kg/GWh	27	33	27	28	27
(2) Sulfur Oxide	kg/GWh	388	342	356	328	302
(3) Nitrogen Oxide	kg/GWh	413	354	364	327	327

Note: 1. Data from 2013 was calculated according to self-compilation; data from the other years were all calculated according to audits.

1.6.2 Corporate Internal Control / Effective Management

◆ Total Quality Management

By 2013, a total of 84 units have acquired ISO-9001 certification issued by the Bureau of Standards, Metrology & Inspection, MOEA. Performance indicators of the past 3 years related to power quality such as performance figures of line loss, thermal efficiency of generating units, period of forced outages, and CO_2 emission strength have all improved significantly. Please refer to "2013 Awards" for other awards.

◆ Company-Level Material Management

Taipower adheres to the philosophy of local procurement. When materials match the definition of company-level materials, the procurement, appropriation, storage and forth of them will be centralized and managed to fulfill demand for materials procurement and effective storage control. These materials used amounted to a total of NT$9.828 billion, accounting for 62.40% of the total construction materials, with a turnover rate of 4.75, much higher than Taipower's turnover rate of construction materials. The extension of transmission and distribution system is still in progress. The average inventory amount has gradually dropped from NT$3.074 billion in 2006 to NT$2.069 in 2013.

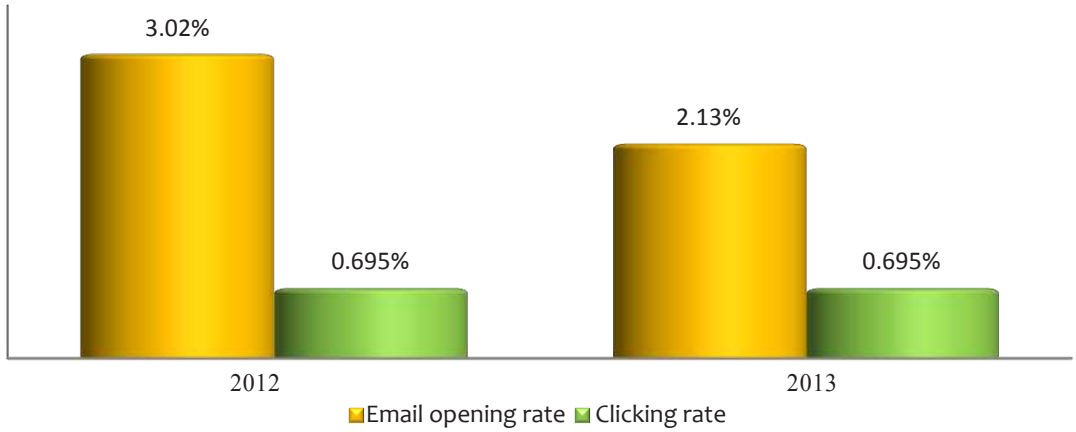
2013 Annual Supplier Expense (Amount Awarded)

Item	Amount (NT$100 million)	%
Construction	342.35	9.08
Assets	3,213.12	85.25
Labor	213.78	5.67
Total	3,769.24	100.00

Information Security Management

Taipower retained its ten ISO 27001 (Security Management System) certificates in 2013. A social engineering email drill was carried out every quarter. Results were in compliance with the specified ratio as announced by the "Executive Yuan Information Security Conference Report" (Email opening rate should be lower than 10%; clicking rate should be less than 6%). In addition, Taipower also monitored the network traffic and activities in real time by applying Microsoft monitoring software. Taipower also incorporated the personal information protection checklist into the internal information security for auditing, and implemented it in company-level information security auditing. Education and training related to information security management was conducted monthly. Courses are consisted of Taipower Network Behavior and Information Security Situational Analysis, Taipower ArcSight System Optimization of Detection Rules, E-mail Security, Server Security Protection, Personal Information and Security Protection, Information Security and Risk Management, and Critical Infrastructure Protection etc.

Company-Wide Social Engineering Email Testing Statistics in 2012 and 2013



Financial Management

Taipower's credit ratings in 2013 were: long-term twAAA, short-term twA-1+, outlook negative, and obtained a long-term A+ grade from Standard & Poor's, with a negative outlook. The negative outlook was obtained because Taiwan Ratings considered the operating environment of the following one or two years being unstable, and this would have a continuous negative impact on Taipower's financial performance. These unstable factors include the tariff schedule and the construction of the Lungmen Nuclear Power Plant .

2. Identification of Key Sustainability Issues

2.1 Identification of Stakeholders and Key Sustainability Issues

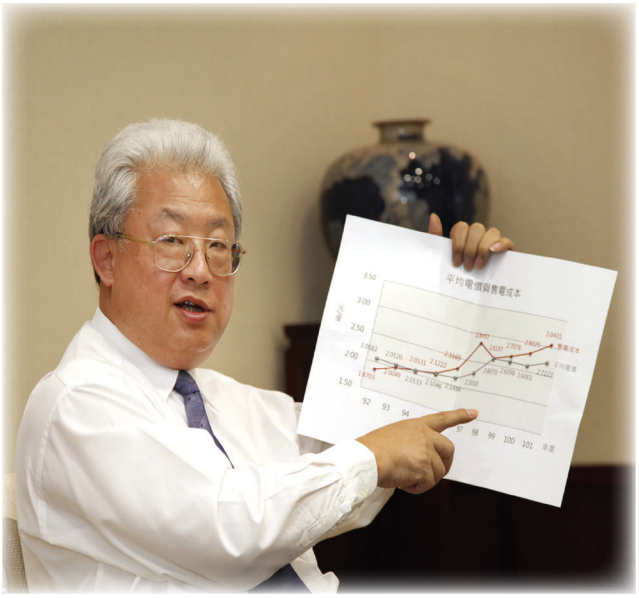
2.1.1 Identification of Stakeholders

Taipower is a large organization consisting of many different business units. The character of each business unit is different from each other; therefore, we conducted a survey to identify the different groups of stakeholders of the Company's thirty-four business units in accordance with the five principles outlined in the "AA1000 Stakeholder Engagement Standards (2011)". They are:

Stakeholders (Group)	Parties
Government/ Competent authority	Ministry of Economic Affairs, State-Owned Enterprise Commission, Environmental Protection Department, Legislative Yuan, Atomic Energy Council, local government agencies
Employees	Employees, union
Residents/general public	Surrounding community residents, general public
Partners	Contractor, IPP service provider, supplier, technology exchange partners
People's Representatives	Legislator, village/township elected representatives
Shareholders	All shareholders
Media	Electronic and print
Board of Directors	Directors
Private organizations	Environmental conversation groups, enterprise association, academic organizations
Customers	General and large customers

2.1.2 Identification of Key Sustainability Issues

In the survey, we identified eleven categories: electricity tariff, management performance, stability in power supply, corporate governance, climate change, friendly environment (including prevention of pollution, environmental safety and community impact), nuclear power safety, customer service and innovative value-added applications, human resources and supplier management[1], social contributions and legal compliance.



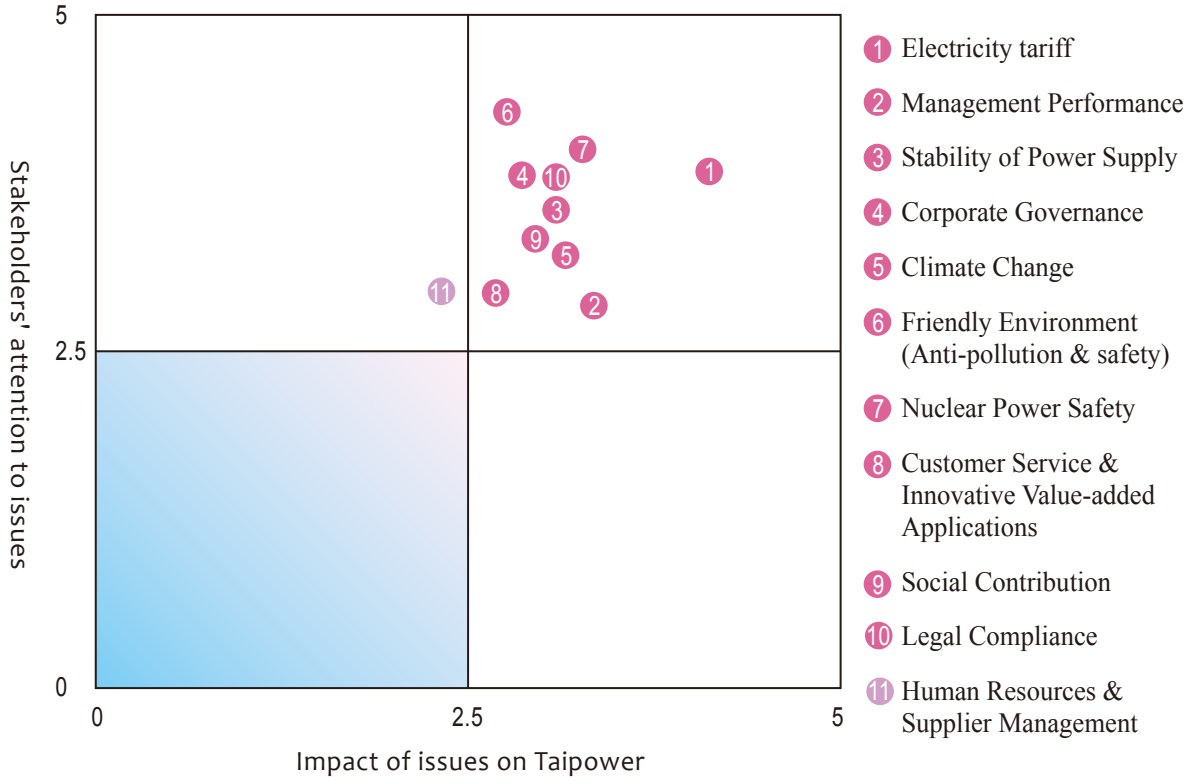
Issues frequently provided by Taipower that stakeholders concern which are as follows :

Issues that stakeholders concerned included legal compliance, which is central to corporate governance and business operations. As such, legal compliance is fundamental to our responses to all other issues. Please see the chapter on "Compliance and Related Regulations ."

The importance of other issues is determined on the basis of the Five-Part Materiality Test referred to the Accountability of AA1000. According to AA1000, key issues are those that may impact the decisions, behaviour and performance of an organization or its stakeholders. The Five-Part Materiality Test may be further converted to "Stakeholders' attention to issues" and "Impact of issues on Taipower" in order to identify key sustainability issues that may materially impact the Company.

[1]Both human resources and supplier management involve workplace safety and issues related to human rights and as such, are identified as one issue.

Materiality Analysis



Stakeholders concern issues / Channels and Frequency of Communication are as follows:

Stakeholders	Issues
Government/ Competent authority	Stability in power supply / Nuclear power safety 1 1 3 3 Electricity tariff 1 Corporate governance 1 3[1] 5 4 Friendly environment /Social contribution 1 3 3 Legal compliance 1 3 Customer service and innovative & value-added applications 5 7
Employees	Human resources and supplier management 4[2] Corporate governance 4[3] 2 9 Customer service and innovative & value-added applications 2 5 Management performance 2 4 9 Social contribution 4 2
Residents/ General public	Friendly environment 3 6 3 Social contribution 1 6 1 8 2 3 Nuclear power safety 6 3 8 2 3 Stability in power supply 4 5 6 1 2 3 Electricity tariff 8 3
Partners	Human resources and supplier management 2 4 9 Corporate governance 9 Management performance 4 1 2 Electricity tariff / Legal compliance / Nuclear power safety 4
People's representative	Friendly environment 1 4 4 6 3 Social contribution 5 6 1 3 Customer service and innovative & value-added applications 1 5 Nuclear power safety 5 6 3 Electricity tariff 1 4 3 Stability in power supply 1
Shareholders	Management performance 3 2 5 6 2 3 Nuclear power safety 2 6 3 2 Electricity tariff 2 Human resources and supplier management 4
Media	Nuclear power safety/Climate change/ Friendly environment 5 6 3 2 3 Electricity tariff/ Corporate governance 5 6 3 2 3
Board of Directors	Management performance/ Corporate governance/ Legal compliance 1 4
Private organisations	Nuclear power safety 4 5 6 3 Climate change 1 Friendly environment 4 6 3 Management performance 4 1 2 Stability in power supply 1 Customer service and innovative & value-added applications 4 7 1
Customers	Customer service and innovative & value-added applications 5 5 3 4 5 6 2 3 Stability in power supply 1 5 5 6 Electricity tariff 5 3 Nuclear power safety 4 6 3

Channels and Frequency of Communication

Written

1 Official correspondences→Irregular
2 Internal forms/Job diary→Irregular
3 Financial statements→Bi-annually
4 Brochures→Irregular
5 Press releases→Irregular

Meetings

1 Board of Directors→Monthly
2 Shareholders' Meetings→Monthly
3 Discussion meetings/review meetings/ interpellation meetings→Irregular
4 Internal & external communication meetings→Irregular
5 Symposiums/conferences→Irregular
6 Public hearings/ road shows→Irregular
7 Exhibition & observation tours→Irregular
8 Campaigns→Irregular

Multi-media

1 Promotional films→Irregular
2 Taipower and market observation post system→Irregular
3 Newspapers, media→Irregular

Other Channels

1 Telephone interviews→Irregular
2 Visits/ interviews→Irregular
3 Field visits/visits by designated representatives→Irregular
4 Surveys/questionnaires→Annually
5 Service hotlines→Irregular
6 Comments & suggestion boxes→Irregular
7 Research projects→Irregular
8 Telephone and mail →Irregular
9 Education/training→Irregular

NOTE:

1 Blue dot = written communication
1 Green dot = meetings
1 Red dot = via multi-media
1 Orange dot=other channels

[1] 1 to 4 times a month
[2] At least 1,600 times annually
[3] Labor relation meetings are held once a month.

We anticipate that in the future, nuclear energy will remain as one of the key sustainability issues. Given the government's initiative for "gradual moves towards a nuclear-free home", stakeholders' attention towards the related issues such as stability of power supply, renewable energy and climate change will inevitably continue to escalate. From an internal perspective, the relevance of issues such as corporate reform and liberalization of the power supply industry will continue to increase as a result.

Issues Concerning Stakeholders	Key Sustainability Issues
Electricity Tariff	Promoting Reasonable Electricity Tariff Schedules
Management Performance	Improving Financial Depreciation
Corporate Governance	Improving Financial Depreciation and Coping with the Liberalization
Stability of Power Supply	Upgrading Power Supply Stability
Climate Change	Mitigating and Adapting to Climate Change
Friendly Environment	Creating an Environmental-friendly Culture
Nuclear Power Safety	Strengthen Nuclear Safety
Customer Service & Innovative & Value- Added Applications	Customer Services and Innovative Applications
Human Resources & Supplier Management	Strengthening Human Resources and Vendor Management
Social Contribution	Social Participation

2.2 Key Sustainability Issues and Response

Taipower makes realistic commitments and sets objectives for key sustainability issues each year on the basis of the government's publicly announced initiatives and regulations and important directions or resolutions of the Company's Board. These commitments and objectives are reviewed by senior management of the Company and published in the 2014 Sustainability Report. Please refer to Chapter 3 of this Report for details of the responses and results of key sustainability issues.

Key Sustainability Issues	Commitments	Objectives	2013 Results
Promoting Reasonable Electricity Tariff Schedules	Keep disclosing information related to operations to enhance the public's understanding of Taipower; establish a reasonable electricity tariff schedule adjustment mechanism and promote reasonable electricity tariffs.	Tariffs should reflect the costs of generation properly and encourage customers to use power efficiently through providing correct pricing signals; Taipower should avoid cross-subsidy of electricity so that the setting of tariff rates are fair.	• Financial information including the income statement, balance sheets and cost of supplied electricity per unit is disclosed under "Information" on the Taipower's official website. • Stage-2 electricity tariff adjustment was implemented on October 1, 2013. Each member of the Company is on a mission to explain the electricity tariff adjustment to the public on appropriate occasions. We also attempt to keep the public regularly informed of the necessity and rationality of the adjustment of the electricity tariff schedule by advertising, publishing information on the company's and relavant government agencies' websites. • Drafted the proposal to amend the "Electricity Tariff Formula" in consultation with the decisions made by the Legislative Yuan and conclusion of the "Electricity Tariff Formula Expert Working Group" of the Bureau of Energy MOEA. The "Electricity Tariff Formula" forum held by the Chung-Hua Institution for Economic Research and the conclusions drawn from the council review meetings convened by the Executive Yuan and MOEA. The proposal has since been reported to the MOEA, forwarded to the Executive Yuan and submitted to the Legislative Yuan on September 11, 2013. The proposal is currently being reviewed.

Key Sustainability Issues	Commitments	Objectives	2013 Results
Improving Financial Depreciation	• Enhance funding planning and management of financial risks to reduce the capital cost. • Revitalize assets. • Work with the MOEA Business Improvement Taskforce to accomplish the company's goals and to improve the company's operations.	• Leverage on the diversity of financial instruments available to obtain multi-faceted sources of funding. • Take advantage of open tenders to raise capital with favorable interest rates. • For financial security and liquidity considerations, the company chooses short-term, low-interest loans over long-term loans to fund our capital with the aim of achieving cost savings. • Real estate and telecommunication assets revitalization initiatives. • In line with the business improvement objectives of the MOEA Business Improvement Taskforce for the period from 2012 to 2016, achieve the following targets: reduce costs by NT$43.8 billion and increase income by NT$6.7 billion. • Manage the financial aspects of suppliers.	• The interest rate for long-term and short-term loans for 2013 averaged between a low of 1.55% and 0.83%. The company reported NT$ 19.094 billion in interest expense, NT$2.98 billion less than the budgeted figure. • Engaged in real estate leasing, promote educational and leisure activities, launch advertising campaigns and undertake land development to revitalize land. • Revitalized existing telecommunication assets by splitting the remaining fiber optic core wires for line rental. • In 2013, the company achieved a cost reduction and increase in income netting NT$ 17 billion, reduced or slowed down investments totaling NT$ 88.4 billion and reduced fuel and material inventory by NT$ 2.8 billion. • On the dimension of managing supplier's financials, the outcomes are: improving fuel procurement by NT$ 5.5 billion, reducing fuel and materials inventory by NT$2.8 billion and amended agreements with nine (9) IPP to future reduce the cost of power.
Upgrading Power Supply Stability	Provide sufficient energy sources and balance regional power demand and supply.	• Working in compliance with the national energy policy to lower the dependence of nuclear energy, and the expansion of renewable energy and natural gas for generation. The supply and demand for power should be balanced in the northern, central and southern parts of Taiwan. • Actively promoting renewable energy.	• Formulated long-term power development schemes and released the report of "2013 Taipower Long-term Power Development Schemes", which was compiled by taking into account the domestic and global energy supply and demand trends and information about the latest emerging power generation technology. • Continued to push forward the renewable energy solutions and planned to install eight 900-watt wind generators at our Luchu wind generation plant with a total installed capacity of 7.2MW. The grid-tied generation system will be in full service by the end of 2014. • Completed 127 automated wind energy forecasting systems in Dayuan Kuanyin, Tatan (I & II), Taichung Harbor, Taichung generation plant, Changkung, Changkung (I), Mailiao, Sihu, Chungtoun and Kinmen. • Besides installing short-term (1-24 hours) wind energy forecasting systems, we also planned to construct medium-term (1-72 hours) automated wind energy forecasting systems at Chungtoun and Kinmen, taking into account the forecasting statistics released by the Central Weather Bureau.

Key Sustainability Issues	Commitments	Objectives	2013 Results
	Strengthen energy supply security to ensure a stable fuel supply for power generation.	Provide fuels to the power plants in the right quality, the right quantity, and at the right time to ensure power supply security and stability.	Ensure fuel supply security and stability and maintained fuel needed for power plants at safe inventory targets.
Coping with the Liberalization	• Assist the government to establish a fair competitive environment and sound supervisory system. • Raise employees' awareness of department costs to improve the company's overall competitiveness.	• Active involvement in the liberalization of power supply regulations to ensure that the direction of regulatory reform is beneficial for the company's development and business initiatives and policy. • Establish a system or policy under which job responsibilities are clearly segregated.	• Fully involved in the consultation meetings held by the MOEA to discuss and put forward comments and suggestions for the reform of power supply regulations. • Promoted segregation of duties of the internal network of plants and undertook enterprise planning.
Mitigating and Adapting to Climate Change	Stepwise implement Taipower's "Master Plan on Energy Conservation and Carbon Reduction" according to the goal of carbon reduction and the policy framework announced by the government.	Accomplish the goal of carbon reduction set in the "National Master Plan on National Energy Conservation and Carbon Reduction" to make emission in 2020 return to that of 2005 and that of 2025 return to that of 2000.	• The preliminary target for reducing carbon remission at Hsiehho, Taichug, Hsinta and Talin power plants is 5.877 million tons. The target was endorsed by the Environmental Protection Department. In addition, two of the Company's carbon offset projects were endorsed by the Department; we set a 10-year target to reduce carbon emission by 496,000 tons. • "Study on Taichung Power Plant's Adaptation to Climate Change" kicked off. We expect to conduct the study on all systems to know the first-hand impact of climate change on power generation systems in order to improve system adaptability.
Creating an Environmental-friendly Culture	Continue to mitigate the related activities, products or services of the power supply industry on the environment and ecosystem.	• Legally compliant: except environmental conservation regulations, the Company also needs to consider landscaping, ecological and workplace hygiene regulations. • Emphasis on prevention of pollution: evaluate impact on the environment and conduct preliminary, in-progress and subsequent monitoring of each project's impact on the environment.	• Compiled a total of seven reports to explain the potential impact of the project to upgrade and expand Tunghsiao, Linkou, Chienshan and Talin power plants on the environment including reports of variance analysis on the environmental impacts and a comparison table of revisions to the report on environmental impacts. The reports were approved by the Environmental Protection Department. • Launched a total of 1,318 events in 2013 (a total of 276,000 people) to promote energy saving concepts and effective consumption of energy by home appliances, and to encourage the use of energy efficient appliances. Organized visits to customers with over 100 kw of energy consumption. Promoted and educated customers on the use of highly efficient and emerging saving devices to increase their awareness for energy conservation. We visited a total of 5,021 customers in 2013.

Key Sustainability Issues	Commitments	Objectives	2013 Results
Creating an Environmental-friendly Culture		• Implement conservation of resources: conserve the energy and resources consumed by each unit including fuel, water and electricity. • Enhance communications and education: each unit shall refer to the spirit of the ISO14001 standards to enhance internal and external communications. • Continue to improve the performance: each unit is compliant with the ISO14001 P-D-C-A concept and is committed to continuously improve performance .	• As part of our initiative to boost the prosperity of local communities and protect the aquatic ecosystem, we have engaged in a campaign to release fish fry with high economic values into the coastal areas surrounding our power facilities. We hoped to fulfill part of our corporate social responsibilities by contributing to the revitalization of natural marine resources and the fishery industry. In 2013, we released a total of 930,000 fish fry. • Taipower is a long-term sponsor of the incubation program for the endemic species of beans of Taiwan. To celebrate the overwhelming harvest, we held a press conference at our Wanta power plant on June 14, 2013.
Strengthen Nuclear Safety	Strengthen the safety of nuclear power generation and improve operational performance to earn the trust of the general public in nuclear safety.	• Continue to strengthen and improve the comprehensive assessment of nuclear safety and improve the capacity to cope with compound disasters. • Enhance the resistance to earthquake and tsunami. • Streamline manpower/ organizational operation and strengthen the safety of nuclear power generation. • Connect with international nuclear power organizations and establish the “Nuclear Energy at a Glance” website to fully disclose safety information.	• The three operating nuclear generation plants have proposed 96 initiatives to enhance nuclear energy safety in response to the Stage 1 nuclear energy safety health check conducted by the Atomic Energy Council. As at December 31, 2013, 93 initiatives were completed. • Evaluated and improved the tolerances of nuclear power plants during an earthquake. • A construction project for tsunami protection walls for nuclear power plants is being carried out. • Completed peer review of pressure tests on all generators in nuclear power plants. • Amended and refined established “Ultimate Emergency Measures”. • Conducted annual compound disaster drills. • In 2013, nuclear power supply accounted for 40,080 GWh. • An average capacity factor at 91.8 % and annual reduction of carbon emission reached 33.63 million tons.
Customer Services and Innovative Applications	Introduce advanced smart grid-oriented technologies for the generation, transmission, distribution and dispatch; improve the reliability and the quality of power, as well as ensuring power supply safety.	• Digitalize the distribution feeders. • Further refine the quality and reliability of the power supply system to ensure reliablie power supply.	• Digitalization of the relays system was 73.9% completed. • Completed the replacement of heat resistant wiring for Lungtan North-Songshu 2nd Road and Dapong–Fongkang–Dawi–Taidong 2nd Road. • Completed the construction of SPS for the East Coast, Tatan and Dongshan. • Conducted the Dynamic Thermal Circuit Rating (DTCR) of the transmission lines and the evaluation and review of data analysis testing points. • Launched the pilot project for the Wide Area Monitoring System in line with the National Energy Program of the National Science Council. • Completed the “Feasibility Study on Installing Dynamic Hierarchical Voltage Control in the Transmission System” of the reactive power control system.

Key Sustainability Issues	Commitments	Objectives	2013 Results
Customer Services and Innovative Applications	Integrate and enhance business information systems to establish more functional procedures.	With continuous improvement and refinement of the ERP system, complete evaluation on the effectiveness of the ERP system upon its implementation.	• Integrated and enhanced business information systems including financial accounting, financial management, procurement and material management, and internal audit and controls, with the optimum goal of establishing core operational procedures that function more efficiently. • Completed (Stage 1) evaluation on the effectiveness of the ERP system upon its implementation.
	Continue to strengthen the management of strategic knowledge, improve R & D capacity and promote R & D outcomes to persistently create knowledge, innovation and application.	• Introduce technical solutions for the generation, transmission, distribution and dispatch of power in order to provide customers with reliable power supply. • Areas of innovative application of technology cover product development, process improvement, introduction of new technology, technological innovation, and promotion of patent and technology. The optimum goal is to reduce the cost and increase revenues.	The outcomes of the R&D and innovation in 2013 are as follows: • NT$ 0.369 billion increase in income • NT$ 5.34 billion decrease in costs • Comprehensive assessment α3.96 • 155 reports • 74 papers • 23 new products • 15 procedural improvements • 18 new technologies • 22 technology innovations • 6 patents • 101 technical services • 20 technical promotions • 10 policy directions
	Listen attentively to customers' concerns and protect their rights, following Taipower's pledge of "Customer First".	Bearing in mind Taipower's commitment of "Service Focus, Customer First", allowing customers to feel the difference of Taipower's care and service.	• Water & Power Associated Services: ★ Taipower allied with the Taiwan Water Corporation to provide a cross-agency integrated service named "Water & Power Associated Services" as a one-stop water and power service. Since March, 2014, Taipower has incorporated the Taipei Water Department as part of our cross-agency integrated service to extend the bill payment collection services for all account holders nationwide. ★ Customers are only required to present the water (electricity) bill payment receipt and relavant required documentation to the service counters at Taipower; Taiwan Water Corporation and Taipei Water can receive five one-stop services including: change of address for water or electricity bills, ceding, application of veteran's dependent benefits, bill payment setup and application of e-billing. • Customer Service Workshop: Several sessions of the "Customer Service Workshop" were held for front-line staffs and those from Taipower customer service centers who were trained to align with the "Customer First" thinking.

Key Sustainability Issues	Commitments	Objectives	2013 Results
Strengthening Human Resources and Vendor Management	Enhance the training of electrical professionals to ensure continuity in the transfer of vital know-how, and to enhance the company's competitiveness.	Recruiting new employees according to plan, upgrading workforce structure, nurturing professional competency and strengthening the utilization of human resources.	• In 2013, Taipower recruited 589 new employees and 547 casual employees to avoid a shortage in human resources. • Established a scholarship system in universities at the graduate level and post-graduate level in disciplines of special skills and uncommon subjects as an incentive for training professionals to acquire special skills in power generation. • Implemented the mentorship system and provide a wide array of training programs for employees to fulfill their needs for self-improvement and to ensure vital know-how is transferred on. • Established a mechanism for appointing and cultivating senior management in order to objectively recruit and nurture outstanding, forward-thinking managerial talents.
Social Participation	Engage actively in community care, offer support for disadvantaged groups and contribute to local charitable events and infrastructure construction to achieve a win-win situation for both stakeholders and the company.	Long-term involvement in achieving social, environmental and economic sustainability: Enhance support for disadvantaged groups and fulfill the responsibilities of a corporate citizen.	In 2013, the company continued to engage in community care, supporting the development of local industries, providing emergency relief for disadvantaged groups and organizing various charitable events.

Taipower is committed to enhancing internal and external communications of the company's key issues through continuous disclosure of information and pro-active interactions with our stakeholders. We hope that the various communication mechanisms will help us to communicate effectively with our stakeholders. We update information published on our official website in a timely manner to ensure delivery of timely and accurate information about our operations. We interacted with key stakeholders by organizing a series of symposiums, press conferences, face-to-face dialogues, visits and community involvements during 2013. We continue to upgrade our website to facilitate disclosure of a diverse array of information. We place strong emphasis on issues concerning the general public (such as hurricanes, nuclear Power plant No. 4 and electricity tariff) to ensure that our services will match the needs of our customers. See Chapter 4 of the 2013 Sustainability Report for the outcomes of key sustainability issues.

3. Key Sustainability Issues and Responses

3.1 Promoting Reasonable Electricity Tariff Schedules

3.1.1 Striving for Reasonable Electricity Tariff Schedules to Reflect Costs

◆Objective of electricity tariff design

In addition to balancing operating expenses, the electricity tariff should also provide reasonable profits for the dealer to allow power suppliers for the investment and construction required for power development.

◆The impact after tariff rate adjustment, the impacts on families, industrial and commercial, and commodity prices:

Category/Phase	Description
Household Expenses	1. Electricity accounted for 1.89% of total household expenses. Given the October 2013 adjustment of 3.87%, household expenses increased by 0.073%. 2. Residential customers (approximately 86% of the total) who use less than 500 kWhs a month were not affected by the 2013 October electricity tariff rate adjustments.
Industrial costs	Electricity expenses in the industrial sector accounted for 2.12% of the total manufacturing costs. Given the 2013 October adjustment of 10.3% for industrial users, an industrial user would face an annual cost increase of 0.22%.

Category/Phase	Description
Consumer Price Index (CPI)	A 10% electricity tariff adjustment would increase CPI by 0.359%. Given the 2013 October adjustment of 3.87% for residential electricity tariff, the annual CPI would increase by 0.139%.

Note: Statistics derived from relevant data published by the Directorate General of the Budget, Accounting and Statistics in 2011.

◆The planned roadmap for a reasonable electricity tariff schedule includes:

● Short-term goals

Pursuant to the resolution of Legislative Yuan, Taipower will draft the formula for electricity pricing in order to establish a electricity tariff schedule that would reflect costs and reasonable profit margins, and as such, Taipower has requested the government to authorize Taipower to include the expenses related to the Renewable Energy Development Fund in the selling price of electricity per Article 7 of the Renewable Energy Development Act.

● Mid- and long-term goals

Pursuant to pertinent regulations, Taipower offers various electricity tariff incentives that include rates for public water systems, rates for electrified railways, rates for schools, rates for public streetlamps, rates for agricultural use and rates for social welfare organizations that came to a total of NT$ 6.82 billion in concessions. In order to prevent the cost of electricity tariff incentives from being passed on to other customers the Electricity Act should clearly state that the budget of subsidy for specific recipients needs to be compiled by industry competent authorities accordingly while an "Electricity Rates Consultation Committee" should be established for the purpose of reviewing all electricity tariffs, electricity tariff incentive recipients and incentive margins.

3.1.2 Striving to Ease Policy Burden

In addition to controlling operating costs by different means (please refer to the Improving Financial Depreciation section), Taipower will consult with related government agencies to draw up budget supplements to help cover lost revenue due to tariff incentives. The key factors that affected Taipower's accounting and income policies in 2013 include:

- The implementation of semi-peak electricity tariff schedule on Saturdays in compliance with government policies led to reduction in income
- Various electricity tariff incentives
- Losses from subsidies to remote islets yet to be compensated by the government
- Losses from higher natural gas pricing (compared to electricity pricing) absorbed by Taipower
- Losses from power conservation incentives given to households, elementary/junior high schools and social welfare institutions in compliance with government policies
- Unable to adjust electricity tariff to reflect rising costs in compliance with government policies
- The expenses incurred from the contribution to Renewable Energy Development Fund were not included in the selling price of electricity in compliance with government policies.

3.2 Improving Financial Depreciation

3.2.1 Control on Capital Expenditure

The "Long-Term Financial Planning and Capital Expenditure Control Task Force" was entrusted with the mission of establishing and running relevant supervisory systems for the purchase and construction of fixed assets, including the adoption of a "top-down" resource allocation system for budget planning and the recollection of bid balance and budget balance from various projects with the following results:

- The capital expenditure budget for 2015 (originally prepared in 2013) was reviewed based on relevant control principles and methods, leading to a reduction of NT$ 23.472 billion.
- For projects, the goal was to lower the investment totalled by collecting the bid balances for various projects. By December 2013, the total of bid balance collected amounted to NT$ 45.09 billion.
- With the budget balance control system that the task force established for general-purpose buildings and facility projects, the task force was able to collect various budget balances, amounting to a total of NT$ 4.68 billion in 2013.

In order to prevent further deficits, Taipower established the "Power Planning Task Force" in 2013 to review the cost effectiveness of power planning and development. In addition, the task force is also responsible for the formulation of viable measures to reduce relevant costs, including the following measures of improvement:

- Amendment of the transmission system planning guides – reduced expenditure by approximately NT$ 4 billion.
- Amendment of the underground transmission line guides – expected to reduce expenditures by approximately NT$ 3.457 billion between 2013 and 2022.
- Promotion of automated system for distribution feeders – expected to reduce expenditures by NT$ 620 million per year.
- Establishment, implementation and control of the "Future Transmission Plan Formulation – Strengthening Transmission and Substation Projects" to ensure that anticipated objectives can be achieved.
- Improvement and refinement of various process technologies, such as reducing uncertainty factors for the commercial operation of thermal units, reducing the project duration of major overhaul for coal-fired units and so forth.

3.2.2 Promoting Real Estate Vitalization

Business category	2013 Results
Real estate rental	● Taipower implemented total of 8 cases of temporary parking lot rentals (33 locations), generating a combined income of NT$ 75.04 million in annual rentals and land value tax exemptions. ● Income from annual rentals for other real estate rentals came to NT$ 137 million.
Promotion of educational/ recreational affairs	The occupancy rate for the Taipower Guest Houses in 2013 came to 29.1%; 13% increase compared to 2012. The annual income totaled NT$ 17.58 million, which is equivalent to 22% growth compared to the previous year.
Promotion of advertising	Taipower leased a total of 10 outer wall spots for advertising and commercials, generating an income of NT$ 5.84 million.
Land development and utilization	Yilan Jiaoxi Recreation Area tender for construction: Tendering for construction on Land no. 2 and 3 in Jiaoxi Yilan was awarded to and contracted with a tenderer and Taipower claimed NT$ 1.3 billion in royalties. In addition, Taipower will be able to collect 5.5% of the declared land value as rent.

In the future, Taipower shall continue to monitor and promote the development and solicitation for lands that have been underused and the five indicative projects including "Land in Jiaoxi, Yilan (completed)", "Land in CDB3, Kaohsiung", "Land of the Old Office Facility on Heping E Road", "Land of the Cargo Warehouse in Nangang" and "Land of the Primary Substation in Banqiao".

3.2.3 Promotion of Optical Fiber Rentals

To vitalize its existing telecom assets, Taipower splitted the cores of its dedicated optical fiber lines and offering the lines for rental business. The business proposal was submitted to NCC for approval in March 2013 and is expected to receive an official permit for franchising operation in 2014. Once the bare fiber rental business becomes operational, Taipower will gradually expand its telecommunications network depending on market demands in order to enlarge its subscriber base. The forecast for 2015 annual revenue is expected to reach NT$ 10 million and will eventually grow to NT$ 100 million over the years.

3.2.4 Boosting Fund-raising Capabilities

◆Short-term funds

Driven by the objectives of ensuring financial security while lowering capital costs, Taipower has endeavoured to seek new sources of funding and attempted to issue commercial papers and raise short-term bank loans by open tenders while prioritizing fund allocations based on relevant demands in order to secure lower-cost funding for operational uses. In 2013, Taipower raised a total of NT$ 156.185 billion in short-term loans from various financial institutions and funds, issued NT$ 532.15 billion worth of commercial papers and managed to reduce the average annual interests for short-term loans to 0.83%, which is lower than the 1.2% interest rate for 2013 that had been approved by the Executive Yuan.

◆Long-term funds

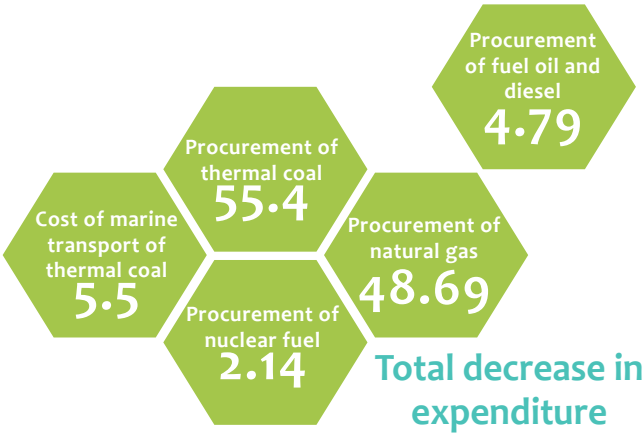
In light of the abundance of refugee capital in the domestic capital market, low interest rates and trends in the securities and bonds market, Taipower aggressively issued NT$ 60.82 billion worth of unsecured fixed rate bonds in 2013 to diversify the risks of growing interest rates in the future. On the other hand, Taipower also sought to suppress interests for mid- and long-term floating interest bank loans through bidding and managed to reduce the average annual mid- and long-term loan interest rate to 1.55%, which is lower than the 1.84% interest rate for 2013 that had been approved by the Executive Yuan.

3.2.5 Supplier Management (finance)

◆Fuel

Working with the operation improvement team of Ministry of Economic Affairs, Taipower has managed to achieve relevant objectives for operational improvement through the effective implementation of relevant strategies (i.e., the establishment of versatile procurement strategies by the Fuel Coal Purchase Review Team, adapting to market changes and so forth; please refer to the section on Business Improvement under Chapter 1, Corporate Governance). In the future, Taipower shall continue to comply with the Ministry of Economic Affairs' instructions to participate in the construction and operation of the 3rd LNG Terminal and independently purchase natural gas from the international market in order to lower the overall costs of fuel procurement.

Expenditure Decrease in 2013(in NT$ 100 million)



◆Materials

The Materials Control Task Force established various improvement measures for the reduction of materials stocks and improving procurement performance such as the deployment of an ERP system for stock control, requesting for procurement at the right time in the right quantity and establishing follow-up expansion terms to ensure versatile materials stocks. In addition, the task force also vied for more room for price negotiation and stock reduction by collective procurement and open contracts. Achievements for the task force in 2013 include "saving in costs for the purchase of operational materials" of NT$ 772 million and "reducing material stock" by NT$ 598 million (surpassing the annual targets in both areas).

◆Power purchase

In order to ensure stable operations and secure financing opportunities for IPP, Taipower has entered into power purchase agreements that span for 25 years and the contract prescribes fixed rates (i.e., does not adjust according to floating interest rates) for capital expenses in the purchase prices. In addition, the contract also clearly defines periodic adjustment schemes for fuel costs, maintenance fees and subsidies. The establishment of the aforementioned IPP purchase pricing (including reserve price and asking price) has been performed in compliance with Ministry of Economic Affairs' "Operation Directions for Deregulated Power Industry" and "Private Power Plant Establishment Plan".

Despite the continuous decline of market interest rates since 1993, Taipower was not able to adjust the capital expenses in accordance with the falling interest rates due to contract restrictions. And as such, Taipower has attempted numerous negotiations with IPPs and sought the assistance of the Energy Bureau of the Ministry of Economic Affairs for negotiation but failed to achieve consensus with the IPPs to amend the terms of the contract. Taipower filed for litigation and submitted a complaint to the Fair Trade Commission. After the Legislative Yuan decreased the budget for power purchase and because of the force from public opinion, the IPPs yielded and agreed to resolve the dispute by means of amending the contract. Taipower amended the contract with 9 IPPs in August 2013 and adopted the status of power generation in 2011 and the market interest rate as the basis of calculation. In the future, Taipower will be able to reduce its power purchase expenditure by approximately NT$ 1.54 billion per year, amounting to a total of NT$ 24.9 billion during the span of the contract.

With regard to the dispute that had arisen from the IPP power purchasing price, the Ministry of Economic Affairs has announced that future establishment of IPP power purchase pricing shall be implemented in the same way that renewable power purchase pricing is done – the government shall set up a review committee that comprises representatives from the industry, the government body and the academe in order to conduct reviews that are objective and professional. Not only that, Taipower will also vie for a fair, unbiased third party to establish the IPP power purchasing price to eradicate the public's doubt on Taipower's overpriced purchase of IPP power.

3.3 Upgrading Power Supply Stability

3.3.1 Strengthening Grid Structure

In order to ensure the stable transmission of power, Taipower has been replacing existing transmission and distribution and sales systems in conjunction with the planning and construction of new facilities.

◆The 7th Transmission and Substation Project (approved by the Executive Yuan on Feb 9, 2010)

In response to the government promotion of economic policies such as the "i-Taiwan 12 Projects", "Industrial Reconstruction" and the "New Blueprint of Global Link" and the resulting demand for power to accommodate the needs of regional growth in power consumption, Taipower has formulated the 7th Transmission and Sub-station Project (after the 6th project) to continue with the required construction of sub-stations and to expand transmission to provide customers all over the country with safe and reliable power. The 7th Transmission and Substation Project, with a total investment of approximately NT$ 238.9 million, has been scheduled for implementation from Jan. 2010 to the end of Dec. 2015. The plan calls for 130 new sub-stations to support a total installed transformer capacity of 23,560 MVA. The expanded line length will come to 2,370 CKM. The progress of the project, by the end of 2013, is at 48.95% (higher than the target) and has reached the target for 2013.

◆The planning and management of power transmission and power supply systems

To ensure equipment safety and improve power supply stability, Taipower retrofits transforming and transmitting equipment for its sub-stations. The following facilities have been retrofitted/replaced in 2013:

	Transformers and breakers	Transmission towers	Overhead transmission lines	Overhead ground wires	Overhead transmission lines replaced by underground cables
Retrofitting and replacement	87 units	426 towers	542.639 ckt-km	300.802 ckt-km	46.878 ckt-km

◆Improvements on power distribution and sales systems

Installation of distribution lines	Taipower has installed distribution lines with the total length reaching 351,474ckt-km as of the end of 2013.
Feeder automation	● In 2013, the number of newly expanded feeders reached 512. By the end of 2013, approximately 44.0% of the feeders would be automated. ● Feeder automation provides the means for fault isolation and effectively reduces the average outage duration from 60 minutes to less than 5 minutes.

3.3.2 Improving Energy Source Mixture

◆ Active Promotion of Base Load Energy Sources and Improvement of the Base Load Power Supply

Due to the renewal and reconstruction of the Talin Power Plant, the original Talin Coal Units #1 and #2 have been decommissioned at the end of 2012. Consequently, the base load ratio came to 41.9% in 2013, which was much lower compared to the ideal base load power of 55%~65%. However, after the Fukushima nuclear disaster, the government adopted an energy policy of "nuclear energy dependence reduction" and in consideration of reducing carbon dioxide emission from power generation; Taipower will prioritize the development of renewable power and the maintenance of a suitable ratio of gas-fired production. As such, it will take a significant period of time for Taipower to improve base load power ratio. Based on Taipower's 10209 Long-Term Power Development Program for 2013, Taipower is expecting to raise the base load power to 44.3% in 2024, with significant room for improvement from achieving the ideal base load power ratio.

With regards to working with the government in the promotion of renewable power, in addition to strengthening the promotion of various renewable energy, Taipower will also be spearheading projects such as the "Thousand Wind Turbines Project" and "Million Rooftop PVs" and so forth in the hope of motivating the public to commit to the development of renewable energy to create an environment of power conservation and carbon reduction in order to achieve sustainable lifestyles and consumption.

◆ Improving the Operational Safety of Thermal Power Units

Taipower has been mindful of the international trends of development for power generator units with the intention of deploying new units of high efficiency in the ongoing and future plans of facility retrofitting/ replacement in order to raise generation efficiency while lowering operating costs.

The Linkou and Talin Power Plant Renewal Project (under construction) have adopted the latest ultra-super-critical coal-fired power generation technologies with thermal efficiencies at 44.93% and 45.59% (LHV and Gross, respectively). In addition, in 2013 the Tong Xiao Power Plant Renewal Project (also under construction) has introduced the latest gas-fired combined-cycle units that deliver generation efficiency up to 60% (LHV). The aforementioned units are scheduled for commercial operation after 2016. Not only that, Taipower also sought to improve the energy efficiency of existing units through prudent operations and maintenance, achieving an annual thermal efficiency of 43.27% (LHV, Gross) in 2013 to set a new record. Taipower ranks 20th in the global power industry in terms of installed capacity scale. The following table is a comparison between Taipower and other large 10 power companies (with the exception of TÜV Rheinland) with comprehensive data.

Ranking of installed capacity by scale	Power Company	Thermal Efficiency (LHV gross %)	Year
1	Électricité de France	42.2*	2004
2	KEPCO	38.8	2012
3	TEPCO	41.38	2012
6	Southern Company	34.1*	2007
9	Eskom	32.0	2012
11	ENEL	39.9	2012
14	Hydro-Québec	32.2*	2009

Ranking of installed capacity by scale	Power Company	Thermal Efficiency (LHV gross %)	Year
17	Kansai Electric Power Company	40.78	2011
18	Chubu Electric Power Company	41.32	2012
21	TÜV Rheinland	41.0*	2011
20	**Taipower**	43.27LHV; 38.68HHV	2013

Note: 1. * represents nation-wide data.
2. Thermal efficiency can be represented either as higher heating value (HHV) and lower heating value (LHV); LHV is used in Europe while U.S. and other countries typically use HHV.

◆ Rolling Review of Reserve Margins

Taipower's long-term power planning is performed based on a general forecast for the future based on a number of factors, including the government's forecast for the economic situation, industrial development, measures of demand side management and other criteria such as population growth, electricity pricing, temperature and so forth. In addition, Taipower's long-term load forecast and long-term power planning based on the inputs of scholars and experts and in the event of an unexpected development/economic reform that would lead to substantial change in the forecast for economic growth.

◆ Long-term Power Development

Taipower's development of renewable power has been conducted in compliance with the "Renewable Energy Development Act". Presently, the percentage of renewable power out of Taipower's total installed capacity is approximately at 7% and the figure is expected to reach 12~15% by 2030, contributing roughly 8~10% of Taipower's total power generation.

After pro-actively assessing the application of various renewable energies over the years, Taipower has chosen to investigate and study items such as hydro, wind, photovoltaic, geothermal, ocean thermal energy, wave power, marine energy and so forth that promise higher potentials for development. In fact, Taipower has been involved in the development of hydro power generation for more than 50 years and since wind power generation has emerged as a relatively more economical source of renewable energy, it has been adopted as the focus of development. In 2013, Taipower completed a total of 127 auto wind power forecasting systems in Taoyuan Guanyin, Tatan (I and II), Taichung Harbor, Taichung Power Plant, Changgong, Changgong (I), Mailiao, Sihu, Jhongtun, Kinmen and so forth in addition to utilizing forecast data from the Central Weather Bureau for the construction of mid-term auto wind power forecasting system for Jhongtun and Kinmen Wind Farm (1~72 hours). Other items such as photovoltaic, geothermal energy, ocean thermal energy, wave power and marine energy remain in the promotion and R&D phase. The following table is a summary of Taipower's long-term power development program. For details on power projects, refer to the section on "Power Projects".

Summary of Taipower 10209 Long-term Power Development Program

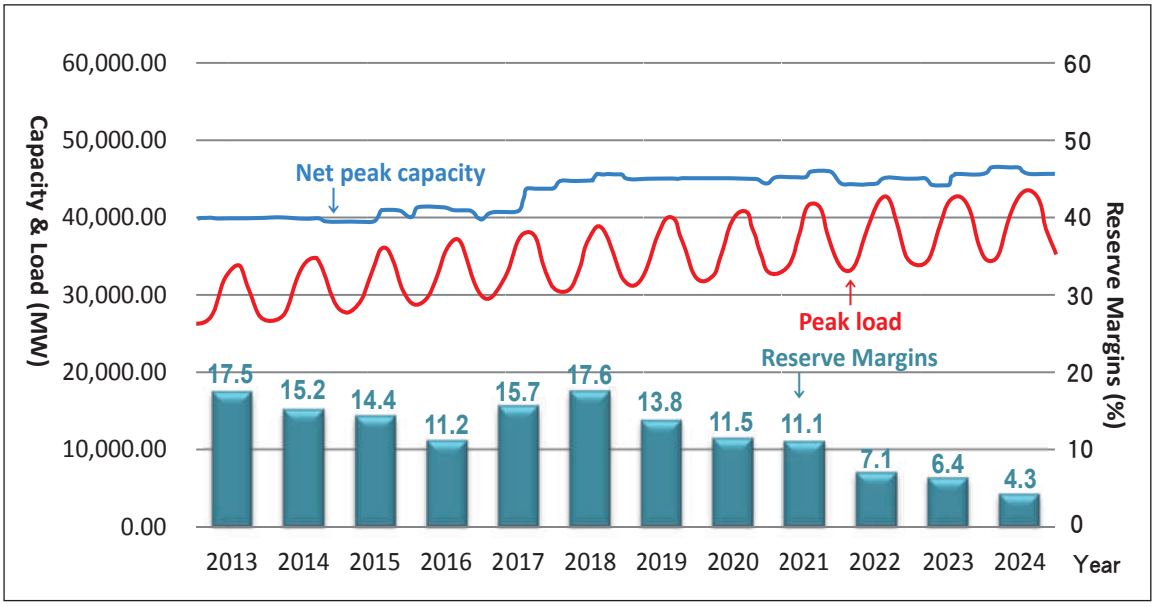
Project	Installed Capacity (MW)	Commercial Operation Year
Renewable Energy (Taipower)	224	
(1) Con. Hydro	8	2016-2021
(2) Other	216	2014-2020
Renewable Energy (IPP)		
(1) Con. Hydro	21	2017-2024
(2) Other	5,281	2014-2024
Taipower Thermal		
(1) Offshore Islands (oil)	57	2016-2022
(2) Talin Rebuild #1 & 2 (Coal)	2*800	2016-2017
(3) Linkou Rebuild #1~3 (Coal)	3*800	2016-2019
(4) Tunghsiao Rebuild C.C. #1~ 3 (Gas)	3*893	2017-2018
(5) Shenao Rebuild #1~2 (Coal)	2*800	2022-2023

Project	Installed Capacity (MW)	Commercial Operation Year
Taipower Thermal		
(6) Tatan C.C. #7~10 (Gas)	4*720	2021-2024
Nuke 4 (Lungmen) #1~2 (Nuclear)	2*1,350	2015-2017
Total	19,454	

Note: The actual date of commercial operation of each unit is subject to change by amendments made to relect the progress of the projects.

Long-Term Load and Reserve Margins

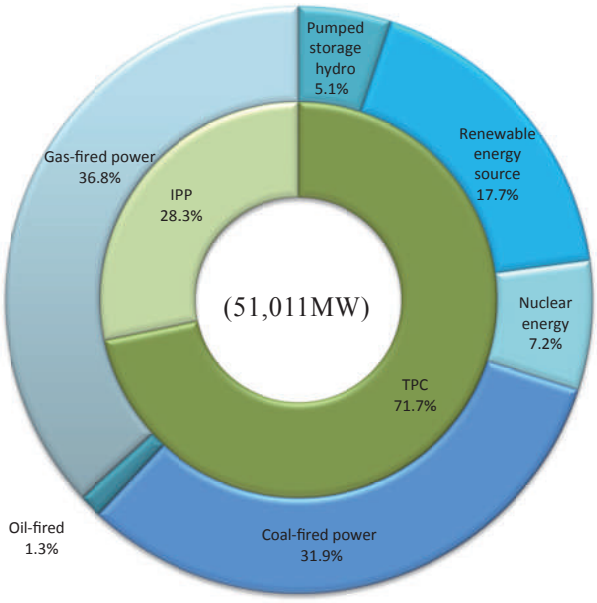
(Taipower 10208 Long-Term Load Forecast and 10209 Long-Term Development Program)



Note: Since newly added power was less than the new demand for power and retired capacity, Reserve margin will be gradually falling from 17.5% over the years from 2013 to single-digit figure by 2022. In 2024, Reserve margin is expected to drop to 4.3%.

Taipower's installed capacity planning by 2024

(based on Taipower 10209 Long-Term Development Program)



◆ IPP and Co-generation Power Purchasing Measures

Due to Taiwan's high population density, the construction of new power plants has always been a tough task for Taipower. As such, Taipower has looked to IPPs and other qualified co-generation systems for power purchasing. Such purchases not only help Taipower boost its domestic power distribution but also decrease on the demand for manpower and resources for relevant power development. In 2013, Taipower's purchases of outsourced power amounted to 49,235 GWh, which constitute approximately 23.1% of the total generated and purchased power amount of 213,429 GWh. These purchases help Taipower reduce its use of higher-cost fuel oil and natural gas for generation and thereby reduces Taipower's overall generation costs.

- IPP (Independent Power Producer): In 2013, there were a total of 9 IPPs under effective power purchase agreements with Taipower, with a total purchase capacity of 7,652.1 MW (for more details, please refer to the section on "Supplier Management" under "Improving Financial Depreciation"
- Co-generation: By the end of 2013, the number of wholesale purchase agreements for co-generation companies was 55, with a total installed capacity of 5,870.6 MW and a guaranteed peak capacity of 2,163.5 MW.

3.3.3 Ensuring Fuel Supply Security and Stability

In order to ensure the stability of fuel supply sources for each type of power generation, Taipower adopts the following measures to secure a sufficient amount of fuels and provide them to the power plants in the right quality and quantity and at the right time to ensure power supply security and stability.

3.3.4 Demand Management

◆ Load Management

Taipower has been committed to promoting DSM for more than 3 decades and has implemented several load management measures to improve the load pattern of the system. In 2013, Taipower successfully reduced the load at peak hours by 5,003 MW (3,565 MW by Time-of-Use Rates and 1,438 MW by Interruptible Rates), equal to 14.7% of the total peak load of 33,957 MW and significantly contributed to system load balance.

Demand Response Measures

Measures		Description	Applicable Customers
Implementing "Season Rates" since 1989		Encourage customers to reduce the consumption during summer by setting diverse prices for different seasons.	All customers
Implementing "Time-of-use Rates" since 1979		Reflect the cost of power supply during different time periods. Encourage off-peak hour electricity use to reduce peak load.	Optional for lighting and low-voltage customers, mandatory for all high-voltage customers
Implementing "Ice Storage Central Air-Conditioning System" since 1991		Encourage installation of ice storage system to fully utilize the off-peak electricity so as to reduce on-peak load. The off-peak hour electricity rate earns a 40% discount of the on-peak rate.	Commercial customers (i.e., hotels, hospitals, administrative agencies and so forth)
Demand response load management measures	Implementing "Central Air Conditioner Duty Cycling Load Control Measure" since 1991	Rotation of central air-conditioning system with 60 mins on and 15 mins off. Rotation of package air-conditioning system with 22 mins on and 8 mins off.	Non-productive customers (i.e., office buildings, schools and so forth)
	Implementing "Interruptible Rates" since 1987	Provide discount rates to mitigate on-peak load and transfer to off-peak hours.	Industrial customers or school customers (such as factories, schools and so forth, depending on the circumstances)

◆ Energy Saving Incentives

To advocate government policy of energy conservation and carbon reduction, and to encourage the public saving energy, Taipower has implemented "Energy Saving Incentives." Customers with outstanding energy conservation performance were entitled to 5%, 10% or 20% discount of their electricity bills. For 2011, 2012 and 2013, up to 3.79, 4.83 and 4.16 TWh respectively, were saved, with an amount of NT$ 7.93, 9.87 and 7.09 billion being discounted. CO_2 emission has been reduced by 2.02, 2.57 and 2.21 million tons for each year, equivalent to 5,450, 6,949 and 5,985 times the annual CO_2 absorption volume of the Da-an Forest Park.

3.3.5 Generation Projects

Energy Type		Project	Description
Nuclear & Thermal Plant Projects	Nuclear	Nuclear #4 No.1 & 2 Project	● The project aims to install two 1,350 MW units that are expected to generate 19,300 GWh per year; using as an alternative to coal-fired power generation, it could reduce annual CO_2 emission by 16.2 million tons. ● As of the end of 2013, the project was 93.71% complete.
	Thermal	Talin Renewal & Reconstruction Project	● The project calls for the installation of four ultra-supercritical coal-fired units of 800MW each to replace the five low-efficiency ones. Due to the Environmental Impact Assessment that only allows for two units, Taipower has revised the project. ● At the end of 2013, the actual progress was 34% complete.
		Linkou Renewal & Expansion Project	● This project aims to install three 800 MW ultra-supercritical coal-fired units. ● At the end of 2013, the project was 36.81% complete.
		Tunghsiao Renewal & Expansion Project	● This project aims to install three 892.6 MW gas-fired combined-cycle units with a total capacity of 2,677.8 MW. ● At the end of 2013, the project was 15.08% complete.
		Shenao Renewal & Expansion Project (application postponed)	● This project aims to install two 800 MW ultra-supercritical coal-fired units. ● At the end of 2013, the project was 2.48% complete.
		Changgong Thermal #1 & #2 Project	● This project will install two 800 MW ultra-supercritical coal-fired units. ● Under the environmental assessment review, the project has been deferred for four years by the Executive Yuan on Jan. 4, 2013.
Hydro Plant Projects	Hydro	Ta Chia Hsi Hydro Power Plant Chingshan Branch Retrofit Project	● Four vertical Francis turbine generation units will be installed. Upon completion, the net peaking capability will reach 368 MW. ● At the end of 2014, the project shall be 82.67% complete.

Energy Type		Project	Description
Renewable Power Projects	Hydro	Wind Project Phase 4 (2012~2015)	● Eight wind power units, totaling 7.2 MW will be installed at the Luchu Wind Power Plant. ● At the end of 2013, the project was 18.78% complete.
		Penghu Low-Carbon Project (2013~2016)	● This project aims to install eleven 3MW wind power units with a total installed capacity of 33 MW. ● Taipower has obtained an official letter of consent for land planning from the Forestry Bureau and will continue to conduct environmental impact assessment.
	Photovol-taic	Photovoltaic Project Phase 1	● The photo-voltaic project originally planned for the installation of systems at Taipower-owned buildings and land and the selected sites provided by outsiders between 2008 and 2011. By the end of 2011, a total installed capacity of 10.4 MW had been completed. To comply with the directions of the government for an increase of renewable energy use, Taipower has amended the project by adding 7.6 MW to the installed capacity and this has been approved by the Ministry of Economic Affairs. The amended project is now scheduled for completion by Dec. 2014, with a total installed capacity increased to 18 MW.

3.3.6 Reducing scheduled and forced power outage frequency and duration

◆Management structure

- To ensure reliability, Taipower has established specific targets for relevant power supply reliability index (SAIDI and SAIFI) to assess operating performance and enhance reliability.
- Taipower holds Facilities System Incident Review Meeting monthly to review the causes of incidents happened in previous month and proposes optimal improvement measures for each case.
- Taipower also strives to expedite feeder automation construction and to improve the accuracy of the distribution of the geographic information system, while endeavoring to achieve overall control of forced outage in the push for outage-free operations.

Terminology

Power supply reliability index:

The index for gauging reliability for the power industry includes:

- System Average Interruption Duration Index (min/customer-year) = All system interruption duration ÷ total number of customers
- System Average Interruption Incident Index (freq./customer-year) = All system interruption Incident ÷ total number of customers

◆Table of reliability target and actual performance

Reliability index \ Year		2011		2012		2013	
		Target	Actual performance	Target	Actual performance	Target	Actual performance
System average interruption duration index (min/ customer, year)	Performance of forced outage	14.546	13.894	13.901	13.331	13.472	13.141
	Unexpected outage	6.439	4.33	6.091	5.719	5.521	4.945
	Total	21	18.224	20	19.050	19	18.086
System average interruption Incident index (freq./ customer, year)	Performance of forced outage	0.07	0.066	0.069	0.067	0.068	0.064
	Unexpected outage	0.23	0.138	0.221	0.23	0.212	0.2
	Total	0.3	0.204	0.29	0.298	0.28	0.264

3.4 Coping with the Liberalization

3.4.1 The Amendment of the Electricity Act

To promulgate liberalization, the Ministry of Economic Affairs established the "Liberalization Planning Task Force" in October 2012 to determine the direction of liberalization. After six meetings, the following suggestions were presented:

- Open market of the generation sector (excluding nuclear and hydro power plants with installed capacity exceeding 20 MW of capacity) and consider permitting direct power supply of independent generators.
- Open access of the grid to provide power wheeling, and establish an independent system operator.
- Transmission and distribution remains monopoly and be regulated.
- Establish an independent regulatory agency responsible for power industry regulation and tariff review.

The Bureau of Energy reported to the Minister of Economic Affairs on May 1, 2013, on the topic of liberalization. The Minister determined that the suggestions of the task force feasible and directed the task force to prepare the Electricity Act amendments, and also requested Taipower to study on organization reform aiming at liberalization. Thus, the Bureau of Energy established "Electricity Act Amendment Task Force" to propose the amendment draft, and Taipower set up Deregulation Countermeasure Task Force" accordingly, includes five sub-team as "Financial Response & Privatization Planning", "Electricity Act Amendment", "Open Competition of Generation Sector", "Wheeling and Dispatch" and "Organization and Communication". The task force is responsible for exploring strategies in response to deregulation and the planning of Taipower's transition to privatization in light of future competition. In addition, the task force has also been entrusted with the task of integrating the existing accounting separation and the simulation of a bidding mechanism for thermal generators, and relevant rates of wheeling.

To cope with the amendment of the Electricity Act, Taipower has been participating in all meetings organized by the Ministry of Economic Affairs since 2013, and has proposed suggestions to the Bureau of Energy and the Ministry of Economic Affairs. Taipower's suggestions are as follows:

- Extend the planned schedule of "Separation of Generation and Grid Functions" to 10 years.
- Establish Independent System Operator under the budget of the government.
- Provide phase-in power supplier options for retailer customers.
- Oppose direct power supply of independent generators to customers (to prevent cherry-picking and to ensure the equity of customer rights).
- Relieve Taipower from non-public-interest obligation.

After completing the aforementioned tasks, the Deregulation Countermeasure Task Force reported to Taipower's top management on Nov 25, 2013 and was directed to transform into "Deregulation Countermeasure Meeting", "Separation of Generation and Grid Functions" and "Organizational Transformation Meeting". The Liberalization Planning Task Force established by the Bureau of Energy submitted the Draft of the Electricity Amendment Act on Feb 11, 2014 to the Executive Yuan for review. In the future, Taipower continues participating in the Draft of the Electricity Act Amendment review meetings hosted by the Executive Yuan and the Legislative Yuan, and communicates with the Union accordingly.

3.4.2 Separation of Generation and Grid (T/D) functions

"Separation of Generation and Grid Functions" is a fundamental policy of Taipower. Its ultimate objective is "Create Value and Reduce Costs", so as to increase the company's business operation efficiency and competitiveness. To promote the policy, Taipower held meetings under the Liberalization Task Force since 2013.

The planning structure is based on the components of "Value Chain of Electric Industry" (i.e., generation, dispatch, transmission, distribution and sales) and the "Business Operational Procedures" (i.e., planning, investment decision, design, construction, procurement, operational maintenance and management), to clarify the responsibilities of each Unit/System.

Initially, the process will focus on an "Annual Production and Sales Plan", with totally 18 topics to be identified before the end of June 2014. Three of the topics, "Overhaul Schedule & Timeframe Control", "Fuel Oil Stock Control" and "Liability for Accidents and Derived Costs", have been implemented for trial run by the Responsibility Center in 2014.

3.4.3 Organizational Transformation

Taipower commissioned Boston Consulting Group (BCG) to conduct a study on the optimal organizational structure for Taipower, under state-owned structure. The study aims to improve Taipower's efficiency to meet expectation of the public and to prepare for the upcoming market competition. The study completed in September 2013 concluded that the optimal organizational structure for Taipower is "Business Unit".

Taking into consideration the expectation of the public for reform, limitations of state-owned enterprise, and requirements of the Ministry of Economic Affairs, Taipower has adopted approaches to transform into a Business Unit organization. It will launch in January 2016, including, including Hydro & Thermal Power Generation, Nuclear Power Generation, Transmission & Supply, and Distribution & Sales Business Units.

3.5 Mitigating and Adapting to Climate Change

3.5.1 Adapting to Climate Change

In response to climate change, other than relevant national policy requirements, Taipower has already launched different adaptive measures and continued to make efforts in related researches. These adaptation plans have been incorporated into Taipower's short, mid- and long-term research and development plans to strengthen its adaptive capability to mitigate the impact of climate change on power generation, supply, transmission and distribution systems. These researches will also help Taipower to better understand the financial risks and opportunities caused by climate change. Taipower's climate change adaptation strategies include:

◆Participation in the National "Climate Change Adaptation Plan"

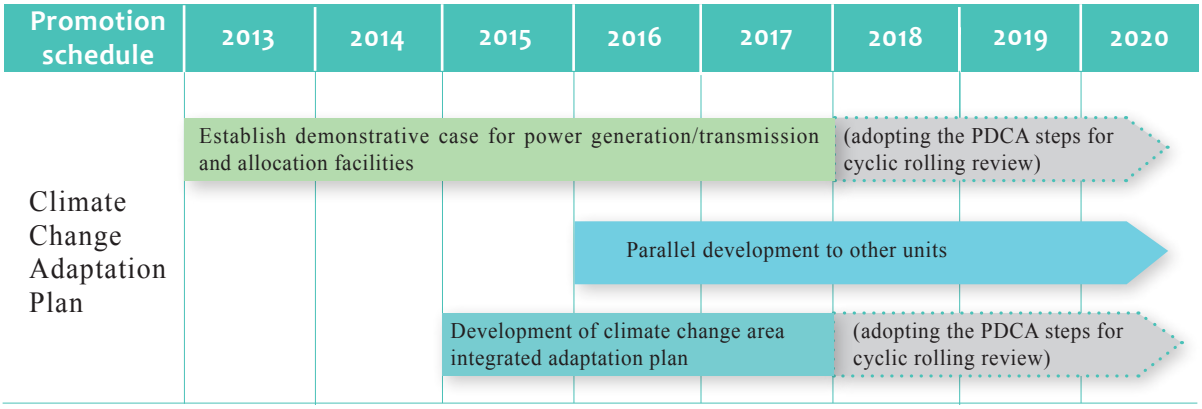
Action plans proposed include:

- Climate change impact assessment and vulnerability inventory check assessment for facilities and their locations (from 2012 through 2015)
- Climate change impact assessment and vulnerability inventory check assessment for the operation of grid annually
- Integrated power industry climate change adaptation capability improvement (from 2012 through 2015)

◆Compliance with the Execution of "Power Facilities Climate Change Adaptation Action Plan"

In 2013, Taipower accepted the assistance of ITRI and selected Mingtan Power Plant, Chienshan Power Plant and Huadong Power Supply Branch for the abovementioned assessment, and extended to hydro and wind power in Eastern Taiwan and offshore islands.

Taichung Power Plant was also chosen to implement the assessment in 2013, starting from itself and planned to extend to other plants. Taking Taichung Power Plant as the demonstration case, Taipower will apply the assessment to other thermal plants and gradually complete the adaptation capability planning and construction for generation, transmission and distribution facilities in accordance with the following schedule:



◆Incorporated these Assessments into Taipower's Current Business Management

In addition to the aforementioned counter-measures, Taipower will also incorporate concepts of adaptation. Due to the potential impact of climate change on existing power supply and demand, reliability was incorporated into the Risk Management Implementation Plan. Not only that, Taipower will also incorporate the adaptation planning and strategies into its future management strategies, strengthening all units' awareness for the risks of climate change and thereby allowing them to take the climate change into account.

◆Incorporation into short-, mid-, and long-term R&D Plan

Due to the complexity of power system and time-consuming power development cycles, coupled with the uncertainty of climate change, the collection and exchange of climate change- related information and implementation of relevant assessments became critical. Taipower planned to incorporate climate change impact and adaptation strategies into its short-, mid- and long-term R&D plans (including the financial risks and opportunities arising from climate change) for prospective, integrated, fundamental and comprehensive research in order to take preventive action and reduce potential losses.

3.5.2 Taipower's Energy-Saving and Carbon Reduction Master Plan

The Executive Yuan ratified the national carbon reduction objective in May 2010 to control the emission volume of 2020 to the level of 2005 and the volume of 2025 to 2000. In order to manage and achieve the GHG emission reduction goals, Taipower has formulated 9 strategies along with 31 action plans (see table below) in May 2011. By focusing on power supply and demand while reinforcing its efforts in energy conservation and carbon reduction technologies and relevant communications, Taipower aims to fulfill the government's reduction objectives. Please refer to the corresponding sections and chapters on the implementation and results for the action plans.

Taipower's Energy Saving and Carbon Reduction Master Plan Promotion Strategies and Action Plans

Strategy	Action plans	Corresponding chapters in this CSR
Expanding Low-Carbon Energy	1. Expand installed capacity of renewable energy 2. Complete units 1 and 2 of the Lungmen Power Plant 3. Maintain natural gas power at an appropriate ratio 4. Seek viable means of extending the lifecycle of existing nuclear units	● Upgrading power supply stability (power grid improvement)
Upgrading the Efficiency of Existing Generation Units	5. Upgrade the efficiency of existing thermal units 6. Upgrade the output of existing nuclear units	● Upgrading power supply stability (power grid improvement)
Upgrading the Efficiency of the Transmission and Distribution Systems	7. Improve efficiency of the operation of transmission and distribution systems to reduce line loss. 8. Improve transmission and distribution facilities 9. Research, promotion and application of high-efficiency transmission, substation and distribution facilities.	● 2013 Performance Overview (line loss rate) ● Upgrading power supply stability (power grid improvement) ● Customer Service & Innovative Applications (R&D)
Strengthening R&D on Power Grid Technology	10. Construct a high-quality power grid for integrating distributed energy sources. 11. Sub-station and feeder automation 12. Study new pumped storage hydro power and the feasibility of modifying the speed-adjustable units at Tatan II plant for the development of renewable energy	Customer Service & Innovative Applications (R&D)
Strengthening R&D on Energy Sources Technology	13. R&D in technologies for clean coal generation and fuel cell generation 14. Develop the technologies for carbon capture, storage (CCS) and reuse 15. R&D in technologies for new energy power generation 16. Introduce and access new demonstrative energy generation systems	● Customer Service & Innovative Applications (R&D) ● Climate change mitigation & adaptation (CCS)
Developing and Trading Carbon Credits	17. Invest or participate in domestic and foreign carbon reduction projects 18. Purchase domestic/foreign carbon emission quota 19. Plant trees to reduce carbon	Climate change mitigation & adaptation (Greenhouse gas inventory & management)
Implementing Demand-side Management	20. Infrastructure plan for AMI 21. Promote demand-side electric energy management measures 22. Promote reasonable electricity tariff schedules 23. Research demand-side management techniques	● Upgrading power supply stability (Demand-side management and Promoting reasonable electricity tariff schedules) ● Customer Service & Innovative Applications (Smart Grid, R&D)
Enhancing Internal Energy Conservation	24. Control international productive and non-productive energy conservation 25. Promote green buildings and in-house energy conservation 26. Promote green IT and teleconferencing 27. Establish an energy conservation service team to provide energy conservation technology diagnosis and consultation services.	● Creating an environmental-friendly culture (Green building, procurement) ● Social participation
Reinforcing Energy Conservation Promotion and Communication	28. Use the media to promote energy conservation and carbon reduction 29. Hold energy conservation and carbon reduction promotion campaigns 30. Promote energy conservation and carbon reduction techniques and methods 31. Host energy conservation and carbon reduction seminars	● Climate change mitigation & adaptation (Reinforcing energy conservation promotion and communication) ● Stakeholder agreement

3.5.3 Greenhouse Gas Inventory and Management

◆ GHG Inventory and Management

Taipower's main sources of GHG emission include thermal power generation, coal yards, transportation vehicles, insulation gas used for switchgear, freezers and air-conditioning facilities. In 2013, approximately 99.3% of Taipower's GHG emission came from thermal power generation (other sources of emission are collectively termed as common process). Not only did the overall emission fall below the 2012 level, the net emission intensity also fell from 0.508 kg CO_2e/kWh to 0.496 kg CO_2e/kWh. A record of Taipower's annual emission rates (from 2005 through 2013) is also available on its website (under the "Information Disclosure" section), showing an overall declining trend.

In order to make its GHG information transparent and credible, Taipower entrusted a certification agency to conduct ISO ISO14064-1 verification. As of 2013, a total of 17 units passed the ISO 14064-1 verification.

GHG emissions by all units from 2009 through 2013 (including generation and common process)

Unit: 1,000 tons of CO_2e

Gas Type	CO_2	CH_4	N_2O	SF_6	HFC	Total
2009	73,410	112	280	185	7	73,995
2010	80,364	97	302	232	7	81,002
2011	83,944	69	316	227	20	84,576
2012	84,206	75	314	186	59	84,840
2013	81,682	65	300	147	58	82,252

GHG emissions by all units between 2011 and 2013

Unit: 1,000 tons of CO_2e

Item	2011	2012	2013
Oil-Fired Unit Generation	5,525	4,347	4,053
Gas-Fired Unit Generation	18,672	20,472	20,844
Coal-Fired Unit Generation	59,777	59,367	56,783
Common Process	602	654	572
Total Taipower Emission	84,576	84,840	82,252

Note: The statistics only cover the 3 year period due to discrepancies in the figures for 2009-2010 as they do not include common process

◆ Management and the Reduction of SF_6

Most modern power generation facilities (including switchyards, substations and distribution lines) use SF_6 for insulation switchgear equipment, with the quantity of equipment being large and varied. Through its SF_6 reporting and management information system, Taipower has achieved precise control of SF_6 use and emission. For the creation of re-usable space, Taipower will recycle and collect SF_6 gas in empty cylinders for storage and deliver them to the National Halons and F-gases Management Center for refining before being transferred to the magnesium alloy industry for further use. This helps to increase the life span of SF_6 and reduce the emission volume of GHG. As of March 13, 2014, the recycled inventory in 2013 came to approximately 2,026.40 kg, with purified emission at roughly 41,693.62 kg.

Terminologies:

- Refill: the quantity of insulation gas that has been recycled, refined and refilled to their respective equipment.
- Inventory: the quantity of insulation gas that has been mixed with impurities and yet to be refined that has been stored temporarily in cylinders.

◆ Preliminary Greenhouse Gas Reduction Project and Replacement Plan

After the Environmental Protection Administration published the Principle of Preliminary Greenhouse Gas Reduction Project and Replacement Plan in 2010, Taipower has followed the principle to replace its preliminary projects with plans to secure certified emission reduction that can be used to offset extra emission in a future case where total emission control is enforced.

Preliminary Project

When a combined-cycle unit set has an emission level lower than that announced by the EPA, the plant may, according to the Principle of Preliminary Project of Greenhouse Gas Reduction and Replacement Plan, apply with the EPA for examination and the grant of a credit for the Preliminary Project.

As of 2013, the Talin, Taichung, Hsiehho and Hsinta Power Plants (2000-2012) have passed the examination by the EPA, with the carbon credits for Taichung and Hsinta Power Plants pending EPA review. The credit amounts requested from the EPA by the plants are shown below:

Overview of the Implementation of Early Action Project Credits

EPA Audit Year	Power Plant	Year of Early Action Project	CER
2012	Talin	2005~2010	Approx. 178,000 tons
2013	Hsiehho	2000~2008	Approx. 5.877 million tons
	Taichung	2000~2011	
	Hsinta		
	Talin	2000~2004, 2011	

Offset project

Offset project refers to the registration of a certified emission reduction for a power plant through the submission of a preliminary project. In 2013, Taipower filed 8 applications for replacement plans. The contents and progress of these projects at the end of 2013 are given below:

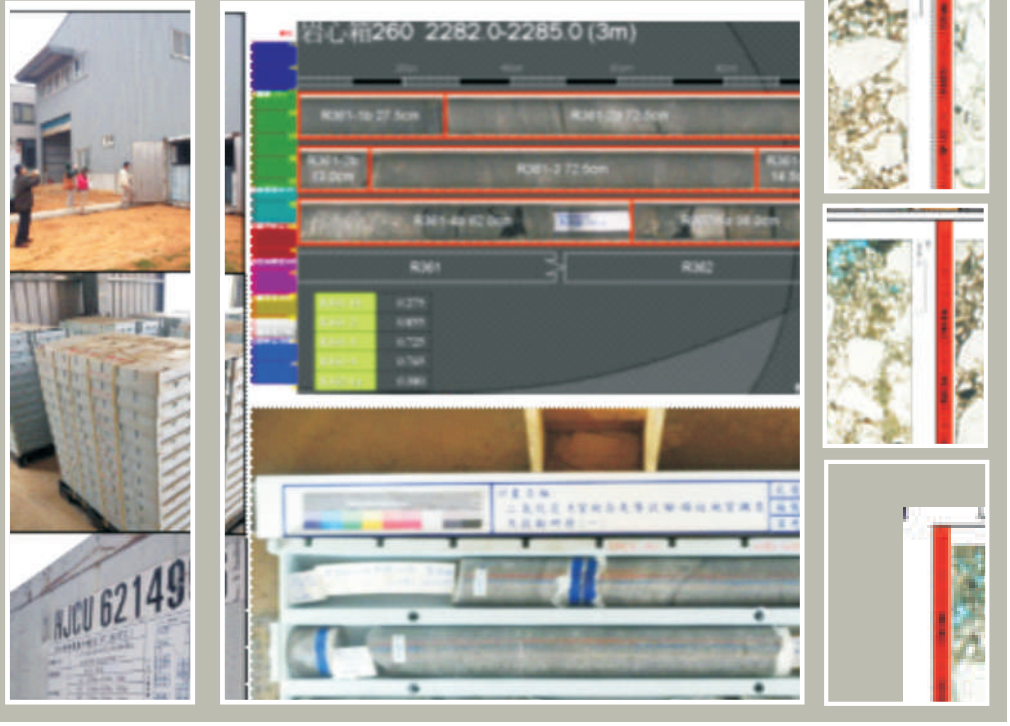
Responsible Unit	Project	Crediting Period (years)	Expected CER (10,000 tons)	Current Status
Taiwan Power Research Institute	7.03MW Photo-voltaic Plant Project	7	4.31	Passed EPA examination and registered (2012.11)
Department of Generation	Wansong, Bihai Hydro Power Generation Projects	7	184.30	Passed EPA examination and registered (2012.11)
Hsiehho Power Plant	H#4 Blower Motor Rotation Control Improvement	10	23.70	Passed EPA examination and registered (2013.12)
Taichung Power Plant	Taichung #4 Steam Turbine Efficiency Improvement	10	25.86	Passed EPA examination and registered (2013.12)
Hsinta Power Plant	Hsin#1 Boiler & Steam Turbine, Control System and Efficiency Improvement	10	49.23	Under examination by EPA
Department of Renewable Energy	Taichung & Hsinta Photo-voltaic	7	2.43	Under examination by EPA
Tatan Power Plant	Natural Gas Power Generation	10	Pending confirmation	Verifying
Tunghsiao Power Plant	Natural Gas Power Generation as an Alternative for Fuel Oil	10	Pending confirmation	Verifying

◆ Carbon Capture and Storage (CCS)

In response to global climate change and compliance with the government policy, Taipower is developing its CCS plan (2009~2030) to save energy and reduce emission. Taipower has completed the "CO_2 Underground Storage Geological Database Construction & Candidate Site Selection Plan" and "CO_2 Geological Storage Experimental Site Investigation Planning & Research Project" in 2008 and 2010 respectively. These large-scaled researches were pioneering projects for the development of carbon storage technology in Taiwan and duly reflect Taipower's commitment to the R&D of carbon reduction technologies. Through the participation in MOEA's CCS Strategic Alliance and the Bureau of Energy's CCS R&D Alliance, Taipower strives to align its objectives with the carbon reduction schedules and objectives that the government has laid out.

Taipower's promotion of CCS has to be implemented in accordance with international trends and in conjunction with the government's carbon reduction policies and pertinent regulations in order to determine the feasibility of CCS operations in Taiwan and prepare for potential demands for large-scaled reduction. Given the demands for carbon reduction on a national level, the National Science Council has also been spearheading relevant national energy projects. Taipower has targeted the saline aquifer layer between 2000~3000 meters in the earth's crust. In order to learn more about the status of the subterranean strata, Taipower has completed the drilling of a 3,000 meter borehole by the end of 2013 and extracted rock core samples at depths between 1,500~ 3,000 meters to determine if the strata were suitable for carbon sequestration through relevant analyses. The strata sequence for the chosen site consists of approximately 3,000 meters of rock formation (made up of a retardation layer, seal and reservoir from top to bottom). The drilling project is only at the initial phase of R&D and has been conducted in the hope of acquiring basic data for feasibility assessment and establishment of relevant laws. Analyses of the relevant data are still on-going and Taipower must still implement relevant trials for verification before moving on to commercial storage. There is still much room for advancement in this technological domain.

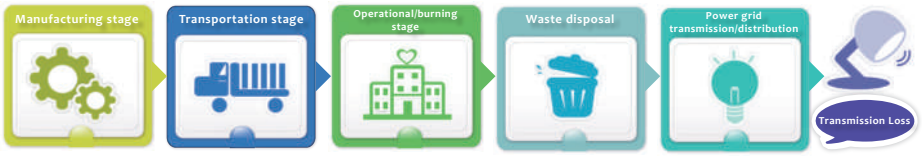
Rock core samples extracted through deep drilling and their microscopic optical images



3.5.4 Carbon Footprints

In contrast to power emission factor where only the operating combustion and distribution stages on the grid for power generation are considered, carbon footprints for the power industry focus on an analysis of greenhouse gases emitted at all stages of power generation including material mining, fuel shipment, power infrastructure construction, combustion, on-grid transmission and distribution to the final waste process. This allows users to review the current greenhouse gas emission from a more sensitive perspective and identify the areas showing a potential for carbon emission decrease.

With the assistance from the Bureau of Energy, MOEA, Taipower has completed the tentative calculation of the carbon footprints for Talin, Taichung, Linkou, Hsinta, Hsiehho, Tatan, Tunghsiao, Nanpu, Nuclear #1, #2, #3, Taichung Wind Power Station and Yongan PV Station. In 2013, Taipower will also extend the calculation of carbon footprints to the offshore Chienshan Power Plant.



3.5.5 Reinforcing Energy Conservation Promotion and Communication

- Twenty sessions of the "National Power Communication Campus Program" were held in 2013 at colleges and senior vocational schools across Taiwan to fortify students' concept and practice of energy conservation and carbon reduction.
- Three sessions of "Power Construction Seminars for Primary and Secondary School Teachers" were held in 2013 to encourage teachers to convey the importance of energy-saving and carbon reduction to their students.
- Taipower participated in the Energy-Saving & Carbon Reduction Promotional Campaign on World Environment Day in 2013 hosted by EPA, Executive Yuan at the Taipei Expo Park in Yuanshan by setting up Taipower's Carbon Reduction Strategy booth at the event.
- Taipower's various branches continued to host various energy conservation workshop (i.e. energy conservation workshops in schools, introductory household appliance repair workshops and so forth) to introduce the appropriate use of lightings, air-conditioners, refrigerators and other appliances for better efficiency. In 2013, a total of 1,318 workshops were organized, attracting approximately 276,000 participants.
- Taipower organized visits to households that use more than 100 kW to disseminate concepts about efficient power use and encourage users to choose appliances with better power efficiency. The visits were designed to help users strengthen their awareness of energy conservation. Taipower visited a total of 5,021 households in 2013.
- Taipower printed approximately 300,000 copies of various practical energy-conservation pamphlets to be distributed to the general public.

3.6 Creating an Environmental-friendly Culture

The "Information Disclosure" section (please refer to Chapter 4 on Enhancing Information Disclosure and Communication) is a new addition to Taipower website, which was revamped in 2013. The "Thermal Power Plant Environmental Protection" under environmental information offers extensive historical data and the latest statistics on air pollution, water pollution, by product re-use, GHG and so forth as rich supplementary material for this chapter.

3.6.1 Environmental Impact Assessment

It is important for Taipower to acknowledge that its development could bring a variety of negative impact on local communities, including water pollution, air pollution, soil pollution, noise and vibrations, pungent odors, waste generation, toxic substance pollution, land subsidence, radioactive pollution, destruction of natural resources/landscapes and destruction of social/cultural/economic/environmental and so forth. As such, it is imperative for Taipower to conduct general investigations that are scientific and subjective beforehand in order to predict, analyze and assess the sites for the proposal of environmental management plans. This would in turn allow Taipower to conduct public seminars and reviews to prevent and mitigate the potential impact of its development on the environment.

Prior to the process of environmental impact assessment before the construction of power facilities, Taipower will conduct public opinion polls in the development areas, including the organization of public seminars, visiting and communicating with the local residents, assessing the local physical and chemical environment, humanities, social/economic/ecological environments and so forth. Since any development plan could result

in varying degrees of impact on the local environment, Taipower will therefore formulate specific mitigation strategies based on the extent of impact, scope and characteristics of the development (i.e. transmission line plan, power development plan and so forth). The strategy will be duly recorded in the environment assessment report and carried out accordingly.

Taipower also hosts internal education and training on the Wildlife Conservation Act and requires sub-contractors to implement trainings for their employees, written in the construction contracts, in order to ensure that all personnel duly abide by relevant regulations. When a development plan has passed the environmental impact assessment, Taipower will then establish a "Minimizing Environment Impact Plan", a "Minimizing Environment Impact Action List" and an "Environment Assessment Commitment Checklist" to ensure that all commitments on environmental impact assessment have been fulfilled. In addition, Taipower also submits its environmental impact assessment commitment declaration and earth processing measure on EPA's website on a quarterly basis while continuing to monitor the site environment in order to achieve the task of environmental protection.

As influenced by various key factors such as energy policies, CO_2 emission issues and project requirements, the progress of reviews for EIA has been fairly slow. Taipower will continue its efforts to communicate with its stakeholders in the hope of meeting their expectations without compromising Taipower's development for power facilities.

3.6.2 Energy and Resource Management

◆ Materials Flow Management System

Given the fact that information transparency has become an important index reflecting the sustainable development and social responsibilities of a company, Taipower has made a full-fledged effort to set-up a materials flow management system (MFMS) for a total of 52 units covering hydro, thermal, nuclear, supply and distribution systems between 2009 and 2013 for the rapid control of raw materials utilization, pollutant emission, and recycle, by product bidding quantity and so forth in order to dramatically improve the efficiency and accuracy of Taipower's environmental information management.

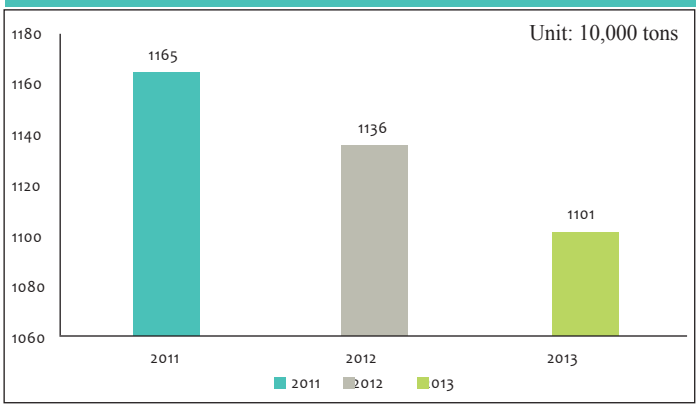
◆ Water Resource Management

Although Taipower's materials flow platform covers water consumption statistics, since the platform is still in the promotional stage, the figures of total water consumption and waste discharge are still unavailable. Relevant platform operations are expected to be completed in the following years. At present, Taipower only has the water consumption for thermal power generation, and the process is available under "Source of Water Pollutant Discharge", Thermal Power Plant Environmental Protection of the Information Disclosure Section on Taipower's website.

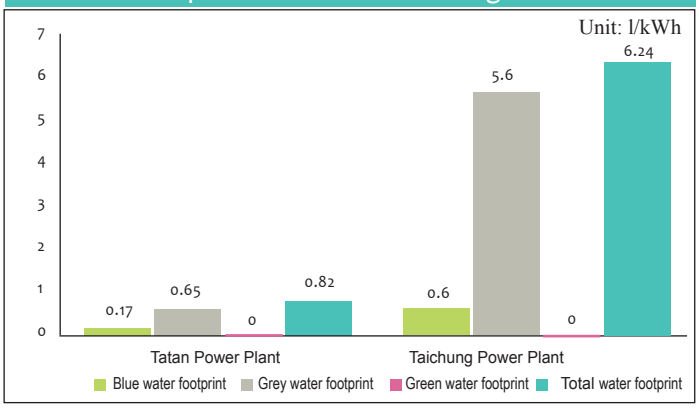
Water Footprints

Taipower took the initiative to calculate the quantity of water inputs and wastewater outputs of thermal power plants to understand the water resource utilization status. In 2013, Taipower commenced the "Power Generation Water Footprint Inventory Preliminary Project" research and chose the Datan and Taichung Power Plants as the designated units for 1st phase water footprint inventory. Results indicated that the water footprint to be 0.82 and 6.24 liters per kWh respectively. In the future, Taipower will coordinate with the government's "water footprint" promotion system to conduct water footprint inventory checks.

Taipower's thermal plant water consumption between 2011 and 2013



Water footprints for Tatan and Taichung Power Plants



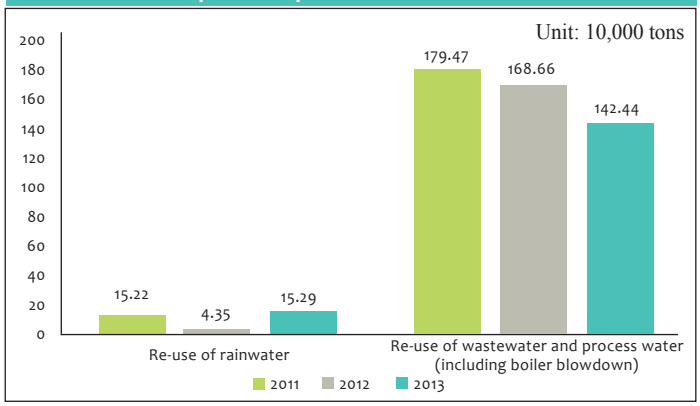
Note:
Blue water footprint: quantity of surface and underground water needed for generation processes
Grey water footprint: quantity of fresh water required for the absorption of pollutants as permitted by law (Water Pollution Control Act)
Green water footprint: quantity of rain water consumed for the manufacture of products (i.e. rainwater trapped in soil)

Wastewater Re-use

While adhering to the concept of water conservation, Taipower has been actively pursuing the goal of zero wastewater discharge. Rainwater collection (power plants and dormitories) and wastewater re-use projects are being promoted, and integral planning has been implemented to reduce the use of tap water inside the power plants.

Due to the excessive salt concentration (that may cause serious corrosions as well as salination of the soil) in the wastewater from the flue gas desulfurization (FGD) process, the recycled water in 2013 was unusable and therefore was not calculated in the total waste water quantity.

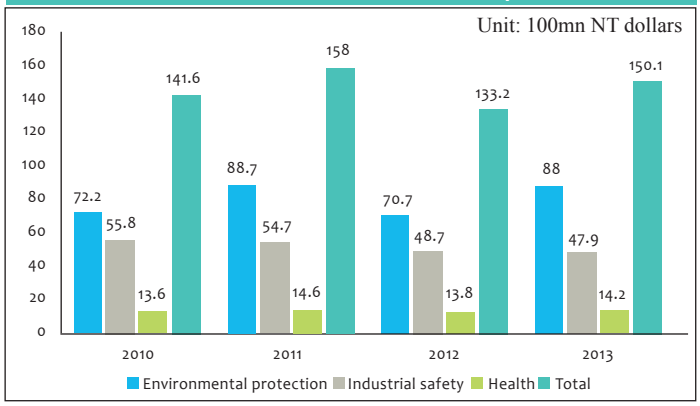
Thermal power plant wastewaters re-use



◆ Environmental Accounting System

Since August 2003, Taipower established its environmental accounting system and developed the EAS information platform to be integrated with Taipower's existing accounting operations and information system. This would allow all units to complete their expense reimbursement and collect materials in a timely manner. The system will effectively transform environment-related activities (including environmental protection, occupational safety and health) into financial or accounting information. As of the end of 2007, the system has been promoted in all Taipower units.

2010-2013 environmental cost expenditures



3.6.3 Air Quality Maintenance

◆ Treatment of SO_X, NO_X and PM

Air Pollutants	Preventive Measures
Particulate matters (PM)	Installation of high-efficiency electrostatic precipitators (ESP) which are capable of removing 90~99.8% of particulate matters
NO_X	Installation of low- NO_X burners (LNB) and selective catalytic reduction (SCR) to purify the smoke
SO_X	Installation of flue gas desulfurization (FGD) to remove over 90% of SO_X emission

The results of Taipower's air pollutant emission from 2011 to 2013 are shown in the table below. In addition to installing highly efficient pollution prevention devices, Taipower has also been building indoor coal yards to reduce coal dust. Taipower has already completed 4 indoor coal yards and will use them and covered conveyors with high priority.

Taipower's air pollutant emission index between 2011 and 2013

Unit: kg/GWh

Air Pollutants	2011	2012	2013
NO_X	356	328	302
SO_X	364	327	327
PM	27	28	27

◆ Control of Ozone Depleting Substances

Taipower's use of ozone depleting substances (ODS) comes mainly from its use of halon (HCFC) fire extinguishers. According to its 2013 inventory, Taipower still has about 69.497 tons in stock. In order to meet the Montreal Protocol, Taipower sets its goal of limiting annual consumption of HCFC to be 25% of the base amount. In the future, Taipower will comply with government policy and regulations to gradually reduce the use of HCFC fire extinguishers to protect the ozone layer.

3.6.4 Environmental Education Training

To help Taipower employees to realize the importance of environmental protection and to put these tasks into practice, Taipower engaged professional training agencies to conduct several environmental education training sessions in 2013. Different classes were held on environmental management systems, the check and review of environmental regulations, waste management and management of GHG, inventory checks, and several other related subjects, for a total of 159 participants.

In addition, each of Taipower's operation units, when necessary, invites environmental experts and scholars to deliver speeches and conduct training sessions every year. In 2013, there were 19,833 participants in total. In compliance with the Environmental Education Act, each employee of Taipower must take at least four hours of education and training in environmental protection every year. In 2013, Taipower employees (26,534 persons) fulfilled the required hours, and declared the result online.

3.6.5 Green Procurement

In order to realize the concept of co-existence and co-prosperity for environmental protection and economic development, the Environmental Protection Administration of the Executive Yuan enforced the "Government Agency Green Purchase Program", hoping to utilize the extensive purchasing power of agencies to make green products the top priority in their purchase plans, encourage the production and use of green products, and make the consumption of green products a prevailing social practice for environmental protection.

Taipower responded to the government policy of green purchase and thereby actively prompting its subordinate units to make efforts in practicing green purchases like office paper, office appliances, electric appliances and other equipment. In addition, Taipower also designated items for "green purchase" as a part of the performance indicators in "environmental management". After years of endeavour, Taipower has enhanced its performance in green purchase incrementally year after year, and has outstanding result in "low pollution, recyclable, and energy savings". As a result of active promotion, in 2013 the amount of the green purchases reached NT$140 million, of which environmental protection products accounted for 94.7%. Taipower encouraged the manufacturing and utilization of green products within the country with positive actions and helped cultivate an atmosphere of green consumption.

3.6.6 Green Building

◆ Winning Smart and Green Building Labels

Taipower plans green buildings to realize energy saving and carbon emission reduction and resist global warming. In 2013, 8 Taipower buildings received Green Building Candidate Certificates, and 9 buildings were marked with the Green Building Label.

Future Goals

- Introduce innovative green building techniques: Taipower will continue to develop applications and approaches of green building for improving energy-conservation efficiency of all buildings.
- Smart energy conservation: Taipower will strive to integrate air-conditioning, elevator, and illumination and automated controls with energy-management software to achieve smart building-management, improving energy efficiency.
- Install photo-voltaic facilities: with a floor area exceeding 600 m^2 that can accommodate PV facilities in excess of 30 kWp capacity, photo-voltaic related circuits shall be reserved for all new buildings in Taichung, Hualien, and southern Taiwan.
- Approximately 97% of all existing buildings in Taiwan suffer power and water inefficiency, water-proof and environmental issues. Those buildings tend to waste energy, thus Taipower targets 1 to 2 existing Taipower buildings to carry out green building improvement and energy-conservation reform.

3.6.7 Environmental Conservation and Ecological Diversity

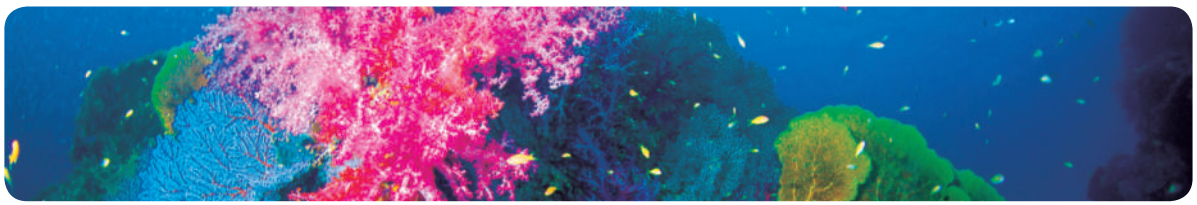
◆ Fishery Resources Restoration

Owing to the declining coastal fisheries resources in Taiwan, Taipower stands out to protect the marine ecology. In practice, Taipower continues to release fish fry with high economic value near thermal and nuclear power plants in order to rejuvenate the fisheries resources and marine ecology in demonstrating its corporate social responsibility. As of the end of 2013, Taipower has released more than 12.65 million fry fish off the coast of the locations of its thermal and nuclear power plants in the past 12 years.

Fish fry release

◆ Coral Preservation

In addition to participating in Kenting National Park's "Hengchun Peninsula Coral Reefs Comprehensive Conservation Program" over the years, Taipower has appointed the Marine Biology Museum for the "Investigation and Monitoring of the Ecology at the Coral Reef at the Sea Zone off South Bay" and installed three underwater remote monitoring systems near the water intake of the 3rd Nuclear Power Plant. These remote monitoring systems allow Taipower to monitor the status of the coral reefs around the clock and to project live images of the reefs for public viewing at Taipower's Southern Visitors Center. Taipower has made the best of its effort in the coral reef conservation for performing its corporate social responsibility in environmental protection, and achieve coexistence and mutual prosperity with the local community.



◆ Environmental Protection Research Collaboration

Project Name	Collaborated Partner	Project content
Integrated planning project of environmental conservation and exhibition in Wanta and Taichung Power Plants	Observer Ecological Consultants Co., Ltd.	● Taipower hosted the "Taiwan Soybean Restoration Result Presentation" in June 2013 and proceeded designs for the Wanta Power Plant Ecological Demonstration Booth.
An investigation and study of little tern habitat construction and restoration at Taichung Power Plant	Observer Ecological Consultants Co., Ltd.	● The "Taichung Little Tern Habitat Construction Project" was completed at the Taichung Power Plant based on the findings of this research. ● Habitat maintenance and management consultation services ● Assessment and study on the results of ecological monitoring and restoration of the habitat ● Production of habitat restoration promotional material ● Production of a documentary film
Using used electric utility poles as artificial reefs: an investigation and study of the resource enhancement	International Ocean Sustainable Culture and Environment Protection Foundation	● Extensive investigations on the ecological status of fish and other organisms at the 10 artificial reef zones have been conducted.

Taiwan Soybean Restoration at Wanta Power Plant

Artificial reefs

Artificial reefs

3.6.8 Recycle and reuse of industrial waste and generation by-products

◆ Reuse of Coal Ash

The majority of waste generated from Taipower's thermal power plants is coal ash (fly ash and bottom ash), most of which can be reused to reduce the environmental burden. Presently, fly ash is commonly used in civil construction. In fact, Taipower has used fly ash in power facilities construction and promoted its use. In the meantime, Taipower has promoted the use of bottom ash for ditch repaving projects in construction units. This greatly raises the reuse quantity and rate of coal ash. In 2013, and auction price for the sale of coal ash amounted to NT$ 109 million or at the utilization rate of 89.7%. For more information, please refer to "Reuse of coal ash" under the Information Disclosure Section on Taipower's website.

◆ Reuse of Gypsum

During the combustion process in coal-fired power plants, the sulfur contained in the coal is converted onto SO_x. The sulfur content of coal is converted into SO_x, and then emitted with the flue gas. To reduce air pollution, Taipower has installed exhaust desulfurization facilities at its three coal-fired power plants (Linkou, Taichung and Hsinta) to eradicate SO_x and uses limestone slurry to transform SO_x in flue gas into gypsum. Taipower used lime paste to give $CaSO_4 \cdot 2H_2O$ or commonly known as raw gypsum through the process of absorption, neutralization, oxidation and crystallization. The gypsum produced by Taipower can be reused by local cement makers and fire retardant board makers. In 2013, the production of gypsum amounted to 645 thousand tons per year and its utilization rate reached 99.1%. For more information, please refer to "Reuse of gypsum" under the Information Disclosure Section on Taipower's website.

◆ Bidding for Industrial Wastes

Other industrial waste, such as waste wires and cables, metal scrap materials, etc., are being reused by Taipower through waste disposal contractors through an open bidding process. In accordance with government regulations, bidding contractors should be qualified Industrial Waste Processors and perform their reuse operations according to regulations to reduce the environmental risks involved in waste treatment.

Industrial Waste Bidding Quantity

Unit: 1,000 tons

Industrial Waste Type	2011	2012	2013
Waste wires, cables and metal scrap materials -centralized for auction sales	6.801	9.678	5.424
Coal ash production volume	2,104	2,126	2,042
Coal ash auctioned volume	1,835	1,820	1,836
Landfills and land reclamation	269	306	206

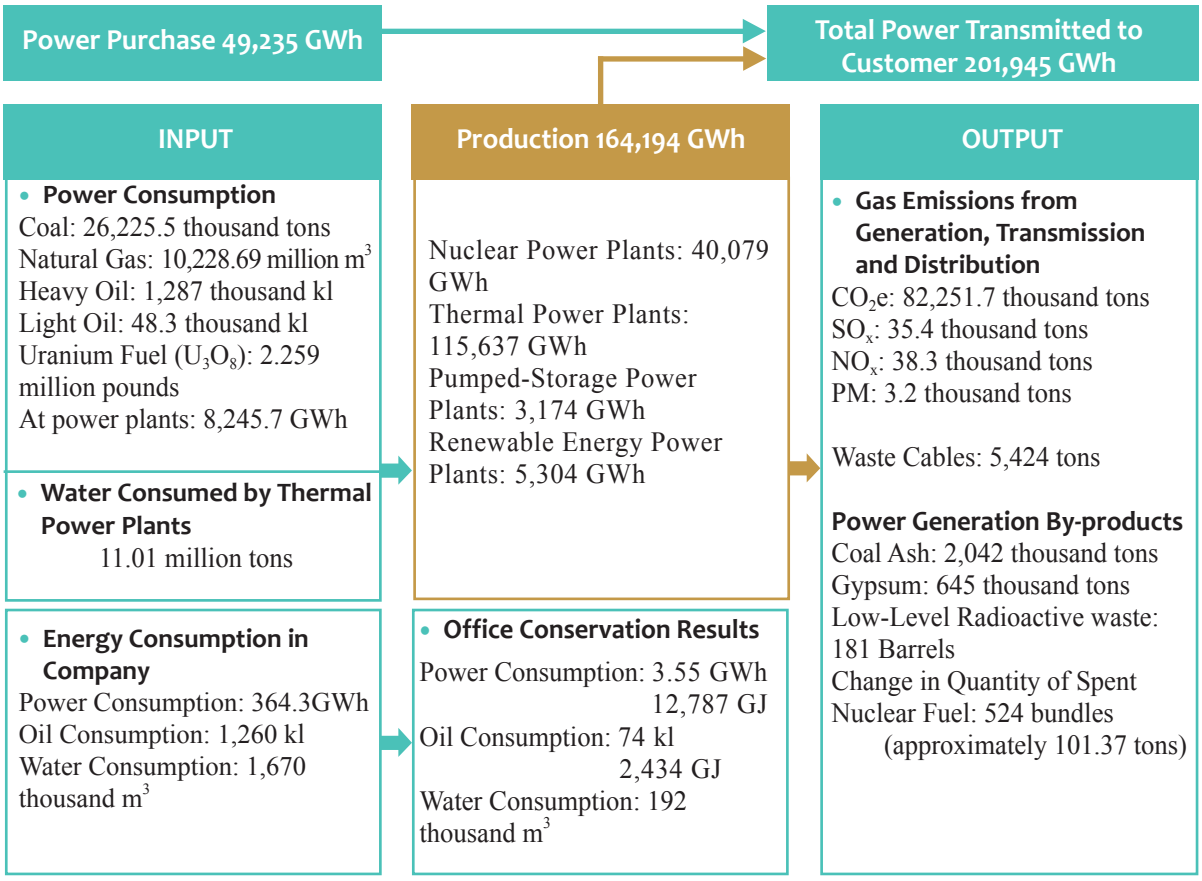
Note: 1. Re-use after sales through auction.
2. Coal ash output = auctioned volume + the volume in landfills and land reclamation.

Industrial Waste Bidding Amount

Unit: in NT$ 100 million

Industrial Waste Type	2011	2012	2013
Waste wires, cables and metal scrap materials	9.88	15.05	8.01
Coal ash	1.46	1.09	1.09
Total	11.34	16.14	9.10

3.6.9 Environmental Footprints of Taipower Operation in 2013



Note: 11kWh = 0.0036GJ; 1 gallon of gasoline = 3.8 l = 0.125GJ

In compliance with the Executive Yuan's "Four Conservation Project for Government Agencies and Schools", Taipower has endeavoured to achieve the goal of conservation. Compared to 2012, the consumption of power/fuel and water was reduced by 1% and 2% respectively. Taipower's headquarter has implemented the following conservation measures in 2013, including:

Type of Conservation	Measures
Water	● Renew cooling towers of the air-conditioning systems with the energy-saving rectangular cooling towers ● Install water saving devices on faucets
Power	● Ensure the indoor temperature is kept between 26~28°C ● Apply smart energy-saving modes of operation for elevators at different periods ● Incorporate all electromechanical equipment (i.e. ventilator, air handling unit) into the central monitoring system for automated control ● Install LED illumination on public corridors and infra-red sensors at parking lots, washrooms and pantry ● Shut down air-conditioning system after working hours
Fuel	● Centralized dispatch and regular maintenance of company vehicles

3.6.10 Environmental Protection Fines Reduction

Through detailed management and check plans, intensified measures and internal control mechanisms, and strengthened check and preventive measures in environmental protection, the number of violations against environmental regulations was 6 in 2013. In the future, Taipower will continue its effort to fulfill its commitment to environmental protection.

Table of Taipower's environmental protection violations in 2013

Unit	Act Violated Against	Number of Violation	Fined (Thousand NT Dollars)
Tunghsiao Power Plant	Air Pollution Control Act	1	100
Taitung Branch	Soil and Groundwater Pollution Remediation Act	1	150
Tunghsiao Power Plant	Waste Disposal Act	1	6
Northern Region Construction Office	Air Pollution Control Act	1	100
Central Region Construction Office	Waste Disposal Act	1	6
Central Region Construction Office	Waste Disposal Act	1	6
Total		6	368

To avoid being fined, Taipower has proposed the following measures for improvement:

- Set the ceiling of cases of environmental violations and total fine amount.
- Organize environmental protection regulations and legal training programmes.
- Strengthen on-site participation in environmental protection legal seminars and training.
- Strengthen on-site environmental protection inspection and comply with ISO 14001.
- Implement unexpected environmental protection inspections.
- Strengthen report systems for environmental protection violation and develop relevant counter-measures.
- Improve environmental protection mechanism of thermal units unable to meet the requirements of current regulations.
- Take environmental protection performance into consideration when selecting sub-contractors; supervision should be carried out if needed.

3.7 Strengthen Nuclear Safety

The "Information Disclosure" section (please refer to Chapter 4 on Enhance Information Disclosure and Communication) is a new part to Taipower's website, which was revamped in 2013. Under this section, additional information on Taipower's application after the Fukushima incident, dry storage for spent nuclear fuel, operational status of Lanyu storage facility and Lungmen Power Plant construction progress are also available.

3.7.1 Planning for Nuclear Safety

◆ Comprehensive Safety Assessment for Nuclear Safety

To learn from the nuclear accident at Fukushima, Taipower launched a full-range assessment of all nuclear power plants and thereby setting up three task forces (the Nuclear Power Plant Seismic Margin Assessment Task Force, the Nuclear Power Plant Tsunami Comprehensive Safety Assessment Task Force, and the Nuclear Power Plant Spent Fuel Pool Task Force) to review and evaluate the ability of the plants to respond to complex disasters, in four directions respectively, namely, "nuclear power plant site selection", "design standard", "operation maintenance", and "accident management". Assessments of 11 items and an overall safety assessment were accomplished in the end.

In addition to exercising emergency preparation drills, the operating nuclear power plants were evaluated by the Atomic Energy Council using comprehensive safety assessment based on a scenario similar to the Fukushima incident in Japan, and confirmed as being free from serious or immediate safety concerns. Taipower's three running nuclear power plants have proposed 96 enhancement plans basing on the first stage comprehensive safety assessment by the Council. As of the end of 2013, 93 of these plans had been completed.

The purpose of the assessment is to substantially improve the safety margin of the nuclear power plants by a complete planning and review of their resistance to earthquakes and tsunamis, and by improving their rescue capacity in terms of energy sources, water sources, the spent fuel pools and the integration of resources and preparation. A pressure test was also performed on each nuclear power plant according to EU regulations, so as to further review and confirm its sufficient capability in safety and the results of comprehensive nuclear safety assessment from the perspectives of extreme natural disasters (including strong earthquakes, tsunamis, and extreme climate), loss of power and water, and emergency response.

The general examination of the nuclear power plants shows that the defense-in-depth protection against a complex disaster that is beyond their original design. To use Fukushima accident as a lesson, each power plant's protection level was raised from 5 to 7. When facing an emergency beyond their design capacity that causes the nuclear power plants to lose the water supply to the reactors, and also to lose all power, or when under threat from a post-earthquake tsunami, the nuclear power plants can immediately start the SAM process, to protect people, their assets and the environment with immediate decisions and actions. Taipower has the confidence and capability to ensure the safety of the generation units and also the lives and property of the public.

Terminologies

Defense-in-depth:

Protective measures targeted at internal and external crisis, such as the placement of radio-active substances in multiple layers of protective barriers in order to prevent the release of radio-active substances. It may also refer to multiple equipment or plant site advantage that would effectively prevent the hazards of tsunamis.

◆ Experts On-Site Inspection and Testing

Taipower complied with the pressure standards of EU and completed a series of pressure tests on the operating nuclear power plants and Lungmen Plant (Nuclear Power Plant #4). In March and September 2013, the Atomic Energy Council invited the OECD/NEA and EC/ENSREG to set up independent expert teams to carry out a peer review on the "National Report of Pressure Tests on Nuclear Power Plants" and confirm the results.

The results of both peer reviews not only acknowledged the credibility of pressure tests that Taipower has conducted on the nuclear plants but also recognized the measures of fortification consistent with EU standard. Additionally, the Atomic Energy Council found no safety-related vulnerability at the nuclear plants. The peer reviews also suggested that the Severe Accident Mitigation (SAM) developed by Taipower were superior to the standards adopted by other nations. In general, the panel of experts reached consensus that Taipower has put efforts into ensuring nuclear safety. Taipower continues making progress and enhancing nuclear safety and pursing the public's confidence.

Terminologies

Severe Accident Mitigation (SAM):

Refers to the training, drills and equipment that Taipower has prepared for complex disasters. Under authorization, the on-site staffs use the equipment in emergencies when the units are in jeopardy. They will inject all available water resources into the reactors to flood the nuclear fuels. This would prevent the core from melting and contain the radiations. Although such measures would mean the sacrifice of the power plant, it would protect the nearby residents.

◆ Safety Assessment of the Lungmen Plant (Nuclear Power Plant #4)

The pilot operation for Nuclear Power Plant #4 is close to completion. However, due to the public's doubts and concerns about the safety, the Ministry of Economic Affairs has instructed Taipower to set up a "Safety Enhancement Inspection Task Force" to re-check all of the documents and re-examine the safety of the Lungmen Plant. Since the task force's establishment in April 2013, the relevant safety inspection operations were conducted during May and December 31. A total of 97 operating systems out of 126 (77.0 %) have passed the inspection and 120 SOPs out of 231 (52.0 %) have been re-verified. All safety inspection operations are scheduled to be completed by the end of June 2014.

With experience, the Safety Enhancement Task Force has conducted the safety inspections for the Lungmen Plant with stringent standards and procedures. The processes were supervised by domestic experts and the WANO (World Association of Nuclear Operators) international organization to ensure that all operations have been performed in accordance with international nuclear industry standards. Finally, the Atomic Energy Council assisted experts from the Nuclear Regulatory Commission in the independent reviews. These painstaking supervision and reviews were conducted in order to ensure the safety of the Lungmen Plant.

Note: On April 28, 2014, The Executive Yuan declared that Lungmen Power Plant (Nuclear Power Plant #4) Unit 1 to be mothballed at the completion of safety checks, and the construction of Unit 2 to be suspended.

◆ The Phase-out Plan of Nuclear Power Plants

According to the Nuclear Reactor Facilities Regulation Act, the phase out of a nuclear power plant shall be completed since its operation has been fully terminated in 25 years including the demolition of the facilities. Taipower has mapped out a preliminary plan for decommissioning nuclear power plant and will perform the tasks in five stages:

- Preliminary operations before de-commissioning: including the preliminary investigation on the history and specific features of the site, de-commissioning strategies and operations research, the preparation of work plans and the de-commissioning plans (including the environmental impact assessment report), presentation of the topics and documents for approval.
- Transitional period for the shutdown of machines.
- Demolition of plant.
- Radiation detection in the perimeters
- Site recovery

In the preliminary plan, Taipower will make appropriate adjustments depending on "the feasibility of technology," "the safety in the phase out process," "cost-efficiency," and "needs in actual operation."

The phase out of Nuclear Power Plant #1 is complicated and the time frame is tight. In addition, this plant will operate until 2018. In addition, Taipower has no prior experience in phasing out a nuclear power plant and a comprehensive legal framework for the task has yet to be established in Taiwan. As such, Taipower has established a task force for the mission and at the preliminary stage, cross-function operations will be adopted to carry out the duties. Presently, Taipower has taken part in the phasing out project headed by the EPRI, which will provide relevant technical services (including visiting the plant for phasing out) and consultations. Besides, Taipower has also participated in the Co-operative Program on Decommissioning (CPD) under the Organization for Economic Cooperation and Development (OECD) as an observing member and is working to become an official member. In the future, the organization shall be subject to adjustment as needed.

3.7.2 Measures for Strengthening Nuclear Power Generation Safety

◆ Adoption of "Defense in Depth" Safety Design Principle

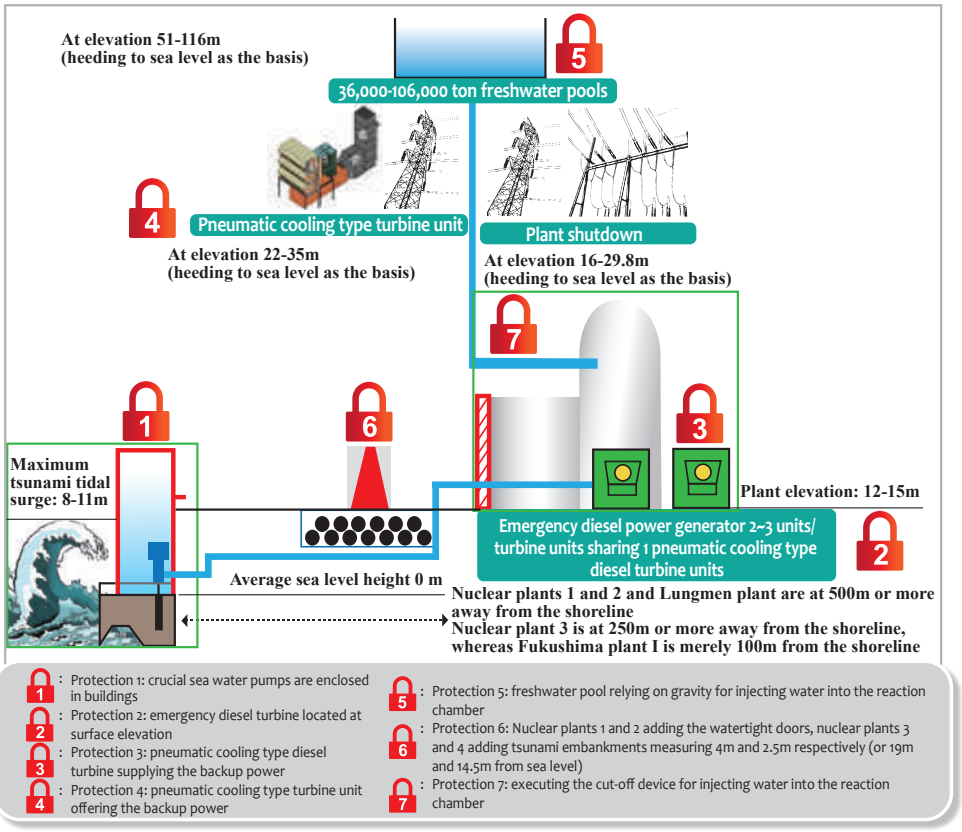
Taipower adopts the concept of "defense in depth" for the safety design of nuclear power plants in order to ensure nuclear power generation safety. The logic behind the concept is simple: should the first layer of defense fail for any reason, the next layer will still offer adequate safety and protective functions. If the second layer of defense also fails, there will still be a third or even a fourth layer of defense that will continue to ensure safety and protection. The goal of setting up multiple layers of defense is to reduce the possibility of a nuclear power accident and minimize its impact.

The layers of defense in depth to prevent the release of nuclear fission products include:

- Fuel pellet: To contain nuclear fission within the pellets so that most radioactive substances stay at the fission stage.
- Fuel rod. Consist of a zirconium alloy to effectively contain radio-active substances in the cladding.
- Connection between the reactor pressure vessel and the closed coolant system: This will ensure that fission products will be contained in the closed coolant circulation system.
- Containment building: The containment building ensures that all radio-active substances from the reactor or cooling system are isolated from the outside environment.

After reviewing the Fukushima incident in Japan, Taipower has assessed its nuclear power plants and determined the specific advantages (as shown in the figure below) that will offer adequate resistance against complex disasters like earthquakes and tsunamis.

Taipower Nuclear Power Plant Multi Disaster Prevention Safety Depth Advantages



◆ Reinforcing Control Measures

In addition to complying with the relevant atomic energy related regulations and implementing all management measures stated in the plant construction safety analyses to ensure that all nuclear power plants operate reliably to safeguard the company's assets and keep the general public safe, Taipower also keeps close contact and cooperates with international nuclear power agencies and organizations such as the International Atomic Energy Association (IAEA), the Institute of Nuclear Power Operations (INPO) and WANO to refine its safety management measures. By bringing the safety management of Taiwan's nuclear power plants with international standards, Taipower shall continue to reinforce the safety of nuclear power plants. Key safety management approaches that Taipower has adopted recently include:

- Convene nuclear power plant safety culture meetings to promote a safety culture and periodically review personnel performance in order to adjust the promotion strategies and improve results.
- Continue with the organization of nuclear safety liaison meetings to monitor the operations and status of nuclear power plants so that the headquarters may offer immediate assistance to nuclear power plants for effective measures to be taken that will eliminate risks and keep the units running steadily.
- Arrange nuclear plant supervisors to perform onsite inspections; having supervisors and foremen take part in on-site operations and guiding personnel to adhere to correct operating practices will help prevent negligence and improve personnel performance.

◆ Emergency Response Mechanism at the Nuclear Power Plant

Though viable safety measures have been considered in the design of the nuclear power plants based on the risk management consideration, Taipower has established the "Taipower Nuclear Reactors Emergency Response Plan" in accordance with the "Nuclear Accident Emergency Response Act" and related bylaws as the Taipower emergency response designated unit in responding to nuclear emergencies and as a guideline for all nuclear power plants in the organization and procedure for responding to emergency situations during nuclear accidents. Taipower's radio-active accident response scheme covers:

Regular preparations	Implementing response operating exercises	Conduct routine training in response to emergency situations, including: (1) General training: once every other year. (2) Professional training: once a year. The training content includes general training in the emergency plan and the professional training in the emergency plan of special duties. All nuclear power plants shall provide training for the personnel assigned to the duties of responding to emergencies (Emergency Response Team), including initial t and annual training.
	Implementing response operating drills	Every nuclear power plant has to conduct a drill once a year internally. Taipower, central and local governments, military, police, and medical units are all mobilized to participate in an annual nuclear safety exercise that is by turns held at each nuclear power plant. In addition to supervising agencies, Taipower also invites professionals and scholars to form an evaluation group to assess exercises on each response measure to make the emergency response plan more effective.
	Establishing emergency response readiness performance indicators	Each nuclear power plant shall enforce the "Emergency Readiness Performance Indicators"and the results are reported quarterly to the Atomic Energy Council as part of the control measures of the Atomic Energy Council for ensuring the safe running of the nuclear power units. Related performance indicators including: ● Drills/ exercise performance. ● Participation of the emergency response organization in drills. ● Reliability of the warning and reporting system.
Response to accidents	Adopting emergency response measures	● In the event of a nuclear accident, nuclear power plants shall comply with the relevant procedures to perform specific rescue operations. ● Should Taipower fail to effectively control the accident and the neighboring residents and environments stand to be jeopardized, Taipower shall refer to the Nuclear Accident Emergency Response Act and related government functions shall establish the Nuclear Accident Central Disaster Response Center, Nuclear Accident Radio-active Monitoring Center, Nuclear Accident Disaster Response Center and Nuclear Accident Support Center to jointly carry out various rescue operations and keep the public safe.
Post accident recovery operations	Damage appraisal and recovery measures	● After verifying the cause of a nuclear accident and after the Nuclear Accident Central Disaster Response Center has confirmed that all emergency response measures have been carried out, the emergency response centers will be relieved of their duties. ● After receiving the notification from the Nuclear Accident Recovery Measure Promotional Commission, Taipower will assign relevant tasks to different units to perform the facility damage appraisal and recovery/restoration of the facilities and the neighboring environment. ● Taipower shall be responsible for the restoration of various units at the power plants and have already established disaster recovery plans and corresponding procedures. The Emergency Control Chief will evaluate the status of the power plant before issuing the order to set up the plant recovery team and commence the recovery operations.

◆ Nuclear Safety Operating Performance

Results of Taipower's Nuclear Safety Performance Indicators for 2013 remained in the green light zone (indicating best performance), which reflects the outstanding performance of Taipower's nuclear power plants in terms of safety.

The power production of the 6 units in the 3 nuclear power plants amounted to 40,080 GWh, with a capacity factor of 91.8% in 2013. For more information, go to "Historical Record of Nuclear Power Generation" under Nuclear Operation Status and Performance in the Information Disclosure Section on Taipower's website.

◆ Radioactive Waste Management and Final Disposal

The low-level radioactive waste generated by the nuclear power operations can be incinerated, compressed or solidified and stored properly in zinc-coated barrels. Under Taipower's strict control, in 2013, the total solid wastes from all nuclear power plants came to 181 barrels (3rd lowest quantity of all years). With a total nuclear power generation of 40,080 GWh in 2013, each GWh of power generated would produce 0.0045 barrels of solid waste (181 barrels/40,080 GWh = 0.0045 barrel/GWh).

Taipower applies a 3-stage strategy for the management of spent nuclear fuel that is applied internationally; pool storage, dry cask storage and final disposal. The capacities of the storage facilities constructed at the 1st, 2nd, and 3rd Nuclear Power Plants are all sufficient enough to meet the requirements for the operating period that's set for the power plants. In the future, all low-level radioactive waste will be sent to final disposal sites and be permanently isolated from the general populace.

As the spent nuclear fuel pool storage facilities in the 1st and 2nd Nuclear Power Plants cannot accommodate the spent nuclear fuel produced over a 40-year period of operations by each reactor, Taipower is currently planning to construct dry storage facilities to enable each power plant to have sufficient storage facilities before the spent nuclear fuel (highly radioactive wastes) is sent to final disposal sites.

Taking reference of widely adopted international measures, Taipower will adopt deep geological disposal methods for its spent nuclear fuel final disposal. Currently, Taipower is undertaking the tasks of investigating and evaluating the characteristics of the potential host rocks.

◆ Enhancing Promotion and Communication with the public

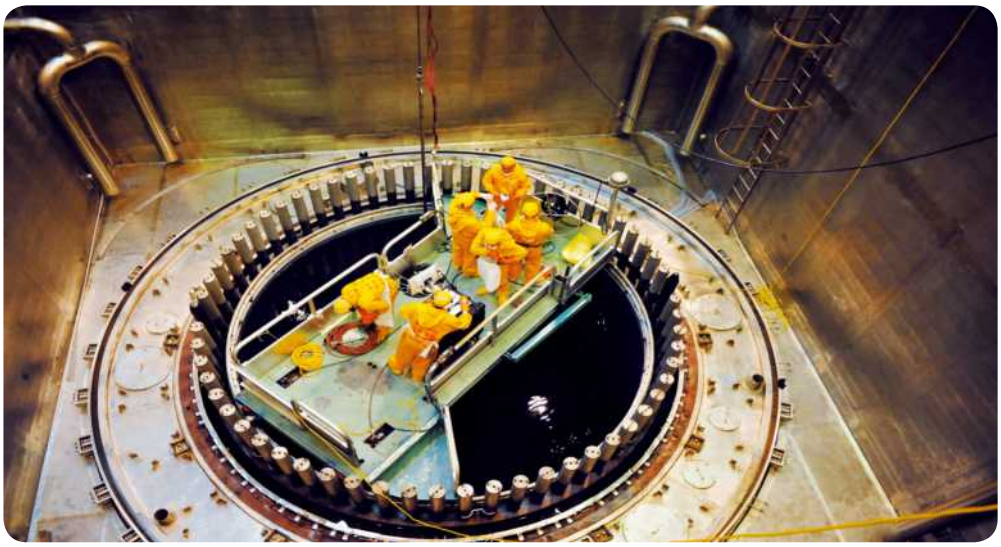
In order to facilitate a better understanding of the energy issues and nuclear power safety, Taipower has participated 16 televised debates and political commentary programs. Not only that, Taipower produced a total of 7 promotional kits, 5 promotional videos, 2 online promotional campaigns and 8 radio advertisements in 2013. Apart from their applications in the dissemination of nuclear power safety and distribution for specific visits, these materials have been distributed to influential organizations and individuals in different circles.

In 2013, Taipower organized 4 international symposiums and invited renowned international figures including the Japanese nuclear safety expert Michio Ishikawa, World Nuclear Association(WNA) Secretary Agneta Rising, Japan Atomic Energy Commission member Noriko Kimoto and Chinese- American Nuclear Technology Association(CANTA) Chairman Dr. Jen-Tai Chiang in order to help the general public learn more about the facts of the Fukushima incident and relevant nuclear power development experiences around the world. The symposiums allowed the experts to convince the participants that the Fukushima incident was in fact a human accident and that since Taiwan's nuclear safety standards are derived from U.S. regulations, an incident like the Fukushima incident will not happen in Taiwan. The delivery of such information has helped to foster the public's confidence in nuclear power safety.

Not only that, Taipower has increased the scale of its nuclear energy safety disseminations by dispatching representatives to offer 493 sessions of lectures at colleges, universities, business entities, administrative agencies and political parties to reach out to the general public, union members and families of employees. Through personal communication, Taipower has successfully reduced the doubts and concerns on nuclear power safety. In addition, Taipower has arranged approximately 251 group visits at the Lungmen Plant for the general populace; after actually visiting the power plant, the majority of visitors that originally held negative opinions on nuclear power actually changed their minds on the subject matter. And since most of the visitors held significant influence in their fields of employment, they are likely to speak in favour of Nuclear Power Plant #4 and with their actual experience at the premises, they would be more convincing.

In short, through comprehensive face-to-face communication, Taipower has endeavoured to lessen the doubts and concerns on nuclear power safety and boost the general public's confidence in nuclear power safety. This in turn has boosted the morale of Taipower personnel at the nuclear power plants and benefitted the cause of enhancing nuclear power safety.

Lastly, Taipower also set up its "Nuclear Energy" website that offers adequate information on nuclear power (such as real-time information on nuclear power plant operations, environmental radiation monitor and so forth) so that the general public can learn more about the achievements and status of nuclear power safety. This would enable the public to cultivate a deeper understanding of the subject during their supervision of the operations.



3.8 Customer Services and Innovative Applications

3.8.1 The Development of Electric Power Technology in 2013

Electric Power Technology	Subject	Electric Power Technology
Power system quality monitoring and improvement	Enhancement of power grid capacity	● Completed the improvement strategies for the excitation system response ratio at Nuclear #3 with Taipower's 7th transmission system as the target to propose various solutions that would resolve issues such as unexpected incidents, reduced generation efficiency or scrams due to unit instability to enhance Nuclear #3 power supply reliability ● Completed full automation control system for all units at Xiaxing #1 and #2 Plants by upgrading traditional auxiliary relay control circuits to programmable controllers along with the addition of new systems including a human-machine interface monitoring system, event log system, plant operation data storage system and report generation system.
Customer power management service, energy management automation application and value-added network technology development	Enhancement of customer power management	● Completed a WEB-BASED customer load monitoring and information management system that dramatically reduces the duration of work for district meter readers from 2 hours (including transportation and time spent on reading meters) to 5 minutes. The development of model recognition algorithm has been tremendously beneficial to the identification of power theft by customers and has significantly raised power theft detection rate. ● Completed the construction of "High-voltage customer service portal website" to achieve real-time information interaction along with the presentation of the advantages of the Advanced Metering Infrastructure (AMI). The website also serves as a multi-channel mobile service platform for high-voltage customers by allowing users to choose the desired contents and method of operations specifically for mobile internet access. In addition to enabling customers to check their power consumption records and electricity bills, the main power management feature also includes individual customer load characteristic query, energy-saving strategy simulations, lowest electricity pricing contract capacity calculation, demand response load management solution calculation, energy-saving information promotion and sharing, customer suggestions and so forth. The website is now available for customers on a pilot run; Taipower will compile customers' suggestions and determine the date for the official launching of the website after the commercial model of operations has been decided.

Electric Power Technology	Subject	Electric Power Technology
		● Completed the introduction of energy technology service model "Offshore Customers Demonstration Project", which takes factors such as power consumption from air-conditioning, hot water, illumination systems and other sources of power use for residents on Green Island in the design of an energy-saving performance based contract model for relevant constructions. The project is compliant with the International Performance Measurement and Verification Protocol (IPMVP) for relevant measurements and verifications and Taipower has also integrated energy-saving and carbon reduction assessment into the project to improve customers' energy efficiency. Taipower is currently assessing the feasibility of introducing ESCO's action plans as a reference for Taipower's promotion of energy-saving policies.
Generator performance management, power plant equipment life cycle management	Increase power generation efficiency	● Coordinated with the power plants to conduct coal-fired boiler combustion adjustment tests and improvement research (covering coal pulverizer performance improvement, coal fineness optimization, total air flow optimization, burner performance optimization and so forth) to improve operational efficacy. The project will include a study on the mixed coal combustion ratio prediction model at Taichung Power Plant, a strategic analysis on the impact of coal quality on unit operations and coal purchasing, a preliminary assessment of high energy coal trial burn fly ash analysis and combustion at Taichung Power Plant #5, a real-time monitoring system for the operation of gas turbine operations at Southern #1, a cause analysis of the gas turbine scram at Tunghsiao #3 and improvement measure, an analysis and improvement research on the secondary air tunnel flow at Taichung Power Plant #9 and so forth. ● Established Taipower's production of advanced gas turbine blades and regeneration processing technology for hot section components to lower operating and maintenance costs: ★ Collaborated with the Maintenance Division to complete the regeneration process for the Tatan Power Plant gas turbine unit (1st and 2nd stage rotor blades and stationary guide blades) and mass production for the 2nd unit. ★ Completed the development for the thermal spraying of insulation coating on the Seimens unit (mixed chamber) at the Hsinta Power Plant with 6 units of thermal spraying completed and another 6 units repaired (on coating). ★ Completed the arc welding and tertiary plasma spraying procedures for the Siemens gas turbine (3rd and 4th stage guide blades) at the Hsinta Power Plant. A total of 50 units were sprayed and sent to the power plant for installation and operation.
Water business and GHG immobilization technology	Emphasis on environment and ecology	● In conjunction with the geological sequestration of CO_2 Taipower has obtained permission from the U.S. Department of Energy for the usage of the TOUGH2 and TOUGHTREACT software. Presently, Taipower has established the capacity to perform CO_2 geological sequestration potential assessments and will proceed to perform CO_2 sequestration potential and leak safety assessment at the candidate sites to determine if the formation characteristics are suited for Taipower's CO_2 sequestration operations. ● Designed and installed an RO waste water recycling system (with a handling capacity of 50 tons/hour) at Taichung Power Plant to recycle the discharge from the general waste water pool. As of 2013, a total of 220,000 tons of waste water has been recycled and re-used for flue gas desulfurization processes. With the membrane recycling system, Taipower recycles 15,000 tons of boilder discharge at the Nanpu Power Plant and 120,000 tons of boilder discharge at the Tatan Power Plant per year.

Electric Power Technology	Subject	Electric Power Technology
Water business and GHG immobilization technology	Emphasis on environment and ecology	● Developed time-release fertilizers from coal ash zeolite and the by-products from fuel-fired thermal power generation that can be extensively used for the physical and chemical improvements for soils at beaches, barren red earth, ash ponds and so forth. The fertilizer works by facilitating the massive growth and reproduction of cyanobacteria, micro-organisms (i.e. nitrogen-fixing bacteria, mycorrhiza) and earthworms in the soil to enrich barren, infertile soils, rendering the soil rich in biodiversity to enable the cultivation of crops and vegetation for agricultural/animal husbandry/forestry purposes and the growth of bioenergy plants to reduce GHG emission.
Research on the insulation characteristics of power facilities and transmission line lightning hazard prevention	Enhancement of power grid capacity	● Established a lightning intensity distribution chart for Taiwan proper using the Long-term Lightning Monitoring Database as a reference for lightning hazard prevention for transmission lines. The chart also enabled Taipower to calculate the probability of lightning strikes on the wind power units and complete the lightning strike risk assessment for the IEC. In addition, Taipower also established corresponding lightning protection levels for all wind power units. ● Completed the standardization of grounding connection for surge arresters at transmission cable connection stations. This serves as a reference template for the design and maintenance of line – cable connection stations and the development of an online monitoring and maintenance system for surge arresters that is low in R&D costs but high in reliability to improve overall system operation reliability.
Power Storage Technology	Enhancement of power grid capacity	● Established a kW solid oxide fuel cell (SOFC) demonstration and experimental system. Taipower has planned to integrate the system together with a vanadium redox battery (VRB) system and intelligent home power & heating utilization model for application at the Penghu Chimei or Wangan offshore islands to boost Taipower's performance in energy efficiency. ● Completed the modification of electrode materials for hydrogen generators and conducted a hydrogen purification research, which was integrated with photo-voltaic technologies for the development and verification of an energy management system for hydrogen energy storage. Taipower also established its SOFC stack measurement platform and production technologies for anode/cathode/electrode while conducting studies on 3~5-layer SOFC stacks. In addition, Taipower also introduced a vanadium redox flow battery technologies to develop flow battery preparation technologies in order to develop key fuel cell component materials.

3.8.2 Research and Development

Taiwan Power Company seeks to apply research and development to introduce new technology and install its core technology for resolving technical field issues on power generation, transmission, distribution and selling, aiming to provide its customers with an abundant and reliable power source with the ultimate goal of reducing company cost and increasing revenues.

Taipower's 2013 R&D achievements include:

- NT$369 million revenue increase
- NT$5.34 billion costs reduction
- The combined assessment at 3.96 (deriving from the percentage of revenues to R&D expenditures).
- 155 report entries
- 74 academic articles
- 23 product development cases
- 15 process improvement cases
- 18 technology introductions cases
- 22 technology innovation cases
- 6 patent cases
- 101 technical services cases
- 20 technology promotion cases
- 10 supportive policy cases

Taipower seeks to continue stepping up strategic knowledge management, enhance its technological R&D capability, and promote the R&D results to stably create knowledge, innovation and practical applications.

3.8.3 Enterprise Resource Planning (ERP)

Since the Taipower ERP system (phase-I) has been fully inducted online (August 6, 2012), the system business volume on a monthly average exceeded 330,000 transactions, and in 2013 it has successfully completed over 3.94 million entries of various types of business transactions. It has also timely completed the monthly account reconciliation and the annual account reconciliation work, as well as generated various operational and financial reports. Since the ERP system induction, the most prominent performance lies in management performance enhancement and operations optimization. The "feasibility study for launching phase-two enterprise resource planning system" in 2014 will be implemented as a reference point for the subsequent system launching.

3.8.4 Smart Grid Planning

Taking the "National Smart Grid Master Plan" as the guide(for the contents of the master plan, please refer to relevant Web pages of the Energy Bureau, Ministry of Economic Affairs), and attempting to "ensure nuclear safety while reducing dependence on nuclear energy; to create green energy, a low- carbon emissions environment; and to gradually build a nuclear-free home," as promoted by Taiwan's latest energy policy, Taipower is following the direction given by the "Smart Grid Promotion Team" of the Ministry of Economic Affairs to implement and promote practices that contribute to the Taipower smart grid.

Overall development is to be carried out in three stages: Short-Term Early Infrastructure (2011~2015), Mid-Term Promotion (2016~2020) and Long-Term Extensive Application (2021~2030). These will be promoted from the perspectives of smart power generation and dispatch, smart power transmission, smart power distribution, and smart customers. In this way, it is hoped that the goals of "ensuring stable power supply, enhancing energy conservation and carbon decrease, upgrading the ratio of green energy use and leading low-carbon industries" will be planned and conducted as a reference for subsequent establishments.

Terminologies

Smart power grid

The policy objective of utilizing information, communication and automation technology for installing an smart power generation, power transmission, power distribution and customer-integrated power network by emphasizing automation, safety and user end supply change in a close-knit coordination, with which to excel the power system's operating efficiency, power supply quality and power grid reliability and also to bridge renewable energy expanded applications and energy-saving and carton reduction.

◆ Smart Power Generation and Dispatch

To achieve what the national smart power grid's overall planning anticipates of "ensuring a stable power supply, excelling energy-saving and carbon reduction, as well as improving green energy use and spearheading the low-carbon industry" objectives, Taipower is actively promoting excelling the renewable energy power generation volume and grid merging ratio, and also enable the renewable energy power generation volume forecast to be more accurate, with which to effectively utilize the renewable energy power generation. In 2013, Taipower completed over 10 wind farms as part of the wind power forecast system, and in the future, it will continue to develop the main island's other wind farm wind power forecast systems.

Also of the fiber optic networks actively developed in response to excelling the system data transmission to speed up the system response capability and excel the substations' data transmission, 2013 has seen the completion of 175km of optical cables laid and 160 units of optical cable communication systems. For 2014 it has plans of coordinating the project budget (at NT$234 million) under the yearly power transmission/conversion project to complete "fiber optic laying totalling 150km" and "fiber optic communication system launching totalling 60 units".

◆ Smart Power Transmission

In 2013, the tangible key items that Taipower has completed include:

Objective	The 2013 results
Enhance electrical relay's movement accuracy ratio to shorten event analysis time	Completed the power relay system's full digitalization replacement work with progress up to 73.9%
Reduce building the conventional power lines to improve system's power transmission capability	Completed the Lungtan north – Sungshu II Road and Dapeng – Fenggang – Dawu – Taitung II road heat resistant lead wire replacement project.
Prevent route, main transformer overload and maintain system stability	Completed and launched the special protection system(SPS) of Dongpu, Tatan, and Dongshan.
Excel power distribution capacity, enhance power grid safety and reliability	Conducted the power transmission line interactive capacity monitoring and data analysis test points' (161kV from Lungchi ~ Sanshang IV Road between #41 to #42 towers) evaluation and review.
Enhance power transmission safety	Supported the National Science Council's new economic policy by staging the advanced broad area monitoring system pilot plan.
Enhance power supply quality and reduce power transmission loss	Completed "power transmission system launching-stage's dynamic voltage control feasibility study" of inert power control system (AVC).

◆ Smart power distribution

Taipower has executed "substation intelligent conversion", "power distribution automation", "strengthening the power distribution network geographic information system", "applying the meter data for strengthening the power distribution system management", "demand response power pricing structure", "regenerable energy grid merging capacity and management enhancement" among other tangible promotion items, aiming to "ensure a stable power supply" as the primary object by embracing the two promotional focuses of "enhancing power distribution safety and performance", "strengthening dispersed energy integration". It combines the advanced power electronics and monitoring automation and information communication technology, by which to develop an intelligence new system framework for excelling the power distribution safety and performance.

◆ Smart Customers

By executing "high-, low-voltage intelligent voltmeter infrastructure", "reviewing demand-based response control subjects and control methods", "formulating peripheral service modes" and related tangible promotion items, focusing on "ascertaining a stable power supply" as the main objective" bracing for the two promotional focuses of "customer/end user information development" and "innovative customers service planning" for installing the customers service portal Web site and value-added information system, which have been solely relying on advanced power electronics, computer science, communication and networking technology to avail of the customers with energy saving incentive-based power pricing mechanism conducive for the customers to voluntarily conserve their power consumption, helping to achieve the intangible yields of suppressing the peak load and power consumption volume and so forth, and helping to create good interaction between the power supplier and the customers and resulting in a win-win situation. Taiwan Power Research Institute had two major pertinent projects in 2013 (Shown below) Taipower also plans to build smart green houses at the Shulin campus of Taiwan Power Research Institute from 2014 to 2015.

The "High-Voltage Subscriber Service Portal Web Site Launching Research" Project

Taipower has completed launching the high-voltage subscriber service portal Web site (at https://hvcs.taipower.com.tw/), and has in October 2013 inducted it for user online trial for selected 100~5000kW test users, offering 9 major services to 24,000 high-voltage subscribers having installed their AMI intelligent voltmeter. This will enable the user to access more power consumption information, and empower the user to manage energy saving, carbon reduction and energy service.

The "Launching of the Low-voltage AMI Preliminary Developing System Technology Consulting, Validation and Cost Return Evaluation" Project

With the project timetable spanning from 2012 to 2014, a value-added demonstration system will be launched on the customers' portal Web site for 10,000 low-voltage subscribers. The customers can actuate the most suitable power consumption plan and power saving project according to their own characteristics.

3.8.5 Consumer Services

Taipower's website provides useful information for customers, such as electricity and life, electricity library, service locations, customer service information, tariff schedules, information related to electromagnetic fields, and website counter services. Taipower publishes the Taipower Customer Service White Paper to show its commitment to integrity, caring, innovation and service. The White Paper can be downloaded at http://www.taipower.com.tw".

◆ Process of Complaints

To satisfy new customers and impress long-term customers with the company's improvement, Taipower has worked hard customer complaints. Through a customer complaint management system, Taipower compiled and classified customers' suggestions as an important reference for future business improvement. In 2013, 2,270 complaints were recorded, of which 1,347 were received via e-mail, a reduction when compared to 2012. Most complaints related to areas such as line relocation (492 cases, 21.7%), and power supply quality (447 cases, 19.7%).

Year	2010	2011	2012	2013
Customer satisfaction (%)	86.1	87.2	85.5	85.7

◆ Customer Satisfaction

Taipower highly values the opinions of customers and has entrusted an outside professional agency to conduct periodical customer satisfaction surveys with regular, medium and large customers (more than 100 kW) through telephoning. The overall customer satisfaction rate has remained above 85 in scores over the past 4 years. Taipower will continue to review and improve various ways of providing more convenient service to customers and strengthen its communication with customers as well.

Year	2010	2011	2012	2013
Customer satisfaction (%)	86.1	87.2	85.5	85.7

◆ Lessen Inconvenience

- To upgrade the environmental effectiveness, in addition to promoting the improvement of existing distribution facilities and developing new-model facilities, Taipower communicated and negotiated actively with customers to improve those distribution facilities that were presented as inconvenience to traffic and pedestrians. In 2013, public injury incidents totalled 8 cases, of which injuries caused by electrocution and non-electrocution incidents tallied 4 cases each.
- Whenever power cannot be reconnected in time due to problems with facility installation, Taipower will make an honest effort to inform the customer and look for ways to resolve the issue as soon as possible. Taipower is committed to providing high-quality power.
- In order to reduce the inconvenience caused by power outages, Taipower strengthened its maintenance inspection procedures to reduce incidents and promoted feeder automation projects and improved distribution lines to enhance power supply stability. (Please refer to "enhancing power supply stability" chapter and sections.) Starting in 1998, the main island of Taiwan no longer had any legal buildings without power supply simply because it was situated in a remote area; in some of the offshore islands, including Penghu Tongpan Li and Wangan Township's Dingji, Dongping, Xiping, Huayu and others, the self-sought power supply method has currently been adopted in case of the economy considerations.
- Also in order to resolve the customer access to customer service or power obstacles due to language, culture, literacy and so forth, Taipower offers customer service in Mandarin, Taiwanese and English.

◆ Confidentiality of Customer Information

To meet the regulations of the Personal Information Protection Act, Taipower conducted an inventory check on personal information files and systems in 2010 to review the necessary fields and amend related business regulations. To protect the confidentiality of customer information, Taipower established a comprehensive security mechanism for different groups.

◆ Unified Counter Service

Supporting the customers' diverse needs, Taipower offers a diverse range of power use application venues, where the customers can not only apply for it over the counter but can also file a request through the Internet, telephone, fax or mail, where the one receiving provides a full range of services, and various operations department service centers, service counters in general also accept a variety of power use applications, with which to avoid the inconvenience of the customers.

◆ E-Application Channels and E-Mail Notification Service

- For the convenience of customers applying for a host of power use services, Taipower has in 2013 added the "message of billing reminder notice", which presently offers a total of 35 power usage application items that can be applied for via the Internet. In 2013, there were about 52,000 applications processed through the Taipower website, accounting for 2.3% of the total number of applications.
- To simplify the operation and to enhance efficiency, the application process has been completely opened to citizen digital certificate. In 2013, approx. 52,000 people applied for it. Besides, Taipower actively supplies the power usage information by e-mail to high-voltage customers.

◆ Multiple Bill Payment Service

The Customers may pay their electricity bills at Taipower branch. With the exception of some 2,000 user where electricity bills will still be collected by personnel dispatched by Taipower, other customers may pay their electricity bills through a wide array of channels:

- Pre-arranged fund transfer from designated account at financial institutions, postal saving and deposits, or credit card.
- Pay over-the-counter of financial institutions, post offices, and 24-hr convenient stores (to lighting and low voltage users only). There are more than 15,100 locations for bill payment.
- Fund transfer through telephone voice service, mobile phone messaging, APP, ATM, internet, multimedia MOD (for lighting and low voltage users only) are not limited by time and space, and are efficient and convenient.

Presently Taipower not only sends postcards to delinquent customers not paying the electric bill but they also remind the customers to pay the electric bill with an e-statement, phone voice, short messaging in a diverse ways, and if the bill still has not been paid approaching the power due date, Taipower also fittingly postpones the deadline by referencing the customer's payment records. When it becomes necessary to suspend the supply, power suspension will only be executed after sending a written power severing notice. In 2013, the customers being suspended of their power supply due to not paying their bills tallied to approx. 147,000.

◆ Call Center Service

To serve the customers, Taipower has set up the northern and central customer service centers, offering year-round service, with service items including power billing and business inquiry, accepting power use application, power supply line repair, processing grievances and so forth. In January 2014, it has integrated the three customer service hotlines into the Taipower customer service hotline 1911 (toll-free, except from public pay phones).

◆ Special Customer Service

To establish a means of direct communication with its customers, Taipower continues offering special customer service. The designated Taipower employees will periodically and actively visit high-voltage customers and village offices to understand their needs, provide them with technical consultation, and solve their problems. This is done in an attempt to win the customers' support and trust.

Year	2010	2011	2012	2013
Service counts for customers with special customer service	71,763	72,607	72,516	74,307

◆ Customer Opinion Box

Taipower's e-mail inbox on the website provides a channel for customers to express opinions directly through the website. All suggestions are collected by the responsible department, which then sends the suggestions out to related units for reply. The suggestions are compiled, analyzed, controlled and followed up. In 2013, 4,946 e-mails were processed. This e-mail system has become an important communication channel between Taipower and its customers.

3.9 Strengthening Human Resources and Vendor Management

In May 2013, Taipower has founded a taskforce under the human resources development project team for formulating tangible proposals in response to Taipower's internal critical human resource subjects and for declaring the information at the project team meeting for discussion. The 2013 results include installing an executive supervisory talent selection and cultivation mechanism, strengthening rotation assignment and related package measures, installing a supporting manpower and reassignment mechanism, enforcing the execution of the mentor system, studying reducing the rallying measures, optimizing company internet website's employee communication functions, and so forth. In vendors' human rights and environmental management aspects, Taipower abides by all laws of state-run enterprises.

3.9.1 Taipower Manpower Structure Overview

◆Employee Hiring Status

Year		2011		2012		2013	
Total employees		27,261		27,082		26,629	
Local employees	Male	24,252	89.0%	24,005	88.6%	23,590	88.6%
	Female	3,009	11.0%	3,077	11.4%	3,039	11.4%
Foreign employees	Male	0	0%	0	0%	0	0%
	Female	0	0%	0	0%	0	0%
Full time/ hourly	Male	24,252	89.0%	24,005	88.6%	23,590	88.6%
	Female	3,009	11.0%	3,077	11.4%	3,039	11.4%
Direct personnel	Male	22,565	82.8%	22,395	82.7%	22,065	82.9%
	Female	1,520	5.5%	1,591	5.9%	1,601	6.0%
Indirect personnel	Male	1,687	6.2%	1,610	5.9%	1,525	5.7%
	Female	1,489	5.5%	1,486	5.5%	1,438	5.4%
Open contract personnel	Male	0	0%	0	0%	0	0%
	Female	0	0%	0	0%	0	0%
Fixed contract personnel	Male	0	0%	0	0%	0	0%
	Female	0	0%	0	0%	0	0%

Note: as distinguished by work nature, "technical" and "operations" in work nature are classified as direct manpower, and "management" in work nature is classified as indirect manpower.

◆Employee Turnover Number and Ratio (statistics by age, gender)

2013 employee turnover number and ratio	Male	Female
Up to the age of 30	24 (0.09%)	15 (0.06%)
Aged 31~50	69 (0.26%)	42 (0.16%)
Aged 50 and up	788 (2.96%)	72 (0.27%)
Total	881 (3.31%)	129 (0.48%)

◆Newly Recruited Employee Number and Turnover Ratio (statistics by age and gender)

Year 2013	Newly recruited employee count and ratio		Newly recruited employee resignation ratio	
	Male	Female	Male	Female
Aged up to 30	218 (0.96%)	49 (0.22%)	0.91%	1.81%
Aged 31~45	229 (1.01%)	41 (0.18%)	0.54%	2.54%
Aged 46 and up	14 (0.06%)	1 (0.00%)	0.00%	0.18%
TOTAL	461 (2.03%)	91 (0.40%)	1.45%	4.53%

Note 1 "New recruit employees" is calculated based on newly recruited company employees in said year.
Note 2 The calculation method of "newly recruited employees' resignation ratio in one year" = the employee count on 2113 company newly recruited employees who also resigned in one year / newly recruited employee number, where the resignation person number includes the employee number for those retaking the exam to be assigned to the company and those for reason of position withheld without pay and so forth.

◆Number of Parental Leave Applications and Reinstatement Rate

Year 2013	Male	Female	Total
Number of persons entitled to apply for parental leave in 2013	1,567	257	1,824
Number of persons applied for parental leave in 2013	11	41	52
Number of persons reinstated in 2013	8	25	33
Number of persons reinstated for one year after 2013	3	7	10
2013 Reinstatement rate	100%	100%	100%
2013 Remaining rate	100%	79%	83%

Note 1: "Number of persons entitled to apply for parental leave in 2013" is calculated based on the employee count on maternity leave and parental maternity leave in the past three years (2011 – 2013).
Note 2: "Number of persons reinstated in 2013" includes those applied in 2011 and also reinstated in 2013, those applied in 2012 and also reinstated in 2013, and those applied in 2013 and also reinstated in 2013.
Note 3: "2013 Reinstatement rate" calculation method = the 2013 reinstated person count / total person count who should be reinstated in 2013
Note 4: "2013 Remaining rate" calculation method = the 2012 reinstated person count who stay on for one year / the total 2012 reinstated person count

◆The 2013 Resignation/Retirement Ratio

As stipulated under subpar 1, subpar 2, par 1, article 5 of the Retirement Pension and Retrenchment Measures for Personnel of Enterprises under the Ministry of Economic Affairs, the term "reaching the retirement age" pertains to the assigned personnel who have worked at various entities for five years or longer consecutively reaching the age of 65, and the hired personnel reaching the age of 65. Taipower's retiring person number in the next 5 years will be up to 6,355 (with retiring person count ratio at 24%); the retiring person number for the next 10 years will be up to 13,037 (with the retiring person count ratio at 48.96%).

◆Male/Female Executive Ratios

Year	2011					2012					2013				
Job level	M	Ratio	F	Ratio	Total count	M	Ratio	F	Ratio	Total count	M	Ratio	F	Ratio	Total count
Elementary executive	3,505	63.9	418	7.6	3,923	3,477	63.6	437	7.9	3,914	3,439	63.7	451	8.3	3,890
Mid-level execution	1,157	21.1	68	1.2	1,225	1,136	20.8	82	1.5	1,218	1,088	20.2	85	1.6	1,173
Higher level executive	328	6.0	11	0.2	339	326	6.0	10	0.2	336	323	6.0	12	0.2	335
Sub-total	4,990	91.0	497	9.0	5,487	4,939	90.4	529	9.6	5,468	4,850	89.9	548	10.1	5,398

3.9.2 Strengthening Human Resources Culmination

◆ Recruiting and Training New Employees

The Taipower employees hiring method is divided into two types, the "assigned personnel" and the "hired personnel". The assigned personnel pertain to employees qualified through selection by the Ministry of Economic Affairs or its commissioned pertinent agencies (institutions), or hired by means of university and graduate school scholarship screening and so on. The hired personnel pertain to employees hired by means of completing the culmination training sessions that Taipower stages or through high school (vocational school) scholarship screening and so on.

As of the end of 2013, Taipower has a total of 26,629 employees. To avoid a manpower gap and for technology transfer, Taipower has in 2013 recruited new employees (assigned personnel) through recruitment exams in 21 categories totalling 560 individuals. It has plans in April 2014 to hire trained new recruits for assignment to various units for a 6-month internship training by focusing on the new recruits' expertise and future planned assignment work to formulate the learning objectives, and select the suitable necessary internship department, and by formulating the internship counselling program, coordinated with the new recruits' career planning to provide a long-term counselling and developmental training. Newly hired employees' hiring education requirements are college or university graduates or higher, and mainly to serve in professional, planning-based management and technical positions.

In 2013, Taipower held new recruit screening tests for hiring in 10 categories totalling 527 persons, in addition to the localized screening for hiring 5 persons, with the sessions' culmination classes beginning on November 11. The associates receive the culmination class (power distribution, power transmission, power transformation, E&M, instrumentation electronics, mechanical, civil engineering, general administration and classes) program and internship training. The working training, lasting 1 year and after passing the exams satisfactorily at the end of the period, the company hires them as newly hired employees to replenish the rudimentary young manpower and for passing down the field technology. The hired personnel's hiring qualification is a high school or vocational school graduate who will primarily serve in field technical positions or rudimentary administrative positions.

◆ Continuing On-the-Job Training

Taipower continues to stage power industry operating management, professional technology and management talent, and executive culmination and related on-the-job training. It also participates in a host of outside company training totalling 50,124 persons/sessions; also to draw new knowledge and the need to bridge internationally, the person count on assignment for foreign exchange numbers 308 persons. Moreover, Taipower actively promotes the credential certification system to augment the technical know-how by counselling the employees to acquire a host of work-related certifications, and in 2013, a total of 2,057 persons/entries have completed a variety of certifications. Taipower also prescribes that each employee undertakes 40 hours of education hours per year, and in 2013, the average learning hours in Taipower's 106 units were 54.68 hours. Currently there are no statistics on the training hours by gender and job type.

◆ Conducting Executive Training

Each level's executives play a key role in promoting and implementing Taipower's management strategies. In order to continuously add new talent to executive levels, in 2013, 330 employees with good performance participated in the supervisory training; 226 participated in the intermediate supervisory training and 504 participated in supervisor training (including 116 as senior supervisors). These training sessions with other diversified on-the-job training sessions are beneficial to manpower reserve and utilization. In 2013, those undergoing the "management talent evaluation" had 2,424 women, which accounted for 9.1% of the entire employees, and men totalling 11,244 persons, which accounted for 42.2% of the entire employees.

◆ Establishing Knowledge Communities

Taipower established a "knowledge communities" system to provide a platform for its employees to share and exchange work experience and professional knowledge. Through these interactions, employees' loyalty was also solidified. The measures included:

- Installation of the Knowledge Management System, including the Taipower blog, business coordination sites, Taipower brain trust, Taipower integrated search and so on.
- Content Building of the Knowledge Management: setting up 104 coordination sites, 242 knowledge community, 7,828 experts, 17,438 knowledge documents, 310 benchmarks.
- Installing Taipower km integrated index search system: It not only integrates employee training materials, reference database and knowledge system but also supports multi-dimensional retrieval.

◆ Establishing Taipower E-Learning School

Taipower plans to continue promoting the lifelong learning concept and integrating resources, such as various practical trainings and Taipower's internal E-Learning School (ELS), to form learning type organization to strengthen employees' competitiveness. In 2013, Taipower ELS offered 772 on-line courses and opened outside learning websites to provide employees with a 24/7 environment to conduct their voluntary on-line learning.

◆ Establishing an Employee Proposal System

Taipower established the "implementation guidelines of the employee proposal system" in 1994. This system provides a platform for the employees to openly demonstrate their potential and creativity and offer suggestions for improvement in a spirit of team work. To encourage qualified proposals, excellent ones have been recognized and rewarded since 2008. In 2013, there were 3,195 proposals, of which 1,662 were rewarded. This is a clear sign that employees have become enthusiastic about participating in this innovation proposal program.

3.9.3 Creation of a Fair Employment Environment

◆ Gender Equality

Taiwan Power Company, more than following the examination laws and regulations and the "Employment Standards Act", is actively promoting gender equality working law and sexual harassment prevention law. It has consistently broached a gender equality working philosophy in terms of employee hiring, exam system design and post-hiring career development and wages, and does not have any gender bias.

In 2013, the average hours that the employee participated in human rights subject-related training was at 1.72 hours, which accounted for 10.85% of the entire employees (using gender mainstream serial courses as the calculation basis). The newly recruited outsourced personnel need to receive relevant professional training as regulated (with each person's training hours being one week) of which the 2-hour Civil Code Introduction encompasses a human rights orientation.

◆ Employment of Disabled and Aboriginal People

To guarantee equal employment opportunities for minorities, Taipower has abided by the regulations stipulated in the People with Disability Rights Protection Act and the Indigenous Peoples Employment Rights Protection Act.

Hiring personnel type	2012	2013
Total employment no. of people with disability	918 persons	929 persons
Ratio of people with disability	3.33%	3.41%
Total employment no. of aboriginal people	162 persons	163 persons
Ratio of aboriginal people hired	0.59%	0.59%

3.9.4 Labor-Management Relations

◆ Employee Working Guidelines and Equity

- Taipower has promulgated the "working rules" and when hiring new employees, the company invariably publishes the rules and also announces the information on the company internal web site to duly inform the new employees.
- Relevant employee equity information is announced and informed on the company internal Web site and on the human resources division's Web site.
- Taipower, as a state-run enterprise issues various wages, bonus per relevant regulations; to avoid affecting the employees' equity, as stipulated under article 41 of Taipower's "group agreement", relevant matters concerning new organizational launching, changes or mergers and so forth shall be communicated with the union in advance.

◆ Communication Mechanism with the Employees

○ Labor-Management Meetings

Taipower routinely holds company level and various units' management-labour meetings and in 2013 a total of 398 meetings were held, in addition to unscheduled interim project meetings convened with union management staff regarding labour-management subjects, which totalled 25 meetings for the year, which enabled effective communications between labour and management. Besides, Taipower held the "current stage operating strategy communication presentation" and "major labour-management subject communication presentation" to bridge the labour-management communication and harmonious relations. The two meetings had 115 participants. To excel the up-down opinion exchange, in 2013, a total of 236 forum meetings were held with rudimentary personnel, which enabled the supervisors to conduct face-to-face communication and listen to the rudimentary personnel's voice.

○ Group Agreement Negotiations

The Taipower employees have organized a Taipower Union and in 2013 the union member count was at 25,954 persons, which account for 97.4% of the entire employees.

Taipower has on October 24, 2013 signed a group agreement with the power union, in which chapter VI "benefits, training, safety and health" mentioned that the company was to provide safety and health-related training for the employees, provide obstacle-free facility for the physically and mentally handicapped and implement occupational hazard prevention and other related matters. However, it has yet to sign human rights review-related documents.

○ Grievance Complaint System

Taipower has promulgated the "working personnel difficulty and grievance matter processing guidelines", and has also installed at various units the "working personnel difficulty and grievance matter processing team", where the employees may present grievance complaints with the team council in writing or verbally. The processing team needs to process it and also respond to the complainer within one month. The headquarters has also founded the "working personnel difficulty and grievance matter processing committee" which was charged with processing grievance complaint cases that the various processing teams have not processed or not accepted by the grievance filer.

Employee Assistance Program (EAPs)

Purpose	Internal and external resources were integrated and applied to help employees solve their difficulties or problems in their work, lives, emotions, and health.
Current status	Currently, 80 Heart-to-Heart Counseling Programs have been established and 642 employees worked on a voluntary basis to organize the assistance programs, concern for employees, preliminary interview, and referral service.
Employee assistance operational activities	● There are 4,000 persons participating preliminary interviews each year. The Heart-to-Heart chapters in each functional unit organized up to a thousand events for assisting employees. ● Taipower has compiled the "Taipower's Heart to Heart Bimonthly" providing Taipower employees with a platform for sharing and exchange, and also offer the employees with work, health and living assistance and enrich them with ample knowledge on better mental and physical health.
Programs	Taipower launched the diverse EAPs (Employee Assistance Programs) to meet the needs of the organization and the employees, including: ● "safety, health so easy assistance program", "workplace sexual harassment prevention", "Work-Life Balance Plan", "Employee Financial Consultation Project" and "Legal Consultation Assistance Project" and so forth.
Year 2013 results	● Outside agencies and schools including Suchow Catholic University, Changhua Normal University and the like have called on Taipower for demonstrative exchange. ● Receiving Council for Labor Affairs, Executive Yuan's invitation to act as the "employee assistance program promotional plan" expert consultant by offering consultation at Evangelist Hospital and Lee Chang-rong Chemical Company, Limited, and sharing Taipower's employee assistance program's promotion results at employee assistance campaign lectures and seminars staged by the Council for Labor Affairs, Executive Yuan and other related entities. ● The Taipower's promoting the employee assistance program has received the "healthy workplace voluntary certification" health enhancement insignia conferred by the government entity, and as a healthy weight reduction excellent entity, excellent workplace "health pioneer" and related award commendations.

Employee Welfare Policy

Taiwan Power Company's various subjugate units are all located within Taiwan and all of its full-time employees are entitled to the following benefits:

Benefits Administrative Measures

The Taipower employee benefits measures and items include: employee civil servant, labour and health insurance, medical subsidies on working injuries, general health examination, mutual group assistance, labour education and a host of recreational activities, which enable the employees and workers to adjust their physical and psychological health to attain the objective of retaining excellent talents.

Benefits Committee

Taipower's employee benefits committee (an incorporated entity) upholds four major principles of fairness, practicality, prevalence and effectively in utilizing the benefits fund by offering employees/workers with marriage, birth/family funeral subsidies, children's education scholarships, medical insurance subsidies, distributing the three major holidays gift payouts, purchasing commissary equipment and related benefits subsidized items, and also hosting sports, recreational, intelligence aspiring activities. The committee has also formulated the employee/workers and family healthcare insurance and subsidy guideline, and employees/workers and family members, when in need of "hospitalized treatment", may apply with the insurer for medical care insurance adjustment or apply with the benefits committee for medical expenditure subsidies.

◆ Care and Arrangement for Retired Employees

Taipower operates a comprehensive retirement system, and also processes each employee's pension payout matter by law, of which employees eligible for the new labour pension system (which at present only applies to the hired personnel) account for 49.9%, where the allotment percentage is implemented per relevant governmental laws and regulations. Taipower hires experts to give keynote speeches about retirees' metal and physical conditions to ready-to-retire employees. For retirees, farewell parties will be held and Taipower will give them memorial presents. At the three major festivals every year, namely Chinese New Year, Dragon Boat Festival, and Middle Moon Festival, the retirees will be visited by the company's representatives and receive cash gifts. When any retiree has serious disease or meet natural disasters, the company, upon being aware of the situation, will try its best to help. For the retiree used to work at a Taipower's facility owing its in-house medical services, the retiree and his/her certain family members can still use the medical service after his/her retirement. The functions supported by the welfare department of Employees' Welfare Committee (such as grocery stores and barbershops) are open to the retirees and their family members.

◆The Taipower New/Old Pension Systems and the Remittance Allocation Ratio

Pension system	Old system		New system		
	Person count	Calculation method	Person count	Allocation ratio	
				Employer allocation	Employee voluntary allocation
Assigned personnel	12,402	Per the retirement pension and retrenchment measures for personnel of enterprises under the Ministry of Economic Affairs	Not yet applicable	Not yet applicable	Not yet applicable
Hired personnel	1,035		13,374	6%	0%~6%
Total	13,437 (50.1%)	—	13,374 (49.9%)	—	—

Source date as of February 21, 2014

3.9.5 Occupational Health and Safety

Taipower also launched Taiwan Occupational Safety and Health Management System (TOSHMS) to further ensure all-dimension safety/health management, and internalize it as a part of the company's operation management, thereby realizing systematic development of TOSHMS, in turn effectively reducing workplace hazard and risk and creating a safe, comfortable working environment.

2013 Honors Awarded to Taipower's Occupational Safety and Health Management

Participating entity	Event	Contents
Taipower	The 2013 national workplace safety and health execution result evaluation activity	The national workplace safety and health weekly series
The power transmission/transformation engineering division southern construction office's "economic trade D/S new construction project (a turnkey project)" and the power transmission/transformation engineering division, southern construction office's "Zhangjhu D/S civil engineering/ construction turnkey new construction project"	The 2013 promotion of labor safety and health outstanding public project	The entry award
The Tainan Operations Department	Certification by the Healthy Workplace Promotion Center as commissioned by the National Health Administration, Ministry of Health and Welfare	The 2013 health enhancement insignia outstanding award of health pioneer award
The Taipei northern operations department, Hualien area operations department (the power distribution center), Hualien area operations department, Yunlin area operations department Taixi service office, Changhua area operations department power distribution center, Tainan area operations department of six units.	Certification by the Healthy Workplace Promotion Center as commissioned by the National Health Administration, Ministry of Health and Welfare	The 2013 health enhancement insignia
The Yunlin area operations department Erlun service office, Changhua area operations department Yungjing service office, Kaohsiung/Pintung power supply area operations department Kaohsiung section of three units.	Certification by the Healthy Workplace Promotion Center as commissioned by the National Health Administration, Ministry of Health and Welfare	The 2013 health activation insignia
The Taipei City operations department, Taipei southern area operations department, Taichung power supply area operations department, Yunlin area operations department Baozhong service office, Yunlin area operations department Yunglin service office, Penghu area operations department Wangan power plant of seven units.	Certification by the Healthy Workplace Promotion Center as commissioned by the National Health Administration, Ministry of Health and Welfare	The 2013 smoking harm prevention insignia

◆ Employee Safety and Health Management Measures

Taipower actively draws up various schemes, with the hope to have its business and function units, by way of sharing safety-health knowledge and mechanism such as education and training, to actively promote workplace safety and health, strengthen industrial safety propaganda, coaching, implement prevention and control, and ensure operational safety and health.

Launching the labor safety and health organization	● The "labor safety and health committee" has the president serve as the commissioner, with committee members totaling 32 persons (including 1 commissioner, 1 deputy commissioner, and 30 committee members). ● Among the Labor Safety and Health Committee, 14 are from the Taipower Union, accounting for 43% of the total, a percentage that is higher than the legal requirement.
Launching the Taiwan occupational safety and health management system (TOSHMS)	● Assistance was offered to each unit to establish a TOSHMS. As of the end of 2013, 57 Taipower units, including generation, repair & maintenance, nuclear power, power supply, business, construction, and so on have passed TOSHMS certification.
Promoting Training and Incentives	● In 2013, the participants totaled 49,000. ● An industrial safety training program was recently launched, allowing the trainees to participate in and experience the real danger, so as to value safety practice. ● The employees with outstanding performance in promoting industrial safety work were openly recognized and awarded.

Enhancing Disease Prevention and Health Awareness	● Contracted doctors were invited to the company's facilities to conduct works for preventing occupational hurt and disease, and for providing health service. ● Various health-promoting campaigns were held, including weight loss, drug consultation, mental health and disease prevention. ● Taipower worked with Health Promotion Administration, Ministry of Health and Welfare to promote more health-promoting campaigns, such as workplace self-certification . ● Taipower provided employees with general and special health checks, and record the results for future tracking and monitoring, in order to improve the condition of health management. ● Staging rabies vaccine measure promotion and front line personnel was vaccinated. ● Staging the H7N9 influenza pandemic prevention promotion and formulating the Taipower ongoing operating plan in response to the spread of the H7N9 pandemic.

◆ Contractor Safety and Health Management Measures

In 2013, the working days of Taipower's contractors' workers participating in the development, operations and maintenance-related projects totalled 4,890,908 days. For minimizing contractor's work injury, Taipower not only urges contractors to well manage the safety and health on the responsible work, but also actively assists contractors in setting up an industrial safety management system and in implementing it by themselves, so as to well fulfill its responsibility of caring the partners. In 2013, the percentage of Taipower's contractors'' workers surpassing pertinent safety and health training was at 100%. The relevant industrial safety measures include:

Reinforcement Safety Awareness	● Exercising TBM-KY (Tool Box Meeting & Kiken Yochi) to prevent accidents. ● Inviting contractors to anti-accident propaganda, demonstration of safe operation and similar campaigns held by either Taipower or the related authorities. ● Inviting contractors to educational courses/training about industrial safety/health held by Taipower, such as workers in effect training and zero-accident program. ● Producing training material about hazard identification for the contractor to use for education, training or propaganda.
Performing industrial safety check	● Intensifying industrial safety check before and after Chinese New Year, during flood season and in summer time to prevent the peak of occupational accidents. ● Having an industrial safety supervising team perform check, diagnosis and guidance, so as to help and urge contractors to implement self-management and ensure safe and healthy on-site operation. ● Taking mutual-defense mechanism for industrial safety to actively identify safety weakness and high-risk operation existing in the contractors' performance and to offer assistance as well as recommendation.
Conducting Assistance and Audits	● The industrial safety supervisory action unit counsels and audits 12 units per year. ● Staging the northern, central and eastern regional contractors industrial safety promotion presentation by inviting contractor employers, industrial safety superintendents, foremen and related personnel to take part in educational safety and health concept and awareness, by which to excel the contractor's industrial safety voluntary management capability. ● The unit supervisors hold two industrial safety face-to-face communication forums with the contractors' working superintendent, industrial safety personnel and so forth. ● Directly using the pecuniary punishment collected from the contractors who violated the provisions about safety and health as set forth in the contracts to improve their safety and health management, thereby, enhancing the overall industrial safety performance.
Accident Review and Horizontal Development	● Horizontally expanding Taipower's review on serious occupational accidents and subsequent preventive solutions, so as to avoid re-occurrence. ● Conducting overall review on the standards for safety operation to update them with the on-site needs. ● Holding safe operation drills to improve operational capability and operational control.

◆ Taipower Occupational Injury Indicators

With the excellent cooperation of all our employees and contractor partners, in 2013, the actual performance value of the employees' Frequency-Severity Indicator is 7.7, and the actual performance value of the contractor' serious occupational accidents is 2 persons, of which disability injuries involving company assets total 24 persons. In the future, Taipower will keep promoting diverse industrial safety management measures, and actively participating in the schemes of accident prevention planned by the governmental agencies, including Council of Labour Affairs, so as to work with the government in securing a safe and happy workplace for our employees.

Taipower Occupational Injury Indicators

		Occupational injury (no. of cases)	Disability from accidents (persons/ times)	The loss of work days (no. of days)	Total work hours	Ratio of occupational injury to loss of work hours	Ratio of loss in work days	Frequency of disability	Total disaster index
2011	M	18	20	1,606	49,751,074	0.07	6.45	0.40	3.57
	F	1	1	115	6,172,727	0.03	3.72	0.16	1.69
	TTL	19	21	1,721	55,923,801	0.06	6.15	0.37	3.33
2012	M	13	18	13,456	49,576,750	0.05	54.28	0.36	9.87
	F	0	0	0	6,127,463	0	0	0	0
	TTL	13	18	13,456	55,704,213	0.05	48.31	0.32	8.81
2013	M	23	23	7,697	49,312,340	0.09	31.22	0.46	8.47
	F	1	1	6	6,347,009	0.03	0.19	0.14	0.14
	TTL	24	24	7,703	55,659,349	0.09	27.68	0.43	7.70

- GRI Industrial injury resulting in loss of work hour ratio = total occupational injury count / total work hours x 200,000*
- (*: referring to the ratio calculated at 50 weeks per year and 40 work hours per week for every 100 hired employees).
- GRI lost work day ratio = total lost work days / total work hours x 200,000*
- (*: referring to the ratio calculated at 50 weeks per year and 40 work hours per week for every 100 hired employees).
- Combined disaster index = (disability injury frequency x disability injury critical ratio) ½ (rounded to the second decimal point).
- Disability injury frequency = disability injury person count x 1,000,000 / total work hours (rounded to the second decimal point)
- Disability injury critical ratio = lost work days x 1,000,000 / total work hours (taken to the even number)

3.9.6 Supplier Management

Taipower, as a state-run enterprise, needs to conform to the Government Procurement Act when staging procurements by considering the public interest and fair national as the principal, without any unjust reasons for the differential treatment to the contractors, and also heeding to professional judgment in rendering the adequate procurement decisions. Below are pertinent stipulations governing the suppliers' human rights management:

- The contractor who hires more than a total of 100 local employee number shall hire a number of mental and physical handicapped and aboriginal during the contract execution period reaching 1% of its total local employee number, and when under hiring, shall remit the surcharge and may not hire foreign workers in place of the under hired portion.
- The contractor, when hiring personnel to execute the contract, may not engage in discriminating against women, indigenous people or minority groups.
- Procurement tenders sought for the indigenous inhabitants area not reaching the announce amount (NT$1 million) shall open them to indigenous and non-indigenous contractors to enter the bid, and shall also describe in the tender announcements or invitation for bid documents that the tender will be awarded with priority to indigenous contractors.

This chapter and sections focus on the aspects of managing the supplier/vendors' social human rights and for the finance-related contents, please refer to the contents of "improving the financial deterioration".

◆Power Suppliers (IPP operators)

Following phase-one and phase-two IPP operators voluntarily declaring with the Ministry of Economic Affairs, the plant launching proposal and environmental impact assessment need to be presented before an operator may sign the power purchase/sale contract with Taipower. In addition, phase-one and phase-two deregulating private operators to set up power plants in restricted areas, and by year and capacity to present the power purchase needs, and those in the northern power needing region (north of Lungtan E/S) are eligible to participate in electric pricing comparison bidding with priority, where the procurement process succinctly

includes a power supplier filling the local (power lacking area) demand with priority. Since the power purchase/sale contract governs the power buyer and seller's entitlements and obligations, but poses no specific requirements on the human rights of personnel that the IPP hires, thus the IPP operators still need to abide by the pertinent governmental labour laws, regulations and guidelines.

◆Coal, Fuel and Natural Gas Suppliers

Taipower's fuel coal procurement are of foreign supplied, and when participating in the bidding, the bidders are required to submit pertinent proof of documentation by the government authorities where they are located to ensure that the suppliers are legitimate contractors and can also conform to the world countries' environmental protection and labour human rights pertinent legal and regulatory stipulations. On the aspect of fuel coal and natural gas, Taipower currently purchases them from the China Petrochemical Corporation and Formosa Petrochemical Corporation, and both are contractors with supply capability and also conform to the relevant governmental laws and regulations.

◆Other Vendors (transformer, power cable and related purchasing)

Taipower's power equipment/device procurements have all been implemented per the Government Procurement Act and related laws and regulations, and also support the government's relevant policies, such as supporting the "power equipment localized production policy", which stipulates that critical parts and components need to be produced, assembled, cut locally and the complete goods' assembly work need to be conducted in local factories, and the company has also held vendors' evaluations based on this. As to the localized production policy's protected category of electric cables, the company currently purchases 100% of the cables from local suppliers.

3.10 Social Participation

3.10.1 Year 2013's Various Social Investment Amounts

Social participation type	Contents	The 2013 amount (NT$ per million)
Social Care and Community Services	Actively caring for minority groups	27.75
	Beach cleanup activity	2.41
	Special scholarships	21.50
	Environment adoption, maintenance activity	5.32
	Actively sponsoring elementary school/junior high school ball teams in the peripheries of the power plants	2.33
Society feedback (feedback to villages and towns)	The Taipower volunteering service teams	4.80
	The power plant peripheries landscape cultivation plans	184.52
	Local elementary infrastructure	153.90
	Residents welfare-related undertakings	181.42
	Yearly assistance funds	2,200.52
Emergency/disaster aid and power billing incentive subsidies related offshore island subsidies	Subsides to Remote Islets	5,900.00
	Emergency/Disaster Assistance and Subsidy for Electricity Bills	75.30
Cultural education	Conferring scholarships (excluding the special scholarships)	47.09
	Cultural education	35.28
Local industry development	One town one feature	14.73
Sports activity	Culminating the teams of Taipower	37.53
Total amount		8,894.40

3.10.2 Social Care and Community Services

◆ Light of Love- Year-End Senior Citizens Attentive Care

Taitung County has the highest percentage of elderly population in Taiwan. Among those with low incomes, Taipower held the "Lighting Up with Love - Year-End Senior Attentive Care" activities with Taitung Christian Hospital and the A Kernel of Wheat Foundation.

In 2013, 220 seniors who lived alone were invited to dinners. They were also accompanied on a festival shopping trip and gifts were presented. Gifts were also sent to 120 disabled seniors. This attentive care activity drew 25 Taipower volunteers to participate and deliver love to remote villages and towns.

◆ Volunteering Services

Taipower volunteers were grouped into 53 teams with a total of 2,210 persons (1,729 are employees, and 481 are families of employees, retired employees and social workers). In 2013, the volunteer corp. had organized different forms of events for social charities in 195 instances, including the promotion of energy saving and safe use of electric power, service and emergency assistance to the disable, action for social and human concern, and environmental protection. These efforts of the volunteers yielded positive results to the society, the public, and the business of Taipower.

◆ Community Energy Conservation Service

Taipower provided a free power-saving promotion service to communities. This was done to advocate accurate power-saving skills and the use of high-efficiency energy conservation products. Besides, it offers suggestions for the improvement of public power consumption facilities. In 2013, 202 community service events were held, covering every area of the country (north, central south,) and offshore islands). A total of 5,892 residents participated in community energy conservation service, which helped the public to substantiate energy saving on a daily basis.

◆ Beach Clean-up Activity

Taipower has been staging the yearly beach clean-up activity for nearly twenty years by combining various seafront power plants, mobilizing the employees and family members, and also inviting nearby junior high, grade schools and community residents to jointly clean the beaches. In 2013, Taipower has joined together with the Tung's Foundation by integrating the beach clean-up activity into the community welfare action by donating $10 for every 1 kilo of garbage picked up; by offering Taipower's community outreach subsidy resources, which are used for conducting the Youth depression Prevention Fund for schools near the power plants. In a move to achieve the yields of beach clean-up and psychological physiological purification on the day of the event, 18 Taipower units have staged the beach cleanup in various locations, picking up a total of approx. 43.59 tons of refuse.

3.10.3 Giving Back to Township and Villages

◆ Subsidies for Local Charitable Activities and Assistance

In order to strengthen the welfare of residents living in areas near power facilities, Taipower established. The Approval Committee of Power Development Foundation (APDF), a body in charge of distributing subsidies for local construction projects. In 2013, Taipower offered a total of NT$2.839 billion in subsidiary projects, making a great contribution to local public construction, education and culture activities, public welfare activities, etc. Major achievement of APDF in 2013 includes:

- Actively planning power plant periphery landscape cultivation plans totaling 29 cases, of which the Wanli area's landscape cultivation plans totaling 9 cases (at NT$55,089,000), the Jinshan area landscape cultivation plans totaling 9 cases (at NT$43,857,000), the Shimen area landscape cultivation plans totaling 5 cases (at NT$52,010,000), the Linkou area Xiafu landscape cultivation plans totaling 6 cases (at NT$33,570,000 with total assistance amount at NT$184,526,000.
- Assisting infrastructural programs in the local community.
- Promoting voluntary care for social minority groups and ball team adoption projects: Combining the efforts of all entities involved, Taipower's promoting voluntary care cases in 2013 has received excellent units with demonstrated results, where the volunteer participation ratio has reached as high as 43~49%, and Taipower tries to continue annually increasing all units' volunteers participation ratios in the future.
- Assist in the environmental conservation adoption activity and voluntarily hosting power plant peripheries' fishery resource recovery and culmination work.
- Providing scholarship for education and culture.
- Assisting the development of local industries.
- Supporting the disable (emergency assistance, low income families).

3.10.4 Emergency/Disaster Assistance and Subsidy for Electricity Bills

◆ Subsidies to Remote Islets

Taipower complies with the government mandate to provide power to remote islets. And their tariff rates base on the regulations stipulated in the Offshore Islands Development Act and the Subsidy Regulations on Losses of Electric Utility Operator for Offshore Islands. In 2013, Taipower offered electricity bills subsidies to remote Islets amounting to NT$5.9 billion.

◆ Urgent Repair after Disasters

- Due to its special geography, Taiwan frequently suffers natural disasters, such as, typhoons and earthquakes. Taipower works with local governments to establish emergency centers for prompt response to all needs and rescue activities. In such occasions, Taipower also actively keeps the authorities and opinion leaders informed with the updated news and development about the situation of disasters and the repair progress.
- On July 13, 2013, Typhoon Soulik devastated Taiwan, which caused 1.137 million household power outage nationwide. Taipower actively mobilized 3,800 persons (including the contractors), 1,892 electromechanical equipment and vehicles, for the emergency rescue, and has completed the task with a power reinstatement ratio of more than 98% in one day, and has repaired completely on July 15.
- By actively participating in the meetings among the government, builders and non-government organizations, Taipower engaged the infrastructure project, such as Transmission Line Improvement Project in Kaohsiung.
- In consideration of the needs of the public, the Power Outage Inquiry and Report System was set up; in the typhoon seasons, the on-line Power Outage Inquiry and Report System, such as App on mobile devices, reduces the load of the 1911 service hotline.

3.10.5 Cultural education

◆ Public Arts

In accordance with the Culture and Arts Reward Act and the Regulations Governing the Installation of Public Art, Taipower budgeted for public art pieces in its buildings and major construction projects to enhance the environment aesthetically.

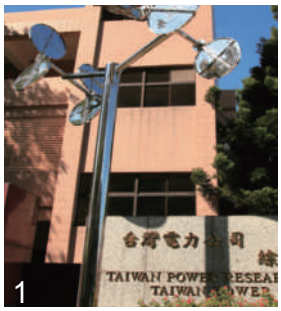
○ Regular Buildings

- Taipower has completed the selection of public arts for Shulin Site of Taiwan Power Research Institute and Training Institute in New Taipei City. The art pieces were installed in 2013, and "Public Art in New Taipei City" has been scheduled to be completed in 2014 totaled NT$27.92 million; the Hualien County public arts will be installed in 2015 totaled NT$11.7 million.

- In 2013, Taipower has launched public art installation projects in Taichung and Hualien Branches and the Xiandu extra high-voltage substation's multi-function construction project in Taipei.
- Taipower plans to launch the public art installation projects in Taipei and Kaohsiung in 2014.

Major project

- In 2013 Taipower has launched the Nangang Exhibition Center's public art installation project, scheduled to be completed by 2019 totaled NT$43,860,000.



Explanation

1. The Training Institute's public artwork: "Seeing the rainbow's home"
2. Shulin Lab, Taiwan Power Research Institute's public artwork: "Turning the Future"
3. The Training Institute's public artwork: "Nature"
4. The Training Institute's participation in public arts: performance by local artists
5. Shulin Lab, Taiwan Power Research Institute's participation in public arts: color painting of pinwheel
6. The Training Institute's participation in public art: the mosaic workshop
7. The Training Institute's participation in public art: power generation amusement park

Circuit Box Embellishment

Taipower have actively promoted embellishment of its transformer cases with painting. For securing the operation of power system and the rights of the pedestrian, the circuit boxes are made compact and colored. The circuit boxes at selected sites may be improved aesthetically. The patterns have been selected to meet the local government's requirements and local features.

- The total circuit boxes colored by Taipower: 6,541.
- The total circuit boxes colored by request: 42.

◆ The Seeds of Hope Program

Starting from 2005, Taipower has cooperated with the Hualien Mennonite Hospital, the Taitung Christian Hospital and the Pingtung Christian Hospital to hold the "Seeds of Hope Program" to jointly create part-time job opportunities for college students to cultivate caring and serving the people from their work. Over the years, this program has encouraged many young people to serve their hometowns and earn part of their tuition from it.

Students can work as administrative or healthcare assistants. They may also arrange to help the elderly living alone in housekeeping, home visits, meal delivery, intensive care center and nursing homes, and help school children with their homework. Through these experiences, the students can have a real sense of service which in turn will drive them forward for caring the people in their daily lives. In 2013, a total of 74 summer part-time job opportunities have been opened to indigenous youth students registered locally.

◆ Firefly, Children's Reading Plan

As limited educational resources in the Tatung and Hualien, lots of students are in great need of assistance. Taipower and the A Kernel of Wheat Foundation continued to jointly promote the "Firefly, Children's Reading Plan" in 2013. There were fifteen after-school classes set up in these two areas, providing mobile book carts, character education classes, summertime growing reading camp, little angel heroes gathering, etc. and so on to enhance the students' reading and learning capability, and 2013 marked the 7th year of the collaboration.

2013 Firefly children's reading program results

After School Classes	The priority was given to primary school students from under privileged mid-and-low income, single parent families and those raised by grandparents. There were in total 356 students who attended these classes.
Mobile Book Cars	Mobile book carts went to the tribes in the remote areas and communities every two weeks. In 2013, there were in total 230 times with 11,744 participants.
Summertime Growing Reading Camp	Fifteen summertime reading camps were held with 62 participants in 2013. Composition campaign was held, receiving 111 papers by 95 participants.
Little Angel Heroes Gathering	The forum is staged at Rihui International Resort in Chishang, Taitung by means of group performances, prize quizzes, awarding and so forth to allow schoolchildren to participate in 8 counseling classes, 163 faculty and students to perform talents. They learn dining etiquette in a luxury buffet, and were given Christmas presents.

◆ Scholarships

Taipower grants scholarships in an annual basis to recognize students of all grades who live and study in difficult conditions yet have outstanding performance. In 2013, Taipower launched the "student scholarship event" in 24 power plants across the country and the amount given to 19,446 awarded students amounting to NT$66.35 million.

3.10.6 Development of Local Industry

◆Assisting Local Industries Development – unique feature for each township

In order to boost local prosperity and local industrial development, Taipower assists local governments in the towns and villages surrounding the power facilities by holding local industrial activities that embody historical, cultural, and economically beneficial features. Meanwhile, professional approaches are adopted to enhance the marketing of industries and tourism resources. The unique culture and image of each town and village is then established to promote local prosperity and the development of other industries and businesses.

In 2013, Taipower helped promote industrial and location-themed activities in the following localities: Pingsi: Sky Lantern Festival, Yongan: Grouper Cultural Festival, Mituo: Milkfish Cultural Festival, Luju: Tomato Cultural Festival, Sanchih: Water Bamboo Festival, Nantou: Sun Moon Lake Black Tea Festival, Gongliao: Gongliao Ocean Music Festival, Jinshan: Sweet Potato Festival, Shimen: International Kite Festival, Zhuolan: Fruit Season Promotion Sales, Taoyuan: Lotus Season Festival, Jiading: Mullet Cultural Festival, Linyuan: Golden Perch and Shrimp Local Culture Festival, Hengchun: Pole Climbing Festival and Flying Fish Promotion & Fishermen Festival celebration 2013, etc., with assistance amount totaling NT$14,730,000.

3.10.7 Sports Events

◆Taipower Sports Team

Taipower has paid great efforts to sport promotion and has contributed to numerous excellent performances. With Taipower's sponsorship, many sport talents and teams have won honor for Taiwan in different international games. Taipower has sponsored a men's baseball team, a men's soccer team, a men's volleyball team, a women's volleyball team, a women's basketball team and a women's badminton team, and all of these amateur teams are classified in Social Group A. Taipower was awarded the Sponsorship Category Gold Medal, Long-Term Sponsorship Award, and Promotional Category Gold Medal Award in 2013 "Sports Culmination Award" activities.

- The baseball team won the championship held by Transglobe Insurance Company in 2013.
- The football team won the championship in the National Five-member Football Team Joint Competitions.
- The women volleyball team won the championship of the Business Competition Tournament, and the men volleyball team won the championship of the sixteenth Sports Council Mix Volleyball Game.
- The women badminton team won the single championship of the National Women's Badminton Game, and the group runner-up of the sixth East Asia Games.
- The sponsored teams not only strive for victory in various games, but also use intervals between training and contesting to participate in the charity activities to coach student teams in the nearby schools, such as the men's football team promotes football in the remote Kaohsiung Ximaxia and Liuguei areas; the women's basketball team hosts basketball summer camp; the mix volleyball team trains with university and high school teams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4. Engagement Performance on Key Sustainability Issues

4.1 Communication with Stakeholders

4.1.1 Communication between Taipower and Stakeholders

Stakeholders	Communication Issues	2013 Performance	Unit/Contact Telephone
Private organizations (such as industry associations)	Customer services and innovative value-added applications (such as electricity services measures and business exchanges)	● Organize two seminars for Taipower to communicate with the Taiwan Electrical Contractors' Association and the Association of Power Facility Inspection & Maintenance in Taiwan respectively. ● Promote important rules and regulations as well as important measures.	Department of Business 02-23666670 02-23666693
Government agencies/ authority agency	Facilitate reasonable tariff schedule and enhance financial status (including budget review)	● Coordinate budget review schedules of the Legislative Yuan to review Taipower's budget. ● Participate in three meetings on the "Expert Group on Electricity Tariff Formula" convened by the Bureau of Energy. ● Participate in four seminars on the "Electricity Tariff Calculation Formula" organized by the Chung-Hua Institute for Economic Research.	Department of Business Department of Accounting 02-23667311

Stakeholders	Communication Issues	2013 Performance	Unit/Contact Telephone
Elected representatives	◎ Promote Reasonable Tariff Schedules. ◎ Enhance nuclear energy safety ◎ Improve power supply reliability, customer services and innovate value-added applications	● Properly and timely response to the issues elected representatives concern and win support for the important policies of Taipower. ● Follow and join in all scheduled meetings. ● Visit and explain to relevant authority agencies. ● Follow up the conclusions of the meetings. ● Integrate, build, and update Q&A pools of all Taipower units. ● Provide prints and website information disclosure.	Department of Public Services 02-23666337
Shareholders	Financial improvements (such as operation status, dividend distribution and issues on information of shareholders' meetings and stock trading)	● Disclose relevant information on Market Observation Post System and "Shareholders" of Taipower's Website. ● Convened one shareholders' meeting on June 21, 2013.	Department of Finance 02-23666831
Customers	Customer services and innovative value-added applications	● Visited 74,307 households. ● More than 1.91 million calls were made to the service hotline at 1911 and toll-free service hotline at 0800; the average waiting time on service hotlines was about 10.52 seconds. ● Manage 4,946 customer mails.	Department of Business 02-23666672 02-23668472
Partners(such as IPPs)	Financial improvement (IPPs agreement adjustment)	● Due to the Economics Committee of the Legislative Yuan cut Taipower's 2012 electricity procurement budget, Taipower and IPPs negotiate on the contract price. We also proposed to Taipei District Court and the Fair Trade Commission, Executive Yuan. ● In August, 2013, Taipower completed contract amendments with nine IPPs based on the 2011's power generation capacity and market interest rates. It enables Taipower to save 1.54 billion annually. A total of 2.49 billion will be saved during these contracts' periods.	Department of Business 02-23666709
Residents/ General Public	◎ Enhance nuclear safety. ◎ Provide customer services and apply innovative value-added measures. ◎ Create a friendly environment for the public. ◎ Mitigate climate change. ◎ Participate in social activities. ◎ Promote reasonable tariff schedules.	● Twenty-eight and 183 times of communication, visits, exchanges on issues related to the operating nuclear plants with schools and other groups respectively ● 18,198 visits to the Nuclear Plant 4. ● Provide free electricity saving consultation and diagnosis in 202 communities with 5,892 person-time involved. ● Organize 1,318 seminars on electricity consumption and easy repairs and maintenance of household equipment and electricity saving, totally 276,000 participants including Mom's Classroom, social groups, and large customers.	Department of Nuclear Generation 02-23667097 02-23667661 Department of Nuclear and Fossil Power Projects 02-23229494

Stakeholders	Communication Issues	2013 Performance	Unit/Contact Telephone
■ Government/ authority agencies ■ Elected representatives ■ Media ■ Residents/ general public ■ NGOs ■ Customers ■ Taipower employees	Enhance nuclear safety.	● Host 4 international forums: ⋆ "Current Status of Japan after the Fukushima Incident" on June 24, 2013 with 350 participants. ⋆ "Nuclear Energy and Energy Safety" on September 26, 2013 with 350 participants. ⋆ "Nuclear Energy and Taiwan's competitiveness on December 27 with 300 participants. ● Plant visits by up to 251 groups. ● 493 communication activities. ● Release seven sets of prints, 5 films and 2 on-line promotions. ● Eight radio commercials. ● Sixteen TV debate and political discussion programs.	Team of Nuclear Communication 02-23668477
■ Government/ authority agencies and elected representatives ■ Residents/ general public	Create friendly environment (Environmental Impact Assessment (EIA) of the Taipower development program).	Organize two hearings: ● "EIA of Changhua Offshore Wind Power Generation of Phase 1 Southern Taiwan Project" was convened in Changhua with 90 participants on June 25, 2013. ● "EIA of Luzhu Wind Power Generation" was convened in Taoyuan County with 70 participants on August 15, 2013.	Department of Environmental Protection 02-23667223
■ Private organizations (academic institutes) ■ Partners (including domestic and international power industries) ■ Residents/ general public	Provide customer services and apply innovative value-added measures.	● Taiwan Power Research Institute (TPRI) conducted relevant research projects by investigating client satisfaction survey. 102 survey forms of technology services were collected and 25 survey forms of research projects were collected. ● Participate in the "2013 Taipei International Invention Show and Technomart," exhibiting nine technology products under three themes: "Smart Life," "Green Energy and Energy Saving," and "Biomedical Care". ● TPRI sent two researchers to present research results and participated in the workshop discussion in the 2013 East Asia Electric Technology Research Workshop, Seoul, Korea. ● The 25th CRIEPI/TPC was convened at the TPRI from November 28-29, 2013.	Taiwan Power Research Institute 02-23601174 02-23601178 02-23601166
Taipower employees	◎ Enhance human resources and supplier management. ◎ Improve financial performance (current status of management).	● Convene 398 periodical labor-management meetings. ● Address employee-concerned issues with the Taiwan Power Labor Union with 25 communications. ● Organize communication seminars on "Current Status of Managerial Strategies" and "Major Labor-Management Issues" with 115 participants. ● Organize 236 seminars for the front-line staffs and managers	

Stakeholders	Communication Issues	2013 Performance	Unit/Contact Telephone
Taipower employees	Enhance human resources and supplier management (labor safety and health).	Convene six meetings of the Labor Safety and Health Committee.	Department of Labor Safety and Health 02-23668638
Partners (contractors)	Enhance human resources and supplier management over the issues and regulations of safety and health.	● Conduct 11 seminars of contractors' safety and health in Northern, Central, Southern and Eastern Taiwan. ● Conduct 132 labor-management seminars for contractors. ● Conduct 18 project consultation sessions to enhance self-management capability.	Department of Occupational Safety and Health 02-23668638
Media	◎ Enhance nuclear safety. ◎ Improve power supply reliability (development of alternative energy).	● Convene one press conference to respond to the false report. ● Arrange 54 interviews on Taipower spokesperson or relevant units. ● Release 117 pieces of news. ● Write three letters to the media to clarify false and biased reports.	Department of Public Relations 02-23666340

4.1.2 Responses to Public-concerned Issues

In 2013, tariff adjustments and the 4th Nuclear Power Plant kept drawing the media's attentions to Taipower. The public demonstrated negative attitudes towards the soaring tariffs as well as doubted the safety of the 4th Nuclear Power Plant project. Thus, we needed to respond to the call for Taipower to change and to communicate with the media in every possible way to convey our efforts for continuous improvement. Moreover, through Taipower employees, we communicated with the public in various activities at different scales to convey the truth.

To reduce the impact of negative news, to implement the rules governing the handling of significant issues such as electricity costs and nuclear energy, and to increase the exposure of Taipower's positive news, in the 169 pieces of news released, came out with 57 pieces of positive news. Compared with those in 2012, the number and percentage of positive news released were significantly increased. For negative ones, we responded as follows:

- In terms of the media reports that may trigger negative issues, we tried to respond with a public discourse.
- As long as there were negative reports, a press conference shall be convened in the morning and news released on the same day.
- By writing to newspapers, magazines and TV stations, Taipower shall arrange interviews or press conferences to clarify false reports.
- News release shall be placed on the website of Taipower or the Ministry of Economic Affairs. Besides, for the dispute of nuclear energy, Taipower also sets up the "Nuclear Energy News" on website to clarify biased news timely and engages in mutual communication with the public.

The following description presents two important issues in 2013 which attract attentions to the society:

◆The 4th Nuclear Power Plant

After the Fukushima Incident, the public concerned about the safety issues of Lungmen (the 4th Nuclear Power Plant Project) on seismic resistance, tsunami mitigation, and flood discharge capabilities. Taipower responds by examining the existing safety design of the Lungmen Nuclear Power Plant that has been equipped with more than five-layered "defense in depth" compared with the Fukushima Power Plant. In the future, at the 12-meter plant area, a 2.5-meter tsunami mitigation wall will be built. The ultimate purpose is to develop seven-layered "defense in depth safety system. Please refer to the "Strengthen Nuclear Safety" of Chapter 3 for detailed information.

◆Tariff Schedule Adjustment

In order to reduce the impact of soaring tariffs on the economy, the initial once adjustment program was changed into the three-phased adjustment that delayed the implementation of Phase 2 adjustment until October 1, 2013 with the average increase percentage of 8.49%. The details are described below:

- Taiwan's neighbor countries gradually adjusted electricity tariffs. Taking South Korea as an example, it adjusted rates during 2009 and 2013 by 25.7%. And a higher rate was adjusted for industrial use than household use.
- If business competitiveness relies on subsidies of electricity bill, it lacks the incentive to reduce electricity costs. In the long run, it harms the competitiveness. Once the government cannot subsidize, the electricity tariff will increase dramatically and the huge losses will become the burden for all taxpayers.
- Taiwan hardly has any self-produced energy; therefore, the increase in electricity cost in the future will be inevitable. The industries shall seriously face the issue and think about ways to save energy and improve the efficiency of energy utilization in order to promote low-carbon industry.

4.1.3 Taipower Outreach

◆Domestic activities

Association of Industrial Relations

Taipower has been a member of Association of Industrial Relations, R.O.C. since 1984. And responding to its corporate responsibility, Taipower always pays great efforts to develop harmonious relationship between the company and its employees. On April 17, 2013, the association organized a seminar on "Labor Pension Reform" and invited the Minister of the Council of Labor Affairs, Mr. Pan Shish-Wei, to be the speaker.

BCSD-Taiwan

Taipower joined the BCSD-Taiwan in 2003 and has since continued to support the organization's initiatives and actions. This includes the "Taiwan Enterprise Sustainability Forum" platform established by representative enterprises in Taiwan. Through learning from other industries' sustainability issues, and the integration and implementation of action plans used by similar trade industries, Taipower and its partners work together to become a sustainable development enterprise. On September 27, 2013, Taipower sent its representatives to join the meeting for sharing the practices of corporate social responsibilities. Taipower also gave a presentation on the "Soy Bean Restoration Results in Wanta Power Plant in Taiwan" to TCSF members.

BCSD organized the activity of "Lighting Up the Community Together" on December 10, 2013. The former ROC Vice President, Mr. Vincent Siew, was invited to attend the meeting. Taipower was also invited and awarded.

Commencement Ceremony of the "Clean Development Mechanism and Carbon Credit Management Alliance"

Taipower's "2005-2010 Talin Pilot Project" was the first GHG reduction one in Taiwan audited and approved by EPA with the certified carbon credit. EPA on February 25, 2013 at the commencement ceremony of Clean Development Mechanism and Carbon Credit Management Alliance recognized Taiwan's first carbon credit to Taipower, about 178,000 tons, with a sign board.

In his remarks delivered as an honorable guest, Chairman Huang stated that Taipower introduced the GHG management system in 2005 for the promotion of voluntary GHG inventory check and reduction. The experiences and results achieved in various fields enabled the successful application and reviews of complicated processes as well as the granting of the carbon credit. Taipower is very willing to provide relevant experiences and technologies to exchange with other partners.

International Exchange Activities

Technology exchanges with CRIEPI, Japan

The 25th Annual CRIEPI/TPC Meeting was held on November 28 and 29, 2013 at Taiwan Power Research Institute; at the meeting, both parties exchanged opinions on the R&D of the electricity industry and corporate management. CRIEPI representatives also visited relevant Taiwan Power Research Institute's research and test facilities at Shulin.

The US Electric Power Research Institute (EPRI)

On the occasion of the participation of the US EPRI at the Taiwan Power Research Institute's conference on the use and integration of P174 renewable energy, Taipower on January 22, 2013 invited the Green Energy and Environment Research Lab of ITRI and professors from the NEP project team of the National Science Council and researchers at the Taiwan Power Research Institute to meet the US EPRI to exchange ideas on technology development of renewable energy, a pilot demonstration project of smart grid in Penghu and a three to six month long personnel training to EPRI in 2013.

AESIEAP CEO Conference

Taipower between October 27 and 29 went to Korea to attend the 2013 AESIEAP CEO Conference. Taipower gave a presentation entitled "The Development of Electric Power Technology to Allow Public Utilities of Electric Power to Create Innovative Smart Green Society." At the meeting, Chairman Huang was again invited to serve as a member of Executive Committee.

EPRI Meeting

Taipower on July 10-11, 2013 organized the "EPRI Research Project Discussion Meeting" and invited the US EPRI's Dr. Liu Shanshan and DR. Aidan Tuohy to discuss EPRI R&D and issues related with research projects.

East Asia Electric Technology Research Workshop

From May 27-31, 2013, the East Asia Electric Technology Research Workshop was held in Seoul, South Korea; participants included Taiwan Power Research Institute, CEPRI from China, CRIEPI from Japan, and KERI from Korea. Taipower presented "The Application Study on Composite Energy Storage System to Renewable Energy" and "Recycle and Reuse of SF6 Gas Insulated Switch of Electric Power Equipment."

INPO

Operating documents and technology databases compiled by INPO have been used for reference matching with the global nuclear industrial standards. Being an international member of INPO, Taipower is also able to directly exchange with the US nuclear energy counterparts and plants and through personnel visits and study tours with INPO, more information can be shared. In 2013, five INPO experts (from Exelon Corporation) conducted a benchmarking visit to Taipower and the 2nd Nuclear Power Plant for equipment reliability.

WANO

WANO is an organization composed by the world's nuclear plant operators with the aim to enhance safety and performance of nuclear plant operations. Taipower is a member of WANO and actively engages with all members and participates in its activities. In 2013, Taipower dispatched its representatives to participate in WANO trainings and conferences as well as arranged peer reviews for the 3rd Nuclear Power Plant, indicating the important demonstration by Taipower to maintain the world standard performance and safety of nuclear plant operations.

4.2 Enhance Information Disclosure and Communication

4.2.1 2013 Website Characteristics

Taipower website was revised in 2013 to cater to the different groups of users by adjusting structures and categories. The information disclosure is designated to provide information in six dimensions: "Management," "Electricity Generation," "Electric Power Supply and Demand," "Uses," "Environment" and "Engineering Information." Relevant information is periodically updated from time to time. There are 22 items under the six information dimensions and under each item, there are sub-items containing rich diagram descriptions and relevant statistics. They can also be used to supplement this report.

In consideration of the needs of the public, the Power Outage Inquiry and Report System was set up; in the typhoon seasons, the on-line Power Outage Inquiry and Report System is promoted to reduce the load of the 1911 service hotline.

- Taipower website: http://www.Taipower.com.tw

4.2.2 Other websites or news/ print media

Taipower also constructed various electronic media networks, including Taipower TV and Power Information App, as well as other publications of Monthly Journal of Taipower, and Monthly Journal of Taipower Engineering.

◆Taipower TV

Taipower set up the Taipower TV and utilized YouTube to enable employees and the public to appreciate Taipower's culture, and to understand different tasks held by different units. Internally, Taipower TV helps to encourage cohesion and record the history, truth, goodness and beauty of Taipower; externally, it serves as the channel to broadcast Taipower's news to users.

Since May 1, 2013, Taipower TV has produced at least one film per day and there have been more than 500 films on YouTube, attracting more than 200,000 views. The relevant contents are often cited by media.

- Website: http://tv.Taipower.com.tw / On YouTube, search TaipowerTV.

◆Taipower Facebook

Taipower created its Facebook, "Electric Power Fans" in 2010, and through the sharing of social networks, it has informed more people about Taipower's relevant information. In the beginning, the contents focused on issues like the introduction of Taipower's figures, activities organized and charities, while important business information was released if necessary (such as recruitment and tariff schedule rationalization). Through the social media, more people are connected and mutual communications and feedbacks are facilitated to earn the public trust for the company.

- Webpage: Search "Electric Power Fans" on Facebook

◆Power Information APP

Enable the public to acquire the real-time information on outage and emergency repairs, "Power Information" APP was developed to verify the position of outage and estimated repair time via mobile devices.

◆Taipower Publications

Publication	Target readers	Issues for Communication	Publication Time
Monthly Journal of Taipower	The public	● Disclose information ● Promote policy ● Communicate with the public	Monthly
Monthly Journal of Taipower's Engineering	Employees	● Introduce the latest electric power technology ● Improve technology level ● Exchange research results	Monthly
Monthly Journal of Nuclear	Employees and relevant nuclear power practitioners	● Introduce the latest nuclear technology ● Provide the communication platform for the industry, the government and academic group ● Promote and apply the research results	Monthly
Taipower's Heart-to-Heart Bimonthly	Employees	● Assist employees to cope with diversified issues in ordinary life	Bimonthly
Taiwan Power Company Sustainability Report	All stakeholders	● Disclose major sustainable issues on corporate management, social responsibilities and environmental sustainability	Annually

- (Website: http://www.Taipower.com.tw/content/power_life/power_life03.aspx?BType=5)

5. Prospects

PROSPECTS

At present, Taipower faces a very difficult operating environment including disputes over the construction of the 4th Nuclear Power Plant, insufficient base load and the failure to reflect power supply costs on tariff. In the future, Taipower will make great efforts to offset for operating losses and change its management system to earn Taipower's reputation.

With value creation and cost reduction, we devote ourselves to maximize our efficiency. Guided by professionalism and integrity, we spare no efforts to conduct comprehensive nuclear safety inspections to secure nuclear safety, balancing stable power supply, economic effectiveness, and environmental protection, and to fulfill corporate social responsibilities. To enhance customer services and improve communications with the public, Taipower provides innovative and convenient services. Mitigating the impact of liberalization of the power industry, Taipower promotes organizational transformation to awake employees' consciousness of crisis and corporate competitiveness.

Issue	Managerial Strategy	Current Strategy	Future Action and Objective
■ Improve financial performance ■ Enhance power supply stability ■ Enhance human resources and supplier management ■ Facilitate reasonable tariff schedules	Create value and reduce costs	Promote optical fiber rental to increase income	Aiming 12 million of annual revenue in 2013, and targeting 400 million in 2019.
		Vitalize real estate to increase income	Scheduled to complete 19 projects from 2012 to 2020 to increase total 16.2 billion of revenue and increase asset value of 53.1 billion.
		Increase base load through introducing efficient thermal units	Renew the 4th Nuclear Power Plant, Linko and Talin thermal plants to increase base load from 41.6% in 2014 to 48.8% in 2018.
		Cultivate talents to Facilitate generational integration	Promote career capability development for executives to enhance their leadership, communication skills and to inspire the junior employees.
		Improve management performance	● Reduce cost and increase income as well as the improvement of fuel coal procurement. ● Reduce or postpone investment projects. ● Down-size fuel inventory. ● Target 50.5 billion from 2012 to 2016.
		Remove policy burden to reduce cost	● Pursue MOEA to budget the subsidies in 10 years to compensate Taipower's losses in offshore island. ● Gradually reduce discount rate of "Electricity Bill Discount for Energy Saving Incentive Measures" to strive for sun-set clause
■ Enhance power supply stability ■ Adaption and mitigation of climate change ■ Improvement of nuclear energy safety ■ Creation of friendly environment ■ Social participation	Proper Exercise of Social Responsibility	Coordination with governmental policy and the focus on the practical development of renewable	Promotion of Photovoltaic Phase 1, Wind Power Phase 4 on Penghui Low-carbon Island, Wind Power Generation Phase 5, business operation of Phase 1 Project of Offshore Wind Power
		Enhancement of nuclear power generation safety and nuclear energy communication	● Promotion of nuclear safety cultural advancement initiative to implement nuclear energy safety culture ● Conduct comprehensive inspections on nuclear power plant safety protection to respond and enhance the initiative ● Enhancement of nuclear energy communication between nuclear power plants, local communities, and the society
		Promotion of friendly environment. Conservation and Restoration Projects near Power Plants.	● According to environmental or ecological concerns of all generation facilities, ecological environment friendly measures are adopted. ● Construct environmentally friendly habitats such as the little tern habitat at Taichung Power Plant. ● Taipower works with local government proceeding landscape and green projects.
		Participation in social caring and fulfillment of corporate citizen responsibilities	● Continuous charity activities such as "Lighting for Love." ● Engage in neighborhood communities of power plants to promote OTOP industries.
Customer services and innovative applications	Improve Customer Service	Improve efficiency through promoting smart grid	● Establish smart grid to mutually communicate and exchange information. ● Promote the 7th Power Distribution Project.
		Promote innovative and diverse services to build the long-lasting relationship with customers	● Enhance the Customer Services Center to be the industrial benchmark. ● Install on-line power outage information system and promote electronic bills.
		Disclose information to improve internal and external communications	● Establish Taipower TV and substantiate website contents with sufficient information disclosure. ● Enhance employee caring and communicate with all stakeholders.
Response to the liberalization of electric power industry	Promote Corporate Reengineering	Accommodate the liberalization of electric power industry and conduct separation of generation and grid functions organizational re-engineering was conducted to boost Taipower's competitiveness	● Coordinate with the schedule of the Electricity Act amendment, and implement separation of generation and grid functions. ● Corporate reengineering is planned with four business units of Hydro & Thermal Power Generation, Nuclear Power Generation, Transmission & Supply, and Distribution & Sales starting operation in January, 2016.

Financial Statements

Taiwan Power Company - Balance Sheet

December 31, 2013, December 31, 2012, and January 1, 2012

NT Dollars in Thousands	12/31/2013	12/31/2012	1/1/2012
ASSETS	**Amount**	**Amount**	**Amount**
CURRENT ASSETS			
Cash and cash equivalents	$2,231,327	$3,312,718	$3,168,307
Notes receivable, net	196,195	220,216	214,325
Accounts receivable, net	43,955,526	33,107,868	31,947,602
Other receivables	2,345,768	3,035,527	2,036,263
Inventories	31,070,767	33,461,618	35,775,799
Prepaid expenses	1,136,723	3,034,345	1,980,637
Other current assets	95,120	40,206	123,944
Total current assets	**81,031,426**	**76,212,498**	**75,246,877**
NON-CURRENT ASSETS			
Financial assets carried at cost	79,206	79,206	79,206
Investments accounted for by the equity method	2,076,396	2,186,584	2,261,577
Property, plant and equipment	1,551,149,417	1,541,112,893	1,534,769,140
Investment-based real property	13,410,642	12,789,353	11,101,751
Intangible assets	562,521	610,603	611,503
Deferred income taxes	595,851	122,513	13,839,343
Nuclear back-end fund	233,634,017	224,365,176	215,728,506
Other non-current assets	11,309,311	12,360,896	8,539,461
Total non-current assets	**1,812,817,361**	**1,793,627,224**	**1,786,930,487**
TOTAL ASSETS	$1,893,848,787	$1,869,839,722	$1,862,177,364

NT Dollars in Thousands	12/31/2013	12/31/2012	1/1/2012
LIABILITIES AND STOCKHOLDERS' EQUITY	**Amount**	**Amount**	**Amount**
CURRENT LIABILITIES			
Short-term debts	$57,462,418	$51,588,769	$96,869,023
Short-term bills payable, net	199,296,723	173,327,241	72,517,878
Accounts payable	37,237,410	38,915,237	46,309,832
Contract payable	14,929,468	9,845,961	14,283,883
Other payables	29,469,991	25,786,616	26,846,151
Current portion of long-term debts	133,631,272	118,900,788	111,046,240
Other current liabilities	2,917,698	913,272	476,187
Total current liabilities	**474,944,980**	**419,277,884**	**368,349,194**
NON-CURRENT LIABILITIES			
Bonds, net of current portion	390,934,793	368,926,659	355,655,178
Loans, net of current portion	396,120,029	443,965,311	437,818,998
Liabilities reserve	371,511,052	359,350,237	346,951,901
Reserve for land value increment tax	56,565,975	56,230,082	56,247,954
Long-term contract payable	2,183,897	3,304,933	2,748,117
Deferred income	1,031,054	1,137,169	1,295,718
Accrued pension cost	8,788,762	10,703,646	6,591,678
Others	11,083,956	10,936,120	4,843,630
Total non-current liabilities	**1,238,219,518**	**1,254,554,157**	**1,212,153,174**
TOTAL LIABILITIES	1,713,164,498	1,673,832,041	1,580,502,368
STOCKHOLDERS' EQUITY ATTRIBUTABLE TO THE COMPANY			
Capital stock – common stock	330,000,000	330,000,000	330,000,000
Accumulated deficit	(149,328,331)	(134,005,239)	(48,334,444)
Other equities	12,620	12,920	9,440
Total stockholders' equity attributable to the company	**180,684,289**	**196,007,681**	**281,674,996**
Total stockholders' equity	180,684,289	196,007,681	281,674,996
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$1,893,848,787	$1,869,839,722	$1,862,177,364

Taiwan Power Company - Statements of Income

Years Ended Dec 31, 2013 and Dec 31, 2012

NT Dollars in Thousands, Except Per Share Amount

	Amount of 2013	Amount of 2012
OPERATING REVENUES		
Sale of Electricity	$584,536,304	$540,058,373
Other	8,254,481	7,157,501
Total operating revenues	592,790,785	547,215,874
OPERATING COSTS	581,920,715	584,905,477
GROSS LOSS	10,870,070	37,689,603
OPERATING EXPENSES		
Marketing	5,957,590	6,477,678
General and administrative	1,408,326	1,359,334
Research and development	3,247,169	3,116,341
Total operating expenses	10,613,085	10,953,353
OTHER GAINS AND LOSSES	(1,943,168)	(1,975,132)
OPERATING LOSS	(1,686,183)	(50,618,088)
NON-OPERATING INCOME AND EXPENSES		
Interest income	2,975,193	2,840,673
Other profit and loss	930,003	1,623,875
Financial costs	(19,845,520)	(20,470,535)
Shareholdings accounted for by the equity method in affiliated companies	83,073	192,381
Total non-operating income and expenses	(15,857,251)	(15,813,606)
LOSS BEFORE INCOME TAX	(17,543,434)	(66,431,694)[1]
INCOME TAX EXPENSE (INCOME)	(487,817)	13,716,610
NET LOSS	(17,055,617)	(80,148,304)
OTHER COMPREHENSIVE PROFIT AND LOSS		
Actuarial profit and loss of defined benefit plan	2,087,379	(5,522,491)
Shareholdings of other comprehensive profit and loss accounted for by the equity method in affiliated companies	2,285	3,480
Income tax related to other comprehensive profit and loss		
Other comprehensive profit and loss, net	(357,439)	-
	1,732,225	(5,519,011)
TOTAL COMPREHENSIVE PROFIT AND LOSS	($15,323,392)	($ 85,667,315)
NET LOSS PER SHARE (Note 27)		
Basic	($ 0.52)	($ 2.43)
Diluted	($ 0.52)	($ 2.43)

[1] Loss before income tax in the year 2012 had been adjusted in accordance with International Financial Reporting Standards (IFRS).

Third-Party Assurance Statement

ASSURANCE STATEMENT

SGS TAIWAN'S INDEPENDENT ASSURANCE REPORT ON SUSTAINABILITY ACTIVITIES IN THE TAIWAN POWER COMPANY'S SUSTAINABLILITY REPORT OF 2014

NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS Taiwan Ltd. (hereinafter referred to as SGS) was commissioned by Taiwan Power Company (hereinafter referred to as TPC) to conduct an independent assurance of the Sustainability Report of 2014. The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the text, and data in accompanying tables, contained in TPC's all operational sites in Taiwan of this report.

The information in the TPC's Sustainability Report of 2014 and its presentation are the responsibility of the superintendents, CSR committee and the management of TPC. SGS has not been involved in the preparation of any of the material included in the TPC's Sustainability Report of 2014.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification set out below with the intention to inform all TPC's stakeholders.

The SGS Group has developed a set of protocols for the Assurance of Sustainability Reports based on current best practice guidance provided in the Global Reporting Initiative Sustainability Reporting Guidelines. These protocols follow differing options for Assurance depending the reporting history and capabilities of the Reporting Organisation.

This report has been assured using our protocols for:

- evaluation of content veracity at a moderate level of scrutiny;
- evaluation of the report against the Global Reporting Initiative Sustainability Reporting Guidelines (G3.1 2011).

The assurance comprised a combination of pre-assurance research; interviews with relevant employees at headquarter of TPC; documentation and record review and validation with external bodies and/or stakeholders where relevant. Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirms our independence from TPC, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with QMS, EMS, SMS, EnMS, GPMS, SA 8000, GHG Verification Lead Auditors and experience on the SRA Assurance service provisions.

VERIFICATION/ ASSURANCE OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the information and data contained within TPC's Sustainability Report of 2014 verified is accurate, reliable and provides a fair and balanced representation of TPC sustainability activities in 01/01/2013 to 12/31/2013.

The assurance team is of the opinion that the report can be used by the Reporting Organisation's Stakeholders. We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting. The report is the third to be assured by an independent assurance team and TPC has taken a bold step by offering the report to evaluation against Global Reporting Initiative's G3.1 guidelines. This shows a deserved confidence in their reporting process.

In our opinion, the contents of the report meet the requirements of Global Reporting Initiative G3.1 Application Level A+.

GLOBAL REPORTING INITIATIVE REPORTING GUIDELINES (2006) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

Principles, Standard Disclosures and Indicators

The report, TPC's Sustainability Report of 2014, is adequately in line with the Global Reporting Initiative G3.1 application level A+. It is recommended to have higher degree of direct involvement of stakeholder engagement and formalize both process and criteria applied to assess materiality to ensure better consistent result. It is also recommended to have more disclosure on the performance of supplier chain management and organizational governance required in GRI G4 in future reporting.

Signed:
For and on behalf of SGS Taiwan Ltd.

Dennis Yang, Chief Operating Officer
Taipei, Taiwan
22 July, 2014
WWW.SGS.COM

GP5008 Issue 4

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3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	Refer to each chapter	-
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LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	Employee Assistance Program Employee Safety and Health Management Measures	84, 86
LA9	Health and safety topics covered in formal agreements with trade unions	Communication Mechanism with Employees	83
LA10	Average hours of training per year per employee by employee category	Continuing On-the-Job Training	81
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Strengthening Human Resources Culmination	81
LA12	Percentage of employees receiving regular performance and career development reviews	Conducting Executive Training	82
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	Taipower Manpower Structure Overview Employment of Disabled and Aboriginal People	79, 82
LA14	Ratio of basic salary of men to women by employee category	Gender Equality	82
Human Rights			
DMA	Disclosures on Management Approach	Creation of a Fair Employment Environment	82
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	None	-
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	Supplier Management	88
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights	Gender Equality	82
HR4	Total number of incidents of discrimination and actions taken	None	-
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	None	-
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	Taipower complies with the requirements of domestic laws and does not hire any child laborers.	-
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor	Taipower complies with the requirements of domestic laws; no incidents of forced or compulsory labor are identified.	-
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations	Gender Equality	82
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	None	-
HR10	Total number of operations that have been subject to human rights reviews and/or impact assessments	Communication Mechanism with Employees	83
HR11	Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanisms	None	-

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Social Indicator			
DMA	Disclosures on Management Approach	Corporate Governance and Corporate Ethics Social Participation	15, 89
SO1	Operational impact on communities in terms of commitment, negotiation and development plan rate	Environmental Impact Assessment	58
SO9	Operations with significant potential or actual negative impacts on local communities	Strengthen Nuclear Safety	66
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impact on local communities	Strengthen Nuclear Safety	66
SO2	Percentage and total number of business units analyzed for risks related to corruption	Corporate Governance and Corporate Ethics	17
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures	Corporate Governance and Corporate Ethics	17
SO4	Actions taken in response to incidents of corruption	Corporate Governance and Corporate Ethics	17
SO5	Public policy positions and participation in public policy development and lobbying	Communication with Stakeholders	96
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	None	-
SO7	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	Not applicable as Taipower is a public power utility	-
SO8	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations	None	-
Product Responsibility			
DMA	Disclosures on Management Approach	Upgrading Power Supply Stability Smart Grid Planning Consumer Services	44, 75, 77
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	Electromagnetic field values detected at all Taipower substations are below the exposure upper limits (60Hz 833 mG) suggested by the WHO and EPA.	-
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	None	-
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	All facilities for power generation, transmission and distribution have safety warnings as regulated. Distinctive logos on metering infrastructures are recognized.	-
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	None	-
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Customer Satisfaction	77
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	Not applicable	-

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PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes	None	-
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	None	-
PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services	None	-
Supplemental Indicator for Power Business			
Corporate Profile			
EU1	Installed capacity, broken down by primary energy source and by regulatory regime	Corporate Highlights	2
EU2	Net energy output broken down by primary energy source and by regulatory regime	Corporate Highlights Profile of Taipower Environmental Footprints of Taipower Operation in 2013	2, 8, 65
EU3	Number of residential, industrial, institutional and commercial customer accounts	Corporate Highlights Profile of Taipower	2
EU4	Length of above and underground transmission and distribution lines by regulatory regime	Profile of Taipower	8
EU5	Allocation of CO_2e emissions allowances or equivalent, broken down by carbon trading framework	Not applicable since Taiwan has not implemented carbon trade system.	56
Economy-aspect management policy			
EU6	Management approach to ensure short and long-term electricity availability and reliability	Upgrading Power Supply Stability	44
EU7	Demand-side management programs including residential, commercial, institutional and industrial programs	Demand Management	48
EU8	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development	The Development of Electric Power Technology in 2013	72
EU9	Provisions for decommissioning of nuclear power sites	The Phase-out Plan of Nuclear	68
Usability and Reliability			
EU10	Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	Long-term Power Development	46
System Efficiency			
EU11	Average generation efficiency of thermal plants by energy source and regulatory regime	Overview of Taipower Management Performance and Achievements in 2013	28
EU12	Transmission and distribution losses as a percentage of total energy	Overview of Taipower Management Performance and Achievements in 2013	28
Biodiversity			
EU13	Biodiversity of offset habitats compared to the biodiversity of the affected areas	Not applicable (no offset habitats)	-
Labor management			
EU14	Processes and processes to ensure the availability of a skilled workforce	Strengthening Human Resources Culmination	81

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EU15	Percentage of employees eligible to retire in the next 5 and 10 years broken down by job category and by region	Taipower Manpower Structure Overview	79
EU16	Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors	Occupational Health and Safety	85
Employment			
EU17	Days worked by contractor and subcontractor employees involved in construction, operation and maintenance activities	Contractor Safety and Health Management Measures	87
EU18	Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	Contractor Safety and Health Management Measures	87
Society-aspect Management policy			
EU19	Stakeholder participation in the decision making process related to energy planning and infrastructure development	Communication with Stakeholders	96
EU20	Approach to managing the impacts of displacement	None	-
EU21	Contingency planning measures, disaster/ emergency management plan and training programs, and recovery/restoration plans	Emergency Response Mechanism at the Nuclear Power Plant	70
Society/Community Engagement			
EU22	Number of people physically or economically displaced and compensation, broken down by type of project	None	-
Product-aspect Management Policy			
EU23	Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	Upgrading Power Supply Stability	44
EU24	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity and customer support services	Continuous to Reduce Inconvenience Unified Counter Service	77, 78
Product/Consumers' Health and Safety			
EU25	Number of injuries and fatalities to the public involving company assets, including legal judgments, settlements and pending legal cases of diseases	Continuous to Reduce Inconvenience	77
Availability			
EU26	Percentage of population unserved in licensed distribution or service areas	Continuous to Reduce Inconvenience	77
EU27	Number of residential disconnections for non-payment, broken down by duration of disconnection and by regulatory regime	Multiple Bill Payment Service	78
EU28	Power outage frequency	Reducing scheduled and forced power outage frequency and duration	50
EU29	Average power outage duration	Reducing scheduled and forced power outage frequency and duration	50
EU30	Average plant availability factor by energy source and by regulatory regime	Profile of Taipower	9

Taipower energizes Taiwan