



2008 Corporate Social Responsibility Report of State Grid Corporation of China



### LOGO

The spherical logo stands for SGCC's promising future, global visions and resolution to becoming a world-class utility.

The circular design symbolizes the interaction, coordination, unity and harmony both inside and outside the company. This design further expresses the determination of SGCC in delivering Quality Services to achieve harmonious coexistence and joint development between customers, employees and society.

The crisscrossing lines on the logo stand for SGCC's core business of constructing and operating power grid. It further signifies SGCC's pursuit of excellence and distinction in ensuring social economic development by providing safer, cleaner, more economical and sustainable electricity supply.

The standard green color on the logo represents the green energy SGCC offers to the society, and SGCC's strive for evergreen vitality and sustainable development.



Safe Efficient Environment-friendly Harmonious

## **Report Brief**

#### Reporting Period:

From January 1, 2008 to December 31, 2008 (part of the contents go beyond this period)

#### Reporting Cycle:

SGCC's CSR Report is released on an annual basis.

#### Organizational Coverage:

The State Grid Corporation of China as a whole (Refer to "Corporate Overview" for organization structure).

#### **Previous Reports:**

SGCC released its CRS Report for three consecutive years in March 2006, January 2007 and January 2008 respectively.

#### Key Differences in this Report:

This is the fourth CSR Report released by SGCC.

Additions to this report are "Strategy for Sustainable Development", "Stakeholders' key concerns and Company's responses", and "Social Responsibility Practices" etc.

#### Note on Reporting Data:

All data quoted in this report is from final statistics of year 2007, Part of these data differs slightly from 2007 CSR Report.

#### **Future Trend of Improvements:**

Reinforces regular assessment on CSR performance; optimizes CSR performance indicators

#### Reference:

Sustainability Reporting Guidelines (2006 Version), by Global Reporting Initiative.

"AA 1000 Assurance Standards", Accountability Institute, Britain.

#### Recommended Readings:

The 2008CSR Report of SGCC(Online Version) provides a wealth of information to interested parties at http://csr.sgcc.com.cn.



2005 Corporate Social Responsibility Report of SGCC



2006 Corporate Social Responsibility Report of SGCC



2007 Corporate Social Responsibility Report of SGCC

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## Message from President



Mr. Liu Zhenya, President of SGCC

The year 2008 was exceptional. The international financial crisis that spread and expanded globally severely impacted the orders of the world economy. The Chinese people experienced a series of unprecedented challenges and severe tests, and witnessed with the rest of the world an unparalleled Beijing 2008 Olympics. State Grid Corporation of China (SGCC) lived up to its commitments in ensuring power supply and withstood the tests of the Big Freeze, the "5.12" earth quake, and the Beijing Olympics.

During the Big Freeze at the beginning of the year, SGCC employees completed the repairs to the grid and restored power supply in 6 weeks which otherwise would have taken 6 months under normal circumstances. Our employees at all levels pulled their collective strengths and utilised the highly efficient organisation of the Company in the rescue operation after the massive earth quake, and fought against time in saving lives and restoring power supply. During the Olympics, we honoured our commitment and delivered our promise of un-interrupted power supply with "zero fault" and "zero incident". Our employees realized the corporate spirit of "in search of excellence, in pursuit of out-performance", and exemplified the core meaning of corporate responsibility by their devotion to their work and the relentless pursue of the values in "duty, challenge, hard work and selflessness".

The severe natural calamities brought home to the Company the importance of safe power supply. We had setbacks and we had successes; the challenges ahead however remain serious. The increasing occurrence of extreme weather conditions brought about by global climate changes is posing serious threats to the safe and reliable operations of our transmission network, which in turn threatens public safety. We will embark on design of our facilities specifically tailored to the swings in climate conditions, to raise their technical capability in withstanding calamities and in handling emergencies, so as to increase the safety and reliability of power supply.

As the world's largest utility and a key player in respect of national energy security and national economy development of China, it is not enough merely to ensure safe and reliable power supply. We recognize that the power grid is not only a power carrier in linking generators to end users, but also an important element in strategic energy distribution, a key link in the industrial chain of energy resources and an essential part of the national integrated energy transportation system. We recognise that an extensive coverage, large scale, highly efficient and strong management of energy resources through active

transformation by accelerating the buildup of strong national ultra-high voltage transmission grid as the backbone with coordinated development of its subordinate networks are of great significance to the promotion of sustainable development of China's energy resources, to the service of national economy and society advancement.

The power grid has by now become one of the key strategic infrastructures of society, and its importance will become increasingly remarkable due to the unbalanced geographical disposition of primary energy and industrial development in China. In recent years, our nation has experienced continued shortage of coal, electricity and oil supply and their transportation capacity. The root cause of this phenomenon can be attributed to the inappropriate development of electricity power, and in particular to the under utilisation of the grid in optimising the allocation of energy sources.

Over a long period, our national power development strategy has been one of local/regional self-sufficient resulting in an energy pattern requiring large-scale, long-distance coal transportation, which is not conducive to the optimized allocation of energy resources. SGCC took on the challenge and change the energy architecture of the nation by the construction of UHV grids, large capacity generation in coal, hydro, nuclear and re-newables close to primary energy sources to maximise the effectiveness of the power grid in ensuring safer, more economical, cleaner and sustainable power supply. This strategy is not only vital to the sustainable energy development of China, but also to the development of low-carbon economy, and to the promotion of sustainable global climate. Following the completion of the 1000 kV UHV AC pilot transmission from Jindongnan of Shanxi Province through Nanyang of Henan Province to Jingmen of Hubei Province, China's UHV power grid now begins a phase of accelerated implementation to facilitate the development and construction of mega power generation bases.

The accelerated implementation of the UHV grid will bring about at the same time the accelerated investment into related infrastructure industries. For example, the construction of every hundred kilometre of 500kV transmission line will require 5,000 tons of steel, 2000 tons of aluminium and 7,000 m<sup>3</sup> of concrete. Therefore, large-scale investment in the power grid will stimulate

the sustainable sound development of Chinese society and economy.

The effective exploitation of the benefits and the efficient construction of the power grid rely on a sound and effective operations of the Company. Over the last few years, we devoted a lot of efforts to change our method of corporate development, to promote conglomerate operations and consolidated development, to standardise constructions, and to streamline management so as to take advantage of the strength of the synergy in optimising the internal disposition of resources and facilities, in raising the economic performance and efficiency, and in enhancing the trust and confidence of Government and society in our management capabilities and results. The performance assessment of the company has been rated "Class-A" for three consecutive years. We were honoured by the State Asset Supervision and Administration Commission of the State Council with an award of "Enterprise with Outstanding Performance" in their first term of appointment. We were listed by the third Committee of Ministry of Science and Technology in the first batch of "Innovative Green Enterprises" in China; and were awarded twice by the Ministry of Civil Affairs the "China Charity Prize". In 2008, we won many honours including the titles of "Model Green Enterprise of the Year", "Golden Bee Leading Enterprise in Social Responsibility", the "People and Social Responsibility Prize", the title of "The Most Socially Responsible Enterprise", etc. SGCC came second in 2008 among the "Top 500 Valuable Brands in China" and came 55th among the Fortune World top 100 "Enterprises in Social Responsibility".

As emphasized by President Hu Jintao during the APEC Summit "enterprises are expected to demonstrate global responsibility, consciously incorporate social responsibility into their operations strategy, and strive to unify economic benefits and social benefits in their best mode of operations". Under current market economy, enterprises are the junctions where the interests of numerous social stakeholders meet. Modern society positions enterprises as not only a profit seeking entity but also a corporate citizen promoting and coordinating and the sustainable economic development of society and environment. SGCC has set an example in CSR management by the release of CSR Report and Guidance for the Implementation of CSR ahead of all other SOEs. In 2008, SGCC put Tianjin Electric Power

### Message from President

Company as a test case in the integration of social responsibility and sustainable development into its daily operations at all levels of its organisation. The Overall Social Responsibility Management for Major Power Grid Enterprises submitted by SGCC was awarded first prize for "Innovative Modern Management" at the 15th Awards to State Owned Enterprises.

SGCC believes that an enterprise should seek not only financial gains, but also integrated economic, social and environmental benefits; create value not only for its shareholders, but also for its stakeholders; emphasize not only on corporate values, but also social values; optimize the allocation of not only the corporate internal resources, but also social resources. As a large enterprise with 1.5 million employees that exerts major influence and drive on the society, the company carries the responsibilities for not only creating material wealth, but also spiritual wealth and knowledge. We have launched a series of major social responsibility initiatives: since 2006, we have implemented the strategy of "New Countryside, New Electricity and New Service"; our campaign of "Power for All" aimed to supply power to 1.186 million households made up of 4.394 million people in the countryside within 3 years. Except for Tibet, we have basically realized the goal of "Power for All" in our service areas. We have organized major events including the "Quality Service to Every Household", "Gold Medal Services for the Olympics", etc, and implemented "Ten Promises" on our power supply service, "Ten Measures" for "Open, Fair and Just Dispatching", and "Ten Prohibitions" against employee misconduct. We supported independent innovation, mastered the world's cutting-edge power grid technologies, achieved major breakthroughs in R&D of key UHV equipments and technologies, and contributed towards the building of innovative Nation. We advocated the concept of low-carbon economy, promoted overall environmental management, fully satisfied the requirements for environmental protection and resource conservation and contributed to the construction of an ecological-friendly society. The Three Gorges — Shanghai 500 kV DC Power Transmission Project was awarded the prize of "National Environment-Friendly Project" by the Chinese Government. We also played an active role in social welfare undertakings. State Grid Loving Care Fund was established for standadized and institutionalized charitable contributions, and employees are encouraged to participate in voluntary services for the construction of a harmonious society.

Furthermore, SGCC attached great attention to international standards for sustainable development including the Ten Universal Principles of the UN Global Compact, ISO26000 and AA1000, GRI Sustainability Reporting Guidelines, etc.

We recognize that the key to the promotion of overall social responsibility management and the realization of sustainable development lies in strengthening the communication and cooperation between stakeholders. We will need to clearly express ourselves, be a better listener to the voices of society, and to integrate and balance better the expectations and requirements of stakeholders. We will establish mutual trust and common ground with stakeholders exploit their potential creative values, consolidate their forces for development, to coordinate and promote the sustainable development of the company and society.

Looking ahead, we still have a long way to go. As a leading state-owned enterprise in exemplifying social responsibility, we will relentlessly campaign for the corporate spirit of "in search of excellence, in pursuit of out-performance" to build a world-class power grid and world-class company, to promote comprehensive sustainable development, to realize safe, efficient and environment-friendly operation of the state grid, to promote sustainable utilization of energy and resources, and to genuinely respond to global climate change and energy challenges, so as to make major contributions to a harmonious society and harmonious world.

加粮鱼

January, 2009

## **Corporate Overview**



State Grid Corporation of China (SGCC) was established on December 29th, 2002. It is a government owned enterprise approved by the State Council to conduct government authorized investment activities. By the end of 2008, SGCC's net assets reached RMB 612.5 billion Yuan. SGCC was ranked 24th in the Fortune Global 500 in 2008 and is the largest utility in the world.

The mission of the company is to provide safe, economical, clean and sustainable electric power for the secured social and economical development. The company's core businesses are the construction and operation of power networks that covers 26 provinces, autonomous regions and municipalities. Its service area covers 88% of the national territories, supported by 1.537million employees to serve a population of over one billion.

Indicators year	2004	2005	2006	2007	2008
Electricity sales (TWh)	1289.1	1464.6	1709.7	1974.2	2123.5
Length of the transmission circuits (km) *	326,215	381,764	413,219	457,104	513,903
Transformation capacity (MVA)**	822,900	983,380	1,137,790	1,342,700	1,608,480
Revenue (RMB billion Yuan)	590.06	712.7	854.52	1010.73	1155.6
Total Assets (RMB billion Yuan)	1111.54	1169.7	1212.79	1361.75	1646.2
Urban power supply reliability rate (%)	99.861	99.755	99.839	99.880	99.865
Rural power supply reliability rate (%)	99.010	99.382	99.491	99.541	99.545
Line loss (%)	6.95	6.59	6.40	6.29	6.10

<sup>\* 100(66)</sup>kV and above

<sup>\*\* 100(66)</sup>kV and above

# **Corporate Overview**

## **Organizational Structure**

	Departments & organizations in he	adqua	rters		
No.	Departments	No.	Departments	No.	Departments
1	General Office	11	Department of Operation	21	Restructuring Office
2	Research Office*	12	Department of UHV Construction	22	Department of Retirees Management
3	Department of Strategic Development & Planning	13	Department of Information Technology	23	Department of Logistics
4	Department of Finance	14	Department of Affiliates Management	24	Department of Corporate Culture
5	Department of Safety Supervision	15	Department of Public Relations (News Center)	25	Bureau of Supervision
6	Department of Production & Technology	16	Department of International Cooperation	26	National Power Dispatching Center
7	Department of Marketing	17	Department of Auditing	27	SGCC Power Exchange Center
8	Department of Rural Electrification	18	Department of Legal Affairs	28	Bidding Management Center
9	Department of Science & Technology	19	Department of Personnel		Labor Union
10	Department of Construction	20	Department of Human Resources		Association of Enterprises Management

E	ntities owned or controlled by SGCC		
No.	Departments	No.	Departments
1	State Grid Operation Co., Ltd	12	Zhongxing Power Business Development Co., Ltd.
2	State Grid Xin Yuan Company Ltd	13	State Grid Executive Learning Center
3	State Grid Energy Development Company Ltd*	14	China An'neng Construction Corporation
4	State Grid Information & Telecommunication Company*	15	State Grid Financial Asset Management Co., Ltd.
5	State Grid DC Engineering Construction Company	16	China Power Finance Co., Ltd.
6	State Grid AC Engineering Construction Company	17	Yingda Taihe Property Insurance Co., Ltd.*
7	China Electric Power Research Institute	18	Yingda Taihe Life Insurance Co., Ltd.*
8	State Grid Electric Power Research Institute*	19	Yingda International Trust Co., Ltd.
9	State Power Economic Research Institute	20	YIngda Security Corporation Ltd.
10	State Grid International Development Company*	21	Chang'an Insurance Brokers Co., Ltd
11	Yingda Media Investment Group*		

<sup>\*</sup> Newly added departments and units in 2008

Regional & pr	ovincial company			
State Grid North China Power	State Grid East China Power Grid	State Grid Central China Power	State Grid Northeast China Power	State Grid Northwest China Powe
Grid Company	Company	Grid Company	Grid Company	Grid Company
State Grid Beijing Electric Power	State Grid Shanghai Electric Power	State Grid Hubei Electric Power	State Grid Liaoning Electric Power	State Grid Shaanxi Electric Power
Company	Company	Company	Company	Company
State Grid Tianjin Electric Power	State Grid Zhejiang Electric Power	State Grid Hunan Electric Power	State Grid Jilin Electric Power	State Grid Gansu Electric Power
Company	Company	Company	Company	Company
State Grid Hebei Electric Power	State Grid Jiangsu Electric Power	State Grid Henan Electric Power	State Grid Heilongjiang Electric	State Grid Ningxia Electric Power
Company	Company	Company	Power Company	Company
State Grid Shanxi Electric Power	State Grid Anhui Electric Power	State Grid Jiangxi Electric Power		State Grid Qinghai Electric Power
Company	Company	Company		Company
State Grid Shandong Electric	State Grid Fujian Electric Power	State Grid Sichuan Electric Power		State Grid Xinjiang Electric Power
Power Company	Company	Company		Company
		State Grid Chongqing Electric Power Company		State Grid Tibet Electric Power Company

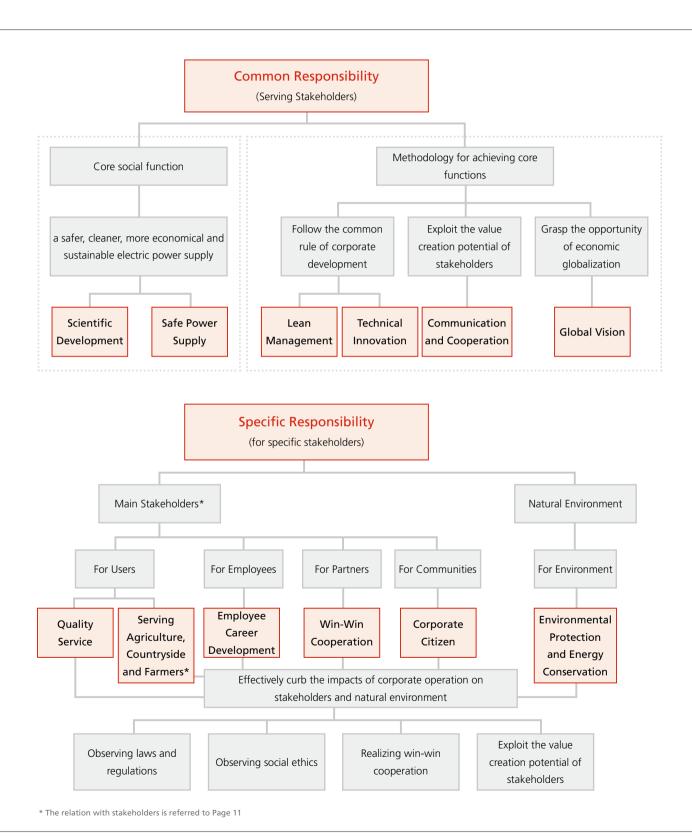
## Main Associations and Organizations SGCC Participated

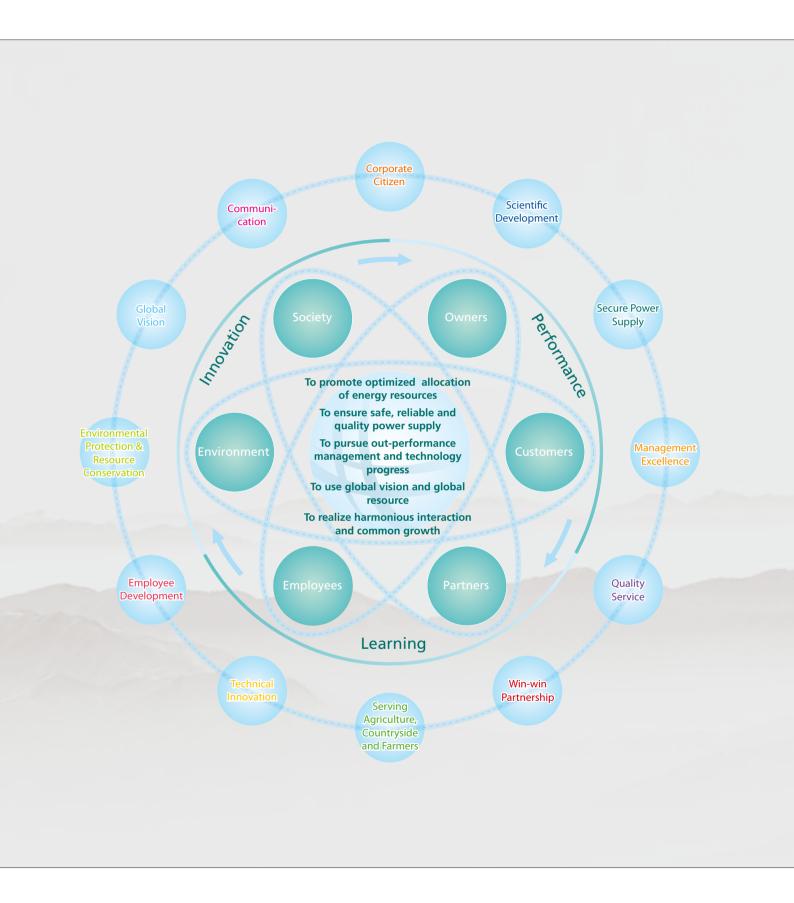
Name of Association and Organization	Role of SGCC	Name of Association and Organization	Role of SGCC
China Enterprise Confederation	Vice Chairman	China Electricity Council	President
China Federation of Industrial Economics (CFIE)	Chairman	China Society for Electrical Engineering	Vice President
China Business Council for Sustainable Development	Councilor	China Society for Hydropower Engineering	Vice President
China Association of Work Safety	Vice Chairman	China Electric Power Construction Association	Vice Chairman
China Reform Council	Vice President	China Electric Equipment Management Association	Standing Councilor
China Accounting Society	Standing Councilor	China Bidding Association	Councilor
China Audit Society	Member	China International Contractors Association	Councilor
China Supervision Society	Councilor	CIGRE.C2	Member
China Petition Society	Councilor	International Electrotechnical Commission	Member
Employment Injury Insurance Research Institute of the Ministry of Labor	Councilor		

# **Corporate Values**

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## **Corporate Social Responsibility**

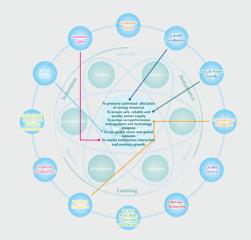




### — Common Responsibility

The core social function of SGCC is to ensure safer, more economical, cleaner and sustainable electric power supply; that is, the company will actively shoulder the responsibility for scientific development, exploit the function of the power grid in optimizing the allocation of energy resources, fulfill the responsibility for safe power supply, and guarantee the stable operation of the power grid, which represents the underlying interests of stakeholders.

The fulfillment of the responsibilities for scientific development and safe power supply depends firstly on excellent management to pursue maximum comprehensive economic, social and environmental values, secondly on technical innovation where technical advance is taken as the underlying driving force for coordinated and sustainable development of the company and the society, thirdly on strengthening communication and cooperation so as to establish mutual trust, develop common ground, enhance development cohesion and realize common development, and fourthly on establishing a global vision to learn from the best international practice and improve the company's capability in fulfilling its responsibilities by utilizing global resources. The above four aspects can be summarized as excellent management, technical innovation, communication and operation, and global vision respectively.



### —— Specific Responsibility

SGCC shall fulfill the common responsibilities for stakeholders and assume specific social responsibilities. These include economic, social and environmental obligations in legal and ethical aspects, as well as giving full play to the advantages and value creation potentials of the stakeholders in maximizing the creation of long term comprehensive economic, social and environmental benefits.

SGCC is a solely state-owned enterprise and shareholders are the public. Therefore, responsibilities for shareholders are not listed independently in corporate social responsibilities.

SGCC pays special attention to agriculture, countryside and farmers. Balancing urban and rural development and building new socialist countryside are important tasks relating to the sustainable development of China, and mission of the time for various business enterprises and social entities. Therefore, the responsibilities of serving agriculture, countryside and farmers are listed separately in the corporate social responsibilities.



# Corporate Strategy for Sustainable Development

The Company consistently positions itself and develops the power grid based on the national plans of economic development of society and national strategy on energy. The drafting and the advancement of corporate strategy for sustainable development are to support the development of economic society with safer, more economical, cleaner and sustainable supply of energy, and to promote the advancement of a healthier environment, more harmonious society and better quality life.

# Promote the implementation of "One Ultra, Four Larges" strategy

In China, the geographical distribution of energy resources and industrial development is unbalanced. Over 80% of coal resources and large amount of wind energy are distributed in the western and northern regions, and over 80% of hydro resources are in the western regions, whereas 75% of the energy demands are concentrated in the eastern and central China. Neighboring countries on the western and northern of China are abounding with coal and hydro resources, presenting huge potential for trans-border transmission. UHV power grid development is the key to tackle the problem of long-distance, large-scale and large-capacity power transmission between energy bases and load centers.

### Development of UHV power grid and construction of large thermal, large hydro, large nuclear power plants and large renewable energy bases.

- Consolidated and clean exploitation of coal resources by the construction of large capacity thermal power bases and the development of large capacity generating units. The development of large capacity thermal power generation bases is conducive to enhancing the recovery rate of coal resources and in their operational safety, in encouraging the development of high efficiency generating units, in facilitating the installation and operations of desulfurizing, denitrifying and electrical dedusting equipment by power generation companies.
- Promote the exploitation of hydropower bases. The planned installed capacity for hydropower in Jinsha River and Yalong River reaches 91,100MW, replacing 132 million tons of standard coal generation and saving 367 million tons of carbon dioxide emission. The exploitable hydropower capacity for Tibet is over 100GW.

- Accelerate nuclear power development and increase nuclear power installed capacity. By 2020, the projected installed nuclear capacity will reach 40 GW, replacing 83.7 million tons of standard coal and reducing the emission of carbon dioxide by 233 million tons annually.
- Promote the development of renewable energy bases. Study shows that the installed capacity of wind power in our service areas will increase from 0.2% of national installed capacity in 2005 to 2.2% by 2010 with a total of 30 GW and thus could save approximately 18 million tons of standard coal and reduce emission of carbon dioxide by 50.06 million tons every year.

# The remarkable advantage of UHV power transmission in saving resources.

- 1000kV AC power transmission is 4 to 5 times in natural power, 25% in line loss, 33% in per kW land occupation, 4 times in economical transmission distance and 73% in per kW cost of 500kV AC power transmission.
- ±800 kV power transmission, with economical transmission distance up to 2500km, is 2 times in natural power, 39% in line loss, 77% in per kW land occupation and 72% in per kW cost of ±500kV power transmission. It is predicted that by 2020, UHV power grid transmission will exceed 300GW, saving new instatllation of 30GW and reducing water discharge up to 7TWh.

# Promote sustainable development in power grid construction and operation

- Enhance the transmission capacity of existing power grids and reduce line loss through technical renovation and promotion of new equipment and technologies. From February, 2005 up to now, we have increased the power transmission capacity at various levels by 154 GW. By implementing the "Energy Conservation and Loss Reduction Plan", the line loss rate has been reduced by 0.49 percentage points from 2006 to 2008, saving 10.1 TWh.
- Promote the construction of large-capacity, high-efficiency and low carbon consumption generating units, and pushed forward energy conservation and emission reduction. It is predicted that by 2010, large-capacity coal power units (i.e. unit capacity of 600 MW and above) will reach 1870 MW in our service area, and the percentage of these large-capacity units has grown

from 14% in 2005 to 32% in the total coal power installed capacity. Calculated on the basis that the average coal consumption of the large-capacity units is 299g standard coal/kWh and that of 300 MW unit is 320g standard coal/kWh, 21.5 million tons of standard coal can be saved and the emission of carbon oxide can be reduced by 59.79 million tons.

- Develop pumped storage power stations and optimize the mode of power grid operation to ensure the secure and economical operation of the power grid. We envisage that by 2020, the pumped storage capacity in the service area will increase from 3,573 MW in 2005 to 33,320 MW.
- Promote standardization and conservation of land, material, water, energy and financial investment. By applying the typical design of substations and transmission lines from 35kV to 500 kV, 5%-10% of land and 2%-9% of static investment will be saved on the substations, and 5%-10% of the steel and 5% of the static investment will be saved in transmission lines on average.
- Research, develop and spread the smart grid technology. We develop new technologies in power grid control, information and management to realize intelligent information communication from power generation to power consumption. In this way, we can systematically optimize the production, transmission and consumption of electric power, and exploit the potential of the power grid in resources allocation.
- Promote the supply-side sustainable development.

  Many measures have been taken including the trading of the power generation right and dispatching in an energy-saving way to encourage "Replacing Small Units by Large Ones" and the generation by units which are high in efficiency and low in coal consumption. We promote the development of renewable energy by stimulating green electricity consumption and offering consumption package.
- Promote the demand side sustainable development. We launch energy conservation demonstration projects from the demand side, provide solutions of efficient electricity consumption, encourage electric power consumption against other forms of energy, and advocate electricity consumption in a scientific, economical and efficient way to promote energy conservation and emission reduction.

# Develop electric power market to promote optimized allocation of energy resources

Construct national, regional and provincial power market trading systems with a full consideration of the rapid growth of energy demand, the mismatch of load centers and resources bases, the regional, seasonal and daily variations in power demand. We actively promote trans-regional, trans-provincial electric power trading to optimize energy resources allocations on a grand scale, and in this way materialize the national energy strategy.

# Develop environment-friendly, economical and energy-efficient technologies

- Expedite the research and application of new technologies and equipment such as energy storage technology, NAS battery, electrical heat pumps, electrical vehicles, etc. SGCC has developed a battery-capacitance hybrid electrical car whose recharge time is less than 3 hours, realizing unattended automatic recharging. The car has a top speed of 100 km/h and a range of 100-300 kilometers, and the power consumption is no higher than 1.16 kWh per kilometer.
- Promote clean coal combustion technology. We built a 300MW circulating fluidized bed demonstration project the Sichuan Baima CFB boiler Power Station, which is the first of its kind in China. The power plant can burn inferior high-sulphur coal and the desulphurizing efficiency exceeds 95%. At its flue gas discharge, sulfur dioxide and nitrogen oxide content in its flue gas are lower than 400 mg /normal cubic meter and 100 mg /normal cubic meter respectively.
- Develop technologies for improving the transmission capacity of the power grid. We promote the application of flexible AC power transmission technologies such as multi-circuits on the same tower, compact and large-section heat-resisting conductors, reactive power compensation devices, large-capacity transformers, and capacitor compensation devices in series.
- Apply green construction processes to minimize the impacts of power grid construction on the environment.
- Research and apply SF<sub>6</sub> recycling technology. We established a SF<sub>6</sub> laboratory to introduce for company wide acceptance of the equipment for collecting and recycling SF<sub>6</sub>.

# **Corporate Governance**

In line with the best practices of modern enterprise, we are committed to optimizing our legal person management structure, establishing a scientific, democratic and law abiding decision-making mechanism, increasing satisfaction of stakeholders and maximizing economic, social and environmental benefits to propel sustainable development of both SGCC and the society.

SGCC adopts the president responsibility system. All important strategic decisions are made collectively. Steering Committees and Professional Committees are responsible for reviewing and recommending specified working regulations and proposals on major issues. Various departments and subsidiaries are involved in the reviewing process and subsequent implementation.

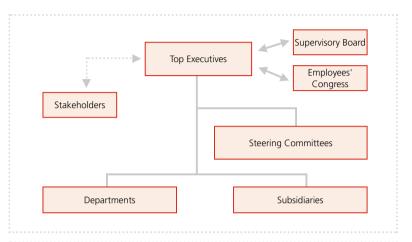
SGCC is supervised by a Supervisory Board designated by the State Council in accordance with the "Regulations on the Surveillance and Management of the SOEs' Assets".

Staff Congress plays a positive role in democratic management and democratic supervision. All important strategic decisions have to be reviewed and approved by the Congress.

The participation mechanism of SGCC ensures that stakeholders' expectations and requests will be fully considered and highly respected in the process of decision-making.

SGCC assumes investor's responsibilities on its subsidiaries, including the designation, appointment and dismissal of their supervisors, directors, and executives. SGCC conducts comprehensive performance evaluation and internal audit on its subsidiaries per annum and per tenure.

### Organizational Structure of SGCC

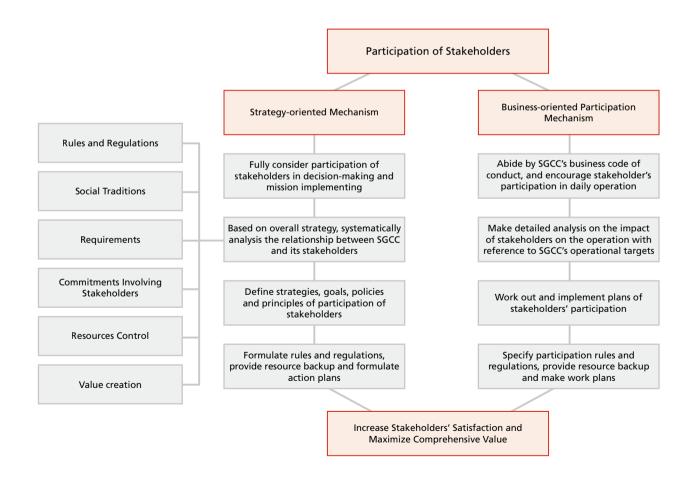


		Guarantee the safety of power supply, people and
	Production Safety	environment.
	Investment Management	Comprehensive evaluation of the economical, social and environmental benefits of the investment.
	Budget Management	Implement all-round budget control.
	Performance Evaluation	Carry out comprehensive performance evaluation.
	UHV Demonstration Project	Develop UHV transmission technology; Construct UHV grid.
	Power Market and Quality Service	Oversee and organize the building of the power market, its demand-side management and constructionist quality of service.
	Corporate Social Responsibility	Unify leadership on corporate social responsibility activities.
Stee	Benchmarking and Best Practice	Implement and promote benchmarking to implement best practices in the power industries.
ering	Scientific & Technological Innovation	Promote technology innovation.
Steering Committees	Energy Conservation and Emission Reduction	Research and promote energy conservation and emission reduction.
nmit	Bidding and Tendering	Ensure an open, fair and just bidding process.
tees	ІТ	Guide Information Technology implementation.
	Human Resource Development	Instruct and coordinate employee training and capacity building.
	Foreign Intellectuals Introduction Office	Introduce global talents.
	Retiree Management	Care the retirees, protect their rights and interests.
	Corporate Culture	Practise business morality; Serve harmonious society building.
	Inspection,and Supervision	Instruct, organize and supervise professional ethic construction.
	Stability Management	Protect employees' legal rights, care employees' life.
	Tibet Aiding	Organize Tibet-aiding program.
	Olympic Partnership	Perform responsibilities and obligations as an Olympic partner.

SGCC has established comprehensive system in managing its social responsibility and appointed a CSR Steering Committee, with SGCC's President as director general and other top executives as deputy directors. Members of the Committee are either the chief of SGCC's functional departments, or the head of subsidiaries. A CSR Office is set up under the Steering Committee supported by a team of administrative staff.

Each subsidiary of SGCC has set up their respective CSR Steering Committee, with the top executive as the director and a member of senior management as the vice director to handle all CSR work. The Working Office (administrative Office) is set up under Steering Committee to handle daily affairs.

SGCC has enacted Guidance for Implementation of CSR. By incorporating social responsibilities into development, engineering, construction and daily operation of the power grid and supply systems, SGCC strives to fulfill its social responsibilities by "Being Safe, Efficient, Green and Harmonious" in an all-round way.







In late January 2008, South China suffered from unparalleled natural calamities of continual and wide-area freezing rain and snow resulting in road closures, rail service interruption and power cutoff.



In our service area, the power supply to 545 counties in 10 provinces was affected, among which the supplies to 80 counties were cut off. About 884 substations stopped operation, 15,284 transmission lines were interrupted, 184,074 poles and towers were damaged and 129,103 cables were broken, resulting in an direct property loss of RMB 10.45 billion Yuan.

SGCC launched the power grid emergency response mechanism on Jan. 25, and top executives were rushed to affected areas to direct the rescue operations. The company spared no effort in its fight against the icing disaster and in the restoration of power supplies. At the peak of disaster relief activities, 266,000 staff from 21 provincial grid companies of SGCC was assembled and applied concerted effort to repair the damaged power grids. SGCC took advantage of its size and centralized group management, mobilized equipment and material valued RMB 5.66 billion Yuan from its subsidiaries, and collected donations of RMB 115 million Yuan from its employees. On March 8, SGCC employees completed restoration of power supply despite extreme conditions and hardships. The whole reconstruction took merely 6 weeks, which would have normally taken 6 months. Ten SGCC employees sacrificed their lives in this course.

"Loyal to the country, the people, and the duty; dedicated to society." SGCC employees stepped forward when confronted with danger, and demonstrated the meaning of CSR.



On December 30, 2008, the Jindongnan-Nanyang-Jingmen 1000 kV UHV AC transmission pilot project was put into trial operation, signifying a new era in China's UHV power grid development.

SGCC fulfills the responsibility of scientific development. Transforming the development mode of the power grid by accelerating construction of UHV grid as the backbone with coordinated development of its subordinate networks are essential to guarantee safer, cleaner, more economical and more sustainable energy supply so as to promote sustainable development of the national economy and society.

### 2

### The Implementation of the "One Ultra & Four Larges" Strategy

The company clearly recognizes that China faces the imbalance between energy distribution and industrial development, as well as the development trend of major power grid.

The development of UHV grid is a strategic choice for the company. UHV grid delivers significantly economic, technical and environmental benefits, and optimizes method of transmission of primary energy to realize the building of large scale, trans-regional, long distant and low loss power supply. UHV grid is conducive to the transformation of Western resources into economic benefits to West, to the harmonized development of the Eastern and Western regions of China, in expanding the company's supply areas, to encourage new technologies for energy industry, in promoting international cooperation, in enhancing environmental protection and in saving resources. It is a strategic choice for transforming the energy development mode and optimizing trans-regional, trans-basin, largescope energy resources allocation to develop UHV power grid with remarkable economical effects, technical superiority and energy-saving characteristic, optimize the primary energy delivery mode and realize large-scale, long-distance and lowloss power transmission. Meanwhile, it is favorable for pushing forward the transformation of abundant resources into economic returns so as to coordinate the development of the east and west regions, and for expanding the power market, promoting technical innovation of the energy industry, accelerating international energy cooperation and strengthening the environmental protection and resource conservation.

We have taken a significant step in the construction of large-scale energy bases. We carried out thorough preliminary studies at major coal bases such as in southeast Shanxi, north Shaanxi, Ximeng, Humeng, etc and thus created the conditions for large-scope exploitation. On Dec. 15, the company launched the world's first  $\pm 660$  kV DC demonstration project starting from Ningdong Coal-Fired Base.



Huainan and Huaibei Coal-Fired Base



Jinshajiang Xiluodu Hydropower Base



Zhejiang Qinshan Nuclear Power Base



Northwest Wind Power Base



### **Fully Implement UHV Power Grid**

The world's first 1000 kV AC Pilot Project(Jindongnan -Nanyang-Jingmen) was successfully put into operation, which marked a milestone in the development of UHV AC power transmission technology.

We achieved breakthroughs in the construction of UHV DC power transmission projects. As an innovative project leading the development of the world's DC power transmission technology and pilot project for China's localized UHV DC power transmission equipment", Xiangjiaba-Shanghai ±800 kV UHV DC Power Transmission Pilot Project progressed smoothly. Jinping-Sunan ±800 kV UHV DC Power Transmission Project with 7200MW was approved by the government and will create more than 10 world records when they become operational.

The development of UHV power transmission has been incorporated into the *National Outline* on the *Planning for the Long-Term Scientific and Technological Development (2006-2020)*, the *Outline on the 11<sup>th</sup> Five-Year Plan for Economic and Social Development of the People's Republic of China, the National 11<sup>th</sup> Five-Year Plan for Building Basic Capability for Independent Innovation successively.* 

Significant achievements have been made in the research on UHV equipment and key technologies. We have drafted a complete set of technical standards and test specifications for UHV equipment, pocessed the capability of conducting type tests and routine tests on UHV equipments, and localized production of UHV AC key equipment including transformers, breakers, high-voltage reactors, etc..

We started preliminary work for UHV projects. We accelerated the construction of the "North China, East China and Central China" UHV synchronous power grids to realize coordinated development of UHV AC and DC power grids.



Jingdongnan-Nanyang-Jingmen 1000 kV UHV AC Pilot Project was successfully put into operation.



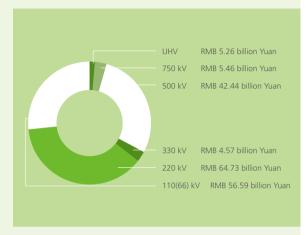
The electricity provided by Xiangjiaba-Shanghai ±800kV UHV DC Power Transmission Pilot Project is equivalent to that of a 6GW coal-fired power unit, saving about 15 million tons of coal every year and reducing the emission of carbon dioxide by 25 million tons, sulfur dioxide by 200,000 tons and nitrogen oxide by 40,000 tons. The picture shows the Fengxian Converter Station under construction.

### 200

### Continuous Improvement of the Resource Allocation Capacity of the Power Grid

Power grids at various levels achieved coordinated development. We accelerated the preliminary work for trans-regional and transprovincial power grids as well as main provincial power network. We commenced the refurbishment of Gezhouba-Shanghai DC Power Transmission Project. We received the approval for the construction of the Qinghai-Tibet DC Power Transmission Project. We continue to strengthen the construction of major urban power grids, distribution networks and power grids in west regions.

Further tap the resource allocation potential of the existing power grid. We updated power grid technologies, completed 6,241 technical reform projects with an investment of RMB 35.168 billion Yuan, refurbished lines with a total length of 36,600 km and a transformation capacity of 38.85 million kVA, improved the safety and stability of the power grids and reduced power grid losses. In addition, we implemented projects for enhancing the transmission capability of the power grid. In 2008, we accomplished 356 such projects and increased the transmission capacity of existing power grid at various levels by 34.104 GW.



Investment structure of 2008 power grid construction [110(66)kV and above]

### 250

### Full Utilization of the Resources Allocation Functions of the Power Market

We upheld our pursuit of marketization of electric power, building an open and orderly Chinese power market system, strengthening the mechanism of the power market and standardizing the regulatory management of the power trade.

We construct power market systems at national, regional and provincial level. We apply innovation to its operating mechanism, facilitate trans-regional and trans-provincial power trade and promote the large-scale optimized allocation of power resources.

In 2008, the national power market witnessed a trade volume of 263.9 TWh, a year-on-year increase of 23.9%. The trans-regional and trans-provincial trade volume reached 369.404 TWh, of which the trans-regional trade volume was 186.829 TWh, and trans-provincial trade volume was 182.575 TWh.



Promote nationwide grid interconnection and realize optimized allocation of the power resource on a large scale

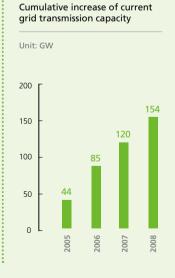


### **Participation of Stakeholders**

Stakeholders' Major Concern	Our Response and Actions
Meet the Social Power Demand.	Investigate the correlation between power demand and economic development, propose power development strategy, planning and appropriate speed to the government.
Power grid development is in line with national energy strategy. The full display of grid's function in optimizing the allocation of energy resources can provide guarantee for safer, more economical, cleaner and sustainable energy supply to back up a sustained development of the economy, society and environment.	Implement national energy strategy, formulate the "One Ultra, Four Larges" power development strategy, accelerate the construction of ultra-high voltage transmission grid as the backbone with coordinated development of its subordinate networks.
	Bring the power market function into full play and enhance grid technical reform and management. Tap the potential of power grid in optimizing the allocation of the power resource.
Push forward the rational energy allocation in our service area, and promote sustainable local development.	Facilitate local governments in formulating medium and long- term energy development plans with electric power as the center, integrate these plans into local socio-economic development planning and put forward constructive suggestions on the scope, speed and structure of power sector development to local government.







\* Estimated figures

### Conduct planning and research on power transmission from major power source bases

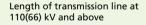
SGCC integrates power grid development into the national energy strategy with a series of undertakings: Xinjiang coal base development and transmission planning, Jindongnan Coal-Fired Base transmission planning evaluation, overall planning for Tibet Hydropower Base development and outgoing transmission, assessment of transmission planning for hydro power pool at the upper reaches of Yellow River, transmission planning of cascading power stations at the upper and lower reaches of Jinshajiang River and middle reaches of Yalongjiang River, power transmission planning report for wind power bases in Hami of Xinjiang, Hexi Corridor in Gansu, and in Kailu County, Tongliao of Inner Mongolia, initial design of transmission plan for wind power bases in the coastal areas of Jiangsu Province.

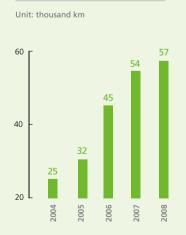
SGCC actively promotes the development of renewable energy bases. We have completed the research on the adaptability of the northwest power grids to large-scale wind power development, and put forward a series of general policy suggestions on accelerating power grid construction, mutual complementation of hydro, thermal and wind power, and bundled trans-regional transmission, etc..

# Close cooperation with local governments to promote the sustainable development of local economy and society

On November 8, 2008, SGCC signed *Minutes of Meeting on Promoting Power Grid Construction in Shandong and Implementing the Strategy of "Importing Electric Power to Shandong"* with Shandong Provincial Government. It is agreed in this MOM that before the end of 2008, a second 500 kV transmission corridor from North China to Shandong and a ±660 kV DC power transmission corridor for Ningdong of Ningxia Province to Shandong would start construction. Therefore Shandong will receive 6,000 MW electric power from other provinces by 2010 and 3,200 MW by 2020, which would make up about 20% of the required installed capacity. It is estimated that the energy consumption per RMB 10 thousand Yuan of GDP in Shandong will be reduced by 8%. It is an important step taken by SGCC in serving local economic and social development and assisting local governments in formulating medium and long-term energy development plan.

Jiang Yikang, Secretary of Shandong Provincial CPC Committee indicated that this arrangement was an important measure in applying the Scientific Outlook on Development and a major strategic adjustment in Shandong's electric power construction. It was also an inevitable adaptation to the current economic situation. It would lay a solid foundation for long-term, steady and rapid development of Shandong.

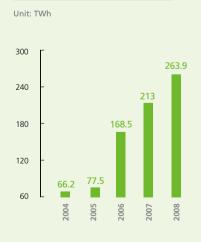




## Transformation capacity at 110(66) kV and above



## Annual power trading volume at national power market





On July 4, 2008, SGCC completed the construction of the Emergency Command Center in charge of emergency information management, emergency resource management, emergency supervision, emergency drill, internet video conferencing, emergency handling, emergency command, etc.

Following the principle of safety first with emphasis on prevention and overall control, SGCC provided safe power supply and successfully accomplished the tasks of big freeze relief, earthquake relief and secured power supply for the Olympics. SGCC also overcame the difficulties and challenges brought on by heavy workloads, coal shortages, summer peaks and the demands for secure and safe power supply.

### 2

### **Total Guarantee for Power Safety**

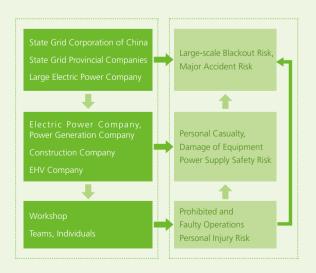
We stick to total prevention, and safety and risk management system. We optimized emergency management, health and incident management. We integrated safe power supply requirements in all aspects of our operations from planning, design, technical innovation, procurement, construction, operation, training to work environment.

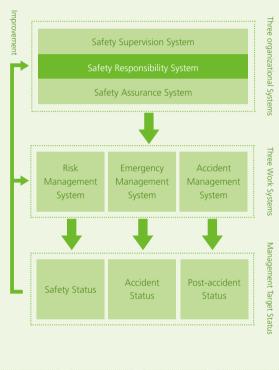
We highlighted safety checks on key sections of power grids for hidden risks so as to bringing them under control.

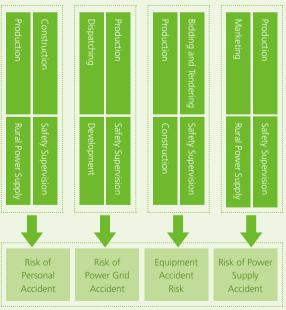
We allocated safety responsibility to each employee so that everyone is self-motivated to perform safety requirements.

We made significant investment in enhancing safety technologies of power grids and equipments. We strengthened the technical supports on safety, and spare no effort in ensuring the safety of the power grids.

Since 2004, the company's power safety has been in steady improvement, with an accident rates (grid/ equipment) decrease of 20% on a yearly basis.









### Significant Achievements in Power Grid Safety Management

With safe and reliable power supply as our top priority, we have actively responded to all challenges and fought against natural disasters. As a result, no major casualties or accidents happened to power grid or equipments during the whole year. Moreover, we successfully accomplished safe power supply for Beijing 2008 Olympics and the launch of "Shenzhou 7" manned spaceship.

We established a permanent review mechanism for safety in production, organized special inspections on safe production against "rule violation", conducted supervisions on safety management especially for high voltage AC projects and heavy construction machinery. We also carried out safety evaluation of the power grid and strengthened the implementation, supervision and assessment of the responsibility for safe electricity supply in all aspects and strictly executed the accountability mechanism.

We searched and controlled potential safety hazards by thoroughly screening out hidden hazards and safety risks that may lead to major and serious accidents in power grid, human body, power supply and stability etc, and strengthened the rectification of hidden safety hazards. We compiled criteria for the assessment of safety risks, formulated and distributed the Manual for Identification and Prevention of Safety Risks, reviewed accident handlings in light of the lessons taken from former safety accidents both inside and outside the industry and strengthen the safety risk education.

We established the corporate emergency response command center, set up safety emergency response system at all levels of the company, carried out joint emergency response drills on blackouts, raise the safety awareness and readiness of society in the response to power grid emergencies.





On June 29 2008, SGCC organized the North China Power Grid, the Northeast Power Grid, the East China Power Grid and etc as well as relevant power plants and successfully held a joint anti-accident drill for securing power supply for the Beijing 2008 Olympics. About 1800 people from 53 relevant companies participated in the drill.

### 2

### Reinforce the Power Grid Against Natural Disasters

We studied and analyzed the unusual ice and snow disaster in the south at the beginning of 2008, conducted research on the ability and enhancement required by the power grid in withstanding natural disasters. We compiled maps showing coverage of ice and snow affected power grids to facilitate the design and construction of these installations. Facts and data collated were used in the drafting of the Guidelines on Power Grid Differentiation Planning and Design and revised the Technical Specifications on the Design of 110-750 kV Overhead Power Transmission Line.

we enhanced the disaster-prevention capability of the power grid. We studied the deicing technology in the extreme weather and successfully developed the fixed and mobile deicing AC/DC devices for 220 kV and 500 kV overhead conductors. We strengthened our research against earthquake and lighting strike, as well as cooperation with the National Meteorological Bureau to monitor extreme weathers.

We enhanced the emergency response ability against natural disasters, strengthened the structure of the emergency response organization and steering committee, put in operation the emergency response command center at the corporate headquarters, Provincial emergency response command centers and pilot integrated emergency response dispatch platform. Emergency response capability were comprehensively improved with coordinated material storage, response team, emergency power source, emergency communication tools and the tri-tier standby dispatch; in the event of disastrous weathers such as typhoon and thunderstorm etc, we ensure timely release of the warning notices, enforced 24-hour emergency response shift and carried out effective measures to minimize impacts and potential losses.



Power grids were seriously damaged by the unprecedented snow storm and icy rain disaster



Develop the deicing device





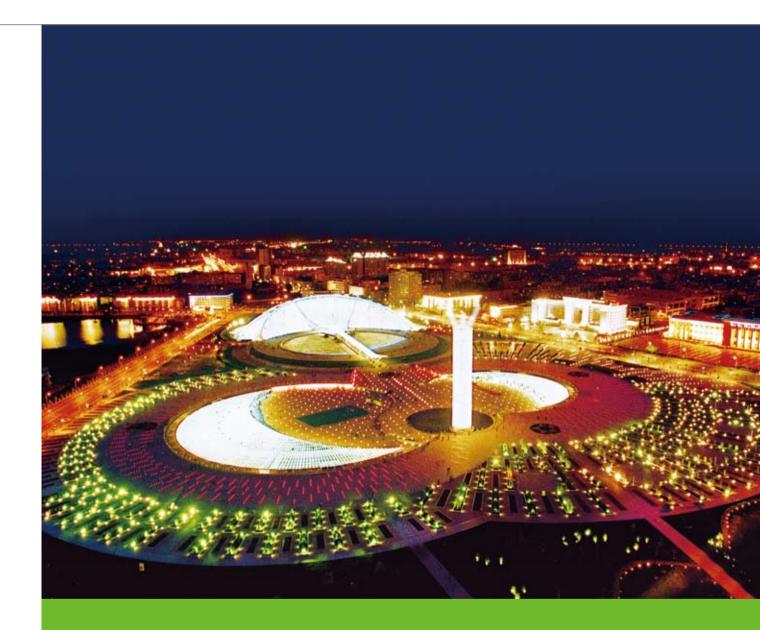
### Participation of Stakeholders

Stakeholders' Major Concern	Our Response and Actions
Ensure stable operation of the power grid and maintain social public safety	Strengthen the cooperation with business partners, customers and suppliers. Establish a lasting mechanism to avoid blackout.
	Build emergency response organizing and managing body, set up the emergency response steering group and the emergency response office, improve the emergency response equipment and material storage as well as enforce team construction and routine training.
Build an emergency response system	Establish an integrated emergency response counter plan covering power grid, equipment, personal and information safety.
	More emphasis is placed on the implementation of these counter plans with joint drills for blackouts to further improve our capability in handling emergencies.
Upgrade disaster prevention capacity	Reinforce power grid against disaster by optimizing development strategy and technical advance.
opgrade disaster prevention capacity	Reinforce power grid against disaster by adjusting construction standards and differentiated designs.

### Significant progress in formulating risk management system

The company drew on internationally advanced practices on safety management, launched risk identification, assessment and control actions within SGCC system, and made significant progress. North China Power Grid Company implemented grid safety assessment, initiated risk management system on safe production covering three levels including headquarters, subsidiaries and workshops to control risks at all levels, and has met all set targets. The Anhui Electric Power Company strengthened the training for frontline workers on risk awareness in order to cultivate sound work habits and the ability to identify and prevent safety risks. In this way we have effectively reduced risks and achieved "controllable and under control" power grid operation.

### Structure of power supply risk management system Theoretical Knowledge Assessment Standards Identification Manual Risk Management Measures Identification of Equipment and Environmental Risks Risk Identification of HR Management Establishment and Application of Risk Database Operation cycle management of safety control mechanism Carry out operational risk analysis and control Conduct standard safety supervision Assessment and Classification of Risks Define Criteria for Acceptable Risk Establish a Risk Alarm Mechanism Conduct Risk Intervention Maximum Load within SGCC Service **Number of Equipment Accidents Number of Power Grid Accidents** Area Unit: times Unit: times Unit: MW 400,000 400 150 370,224 306 342,755 350,000 300 102 100 306,516 208 300,000 200 261,579 102 50 100 250,000 0 200,000 2005



In April 2008, the company launched a pilot project for all-round social responsibility management at Tianjin Electric Power Company, aiming at instilling the concept of social responsibilities and sustainable development throughout its daily operation.

The company actively performs the responsibility of excellent management by pursuing conglomerated operation, consolidated development, streamlined management and standardized construction. The company established a participation mechanism involving all stakeholders to increase stakeholders' satisfaction to our corporation. The company maximized corporate and social benefits by creating and consolidating corporate resources and energy resource efficiently.



# Push Forward Conglomerated Operation, Consolidated Development, Streamlined Management and Standardized Construction

Utilize the advantages of conglomerated operation. We strengthened headquarters' function as decision-making, resource allocation, management and dispatching center; we strengthened the strategic management and unified planning, and bring resource allocation function of large grid into full play; we also refined the integrated plan and budget to make it more comprehensive, accurate and timely; in addition, we further improved staff performance assessment as well as execution effectiveness.

Promote the standardization of management system. We formed a three-tier management system including SGCC headquarters, provincial power grid companies and the construction management units, and five professional systems including construction project, safety, quality, cost and techniques. It is estimated that we can save 20% of engineering and design costs and shortened the construction period by over 20%.

Foster first-class benchmarking. We optimized the benchmarking of our management system, conducted two-dimensional benchmarking, advocate benchmarking results, shared the best practices so as to improve streamlined management.

Vigorously promote the life cycle management of the assets. We integrated the whole process of planning, design, procurement, construction, operation, maintenance, technical modification and retirement, aiming at reducing the life cycle costs and increase the efficiency of assets utilization, adopted consolidated assets management of goods flow, information flow and value flow to achieve close-loop flow management, streamlined quantitative management and information management.

Strengthen cost control. We tightly control management expenses, reduce non-productive investment and standardized HR management to reduce labor costs. We reviewed our participation in different social organizations and incorporated the membership fees into overall budget management.



Wuxi Huiquan Substation — the company's first "resource-saving, environment-friendly and industrialized" 500 kV substation



Anqing Substation — SGCC's first 500 kV substation designed according to the concept of the asset life cycle management

### 200

### Optimized Allocation of SGCC Resources Led to Remarkable Benefits

Deepen the integration of capital resources. We combined our bank accounts, increased capital centralization to 98.6% and realized capital operational earnings of RMB 5.46 billion Yuan. We issued RMB 39.5 billion Yuan worth of special bonds for the power grid construction and RMB 60 billion Yuan worth of short-term financing bonds.

Promote centralized tendering and procurement. We expanded the scope to secondary equipments and office appliance, adding the annual bidding volume up to RMB 187.89 billion Yuan, saving RMB 14.08 billion Yuan. Reviews are actively done to improve work quality.

Establish a financial platform. Yingda Taihe Financial Insurance Co., Ltd was founded. The financial subsidiaries are expected to respond timely to the changes of capital market, expand the market and control operational risks.

Optimize the industrial structure. We restructured subsidiaries to enhance their core competitiveness. In line with the power sector reform, we separated affiliated businesses from core business and enact stricter control on affiliated transactions. We further integrated the grid asset to shorten management chain and strengthen control.

Build up SGCC brand. SGCC staff withstood the severe tests of the ice disaster and the "5.12" Earthquake with exceptional dedication and devotion. The brand value of SGCC is ranked the second place among the "Top 500 Valuable Chinese Brands" in 2008.

We fully implement the SG186 projects and build an integrated corporate information platform. Its application coverage doubled in core business at prefecture level and above. We are actively engaged in building digitalized power grids and IT-based subsidiaries. Information security level has been significantly improved, winning the title of "2008 Best Utility in Network and Information Security Work." SGCC also ranked level A in the assessment on IT application among SOEs.



Expansion of centralized tendering



Research findings of standardized construction



### Major Steps on Social Responsibility Management

SGCC made the first try on refining the meaning, action and performance of CSR management for grid companies, and won the first prize at national level in this regard.

We encourage participation and integration in all aspects, and continuously improve corporate value, development

which tapped potential of stakeholders and maximized economic, social and environmental benefits. As a CSR pilot subsidiary, Tianjin Electric Power Company defines responsibilities in terms of serving local economic and social development, handling the relationship with stakeholders, promoting sustainable environmental

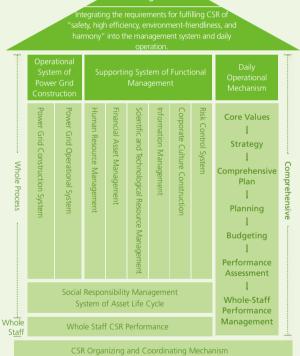
development and adapting to the economic globalization. The performance of the pilot program shows the implementation of SGCC CSR Guideline is of great significance for the transformation of the development mode of the power grid and building a world-class power

strategy, daily operation and management system. In

addition, we also realized effective management on

our commitment to stakeholders and environment,

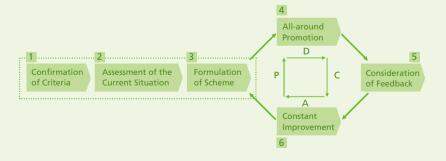
grid and enterprise.



Target Mode of Overall Social Responsibility Management



Promotion Mode of Overall Social Responsibility Management

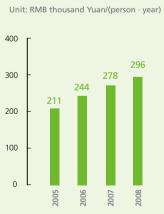




# **Participation of Stakeholders**

Stakeholders' Major Concern	Our Response and Actions
Maximally improve the operational efficiency of enterprise	We carried out conglomerated operation, consolidated development, streamlined management and standardized construction, optimized internal resource allocation and enhanced the operational efficiency of the power grid and the company.
Maximize integrated economic, social and environmental value of the corporate development	We innovated the corporate management mode in comprehensively and steered the management objective from maximizing profits to maximizing the integrated economic, social and environmental value; we expanded the management coverage from inside the company to external stakeholders; we extended the management value from economic value to environmental and social value, from shareholders' value to stakeholders' value and from corporate value to social value; we developed the management mechanism from optimizing the allocation of internal corporate resources to promoting optimized allocation of social resources.
Enhance the overall satisfaction of stakeholders in an all-around way	We established the mechanism for cooperation with stakeholders to fully exploit the potential and advantages of the stakeholders in creating added value.
	We strengthened communication to learn about and confirm material issues in stakeholders' concern, and balanced and responded to the expectations and requirements of stakeholders through constructing a participating mechanism for them.

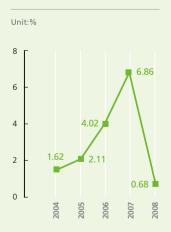




#### **Total Profit**



### Return on Equity



In 2008, the productivity and the assets utilization rate were on an upward trend. However, the profitability of the year was badly affected due to the differentiation between on-grid tariff and retail tariff.

# Conglomerated operation plays a significant role

With conglomerated operation, we have withstood the challenges of the two severe natural disasters as well as Olympics power supply. Therefore the concentrated resources are the fundamental guarantee for SGCC's large-scale investment and expedited power grid construction in recent years. This not only prepares the company to confront major natural disasters but also provides a sound mechanism for restoration in disaster-stricken areas in the shortest time. With the conglomerate advantages, we can fully leverage the advantages of scale, resource, expertise and synergy to optimize internal resource allocation with pooled strength and wisdom of the whole company.

#### Social feedbacks on SGCC CSR initiative

"SGCC shoulders crucial social responsibility, and its achievements CSR fulfillment are significant enough for wider application in the whole society."

——Jiang Jingui, Executive Vice Chairman of China Enterprise Association, Deputy Director of Former State Economy and Trade Committee

"SGCC, as the pioneer in the CSR practice among state-owned enterprises (SOEs), first established CSR management system and conducted overall social responsibility management, issued the SGCC CSR guidance, integrated CSR concept into its corporate values, development strategy and daily operation, and for the first time, released the CSR report. Its systematic exploration and realization of CSR management is extraordinary."

——Peng Huagang, Director of the Research Office of SASAC









On July 28, 2008, the Ministry of Science and Technology, SASAC and All China Federation of Trade Unions named 91 enterprises including SGCC the first group of "Innovative Enterprises" in China.

The company duly performs its responsibility of technical innovation, promotes the "One First Class, Four Larges" strategy, develops human resources, R&D, foster breakthroughs, cultivate big industrial bases, and promote technical application, so as to provide strong technical support for the transformation of power grid development model in line with the development of an innovative country.

# 2

# Push Forward the Construction of "Four Bases and Two Centers"

SGCC has established world-class UHV test facilities. We are presently dedicated to constructing the worlds most comprehensive and advanced UHV test facilities centering on UHV AC test base, UHV DC test base, UHV tower and pole test base and Tibet high-altitude test base.

As national engineering laboratories, UHV AC test base and DC test base have created over 30 world records with over 100 thousand sets of test data acquired, providing a vital verification basis for the construction and operation of the UHV project.

SGCC Simulation Center is in smooth construction. This is the largest, most comprehensive and advanced electric system simulation R&D base with 5 world records.

The construction of SGCC Metering Center has kicked off. Aiming at catching up in electric metering technology and experimental study. It has improved standard value and proportion benchmark of electric metering in China.



UHV AC Test Base (Wuhan, Hubei)



UHV DC Test Base (Beijing)



UHV Tower-pole Test Base (Bazhou, Hebei)



High-altitude Test Base (Yangbajing, Tibet)



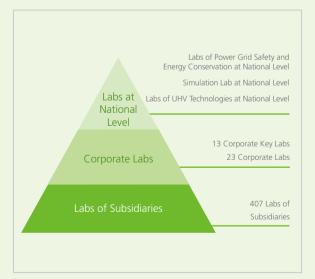
### Strengthen Management on Technical Innovation

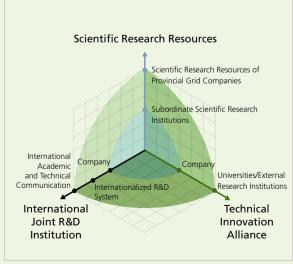
Increase investment in technical innovation. In 2008, SGCC invested RMB 14.434 billion Yuan in scientific research, a year-on-year increase of 42.1%. Investment in technical innovation has increased by 32.8% on annual basis over the last five years and the independent innovation capability of the company has been strengthened.

Optimize the scientific development strategy. We signed cooperation agreements with universities and other scientific research institutions, focusing on theoretic research and cross-check. Moreover, we established strategic partnership with equipment manufacturers in terms of core techniques, technical standards and market co-exploration, with the emphasis on equipment development. In addition, we cooperate with foreign R&D institutions and enterprises in formulating international technical standards.

Integrate the scientific and technical resources. We built three core R&D institutions, allocated R&D funds, and defined the main directions of scientific researches. We established a three-tier testing system in line with theory studies and technologies, key and supportive technologies and engineering application technologies.

Strengthen the development of scientific and technical team. We carried out the plan of building a qualified team to tackle hard-nut problems in science and technology, and developed world-class talents. We also set up 15 teams specialized in power safety and stability control technology as well as the power grid automation technology.







### Significant Achievements in Technical Innovation

Make great breakthroughs in major research areas. We initiated 216 research projects on UHV AC and DC technologies, 159 of which have been accepted. More

than 370 results have been applied and 28 standards have been formulated. In 2008, SGCC won a lot of top prizes in terms of technical innovation at national level.

Accelerate technical commercialization. The market share of major products with independent intellectual property rights is expanding steadily. The market share of TCSC, SVC, WAMS as well as the control and protection system is over 50%; the market share of the power grid dispatching automation products, security/stability devices has been increased to over 80%.

Promote new technologies. We strengthened the application of new technologies including bird hazard prevention, anti-dropping device and lightning-proof technology. By the end of 2008, 15865 km of 500/330 kV double circuit line on the same tower, 5187 km of 500/330 kV compact line and 10580 km of large-section heatproof conductor, 26 500/330 kV TCSCs with the capacity of 11791 MHZ, 14 homemade SVCs with the capacity of 1380 MHZ and 79 500/330 kV large-capacity transformers had been developed.

#### Strengthen intellectual property rights management.

We issued the Measures for SGCC Intellectual Property Rights Management and established a patent service center for intellectual property rights trainings and patent agency team-building. In 2008, we applied for patents for 2,362 items, 567 of which were granted with patents. We now own 1,994 patents in total.



Short-circuit grounding experiment on the construction site of UHV AC pilot project



The world's first double-bridge grounding capacitor in the UHV AC pilot project



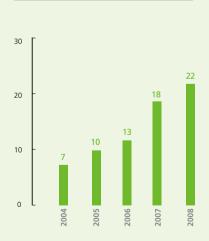
# **Participation of Stakeholders**

Stakeholders' Major Concern	Our Response and Actions
Set an example in independent innovation	We implemented scientific development strategy, built excellent taskforce, focused on R&D, innovated important technologies and cultivated key industries. We also took the lead in the development of the world's electric power technologies, including UHV technology, power grid safety and power system automation.
Promote localization of key equipments	We actively organized domestic equipment suppliers to develop key equipment for UHV projects, raised localization rate of the transmission equipment and implemented localization scheme for major power transmission projects.
Develop environment-friendly, economized and energy-efficient technology	We apply compact lines and multi-circuit lines on the same tower to improve the transmission capacity and reduce land use. We push forward more than ten pilot projects with new technical upgrading of typical design and DC set technology with large capacity in ten aspects, including large capacity transmission, resource reservation and environment protection.

### Scientific and Technical Investment



#### Number of Total National-level Prizes



# To be an innovative SOE, make progress in technical innovation

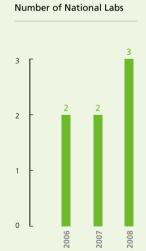
"The thoughts and methods adopted by SGCC concerning the construction of technical innovation system set a sample for major state-owned enterprises", says Zhou Yuan, vice director of 21st Century Agenda Center of China and director of the comprehensive group of National "Innovative Enterprise Assessment".

SGCC breaks technical barriers in UHV power grid development to drive domestic manufacturing technology and competence. Through the UHV pilot project, domestic manufacturing enterprises have basically achieved effective integration and advancement on different manufacturing technologies and the key materials can be self-supporting, which signifies that the manufacturing industry of power transmission and transformation equipment has taken an important step towards leading the power transmission technology of the world, says Hu Shuqing, chief of the Major Equipment Office of China Mechanic Industry Association.

#### Actively participate in R&D on electric vehicle and achieve leap-forward development

SGCC established a cooperative mechanism for electric motor development with universities, research institutes, suppliers, etc. to foster rapid development of domestic electric vehicle application, which has won compliments from National Development and Reform Committee, Ministry of Science and Technology, as well as experts and scholars.

Mark, Secretary-General of French Electric Motor Inter-department Coordinating Committee, also expressed his respect and appreciation on SGCC's R&D achievments on electric vehicle.







On August 4, 2008, the SGCC Olympic Exhibition Center was open to the public at the Olympic Park, aiming at advocating Olympic spirit and the corporate spirit of "In search of Excellence and in Pursuit of Out-performance".

The company fulfilled its responsibility of communication and cooperation by strengthening dialogue and common grounds with stakeholders. With synergy and innovation, we pursue the overall efficiency of economy, society and environment.



# Improve the Communication and Cooperation Mechanism

Enhance staff's awareness of communication and cooperation. Communication leads to trust, trust supports cooperation, and cooperation creates value. SGCC staff should take this responsibility as driving force, strengthen communication with government and the public so as to achieve common consensus on the coordinated development of power grid, economy and society.

Further improve the management system. We established the special department in charge of external communication and CSR work, defined the responsibilities of each department, unit and job position and derive understanding and support from stakeholders.

Improve the cooperation mechanism. By improving our information release mechanism, communication channel, method and supervision on information disclosure, so as to ensure stakeholders' right to know and supervise. We also provide tailored support for stakeholders and work out specific objective, strategy, principle and process for their participation.

Optimize the CSR report mechanism. We improved the cross compilation of CSR report and third-party review system and turned the whole process into a learning and reviewing experience. Therefore the release and feedback of the CSR report has become a reflection of stakeholders' expectations, through which we can listen to their advice and improve our work.



Establish a regular communication mechanism with governments at all levels



Selection of SGCC Cup "One World One Dream" Worldwide Olympic Essay





### **Effects Achieved in Communication and Cooperation**

Reach consensus on power grid's function in optimizing resource allocation function. We integrate the power grid development into the economic and social development.

The power grid is essential to the national energy strategy and energy delivery system. It is of great significance to build a strong national ultra-high voltage transmission grid as the backbone with coordinated development of its subordinate networks. The power grid development strategy wins trust and support. On the basis of communication with the parties concerned, SGCC revises the UHV power grid development planning and conducts research on the 12th Five-Year Plan and 2030 power grid planning. SGCC assists the local government in compiling the long-term energy planning centering on

electric power, integrates the power grid development planning into the local economic and social development, and reaches consensus with the local government in terms of the power grid investment scale, development pace and distribution. Some provinces and cities require enhancing the proportion of external power transmission, optimizing energy resources allocation and serving the sustainable development of the economy, society and environment.

Expedite the preliminary work of building the transregional and trans-provincial power grids and the power network at provincial level. We promote common ground on development, and facilitate the approval process of power grid construction projects.



Boost the integration the Olympic spirit and CSR





Broaden the communication channel and create sound development environment

# Absorb suggestions of stakeholders and improve the quality of the CRS Report

The Research Office of SASAC, the social responsibility research groups and other core stakeholders put forward a series of suggestions concerning the compilation of the 2008 CSR Report, which are greatly helpful in improving the content and structure of the report.

#### Suggestions from Stakeholders:

- 1. Further clarify the interrelation between the 12 aspects in the CSR module.
- 2. Further clarify the sustainable development strategy and its effect on the development of low carbon economy.
- 3. Further clarify the expectations of stakeholders and their major concerns
- 4. Enlarge the CSR indicator release scope, especially the effect of the corporate operation on the economy and the environmental performance indicator, and improve CSR indicator system.

#### Corporate Response:

Collecting suggestions from stakeholders and their experts is vital for compiling the CSR Report. They are of great importance to improve the integrality of the CRS Report. The 2008 CSR Report absorbs suggestions from all relevant parties. The 9th page of the report expounds the logical structure of 12 aspects of the social responsibility; and the 12th page, SGCC's sustainable development strategy. Meanwhile, major concerns of stakeholders are listed in each CSR module.

#### Boost trans-regional cooperation of the stakeholders and promote wind power development

Three major challenges hinder the large-scale development of wind power. Firstly, large-scale wind power cannot be consumed within a single area. Secondly, it fails to ensure stable and reliable power grid operation. Thirdly, the uncertainty of wind power generation requires the support of peak load units while it is difficult to match power sources locally, and wind power transmission only will bring about high tariff to customers.

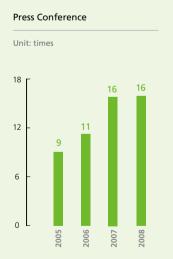
#### Corporate Response:

SGCC actively assists local governments in compiling the energy development planning centering on electric power, cooperates with other relevant parties to optimize the construction of composite energy bases and promotes the development of wind power.

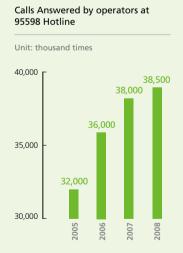


# **Participation of Stakeholders**

Stakeholders' Major Concern	Our Response and Actions
Transparent Operation	Accept social surveillance
	Listen to the opinions from experts, scholars and other parties on major decision-making
	Strengthen corporate information release
Encourage stakeholder participation	Aiming at different stakeholders, we established specific stakeholders' participation mechanisms to ensure their rights to know, to supervise and to participate.
	We established tailored participation and cooperation mechanism for different stakeholders to ensure their right to know and supervise.
	We provide necessary guarantee to enhance stakeholders' participation.









In recent three years, the top executives of SGCC have met with 24 provincial (autonomous regions and municipalities) governments, conducted indepth communication on regional power demand, the "11th Five-year Plan" for power grid development, municipal power grid construction and "Power for All" project, and reached a consensus on boosting the sustainable development of the power grid in coordination with regional economy and society. The local governments set up steering groups to support power grid development and formulated supporting policies.

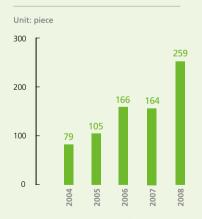
#### Establish power grid construction fund

The opening-up and development of Tianjin Binhai New District has boosted power demand. Tianjin Electric Power Company reached a consensus on accelerating the power grid construction with local government, and signed the joint development agreement to support Tianjin power grid construction during the "11th Five-Year Plan". Tianjin New District and relevant counties allocated special funds to complete the preliminary work of power grid construction.

#### Portal Website Traffic

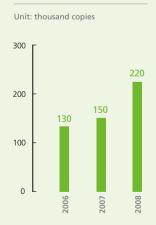


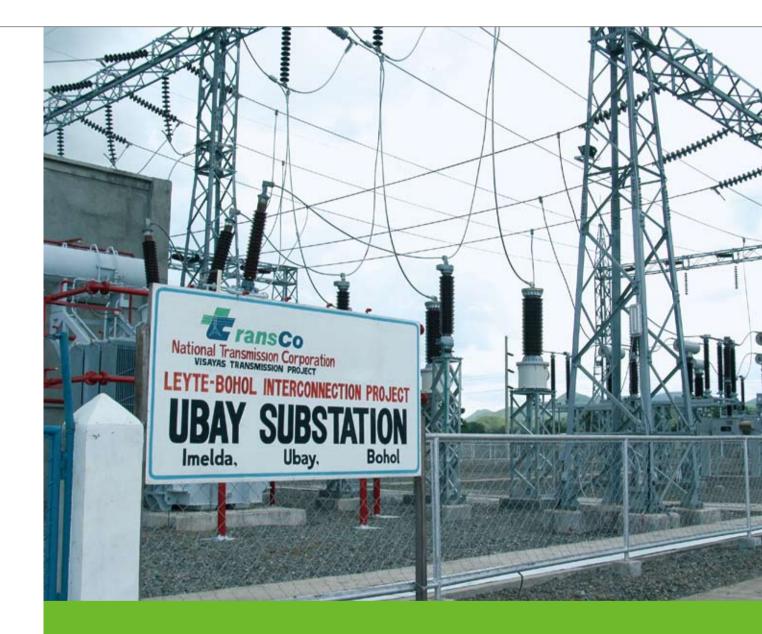
# Information Submitted to Governmental Sectors \*



#### \* Governmental sectors refer to General Office of CCCPC, General Office of the State Council, SASAC, NDRC and SERC, etc.

#### Circulation of SG News





On December 19, 2008, the Parliament of the Philippines granted SGCC the 25-year concession of TRANSCO.

SGCC actively participates in the economic globalization process, implements globalization strategy, attend to international energy cooperation and transnational operation, and strengthen international cooperation. We are keen to make great contribution to the sustainable development of SGCC.

# 2

#### Push Forward the Sustainable Globalization Strategy

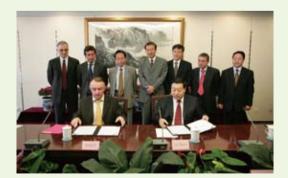
Advance the energy cooperation with neighboring countries. We conduct energy cooperation with Russia, enlarge the bilateral trade and jointly build power transmission projects. In addition, we strengthen the power cooperation with Mongolia, Kazakstan, Kirghizia and Tajikistan in terms of business cooperation and technical exchange.

Further exploit the international power market. We strengthened the cooperation with world-class companies in power investment, procurement, new energy technologies and equipment manufacturing to achieve win-win cooperation. We founded the SG International Development Company Ltd. and set up a platform of centralized bidding, equipment supervision, contract execution, logistics, equipment lease, international authorization and information exchange. We participated in the design, construction and technical services related to power sources and power grids in over 40 countries and regions. Nearly 100 overseas engineering projects were under construction in 2008 and the value of technical service contracts amounted to US\$ 13.1 billion.

SGCC will, together with local partners, operate the Philippines national Power Grid efficiently to its best performance in accordance with Philippine laws and regulations, respect local customs and traditions, and support local community and social development.

"SGCC's NGCP program is currently the biggest cooperation project between China and Philippines. The project is huge, hence the operation should take the interests of all sides into consideration, comply with local laws and lay a solid foundation for long-term operation", says Wu Zhengping, counselor of Chinese Embassy to Philippines.

"Philippines State Power Transmission Grid will achieve stable development with the support of SGCC in regards of technology, fund and management," says Angelo REYES, Minister of of Energy of Philippines.



Strengthen cooperation with well-known power enterprises



Open up international market of power projects





### Utilize Global Resources to Boost Sustainable Development of the Company

# $\label{problem} \mbox{Exchange of advanced technologies and practices.}$

SGCC attended a series of international meetings such as 2008 International Electric Power & Energy Summit, the 17th Asia & Pacific Ocean Areas Electric Association Conference, APEC Summit of Industrial and Commercial Leaders, the International Extra-Large Power Grid Meeting, Large Power Grid Operators' Annual Meeting, the IEC and the 3rd China & Russia Summit Forum of Economic, Industrial and Business Circles to jointly study environmental and energy issues, and also received many survey groups from Europe, North America, Asia and Africa to exchange advanced technologies and development experience.

Strengthen exchange on management experience with international peers and world famous institutions. Since 2006, a total of 135 senior management members of SGCC have paid visit to world-class multinational companies such as Siemens, ABB and GE.

Participate in the formulation of international standards. On August 15, 2008, the proposal of founding a DC Technical Committee submitted by SAC to IEC was approved and SGCC was appointed as the secretary-general unit.

Promote international exchange in social responsibility. SGCC actively participates in the formulation of ISO26000 for social responsibility, attends the training courses of "Global Compact & Corporate Social Responsibility Seminar" and advocates the ten principles of UN "Global Compact". In addition, SGCC translated AA1000 Standard and the world's first monograph on responsibility management, and introduces the latest achievements of social responsibility researches conducted by international enterprises.



Host international academic conferences

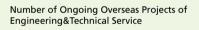


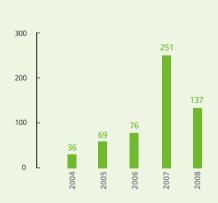
Carry out international technical exchange



# Participation of Stakeholders

Stakeholders' Major Concern	Our Response and Actions	
	Participate in international electric projects and the competition of electric high-tech products market;	
Follow the development trend of economic globalization, and advance "going global" strategy	Promote international energy cooperation. SGCC launched coal, hydro power and renewable energies with neighboring countries;	
Utilize global resources to enhance sustainable	Develop global vision and carry out benchmarking with leading international enterprises for their best management practices to improve the ability of optimizing resources globally.	
development	Learn international successful experiences and improve power grid operation and construction strength with global market, technology, talent and fund resources;	
Participate in the formulation of international standards	Strengthen technical exchange with international counterparts and participate in formulating international electric power technical standards.	





# Total Contract Value of Ongoing Overseas Engineering & Technical Service Projects







At 2:28 p.m. of May 12, 2008, the 8.0-magnitude catastrophic earthquake took place in Southwest China. The massive disaster leads to nearly 90,000 deaths and missing persons and a direct economic loss of RMB 845.14 billion Yuan.



During the "5·12" Earthquake, 405 employees of SGCC were dead or missing, power supply systems in 110 counties of 23 regions or cities within the service area of SGCC were destroyed, leading to a direct economic loss of over RMB 12 billion Yuan. RMB 73.6 billion Yuan was needed for restoration and reconstruction.

SGCC launched emergency response scheme 12 minutes after the earthquake and set up the disaster-relief system, put the salvation of lives as top priority, and quickly mobilized 4,300 technicians, 268 medical workers, 242 units of major machinery and emergency response vehicles and 1205 generators to the disaster areas, racing against time to save lives and repair the power supply facilities. SGCC sent 12 medical teams with over 7000 person-times. Our staff and retirees of the company donated RMB 76 million Yuan to the disaster areas and CPC members turned in RMB 105 million Yuan as "Special Party Membership Dues" to the disaster areas. After over two months' hard work, subsidiary companies of SGCC in five provinces and one municipality accomplished the power grid repair and restoring work in six corresponding earthquake-stricken counties in Sichuan Province, including Wenchuan, Maoxian, Xiaojin, Songpan, Beichuan and Lixian.

The earthquake-relief work of SGCC was fully recognized by the government and the society. The Yingxiuwan Hydro-power General Plant of Sichuan Province was conferred with the title of "Heroic Collective of SOEs against Earthquake" jointly by the Ministry of Human Resource and Social Security and SASAC. Chen Xueyun from Qingchuan Power Supply Bureau of Sichuan Province and Li Wenli from Hunan Company were conferred with the title of "National Model against Earthquake" by the Central Committee of CPC, the State Council and the Military Commission of the Central Committee of CPC.



On June 10, 2008, SGCC launched the campaign of "Welcome Olympics with Quality Service" and accomplished the tasks of securing power supply for Beijing 2008 Olympics and Paralympics smoothly with high-level, high-quality power supply service.

SGCC earnestly fulfils its social responsibility starting from knowing customer's needs and ends with satisfaction of such needs. SGCC constantly pursuits the mission of providing quality service, perfecting quality service mechanism and accreting first-class service brand value while creating value for customer.

# 6

# Strengthen the Philosophy of Quality Service

**Innovate services according to customer needs.** SGCC improve and innovate the content, key points and methods of service to benefit customer value.

Adhere to customer-orientation and quality service. For different customer groups, SGCC provides customized, streamlined and human-oriented services.

Create value through cooperation with customers. SGCC dedicates to creating a mechanism for cooperation with customers, bring synergy with respective advantages, explore value-creating potential and achieve mutual trust and win-win cooperation.

Integrate service resources and unify service brands. SGCC strengthens service concept of staff, integrate internal professional resources, optimize business processes and promote "One-Stop" service. SGCC also unify the connotation of our service brand, service brand regulations, service window logos and the mode of service resources allocation, so as to build an outstanding service brand of "SGCC".

Explore customer resources and provide value-added services. SGCC boost the construction of power consumption information collecting system to by users and explore various kinds of value-added services on the basis of ensuring the security of customer information.

Smooth supervision channels and guarantee service quality. SGCC attaches equal importance to both internal and external supervision: internally promote quality assessment of power supply service and strengthen the inspection of service quality; externally encourage people to file complaints and report improper practices and mobilize public supervisors to monitor our power supply service.



Improve the service quality



Provide diversified services



Make customers more satisfied with our services



# Improve Regular Mechanism for Quality Service

Accelerate the construction of automation system and perfect the marketing organization mode of SGCC; SGCC unifies the organization mode, the business process and the technical devices concerning computation, meter reading and billing and deepen the construction of marketing standardization; carry out the "Ten Promises" of power supply and "Ten Prohibitions" of employee service, execute the regulating measures of power supply, deepen the service review activities on quality service, improve the service quality constantly and establish the lasting quality service mechanism.

#### "Ten Promises" on Power Supply Service

- Urban areas: the reliability rate of power supply is no lower than 99.90% and residential voltage qualification rate is no lower than 96%
   Rural areas: Indicators for reliability rate of power supply and voltage qualification rate are publicized by provincial electric power companies (autonomous regions and municipalities) after being approved by SGCC.
- Transparent tariff, charging standard and service procedures.
- We, upon request for power supply, provide supply scheme in no more than 3 working days for residential customers, 7 working days for low-voltage power users, 15 working days for single circuit highvoltage power users and 30 working days for double circuit high-voltage power users.
- We start to supply power within 3 working days after user-side electrical equipment is checked eligible and certified in the case of urban or rural residential users.
- We start to supply power within 5 working days after user-side electrical equipment is checked qualified and certified in the case of urban or rural non-residential users.

- We strictly follow the load shedding schedule as approved by the government in case of interruption due to power shortage.
- We make public planned outage for maintenance to the public 7 days in advance.
- We provide 7\*24 clockwise trouble-shooting services and repair electricians arrive in no more than 45 minutes in urban areas, 90 minutes in rural areas and 2 hours in special or remote areas.
- We deliver Outage Notice 7 days in advance to customers in arrears to whom we're authorized under laws to suspend power supply.
- We attend 7\*24 clockwise to consulting, enquiries, complaints and trouble reports through our power service hotline 95598.

# **Supplying Reliable Electricity**

Credible Business Operation, Publicize service procedures, standardize service processes, ensure the precision of energy metering and transparent tariffs, and protect customer information.

Strictly implement Working Regulations and Guidelines on installation and connection, provide the name-list of qualified suppliers of design, construction and equipment supply to the customers and apply whole-process supervision and feedback mechanism.

We promote the publicity of power consumption safety and provide customers with consultation, guidance and technical support in order to eliminate hidden risks.

We are actively engaged in ethics appraisals and consciously subject to governmental and social supervision. Furthermore, we employ ethics surveillants and establish a fund to reward complaints.

Beijing Electric Power Company designed a special distribution network monitoring system for the power supply of Olympic venues, which covers all power supply facilities from 220 kV high-voltage power sources to 380V low-voltage customers, 18 220 kV and above substations, 31 110 kV substations, temporary distribution equipments of 30 integrated broadcast areas located in 31 venues, 5 affiliated facilities, as well as key facilities such as the box transformer units for opening and closing ceremonies and the temporary switching stations of the BOB TV Tower. This system created a national record in realizing the whole-process monitoring from the HV to the LV customers, enabled immediate faulty and accident alarm, which provided strong support for power dispatching, command and emergent repair services of Olympic power supply.



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# **Supplying Satisfying Electricity**

Empower customer service center to become a customer data collection center, a dispatching and command center and a quality assessment and management center of customer service to provide the "One-stop" service.

Provide effective and customized power supply service to customers. We specially designed customer representative system and the big customer manager system to provide individualized service for key projects and VIP customers; we also provide seven-day-a-week service to residential customers and onsite service to communities, supermarkets and big customers, etc.; provide English terminal, sign language, appointment and other human-oriented services to disadvantaged customers .

A variety of convenient billing services can be approached through financial institutes, internet, telephone or prepaid electricity card.

Strengthen communication with customers to foster harmonious relationship. For example, we regularly invite customer representative to visit our companies and experience power supply service in person, visit customers or hold workshops to listen to their advice and solicit their opinions and suggestions.

Confronted with the difficult environment under the global financial crisis, manufacturing enterprises in Wenzhou are experiencing a survival crisis with sharp drop in the export trade. SGCC Wenzhou subsidiaries in reponse put forward new service measures to help local small and medium-sized enterprises to deal with the crisis. A fund of over 10 million Yuan is set aside as incentive for enterprises to consume electricity during base load periods. They provide advisory service to enterprises on demand side management, including production shifts and maintenance plan to optimize expenditure on electricity consumption.

Fujian Electric Power Company takes measures to improve power supply services. It entrusts a third-party investigation institution to make comprehensive evaluation on trouble shooting and other power supply services. In addition, it built the first provincial-level power service center to strengthen intensive complaint management and find out customers' service demand.



# **SGCC** Brand Building

SGCC promotes golden service campaign, in which a large number of quality service teams and employees make great contribution. Ten Service Stars of power supply glorified SGCC brand.

In January, 2008, Han Keqin was selected as one of the "Ten Outstanding Youths of SGCC" and "Suzhou Loving Care Ambassador". She worked for 12 years in the Power Supply Service Center of Fenghuo Road, Suzhou, with outstanding performance. She devoted weekends and holidays to provide consulting service to the public and became skilled in over 20 business sections. She always keeps in mind "customer first and more patience".







# Participation of Stakeholders

Customers' Major Concern	Our Response and Actions
Expeditious Power Supply and Quick Trouble-shooting.	Simplify the application procedure for electricity meter installation and shorten the waiting time for access to electricity.
	We make public planned outage for maintenance to the public 7 days in advance. We make efforts to refine maintenance and overhaul schedules, promote live-line operation, and strengthen construction management to reduce the frequency and duration of power outage.
	We provide 7*24 clockwise trouble-shooting services. Repairing electricians shall arrive in no more than 45 minutes in urban area, 90 minutes in rural area and 2 hours in special or remote areas.
Ensure reliable power supply, and provide safe and trustworthy electricity.	We leverage the advantage of large power grid to alleviate power shortage and ensure power supply to the highest possible extent by means of scientific dispatching, demand-side management and rational load shedding.
	We formulate the regulations on ensuring power supply safety and provide customers with consultation, guidance and technical support in order to eliminate hidden risks.
	We promote the publicity of power consumption safety.
Convenient and reliable power use.	We unified logos at all service centers, standardized service procedures, adopted customer manage system, and offered the first-call responsibility system and one-stop service.
	We follow the principle of openness and transparency, strictly implement the state tariff policies, ensure the precision of energy metering , protect customer information and listen to the customers' voice.
Power service contribute to comprehensive value.	Provide tailored service based on customers' demand.
	Eyes on customer value by optimizing service mode.
	Guide scientific and economized use of electricity.

# Enhances our service through case study

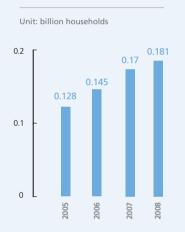
SGCC published the *Collection of Typical Cases on Power Supply Service*. According to the various types of service, SGCC summarized the advanced experiences and lessons to improve our service awareness and techniques.



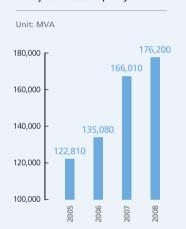
# Reliable power supply supports trains speed increase

SGCC sets up the leading group to ensure railway electrification. Meanwhile, we strengthen the construction of supportive projects and researches key issues on railway electrification, pollution management, project construction and tariff management. In addition, we supply convenient, warm and quality power service for the development of railway electrification.

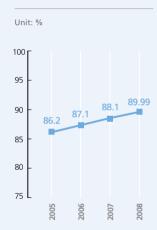




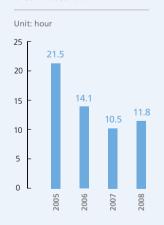
#### Newly connected capacity



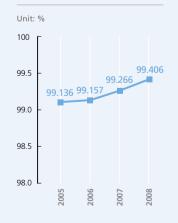
#### Market share



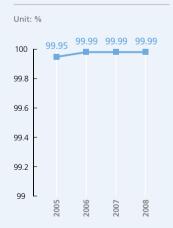
# Average Outage time per urban household



# Voltage qualification rate of urban end-users



#### Fulfillment rate for "Ten Promises"





On September 28, 2008, SGCC held a commendation meeting on rewarding those who stood out in quake relief and Olympic power supply.

SGCC takes talents as the first priority, sticks to the managerial philosophy that talents are the most invaluable resources of an enterprise, and implements the strategy of vitalizing the company through human resource development. Meanwhile, we strengthen the management capability of the executive team, stimulate employees' creativity and realize their individual value.



# Safeguard the Lawful Rights and Interests of Employees

We support the ten principles of the UN Global Compact, respect and safeguard the international human rights and labor standard signed by the government, prohibit forced or compulsory labor, and the use of child labor, eliminate all kinds of discrimination in respect of nationality, gender, sexual orientation, religious belief, national or regional difference, age and disease, etc. There was no infringement against human right in 2008 at SGCC.

We abide by Labor Contract Law and other laws and regulations, sign labor contracts with employees, guarantee that employees enjoy paid holidays, respect their dignity and freedom, and respect their privacy.

We provide employees with rational remuneration and welfare, set salary according to posts and workload, offer same payment standard between male and female employees and purchase social insurances for employees.



# Ensure the Safety and Health of Employees

We provide safe and sanitary workplaces, establish health records for employees and organize regular medical check-ups to prevent occupational diseases. In addition, we conduct safety training to enhance employees' safety awareness. In 2008, four SGCC employees died from work accidents.

We enrich the cultural life of employees and care about their mental health, organize recreational activities and help address practical problems for employees.

We safeguard the rights and interests of retirees by arranging special personnel to provide considerate service.

Shandong Electric Power Company established a health management center to care for the health condition of employees. It established electronic health records for employees, organized regular medical check-ups, and conducted health assessment and consultancy based on the check-up results. Sunshine mindset and healthy lifestyle are advocated.



### **Carry Out Employee Training**

We adopt various training methods such as centralized training, outsourced training, web-based training, tele-training, self-education and conduct whole-staff training. We have formed a diversified training system including off-the-job training, overseas training for senior executives, on-the-job training for executive candidates, etc.

We carry out trainings on safety, laws and human rights, environmental management, corporate social responsibility and sustainable development for employees. In 2008, special CSR trainings were held with over 1000 attendances in the headquarters and over 30,000 attendances at subsidiary level.





Enhance professional skills



# Optimize the Employment Mechanism

The executive team is required with integral political caliber, business performance, team spirit and morality. We develop our business in line with development of the country and find out the solution to the issues that hinder our development.

The 1551 High-Caliber Talents Development Program has been implemented (fostering 100 business elites, 500 management talents, 500 engineering experts as well as 1,000 technicians). Our selection and recruitment process are guided by fairness and career plan is featured by diversification. SGCC has a graduate recruitment program and establishes an open, fair, and just recruitment mechanism.

We expanded personnel exchanges across various levels, units, and regions, and management personnel have been well fostered through position shift and reshuffling. In 2008, 24 excellent managers were sent to Tibet and Xinjiang to contribute their share to local power sector development.

Diversified management is applied to offer more career opportunities for female and ethnic minority and optimize regional and professional distribution of managers within SGCC system. Females take up 5.33% among all senior management personnel.



# Encourage Employees to Participate in Corporate Management

SGCC has established labor union at all subsidiaries to safeguard legal interests of employees and encourage their supervision and participation in corporate management.

Staff Congress plays a positive role in democratic management and supervision. We have established a President Contact Person System to solicit advice and suggestions from employees.

We motivate employees to actively participate in corporate development, and offer awards for excellent ideas.

We protect employees' rights to express, to participate, to complain and to supervise.



# **Corporate Culture**

We held a theme activity of intergrity throughout the Company, to promote compliance with corporate ethics, rules, and regulations, in expection to build SGCC to become an enterprise renowned in integrity, prestige and outstanding performance.

SGCC employees have demonstrated respectable dedication and corporate spirit in restoring power in the severe snow disaster, earthquake, and securing Olympic power supply. More than 55 subsidiaries were honored the National May Day Labor Diplomas and 60 individuals received National May Day Labor Medals.

We inspire creativity and team spirit of the employees, optimize the incentive mechanism to build a sound competitive and cooperative environment that can tap the potential of each and every employee.



Make Staff Congress System more effective



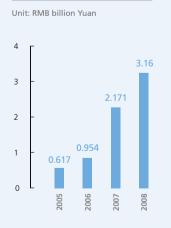
Advocate corporate culture and encourage innovation



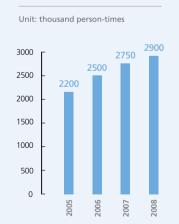
# **Participation of Stakeholders**

Employee's Major Concern	Our Response and Actions
Protect health and safety of the employees	We establish employees' health records and organize regular medical check-ups.
	We improve working conditions and ensure safe working environment.
Respect the rights and interests of the employees	We regulate labor contract management, protect employees' lawfull labor rights and interests, and advocate equality and justice.
	We provide rational renumeration and welfare system.
	We establish open, fair and just employment mechanism.
On-going personal improvement and innovation	We organize various trainings, integrate training resources and improve training methods.
	We conduct activities and contests to improve employees' vocational skills.
	We provide specific development channels for management, engineering and technical personnel, and improve the employee personal development mechanism.
Exercise the right of democratic management and supervision	We make Staff Congress System play a more important role, and ensure employee representatives to fully exercise democratic rights, and properly address their proposals.
	We establish the President Contact Person System, make smooth the communication between the company and employees, and encourage them to offer constructive suggestions.

#### Investment in Employee Training



# **Employee Training Person-times**



#### Whole-staff Training-attendance Rate



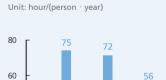
### The president contact person system promotes democratic management

We established a President Contact Person System. All the contact persons actively participate in the discussion of corporate issues on production and operation, power grid dispatching, security management, marketing, and employees' daily life, which play an active role in the development of the

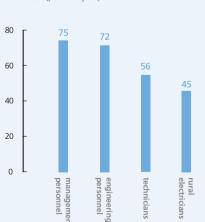
We hold trainings to enhance the contact persons' competence, motivate them to participate in the democratic management of the company.

### Constitute a training network system covering all specialties and a unified remote education platform

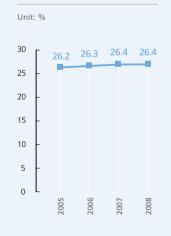
In 2008, SGCC established the Management College and the Technical College, set up 262 training centers (bases) in the subsidiaries at prefecture level and above, and organized regular on-the-job trainings and skill contests to improve the competence of employees. Since 2005, 41 employees won the honors of National Top Technical Performer and Top SOE-Technical Performer.



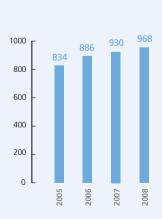
**Average Staff Training Hours** 



# Percentage of Female Employees



#### **Number of Labor Union Branches**





The 1000kV UHV AC Jindongnan-Nanyang-Jinmen pilot project, the first of its kind in the world, successfully completed its 168-hour trial operation on January 6, 2009.

Sticking to the principle of long-lasting, sincere win-win cooperation and mutual benefits, SGCC strengthens cooperation with generation companies, suppliers, scientific and research institutions, construction compies as well as banking and financial agencies for mutual benefits and sustainable development.



#### **Develop Responsible Concept Throughout Value Chain**

SGCC and its suppliers consistently abide by laws, regulations and social norms, respect human rights and labor laws, as well as boycott cooperation with companies involved in business bribery and illicit competition. We fully implement the Regulation on Electric Power Supervision, carry out ten measures to ensure open, fair and just power distribution and keep good relations with generation companies. We adhere to transparent business operations, strengthen communication with our suppliers and ensure open, fair and just bidding process. In August 2007, we signed the Self-disciplinary Convention on Bidding System.

Win-win cooperation and mutual benefits are our pursuit. SGCC operates in harmony with its business partners and strengthens cooperation and mutual trust with them. We also establish a mechanism that encourages cooperation, resources sharing and mutural benefit. In addition, we push forward independent innovation, scientific advancement, joint R&D on core technologies and equipment localization.

The concept of sustainable development that highlights "security, efficiency, envrionmetal friendliness and harmony" is promoted. SGCC and its suppliers ensure the safety in the production and application process, and safety and health of the employees. We will cease the partnership with the enterprises that fail to the meet the safety and health standard. In view of price, quality, service and delivery of the equipment, we give preference to purchase of energy efficient and environment-friendly facilities and technology. We encourage our business partners to minimize the environmental hazards caused in the production and application process, and motivate them to take into consideration the expectations of stakeholders, and to support community development.





Enhance power dispatching information release, communication mechanism between grdi companies and power plants, so as to ensure safe and stable operation of the entire power system.



# Promote Sound Development of Power Industry Together with Power Generating Companies

SGCC promotes the integrated planning and optimized distribution between power grid and generations, arranges a rational scheme for outgoing transmission lines and guarantees the timely transmission for generation projects. For recen years, SGCC has tackled the severe challenges posed by a booming construction of power plants. Between 2004 and 2008, the newly installed generation capacity in our service area totaled 319 GWh, four times of the total installed capacity in UK.

We are fully in compliance with the principle of Open, Fair and Just Dispatching. Enhance power dispatching information release, communication mechanism between grdi companies and power plants, so as to ensure safe and stable operation of the entire power system. We develop technical support system for energy-saving power dispatching, to promote energy conserving distribution and transaction of generation rights for replacing the small units with large units, as a way to encourage the development of efficient and low emission big units. We provide strong support for large-scale wind farm construction, and optimize hydropower dispatching to raise hydropower utilization rate, in which way, 11.5 TWh more electricity could be generated.



#### Oberseve Ten Measures for Open, Fair and Just Power Dispatching

- Firmly follow the principle of "Open, Fair and Just" power dispatching to ensure safe and reliable operation of the power system.
- Strictly comply with the Regulations on Electric Power Supervision and submit dispatching performance report to the regulator on a quarterly basis.
- Issue SGCC's Rules of Open, Fair and Just Power Dispatch to standardize dispatching management.
- Strictly implement signed Power Purchase Contracts and Grid Connection and Dispatching Agreements and operate the grid in a scientific and rational mode.
- Routinely release the dispatching information to the public with the standardized content, form and frequency. The related website is updated on the 10th day of each month.

- Establish enquiry reply system to ensure that all inquiries from interconnected power plants be replied within 10 working days.
- Strengthen the communication mechanism between grid companies and power plants. At least two joint conferences should be held annually.
- Engage public observers to supervise dispatching activities and establish an external supervision mechanism.
- Set up accountability system to tighten the supervision and inspection, and take the "Open, Fair and Just Dispatching" as an important assessment criterion.
- Strictly enforce the discipline of power dispatch and abide by the Five Shall-not Regulation for SGCC Power Dispatching Personnel.



#### Push Forward Sustainable Development Through Cooperation with Business Partners

Promote an open, just and fair 2-tier centralized tendering and procurement system and ensure its compliance with laws, supervision and auditing regulations.

Sign strategic cooperation agreement with Tsinghua University and other research institutions, and set up joint R&D centers to encourage grid technology innovation.

Sponsor R&D projects and foster breakthroughs in UHV key equipments jointly with suppliers. SGCC successfully developed China's first 1000 kV UHV transformer, first set of 1100 kV GIS, and organized R&D for the world's first ±800 kV, 4000 A UHV Dry Air-core shunt reactor with independent IPR. The company is also commited to promote energy-convservation in the development of power transimission equipment. We have developed 900 mm² large cross-section transmission lines which have extroadinary performance in energy conservation and environment protection. Thus China's capability of large cross-section transmission lines R&D, production, and installation has upgraded to a world-class level.

Work together with desiging and construction teams to promote new equipment, technologies and techniques so as to improve project quality, cut down cost and reduce environmental hazards. SGCC's Huaisu 500kV substation project won the 2008 National Construction Best Prize, the company's ninth such award since its establishment in 2002.

Propel localization of key equipment to encourage independent technical innovation. The localization ratio of DC transmission equipment witnessed a substantial raise from 30% in 2003 to the current 100%. The percentage of local equipment purchased in our centralized procurement has experienced a steady growth over the years.

Intensify strategic cooperation with banks to effectively hedge financial risks, raise returns on capital, and expand financing sources. In 2008, SGCC raised RMB 19.5 billion Yuan to fund grid construction projects through issuing corporate bonds.



1000 kV UHV shunt reactor installed at the Jindongnan Substation, UHV AC Experimental and Demonstration Project



The factory assembly of the first transformer for Fengxian Station, Xiangjiaba - Shanghai ±800 kV UHVDC Demonstration project.



## Participation of Stakeholders

Stakeholders	Stakeholders' Major Concerns	Corporate Response and Actions		
Power	Optimize planning for power grids and power sources to achieve coordinatecd development of grid and power source, and promote optimal resource allocation.	Optimize planning for power grids and power sources to achieve rationate design and realization of transmission project.		
generation companies	Ensure open, fair, and just power	Promote an open, just and fair 2-tier centralized tendering and procurement system, inhance communication with generation companies and dispatching information release.		
	dispatching in line	SGCC sticks to sound coordination between power generators to maintain safe and stable operation of power system, and achieve joint development of power market .		
	Participate in power grid project development and construction,	SGCC and equipment manufacturers make common efforts to develop key techniques and equipments, encourage independent innovation and technical upgrading, and promote localization of key equipments.		
Equipment suppliers	promote localization of power equipments, and push forward technical innovation of power	Adopt centralizedc tendering and procurement, to maintain fair competition and cut down cost.		
	industry	Give priority to energy-efficient, environment-friendly and resources-conserving equipment and technologies.		
Construction Companies	Upgrade the management of power grid construction projects to foster quality grid construction projects.	Improve project management together with designing, supervising and construction teams and promote the application of energy-conserving equipment, technologies and techniques to improve project quality.		
Industry association	Reinforce self-discipline within power industry, upgrade technology and management capacity	Oberserve industry regulations, sign commitment, host industry- wide activities and make active exchanges with peers to improve performance.		
Universities and research institutions	Strengthen industry-university- research interation	Share resources with universities scientific research institutes and jointly carry out staff training and exchange programs in areas such as equipment manufacturing, theoretical research and cuttingedge technologies, and establish strategic alliance for technical innovation.		
	Advocate and promote new	Implement a scientific development strategy, integrate scientific and technological resources, and accelerate the implementation of 2008 key sci-tech projects.		
	technologies	Enlarge investment in scientific research, set up expert teams to tackle technological obstacles, and provide sufficient fund and talents for scientific researches.		
Financial instutions	Strengthen cooperation with banks and jointly explore the capital market	Achieve common development with financial institutions, ensure capital support for grid construction, improve capital utilization efficiency, and control cost and management riskof the grid construction.		

Total interconnected capacity in SGCC's service areas



Total off-take electricity in SGCC's service areas



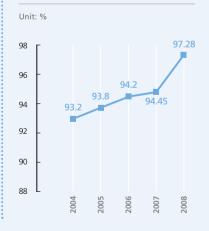
Total newly added capacity in SGCC's service areas



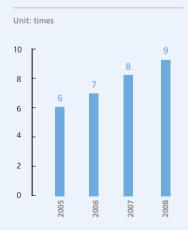
Centralized Tendering Volume



Localization rate of equipment purchased in Centralized Tendering



#### Times of winning of "Luban Prize"





The "Power for All" project was completed on September 30, 2008. It has been primarily reliazed in SGCC's service areas except Tibet Autonomous Region.

SGCC carries out the Central Government's strategy of building new socialist countryside and devotes itself to promoting prosperity of rural areas, agricultural development and famers' livelihood.



#### "Power for All" Project Has Been Primarily Accomplished in Rural Areas

In 2008, SGCC invested RMB 2.43 billion Yuan to continue implementing the "Power for All" project. Another 195,000 households with 758,000 people obtained electricity access. Since the project was initiated in 2006, a total of 1.186 million households with 4.394 million people were provided with electricity access.

By the end of 2008, we had invested RMB 13.7 billion Yuan in the "Power for All" project, newly built or upgraded 1,172 km of 110 kV transmission lines, 3,830 km of 35 kV, 60,648 km of 10 kV, and 132,423 km of low voltage. In addition, we built or upgraded another 38 substantions at 110 kV level, 200 at 35 kV and 36,338 distribution transformers.

It took us three years to complete the "Power for All" project in Qinghai Province, 14 months earlier than planned. 221,000 farmers experience the benefit of electrified modern life.

49-year-old Ren Qingben, a nomad living in Tiegai Township of Gonghe County, has six family members and raises more than 400 sheeps and 50 cattle. Qinghai Electric Power Company acclerated the Project in order to realize Ren's wish of watching live broadcast of Beijing Olympic Games in August. "With electricity, I can buy grinder to help me process cattle feed. Even in case of snowstorms, I don't need to worry about how to process their feed any more. We are grateful to the government and the power suppliers."

"With electricity, we nomads can deliver newborn lambs under bright lights, and water can be pumped from the wells to the sheepcote. Survival rate of lambs could be raised up to 90 percent," said Wa La, head of Niannai Suoma Village adjacent to the Qinghai Lake.

"Power for All" Project has created another miracle succeeding the rural grid refurbishment project. It lights up the hope for the nomads and will help improve their lifestyle, economy and cultural life," said Xu Fuchang, standing committee member of the provincial party committee and vice governor of Qinghai Province.





After toil and moil, we overtook every obstacle to bring light and hope for the farmers who live without electricity access



#### **Electrification in Rural Areas Witnesses Rapid Progress**

# Actively improve the rural grid in central and western regions

We invested RMB 7.64 billion Yuan to improve rural grids in central and western regions in 2008, and the total investment so far reached RMB 15.71 billion Yuan. It has made tremendous contribution to narrow the gap between the underdeveloped west and the more developed east.

#### Roll out rural electrification project

We cooperate with the government to push forward electrification and sustainable economic development in rural areas. In 2008, another 84 counties, 1,020 towns and 18,065 villages achieved electrification. Since we initiated the new countryside electrification, a total of 170 counties, 2,019 towns and 34,570 villages have achieved electrification.

# Strictly follow the unified tariff mechanism between urban and rural areas

By the end of 2008, a total of 1,663 counties in 25 provinces, autonomous regions and municipalities have realized the same residential tariff. Tariffs on various catalogues have been unified for 1,142 counties in 19 provinces, autonomous regions and municipalities. Residential tarrif for rural people was lowered from the RMB 0.756 Yuan/kWh in 1998 to today's 0.5373 Yuan/kWh. With the reduction of 0.2187 Yuan/kWh, people in rural areas pay RMB 26 billion Yuan less for their electricity bills.

"Electric meters tell the living standards of households." That is a comments that people in Jiangyin summarized to assess a new living style based on electricity consumption. More than 8,000 residents from 13 natural villages around the Changbai Village area have moved into its own Village Community, the Changbai Community, where the traditional way of living for farmers has virtually vanished. The number of so-called ``city-like villages" like the Changshan community have ballooned ever since. Jiangyin Electricity Supply Co. has allocated 8 kilowatts capacity for each household to light up the communities in accordance with the standard requirements of modern residential areas.

Rural electrification has revolutionized farmers' lifestyle here. It became China's first village to have private cars, Jiangsu province's first village to have color TV and air-conditioner. E-business has also became part of farmers' lives. As for Mr Zheng, who sells wall paint in Huahong Village in Zhouzhuang County, half of his business transactions were done on-line.

## 6

#### Overall Enhancement of Rural Power Enterprise Management

# Standardize the management of rural power enterprise

Standardize rural power sector, power enterprise management system, substation work flow, onsite operations and application of typical designs for rural power grids.

#### Build up the competence of rural power technicians

We set up a rural training base, improved the threetier training program at provincial, municipal and county levels, and provided tailored courses for all rural electricians. We organize various technical contests among rural electricians. A total of 226,000 people took part in the contests in the year. We require more rural electricians to hold professional qualification certificate and over 85 percent of the electricians have such certificates by now.

#### Promote benchmarking initiatives

We require the model companies set good example and promote their successful experience. In 2008, SGCC named another 66 county-level power supply companies which had reached the first-class standards.



Push forward the development of rural electrification



Service delivered to the door







## **Participation of Stakeholders**

Stakeholders' Major Concerns	Our Response and Actions		
Provide electricity access for people in rural areas	SGCC initiated the "Power for All" project in 2006 and will primarily realize the objective within its service areas by 2010. Nearly 1.2 million households with 4.5 million people will benefit from the project. By the end of 2008, a total of 1.186 million households had been provided with electricity.		
	We actively carry out rural grid construction and refurbishment as well as rural electrification, and further refurbish the county-level power grid, and improve the development of the power grid in midwestern China.		
Improve the power supply quality, lower its cost, and ensure	We enhance power supply safety management for high-risk customers, attach importance to publicity on safe power utilization in rural areas, and provide tailored onsite services.		
safe and economized power consumption in rural areas	We develop new technologies in rural power grid, strengthen reactive compensation management and improve the power supply quality.		
	Within SGCC's service areas, tariffs on various catalogues and residential tariff have been unified in 19 and 25 provinces, autonomous regions and municipalities respectively. China's rural residents have been exempted from a total of RMB 26 billion Yuan of power bills.		
Enjoy standardized and quality	We enhance standardization of power supply service, carry out tailored services for rural customers, fulfill our "Ten Promises" of power supply service and improve the service quality and management of rural power enterprises.		
rural power supply services	We intensify vocational training for rural electricians, organize various technical contests and improve their competence. Over 85 percent of the electricians have such certificates by now.		
Electric power helps create value for the development of the countryside, rural people's lifestyle and agriculture	We push forward the development of electrification in rural areas. A total of 86 counties, 999 towns and 16,505 villages have realized electrification.		

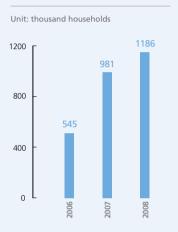


## Red-Jacket Help Center delivers power utilization safety knowledge in the countryside

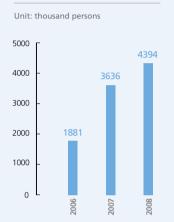
Hubei Jingmen Electricity Supply Company set up 312 Red-Jacket Help Centers in rural areas to familiarize the farmers with knowledge on safe power utilization and emergency treatment.

Establishing Red-Jacket Help Centers is an important part of building a harmonious society and serving the construction of new countryside, said Liu Tianzhong, head of publicity sector with the Jingmen municipal government.

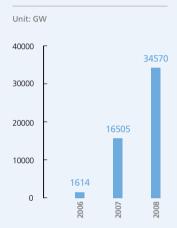
# Incremental Number of Househoulds Connected to Electricity



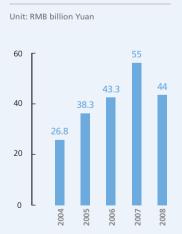
## Incremental Population of Electrification



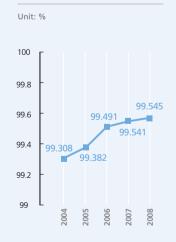
# Incremental Number of Electrified Villages



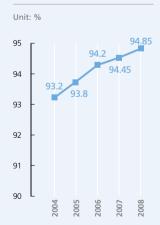
#### Investment on rural grid



## Rate of Rural Power Supply



# Voltage Qualification Rate for Rural End-Users





The Three Gorges-Shanghai  $\pm 500$  kV DC Transmission Project received the National Environment Friendly Project Award, the highest national award conferred by the State Environment Protection Bureau, on July 8, 2008.

SGCC promotes comprehensive environmental management, satisfy the requirements for environmental protection and energy conservation, and serve the construction of an energy-conserving and environment-friendly society.



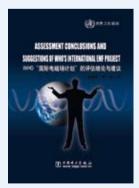
#### Steadily Advance Environmental Management in an All-around Way

As an energy supplier, we play an important role in promoting environmental protection and sustainable resource utilization. Therefore, we actively push forwad comprehensive environmental management to serve harmonious development of mankind and nature.

# Guildlines for comprehensive environmental management

- Recongize the influence of construction and operation of power grids on environment;
- Protect the environment during the whole cycle of strategy setting, planning, construction, production and customer service;
- Keep environmental protection and resources conservation in mind and participate in environmental management;
- Promote life cycle asset management on environment and implement environmental protection and resources conservation;
- Cooperate with stakeholders to promote environmental protection and resources conservation;
- Establish comprehensive environment management system, standardize management for continuous improvement.

# Framework for Developing Health-Based EMF Standards



SGCC issued the Chinese version of the Framework for Developing Health Based EMF Standard and Assessment Conclusions and Suggestions of WHO's International EMF Project published by World Health Organization.

# Key areas of comprehensive environmental management

- Apply project environmental evaluation, implement environmental protection measures and meet the requirement of Environmental Protection Acceptance Test:
- Put conservation as the priority and promote energy and resources saving;
- Promote low-carbon economy and reduce emissions of greenhouse gases;
- Continue to be environmental friendly and maintain biological diversification;
- Promote recycling economy, including recycle of waste water, waste gas and solid waste;
- Encourage technological innovation and application of environementally-friendly, energy-saving and energy-efficient technologies;
- Enhance education of environmental awareness on our employees, customers, partners and the society.

Currently, 59 of SGCC's 294 city-level electric power companies received qualification from the ISO14001 Environmental Management System.



#### Improve Environmental Management System

#### Define overall environmental action plan

- Fully implement national energy and environmental laws and regulations;
- Implement the strategy of Construcing UHV Grid to facilitate Large Thermal, Large Hydro, Large Nulcear Power Plants and Large Renewable Energy Base, realize efficient exploitation and green utilization of hydro power, wind power and solar energy and so on:
- Take energy conservation as priority. We raise the transmission capacity, lower the line loss and promote energy conservation and emission reduction by technical upgrading, application of new equipment, technology, and development of pumped storage power stations;
- Implement standardized construction, promote universal design of transmission lines and substations, and build "resources-saving, environment-friendly, industrialized" substations and transmission lines with "new technology, new material, and new techniques";
- Promote sustainable development in power generation and consumption, encourage the application of efficient and low coal-consumption generators and renewable energies, motivate customers to use electricity in a scientic and efficient way, and advocate energy conservation and emission reduction;
- Accelerate recycling economy and ecological economy, adopt life cycle asset management on environment, implement efficient utilization and recycle of energy, and minimize the influence of corporate operation upon the environment.

# Optimize comprehensive environmental management system

We explore effective means to develop environmentfriendly power grids and improve the environmental management system. We carry out relevant measures and regulations on environmental protection along with its management and supervision.

# Core technologies for the development of an environment-friendly power grid

We compiled R&D Framework of Core Technologies on Environmental Protection in Grid Construction and Operation, which covers five research topics and 24 subtopics, including theories, technology standards, measures for prevention and improvement, waste recycling, management and policy. It serves as a guide for all researches related to environmental protection in grid construction and operation, which is crutial for realization energy-saving and environment-friendly enterprise.

Beijing has a six-year plan to upgrade the electrical systems of 154,000 households within the second ring road, which would save 154,000 tons of standard coal and reduce 441,000 tons  $\rm CO_2$  and 3,450 tons  $\rm SO_2$  emission. This will significantly improve air quality and protect historical relics. From 2003 to 2007, SGCC invested a total of RMB 1,287 billion Yuan to implement the "Replacing Coal with Electricity" project for 34,000 households. In 2008, we have accomplished the upgrading for another 47,000 households.

## 6

#### **Progress in Environmental Management**

The development of the UHV grid contributes to lowering line loss, optimizing the power network structure, saving land resources and investment. We take advantage of the environmental capacity, alleviate environmental impact and, as a result, save reserve capacity and shift peak loads. Other benefits include cross-drainae competition, mutual complementation between hydropower and thermal power generation. By building up large thermal, hydro, nuclear and renewable engery bases and promoting scaled development and clean use of coal resources, we are dedicated to drive the development of zero-carbon emission renewable energies such as hydro, nuclear and wind power.

We develop environment-friendly, economized and energy-efficient technology to facilitate the study and application of new technologies and equipment such as energy storage, NAS battery, electric vehicle, and electric heat pump. We also set up a SF<sub>6</sub> laboratory specialized in collection and refilling of SF<sub>6</sub>, and developed pilot programs in six subsidiaries.

We adopt various measures to tap power grid's potential in energy resources allocation. Taking into consideration of different sections of power grids, we apply tailored simulation technology, control technology, power transmission technology, management system and equipment for different cases. Since Feburay 2005, SGCC consecutively implemented five projects to increase transmission capacity. We managed to improve our transmission capacity by 154 GW and effectively solved many bottleneck problems. The effect of the increased capacity equals to 150 circuits of newly constructed 500 kV transmission lines, saving a lot of investment. We applied many new technologies, equipment and techniques to lower line loss, such as large-capacity SVC, SC and TCSC technologies, amorphous alloy energy-saving transformer, compact-type transmission line and multicircuit transmission lines on same tower. The development of pumped storage power stations could meet the demand of peak loads, improve load characteristics, maintain the operational stability of the power grid, optimize the quality and reliability of the power supply, and enhance energy conservation and reduce energy consumption.



Attach great importance to environmental protection during project construction



Develop technologies to replace oil with electricity and promote electric vehicles

Promote standardized construction and boost energy conservation and resources efficiency. We circulate the "SGCC Guidelines on Life-Circle Design and Construction of Transmission and Substation Projects", and promote optimized universal design to build resource-saving, environment-friendly, industrialized substations and resource-saving, environment-friendly transmission lines using new technology, new materials and new techniques. Regarding design principles, SGCC promote life-circle optimized design and implement both standard design and tailored design, making full use of the new technology, new materials and new techniques and saving the overall costs in construction and operations.

We abide by utilizing green construction processing and well-tailored technologies. We allievate the damages of power grid construction to vegetation and forests, reduce soil erosion, restore the natural environment after construction and minimize negative impacts upon the environment.

Make trial operations of energy-saving electricity dispatch in a regulated manner. We implement the country's energy-saving power dispatch regulations and develop a supporting system to carry them out. We set up pilot centers in Jiangsu, Sichuan and Henan provinces to start the energy-saving power dispatch system, which gives priority to renewable energy, nuclear and combined heating and electricity supplies, and reduces energy waste and pollution.

SGCC adopts renovated design and techniques during construction and upgrading of electricity networks, achieving a harmonious co-existence of power grids and sightseeing attractions.

In July 2008, the Sanqingshan scenery spot officially became China's 7th and Jiangxi's only World Natural Heritage Reserve. During the renovation of power grids and expansion of substations at the Sanqingshan site, we placed the underground cables and painted the towers and the equipment buildings to make then in tune with the natural scenery. We also adopted the electricity storage technology to supply clean, green power to the scenery site.

At the same time, the Tulou tower in Fujian was selected as China's 36th World Cultural Heritage project. During the renovation of power lines in Tulou, we put all the cables underground and hid all the lines inside the rooms to remain an original view of the site.



Lay underground cables for Zhenfu Tower, a renouned building in Fujian.

We actively encourage trading of generation rights, so as to replace small power plants with bigger ones, thermal power plants with hydropower plants. In 2008, 98.962 TWh of electricity has been traded, by which 9.0575 million tons of standard coal were saved and emissions of 269,000 tons of SO<sub>2</sub> were reduced.

Anhui Electric Power Company persuaded local government to issue pricing policy for electricity generated by proxy generators and called for the power generators to adopt various models of generation rights trading, such as internal replacement and trans-province power transmission. By these, the internal generators enjoy a priority with generation rights and the generators of the "Anhui-to-Eastern China" power transmission project were used to produce power instead of small generators in Anhui province. A total of 10 TWh of electricity has been traded in 2008.

The Anhui Provincial Development and Reform Comission had given high appraisal to this: "Generation rights trading could help to reduce energy consumption and emissions. It benefited the power generating companies, optimized power allocation, promoted economic and social development in line with environmental protection. It is a good example of scientific outlook on development".

Underground substations fits into the surrounding environment.

We strengthen the demand-side management and promote the application of energy conservation and environment-friendly technologies. In 2008, we constructed several demand-side management pilot projects, which saved 4.3 TWh of electricity and, which is equivalent to 1.535 million tons of stardard coal. A total of 5.33 tons of CO<sub>2</sub> emission had been reduced by our effort. We also promote the application of environment-friendly and energy-efficient technologies such as energy storage, green lighting and electric vehicles, etc.

We actively initiate activities to promote environmental protection. We organized a theme party on "Health, harmony and electricity makes life better" on July 5th, the World Environment Day. We took this occasion to promote knowledge about electromagnetic environment of power transmission and transformation equipment, daily power consumption tips and power conservation.

We promote the development of renewable energy development and the application of green power. SGCC promises to pay full price to purchase electricity generated by renewable energies. We encourage ourend users to use green energy, to lead a green lifestyle and to support renewable energy development.



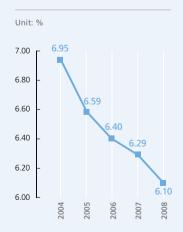
Leaf-shaped lightpole makes the city more beautiful.



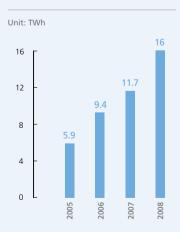
## **Participation of Stakeholders**

Stakeholders' Major Concern	Corporate Response and Actions		
	The development of the UHV grid will lower line loss, optimize power network structure and effective utilization of energy resources through long-distance, large capacity and large scale power transmission.		
Adhere to coordinated development of economy, society	The development of pumped storage power stations will meet the demand of peak loads, improve load characteristics, and enhance energy conservation and reduce consumption.		
and environment in process of the power grid development	We develop environment-friendly, economized and energy-efficient technology to facilitate the R&D and application of new technologies and equipment such as energy storage, NAS battery and electric vehicles.		
	We encourage the construction of large renewable energy bases and support renewable energy development.		
	We strictly carry out the environmental impact assessment of power grid construction and regulate environmental management.		
Execution of environmental	We adopt advanced technologies to choose the best transmission corridors and substation sites and take environmental factors fully into consideration.		
protection and energy conservation requirements during	We promote universal design for substations and advocate application of energy conservation and environment-friendly equipment.		
construction of power grids	By utilizing green construction processes and well-tailored technologies, we alleviate the negative impects of the power grid construction to the natural environment adjacent to the project sites. We will also restore the natural environment after construction and minimize negative impacts upon the environment.		
Assess the impact of asset on the environment during life-cycle.	With the application of asset life-cycle management priciples, we implement comprehensive environmental management.		
Assess the impact of people's activities on the environment	We encourage our staff to implement environmental protection in their daily life and we advocate environmental protection knowledge.		





## Annual power saved by line loss



# SGCC's Three Gorges-Shanghai ±500 kV HVDC transmission project received China's top award conferred by State Environment Protection Bureau

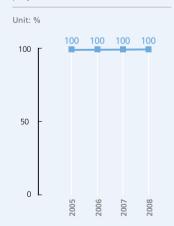
The project adopted many advanced technologies to promote environmental protection and energy conservation. We used Helava satellite technology and aerial shooting technology to choose the best corridor. We also developed the world's first F-shaped tower to reduce corridor land occupation. We widely applied the foundation design of tower with legs at different height. We actively promote "Green Construction" by reducing tree cutting, household reallocation and soil erosion. It's the first time we take noise reduction measures into our substation project design. The project won various awards, such as "Quality Project" of China's Power Industry, 2007 Annual Prize for Best Power Transmission and Conversion Project in Asia, and the National Environment Friendly Project Award.

#### Great achievements in energy conservation and emission reduction

SGCC has made great achievements in energy conservation and emission reduction after a series of measures, such as technical upgrade, power generation rights trading, promotion of environment-friendly, energy-conserving and energy-efficient technologies, and demand-side management pilot projects, etc. In 2008, these efforts helped to save 16.59 million tons of standard coal and reduce the emissions of 46.14 million tons of CO2 and 395,000 tons of SO2. These achievements include:

- The line loss has been lowered by 0.19 percentage point compared with the same period of last year, which is equivalent to saving of 4.3 TWh of electricity or 1.53 million tons of standard coal.
- Optimize reservoir regulation. Additional hydro energy of 11.5 TWh were saved, which equals to 4.08 million tons standard coal.
- Launch trading of generation rights. 98.962 TWh of electricity has been traded and 9.06 million tons of standard coal has been saved.
- Implement demand-side management pilot projects. A total of 5.4 TWh of electricity was saved, which equals to 1.92 million tons of stardard coal.

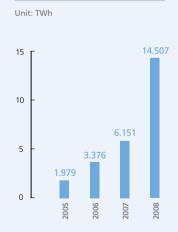
#### Environmental impact assessment (EIA) rate of power grid construction projects at or above 330 kV



# Synchronized capacity from renewable energies



# Total Off-take Electricity from renewable energies





In August 2008, over 2,000 SGCC employees served as Olympic volunteers at Olympic venues and communities in urban and suburb areas.

Playing a leading role in SOEs, we fulfill our obligations as a responsible corporate citizen and comply with laws, regulations and social value standards. With a strong commitment to promoting social morality, welfare, and justice, we make contribution to the construction of a harmonious socialist society.

## Stick to Law-abiding and Faithful Business Operation

We strictly comply with laws and regulations and promote transparent business operation. A series of educational activities were carried out to promote laws and regulations in officies, workshops, countrysides, communities and subsidiaries. In 2008, SGCC was awarded as a model company in law compliance and invited by the Ministry of Justice as the only enterprise in an experience exchange senimar.

We carry out the policy of serving the development of the country, customers and generation enterprises, establish sound and active corporate culture and play a leading role among all SOEs.

An internal control and supervision system is intensified to guarantee legal and sustainable development of the company and find out problems by restructuring operational management and analyzing autiding results. We carry on with comprehensive risk management and improve our risk management system on planning, construction, production and operation. In addition, we strengthen prevention, detection and punishment of corruption to render a fair and self-disciplined management team, and implement the 2008-2012 Working Programme on Establishing Corruption Punishment and Prevention System.



Actively participate in 2010 Shanghai World Expo



A Project Hope school sponsored by SGCC



## **Support Public Undertakings**

We actively donated for inflicted areas in the snowstorms and earthquakes. SGCC staff donated a total of RMB 115 million Yuan for the ice and snow disaster and RMB 210 million Yuan for the Sichuang Earthquake, among the latter RMB 76 million Yuan came from our employees and retirees, and RMB 105 million Yuan came as "special party dues".

We carried out a series of public undertakings, ie. Power makes modern life style for supporting renewable energy development, Power for All Project, Green Power, A Project Hope, Youth Sunshine Active and so on. Since 2003, a total of 700,000 man-times of SGCC volunteer service have been recorded in "Youth Sunshine Day" theme activities.

We actively boost the Tibet-aiding program and the poverty-relief program. From 2002, SGCC allocated RMB 80 million Yuan as the financial aid for Cuoqin County, Tibet. SGCC make efforts on poverty relief, having donated RMB 57 million Yuan to Changyang County, Zigui County, Badong County and the Shennongjia forestry. The donation stimulated a further investment of RMB 181 million Yuan from the local areas, completing 217 poverty-relief projects. SGCC was awarded the title of "One of Leading State-Owned Companies in Poverty Relief" by the Sate Council Leading Group Office of Poverty Alleviation in 2008. We support the "Mother Well" public project initiated by the All-China Women's Federation, donating RMB 1 million Yuan to help solve the water-supply difficulties faced by 1,000 households, or 5,000 people.

Since 2004, the East China Company has carried out the "Poverty Relief Campaign in Under-developed Areas" for five years in Liu'an of Anhui, Longyan of Fujian, Tonglu, Tiantai and Jiande of Zhejiang. The campaign highlighted the historical, local and SGCC's characteristics, donating more than RMB 700,000 Yuan to local poverty-stricken residents and students, applauded by the local governments and residents. The East China Company paid due attention to an interaction between SGCC and local society and helps the local people develop skills to improve their living standards, contributing to the development of those regions. This campaign won the award of "Excellent Achievement by a Chinese Company to Promote Cultural Construction."







We strictly observe the donation contract with the Ministry of Civil Affairs, China Disabled Persons' Association, and China Youth Development Foundation and push forward the projects to help school dropouts, people with disabilities and the elders

## 6

## Promote Efficient and Regulated Operation of SGCC Love Care Fund

We set up a Love Care Fund Management Committee, issue fund management regulations, and register this public welfare foundation at the Ministry of Civil Affiars. We manage this foundation with regulations, scientific measures and rules.SGCC makes more efforts to help school dropouts, disabled people and the elderly.

SGCC donated RMB 120 million Yuan for the China Youth Development Foundation to set up a "SGCC Project Hope Foundation". The initial denation of RMB 40 millioin Yuan helped to draw another RMB 50.7 million Yuan investment from the local government. With these donations, the first batch of more than 100 SGCC Hope schools were built up.

SGCC donated RMB 60 million Yuan for the China Foundation for the Disabled Persons to set up a "SGCC Help Disabled Persons Foundation". The initial donation of RMB 20 million Yuan was used to buy artificial limbs and install barrier-free facilities at airports for the disabled. SGCC also donated RMB 60 million Yuan for the Ministry of Civil Affiars to set up a "SGCC Help the Elderly Foundation". The initial donation of RMB 20 million Yuan was used to assist more than 10,000 widowed elders in Hubei province and five other provinces, autonomous regions and municipalities.

Sui Jiali, a primary school student studying at SGCC Love Care Hope School newly established in 2008 in Dongjin Township, Beilin District, Suihua City of Heilongjiang Province said, "We will treasure this rare opportunity to go back to school. We will study harder, aim higher and will repay our society with good moral standards and excellent academic achievements. We will pass on SGCC's love to us for ever."

## Make wise renovations on historical architecture, and create the utmost social values

The original office of the Tianjin Company is located in the Hebei district. Built in 1904 by the Belgians, the architecture belonged to the "Belgian Electric Lamp and Traction Co." The building risked being removed as the Tianjin government accelerated city construction. The Tianjin Company made in-depth research into the cultural implications of the historical architecture and the functional position of Hebei District, and therefore renovated it into the Tianjin Electric Technology Museum, a specialized exhibition hall integrating history and technology. According to Tianjin's development plan, the Hebei district will be built into a cultural tourist base concentrating on cultural, historical and religious heritages. Redeveloping the Belgian building into an exhibition on the 100-year history of Tianjin's power industry, while retaining the architecture's original outlook, is a multi-win solution to create the utmost social values of the site: 1) it maintained the relics that witness Tianjin as a Recent Industrial Cradle; 2) it connects with the 120th anniversary of Tianjin's power industry; 3) it lifts the historical, cultural and technological implications of the district; 4) Its helps disseminate the knowledge of the power technology, of electricity safety and energy conservation; 5) It provides the local residents and tourists a place of sightseeing, entertainment and educating the children on energy knowledge. The museum was opened to the public for free on Oct. 18 2008, becoming an technology educational base for Tianjin's students.



#### **Volunteer Activities**

Based on the conditions and characteristics of power grid enterprises in different parts of the nation, SGCC establish volunteer groups from all subsidiaries. We successfully created a series of special, systematic and influential volunteer service brands. According to preliminary calculation, SGCC currently has about 300,000 volunteers, and during the six years between 2003 to 2008, a total of 500,000 man-times of SGCC volunteer service was recorded.

- Shandong Zibo Electricty Supply Co. initiated the "Shanxiao (helping the children)" Voluntary Service Campaign, upholding the concept of "Caring for Others and Contributing to the Society." Over the years, the project has helped 303 school dropouts and more than 4,500 people from the vulnerable groups, donating a total of RMB 1.27 million Yuan to the society. In October 2005, "Shanxiao" was registered at the National Industrial and Commercial Administration as the first educational brand applied by a company.
- SGCC's Shanghai Company initiated the "Electricty Young Volunteers Targetting Service to Individual Communities" project. Those volunteers make their names and contacts public to the local residential communities and offer them tailored services.
- The Sichuan Company pushed ahead the construction of clubs for children whose parents work in regions away from home, benefiting more than 60,000 students in the rural areas.
- Fujian Quanzhou Electricty Co. carried out the "May Flower" Young-Helps-the-Old Initiative, offering longterm help to the elders with no children.

- Tianjin Company organized the "Heart-to-Heart" voluntary service, integrated with the local community-wide voluntary teams to provide services such as electricity-use consultation, help to the poverty-stricken families and the elderly.
- Jiangsu Nanjing Electricity Supply Co. organized the Red-Jacket Voluntary Teams, improving lighting facilities free of charge for the schools of migrant workers' children and some home to the aged with poor economic conditions.
- Henan Zhengzhou Electricity Supply Co. organized the "Leifeng" Power Rescue Teams, offering freeof-charge help to the widowed elders, the martyr's dependants and wounded soldiers.
- Zhajiang Company initiated the "Yellow, Green, Red Caring Link" youth voluntary services, organizing the young employees to spread knowledge on electricity use, conduct safety checks on power supply and organize summer camps.

One major social problem existing in the current rural villages lies in the fact that a large number of young labor forces working in areas away from their hometown, leaving their aged seniors and children alone at home. Such a problem outstands in Sichuan province of a big population. A total of more than 19 million local residents working outside their hometowns in Sichuan, and the number of children left alone reaches more than 3 million.

The Sichuan province cares about those people and their children in the rural villages, and plans to spend two years building 200 clubs for those children without their parents around. Seventy five of such clubs have been put into operations so far.

In the "Sichuan Power Left-Alone Children Home Clubs," volunteers from the Sichuan Power Company act as the temporary parents of those children. Those volunteers offer long-term and stable care and love for those children through frequent helps during weekends and holidays, heart-felt conservations once a week, home visits once a month, extra-curricular activities every six months and group birthday celebrations once a year.



## **Actively Provide Services to Community Construction**

The company makes great efforts to push ahead community service through activities such as Power Service into Communities and Harmonious Community Construction.

The company has established more than 1,000 trial stations of electricity services in communities, specifying content and forms of such services. Such an initiative provides electricity-use consultation and facilitates local residents in making power transactions. It also equips local residents with updated information of power blackouts, cut-offs and knowledge on consuming electricity safely and in an energy-saving way.

Teacher Xiao Guo's electricity safety lessons are a special course for pupils at the Anhui Langxi Dongxia Central Elementary School. Guo Jie, a young Wanling Sunshine volunteer from the Anhui Xuancheng Electrcity Supply Co., makes frequents visit to the school to lecture on safety knowledge of electricity usage. Langxi has many local residents going outside the county to seek working opportunities, and the Dongxia Central Elementary School has 987 students, 68 percent of whose parents work away from the hometown and leave the children alone at home. "You come to visis those children, not only giving them knowledge to use electricity safely, but also loving help to live a confident life," Headmaster Wu of the school commented on the power volunteers with gratitude.

Guo Jie offered more than 100 times voluntary service in the community, providing help to the disabled and the widowed elders, benefiting almost 1,000 people. Guo spent mor ethan 770 yours in his position as a power volunteer. In August of 20008, Guo Jie was awarded the title of "Top 100 Excellent Volunteer in China" by the Central Youth Legue Committee of the Chinese Communist Party.







Integrate resources of various volunteer organizations, set up a lasting mechanism for volunteer services, and establish a brandname for our volunteer services





Stakeholders' Major Concerns	Corporate Response and Actions	
	We strictly comply with laws and regulations, social ethics and industri standards, fulfill taxation obligations and actively implement the idea claw-based corporate governance.	
Law-abiding Business Operation	We strengthen the building of a clean and honest management team by prevention, detection and punishment of corruption.	
	We implement the 11th Five-Year Plan for ethical and cultural progress, and carried out "integrity campaign".	
	We set up strict and effective internal control and supervision systems to ensure law-abiding business operations.	
Play a major role as a moral representative of Central SOEs	We promote social moral and business ethics. We had been an excellent partner of 2008 Beijing Olympic Games and we observe our commitment as a partner of 2010 Shanghai World Expo.	
	We actively respond to the country's policies and guidelines to promote poverty-relief and Tibet-aid projet.	
Develop a plan for strategic public undertakings	We make full use of SGCC's advantages, give free lectures in communities and campuses about how to use electricity safely, and help our end-users to eliminate potential hazards.	
<u>J</u> .	We actively develop socially-beneficial new technologies and offer our users clean energy.	
	We try to bring our services and practices to a wider range of people.	
	We choose themes of our public undertakings based on the particular conditions of our country and the company.	
Support public undertakings with systemized, scientific and regulated measures	We invite our stakeholders to participate in the planning, goal-setting and feasibility study of the public undertakings.	
	We carry out result evaluation, based on the returns brought to SGCC and the society.	
	We improve the volunteer service system, integrate resources of various volunteer organizations, and form volunteer groups from all subsidiaries	
Set up a long-term mechanism for volunteer services	We establish powerful volunteer service brands, and play up the social impact of volunteerism.	
	We go into communities, make use of our professional advantage and foster social harmony.	



#### Focus on core business and promote professional ethics

Every subsidiary has established teams to encourage employees to provide voluntary services, focusing on the core responsibilities such as safeguarding electricity supply, providing quality service and promoting energy conservation and environmental protection. Those volunteers all resolutely devoted themselves to the urgent and risky assignments, not only in ensuring adequate power supplies in major events, but also in combating natural disasters such as typhoons, droughts, snowstorms and earthquakes. In the efforts to fight the devastating natural disasters and safeguard electricity supplies to the Olympics in 2008, SGCC sent 125 voluntary teams to the frontiers, having played a leading role and made important contributions. The Sichuan branch of SGCC's Youth Voluntary Service Team was awarded the title of "Excellent Voluntary Group in Earthquake Relief" by the Central Youth League Committee of the Chinese Communist Party.

#### 6

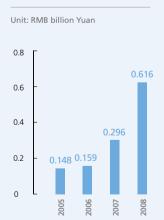
#### Promote communities development, care people's livelihood

Zhejiang Company helped the community development in more than 150 residential areas by establishing a power supply work team comprising community officials, power supply managers and local residents. The power supply company assigned key account managers to different communities, setting up information bulletin boards on electricity supply updates, opening service hotlines and establishing an electricity-use information search system. The Community Development Program includes 12 parts such as power outage notice, troubleshooting reports and meter checkups, extending electricity supply to all households. The initiative has established an interactive system between power supply companies, the community management officials and local residents.

In addition, Zhejiang Company has introduced the program to villages. "Those services, though plain and small, reflect the electricity company's heart-felt care to issues concerning peoples livelihood," Jin Ganying, standing member of the Disciplinary Committee at Huzhou Municipal government in Zhejiang.



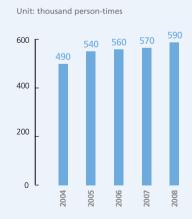
\*incomplete statistics



#### Tax Paid



#### Volunteer Service







The 2008 Beijing Olympic Games and Beijing Paralympic Games closed on August 24 and September 17, 2008 respectively. IOC President Rogge described the Beijing Olympic Games as an "exceptional Olympics".

From July 27, 2008, when the first international athletes arrived in the Olympic Athletes Village till September 17 when Paralympic Games closed, SGCC served as the official partner supplying power for the two Games. We fulfilled our commitment of safe power supply for the two games with "zero mistake, zero accident" during the Games.

SGCC ensured power supply for 40 Olympic venues, 62 training venues in 6 cities, 239 Olympics-related important clients with reliable and stable power supply from hundreds of substations and thousands of kilometers of transmission lines.

SGCC has equipped all power supply sources with backups, built 13 standby dispatching systems, formulated 1792 emergency scenarios in the three-tier command system in SGCC headquarter, regional/provincial power companies and the games venues. SGCC has mobilized 3,000 technical experts, 300 maintenace vehicles and 28 power-generation vehicles.

SGCC has successfully fulfilled the uninterrupted power supply for the 29th Olympic Games which was distinguished with unprecedented complexity and scale. State Grid Beijing Electric Power Company won the honor of "Best Performer in Beijing Olympic and Paralympic Games".



## Outlook for 2009

#### Scientific Development

- Establish a strong national power grid with UHV lines as the backbone and a coordinated development of subordinated transmission lines
- Commission 52,000 km of 110 kV and above AC transmission lines and 260GVA transformation equipment with a total investment of RMB 253.3 billion Yuan.
- Secure safe operation of the UHV AC Pilot Project and push the development of UHV DC Demonstration Project.
- Increase transmission capacity.
- Trade power of 270 TWh in the National Power Exchange Center.

#### Power Supply Safety

- Standardize the production safety management process.
- Identify, prevent and appraise risks for the power suppliers to ensure safety.
- Identify and resolve hidden risks for high-risk and important

#### customers.

- Improve emergency response mechanism with an emergency command center to better address emergencies.
- Avoid the cascading of black-out.

#### **Excellent Management**

- set up an inter-department coordination mechanism based on business process.
- Lauch asset life-cycle management system.
- Establish an integrated logistics system.
- Further centralize the tendering process.

- Centralize the capital, the reserves, the budge and the settlement management.
- Reap a revenue of RMB 1.2 trillion Yuan.
- Achieve overall productivity of RMB 286,000 Yuan/ person·year.

#### **Technical Innovation**

- Deepen technology strategy with emphasis on teambuilding, research, yields, application and promotion.
- Consolidate technological resources and increase investment output.
- Improve mid-and-long term development plan for scientific and technological research.
- Invest RMB 13.5 billion Yuan in scientific and technological research.

#### Communication and Cooperation

- Enhance dialogue with stakeholders.
- Implement the minutes of meetings between SGCC and provincial governments.
- Hold 16 press conferences.
- Release power dispatching information for 500 times.

#### Global Vision

- Promote energy cooperation with Russia and Mongolia.
- Establish an efficient and effective logistics system under the international tendering platform.
- Promote overseas training of the executive to strengthen
- international cooperations.
- Be active in formulation and promotion of international technical standards

#### Quality Service

- Implement "Ten Prohibitions" against employee's misbehaviors.
- Reduce electricity outages than that of 2008.
- Increase urban voltage qualification rate higher than that of 2008.

#### **Employee Development**

- Safeguard employees' legitimate rights and keep the stability of the workforce.
- Protect employees' work safety.

- Improve employee career plans and staff training programs.
- Involve employees in the corporate management.

#### Win-Win Cooperation

- Dispatch in the principle of "Open, Fair and Just".
- Boost the localization of electric power equipment.
- Research and develop key technologies with business

#### partners.

Strengthen cooperation with banking institutions.

#### Serving Aguiculture, Countryside, and Farmers

- Reinforce electrification and the "Power for All" Project.
- Less annual average electricity outage than that of 2008.
- Keep the rural voltage qualification rate higher than that of 2008.
- Standardization of rural power enterprises managmentment.
- More investment in rural electricians training than 2008.

#### **Environmental Protection and Energy Conservation**

- Lower the line loss from 6.10% in 2008 to 6.05%.
- Maintian the 100% Environmental Compliance of 330 kV and above power grids.
- Promote energy conservation by trading power generating rights of 100 TWh and above.
- Prioritize the dispatching of energy-saving generation.
- Adopt energy-saving technologies.
- Provide grid access to the generated green electricity.
- Increase the proportion of electricity in the entire energy consumption.

#### Corporate Citizen

- Comply with laws and regulations, be self-disciplined and credible.
- Launch poverty-relief and Tibet-aiding program.
- Observe our commitment as a partner of 2010 Shanghai World Expo.
- Implement the second phase of the "SGCC Loving Care Fund" project.
- Ecourage our employees to take part in voluntary activities.
- It is estimated that voluntary services throughout the whole year will total up to 600,000 man-times.

## **UN Global Compact: Initiatives and Performance**



SGCC implements Ten Principles of UN Global Compact, builds all-round CSR management system, and improve its economic, social and environmental performance.

#### Ten Principles of UN Global Compact

#### **Human Rights**

- Support and respect the protection of internationally proclaimed human rights
- 2. Ensure company is not complicit in human rights abuses

#### **Labour Standards**

- 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining
- 4. Eliminate all forms of forced or compulsory labor
- 5. Effectively abolish child labor
- 6. Elimination of discrimination in respect of employment and occupation.

#### **Environment**

- 7. Take a precautionary approach to environmental challenges
- 8. Undertake initiatives to promote greater environmental responsibility
- 9. Encourage the development and diffusion of environmentally friendly technologies

#### **Anti-Corruption**

 Businesses should work against corruption in all its forms, including extortion and bribery.

#### **Initiatives and Performance**

- Comply with Chinese laws, regulations and standards.
- Observe international conventions and declarations signed or recognized by the Chinese government, and respect Declaration of Human Rights, International Covenant on Civil and Political Rights, International Covenant on Economic, Social and Cultural Rights, etc.
- Establish staff congress and labor union at all levels of SGCC to promote equal consultation and collective contract system, enhance democratic staff management and supervision, and protect the lawful rights and benefits of employees.
- Prohibit forced or compulsory labor.
- Prohibit the use of child labor.
- Establish fair and open selective employment mechanism based on the principle of competition; eliminate all kinds of discrimination in respect of nationality, gender, sexual orientation, religious belief, national or regional difference, age and disease, etc.
- Implement sustainable development strategy and develop UHV grid to reduce installation, loss and transmission corridor, and optimize resource allocation.
- The power grid construction projects all went through strict EIA procedures and met high environmental protection standards.
   The 1000 kV UHV transmission line implemented even the same electromagnetic environmental standards as that of 500 kV transmission line
- Promote standardized construction, universal design, equipment and cost, standardized technology to cut down on resource consumption.
- Instruct customers to use energy efficiently, encourage them to use green energy, and support the development of renewable energy.
- Develop energy-saving, environment-friendly, and high-efficiency technologies to reduce line loss and increase the transmission capacity of present grid. Promote R&D and application of new technologies and facilities such as energy storage technology, NAS battery, plug-in hybrid vehicle, and amorphous alloy transformer, etc. Promote the clean coal combustion technology.
- Foster honesty and self-discipline in management by setting up a mechanism for prevention and treatment of corruption.
- Treat reports about corruption appropriately and prevent corruption efficiently.
- Combat business bribery by liability auditing and performance surveillance of chief executives of SGCC during their tenures.
- Provide anti-corruption policy training to each and every employee.

# **GRI Index**

	No.	GRI	G3 Standards	Index
1.Strategy and	1	1.1	Statement from the most senior decision-maker of the organization about the relevance of sustainability to the organization and its strategy.	P2~4/P9~13
Analysis	2	1.2	Description of key impacts, risks, and opportunities.	P2~4/P9~13
	3	2.1	Name of the organization.	cover/P5
	4 5	2.2	Primary brands, products, and/or services.  Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	cover/P5/P59 P6~7
2.Organizational	6 7	2.4	Location of organization's headquarters.  Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	Inside back cover P5/P48~51
Profile	8	2.6	Nature of ownership and legal form.	P5
	9 10	2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).  Scale of the reporting organization, including: number of employees, net revenues, quantity of products or services provided and total assets.	P5/P48~51 P5
	11	2.9	Significant changes during the reporting period regarding size, structure, or ownership.	P6
	12	2.10	Awards received in the reporting period.	P3~4
	13	3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	Report Brief
	14	3.2	Date of most recent previous report (if any).	Report Brief
	15	3.3	Reporting cycle (annual, biennial, etc.)	Report Brief
	16 17	3.4 3.5	Contact point for questions regarding the report or its contents.	Report Brief/P14, 15
	17	3.5	Process for defining report content, including: determining materiality; prioritizing topics within the report; and identifying stakeholders the organization expects to use the report.	Report Brief/P14~15
	18	3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers).	Report Brief
	19	3.7	State any specific limitations on the scope or boundary of the report.	Report Brief
3.Report	20	3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other	P6~7/P14~15
Parameters	21	2.0	entities that can significantly affect comparability from period to period and/or between organizations.	Depart Drief
	21 22	3.9 3.10	Data measurement techniques and the bases of calculations.  Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of	Report Brief Report Brief
	23	3.11	business, measurement methods). ignificant changes from previous reporting periods in the scope, boundary, or measurement methods	Report Brief
	24	3.12	applied in the report.  Table identifying the location of the Standard Disclosures in the report. Identify the page numbers or web links.	P101~105
	25	3.13	Policy and current practice with regard to seeking external assurance for the report.	P106~107
	26	4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	P14~15
	27	4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	P14~15
	28	4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	P14~15
	29	4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	P62~67
	30	4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives and the organization's performance.	P14/P63~65
4.Governance	31	4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	P2~4/P14~15
	32	4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	P14
	33	4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	P2~4/P8/P56/P70
	34	4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	P14~15/P30~35

	No.	GRI	G3 Standards	Index
	35		Processes for evaluating the highest governance body's own performance, particularly with respect to	P14~15/P65
	36	4.12	economic, environmental, and social performance.  Explanation of whether and how the precautionary approach or principle is addressed by the organization.	P14~15/P24~29
	37	4.13	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	P2~4/P100~105
4.Governance	38	4.14 4.15	Memberships in associations (such as industry associations) and/or national/international advocacy organizations.	P7
	39	4.16	List of stakeholder groups engaged by the organization.	P9~11/P42~47
	40 41	4.17	Basis for identification and selection of stakeholders with whom to engage.  Approaches to stakeholder engagement, including frequency of engagement by type and by	P9~11/P42~47 P9~11/P14~15/P42~47
	42		stakeholder group.  Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	P15/P22/P28/P34/P40/P42~47/P51/ P60/P66/P72/P78/P94
	43	EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to	P30~35/P73/P87/P90~95
	44	EC2	capital providers and governments.  Financial implications and other risks and opportunities for the organization's activities due to climate change.	P2~4/P12~13/P81~87
	45	EC3	Coverage of the organization's defined benefit plan obligations.	P62~67
5.Economic	46	EC4	Significant financial assistance received from government.	Not in this case
Performance	47	EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.	P62~67
Indicators	48	EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	P68~73
	49	EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation.	P62~67
	50	EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	P74~79/P88~95
	51	EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	P74~79/P88~95
	52	EN1	Materials used by weight or volume.	P5
	53	EN2	Percentage of materials used that are recycled input materials.	P5
	54	EN3	Direct energy consumption by primary energy source.	P80~87
	55	EN4	Indirect energy consumption by primary source.	P80~87
	56	EN5	Energy saved due to conservation and efficiency improvements.	P80~87
	57	EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	P80~87
	58	EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	P80~87
	59	EN8	Total water withdrawal by source.	P80~87
	60	EN9	Water sources significantly affected by withdrawal of water.	P80~87
6.Environmental	61	EN10	Percentage and total volume of water recycled and reused.	P80~87
Performance	62	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	P80~87
Indicators	63	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	P80~87
	64	EN13	Habitats protected or restored.	P80~87
	65	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	P12~13/P80~87
	66	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	P80~87
	67	EN16	Total direct and indirect greenhouse gas emissions by weight.	P12~13/P80~87
	68	EN17	Other relevant indirect greenhouse gas emissions by weight.	P80~87
	69	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	P12~13/P80~87
	70	EN19	Emissions of ozone-depleting substances by weight.	Not in this case
	71	EN20	NO, SO, and other significant air emissions by type and weight.	P80~87

	No.	GRI	G3 Standards	Index
	72	EN21	Total water discharge by quality and destination.	Not in this case
	73	EN22	Total weight of waste by type and disposal method.	Not in this case
	74	EN23	Total number and volume of significant spills.	No similar situation
	75	EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the	Not in this case
			Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	
C Environmental	76	EN25	dentity, size, protected status, and biodiversity value of water bodies and related habitats significantly	P80~87
6.Environmental			affected by the reporting organization's discharges of water and runoff.	
Performance	77	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	P12~13/P80~87
Indicators	78	EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	Not in this case
	79	EN28	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance	P80~87
			with environmental laws and regulations.	
	80	EN29	Significant environmental impacts of transporting products and other goods and materials used for the	Not in this case
			organization's operations, and transporting members of the workforce.	
	81	EN30	Total environmental protection expenditures and investments by type.	Not in this case
	82	LA1	Total workforce by employment type, employment contract, and region.	P62~67/P74~79
	83	LA2	Total number and rate of employee turnover by age group, gender, and region.	P62~67
	84	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees,	P62~67
			by major operations.	
	85	LA4	Percentage of employees covered by collective bargaining agreements.	P62~67
	86	LA5	Minimum notice period(s) regarding operational changes, including whether it is specified in collective	P62~67
			agreements.	
76 1111	87	LA6	Percentage of total workforce represented in formal joint management–worker health and safety	P62~67
7.Social-Labor			committees that help monitor and advise on occupational health and safety programs.	
Practices and	88	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related	P62~67
Decent Work	00	1.40	fatalities by region.	200 07
Performance	89	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce	P62~67
Indicators	90	LA9	members, their families, or community members regarding serious diseases.  Health and safety topics covered in formal agreements with trade unions.	P62~67
	91	LA10	Average hours of training per year per employee by employee category.	P62~67
	92	LA11	Programs for skills management and lifelong learning that support the continued employability of	P62~67
	32	5	employees and assist them in managing career endings.	. 62 67
	93	LA12	Percentage of employees receiving regular performance and career development reviews.	P62~67
	94	LA13	Composition of governance bodies and breakdown of employees per category according to gender,	P62~67
			age group, minority group membership, and other indicators of diversity.	
	95	LA14	Ratio of basic salary of men to women by employee category.	P62~67
	96	HR1	Percentage and total number of significant investment agreements that include human rights clauses	P68~73
			or that have undergone human rights screening.	
	97	HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights	P68~73
			and actions taken.	
	98	HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that	P62~67
0.00 2.1			are relevant to operations, including the percentage of employees trained.	
8.Social-	99	HR4	Total number of incidents of discrimination and actions taken.	No similar situation
Human Rights	100	HR5	Operations identified in which the right to exercise freedom of association and collective bargaining	P62~67
Performance	101	LIDC	may be at significant risk, and actions taken to support these rights.	DC2 C7
Indicators	101	HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	P62~67
	102	HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and	P62~67
	102	11117	measures to contribute to the elimination of forced or compulsory labor.	102 07
	103	HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects	Not in this case
	. 33		of human rights that are relevant to operations.	
	104	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	No similar situation

	No.	GRI	G3 Standards	Index
	105	SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	P88~95
	106	SO2	Percentage and total number of business units analyzed for risks related to corruption.	P88~95
	107	SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	P62~67
O Cardal Cardata	108	SO4	Actions taken in response to incidents of corruption.	P89/P94
9.Social-Society	109	SO5	Public policy positions and participation in public policy development and lobbying.	P2~4/P12~13/P88~95
Performance Indicators	110	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	No similar situation
	111	SO7	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes.	No similar situation
	112	SO8	Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.	No similar situation
	113	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.	P54~61
	114	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.	P54~61
	115	PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	P54~61
10.Social-Product	116	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	No similar situation
Responsibility Performance	117	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	P54~61
Indicators	118	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	P54~61/P88~95
	119	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.	No similar situation
	120	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	P54~61
	121	PR9	Monetary value of significant fines for noncompliance with laws and regulations concerning the provision and use of products and services.	No similar situation

No.	GRI*	G3 Standards	Index
1	EU1	Installed capacity (MW), broken down by energy source and by country or regulatoryregime.**	P73
2	EU2	Number of residential, industrial and commercial customer accounts.***	P105
3	EU3	Length of transmission and distribution lines by voltage.	P5
4	EU4	Allocation of CO2 emissions permits, broken down by country or regulatory regime.	P87
5	EU5	Planning to ensure short and long-term electricity availability and reliability.	P12~13/P18~23/P48~51/ P54~61
6	EU6	Demand-side management programs including residential, commercial and industrial programs.	P54~61/P87
7	EU7	Research and development activity aimed at providing reliable and affordable electricity and promoting sustainable development.	P18~23/P36~41
8	EU8	Provisions for decommissioning of nuclear power sites.	No similar situation
9	EU9	Planned capacity (MW) against projected electricity demand over the long term, broken down by energy source and country or regulatory regime.	P12
10	EU10	Estimated capacity (MW) saved through demand-side management programs.	Not in this case
11	EU11	Estimated energy (MWh) saved through demand-side management programs, broken down by residential, commercial and industrial customers.	P87
12	EU12	Average generation efficiency by energy source and by country or regulatory regime.	No similar situation
13	EU13	Transmission and distribution efficiency.	P80~87
14	EU14	Biodiversity of replacement habitats compared to the biodiversity of the areas that are being replaced.	P80~87
15	EU15	Processes to ensure retention and renewal of skilled workforce.	P62~67
16	EU16	Total subcontracted workforce.	P63
17	EU17	Percentage of contractors and subcontractors that have undergone relevant health and safety training.	P62~67
18	EU18	Participatory decision making processes with stakeholders and outcomes of engagement.	P42~47
19	EU19	Approach to managing the impacts of involuntary displacement.	P88~95
20	EU20	Contingency planning measures and disaster/emergency management plan and training programs, and recovery/ restoration plans.	P24~29
21	EU21	Number of people displaced by new or expansion projects related to generation facilities and transmission lines, broken down by physical and economic displacement.	P74~79
22	EU22	Programs, including those in partnership with government, to improve or maintain access to electricity services.	P54~61
23	EU23	Practices to address language, cultural, low literacy and disability related barriers to accessing and safely using electricity services.	P54~61/P88~95
24	EU24	Number of injuries and fatalities to the public involving company assets, including legal judgements, settlements and pending legal cases of diseases.	Not in this case
25	EU25	Percentage of population unserved in licensed distribution areas, broken down by population in rural areas and urban areas.	P54~61/P74~79
26	EU26	Number of residential disconnections for non-payment, broken by duration of disconnection.	Not in this case
27	EU27	Power outage frequency.	P56
28	EU28	Average power outage duration.	P61/P79
29	EU29	Average plant availability factor by energy source and by country or regulatory regime.	No similar situation

<sup>\*</sup> GRI Electric Utility Sector Supplement.

\*\* Total Installed Capacity in SGCC service area.

\*\*\* By the end of 2008, SGCC directly served 181 million households, including 5.81 million industrial households, 162 million residential households, 10.07 million commercial households and 3.3 million rural households.

## **Assurance Statement**

#### DNV Assurance Statement

# State Grid Social Responsibility Report 2008 To: all interested parties of State Grid Corporation of China

#### Introduction

Det Norske Veritas ('DNV') has been commissioned by the management of State Grid to carry out an assurance engagement on State Grid 2008 Corporate Social Responsibility Report ('the Report ') in its printed format

State Grid has been published Annual Corporate Social Responsibility Report for the fourth times running and is also the second time to invite third-party agency to conduct an independent assurance.

#### Scope of Assurance

DNV's scope of assurance is to assess if the disclosed critical information, data and management support systems are in compliance with the relevant reporting principles.

#### Limitation of Assurance

- Other then State Grid's head-office in Beijing, the assessment team did not visit any site office or external stakeholders.
- The scope of assurance did not include the evaluation of the accuracy of performance indicators which were disclosed in the Report.

#### Assurance Approach

The assurance engagement was conducted from December 2008 to January 2009 and performed in accordance with requirements of "DNV Assurance Protocol for Sustainability Reporting". The Report has been evaluated against the following criteria:

- Adherence to the principles of materiality, completeness, neutrality, reliability, comparability, responsiveness and stakeholder Inclusiveness, as set out in the "AA1000 Assurance Standards 2008"
- The principles of balance and comparability in "DNV Assurance Protocol for Sustainability Reporting" serve as a basis for reviewing the reliability of the social responsibility performance data in the Report.

# To reach our conclusions, we have conducted the following work:

 Searched the relevant information of State Grid in the public domain to find out the concerns of the stakeholders;



- Based on DNV to develop structured approach evaluated and gaped Analysis at site;
- Interviewed with State Grid's management team to understand the top level commitment and strategy approach to sustainability;
- Interviews representatives of relevant departments to understand objectives and priorities for embedding and managing the commitments set out in State Grid's sustainability polices and Report; the means by which State Grid planned to accomplish its objectives, and the degree to which those objectives were met;
- Examined the method used at the headquarters of State Grid for the data statistics and report in the Report;
- Checked the relevant statements and performance index in the Report of State Grid;
- Verified the relevant documents, data and information provided by State Grid;
- Verified internal communication mechanism and the ways in which relevant policies of State Grid are disclosed to external media

#### Conclusions

DNV is of the opinion that the details in the Report regarding the implementation of the corporate social responsibility policy of State Grid are basically accurate and objective and no untruthful systematic or material statement is found.

DNV has also identified several matters to be improved in respect of the sustainable development of State Grid and suggestions for improvement will be described in the review report submitted to State Grid.

#### Stakeholder Inclusiveness

The Report presents the sustainable development strategy of the State Grid, elaborates on the policies concerning interested parties and reveals the key issues concerned by major interested parties. However, the Report makes no clear statement on the processes participated in by interested parties and some key issues (e.g. no information is disclosed on the satisfaction degree of clients for client services). State Grid should further improve relevant mechanisms so as to plan as a whole and balance expectations of individual interested party.

#### Materiality

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#### **DNV Assurance Statement**

# State Grid Social Responsibility Report 2008 To: all interested parties of State Grid Corporation of China

The Report states information regarding the social responsibility performance of State Grid by taking industrial features and the effect on interested parties into consideration, defines the boundary of the social responsibility assumed by State Grid and puts forward the general idea, key fields and action guideline regarding overall environmental management. However, the Report does not have quantitative index reflecting how the policies are fully carried out in secondary units. In addition, the Report lacks quantitative index (e.g. the total amount of energy consumption or the total amount of carbon dioxide emission) in respect of the issues especially concerned by interested parties. State Grid should further establish definite and substantial principles and standards so as to reflect the variability of the background of sustainable development.

#### Responsiveness

The Report states that State Grid fully and objectively responds to the key issues concerned by interested parties through the implementation of strategic planning and management policy. However, the sustainable development strategy of State Grid should set timetable and quantitative methods so as to

Sangem Hsu Vice President Det Norske Veritas. January 2009 Wang, Xuezhu CSR Services Manager Region Greater China Det Norske Veritas. January 2009



strengthen the response to the key issues concerned by interested parties.

#### Reliability

Through dedicated corporate social responsibility management office, State Grid has implemented relevant processes to collect, compile and analyze information. However, DNV's scope of work did not include the evaluation of performance data quality of the report.

#### DNV's Independence

The members of State Grid Report review group dispatched by DNV have no obvious interest relation with State Grid and its interested parties. DNV personnel guarantee their independence and fairness. As for the capacity and qualification of them, please refer to <a href="https://www.dnv.com">www.dnv.com</a>.

DNV shall bear no liability or undertake no obligation for any decision made by any third party in investment or otherwise based on the Review Statement of the Report.

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## In Search of Excellence, In Pursuit of Out-performance

## Feedback

In order to improve our fulfillment of social responsibilities, we warmly welcome your valuable comments on our performance and CSR Report:

1.	2008 CSR Report of SGCC is:
	○ Excellent ○ Good ○ Fair
2.	SGCC's performance in actively serving the government and customers is:
	○ Excellent ○ Good ○ Fair ○ Poor ○ Not well-informed
2	SGCC's effort in environmental protection and promoting sustainable development is:
٥.	○ Excellent ○ Good ○ Fair ○ Poor ○ Not well-informed
4.	The communication between SGCC and stakeholders is:
	○ Excellent ○ Good ○ Fair ○ Poor ○ Not well-informed
5.	Do you think this Report can reflect the major influence of SGCC on the economy, environment and society:
	○ Yes ○ Fairly ○ No
6.	The clarity, accuracy and completeness of the information, statistics and indicators released in this report are:
	○ High ○ Relatively high ○ Fair ○ Relatively low ○ Low
7	Do you think this Donort is reader friendly
1.	Do you think this Report is reader-friendly:  O Yes O Fairly O No
8.	We welcome your comments and suggestions on our performance and CSR Report:

Note: Please tick " $\sqrt$ " in the " $\bigcirc$ " before the item that fits your opinion.

#### **Related Publications**

State Grid News State Grid Journal SGCC Guidance for the Implementation of CSR





