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CSG Lights Up Every Household

2014

Corporate Social Responsibility Report



Interview with the Chairman

Jianguo ZHAO:
Board Chairman of CSG



In 2014, the Central Government of China realised that the economic development of the country has entered what is termed as ‘the new normal era’. How will CSG adapt to the new environment and better serve the socio-economic development of the five provinces?



Last year, during the Economic Conference of the Central Government, President XI Jinping highlighted nine features of the new economic norms and carefully pointed out that China had entered this era. He noted that the economic growth of the country will register at mid-level instead of at a high speed; intensive growth will replace extensive growth; the economic structure will shift from incremental expansion to one that is quality-oriented; and that the criteria for economic development will need new growth reference points. In such a context, our company is also scaling new heights, facing many new problems and new challenges but also seeing new opportunities related to our future development and transformation.

Our actions are in line with the Central Government’s decisions and judgement. We understand the parameters and the concepts of the new normal, we are doing research on it and are making the changes and adjustments to help us adapt to meet the new goals. We seek progress while maintaining stability. All we do will ensure security, growth and transformation. The operational system runs efficiently and safely and we work to improve the overall efficiency of the power grid, and, in the past we have exceeded the goals set by SASAC (State-Owned Assets Supervision and Administration Commission). We also maintain an adaptive response stance as regards the One Belt/One Road initiative, taking as our responsibilities plans to expand our cooperation with the Greater Mekong Subregion to the 10 ASEAN countries including the “Bangladesh, China, India and Burma Economic Corridor”. We are also becoming more innovative in safe operations procedures as well as customer service and technology. We have joined the new power system reform, implemented the national reform strategy and continue to promote sound and rapid development of the power industry. In short, we have initiated new plans to promote the company’s development, we are making efforts to improve the quality and efficiency of developmental programs so as to be a pioneer and realise our “CSG Dream”, thereby making greater contributions to the economic development of the five provinces and regions we serve.



The Fourth Plenary Session of the 18th CPC Congress formalized the blueprint on China’s ‘rule of law’. What measures has CSG taken to ensure adherence to the rule of law?



The ‘rule of law’ is a systematic project, an extensive and profound revolution and the most basic function of the rule of law is that rules, once established, need to be abided by. It needs to be part of our Corporate governance. As such, the rule of law will have a significant and far-reaching impact on the Central State-Owned Enterprises reform and development efforts and programs.

Our Corporation regards the rule of law as an essential element of the business ... a matter of survival. We are fully aware of how important the rule of law is to us so that we may carry out our strategies, innovate to improve our management system and build an internationally advanced power grid. In 2015 we issued Measures on Promoting the Rule of Law and a five-year plan on the legal work required to achieve our goals. We aimed to improve the corporate governance system so that the rule of law could be implemented throughout the operations of the company. Our intent was to write a new chapter in our company’s history. President XI Jinping emphasised that, whatever we did, we needed to look at the domestic context and pay attention to team-building. He emphasized that we need rigorous policies and measures as well as role models for staff members. We have made significant progress in our anti-corruption campaign yet the problem is still serious. We need to raise the overall awareness and continue our anti-corruption campaigns. We need to improve our evaluation systems and our accountability mechanisms to ensure that all follow the rule of law. On top of that we have to demonstrate a zero-tolerance level for any kind of corruption.



The “energy revolution” has become a national strategy for China. The core value of the energy revolution is green energy, low-carbon emissions, energy-saving and building an energy-saving society. What measures will CSG take in establishing its commitment to the energy revolution?



As the regional centre for resources and energy optimisation, CSG is a role model for the whole industry, both upstream and downstream. As a company, if we, together with our stakeholders, can possibly achieve the lowest consumption, we can make the greatest contribution. For more than a decade since CSG’s formation, we have promoted clean power in hydropower, wind power, solar energy and other renewable energy sources. The non-fossil energy units and programs we installed accounted for 48.5 percent of the overall installed capacity, a level significantly higher than the national average. In recent years, CSG’s transmitted electricity from west to east has gradually increased; in 2014 it amounted to 172.3 Twh and 120.5 Twh was hydropower. We maximised the use of hydropower and other clean energy sources in the West and achieved a win-win situation.

We continue to improve energy generation scheduling, for each amount of electricity we sell, the fossil-fuel energy consumption has been reduced by 24 grams of standard coal / kWh. This is something we have constantly been working on and it is one of the highlights of our job. Next, we will re-evaluate the power development efforts and provide a view of the ecological products, outline the support of the low-carbon programs in the pilot regions and take actions to implement energy conservation strategies and elaborate on the “future of the energy revolution”. As well we need to make clear our plans for contributions to the five provinces and regions where we work, live and serve.



In 2014, CSG ranked first in the National social responsibility development index and industry development index. What new plans does CSG have in 2015 to advance social responsibility?



The Country and the general public have an increasing interest in the companies’ activities in the areas of corporate social responsibility. The Third Plenary Session of the 18th CPC Congress made it clear that social responsibility was one of six priorities for further SOE reform. Therefore this is more clearly a stringent requirement for CSR’s SOE focus. As a central SOE player, we were one of the key companies to implement the 12th Five-Year Plan so we need to become a role model for others, we must establish sound working mechanisms and incorporate all elements of corporate social responsibility into our strategy, operations and management programs in such ways that the results seen will be recognized as superior and innovative.

In 2015, our country continues to reform the total, overall power system. We will work with the stakeholders to promote social responsibility. First, we will carry out a stakeholder survey, then we will respond to the interests and expectations of the customers, suppliers, partners, governments, employees and the environment in a way that allows all to see and to truly understand these profound concepts. We will identify the CSR issues in power supply, environmental protection, economic performance and social harmony. Then we will set clear goals in dealing with those issues. In addition, while the CSR issues will be the focus of our work, we will ensure high employee performance so as to reward our stakeholders. In doing so we can build a better brand by: lighting up every household with love from CSG.

About Us

CSG:

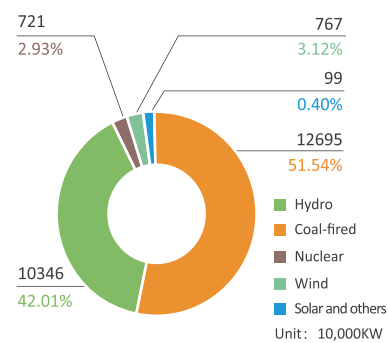
Our Goal: To be a world-leading power grid company which excels in service, management and corporate image.

China Southern Power Grid Co., Ltd. (hereinafter referred to as CSG) was established in 2002. The geographic service area covers one million square kilometers, with a population of 230 million, and 72.92 million clients. The Company is headquartered in Guangzhou.

CSG invests, constructs and operates power networks in Guangdong, Guangxi, Yunnan, Guizhou and Hainan provinces and regions. CSG is in charge of the operation of trans-regional projects including power transmission, power distribution and interconnection projects; power trading, power dispatching; domestic and overseas investment and financing; foreign trade, international cooperation, offshore power projects contracts, and labor services cooperation.

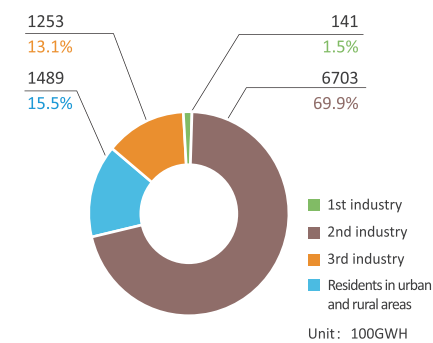
Key business data	2010	2011	2012	2013	2014
Total Asset (RMB100 million)	4908	5275	5556	5872	6191
Power sales (100GW)	6027	6668	7010	7433	7859
Business revenue (RMB100 million)	3697	3912	4210	4482	4738
Length of power transmission lines at 110KV and above(KM)	151899	163404	165563	182181	191371
Transformer capacity at 110 KV and above (10,000KVA)	57932	64389	68892	73099	78919
West-to-East power transmission(100GWH)	1117	969	1243	1314	1723
Ranking w/in the Fortune 500	156	149	152	134	115

Energy portfolio of the Five Provinces and Region in 2014



Total installed capacity in the Five Provinces and Region (unit: 10,000 KW): 24628

Power consumption by different industries



Total power consumption in the Five Provinces and Region : 9586



Clients

Average SAIDI* in CSG service area: 4.69 hours/per household (CSG headquarters statistics)



Environment

Total carbon dioxide reduction saving by CSG downstream and upstream players: 199.974 million tons



Government

Every KWH power enabled GDP 11.92 (in RMB) generation



Society and charity

Total donation made in 2013: RMB 61.76 Million



Partners

Contract fulfillment rate : 100%



Employees

567,000 employees received training

The Management



ZHAO Jianguo
Board Chairman



ZHONG Jun
Board Director
President



WANG Jiuling
Board Director
Vice President



SUN Xiaoyi
Head of Discipline
Inspection



WANG Liangyou
Vice President



HE Xiqiang
Vice President



LI Wenzhong
Chief Accountant



YANG Jinbai
Vice President

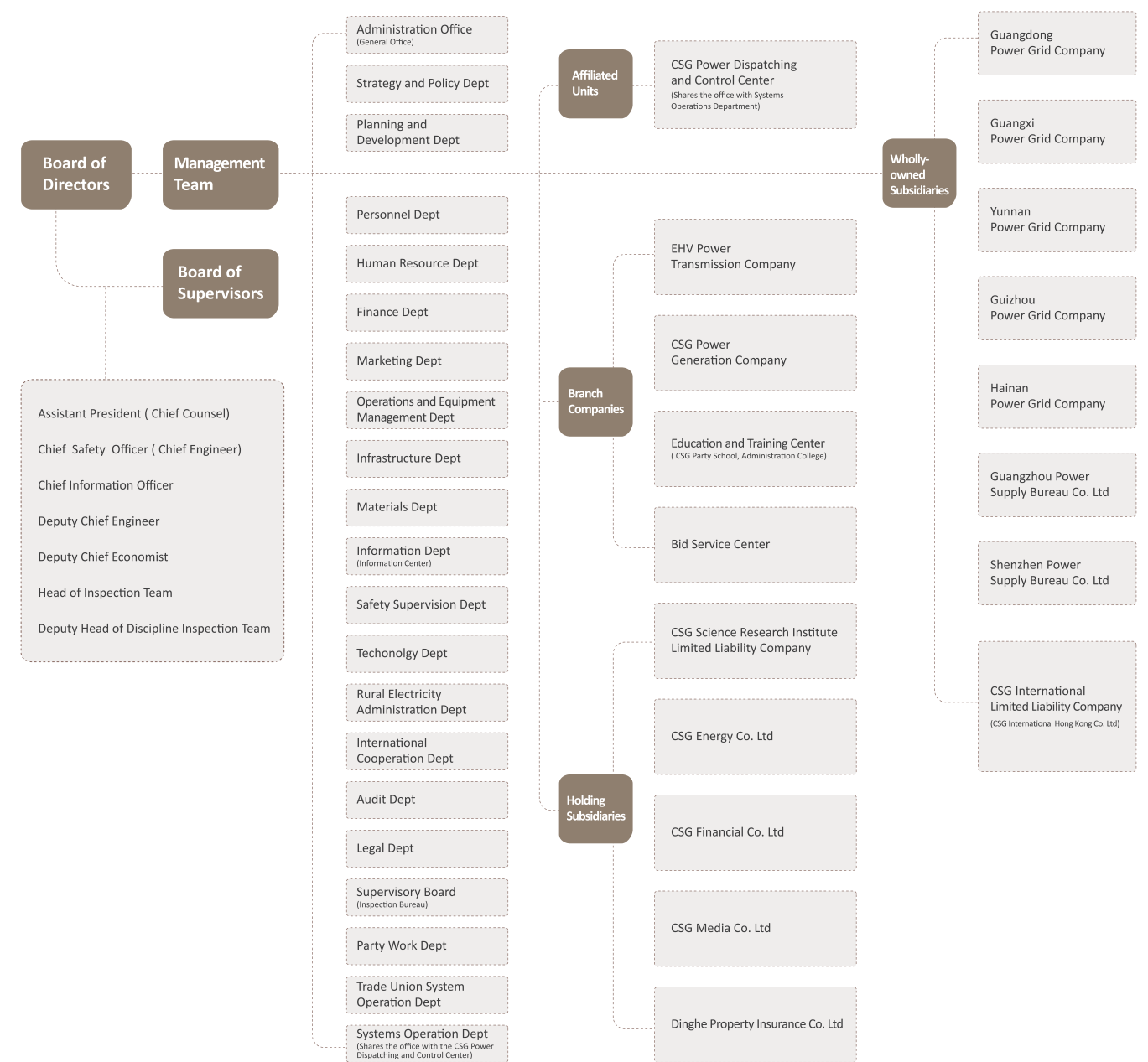
Corporate Governance

CSG is a State-Owned 'backbone company'. In accordance with the Company Law and the requirements of the State-Owned Assets Supervision and Administration Commission of the State Council (SASAC), CSG has established a modern corporate Governance structure consisting of board of directors, supervisory board and an operations management team. The Board of Directors plays a core role in corporate governance. The Board of Directors exercises administrative duties in accordance with Articles of Association.

CSG's strategic orientation is to be: Service-oriented, operation-based; a conglomerate in terms of operations, and a company exemplifying an integrated approach to management. CSG specifies decision-making power and procedures, maintains a sound check and balance system and CSG has always practiced a stringent regulation, procedures and operations approach to daily operations. CSG is dedicated to its' efforts to be a highly effective operation for State-Owned asset appreciation. To establish sound legal person governance, CSG has established board of directors and appointed a board of supervisors at Guangdong Power Grid, Guangxi Power Grid, Yunnan Power Grid, Guizhou Power Grid and Hainan Power Grid and has formulated specific rules as regards on-board structure and responsibility.

Organizational Structure

CSG headquarters has 21 departments, one institutional and four branches; namely The Bidding Service Center, The Education Training Center, The CSG EHV Power Transmission Company and the CSG Power Generation Company; eight wholly-owned subsidiaries exist, namely the Guangdong Power Grid Company, The Guangxi Power Grid Company, The Yunnan Power Grid Company, The Guizhou Power Grid Company, The Hainan Power Grid Company, The Guangzhou Power Supply Bureau Co. Ltd, The Shenzhen Power Supply Bureau Co. Ltd, and The CSG International Company. Additionally CSG is the controlling shareholder of the CSG Financial Company, the CSG Research Institute, the CSG Synthesis Energy Corporation, the Dinghe Property Insurance Co., Ltd, and CSG Media.





Combating Major Disasters, Delivering Support from CSG

Recent years have seen frequent extreme climate changes and natural disasters which have posed severe challenges to grid operations, as well as peoples lives and properties. In 2014, various disasters including a super-typhoon, extraordinary rainstorms, ice storms and earthquakes attacked the five provinces and regions of CSG's service area. Adhering to the idea of "responsibility in the face of disaster", CSG always puts public security and interests in the forefront and actively participated in the combat against severe disasters and the efforts to stave-off disastrous results. The company successfully overcame the tests presented by various disasters, ensured the safe and stable operation of the grid and effectively safeguarded the socio-economic development and power usage for people.

Fighting Typhoon Rammasun

1 Serious Damage by A Severe Storm

On July 18 –19 of 2014, super-typhoon Rammasun landed three times in Wenchang, Hainan , Xuwen, Guangdong Guangxi and Fangchenggang Provinces successively. Hainan, Guangdong, Guangxi and Yunnan were all affected by the strongest typhoon having landed in southern China since 1973.

With a 17 degree instantaneous wind speed and 500 mm super-heavy rain, Rammasun caused an accumulative economic loss of RMB 1.619 billion to CSG.

Damages of CSG Grid	
	183 substations lost voltage
	5.327 million homes and organizations affected
	78,920 power cable poles and towers damaged
	2.605 GW load lost



2 Sparing No Effort to Fix the Grid

All staff of CSG paid close attention to Rammasun and took immediate action to deploy contingency materials in advance. Staff set up emergency headquarters on the frontline of disaster-stricken areas and assembled 8,798 experienced members from companies in Guangdong, Guangxi, Yunnan, Guizhou, Guangzhou and Shenzhen and 330 contingency generators for urgent support to Hainan. Restoring power was the primary goal, and we deployed the whole of CSG's resources and went all-out to ensure safety and resume power provision as early as possible.



Resources distributed	
	54,000 staff involved in emergency repair
	11,903 emergency repair vehicles
	91 contingency power generation cars
	RMB 448 million worth in repaired materials

3 CSG Spirit Lights up Thousands of Homes

CSG completed all emergency repair and power restoration work in only 19 days, completely recovering power supplies in the disaster-affected areas and embodying the sense of responsibility of a central enterprise in modern times. In particular, power supply was completely restored in Guangxi in only 5 days and in Guangdong only 8 days after the strike of the disaster.

Unfortunately, Wen HE and ZHUANG Huaji, two members of CSG sacrificed their lives on the frontline of the disaster relief campaign due to their continuous work and, ultimately, to exhaustion. They embodied CSG spirit of dedicating themselves to the restoration of brightness of thousands of homes, sacrificing theirlives and demonstrating the devotion of CSG employees.



Wen HE



ZHUANG Huaji



Responding to Ludian Earthquake

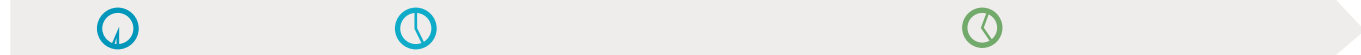
When fighting typhoon Rammasun, on August 3, 2014, a 6.5 degree earthquake struck Ludian in Shaotong City, Yunnan, causing 617 deaths and affecting 1.8 million people in 20 towns, where 31,000 households lost power supply.

As soon as the earthquake hit, CSG initiated a level I contingency response to this earthquake disaster; a joint action was taken among the four levels of the group, provincial, prefectural and county, to make certain every effort to combat the quake was at-hand.



A triumph for your company to restore power so rapidly to the epicenter of the affected area and, thank you especially for providing free mobile phone charging to the people in these affected areas demonstrating your great sense of social responsibility!

LI Keqiang
Premier of the State Council



18:30, August 3

Power is fully restored in Ludian county downtown



17:00, August 5

Three 35kv transformation stations, two 35kv cables and 15 10kv cables damaged by the earthquake in Shaotong were all repaired and the power supply resumed



17:10, August 9

Power supply restored in all 336 administrative villages affected by the disaster



The CSG team, making every effort was contributed by: 16,000 persons; use of 2,316 vehicles; 10 contingency power generation cars, 125 contingency power generators, 68 high-pole lamps and over 18,000 low-voltage power supply kits, all of which were deployed for disaster relief and power protection.



Ensuring lighting: Contingency power sources for lighting was provided for 8,000 tent units in 153 settlement sites for disaster victims; and, as well, 50,000 power usage safety handbooks were handed out.



Additional public services provided included: Setting up 18 public service points to provide free charging for mobile phones, electric torches, disaster relief equipment and free hot water etc.



Active donations: CSG individual executives and staff made a total donation of RMB 12 million to help disaster victims through adversity and rebuild homes.



Meeting Energy Revolution Deepening Power Sector Reform

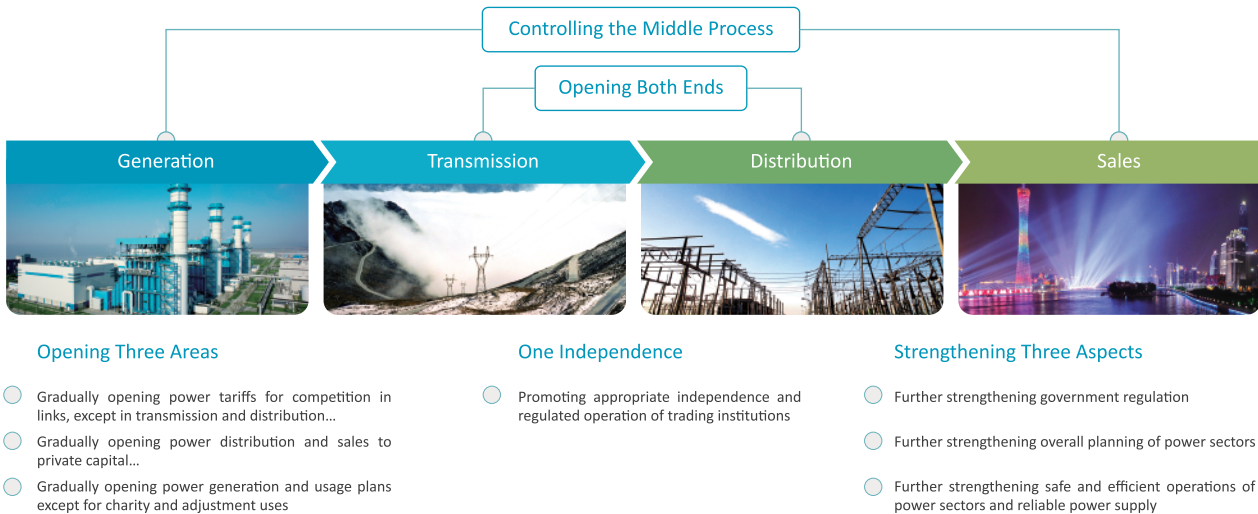


Promoting energy consumption revolution and curbing irrational energy consumption; supporting energy supply revolution and establishing diversified supply systems; advancing energy technology revolution and driving industrial upgrade; advocating energy system revolution and building energy development highway.

XI Jinping, President of China

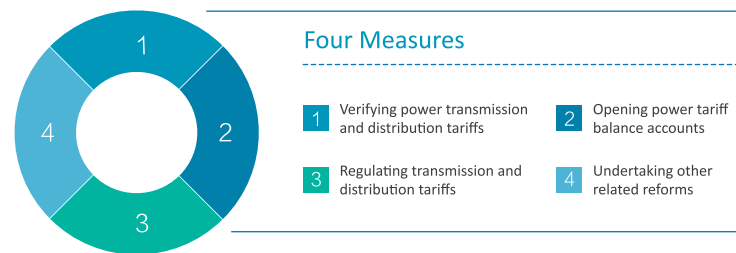
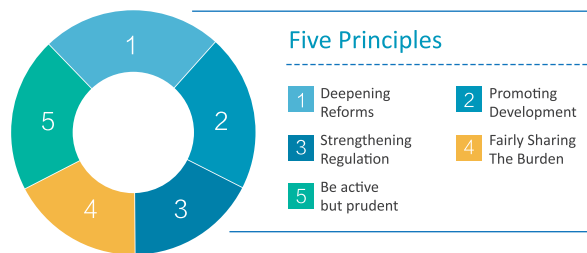
Deepening Power Sector System Reform

In March 2015, the CPC Central Committee and State Council issued Several Opinions on Further Deepening the Reform of the Power Sector System (2015 No. 9 document by the Central Committee) which clarifies the reformed system structure of “controlling the middle process and opening of both ends”, the core reform activity of “Opening Three Areas; One Independent and Strengthening Three Aspects” and including the fundamental reform principle of “be safe and reliable, marketized in terms of reform, ensuring people’s livelihoods, energy conservation and emissions reduction, according to scientific regulation”, grid companies will charge government-ratified grid tariffs for power transmission and transformation; and such a reform will change grid companies’ operational models, further promoting the market’s leading role in resources allocation and giving the government a more effective role.



Pilot Project in Shenzhen

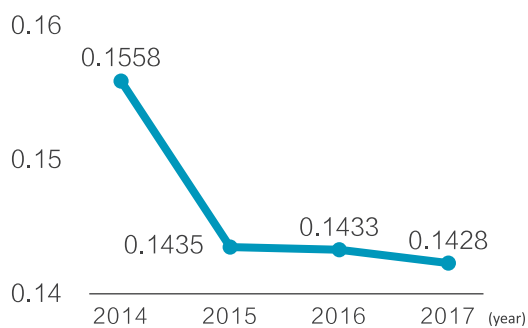
To implement the policy requirements of the State on Energy System Reform, CSG set up a dedicated working group to explore reforms in power transmission and distribution tariffs in Shenzhen. On November 4, 2014, the NDRC published the pilot scheme of power transmission and distribution tariff reforms in Shenzhen, officially launching the new round of pilot reforms in the city.



Exploring the Path of Power Sector Reform

Following the guiding principle of “controlling the middle process and opening both ends”, CSG has been actively exploring a scientific and rational transmission and distribution tariff forming mechanism to promote the leading role of market in power sector resources allocations.

Power transmission and distribution tariff trends by the Shenzhen Power Supply Bureau (yuan/kwh)



Cost restraints

- Verification of power transmission and distribution tariffs will be based on the total assets of the Grid Company, cost supervision and audits, and the principle of permitted cost-plus reasonable profit.
- In the next three years, the transmission and distribution price per/kwh will drop over RMB 0.01. Calculated on the predicted power sales volume from 2015–2017 by the Shenzhen Power Supply Bureau, its’ profits from grid usage will reduce by RMB 2.4 billion accumulatively in the next three years.

Government regulation

- Government authority will directly supervise the grid company’s business income from both power transmission and distribution.
- Strict supervision and audits will be undertaken for the 2012 - 2014 historical costs of the Shenzhen grid.
- Future grid investment will be subject to governmental price regulation; assets not approved for construction will not be included in the effective assets.

Market opening

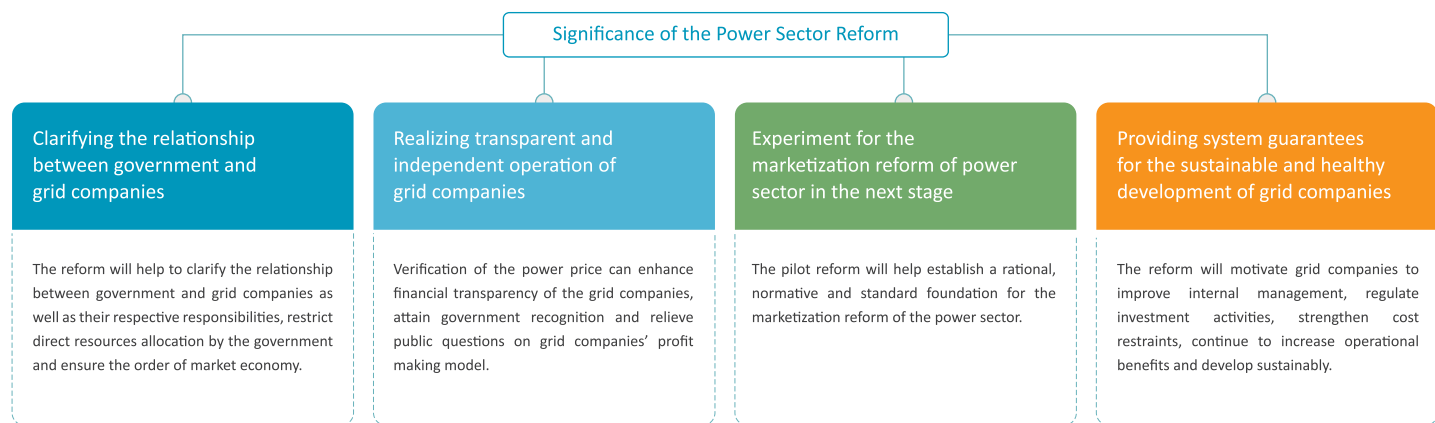
- The establishment of independent transmission and distribution price systems will provide the key conditions for the marketization of power generation on both the power distribution/sales sides.

? Why choose Shenzhen as the reform pilot?

Foundation for Reform	Conditions for Reform	Will to Reform
As early as the late 1980’s Shenzhen initiated reforms in power tariff management mechanisms and power sales price structures: profit control was applied to the Shenzhen Power Supply Bureau procedures and a dynamic balance mechanism based on power price adjustment reserves was set up; power sales price structure was reformed according to the features of power load and power tariff structures independent from those in other areas was established.	Since January 2012, Shenzhen Power Supply Bureau has been separated from Guangdong Power Grid designated as a fully-owned subsidiary of CSG independent in operations and accounting and being fully responsible for its own profits and losses. With a sound management foundation, excellent operations performance and a high-level of productivity, Shenzhen Power Supply Bureau has undertaken the mission of being a pioneer in establishing a world-level power supply company.	Shenzhen has always stood at the forefront of China’s reform and opening; the spirit of reform is deeply rooted in the minds of the citizens’ and the government and has the advantage of experience and resolution for reform. Both the Shenzhen government and CSG have given strong support to the pilot reforms for power transmission and distribution pricing in Shenzhen.

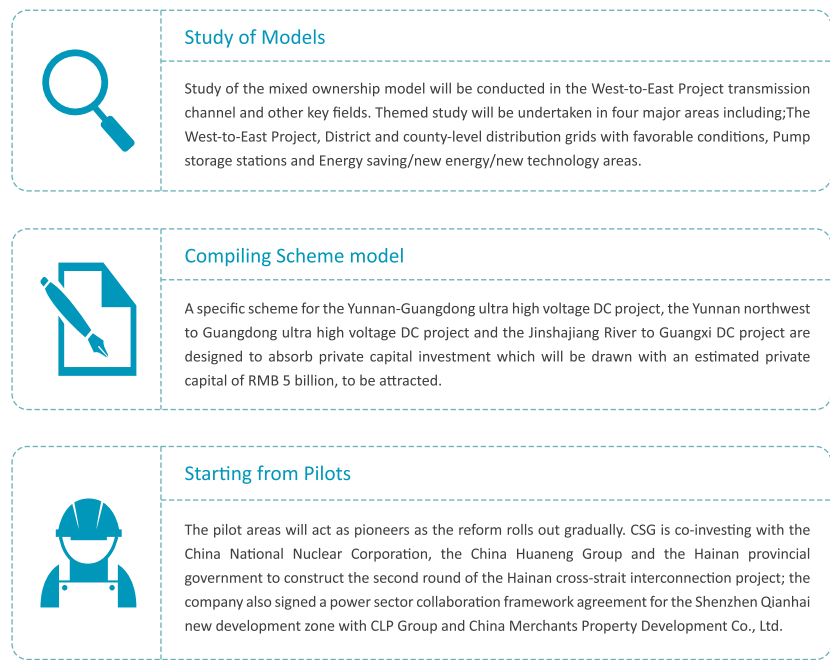
The Great Significance of Reform

The current round of transmission and distribution price reform in Shenzhen will focus on verifying power prices, which will be a milestone for establishing a sound and rational transmission and distribution price mechanism and promoting sustainable power grid development. The Shenzhen pilot project will be a pivot-point for further reform of the power sector, resolving the acute conflicts and deep-rooted problems that have been restricting healthy development of the sector, enabling a quick and sound sector development and promoting structural adjustment and industrial upgrade.



Actions by CSG

In 2014, with the theme of deepening SOE reform, CSG continued to explore the effective path for the reform towards mixed ownership of grid companies, introduced non-State-Owned capital to hold stake, and increased the operational benefits of State-Owned capital to comprehensively enhance CSG’s core competitiveness.





Power Supply

The number of major and above major power safety incidents
The number of major and above major facility incidents

0

Average outage time with urban clients

1.6 hours/household

Average outage time with rural clients

5.6 hours/household

Third-party customer satisfaction rate
(Total assets)

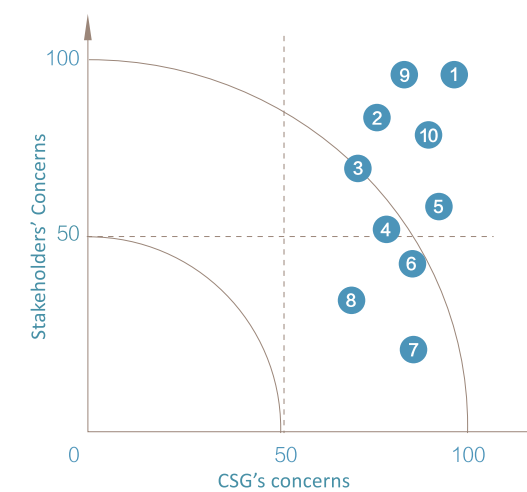
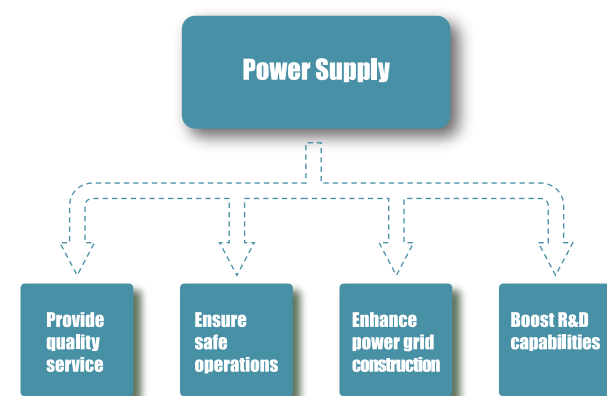
79

points of 100
Reaching internationally leading levels

Introduction

Ensuring power availability and quality for all customers

CSG has always considered grid safety and stability as the company's lifeline and followed the service principle of "customer first, realizing win-win in harmony". In practice, CSG has continued to enhance power grid construction, scientific innovation and management capacity, and to ensure a safe, stable, reliable and high quality power supply to clients.



Substantial topics matrix

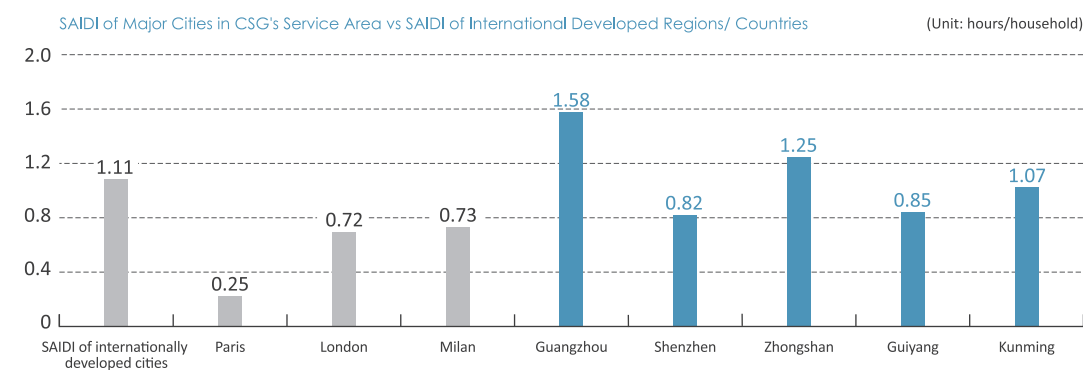
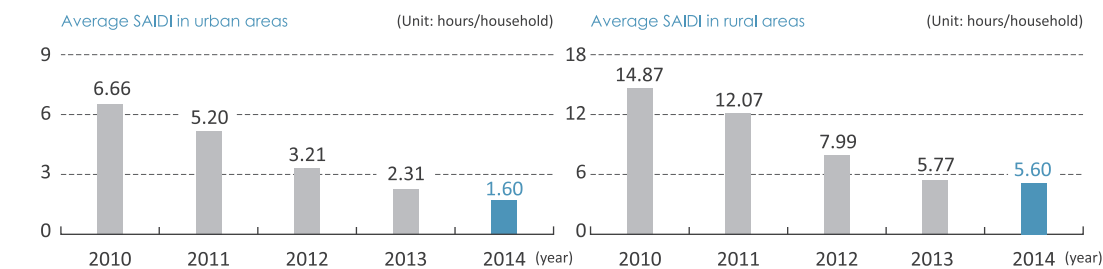
- | | |
|--|---|
| 1 Outage reduction | 6 Adequate location of substation, high voltage lines corridors |
| 2 Ensure a safe, stable, and reliable power supply | 7 Prevention and control of production safety risks |
| 3 Fair and open power tariffs | 8 Ensure power supplies to key events |
| 4 Ensure accurate meter measurement | 9 Quality and convenient services |
| 5 Address natural disaster issues and restore power supply efficiently | 10 Faster business operation |

Provide quality service



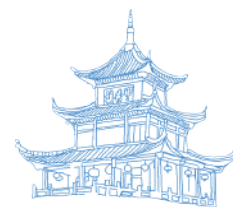
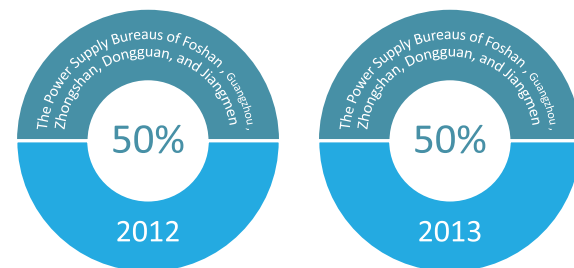
Service performance

We have taken solid measures to enhance power supply reliability. In 2014, CSG's annual SAIDI in its service areas was 4.69 hours/household. The average SAIDI reduction in the western provinces outperformed that of the eastern provinces. Guiyang Power Supply Bureau was the first one rated as having attained B-class power supply reliability in the western provinces.



Note: SAIDI reflects the differences in foundation, investment and the developmental phase of the power grid in different cities. The statistics used in this page are from the parent company. SAIDI of internationally developed cities are based on CSG 2013 data.

50% of National Best Power Reliability Companies are CSG branch companies

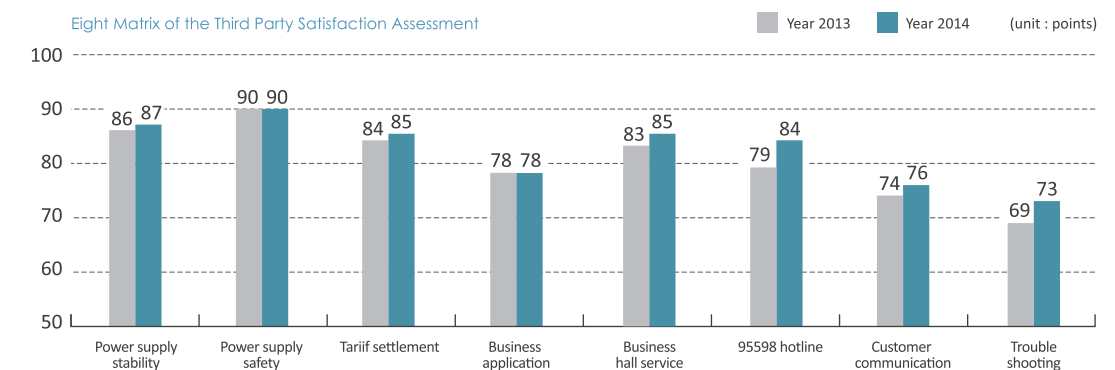
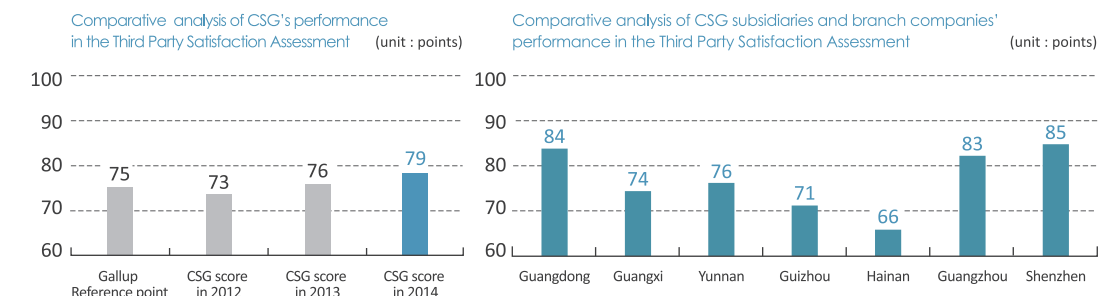


The Guiyang Power Supply Bureau was rated as a "B" class Power Reliability Company, the first one in western China.

CSG takes 5 out of the 10 National Best Power Reliability Companies



CSG has launched customer service campaigns for better customer service. In 2014, CSG scored 79 (out of 100) in the Third Party Satisfaction Assessment, 3 points higher than that of the previous year.



Note: Data used in this page are based on total asset statistics. The third party customer satisfaction results are : 77 (in year 2012), 81 (in year 2013) and 83 (in year 2014)

CSG's service has been positively recognized by the people in its service areas. In 2014, CSG ranked top as the utility service provider in the public opinion surveys done by local governments.



Guangdong Power Grid, ranked top utility service provider in overall customer satisfaction

Guangxi Power Grid, ranked top utility service provider in customer satisfaction

Yunnan Power Grid, won the first place in public satisfaction among companies of 10 utility service sectors

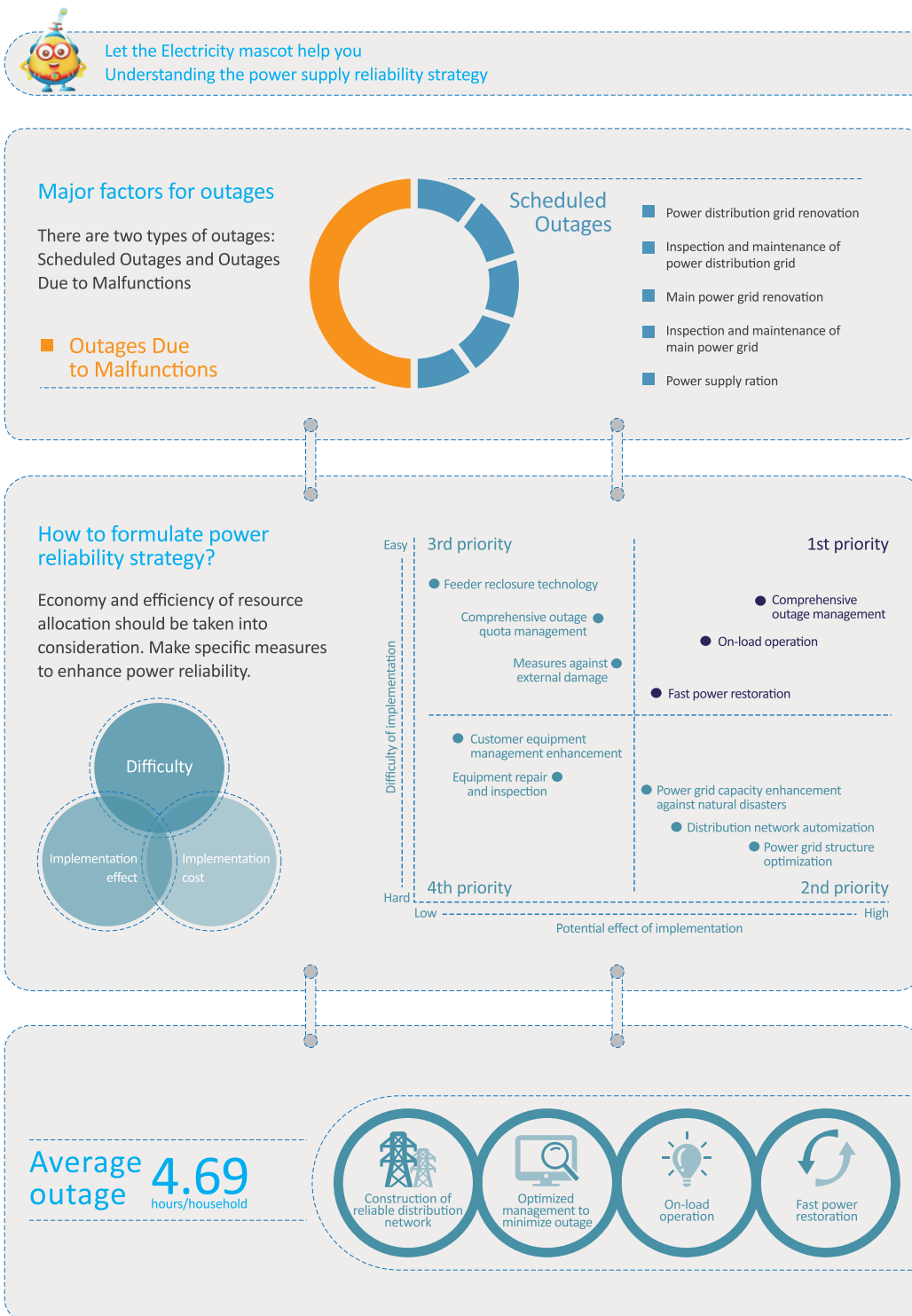
Guizhou Power Grid, won the first place in public satisfaction among companies of 10 utility service sectors

Guangzhou Power Supply Bureau, winner in public opinion surveys

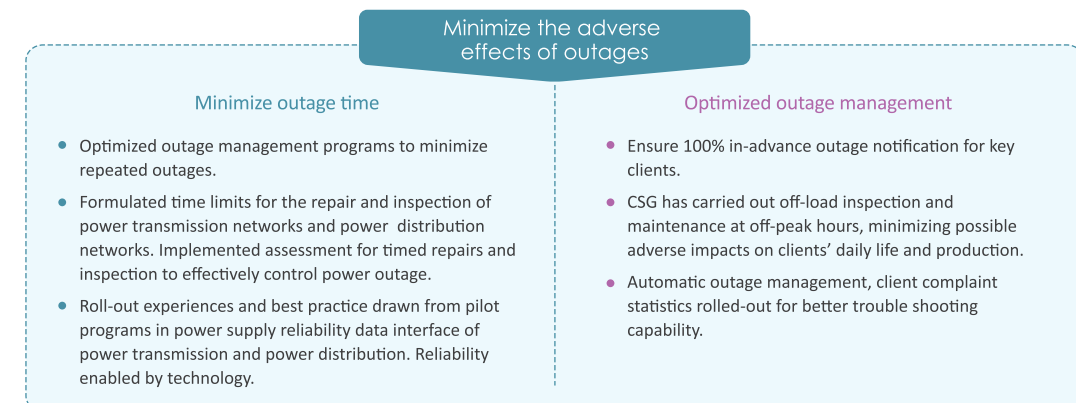
Shenzhen Power Supply Bureau, ranked the top place among companies in 40 governmental utility services in Shenzhen

Reducing Outages

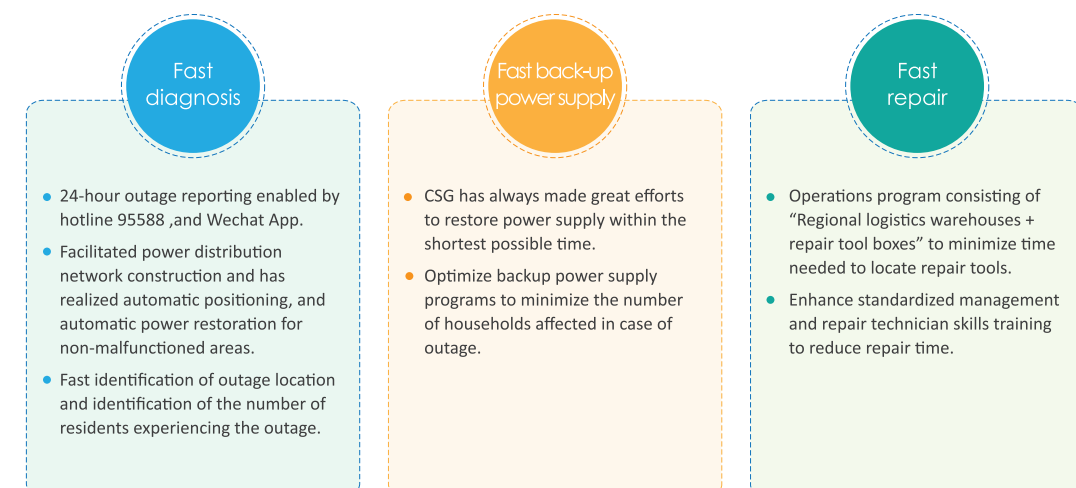
CSG has identified outage minimization as the core competence and formulated power supply reliability strategy. The company has taken a number of measures to reinforce comprehensive outage management, on-load operation, and fast power restoration to minimize adverse effects of outage.



CSG has carried out comprehensive outage management planning. CSG reinforced outage management actions and singled-out major outage factors from the source, avoiding repeated outages, temporary outages and prolonged outages.



Fast power restoration. CSG has identified "Fast diagnosis, fast back-up power supply and fast repair" as objectives. The company has bettered outage repair reports and outage fast repair processing to enable a highly efficient, safe and optimized distribution power grid restoration.



Case study: Fast power restoration experience

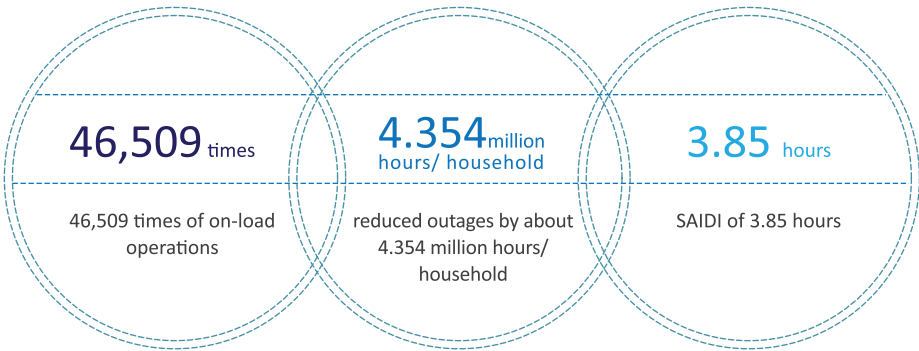
Dongguan Power Supply Bureau has introduced new technology to improve repair efficiency and fast power restoration services. The bureau utilized power restoration platforms and marketing systems to enable fault repair via closed-loop management and real-time whole-cycle power restoration sharing. In 2014, the bureau has achieved 35.3% in time savings in arriving onsite, and 16% as relates to repair feedback efficiency. Customers are empowered to comment on repair service in power repair and restoration.



Power Supply for Important Events

On-load operation. CSG has reinforced standardized on-load operation management and promote on-load operation, and therefore the on-load operation area and scope has been expanded and SAIDI has been reduced.

- On-load operations are increasingly adopted in construction, business expansion, and repair. The company prioritizes on-load operation to projects contributing power reliability.
- CSG has used ERDF and other international leading players as the benchmark.



Main grid on-load inspection by Operations and Inspection Branch Company under Guizhou Power Grid



Insulated single foot ladder independently developed by Guangzhou Power Supply Bureau, giving more freedom to on-load operations



Case study: China's first on-load operation at an altitude of 3,300 meters.

In May, 2014, Yunnan On-load Operation Company and Diqing Power Supply Bureau practiced five high altitude on-load operations. On-load operation demands good skills and physical fitness of operators. After six months discussion, onsite surveying, project finalization and program formulation, operators successfully installed and connected circuit breakers. This is the first time for China to practice on-load operation at an altitude of 3,300 meters.



Enhance customer experience

Meeting customer demands is CSG's mission. The company leveraged comprehensive service network to ensure a better, convenient, standard and efficient service to enhance the customer experience.

Comprehensive customer service network. CSG vigorously promoted standardized and lean marketing management to understand, meet and guide customer demands.



Meeting the power supply pledge

	National power supply standard	CSG customer pledge	CSG performance in 2013	CSG performance in 2014
power supply reliability in urban areas	99.5	99.9	99.973	99.982
voltage qualified rate at urban residents' end	95	98	99.593	99.77
Once outage occurs, power supply emergency repair team shall arrive on scene within ____ minutes in urban areas	60	45	28	25
Once outage occurs, the power supply emergency repair team shall arrive on scene within ____ minutes in rural areas	120	90	69	61
Once outage occurs, power supply emergency repair team shall arrive on scene within ____ hours in remote areas	4	2	1.3	1.1
Power supply program response: Response should be made in no more than ____ working days to low voltage clients	8	7	5.5	4
Power supply program response: Response should be made in no more than ____ working days to high voltage single power clients	20	15	11	8
Power supply program response: Response should be made in no more than ____ working days to high voltage dual power clients	45	30	23	17

Note: All data in this table are based on CSG total asset statistics, except the response time to low voltage clients

Optimize workflow and upgrade service. CSG has effectively boosted trouble- shooting by prioritizing service, leveraging department synergy and enhancing business development management. In 2014, clients complaint rate is 19.67/per million clients, dropping by 5.33/per million clients.

- CSG has set up a Comprehensive Service Management Committee which meets on a regular basis. The committee has formulated key inter-department synergy flow patterns and standardized inter-department synergy points.
- The company has improved information integration, and has facilitated marketing information integration. Guangdong Power Grid practices advanced marketing and distribution information integration.



Jiangmen Power Supply Bureau staff is doing smart meter reading enabled by mobile application



Liuzhou Power Supply Bureau is using three colors progress bar indicating business development status

Open and transparent business development enabled by comprehensive supervision

Prioritize investment on power distribution construction, standardize business development management .

Reinforce customer power consumption management to better understand customers' needs

Reinforce key position accountability and control. Realized power access within one day by making one single call.

Practice long-distance business handling, information disclosure, power supply management for higher efficiency

Take more stringent measures to implement key initiatives and investigate breaches, be tough on malpractice and misconduct.

Speed up business development



Standardize business development

In 2014, CSG rolled out new supervisory practices on business development efficiency. In total, 481 letters and reports were addressed, 271 misconducts and malpractices were penalized. 71 staff were sanctioned, 4 were prosecuted and 2 were dismissed. The company has taken solid measures to prevent malpractice to address pressing challenges and weak links in business development. The company has established long-term mechanisms to standardize business.

We have attached importance to service innovation, made great efforts to expand remote service channels, and enhance channel management. A service model with the features of "informative, mobile and smart" has been established to provide more convenient, interactive and user-generated demand data. Customers can pay their bills at home via mobile Internet service channels, such as hot-line 95598, self service terminals, online business halls, or bank accounts. We have carried out customer information management and privacy protection program to ensure information security.

More convenient diversified and customized services

Official business halls

Process business application



Telephone services

24/7 customer service, offering business inquiries, business handling, complaints, fault report by hotline 95598.



On-line services

Offering services on electric bills inquiry, on-line fee settlement, and business application



Mobile business services

Bill and notice on outages will be sent to clients by text messages, bill settlement, business application and information update enabled by Wechat App.



Pop-up business halls

Offer on-site business handling and on-site settlement of bills



TV service

Services include: bills and power consumption inquiry, queue status at official business halls, information on safe power consumption and power savings.



Case study: Wechat brings new customer experiences

CSG rolled out customer service on Wechat App . Branch companies and subsidiaries launched official Wechat customer service accounts. A CSG official microblog account and official Wechat account were activated on 19, November, 2015. Both accounts release information updates, educational articles and provide interactive services. Mobile technology has brought better customer service.



Scan me, for more information

Fair Measurement and Billing

The State has promulgated the The Law on Metrology of the People's Republic of China and Guidance on Phased Electricity Pricing for Ordinary Citizens. The Company attaches great importance to the standards and measurements and on correct and efficient implementation of these National policies and regulations. Under the supervision of the government departments, CSG partners with the meter suppliers to ensure fair metering and billing to protect the interests of customers of electricity.

Strict Control and Boosting Customer Confidence

The meter is a national mandatory measuring instrument. It is authorised by the government, CSG requires the meter suppliers to obtain the manufacturing license and quality management system issued by national quality supervision department so that the quality of power meter meets the national standards.

Quality Guarantee

Access

The tender process is always open, fair and just. The meters' performance and technical indicators are all in line with the national standards applied within the power industry.

Storage

When the meters are collected, each of them must go through the national standardised examination process. Meters will not be stored until checked twice.

Evaluation

Meters will be checked again before they are put into use. We ensure that the meters meet the national standards.



Fair Measurement

Operations

We make plans to regularly check the meters in line with the Power Measurement Device Technology and Management Procedures. We conduct on-site verification of the meters and take them back for maintenance, as needed, to guarantee accurate measurement.

Supervision

The inspectors follow the rules and supervise all checking and maintenance assuring that the meters are well installed and operated. This guarantees that the electricity registered as consumed is fair, accurate and in line with the regulations.

Fair Billing

How is electricity fare/cost calculated?

Currently the electricity rate for home residents is set by the National Development and Reform Commission. The phased pricing system divides the monthly electricity consumption into three categories. The electricity rate increases as the electricity consumption grows. This policy aims to encourage rational consumption of electricity and energy-saving. CSG implements national policies and implements detailed efforts to provide clear and accurate data for the electricity bill.

1st Category

The amount in the first category is calculated according to the average consumption of 80% of the residents. In this phase the fare is relatively low to ensure the interests of residents.

2nd Category

The amount in the first category is calculated according to the average consumption of 95% of the residents. In this phase the fare is adjusted to cover the costs of the power companies so that they can make profits.

3rd Category

The Amount Exceeding the Second Category
Considering the energy scarcity, the fare in this phase compensates for environmental damage costs

Power Supply for Important Events

The company sets up a power supply mechanisms and issues regulations on power supply security risk assessment for important occasions. We have guaranteed power supply for major events such as the Boao Forum, The 15th Anniversary of Macau's Return, and the "two conferences and one festival" in Guangxi.



“Guaranteeing the power supply is not bargaining. It is a responsibility. We need to work hard to adapt to ever-greater challenges and more difficult assignments.”

MA Dechao,

“Power Supply Superman”,
Qionghai Power Supply Bureau



Case Study: Power Supply for the 15th Anniversary of Macau's Return

Guangdong and Macao are connected by numerous silver lines. On December 20, 2014, CSG offered its highest level of power supply guarantee for the 15th Anniversary of Macau's return. This project involves a total of twelve 220 kV substations, six 500 kV lines and twenty five 220 kV lines. CSG made a co-ordinated plan with the Energy Office of the Macau SAR Government and CEM (Companhia de Electricidade de Macau) and made reasonable arrangements. The important production sites and all equipment were given special attention. In the end the power supply for the anniversary was a huge success.

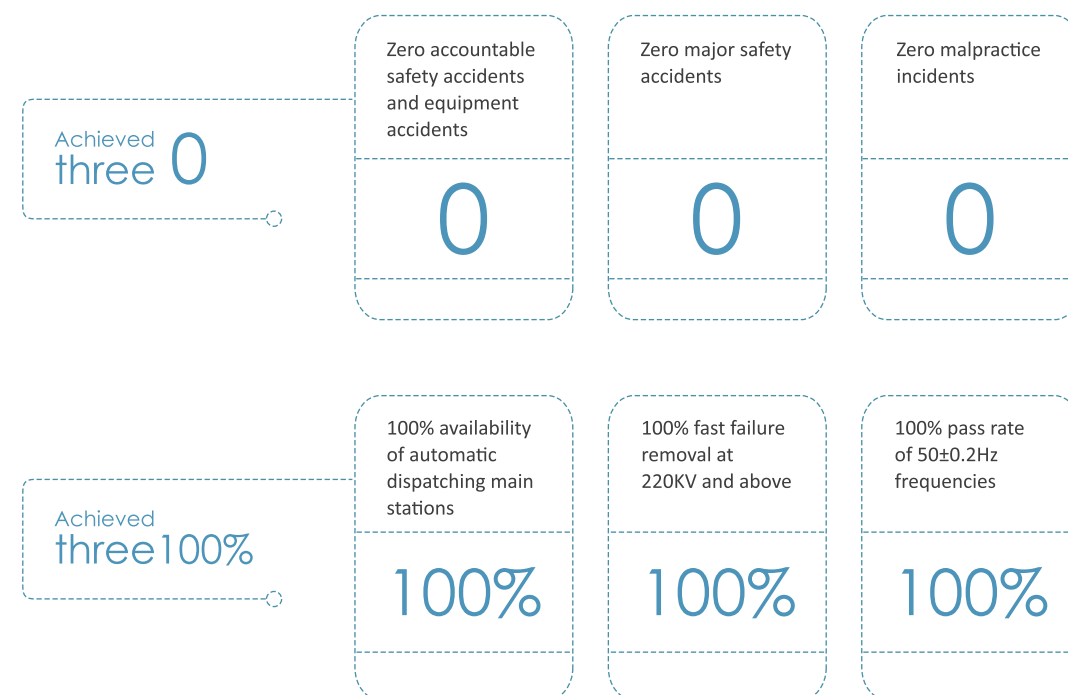


Ensure safe operation

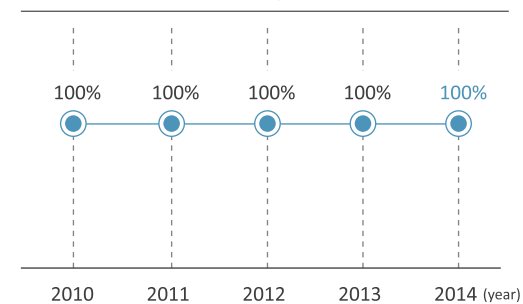


Safety performance

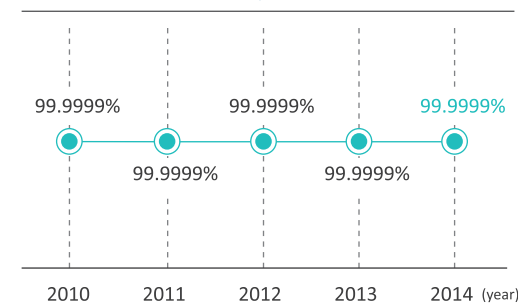
Power grids are confronted with a number of challenges: sophisticated operations systems, volatile supply and demand situations, and frequent natural disasters. CSG sees safe production as the core task and has been boosting systems operation, making detailed efforts to maintain equipment and has successfully addressed safety risks. In 2014, the company safeguarded the power grid's operation.



Pass rate of 50±0.2Hz frequencies



Pass rate of 500 KV frequencies



Imbalanced regional power supply and demand

- Redundant hydro power generation versus decreasing thermal power, imbalanced power supply and demand between the western and eastern China.
- Imbalanced regional economic development. Power grid structures in some regions need to be reinforced, power outage risks still exist.

System sophisticated features ensuring stability

- Eight AC and eight DC power transmission lines in the West-to-East power transmission project. Prominent feature of strong DC and weak AC lines.
- Sophisticated operations controls at two DC projects (Nuozhadu DC Project and Xiluodu DC Project).
- Long hours of peak capacity operation exacerbates power grid risks.

Natural disaster impact

- Natural disasters such as typhoons, earthquakes, thunderstorms and ice/sleet storms hit CSG's service area often and pose a threat to safe grid operations.



Challenges

Safety first Prevention first Comprehensive solutions

Action

Stable system operations

- Optimize system operations management top layer design.
- Closed-loop risk management.
- Optimize annual operation plan and address incidents in a timely and precautionary manner.

Equipment maintenance

- Improve equipment maintenance models.
- Reinforce differentiated operations and maintenance.
- Launch equipment maintenance campaigns.

Prevention and control of grid safety risks

- Power grid risk analysis, layer, hierarchy management and control.
- Standardize safe production inspection, address hidden risks.
- Promote safe production risk management.

Boost emergency response capability

- Standardize emergency response management and reinforce emergency support capability.
- Reinforce emergency synergy mechanism, boost emergency handling capacity.
- Take solid measures to implement disaster prevention technical solutions, improve comprehensive disaster relief capacity



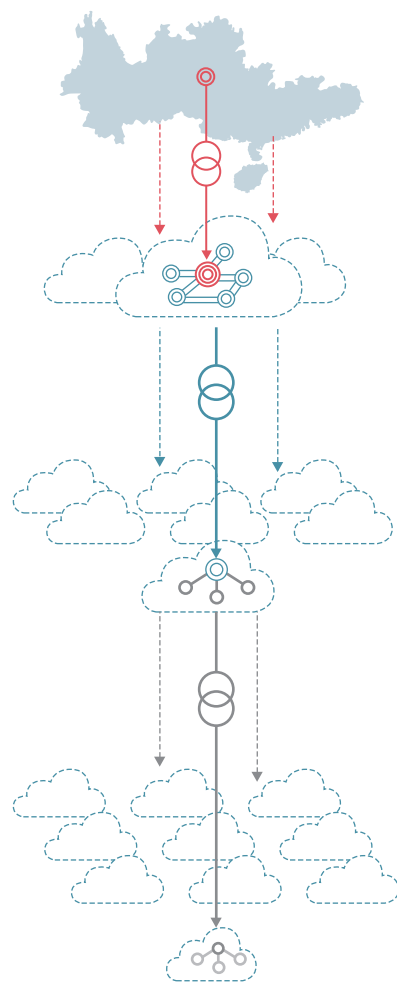
Staff from Honghe Power Supply Bureau pledging safe production



Staff from Shenzhen Power Supply Bureau inspecting power transmission lines in tunnels

Stable system operation

CSG has continued to improve the closed-loop risk management and control mechanism including timely ex-ante prevention, effective response and ex-post continuous improvement; as a result, CSG has effectively prevented and controlled grid operation risks and ensured a safe, stable and reliable power supply.



500 KV main grid

- Identified 12 power grid operation risks, took solid measures to implement 238 prevention and control measures and effectively controlled power grid risks.
- Successfully handled 55 major faults and ensured safe, stable operation of power grid.
- Carried out 4 hidden danger identification campaigns and reinforced the closed-loop system of operations safety management and control.

220 KV grid

- Issued 903 risk warnings and addressed short-circuit current problems by sectionalizing power supply to 16 service areas.
- Achieved a zero-mistake execution of 20,000 orders, and successfully addressed 1,457 trippings.
- Compiled 146 error analysis reports and implemented 2295 rectification measures thereby enhancing grid safe operation.

110KV grid

- Issued 3168 risk warnings and timely addressed safety hidden dangers.
- Achieved zero-mistake execution of 42,000 orders, and successfully addressed 10,344 trippings.
- Followed system exceptions ,implementing 4581 rectification measures and successfully prevented similar incidents from happening again.



Equipment maintenance

CSG has taken solid measures to practice equipment life-cycle management, perfected equipment control and management mechanisms, reinforced closed-loop systems operation safety management and control, enhanced differentiated equipment operations and maintenance, reinforced capacity building to ensure continuous improvement of equipment maintenance.



Equipment selection

Optimized equipment parameters, addressed problems in equipment selection. (eg: brand selection, spare parts storage and access to repair)



Equipment purchase

Established stringent project thresholds and incorporated equipment operation evaluation results in bidding evaluation. Control equipment quality from the source.



Project construction

Reinforced on-site management, took concrete measures to implement zero-defect turn-key projects to ensure project quality.



Equipment maintenance and operation

Established life-cycle management , advanced standardization at every stage of equipment management.

- Addressed problems, took solid measures to implement delay protection of transforming heavy gas, GIS anti-accident measures, prevention measures of traversing power transmission lines .

- Rolled out standardized inspection and repair, conducted rectification campaign to identify worn-out equipment , and reduced by 92% the fault rate of transformers, and for the first time realized zero burning of transformers.

- CSG strengthens the differentiated operation and maintenance of equipment and provides special maintenance of important transmission lines for 31560 times and 75071 sets of substation equipment.

- It also Increases the helicopter patrol and sets up a helicopter/ UAV patrol system to enhance the inspection quality and efficiency of transmission lines.



Helicopter patrol

Enabling automatic inspection execution, simultaneous access to, analysis and location of high voltage line data.



DC de-icing technology

Effective de-icing to power transmission lines , highly adaptable under different situations (area, line length and icing type/characteristics).



Smart detection system of transformer status

Highly effective, active and comprehensive equipment management, incorporating fault diagnosis as relates to repair decision-making.

Security Risk Prevention

CSG prioritises production safety and risk management. Risk assessment and stratification controls are in place. We have also established long-term mechanisms of safety supervision, and in-depth production safety and risk management systems. As a result the performance of production safety management has improved steadily.

The accountability system has been implemented at all levels of the company. The security risk management and control models include monthly and annual reports, weekly adjustment and daily implementations. All risks are well-managed with 19 major risks to production safety being controlled and 12 potential hazards having been eliminated.



The Guangzhou Bureau of the EHV Company carries out safety inspections

Risk report

The risks are identified and **102** key measures are implemented at every level.

- 12 risks to the power grid
- 11 social risks
- 7 device risks
- 5 environmental and occupational health risks
- 2 personal risks

P

Monthly Supervision Plan

The power grid, equipment and operational risks are monitored constantly with 19 high-risk management programs reviewed as per schedule and 5 on-site supervision inspections are conducted. All the risks have been effectively controlled

D

Daily Adjustment

Each department breaks down the tasks, carries out risk analysis, develops appropriate preventive measures and improves the assessment to ensure that the risk control measures are implemented.

A

Weekly Adjustment

Weekly tracking of the operations and reporting on each production week is in-place. Controls have been established at different layers, categories, grades and specialised areas.

C

We strengthen safety supervision. CSG requires that safety supervision should be "fully covered, enforced and pragmatic". We broaden the scope of safety supervision, make improvements at the time of planning, check and rectify at each stage. We have monitored assumed responsibility for production safety situations, to promote safe production responsibility so as to implement rectification in-place.



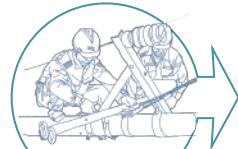
Planning Stage

We assign a team of safety inspection experts, utilize an innovative safety inspection model and build standardised inspection processes.



Checking Stage

We establish normal safety inspection mechanisms, and give full play to the initiative of all departments. The safety inspection includes self-examination, security checks by professionals and CSG's own inspection teams.



Rectification Stage

We are problem-oriented and divide the issues into Class A (CSG network), Class B (affiliates), and Class C (municipalities). The responsibilities are delegated to different levels.

We promote the safety risk management system. CSG implements the dynamic risk-management system and production safety ratings. The risk management system focuses on five areas including goals, problems, plans, inspection and performance. Such programs will be carried out in various professional fields to improve the overall system security management. In 2014, 91.7% of the departments and affiliates in CSG were rated three diamonds or higher.

Assessment Results of Local Affiliates in Production Safety and Risk Management System

Rating	2012	2013	2014
5 Diamonds	1	1	1
4 Diamonds	10	12	22
3 Diamonds	59	57	66
2 Diamonds	9	5	2

Better Capabilities to Cope with Emergencies

Typhoons, earthquakes, ice storms and other natural disasters occur in our region quite frequently and pose a serious threat to the safe operation of the power grid. We always prioritise public safety and the public interest and constantly improve our ability to cope with emergencies. We make every effort to minimise the impact of the power outages caused by natural disasters.

We have also enhanced emergency management. We adhere to the customer-centric philosophy, enhance the network resilience, optimise the contingency plans, have a highly-detailed emergency plan system, constantly work to improve emergency response mechanisms and emergency management processes.

Enhancement of Overall Resilience

- We identify the overall planning and design in disaster prevention support and enhance the ability to provide disaster prevention systems for the power grid.
- We draw ice maps and in the coastal regions we draw wind speed distribution charts and prepare guidance materials on anti-ice procedures for the transmission lines as well as recommended wind damage prevention measures. We have also finalised disaster prevention standards.

Optimise the Contingency Plan

- We have modified the "1+15" contingency handbook and improved its practicality.
- We've re-written the Handbook for Emergencies, improving the workflow and standardizing the forms.
- We've asked each department to write emergency response plans and detailed measures to cope with assorted types of emergencies.

Standardization of the Management of Emergency Equipment

- We've made scientific plans on deployment of emergency equipment when responding to emergencies in different regions, different types of disasters, as well as categories and levels of risk.
- We've established principles on power communication technology, making clear the requirements for use of emergency communications equipment.
- We've also purchased emergency equipment enhancement devices to meet the levels needed of such facilities in disaster-prone areas.

Better Co-Ordinated Mechanisms

- We've partnered with the Guangdong Provincial Government and Guiyang and Zunyi city governments to carry out rehearsals for large-scale power outages.
- We've contacted emergency command platforms with local governments in Guangdong, Yunnan, Guangzhou, Shenzhen and other areas. More information is shared as are benefits of co-ordinated actions.



Case Study: Emergency Drill for a West-to-East Power Transmission Fault

On October 15, 2014, the Guangdong Provincial Government, the Southern Authority of the National Energy Board, and the Guangdong Emergency Command Center for Large-Scale Blackouts did a joint emergency drill for a simulated West-to-East Power Transmission Fault. The emergency response practice was largest in scale, involving the largest number of cities and companies and the simulation scene was potentially the most damaging imaginable. Such practice sessions improves the ability of the government and power companies to jointly deal with an emergency during an actual power outage.



In light of the frequently occurring natural disasters, CSG responds effectively to sudden major disasters such as typhoons, earthquakes, storms, ice storms, etc. The preparations before the disaster are carried out and teams are sent to repair electrical power. A careful post-disaster analysis is always done to assure that emergency plans are managed well.



Pre-Disaster Prevention

- Timely warnings are issued which aids with the preparation of special programs and defense work.
- The staff take shifts day-and-night and strengthen the construction site risk assessment and control

Power Outage Restoration

- Emergency command system operations
- The deployment of emergency supplies
- Emergency response teams are in place
- Timely updated information

Post-Disaster Assessment

- Assessment for Emergency Response for Typhoon "Ramasun" and the Ludian Earthquake
- Make plans and improvements on the emergency response plans
- Write the Assessment of Economic Losses of Power Companies in National Disasters as required by the National Energy Board



Security Alarms

We adhere to the people-oriented philosophy and attach great importance to production safety. Yet in 2014 there were still four cases of personal injury or death within CSG emergency teams. CSG has reviewed the issues and has developed thorough measures to prevent recurrence of similar incidents.

Continuing Problems

For CSG:

- The security training and education exams should be more strict.
- Some employees do not have enough knowledge of security practices and violations have occurred occasionally.

For stakeholders

- At some sites, security management is not in place and the construction site is disorganised
- Some construction workers have poor safety awareness and low safety skills. Some construction workers do not have the necessary job qualifications and seemingly have no idea about the basic requirements of safety.

Measures for Improvement

- We need to implement the new Regulations on Production Safety, improve the documents on safety supervision and management and identify the responsibilities and objectives of production safety at all levels.
- Various types of professional training on production safety should be given and a good corporate culture on safety needs to be created.
- More attention to risk-prevention should be given to potential risks involving the power grid, equipment, people, the social impact, as well as environmental and occupational health issues.
- Better management for outsourced projects is needed. The electrical construction contractors should be scrutinised to assure their work practices are within CSG safety management and construction organisation parameters.

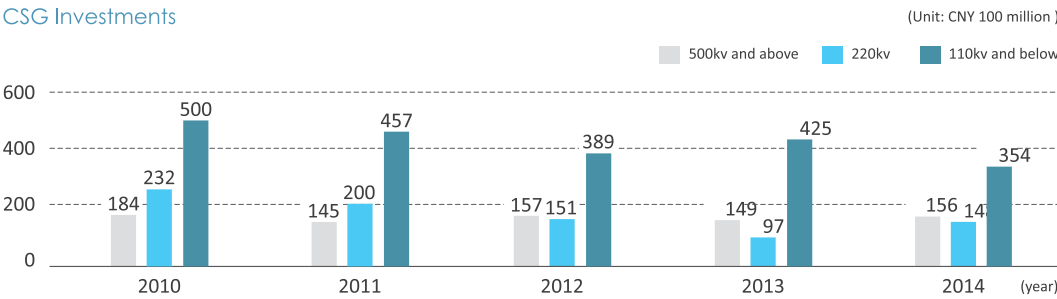
Stronger Power Grid



Planning and Investment

CSG has implemented scientific planning on the power grid to strengthen key technology projects. It encourages the application of technology in order to create ‘intelligent substations’, improve distributed power access, to assure diffusion of electricity information and communication and CSG tries its best to create a smart, efficient, reliable and green power grid. In 2014, CSG invested CNY 65.8 billion on construction projects, 6400 kilometres of 220 kilovolt transmission lines have been installed and we have achieved 34.8 million KVA in transformer capacity.

CSG Investments



Quality Projects of CSG 2014

Name of the Project	Award	Awarding Body
Yucheng 500kv Substation Project, Guangdong	National Quality Engineering Award (Silver Prize) China Power Quality Engineering Award 2014	National Engineering Construction Quality Award Committee China Electric Power Construction Enterprise Association
Jiaobu 220kv Substation Project, Guangdong	China Power Quality Engineering Award 2014	China Electric Power Construction Enterprise Association
Lihua 220kv Substation Project, Yunnan	China Power Quality Engineering Award 2014	China Electric Power Construction Enterprise Association
Liangqing 220kv Substation Project, Guangxi	China Power Quality Engineering Award 2014	China Electric Power Construction Enterprise Association
Donghua 110kv Substation Project, Guangdong	China Power Quality Engineering Award 2014	China Electric Power Construction Enterprise Association



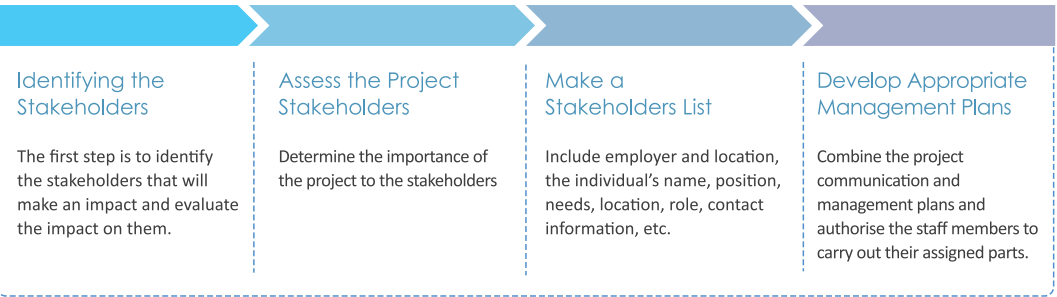
Case Study: The Xiluodu Power Transmission in Guangdong ± 500 kV DC Transmission Project Now in Operation

In June of 2014, the right bank of the Xiluodu Hydropower Station in Guangdong ± 500 kV Transmission Tower Double HVDC transmission project was fully completed and put into operation. The line had a length of 2 × 1223 km and the double-circuit HVDC capacity was 6.4 GW. It has the distinction of being the double HVDC transmission project with the world's largest transmission capacity and transmission distance. The lines use double circuit tower and the line corridors save about 7,000 hectares of land while the foundation saves another 180 hectares. The sending end and the receiving end use the same sites thus saving about 33 hectares.



Communication with Stakeholders

Electricity and people's lives are inseparable. But some people are reluctant to be neighbours of electricity generating or transmission facilities and always claim “NIMBY” (not in my backyard). CSG faces significant resistance in the process of promoting the construction of power grids. CSG manages the projects carefully and talks with the stakeholders, especially the community residents, providing details on power grid construction. The communication is honest and transparent. It aims to eliminate the worries of the residents and to get the understanding and support of the stakeholders.



- Develop a Communications Plan**
 Development of a communications plan that includes the information categories necessary, ways of collecting information, the audience, timeframe and format for each project stakeholder.
- Seek Help Locally**
 The local affiliates can help with the land acquisition and compensation.
- Difficulties in Communication Projects**
 The design firms need to understand the difficulties in demolition and compensation. And they need to work out responses.
- Update Information Regularly**
 Host project meetings regularly so that stakeholders have accurate and full knowledge of project progress
- Evaluation and Improvement**
 Evaluate and improve project communication plan to enhance communication effectiveness



Case Study: Smart Idea in Power Grid Construction

In July of 2014, the company launched the third “Smart Idea” contest. The theme was “smart idea/green life”. It focused on the difficulties in power grid construction such as land acquisition and the effects on the landscape. Stakeholders are normally concerned about these issues and the difficulties hinder the construction process. The competition brought together the industry elites and gathered the latest and best ideas. A number of good ideas have emerged via the contest and serve our goal of building a “smart, efficient, reliable and green” power grid.



Raising the Technological Level



Scientific and Technological Innovation and Application

In 2014, the company's annual investment in scientific research reached CNY 2.023 billion, accounting for 0.43% of the main business revenues. CSG chaired the publishing of four electrical and electronics engineers standards. The result is a substantial increase in independent intellectual property rights and the number of patents. Our ranking among the central SOEs has been on the rise.

In 2014 the company won a total of 40 provincial science and technology awards, one being a grand prize and eleven were first prizes.



China Electric Power Science and Technology Progress Award :

Development and Application of the ± 200 Mvar STATCOM Technology Based on voltage source converters.



Science and Technology Award Grand Prize (first win)

AC-DC Power Parallel Key Technology Research and Engineering Practice

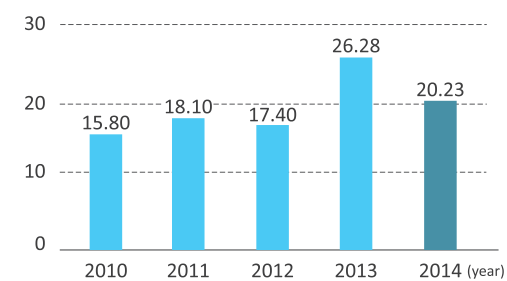


First Prize in the China Electrotechnical Society Science and Technology Award (first win)

Development and Application of DC Ice-melting Devices

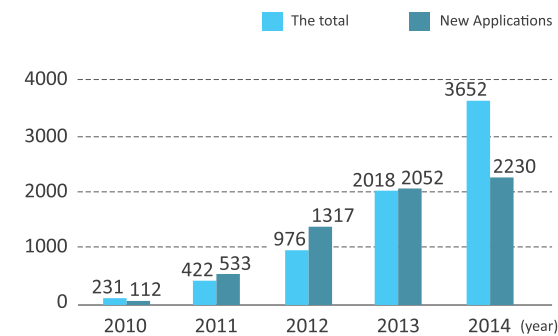
Investment in R & D

(Unit: CNY 100 million)



Patent Applications and Licensing

(Items)



Note: In 2013 CSG invested CNY 1.189 billion in the multi-terminal VSC project in Nan'ao. It was a National Key Project so the R&D investment in 2013 was higher.



Electrical equipment and chemical recycling of sulfur hexafluoride diagnostic techniques.



Digital substation protection and high reliability network sampling.



Perspective imaging detection equipment based on digital X-ray.

Technological Innovation Systems

CSG builds international technological innovation systems and aims to be at the international forefront of technology in power grid development. It carries out in-depth cooperation with renowned agencies both at home and abroad and builds the core competitiveness of the company. Such practices provide support for the sustainable development of the company.

- We also improve our science and technology management systems. The CSG science and technology management system has covered all industry sectors. The science and technology indicators won a first prize in the country's Management Innovation in the category of Electricity Industry Awards.
- We promote differentiated development and collaborative innovation systems. The Science Academy of CSG was designated as a central research institute. We make plans to improve the innovative capacity of the affiliates and make company-wide collaborative efforts to improve ourselves.
- Better team-building and staff training. Our talent pool is featured by academicians, national experts and full-time researchers. JIN Xiaoming and two other employees were awarded as National Outstanding Scientific and Technological Experts. ZHAO Manyong won the Outstanding Contribution Award in the China Electric Power Science and Technology sector. HUANG Ying and XIAO Yong won the Outstanding Young Engineer Award in Electrical Engineering.
- We encourage innovation among the employees. We set up a fund of CNY 43.75 million and support 1000 projects. We also set up the Technology Innovation Award and encourage the employee's participation.

CSG's High-Level Scientific and Technological Personnel



2
Academicians of the Chinese Academy of Engineering



1
Candidate from the "Thousand Talents Project"



5
Experts from the central government's "Thousand Talent Program"



631
Technical experts at all levels



75
Experts have received special government subsidies.

Bachelor's degree and above



471
PhDs

7075
Master's degrees holder

People with intermediate professional and technical qualifications



217
People with senior professional qualifications

8087
People with associate senior professional qualifications

Senior technicians qualification



1916
Senior Technician

12067
Technician



Drones to Eliminate the Floating Objects on High-voltage Lines (by Guangzhou Power Supply Bureau)

Video



Employee's Technological Innovation



Environmental protection

Fossil fuel consumption per unit electricity sale is
191 g standard coal/KWh
down by 24g standard coal/KWh

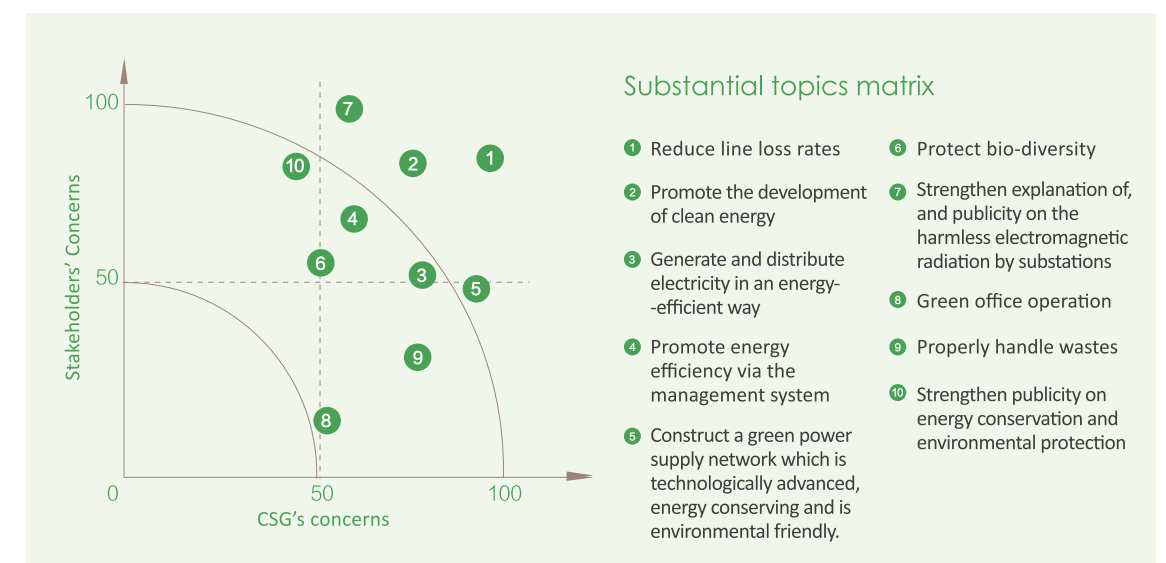
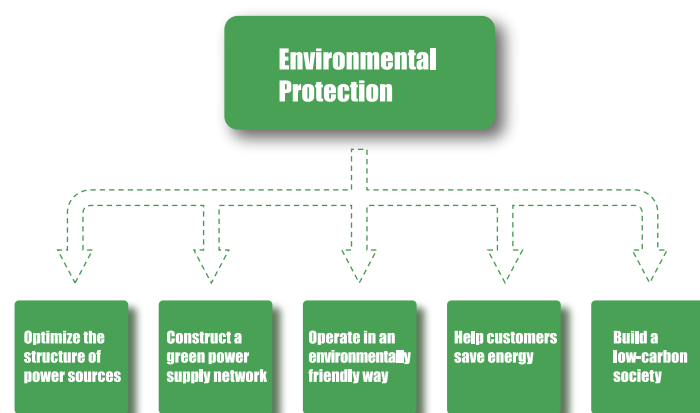
Annual West-to-East hydro-power transmission is
120.5 TWh
up by 31%

Overall line loss rate is
6.94%
a decrease of 0.26%

Introduction

Contributing green power to building a low-carbon society

We give a full play to our role as a regional resource distribution platform, actively optimizing the structure of power sources, constructing a green power supply network and operating in an environmental-friendly way. We also help our customers improve energy efficiency and promote low-carbon development by passing on a green concept developmental ideas. By doing so, we are able to make a due contribution to advancing the energy revolution and building a more beautiful China.



“ China plans to achieve peak carbon emissions around 2030 and increase the percentage of non-fossil-fuel in primary energy consumption to about 20%. ”

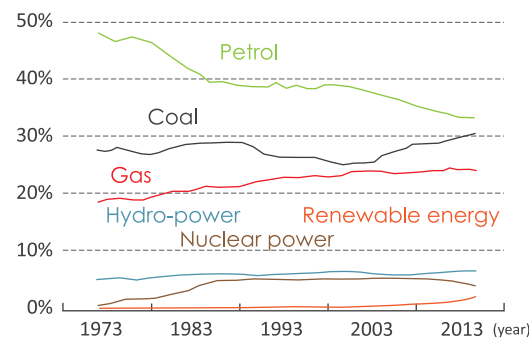
Xi Jinping, President of China

The world is kick-starting an energy revolution to tackle climate change

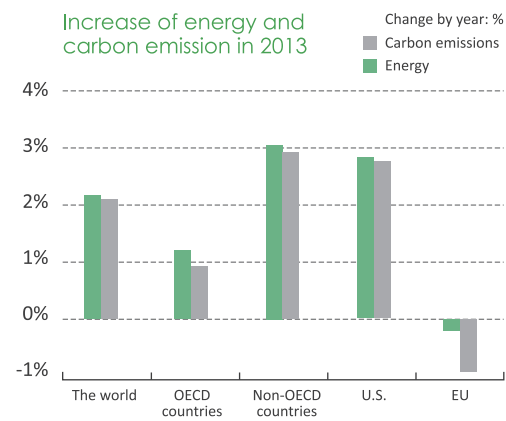
The AR5 published by IPCC of the UN pointed out that the influence of human activities on the climate system is explicit. The traditional energy production and consumption mode which relies heavily on fossil fuels puts immense pressure on the environment and intensifies climate change by the emission of high carbon and other pollutants. If we simply do nothing, climate change will cause catastrophic and irreversible consequences for mankind and the ecological system.

To reduce negative effects on global climate change by irrational energy production and consumption, world major powers started the energy revolution. They enhance the transformation of energy production and consumption, to which they dedicate themselves in a more sustainable way, so as to mitigate influence of human activities on climate change.

Global primary energy proportion



Increase of energy and carbon emission in 2013

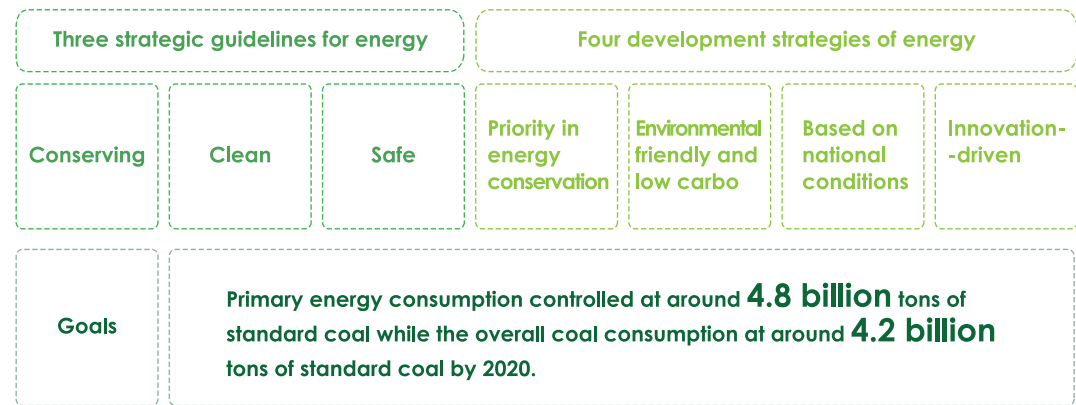


Source: BP Statistical Review of World Energy 2014

China ushers in a new era of energy production and consumption

The Chinese government attaches great importance to tackling climate change and embracing the energy revolution. In 2014, the State identified the program of action, developmental guidelines and major tasks in the energy sector, which symbolizes that China has ushered in a new era of energy production and consumption.

On November 16th, 2014, at the 9th G20 Summit, President Xi Jinping announced that China planned to achieve peak carbon dioxide emissions around 2030 and increase the percentage of non-fossil-fuel in primary energy consumption to about 20%. At the same time, we will establish a South-South Cooperation Foundation on Climate Change to help other developing countries tackle climate change.



Source: Energy Development Strategy Action Plan 2014-2020 published by the State Council

Power grid companies: Green envoys of energy revolution

Connecting power generation with the demand side, power grid companies play an important role in advancing energy conservation and emission reduction. There is much room and potential for further energy conservation and emission reduction within the whole production-consumption cycle. It is the responsibility of power grid companies to urge power stations and their customers to adjust energy production and consumption modes, while fulfilling commitment in energy conservation and emissions reduction.



Power supply side

- Further develop and use renewable energies
- Increase the percentage of use of non-fossil-fuel in power generation



Customers side

- Continue to promote energy conservation and emission reduction, increase energy efficiency
- Transform traditional energy end-use to a more efficient one

CSG in action

As an important platform for resource distribution in the region, CSG adheres to the path of green development. While focusing on energy conservation and emission reduction ourselves, we also guide upstream and downstream companies to follow so as to serve the low carbon development in 4 provinces and Guangxi Autonomous Region within CSG's jurisdiction.

We strive to build a strong environmental protection mechanism. CSG makes company regulations on environmental protection to better improve environmental protection mechanisms and contingency precaution and response mechanisms. With these regulations in form, we can better guarantee making energy conservation and emissions reductions in an orderly fashion.

We strive to build an eco-friendly electricity value chain. According to calculations, the power supply side, the power grid side and the customer side respectively account for 39%, 8% and 53% of the annual potential emissions reductions within the production-consumption cycle in four provinces and Guangxi Autonomous Region within CSG's jurisdiction.

39% reduction potential by power supply side

8% by power grid side

53% by customer side



Results of energy conservation and emission reduction



Power supply

Non-fossil-fuel installed capacity accounts for **48.5%** of the total installed capacity

Non-fossil-fuel power generation accounts for **45.5%** of total power generation

Power grid

Overall line loss rate is **6.94%**

Overall energy consumption rate is **0.175 ton** of standard coal per RMB 10,000 output

Customer

Total amount of quantity of electricity saved is **0.903 TWh**

Total amount of electric power saved is **0.1874 GW**

Results of energy conservation and emission reduction by upstream and downstream companies in 2014

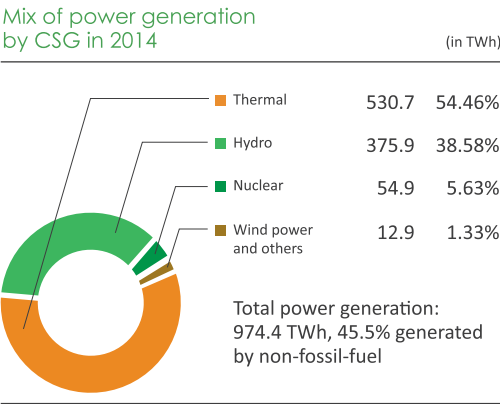
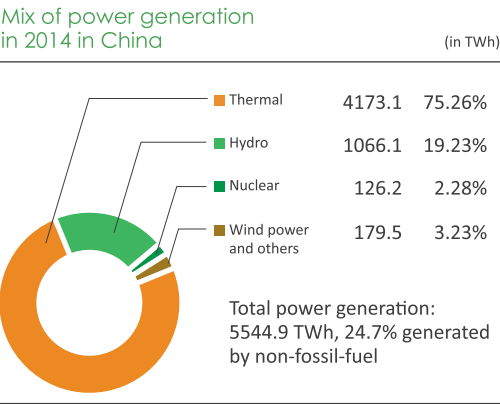
Item	Quantity of electricity (in TWh)	Standard Coal (in million tons)	Carbon dioxide (in million tons)	Sulfur dioxide (in million tons)
Expansion of non-fossil-fuel power generation projects	205.7	61.29	163.03	1.18
Launching big and energy-efficient projects while shutting down small and energy-inefficient power plants	-	1.43	3.81	0.0275
Energy conserving power generation and distribution	-	10.96	29.15	0.21
Reduction of overall line loss rate	4.1	1.21	3.22	0.02
Customer side energy conservation	0.903	0.29	0.764	0.0055
Total	-	75.18	199.974	1.443

Results of energy conservation and emission reduction by upstream and downstream companies in total

Item	Quantity of electricity (in TWh)	Standard Coal (in million tons)	Carbon dioxide (in million tons)	Sulfur dioxide (in million tons)
Expansion of non-fossil-fuel power generation projects	771	238.85	635.34	4.59
Launching big and energy-efficient projects while shutting down small and energy-inefficient power plants	-	13.41	35.2	0.26
Energy conserving power generation and distribution	-	31.05	82.48	0.6
Reduction of overall line loss rate	34.2	10.64	28.31	0.2
Customer side energy conservation	9.3	3.05	7.7	0.06
Total	-	297	789.03	5.71

Note: The figures in the second form refer to the aggregate amount from 2002 to 2014. Statistics of the increase of non-fossil-fuel power generation and line loss reduction from 2002, 2005 and 2010 are used as reference for the Tenth, Eleventh and Twelfth Five Year Plans respectively.

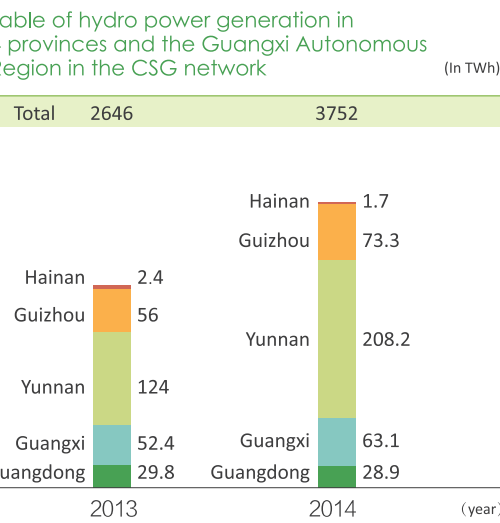
Enhance the optimization of power supply structure



Promote West-to-East hydro power transmission

Through the West-to-East hydro power transmission scheme, economical and clean electricity is transmitted to the eastern part of China, which greatly relieved the pressures related to environmental protection in the region.

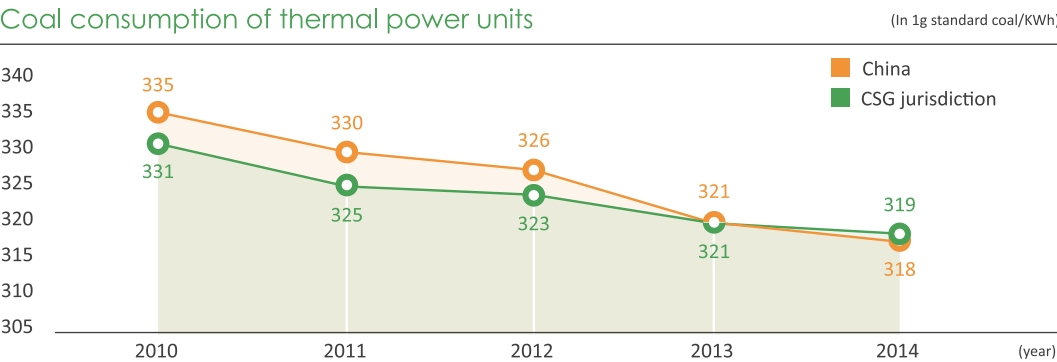
- In 2014, the total electricity transmitted through the scheme was 172.3 TWh, increasing by 31%.
- The total hydro power transmitted through the scheme was 120.5 TWh, which equals 38.32 million tons of standard coal consumption, 101.93 million tons of carbon dioxide and 0.74 million tons of sulfur dioxide emissions cut.
- The West-to-East transmission capacity of Yunnan Province increased by 8 GW, which greatly relieved its pressure on conserving water.



The total West-to-East hydro power transmission in 2014 was **120.5 TWh**

Advance the development of clean thermal power

CSG actively advances the environmental-friendly renovation of thermal power units within our jurisdiction to promote the efficient and clean development of coal power generation. We completed the construction of supporting projects for an official scheme to launch big and energy-efficient thermal power projects while shutting down small and energy-inefficient ones in Guangdong, Guangxi and Guizhou. In cooperation with local governments, we managed to shut down small thermal power units of 2.3176 GW, complete desulfurization renovation of 100% coal power units and meeting 93% of the desulfurization renovation plan. Moreover, 67% of the thermal power units completed the real-time energy consumption and emission information access so that online monitoring of energy conservation and emissions cuts could be basically achieved. After renovation, thermal power units within the jurisdiction of CSG consume 319g standard coal per KWh, decreasing by 2g per KWh.



Note: The three tables above, including Mix of power generation in 2014 in China, Coal consumption of thermal power units in 2014 in China, and Mix of power generation in 2014 in China all come from the Flash Report of Statistics Data of National Electric Power Industry 2014 was Released by CEC.

Enhance grid connection to nuclear power

With application of the highest international safety standards, the Chinese government promotes the safe and innovative development of nuclear power in a serious and prudent manner. The government also strictly requires that the newly-built nuclear power units must meet the third-generation safety standards.

CSG positively carried out the national policy to provide grid-connection service for qualified nuclear power projects. In 2014, 54.9 TWh electricity generated by nuclear power was integrated into CSG networks.

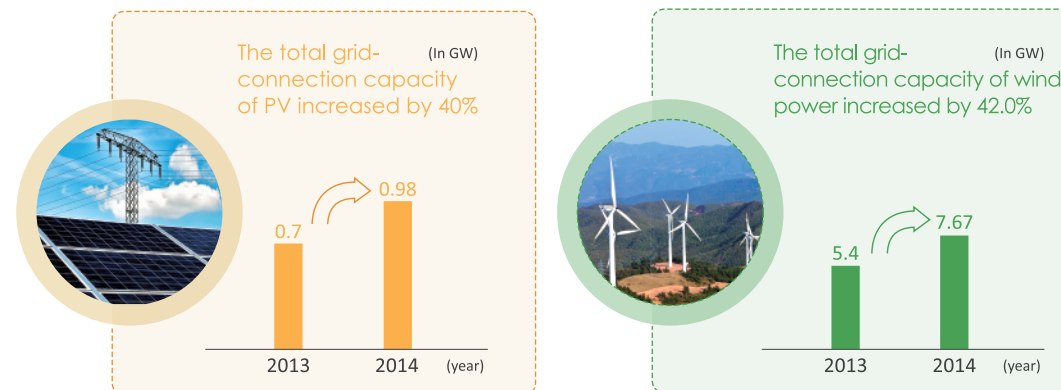


2-circuit 500 KV cables between Fanchenggang Nuclear Power Plant and Haigang Substation in Guangxi were put into operation

Support the development of new energy

CSG continues to promote grid connection with new-energy power grids and provides supporting services for new-energy power generation. We gradually increased the ratio of new energies and renewable energies in power unit installations. Up to the end of 2014, the total installation capacity of new energy reached 10.38 GW, a year-on-year growth of 43.3%, and the ratio of new energy installation rose to 4.3%.

- We published management regulations and service guidebooks to standardize the management of new energy businesses.
- We also organized our branches and subsidiaries to formulate supporting regulations for the development of new energy.



The construction of the world's largest distributed PV project in a single manufacturing site

In September, 2014, CSG Energy Company started the distributed PV project of the Galanz (Zhongshan) Household Appliance Company. With a total capacity of 0.06 GW, it has hitherto become the largest distributed PV project in a single manufacturing site in the world. When completed, the project will facilitate heat insulation and improve the working environment of numerous enterprises. It can also reduce air-conditioning consumption by 16% and electricity costs by 5%-10%. It was estimated that 467,000 tons of coal will be saved during the project's operation, which amounts to an emission reduction of 1.18 million tons of carbon dioxide and 580 tons of dust.



Energy-conserving power generation and distribution

CSG continues to practice energy-conserving power generation and distribution. We prioritize the use of renewable energies, nuclear power and high-efficiency thermal power so as to reduce primary energy consumption and disturbance on the environment. It is our goal to advance socioeconomic development with the smallest sum of energy consumption and pollution emission.



Let the Electricity mascot help you

An info-graphic about energy-conserving power generation and distribution

Why should we practice energy-conserving power generation and distribution?

Energy-conserving power generation and distribution could impose indirect adjustment and control on the generation order and method. It bears a profound significance for the reduction of energy consumption and pollution emission, for the sound and fast development of economy, and for the realization of energy conservation and environmental protection.

- It is conducive to reducing pollution and protecting the ecological environment.
- It facilitates the power industry to make structural adjustments and transform the growth pattern.

How to achieve energy-conserving power generation and distribution?

- Cooperate with the authorities to formulate power generation sorted list and combination programs.
- Improve the mechanisms through which daily monitoring, weekly and monthly data collection and analysis, and quarterly negotiation are conducted. Timely adjust generation deviation and optimize operation arrangements.
- Advance environmental-friendly upgrades and renovation of power units and basically achieve online monitoring of energy conservation and emission reductions.
- Standardize power grid connections and operation monitoring of power units



Thermal power

Construct supporting projects of a new scheme, which aims to launch big and energy-efficient projects while shutting down small and energy-inefficient projects.



Hydro power

Promote hydro power absorption by speeding up power grid construction and optimizing power distribution



New energy

Promulgate supporting regulations and gradually increase the absorption of power generated by new energies.



Nuclear power

Implement national policies and provide power grid connection service for qualified nuclear power projects.

Results of energy-conserving power generation and distribution

48.5%

Non-fossil-fuel power units capacity accounts for 48.5% of the total power units capacity

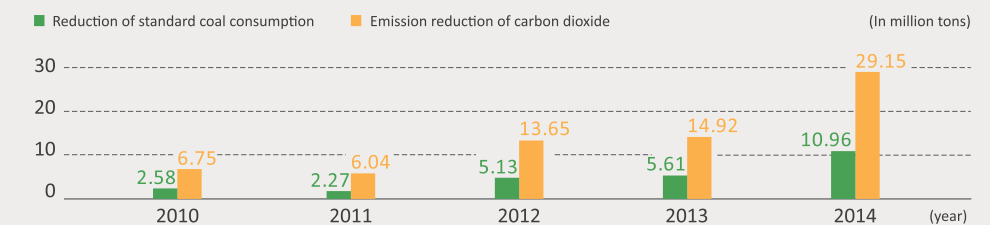
45.5%

Power generated by non-fossil-fuel accounts for 45.5% of total power generated

The amount of surplus water reduced after the implementation of the scheme is **9.8 TWh**

The fossil fuel consumption per unit electricity sales is **191g standard coal/KWh** down by **24g standard coal/KWh**

Environmental benefits from energy-conserving power generation and distribution



Constructing a green power supply network



Constructing 3C green substations

CSG pays close attention to the construction of green substations. We try to make them more environmentally-efficient, saving energy, water and land use, so as to reduce noise pollution to the community and to avoid alteration of the environment.

- We carry out strict construction standards, thus 80% of infrastructure projects this year met the Level-1 requirements or above.
- We also put forward technical requirements on substations' noise design and noise-reduction measures, and developed two corporate standards.
- Several 3C ecological substations were constructed, which includes the Shigu 110KV Substation in Dongguan (Guangdong Power Grid Corporation), the Yuexiu 110KV Substation in Nanning (Guangxi Power Grid Corporation), and the Qingshan 110KV Substation in Guiyang (Guizhou Power Grid Corporation).



The Yuexiu 110KV Substation in Nanning (Guangxi Power Grid Corporation)

Protecting biodiversity

We are fully aware of the importance of protecting biological diversity so strive to achieve a harmony between our projects and nature. Hence biological protection is our primary consideration in the preparation, planning, building, after-completion restoration and other processes of construction.

In 2014, all of CSG's construction projects have passed their environmental impact assessments and fulfilled the acceptance criteria. No case of violation of environmental protection was reported.



Protecting vegetation

- We try to keep away from woodlands during the pole and tower spotting process
- We try to avoid cutting trees by using high tower crossing or compact tower methods
- We make rational plans for construction to reduce disturbance of planted areas and to avoid damage to vegetation
- We take corresponding measures to preserve protected plants found during construction
- Affected vegetation is restored in a timely manner after the construction



Protecting wild animals

- We try to avoid construction at nighttime and during birds' breeding seasons
- We make sure that water pollution is prevented and the habitats of amphibians will not be severely affected
- Light use was limited in case of strikes from birds
- Details of the ecological environment are timely restored to reduce disturbance to animals

Clearing up public misunderstandings about electromagnetic radiation

The research report of International EMF Project released by WHO confirmed that no evidence has been found to demonstrate any correlation between ELF electromagnetic fields and depression, cardiovascular disease or cancers.

We fully understand public concerns about electromagnetic radiation and we also welcome rational appeals. To help clear up public misunderstandings, in 2014 we publicized electromagnetism-monitor data of our substations through various channels including public activities, websites, Weibo and Wechat.



Campaigns

The Shenzhen Power Supply Bureau invited citizens to measure radiation intensity themselves in the substations. Under the instruction of professional staff from a third party, they measured electric field intensity, magnetic field intensity and electromagnetic induction of household appliances.



The Internet

The Shenzhen Power Supply Bureau set up online electromagnetism-monitor programs on their official website to disclose monitoring data of the 110KV, 220KV, 500KV substations in Shenzhen.



Wechat

On its Wechat platform Guangzhou Power Supply Bureau set up a special column named Electricity Encyclopedia. In a voracious but easy-to-understand way, it was designed to clear up rumors about electromagnetic radiation of substations and high voltage cables by hearing experts' interpretation, conducting experiments before finally reaching a scientific conclusion.



Scan the QR code to monitor the real-time substation electromagnetic radiation



Scan the QR code to better your understanding

Q Is electromagnetic radiation truly a menace from substations?

A As a matter of fact, the Earth itself is a huge magnetic field, and natural magnetic fields, sunlight or even household appliances generate radiation. Thus in some sense human beings will not be able to survive in an environment free from electric and magnetic fields.

As a matter of fact, the electromagnetic intensity generated by substations will decline quickly within the initial several meters. In the area 1 meter away from the wall of a substation, the intensity will remain as normal as it was before the construction. Therefore, electromagnetic radiation caused by substations does little damage to the environment, which may even be far lower than that of household appliances.



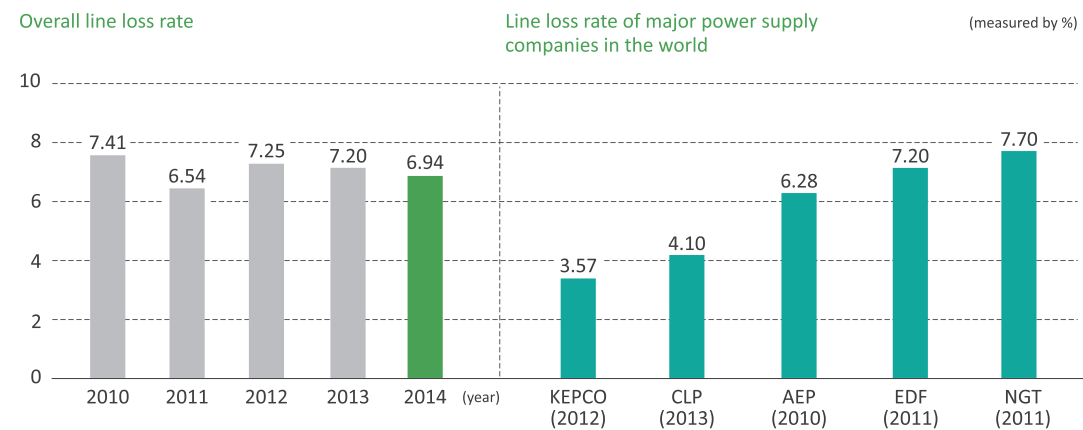
Zhonghang 220KV Substation is located next to the office building of Futian Power Supply Bureau in Shenzhen

Green Operation



Striving to cut line losses

Cutting line losses is one of the priority tasks for power supply companies to save energy and cut emissions. CSG strives to cut line losses from both technical and management sides by increasing input in technological R&D and practicing lean and information-based management. In 2014, the overall line loss rate of CSG was 6.94%, decreasing by 0.26% compared to the 2013 level.



Note: The overall line loss rates from 2010 to 2014 were measured on total asset basis. The figures of line loss rates for world major power supply companies come from KEPCO CSR Report 2013. Due to differences of company size and characteristics, there is little comparability of the figures provided above.

Measures to cut line loss

Management

- CSG strives to enhance its information and automation capacity in management. In pace with the establishment of "6+1" information system, marketing and distribution information integration platform, and metering automation system, we will achieve automatic line loss calculation and information-based management in different regions in a phased manner.
- CSG vigorously enhances reduction of line loss in county-level power supply companies. We formulated a guidance on reducing line loss in high loss power supply companies at county level and urged subsidiaries and relevant companies to formulate their own working plans. Ten county-level power supply companies with the highest line loss rate within our network have reduced their line loss rate to below 10%.
- We also piloted benchmarking management studies on line loss. We experimented benchmarking management in Guangxi to look into specific problems and weaknesses from loss reduction in planning, management, operation and technology.

Technology

- We promote the application of energy-reserving and environment-friendly equipment. In 2014, we purchased 13,144 amorphous alloy transformers, accounting for 55% of the oil-immersed transformers purchased during the year.
- We piloted the renovation of transformers with high loss rate through a new business model study

Properly handling wastes

With the concept of a cyclic economy, we properly recycled and treated wastes generated during operation, improved waste recycling rates and thus reduced pollution.

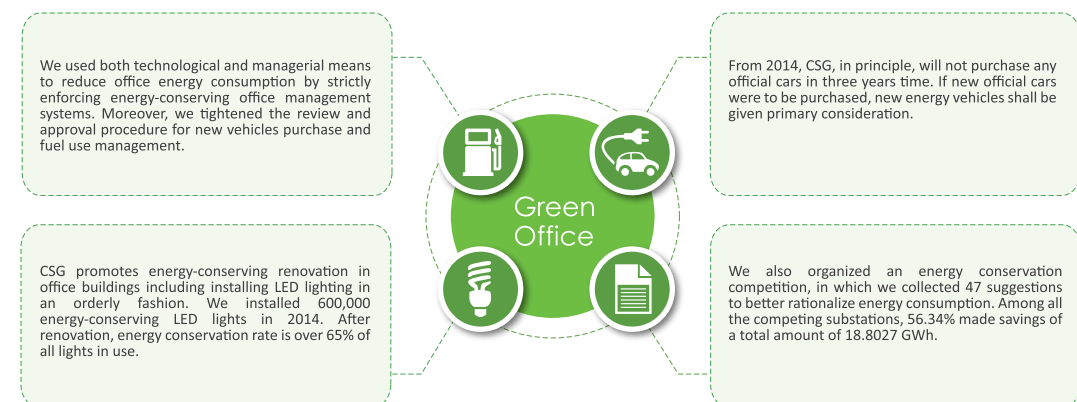
- The recycling rate of waste oil from the transformers has recently been close to 100%.
- We strictly monitor and follow the recycling and reuse of sulfur hexafluoride, and fully implement relevant regulations and requirements. In 2014 our sulfur hexafluoride recycling rate reached 100%.

Q Why must sulfur hexafluoride be recycled?

A Sulfur hexafluoride has good insulating property and excellent arc extinction performance. It is a new-generation EHV insulating material with better performance than air or oil. It is usually used as a condensing agent in substations. Sulfur hexafluoride itself is a non-toxic material; it is, however, a greenhouse gas whose single-molecule greenhouse effect is 22,000 times higher than that of carbon dioxide. Recycling sulfur hexafluoride is an important measure in the process of carrying out carbon management and the reduction of carbon emissions.

Green office operation

CSG advocates a green office operation and encourages our staff to save water and electricity and choose environmental friendly modes of transportation. It is our goal to raise the awareness of our staff to augment practices of green ways of life and work, and pursue green development on a daily basis.



In 2014, on the basis of energy-conserving renovation, CSG headquarters started to use an advanced energy efficiency management system, which helped save 1,804.8 GWh. The energy conservation rate was 14.84%, equivalent to cutting carbon dioxide emission by 1,799 tons.

Helping customers save energy



Energy conservation service

CSG promotes the energy conservation pilot project and contracts energy management by introducing advanced energy-conserving technologies from home and abroad to serve our customers. We helped diagnose 1,325 customers situations to accommodate their demand for energy conservation. After diagnosis and improvement, they were able to achieve 0.903 TWh cut in electricity, which equals to the consumption of 290,000 tons of standard coal and 764,000 tons of carbon dioxide emission.



Diagnosis service of energy conservation

CSG successfully established 320 energy-conserving industrial projects and promoted the launching of influential projects with Sinopec, BaoSteel, Coca Cola and Midea.



Energy conservation service for construction projects

CSG successfully implemented 35 energy-conserving projects for new buildings and for 13 renovation projects. We also carried out energy conservation diagnoses for 18 public institutions in Guangzhou.



Promoting the use of LED lighting

CSG has completed the installation of 1.72 million LED lights in 130 projects, which accounts for 60% of the total number of projects in Guangdong in the same period of time. The overall electricity saving rate exceeds 60% and the annual electricity saving amount was up to 200 GWh.



Case study: Helping China's biggest Coca Cola manufacturer complete energy saving renovation

In June 2014, the energy company of CSG launched an energy saving renovation project for Swire Guangdong Coca-Cola Ltd., China's biggest Coca Cola manufacturer. After renovation, the loss rate of transformers is expected to be cut by over 40%, saving RMB 780,000 for our customers by cutting fuel costs and acquiring extra revenue including government subsidies and outdated equipment sales. We will continue to provide a series of services for Swire Guangdong including installation of LED lightings and establishment of energy efficiency system. It is our goal to build the facility into a "Green Factory" demonstration project in the food and beverage industry.



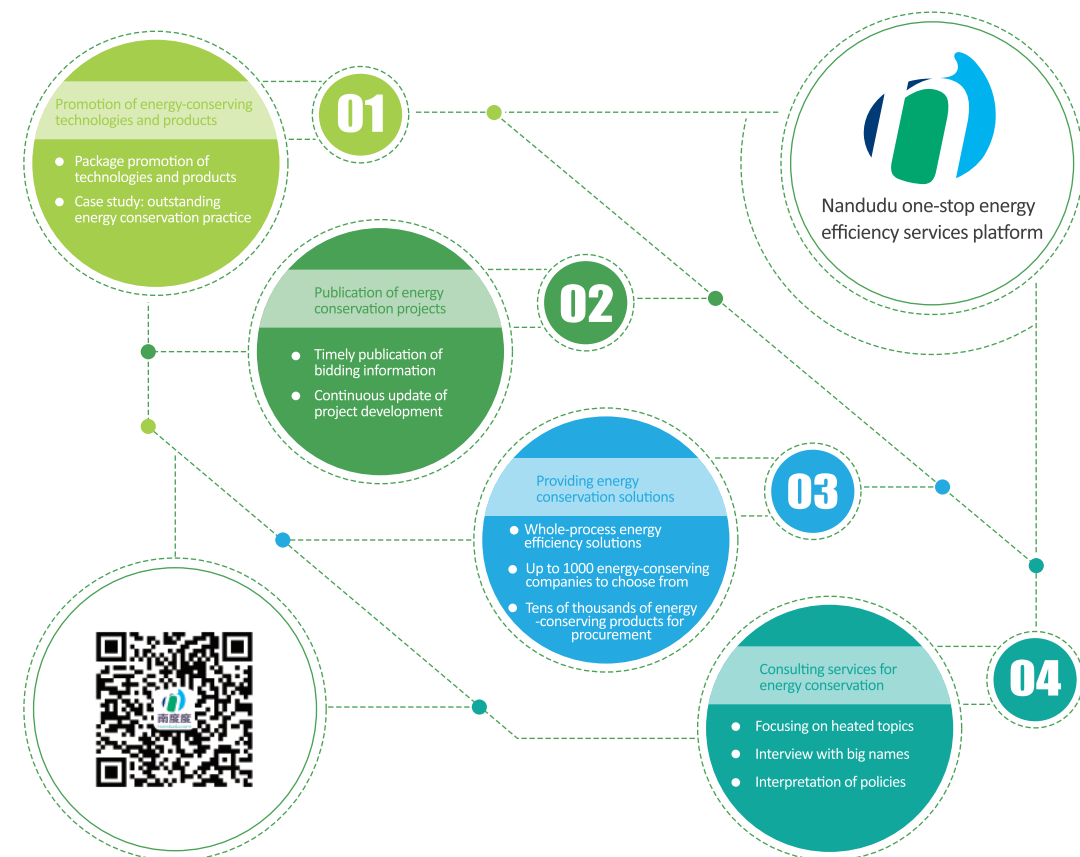
It helps the consumers to save

0.93 Twh of electricity

Establishing a demand side management platform

CSG actively participates in the national demand side platform construction and the formulation policies. We integrate different energy conservation sub-platforms within the network, promote energy conservation renovation in the demand side and push forward energy consumption revolution.

- We started to build the CSG sub-platform of the national demand side management platform. Entrusted by the National Development and Reform Commission, we are compiling the Guidebook on the Demand Side Resources Potential Survey of the National Electric Power to help promote the demand side energy conservation and emission reduction in the electric power sector.
- We successfully launched nandudu.com, a platform for one-stop energy efficiency services. This platform provides one-stop services such as consulting, design, construction, operation and maintenance of energy conservation projects for our customers and establishes a bridge for win-win cooperation between companies who provide energy conservation service and those who consume energy. By the end of 2014, we had 843 registered company members who had been engaging in energy-conserving technologies and products.



Case Study: Helping the demand side management on a pilot city project

Confirmed by the NDRC and the Ministry of Finance, Foshan is one of the four cities piloting demand side management practice. CSG undertook the establishment of a demand side management platform for Foshan. In May 2014, the platform was officially launched for online operation. The functions of the platform include online monitoring, decision analysis, project management and statistics, orderly use of power and demand side reaction. It vividly demonstrates the characteristics of Foshan's power supply undertaking, which include deciding usage and supply based on customers' demand and load management. The platform could provide statistical support for the formulation of macro policies and adjustment of electric power supply and demand plans. It will also help electricity consuming companies cut costs, improve product competitiveness and raise social benefits.



Build a low carbon society

Promote the development of EV

CSG helps electric vehicle companies expand business in accordance with government policies and boost the development of the electric vehicle industry.

- We have been conducting studies on electric vehicles including operation and management systems for EV, battery sorting technology, trolley bus and battery change modes.
- We have also been conducting studies on the promotion of EV and establishing an EV information management platform to lay a solid foundation for the future development of EVs.
- In 2014, we completed the construction of 15 battery charging stations, 1 experience center, 2966 AC charging posts and 117 DC chargers.



Shenzhen Futian Charging Station for EVs

Passing on the green concept

CSG gives a full play to its advantage as a resource distribution platform and passes on its low carbon and energy conservation concept through multiple channels. We also help create an atmosphere of rational and green consumption and the building of a resource-conserving society.

CSG organized a themed campaign called "Building a low carbon society; Conserving the clear sky and waters".

CSG was selected by the State-Owned Assets Supervision and Administration Commission as a role model in energy conservation and emission cut.

Passing on the green concept to the citizens

Displaying energy conservation results to the public

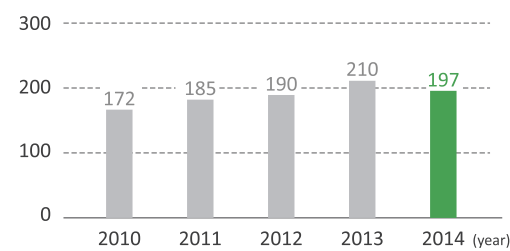
CSG compiled an annual report on energy conservation and emissions cuts to demonstrate our achievements in energy conservation in 2013.

Sharing energy conservation experience with other central enterprises

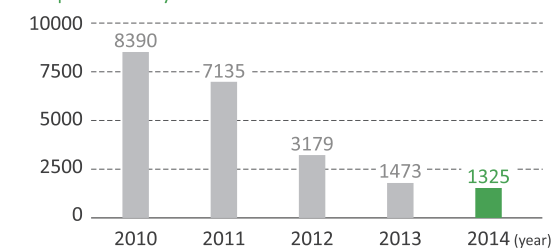
Passing on the low carbon concept to university students

CSG co-organized the 7th CSG Cup Guangdong Industrial Design Competition of Energy Conservation and Emission Cuts for University Students

More than 100 training programs each year (Unit: number of training programs)



Free energy conservation diagnosis is provided for more than 1,000 companies each year (Number of companies)



Case Study: Be a Superstar Who Passes on Green Concepts

In 2014, Shenzhen Power Supply Bureau initiated an eight-second video clip campaign named "Be a Superstar Who Passes on Green Concepts". It encouraged citizens to film a creative video clip with their cellphones to promote environmental protection and then to share them with the general public. On the day of the event, Shenzhen Power Supply Bureau also organized a "Lights Off for One Hour, Five Days Fun in Shenzhen" campaign to raise the public awareness of energy conservation. It is our goal to make the best use of the electric power so that the sky above Shenzhen will be clearer.



Golden Bee 2020

Together with the China WTO Tribune, CSG put forward the Golden Bee 2020 initiative in June, 2011. As the chair member of the Low Carbon and Energy Efficiency Management Committee, we vigorously promoted the cross-over cooperation of Golden Bee 2020, a Low Carbon and Energy Efficiency Management initiative. On the 9th International Forum of Corporate Social Responsibility held in June 2014, we co-hosted the sub-forum of Green Operation Era with China WTO Tribune. We had in-depth discussions on issues such as how to implement green operations as a responsible company, advocacy of environment-friendly concepts, how to realize green production, establishment of green supply chains, ways to cut resources and energy consumption, and some means to reduce the negative impact of operations on the environment.

Our footprint



On the 6th Session, we co-initiated the Low Carbon and Energy Efficiency Responsibility Initiative



On the 7th Session, we co-organized the Low Carbon Responsibility Competitiveness Sub-Forum



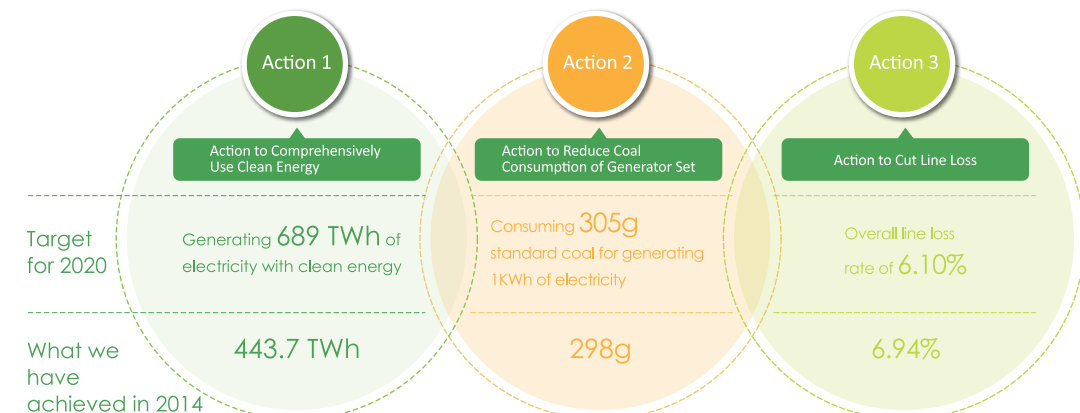
On the 8th Session, we co-organized the Green Momentum for a Beautiful China Sub-Forum



On the 9th Session, we co-organized the Green Operation Era Sub-Forum

Performance of Golden Bee 2020 Initiative

Since joining the Initiative, we have been working closely with upstream as well as downstream companies to establish a green industrial chain, build a low carbon society, live a greener life and build a more sustainable future. By doing so, we will be able to create a path to green development.





Economic Performance

Electricity sales

785.9 TWh
an increase of 5.7%

Operating income CNY

473.8 billion
an increase of 5.7%

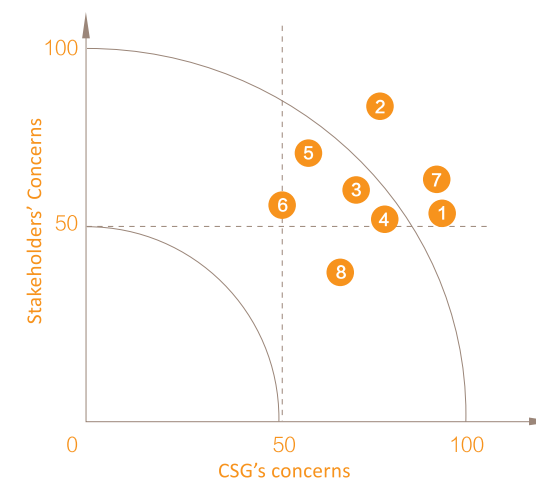
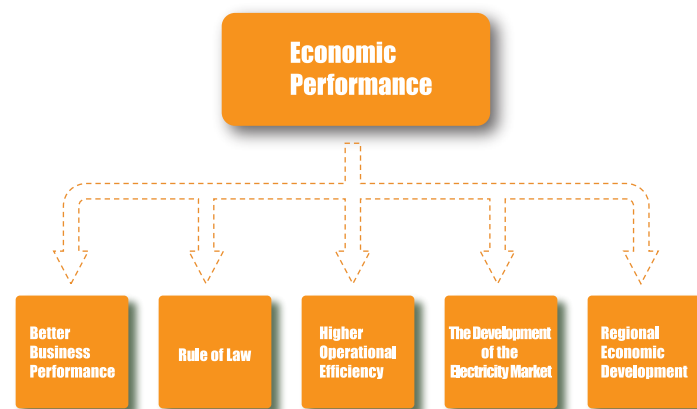
Total assets of CNY

619.1 billion
an increase of 5.2%

Introduction

We try to create more value with our electricity

We adhere to the rule of law, reduce the cost and improve the efficiency and ensure the value of the State-Owned assets. We will make efforts to promote the development of the electricity market, transform the five provinces and bring higher value to our stakeholders.

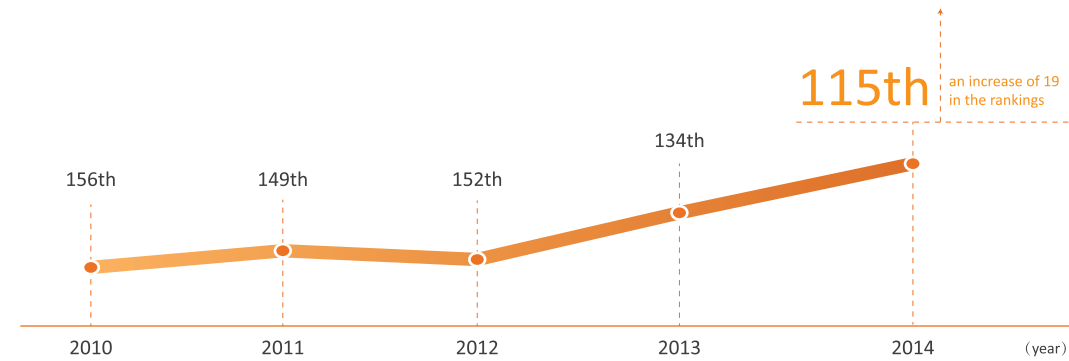


Substantial topics matrix

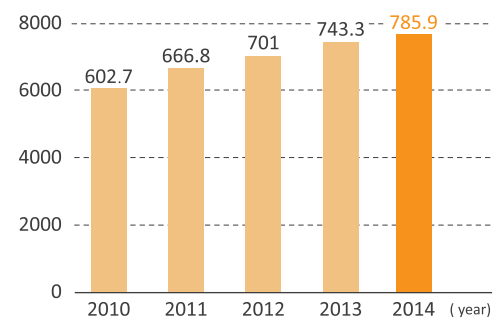
- 1 legal risk management
- 2 anti-corruption
- 3 prevent theft of electricity
- 4 cost efficiency
- 5 extend the life of the assets
- 6 to promote the development of the electricity market
- 7 local economic development
- 8 better regional power cooperation

Better Business Performance

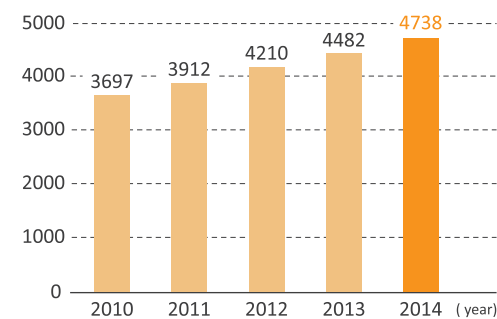
For ten years CSG has been listed in the Top 500 Companies by Fortune Magazine.



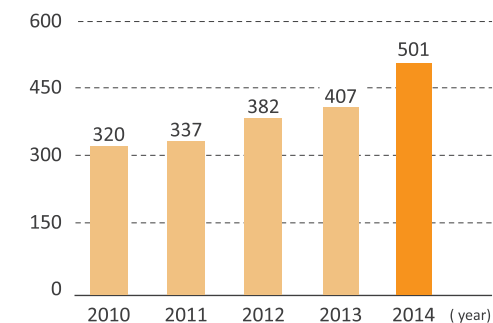
Electricity sales reached **785.9 TWh**, an increase of **5.7%** (As in: TWh)



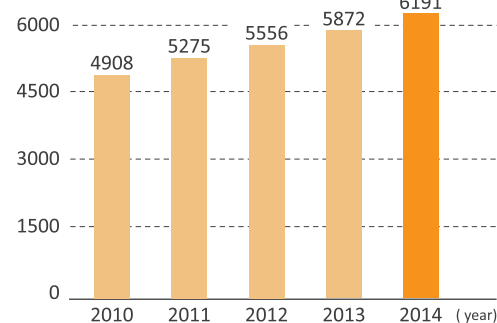
The operating income reached CNY **473.8 billion**, an increase of **5.7%** (100 million)



The total profits reached CNY **50.1 billion yuan**, an increase of **24.4%** (100 million)



The total assets reached CNY **619.1 billion yuan**, a year-on-year growth of **5.2%** (100 million)



The appreciation rate for fixed assets is **105.7%**.

The rule of law is enhanced



Legal Risk Management



Better Institutional Design

We try to meet the standards of internationally renowned companies, draft the Five-Year Plan on level work and finish the institution with a top-level design.

We have **37** new law clinics.

We also issued **3214** legal solutions.



Sound Legal Risk Management System

We need a systematic legal risk management system operations framework, we must identify and sort out the key areas of legal risk, we establish an information database and take stringent legal risk prevention and control measures.



Better legal services

In 2014 we resolved 629 legal disputes and avoided CNY 287 million in economic losses. The customized legal services are provided and consulting is provided to the grassroots level.



Promoting the rule of law culture

We conduct legal literacy education and promote the rule of law culture. 7520 people received our training.

Better Internal Auditing

CSG takes the 2014 national economic responsibility audit as an opportunity to pay close attention to rectification, strengthening supervision and improving the ways and means of internal audits and enhancing the level of corporate governance.



Impressive Results

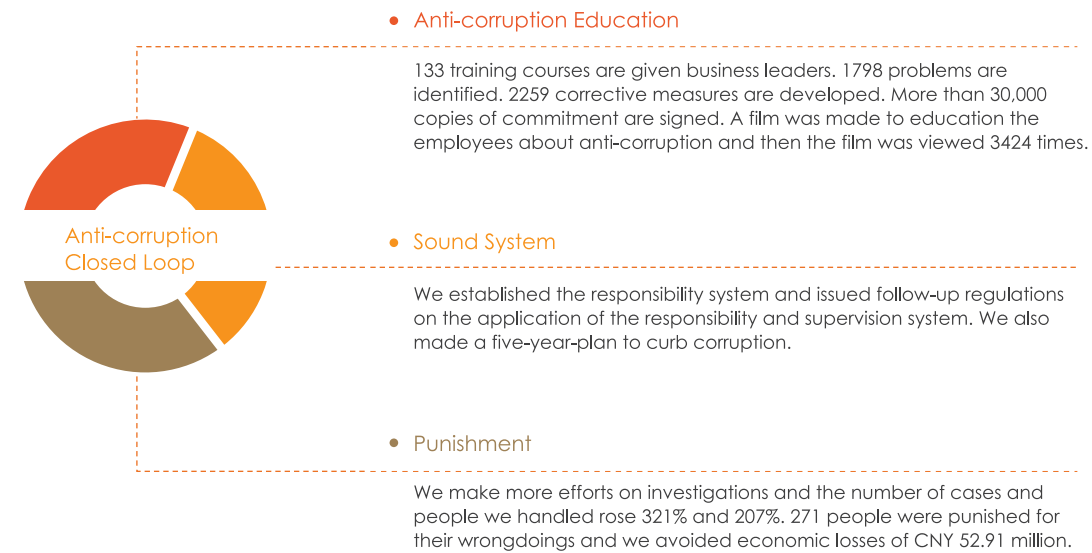
- First Prize in Audit information Award of the Power Industry
- 5627 Management Recommendations

- CNY 201 million of embezzlement discovered.
- CNY 213 million in costs was reduced

- 281 audit items on economic responsibility at all levels
- 853 audit items for fixed assets investment

Anti-corruption

CSG follows the central government's regulations and takes the "zero tolerance" approach to investigate and discipline violation cases, establishes a long-term anti-corruption mechanism to ensure the sustained and healthy development of the company



Supervision

The Regulatory Commission coordinates the audit, legal, supervision, inspection, the Board of Supervisors and other teams to improve the overall efficiency of anti-corruption work.



Top-level design

We improved program coordination, transferring and case investigation procedures as well as the application of the results.



Coordination

We give full play to the "three offices" (the Discipline Inspection Team Offices, the Board of Supervisors Office, Office of the Regulatory Commission) and, as well, coordinate with the supervision departments in five provinces.



Anti-Corruption Alarm

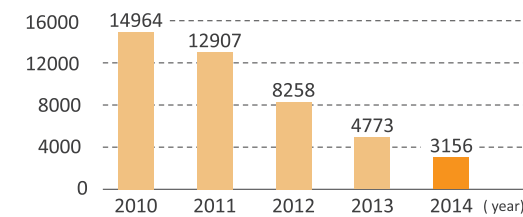
We attach great importance to building a clean company and carrying out the necessary supervision. Yet in 2014 there were still 77 cases of violations of the "Eight Rules" and public interest. 327 people were punished. We realise the problem, carry out in-depth analyses and continue to work hard on anti-corruption to ensure a healthy development.

Combating Illegal Actions

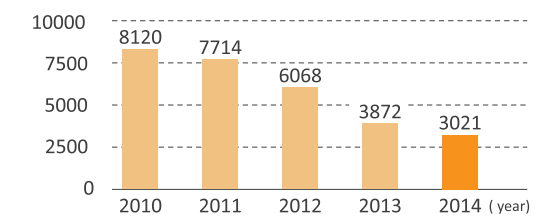
CSG partners with the government departments, the public and other stakeholders to crack down on destruction of power facilities, malicious tampering and other illegal activities. We promote the standardization of power management to protect the legitimate rights and interests of the enterprises and customers.

Protection of power facilities. CSG implements the relevant laws and regulations, improves the protection of power facilities and maintains the operations of the power grid. In 2014 there was not a single accident caused by power facilities damage.

The number of cases in power facilities damage



Economic loss brought by power facility damage (As in CNY 10,000)



There are no plants in the power facility protection areas that may endanger the safety



No buildings in the overhead power line protection zones

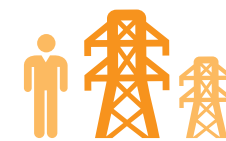


No Kite flying within the 300 meters range of the overhead power lines



No piling, drilling, excavation in the cable line protection zones

The theft of electricity is a criminal behaviour disrupting the normal supply of electricity and the power companies. CSG partners with the police and increases technology and education investment. We carry out special operations against stealing and prevent loss of state assets. 9418 cases of theft of electricity were identified and 77.24 million Gwh was recovered. CNY 213 million was taken back as electricity fares and penalties.



It damages personal safety



It disrupts power grid



It leads to unethical conducts

Improve Operational Efficiency

Improve the management framework

CSG learns from good management examples and experiences at home and abroad and establishes management systems with our own intellectual property rights and core businesses. Our business management mode has transferred from extensive to intensive. This transformation is a strategic move of CSG to become more international. In 2014, SASAC awarded CSG for its excellent practices in improving management.

- CSG established top-level designs in line with international practices and boasts its' own characteristics. It is intensive and extensive with clear controls as well as distinctive differences.
- CSG establishes work standards that are not only in management regulations but also in employee's handbooks. In this way the institutional design can be applied to real practice.
- The business-oriented information system was completed in December 2014, facilitating the launch of the "6 + 1" information system which was put into operation.

The Management Committee's Roles

The eight management committees play a role in building an advanced management system so that the power supply bureau can work on the information technology transfer at all levels .



Promote the Power Market



Power Market Reform



Better Scheduling

- We try to improve the scheduling and optimise the generation, transmission and dispatching of electricity.
- We also improve the information disclosure mechanism and the approval rating for scheduling reached 95.14%



Promoting electricity trading

- We promote the provincial electricity trading center. In November and December, Guangdong and Yunnan opened electricity trading centers. Guizhou and Guangxi electricity trading center has been authorized by the Provincial Government.
- The Yunnan power exchange promotes transactions of 9.4 Twh.
- The Guangdong Electric Power Trade Center helps with the purchase of 15 Twh.



Regulating electricity orders

- CSG looks into electric power installation and promotes integrated marketing.
- We also monitor the line losses and crack down theft of electricity and ensure safe operation.



Receiving large clients' assets

- CSG researches on strategies to receive clients' assets and makes more efforts to receive assets. In 2014 CSG received CNY 11.5 billion.

Q How do the power exchanges in other countries work?

A The Japanese electricity trading market will be used as an example: JEPX was established in November 2003 and it focused mainly on trading and long-term contract trading. The market consisted of the main power companies, large power companies, small-scale power generation companies, electricity suppliers and wholesale regional electricity companies. The power supply companies, power generation companies and electricity retailers can freely trade the remaining power. The end customers (including large customers) do not participate in the exchange. They can only choose between electricity retailers.

Regional Economic Development

Economic Development of the Five Provinces

Based on the positioning of the five provinces, CSG relies on the power resource allocation, provides power to the local industrial development and creates favorable conditions for local employment. CSG offers support to local economic and social development.



Let the Electricity mascot help you
One Graph Showing the Regional Economic Development

Quality Power Supply



Electricity boosts special industries and upgrades the service economy. We provide sufficient support for advanced manufacturing in Guangdong, textile industry in Guangxi, specialty agriculture in Yunnan, energy and mining industry in Guizhou and tourism industry in Hainan.

Creating economic value



Each kwh produces CNY **11.92** in GDP output

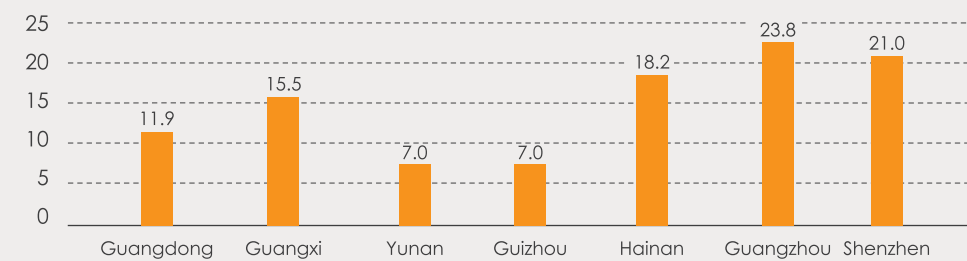


CSG provided **785.9** Twh of electricity



CNY **65.8** billion invested in power grid construction

GDP output supported by each Kwh



Note: The data was retrieved from 2014.

More Cooperation with Hong Kong and Macau

CSG attaches great importance to the cooperation with Hong Kong and Macau and ensures the security of the electricity supply. The partnership between Guangdong and Hong Kong, as well as Guangdong and Macao is stronger than ever before.

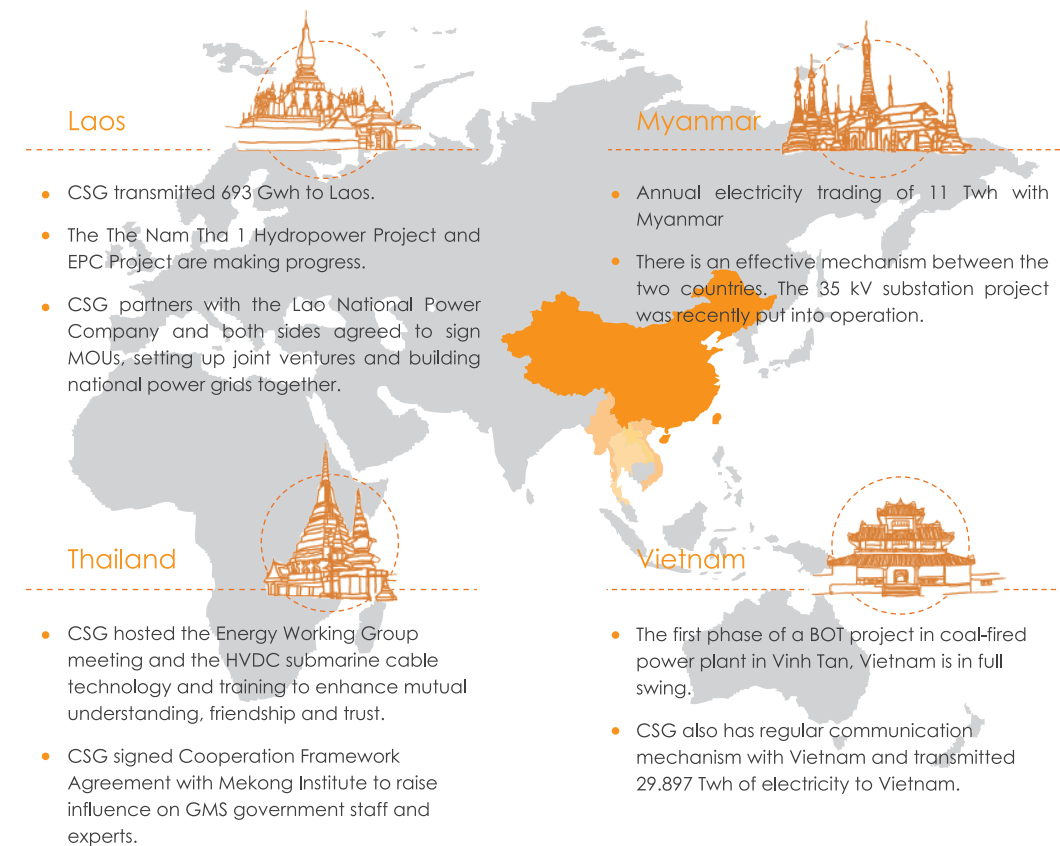
- High-level CSG personnel paid visits to CLP Power Hong Kong and conducted technical exchanges. Both sides are seeking experience sharing and common development opportunities.
- Over the past three decades, not a single outage occurred in Guangdong's power supply to Hong Kong. 28 Twh of electricity has been transmitted to Macau, accounting for 90% of the total electricity use locally. CSG partnerships with the local Energy Office and the Macau Electricity Co., Ltd.. In addition CSG and Macau Electricity Co., Ltd. signed MOU on Daily Operation and Maintenance of Power Equipments to ensure that the facilities run smoothly.



CSG bought 30% of Castle Peak Power Station's equity.

Promote Regional Cooperation

CSG also responds to the One Belt One Road initiative, take the responsibilities and expand the cooperation with the Greater Mekong Subregion to 10 ASEAN countries including the economic corridor of Bangladesh, China, India and Burma.



Video



One graph showing "One Belt One Road" initiative



Social Harmony

We invested CNY

18.29 billion
in rural power grids

21370

employees provide
voluntary service

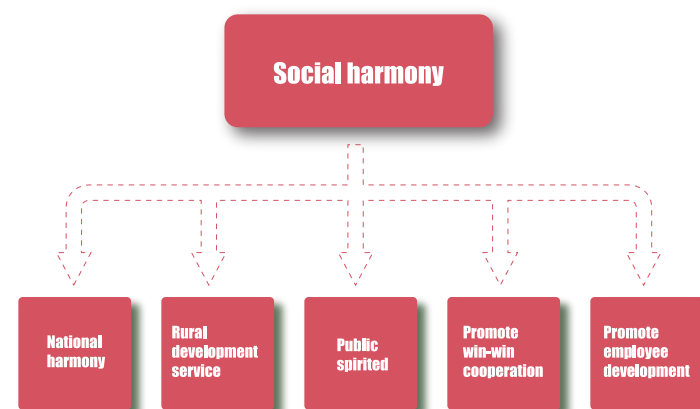
95%

of the employees
receive training

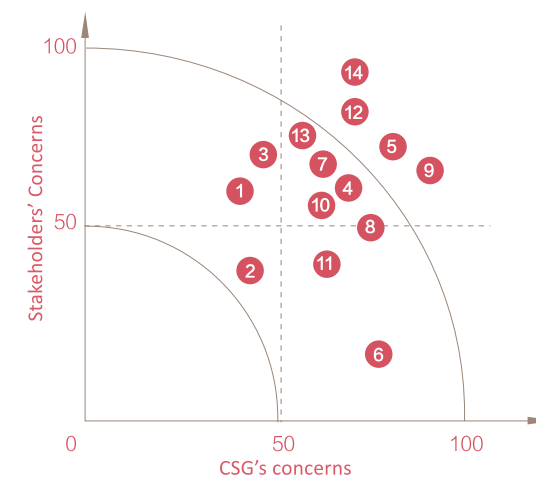
Introduction

Partnerships with Stakeholders

We adhere to a people-oriented philosophy and promote the progress of both the employees and the company. We try to make our company harmonious and happy. We let every employee provide service with love. We promote national harmony, coordinated development of urban and rural areas, participate in social activities and bring light and happiness to the community.



Substantial topics matrix



- | | |
|---|---|
| 1 volunteer activities | 8 service development in minority areas |
| 2 charitable activities | 9 protect the rights and interests of suppliers |
| 3 care for vulnerable groups | 10 suppliers audited and certified quickly and easily |
| 4 upgrade the rural power grids | 11 diversity and equal opportunity for employees |
| 5 reduce outages in rural areas | 12 employees' occupational health and safety |
| 6 preserve minority cultures | 13 complaint channels established |
| 7 power supply for ethnic minorities and special services | 14 improved staff training systems |

Promote National Harmony



The five provinces we serve have 34 ethnic minorities, including Zhuang, Yao, Miao, Dai, Yi and other ethnic minorities. According to the sixth national census, the population of ethnic minority reached 48.5047 million, accounting for 20% of the total population of the five provinces.

Preserving Traditional Culture

The culture of the ethnic minorities is an important part of Chinese traditional culture. CSG fully respects the customs, religious beliefs and cultural traditions of ethnic minorities and participates in their protection and heritage.



Respect for the Language of Ethnic Minorities

CSG respects the minorities' rights to use their native languages. We also give full play to the employee's minority language proficiency and set up minority language services and present other services in their languages as well.



Protection of Minority Traditional Houses

In the ethnic minority areas, most buildings are wooden structure houses and have an assigned high fire danger rating. CSG upgrades power lines to eliminate electrical safety risks according to the residential structure characteristics and protects these houses.



Power Supply for Festivals

The ethnic and traditional festivals are important carriers of national cultural heritage. CSG pays attention to the minority traditional culture festivals and provides power services for the minority cultural activities helping their culture to prosper.

Promote the Development of Ethnic Minority Areas

CSG understands the economic characteristics of ethnic minority areas and increases investment in power grid construction in such places. It also focuses on education and ecological protection and contributes to the overall economic and social development of these areas.



Boosting Economic Development

- More investment, special plans on power grid installation and solving the electricity problems in the region.
- Better protection for infrastructure and power support for agriculture, industry and tourism development



Personnel Training

- CSG implements national policy and hires employees of different minorities and works hard on team-building.



Ecological Environment Protection

- CSG focuses on protecting local ecological environment in the process of power grid construction and reduces the destruction of native vegetation and damage to the landscape.
- We promote green ideas and encourage people to use electrical equipment and reduce the felling of trees.



Focus on Education

- We improve power supply facilities at schools, repair the lines and ensure that students and teachers have access to electricity.
- We also donate teaching materials to the students.



Video



Dulongjiang builds China's first independent 20-kilovolt power grid in a rural area.

Dulongjiang Lighted

The Dulongjiang Autonomous Town, located on the border between China and Myanmar, has snow-capped mountains and steep valleys. It is the main settlement for more than 6900 Dulong villagers and known as the last pure land on the earth.

The "power to every family" project in Dulongjiang is the one with the most dangerous conditions and biggest investment undertaken by CSG. CSG invested CNY 80 million to overcome difficulties such as snow and steep valleys. The instillation was totally innovative and the is operated in a unique way—the generation and supply of electricity are combined yet operated independently. Eventually CSG built the first 20-kilovolt hydropower plant in a rural areas and now can offer electricity to local residents.



The hydropower station staffers in Dulongjiang are dragging wooden debris with the help of the villagers. The Dulong Township station staff aid those in the village to establish secure operations systems.

Rural Development Services



Strengthening Rural Power Grid Construction

The company pioneers the promotion of rural power grids and works on the rural power network construction, training staff for rural electricity service delivery. CSG has also standardised the power enterprises at county levels to ensure electricity supply in rural areas and to raise the level of universal services.



Promoting the Upgrading of Rural Power Grids

Currently the rural electrical power infrastructure and basic management is weak. In light of those issues, CSG fully upgrades the rural power grids and focuses on solving the problems such as network strangle-holds, heavy overloads and low voltage. In such areas the infrastructure needs to be enhanced and the investments planned and made wisely. The quality of electricity in rural areas will be improved.

Management of Staff Members

In addition to the standardised management in Guangdong, Guizhou and Hainan, CSG focuses on Yunnan and Guangxi as well and streamlines the labor management relations.

Power Supplies in Rural Areas

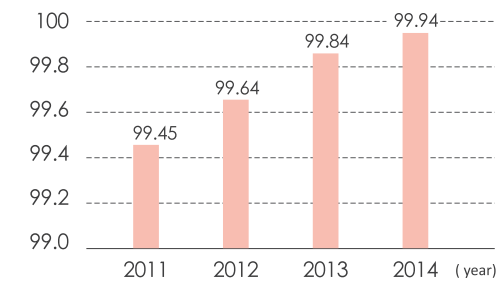
CSG develops special management measures and increases inspection efforts to ensure the quality and dependability of rural electricity. CSG also teaches rural residents about electrical safety and builds a harmonious environment of rural electrification.

CNY **18.29** billion
Invested in Rural
Electrification

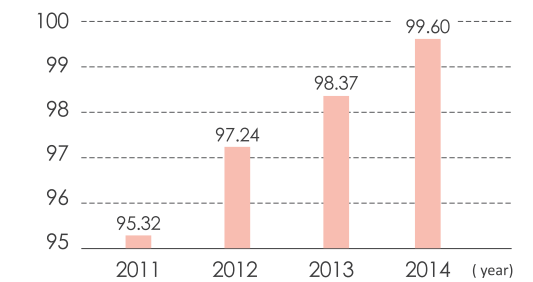
Upgrade Rural Power Service

CSG works hard to benefit rural residents and make life easier for them. The sense of service is prioritised and the forms of services are innovative. Most county-level affiliates have very impressive numbers in the local public opinion polls.

Rural power supply reliability rate (measured by %)



Voltage Eligibility Rate (measured by %)



Promoting Rural Economic Development

CSG studies the economic development potential of rural areas and improves the conditions for power supply accordingly. CSG tries its best to provide adequate, reliable, green and economical electric power resources to benefit agricultural production.

Spring

The power supply helps with the plowing.

Summer

The power helps to fight against drought and water the fields



Autumn

The power supply ensures harvest and assures that failsafes are in place.

Winter

The power supply helps with the battle against frost and the seeds are kept safe and ready in the greenhouses



Case Study: Power Transforms Buna Village

Buna Village, a village with local characteristics in Shuicheng County in Guizhou, is famous for its folk tours, embroidery, red kiwi and other specialty products. With the large-scale operation of local tourism and agriculture, the demand for electricity services has been on the rise. In 2014, the Shuicheng affiliate of the Guizhou Power Grid Bureau invested CNY 30 million on power supply construction for prosperous regions such as Buna. The new network has a power supply reliability rate of 99.92% and the voltage eligibility rate is 99.65%. This is a perfect combination of electricity and village characteristics. The power supply offers strong support for the development of both industry and tourism.



Case Study: Power Supply and Silk Industrial Upgrading in Yizhou.

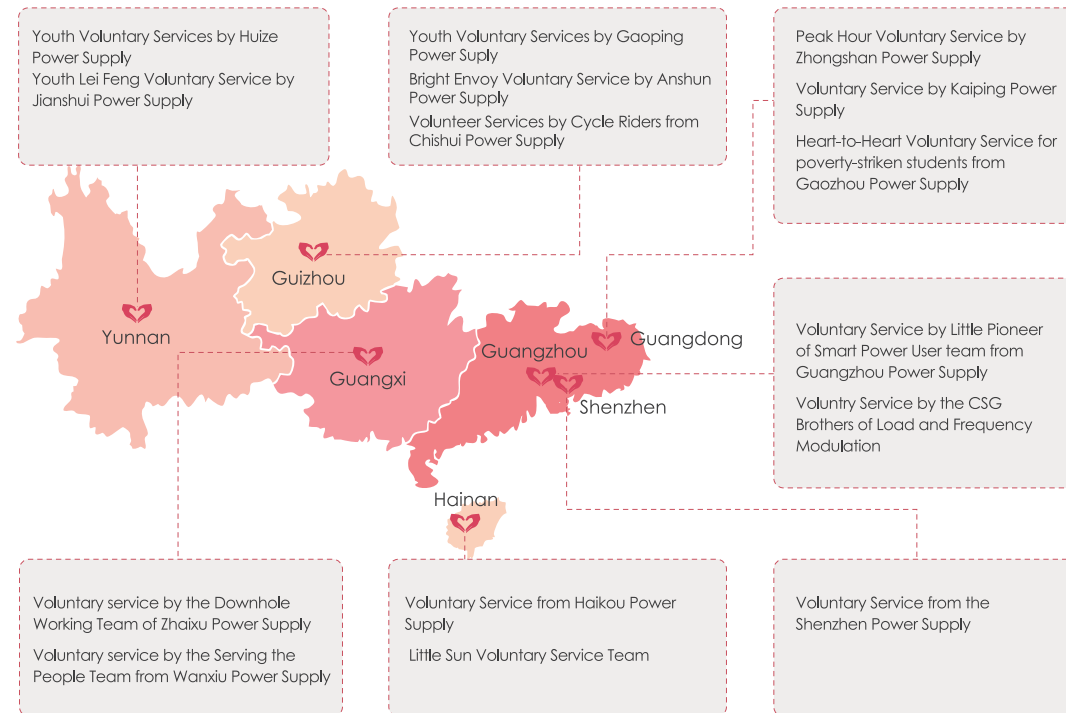
The silk industry is a pillar industry in Yizhou, Guangxi. The Yizhou affiliate of Guangxi Power Grid volunteered to replace the transformers with a large-capacity transformer, adding to the length of the 35 kV and 10 kV lines and executes more frequent inspections during the peak seasons. The power supply offers services for silkworm breeding, silk reeling and processing, production of silk products and supports the whole industry chain. It certainly boosts the industrial restructuring and upgrading in Yizhou. In 2014, Yizhou's total output of cocoon production, silk cocoon processing and the utilisation of such resources reached CNY 4.037 billion.



Corporate Social Responsibility

Voluntary Services

Based on the advantages and resources of the company, a volunteer information management system was built to enable volunteers from various areas to provide multi-domain voluntary services, transmitting the Positive Energy of CSG. 90,000 hours of voluntary services were provided by 21,370 people in one year.



1130 Voluntary Service teams

Poverty Alleviation Work

CSG is dedicated to assisting the development of poverty-stricken areas by increasing investment in those areas and establishing a Blood Generating mechanism to eliminate poverty and inspire the locals. 30,299,000 RMB was donated to the stricken-poverty areas.



Foshan Power Supply branch awarded for its extraordinary work in poverty alleviation

Provide relief for disaster-stricken areas

Disasters have no mercy, but humans do. As a State-Owned Enterprise, CSG truly displays the sense for Corporate Social Responsibility in times of difficulties brought by such natural disasters as earthquakes and typhoons, conducting emergency repair and organizing donation events to make sure normal life in the disaster-stricken area is restored.



Lighting up dreams public service activity in the aftermath of typhoon Rammasun

CSG donated 61.768 RMB within one year

Promote Win-Win Cooperation

Buiding a transparent value chain to achieve mutual benefit

CSG is aware that principle of openness, fairness, justice and efficiency are pursued by all stakeholders; therefore we always work closely with our business partners and clients to create a responsible and sustainable value chain from the power supply industry in a transparent and fair manner.



100% fulfillment of business contracts

To safeguard the rights and interests of suppliers

Sunshine trading and transparent business process is an effective way to ensure suppliers' rights and interests are protected. In 2014, CSG strictly followed rules and regulations in public bidding, upgraded the evaluation standards for suppliers incorporating a stronger fulfillment capability, in order to build a Smart Supply Chain.

Implanting a sense of social responsibility in the process of purchasing



- The concept of Sunshine Purchasing was strongly advocated by implanting sense of social responsibility in the purchasing process. CSG supports and encourages the use of products and services purchased in the presence of responsibility awareness. As a result, the rate of tier-one material suppliers passing ISO 9001, EMS (Environmental Management System) and OHSMS (Occupation Health Safety Management) was 100%, 74.8%, and 70.5% respectively.
- Principles of openness, fairness and justice are strictly followed in purchasing to fight against business bribery and corruption in all forms.

A supplier evaluation system was established



- Suppliers are evaluated in terms of qualifications, contract fulfillment and operational abilities, and results of the evaluation are applied in 9 categories of the equipment purchase bidding process.
- As a result of strengthened management in supplier evaluation systems, penalty tickets were issued to 33 suppliers in 2014, among which 11 cases were related to environmental protection.

Management and control in the bidding process were enhanced



- Management policies and operational standards for both bidding and non-bidding purchasing were documented; files for 332 bidding cases were properly archived.
- Anti-corruption training and education programs for personnel were initiated, and a closed-circle supervision was applied in every link of the bidding process including planning, calling for tender, tender evaluation, award notification, contract signing and fulfillment.

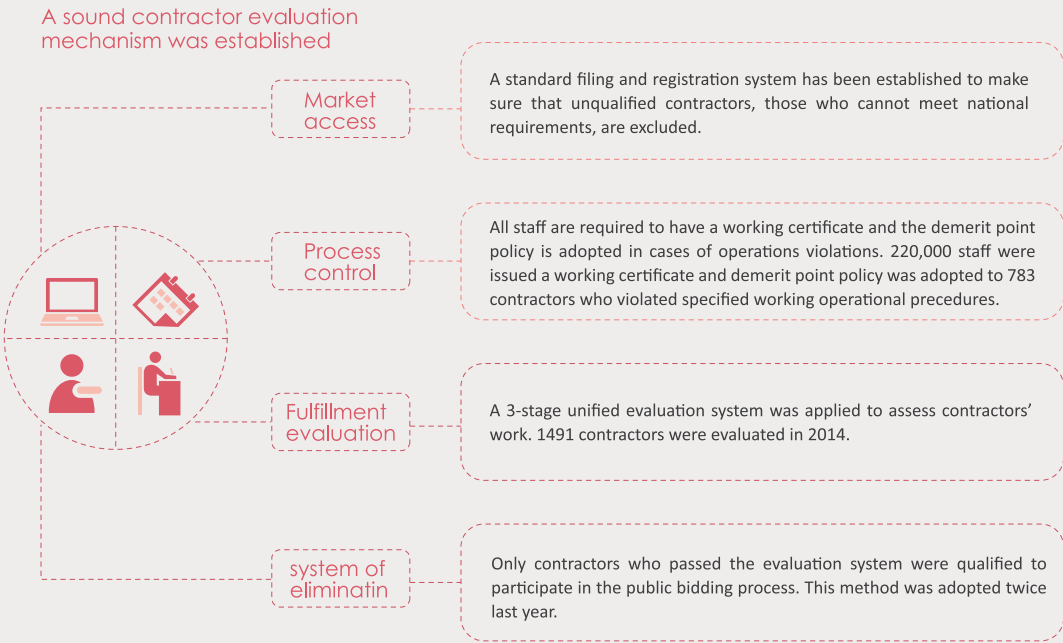
A technology center for quality control was built



- A technology center for quality control was built to provide quality control services for 199 categories of tier one materials and 15 categories of tier two materials, all to ensure a full coverage of purchasing quality control.

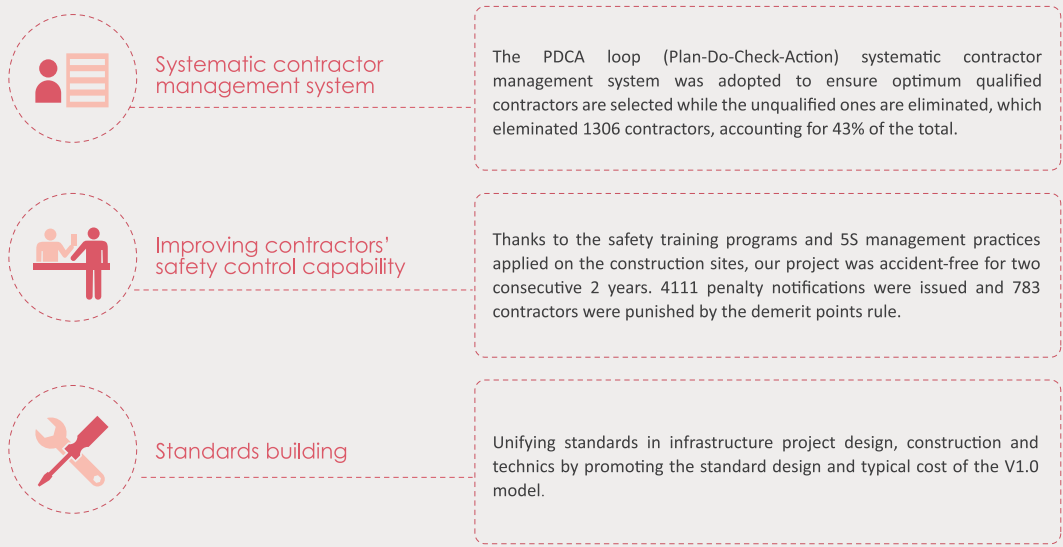
How to help responsible contractors stand out among their competitors?

As the crucial partner of CSG as relates to grid construction, contractors play an important role in ensuring project quality and safety. That's why we spare no efforts in forging a fair, well-regulated and effective mechanism to choose our contractors in a scientific manner and to make sure that the truly competitive and well-reputed ones can stand-out. In 2014, CSG improved the accrediting system used in evaluating quality safety and established a system for rewards and penalties, which gave the Survival of the Fittest law full-play in selecting contractors and, in the end, reduced projects risks considerably.



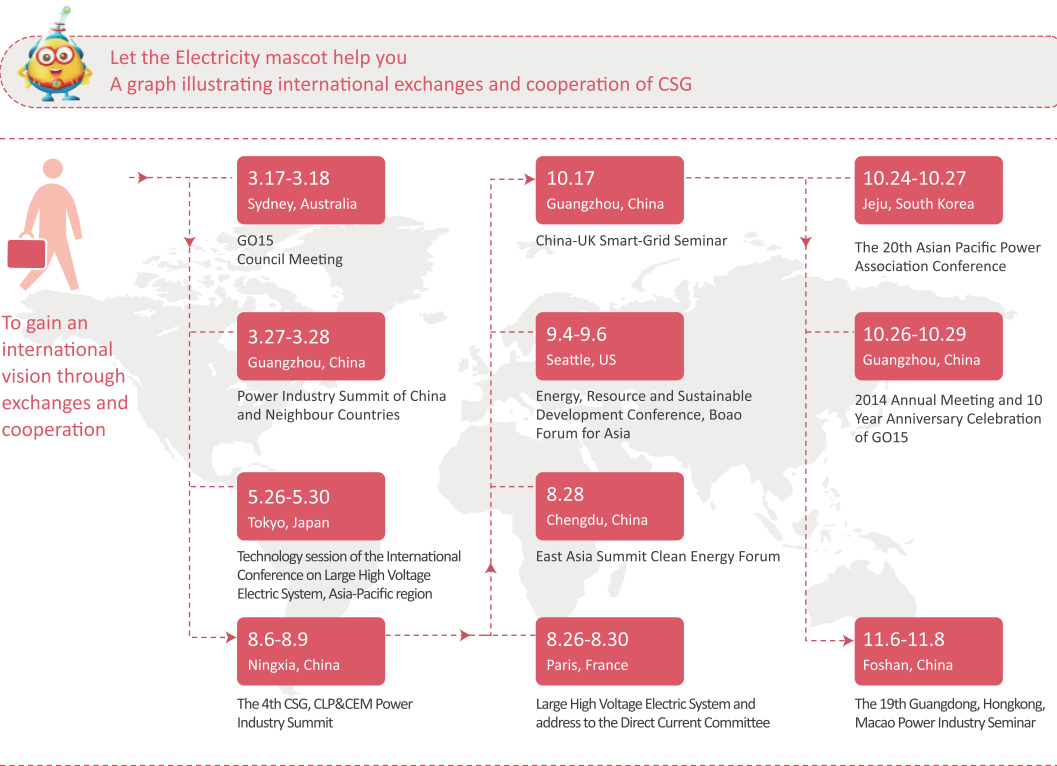
Assisting contractors to improve management

CSG assists contractors to improve safety control capabilities and encourages modern and standard operations via strengthening their information and standard management systems, all in an effort to build green, reliable, defect-free infrastructures that meet the national standard requirements.



International exchanges and cooperation

CSG adopted to the new normal in international business, following the "go abroad" strategy and built a platform to promote exchanges and cooperation with world-renowned power supply enterprises and institutes.



59 power supply companies and institutes were received by CSG

Communication mechanisms were established by hosting multilateral conferences



Initiated the First Power Industry Summit of China and Neighbour Countries and formed a mechanism for exchanges and communication between China and the neighbouring countries

Hosted 2014 Annual Meeting and 10 Year Anniversary Celebration of GO15

International (Regional) Organisations

Organization	Status	Organization	Status
CIRE	Committee member	IERE	member
GO15	Vice Chairman	AESIEAP	member
CIGRE	member	BFA	member

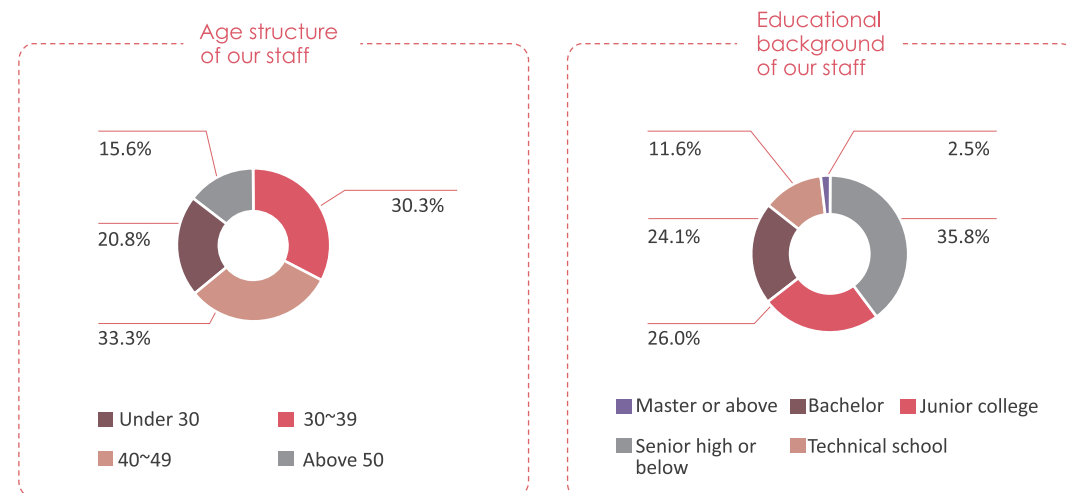
Membership in 15 international organizations

Promoting individual development



Staff structure

By the end of 2014, CSG had around 307,800 staff, among which 24% were women employees.



Rights and interests of our staff

CSG fully complies with labor laws and regulations. We guarantee equal rights, improve corporate salary and welfare systems to safeguard the legitimate rights and interests of our staff. Thanks to our system, we had no major labor disputes in 2014. We were awarded the prize as one of 2013's China's Best Companies for Individual Development.

Relations between the employer and employees

CSG abides by the Labor Law and signs labor contracts with our staff in accordance with the law. We ensure a 100% contract signing rate including junior electricians at rural areas and a 100% collective negotiation and collective contract coverage rate.

Respect for human rights

Our employees, regardless of sex, age, educational background and physical status, are treated equally. We also give special attention to safeguard the rights of female employees and protect the privacy of all our staff.

Salary management

We have established a benefit-oriented salary mechanism and strengthened the salary management which emphasizes the individual performance. Under this mechanism, posts of the staff are a major determinant of their salary, which will be changed accordingly if they are rotated to a new post. Their salary and bonus will also be determined based on their performance and results.

Holidays and welfare

We have established and improved social security management system of our company and bought five social insurances and housing fund for 100% of our staff in accordance with the law. We also encourage our staff to take paid leaves, which on average are 9 days per year.

Occupational safety and health

CSG continues to improve corporate safety. We have established and improved vocational health management system and created a healthy working environment to prevent health risks. In 2014, not a single case of occupational disease was reported.



Safety education and training

We conduct safety education and training of various forms and improve the practical capability of our staff in dealing with safety issues. In 2014 we held 1009 training sessions, developed 30 Safety Sympathy Training programs, in which 144,000 staff members were trained.



Care for the physical and mental health of our staff

We organize body checks for our staff regularly, establish health documents and psychological counseling to ensure the physical and mental health of our staff. We ensure that 100% of our staff can have a body check on a regular basis.



Creating a safe working environment

We have created a safe and user-friendly working environment by strengthening management of safety signs and equipment.

Democratic management

A transparent management model can strengthen the sense of belonging of our staff. CSG has actively widened the channel for democratic participation and improved the system of employee representatives meetings. Moreover, we practice a transparent administration of corporate affairs to listen to the voice of our staff and improve our management.

Employees' representative meetings

In 2014, we paid close attention to the employees' representative meetings, solicited opinions and ensured the implementation of the proposals. We practiced closed-loop control on 11 proposals and ensured that each and every proposal was implemented and assured that proposers would have feedback.

Open administration

161 level-three companies fulfilled their commitment to practice open administration of corporate affairs and the overall rate of fulfillment of the whole group of CSG reached 86% in 2014.

Channels for appeal

We have made sure that all our staff could access three major channels for appeal, including connection with labor union members, the Chairman's mailbox and connection with representatives of the employees. In this way, we can effectively solve the difficulties of our staff.

Inspection by employee representatives

Representatives of the employees conduct field trips to the production sites and report to the executives problems they have seen on-site. They will also be responsible for the follow-up of the problems reported and seeing to the improvement.

100%
of the staff members
join the labor union



Case study: Say 'no' to work; dare you?

"Saying no to work" is generally not allowed at a workplace. However, CSG encourages our staff to say 'no' on a reasonable basis. In order to safeguard the safety of our staff, CSG Guangdong published the Guide Book on Employees' Refusal to Work in 2014, giving our employees the right to decide. Employees may refuse to take up tasks for the consideration of the safety of themselves and the facilities when they have a good reason to believe that the working conditions may cause serious damage to their health or safety, to the facilities, the grid or to the environment.



Executive staff management

CSG attaches great importance to the building of competent executive staff at all levels and maintains strict discipline. We focus on providing theoretical as well as practical training to our executives, especially the younger generation, so as to improve the management capabilities of the whole company.

Strict staff management

We pay close attention to the promotion procedure of staff and implement strict staff management so as to improve satisfaction rates on staff appointments.

Personnel training

In 2014 we held 40 sessions of professional training on study of President Xi Jinping's key speeches, law-based corporate government, financial management, analysis of national and party conditions and public sentiments on the internet; 2,080 staff attended the training sessions.

Service for retired staff

We organized a Respect for the Retired activity for 5 consecutive years to show our gratitude and attention to the retired staff. One of our retired staff has been awarded as the National Outstanding Retired Staff Member.

Career development

CSG pays high attention to the career development of our staff. They are given a good platform to show their talents and realize their self-worth to the largest extent. We also help them improve technical capabilities and their life-long learning ability and employability.

Path to career development

We focus on improving post responsibility system and have created three paths to career development including management, professional skills and technical ability.

Encouraging technological innovation

We formulated the Technological Innovation Project Management Regulation to inspire the enthusiasm of our staff. In 2014, we established 156 Model Worker workshops and registered 273 innovation achievements.

Competition for progress

In 2014 CSG organized 285 technical competitions in live working, distribution and operation and multi-rotor UAV operations. The competitions attracted 87,473 contestants and produced 152 outstanding competitors.

Spiritual inspiration

We organized a selection for Model Workers and acknowledged outstanding representatives of the employees. In the past four years, we managed to organize a selection campaign acknowledging those who made outstanding contributions to CSG every year.



Case study: The LU Xingfu Model Worker Innovation Workshop

Headed by LU Xingfu, a National Labor Medal Winner, the LU Xingfu Workshop of Guiyang Power Supply Bureau of Guizhou Province is an innovation team prioritizing technological breakthroughs while cultivating technical staff. Since its establishment in 2013, the Workshop has completed eight innovation projects and acquired four national patents. Several of its members were promoted to senior engineers and senior technicians. In November 2014, the Workshop was named as the National Model Worker Innovation Workshop by ACFTU.



Staff training

CSG pays high attention to the vocational training. Focusing on safe production and technical training, we organized professional training programs for staff at different levels and in different sectors. We continue to improve the training systems and raise the capability of our staff to perform well in their positions.



Training for new staff

Newly recruited staff are provided with intensive vocational training programs to help them adapt to their positions. In 2014, CSG trained all of the 6,040 newly recruited staff.



Training for technical staff

We vigorously organized technical training for staff at different levels and in different sectors. In 2014, we organized 4,140 technical training programs which trained 312,000 person-times and established 108 technique training rooms.



Training for professional staff

We provide training for professionals in safety production, marketing, construction and supervision posts to improve their professional capabilities.

In 2014, we organized **7,882** training programs.

567,000 person-times trained

Care for the staff

CSG continues to improve the working and living environment for our staff. In 2014 we organized various types of cultural events for the staff to better balance their work and life, creating a warm and harmonious working environment. We also actively enhanced the establishment of a caring trade union, with which 99% of the staff were satisfied.

Care for the staff in need

We pay attention to recording the staff in need. For example, we organized an activity helping those who need financial support for their children's education. In 2014, we granted RMB 25.3087 million in total to our staff in need.

Care for the Staff

CSG makes every effort to improve the working and living conditions of the staff members. Canteens are provided, nap time and place is offered and the staff receive help for their children's schooling.

Care for the families of our staff

We try to strike a better balance between work and life of our staff by organizing interactive family activities.

Care for the Female Employees

CSG cares about the female employees and protects their lawful rights and special interests. All the female staff members return to their jobs after the maternity leave.

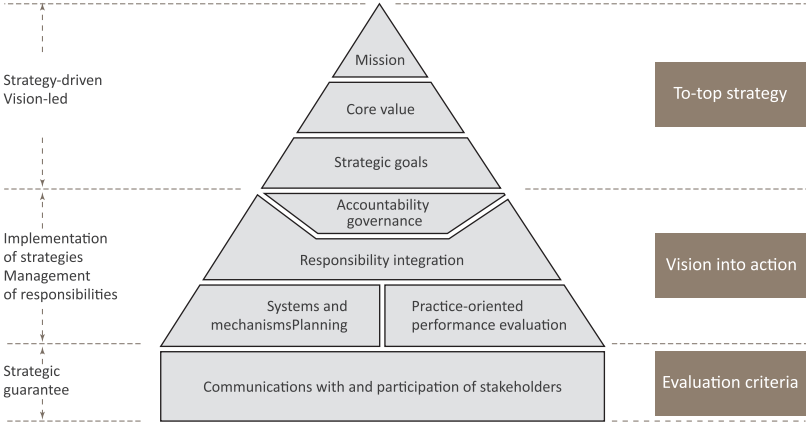
Care for the retired staff

We pay close attention to the physical and mental health of the retired staff and organize regular visits to them with an aim to create a caring atmosphere so the retired staff could live happily.

Responsibility management

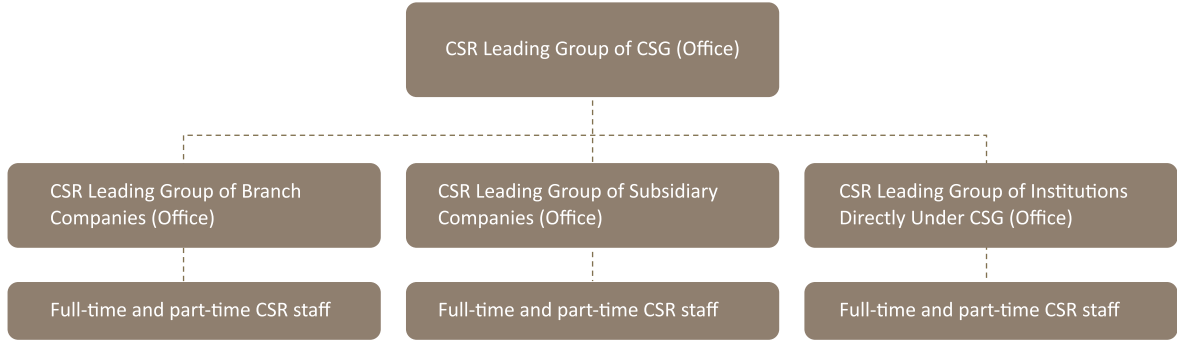
Responsibility strategy

It is our strategic goal to be a world-leading power grid company which excels in service, management and corporate image. Focusing on this strategic goal, we adhere to our social responsibilities with a strategic management mentality. Moreover, we incorporate our social responsibilities into professional management and daily operation. We have successfully formulated a strategy-driven roadmap of social responsibilities.



Accountability governance

CSG continues to perfect the organizational structure of our CSR work by making a CSR management system and integrating CSR into daily operation and management.



Study on social responsibilities

CSG insists upon taking a global perspective and setting high standards in line with our international leading counterparts. We have conducted a series of studies on corporate social responsibilities aiming to increase the soft power and social influence of our company.

- We continue to conduct studies on the CSR reports of world-leading companies and benchmark our performance against theirs. We also focus on borrowing advanced international experience and increasing CSG’s global influence in the area of corporate social responsibility.
- We also conduct studies on protecting minority ethnic groups’ culture and establishing stakeholders management system. By conducting these studies, we are able to lay a theoretical foundation for our future work in CSR.
- We participated in the revision of the CSR evaluation system for power supply companies, contributing to the enhancement of overall quality of CSR reports in the industry.

Communications with and participation of stakeholders

Stakeholders	Expectations	Response to expectations
 Government	Law-abiding, paying taxes on time, ensuring safe power supply, state-owned assets appreciation and stable return.	Operating in accordance with laws and regulations, paying taxes on time, enhancing power grid construction in cooperation with the government, accepting supervision and evaluation, improving governance structure.
 Employees	Salary and welfare guarantees, health and safety, fair promotion and development, care for the employees.	Paying salary and social insurances on time, providing a healthy and safe working environment, establishing a fair promotion mechanism, providing consulting services.
 Customers	Reducing time of blackouts, providing high quality power supply and efficient service, giving guidance on energy conservation.	Reliable power supply, constructing and renovating power grid, hosting meetings and making field trips, carrying out energy conservation campaigns.
 Partners	Fulfilling commitments, open and fair procurement, sharing experience.	Disclosing procurement information, listening to feedback and complaints, conducting negotiation and communications, making project cooperation and strategic collaboration, making procurement under an accountability system.
 Environment	Conserving energy and cutting emission, saving resources, tackling climate change, protecting the ecological environment.	Energy-conserving power generation and distribution, green technology innovation, low carbon and energy efficiency management initiatives, developing EHV industry.
 Communities and the public	Developing social undertakings, helping the poor and people in need, facilitating communications among communities.	Surveying community demand, providing education and publicity within communities, hosting meetings, improving the official website, organizing public welfare campaigns.

Honors and acknowledgments in CSR



Our 2013 CSR Report was graded as a five-star report for the fourth year in a row and ranked No.1 out of 1,007 sample CSR reports in the 2014 White Paper of CSR Reports of Chinese Enterprises published by CASS.

Our 2013 CSR Report won the Changqing Prize in the 7th International Seminar on the CSR of Chinese Enterprises.



According to the 2014 Blue Paper of CSR published by CASS, CSG ranked No.1 out of 300 evaluated companies in both CSR development index and industry development index.



Our 2013 CSR Report won the Best CSR Report Prize in the 2014 Annual Conference on Sustainable Competitiveness of Chinese Enterprises--Corporate Social Responsibilities Maturity and Corporate Public Transparency.

Responsibility communications

China Tour--Sharing CSR Experiences

On March 3, 2014, the research team named China Tour - Sharing CSR Experiences, co-organized by the Research Bureau of the State-Owned Assets Supervision and Administration Commission (SASAC) and the Research Center for Corporate Social Responsibility of CASS, confirmed CSG as their first stop of the tour and held a launching ceremony in our company. We had in-depth discussions with experts in the research team on CSR issues and ways to promote CSR of Chinese enterprises.



CSR Week

In May 2014, CSG launched the second "CSR Week" which aims to serve the community. The "CSR Week" showed how our branches and subsidiaries performed social responsibilities, established connections with governments, power plants, customers, experts, scholars, media and the people. It also passed on the concept of sharing and common development.

The Second "CSR Week" by
CSG
2014.5.15—2014.5.21
Theme: Service,
Responsibility and Care



Guangdong Power Grid Corporation (May 15)
Guangdong Power Grid Corporation held exhibitions of power-protecting apparatus in Dongguan, Foshan, and Zhuhai, building "electricity experience halls" and "Energy-saving houses" and carrying out electricity facilities protection publicity campaigns in communities, schools and hospitals.



Guangxi Power Grid Corporation (May 16)
In Nanning, Liuzhou, Guilin and other 11 prefectural-level cities, the media and citizens were invited to visit transformer substations and live-working spots to closely experience CSG's high-quality services.



Yunnan Power Grid Corporation (May 17)
In Kunming, Qujing and Honghe, Yunnan Power Grid Corporation provided various services for the citizens and invited customer representatives to experience the convenient services of their sales office.



Guizhou Power Grid Corporation (May 18)
In Guiyang, Zunyi and Duiyun, volunteers were organized to examine indoor electric circuit and devices, and to publicize basic knowledge on using power safely and efficiently.



Hainan Power Grid Corporation (May 19)
In Haikou, Sanya, Danzhou and Qionghai, publicity campaigns on electricity safety and energy conservation were organized to raise public awareness and answer questions from the citizens.



Guangzhou Power Supply Bureau (May 20)
Guangzhou Power Supply Bureau held a series of interactive and voluntary activities such as "the journey of 1 kWh power" and "let me help you deal with power" as part of the science publicity campaign.



Shenzhen Power Supply Bureau (May 21)
Shenzhen Power Supply Bureau invited members of the Customers Council to visit Binhe transformer substation and electricity living room, conducted Gallup poll on the third party's satisfaction rate, and held Social Responsibilities and an Urban Green Life Forum.

Constructing CSR demonstration bases

With demonstration bases as a platform, CSG will integrate social responsibilities and concrete business and make regular communications with stakeholders so as to reinforce the construction of CSR demonstration bases.

Guangdong



Guangdong Power Grid Corporation started the construction of three comprehensive CSR demonstration bases: the "Electric Housekeeper" in Dongguan, the "Electric Impression Park" in Foshan and the "Cultural Gallery of Power Supply and Power Distribution Automation" in Zhongshan.

Guangxi



Relying on the four CSR demonstration bases in Nanning, Guilin, Guigang and Qinzhou, Guangxi Power Grid Corporation developed special display schemes, planned visiting routes and explanatory notes, and established a mechanism for permanent opening to the public and a visit time reservation mechanism.

Yunnan



With Yundian Technology Park as a CSR demonstration base, Yunnan Power Grid Corporation developed displaying schemes and precautionary measures for visitors, and established a mechanism for permanent opening to the public and a visit time reservation mechanism.



Guizhou



With the support of Guizhou Power Distribution and Communications Bureau, especially its CSR demonstration base, Guizhou Power Grid Corporation continued to perfect the energy-conserving generation and distribution platform and enhance relevant promotions. They also shot promotional videos and trained part-time guides.

Shenzhen



Shenzhen Power Supply Bureau set up six displaying areas, including Electromagnetic Radiation and Scientific Use of Power, to publicize the environmental-friendly concept of transformer substations, provide rich interactive experiences and communicate with the general public.

Guangzhou



Guangzhou Power Supply Bureau created a special mode of publicity and communications named "the journey of 1 kWh power", and launched a series of original cartoon brands which were designed for their potential customers.

Hainan



Hainan Power Grid Corporation studied the advanced methods of constructing CSR demonstration bases in order to explore the feasibility of establishing demonstration bases in Customers Service Center and in power supply bureaus of Haikou and Sanya.

Outlook of 2015

2015 will be a key year for the all-round further reform and the last year of the second stage objective in realizing CSG's three steps of its mid-to-long-term development strategy. CSG will face complicated situations and many uncertainties. However, we shall turn challenges into opportunities, actively adapt ourselves to the new normal of economy, and take the initiative to meet the energy revolution and power sector reform to make new contribution to the socio-economic development in the five provinces and region of CSG's service area.

Power Supply

Continuing to increase power supply stability and improve energy quality to provide strong power guarantees for economic and social development.



Receiving **79** points out of 100 in the third-party customer satisfaction rate survey



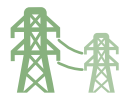
No major power safety accident or facility accident in 2014.

Environment Protection

Actively responding to climate change, supporting the development of new energy, opening a new chapter of low-carbon development and contributing to the establishment of green China.



General line loss rate dropping to **6.91%**



West-to-East Project transmitting **173.8** twh

Economic Performance

Driving corporate development with rule of law and with the power sector reform, optimizing the overall corporate governance, actively and prudently "going broad" and enhancing CSG's core competitiveness.



Power sales reaching **821.7** billion twh in 2014



Business turnover reaching RMB **496.7** billion in 2014

Social Harmony

Caring about people's livelihood and social harmony, listening to the voice and expectations from government, the supply chain, peers, partners and staff, and joining efforts with all stakeholders to continuously create and share value.



Continuing to reform and upgrade the rural grid



Making it a norm to undertake charity activities

About This Report

Dear readers, this report records CSG's fulfillment of social responsibility in 2014. We hope this report shows you the sincerity of CSG staff and will earn your support and help for CSG's reform and development.

This is the eighth annual social responsibility report released by CSG. The last report was released on May 17, 2014 and the next one will be published in May 2016. The report will have Chinese and English versions. With a principle of being objective, standard, transparent and comprehensive, the social responsibility report records CSG's performance in power supply safety and quality as well as in economic, environment and social development. In case there are any minor discrepancies between the Chinese and English versions, the Chinese version should prevail.

• Timescale

The report covers from January 1 to December 31, 2014. To add on to its comparability and extensibility, some content will extend to outside this timeframe.

• Boundary of Report

CSG, including its subsidiaries, branches and affiliated organizations, is the main subject of the report.

• Report Basis

The CSR indicators system of CSG (CSG-CSR 1.0)

• References

Guidance on Social Responsibility Fulfillment by Central Enterprises by the State-owned Assets Supervision and Administration Commission of the State Council (SASAC [2008] No. 1 document)

Corporate Social Responsibility Report Compiling Guidance for Chinese Businesses by Chinese Academy of Social Sciences (CASS-CSR 3.0)

Sustainability Reporting Guidelines by Global Reporting Initiative (GRI G4)

Social Responsibility Guidelines to Chinese Industrial Businesses and Industrial Associations by China Federation of Industrial Economics

Recommended Standards and Implementation Examples of Social Responsibility for Chinese Businesses and Public Organizations by China Business Council for Sustainable Development

• Source of Statistics

All statistics used in the report are from published documents or reports of CSG or other parties.

• Reliability Guarantee

CSG guarantees this report does not have any false account, misleading narration or major omission/missing information.

• Title Usage

For writing and reading convenience, in this report, the China Southern Power Grid Company Limited is also referred to as "CSG" "the company" or "we".

• Report Improvement

On compiling method, we optimized the report compiling process and improved the identification and management of substantive topics so that the disclosure of topics is more enriched.

On report structure, reading guidance to each chapter was added, the logic structure between all chapters were refined so that the report structure is clearer.

On content, hot social topics such as energy revolution, development of minority ethnic groups were given most attention; an "echo wall" column was adopted to respond to the subjects of stakeholders' interest such as disclosing power volume measurement and bill calculation, electromagnetic radiation and contractor development to add on to the substance of the report.

On presentation, we refined report language and fully integrated pictures, graphics and words to increase the richness and vividness of the report and further improve reading experience.

• Further Reading

CSG has established a social responsibility information disclosure system. You may visit the official website at: www.csg.cn for our past reports as well as the 2014 fascicles on Guangdong Power Grid, Guangxi Power Grid, Yunnan Power Grid, Guizhou Power Grid, Hainan Power Grid, Guangzhou Power Supply Bureau and Shenzhen Power Supply Bureau to have a deeper understanding of the social responsibility practice of CSG.

• Report Request

You may download an electronic copy from our official website. Should you have any inquiries or need a hardcopy, please send email to csr@csg.cn, or call us at (020) 38121917.

Report Rating

Rating Report of the 2014 Corporate Social Responsibility Report of China Southern Power Grid Co., Ltd.



Commissioned by CSG, the Corporate Social Responsibility Research Center, Economics Department of Chinese Academy of Social Sciences (referred to as “the Center” in the following text) selected experts from the Experts Committee for China Corporate Social Responsibility Report Rating to form a rating panel to assess the 2014 Corporate Social Responsibility Report of China Southern Power Grid Co., Ltd (referred to as “the Report” in the following text).

1. Rating Basis

Corporate Social Responsibility Compiling Guidelines for Chinese Businesses (CASS-CSR 3.0), i.e., the Rating Standards on Corporate Social Responsibility Report of Chinese Businesses (2014).

2. Rating Process

- A. The process appraisal team interviewed members involved in CSG’s social responsibility work;
- B. The process appraisal team examined the compiling process of the Report and related materials on site;
- C. The process appraisal team gave assessment to the management procedure and the disclosed content of the Report.

3. Rating Conclusion

Process (★★★★★)

CSG’s strategic planning department took the lead to set up a report compiling team; senior executives were responsible for the compiling progress and report reviews; the compiling team identified and sorted out stakeholders and collected their feedback through experts’ research, questionnaires and other means; then the team defined the substantive topics according to stakeholders’ feedback, major events of the company, relevant national policies and industry benchmark analysis; the team plans to hold press conferences for the report and publish the report in both hard copy and e-copy and in multiple languages. All these show an excellent process performance of CSG in compiling the report.

Substantiveness (★★★★★)

The Report systematically covers key topics of the power sector such as ensuring power supply, providing high-quality and convenient service, ensuring safe operation, workplace health and safety, developing green grid and increasing operational efficiency. The disclosure is complete and detailed with excellent substantiveness.

Completeness (★★★★★)

The Report discloses 91.0% on the core indicators of the power sector and demonstrates a good completeness. Core indicators include: Power supply, green and environment, economic performance, social harmony and responsibility management.

Balance (★★★★★)

The Report discloses negative information involving the number of major and above-major power safety accidents, the complaint rate per million customers, the number of level three and above power safety accidents etc., and accounts, in detail, CSG’s practice in safe production, handling discipline violations and rectification measures, displaying excellent balance throughout.

Comparability (★★★★★)

The Report discloses 41 key performance indicators for the past 3 consecutive years, and makes horizontal comparisons of average outage time to customers, general line loss rates and other parameters, demonstrating outstanding comparability.

Readability (★★★★★)

The Report is well structured and in appropriate length and fluent narration. Diverse formats, such as pictures and tables, complement words well; the “one picture to show it all” format used in several places is very telling and interesting, significantly increasing the fun of reading. All in all, the Report demonstrates strong readability.

Innovativeness (★★★★★)

Every chapter of the report has a reading guide at the beginning to make analysis in matrix on substantive subjects and lay out key points of the chapter so stakeholders may have a quick overview; an “echo wall” format is used several times to specifically respond to the expectations from stakeholders, proving great innovativeness.

Overall rating (★★★★★)

The 2014 Corporate Social Responsibility Report of China Southern Power Grid Co., Ltd. is rated five stars by the panel, indicating it is an outstanding corporate social responsibility report.

4. Improvement Suggestion

Some discourse could be more concise so that the report may have even better readability.

5. Rating Panel

Lead person of the panel:

ZHONG Hongwu

Director, Corporate Social Responsibility Research Center, Economics Department, Chinese Academy of Social Sciences

Panelists:

WANG Zhixuan, Secretary-General, China Electricity Council

CHENG Duosheng, Director, Enterprise Innovation Department, China Enterprise Confederation

ZHONG Hongwu, ZHAI Lifeng, Process Appraisers, Corporate Social Responsibility Research Center, Chinese Academy of Social Sciences



中国企业社会责任报告
专家评级委员会
Chinese Expert Committee on CSR Report Rating
Issued on: April 24, 2015

钟宏武

Chairman of Rating Experts Committee
Executive Vice Director-General,
Corporate Social Responsibility
Research Center

钟宏武

Lead Person of Rating Panel
Director, Corporate Social
Responsibility Research
Center

Third-party Comments

CHU Xuping

Director-General, Research Center, SASAC

CSG has been promoting social responsibility comprehensively through value leading, strategy driving and continuous communication, hence becoming a benchmark for central enterprises in social responsibility performance. CSG’s 2014 social responsibility report has rich substance, clear key points, distinct characteristics, creating smooth reading experience. The report continues to break through while inheriting traditional strength, reflecting that CSG has been doing a lot of fruitful work in a wide range of areas.

Firstly, being innovative in social responsibility management.

CSG manages stakeholders foresightedly and has innovatively integrated substantive subjects into all stages of the report compiling process. The report systematically goes through social responsibility agenda in four main fields: power supply, green and environment, economic performance and social harmony, taking a big step forward in the substantiveness of the report. It is also a report truly written from the stakeholders’ perspective, therefore having a higher value in promulgating ideas, improving practice and enhancing management. This is not only a change of ideas, but also a revolution of CSG’s social responsibility practice. In addition, the stable progress of the social responsibility demonstration base and the gradual enrichment of “social responsibility week” activities demonstrate a CSG that is bold to explore, brave to innovate, active to practice and always keeps up with the times.

Secondly, closely linking social responsibility with the company’s business activities.

CSG pays close attention to hot social issues such as energy revolution and power sector reform and integrates social responsibility into daily operation on a higher and deeper level, significantly enhancing its capability in creating general values. In 2014, with the core task to deepen SOE reform, CSG actively participated in the new round of power sector reform, created a favorable external business environment under the new normal, achieving successful business performance with power sales volume of 785.9 twh and business turnover of RMB 473.8 billion. CSG also took advantage of its role as a platform for optimized regional energy resources allocation to optimize power sources structure and serve the green and low-carbon development of the society. In 2014, the percentage of installed power capacity from non-fossil fuels in CSG service area rose to 48.5% of the total installed capacity, higher than the 27% national average; CSG general line loss dropped to 6.94%, 0.26% lower than the year before, achieving excellent environment and social benefits. All these vertically and horizontally compared figures show CSG’s strong sustainable development as well as the solid growth path of a responsible company.

Thirdly, sincerely responding to stakeholders’ concerns.

Every chapter of the 2014 report has highlighting columns such as “one picture to show it all” “echo wall” and “responsibility reflection” to make in-depth disclosure on the stakeholders’ concerns and CSG’s responsibility compliance priorities. At the same time, the report does not avoid or hide the death and injury accidents, the rectification of the procedure of power provision for business expansion and the result of anti-corruption campaign in 2014 but seriously reflects on the causes of problems and actively proposes correction measures, displaying the company’s sincerity to communicate and its candor.

Looking into the future, I hope CSG continues to make further achievement in social responsibility management, better risk-prevention responsibility, continues to play a leading and demonstrative role, writes a new chapter of “a myriad of twinkling lights, great rapport of CSG”, and makes positive contributions to the transformation of society and the realization of the “China dream”.

YIN Gefei

Deputy Director of China WTO Tribune, Director of Peking University International Research Center for Social Responsibility and Sustainable Development

CSG’s social responsibility report has been taking a step forward every year; the 2014 report both inherits traditions and makes many innovations, showcasing great ingenuity. Firstly, with the internationalization of the company, the compiling of the report also enters into a new level. The confidence of the report in both theory and practice continues to grow; it can be seen that the report is gradually moving away from depending on certain frameworks to showcasing confidence and ease as those from other internationally leading companies do. Secondly, by inheriting tradition and making innovation, CSG has found a characteristic way to compile the report. While maintaining the report’s original style, the compiling team has gradually explored and found a new compiling methods with CSG’s own distinctive characteristics – taking the CASS guidelines as foundation, G4 as standards and reflecting the 4G era. Thirdly, with the trends of 4G, the report has incorporated mobile reading elements to allow for mobile and internet access. 2D bar codes for video links are inserted in many parts of the report so the stakeholders can conveniently open videos for content of their interests, creating a more direct, dimensional and richer presentation of information and better reading experience.

ZHANG Haiyang

Vice Director, Culture and Outreach Department, China Electricity Council

On top of the previous seven annual social responsibility reports, CSG’s 2014 report steps up to yet another new level, proving itself to be a high quality report. Firstly, the report plays a leading role. With its distinct theme, comprehensive indicators, completeness, standardization and effectiveness, the report achieves a leading position in China and in the power sector. Secondly, the report presents novel ideas. Many highlights can be seen in the report; the vivid ichnographs and dimensional pictures clearly showcase the ecosystem of the sector and voices from stakeholders. Thirdly, language is accurate and colorful. Placing readers at the center, the report language is concise, statistics meticulous, examples vivid; plus skillfully added internet elements, the report shows strong readability.

CHENG Duosheng

Director, Innovation Department, China Enterprise Confederation

Inheriting from tradition while constantly innovating, every year’s CSG social responsibility report makes people feel familiar yet freshly new. The 2014 report impresses me in three aspects: Firstly, it keeps pace with the time closely. Adapting to the new normal, the report actively responds to hot social issues such as power sector reform, new energy revolution and haze in the air, showcasing a central enterprise’s effective measures and concrete actions in leading the new normal. Secondly, the report provides rich and accurate content and covers comprehensive topics. Focusing on four main fields of power supply, green and environment, economic performance and social harmony, the report fully reveals the new achievements and progress by CSG in fulfilling its social responsibility. Thirdly, the report contains a variety of formats. It adopts a novel reading guide format, using a comprehensive picture or the “echo wall” to showcase CSG’s practice and achievements in social responsibility in a variety of ways. The novel format not only increases readers’ interest, but also provides a clear overview of CSG’s social responsibility performance to stakeholders.

Report Index

Content	GRI index	CASS-CSR benchmarking
Cover		
Interview	G4-1/G4-2	P3.1/P3.2
Guide to reading the report	G4-18/G4-27/G4-49/G4-50	G1.3
About us	G4-3/G4-4/G4-5/G4-6/G4-7/G4-8/G4-9/ G4-12/G4-14/G4-34/G4-41/G4-56	P4.1/P4.7/P4.2/P4.3/P4.4
Feature report 1	G4-EC7/G4-EC8/G4-SO1	P5.1
Feature report 2	G4-EC8/G4-SO7	P5.1/S1.6
Power supply	G4-19/G4-20/G4-21	G1.3/S3.2/M2.6
Provide quality service	G4-EC7/G4-PR1/G4-PR2/G4-PR4/ G4-PR5/G4-PR8/G4-PR9	M2.1/M2.2/M2.3/M2.5/M2.6/M2.7/M2.13/M2.14
Ensure	G4-14/G4-LA7/G4-PR3	G4.4/S3.1/S3.2/S3.6/S3.7
Enhance power grid construction	G4-37/G4-45/G4-EC7/G4-SO1	
Enhance technology		M2.8/M2.9/M2.10/M2.12
Environmental Protection	G4-19/G4-20/G4-21	G1.3
Opening Chapter	G4-EC2	E1.1/E1.2/E1.8/E2.1/E2.2/ 2.18
Carbon emissions and energy-savins	G4-EN3/G4-EN5/G4-EN6/G4-EN7/ G4-EN18/G4-EN19/G4-EN21/G4-EN27	E2.19/ E2.3/E2.4/E2.8
Optimize the structure of power sources	G4-EN6/G4-EN7/G4-EN27	S4.1/S4.2/E2.5/E2.6/E2.7/E2.8/E2.9
Build a green grid	G4-EN12/G4-EN13/G4-EN27/G4-EN29	S4.1/S4.2/S4.3/E1.4/E1.9/E4.1/E4.2/E4.3
Green operations	G4-EN2/G4-EN6/G4-EN7/G4-EN23/G4-EN27	E1.10/E1.11/E1.12/E1.13/E2.10/E2.11/E2.12/E2.13/E2.14/
Help clients save energy	G4-EC7/G4-EC8/G4-EN6/G4-EN7/G4-EN27	M2.2/E1.6/E3.6/E4.5
Build a low carbon society	G4-EN6/G4-EN27/G4-15	E1.6/E1.7/E4.5/G1.2/E1.3
Economic performance	G4-19/G4-20/G4-21	G1.3/S1.5
Boosting economic performance	G4-9/ G4-14/G4-EC1	M1.1/M1.2/M1.4/M1.5/M1.6/S1.5
Rule of Law/Govern the company by law	G4-43/G4-56/G4-57/G4-58/G4-SO3/ G4-SO4/G4-SO5/G4-SO8	M1.3/S1.1/S1.2/S1.3/S1.4/S1.6
Better Operational Efficiency		
Power Market Development	G4-56/G4-EC8/G4-SO7	M3.1/M3.2
Regional Economic Development	G4-9/G4-EC1/G4-EC8	M3.1/S1.6/S1.7/S4.5
Social Harmony	G4-19/G4-20/G4-21	G1.3/S2.26/M3.7
National harmony	G4-EC8/G4-HR8/G4-SO1	S1.6
Rural development services	G4-EC8/G4-SO1	S1.6
Dedicated to well-being of the general public	G4-EC1/G4-EC8/G4-SO6	M3.1/S4.9/S4.12/S4.13/S4.14
Win-win	G4-12/G4-16/G4-56/G4-EN19/G4-SO10	P4.6/G3.2/M3.1/M3.2/M3.3/M3.4/M3.5/M3.6/M3.7/M3.8/ M3.10/M3.11/M3.12/S1.3/S2.23/S4.8/E3.1/E3.2/E3.3 P4.5/S1.8/S2.1/S2.2/S2.3/S2.4/S2.5/S2.6/S2.7/S2.9/S2.10/ S2.11/S2.12/S2.13/S2.14/S2.15/S2.17/S2.21/S2.22/S2.24/ S2.25/S2.26/S2.27/S2.28/S2.29/S2.30/S2.31/S3.3/S3.4/S4.6
Employee Development	G4-9/G4-10/G4-11/G4-EC6/G4-LA1/G4-LA2/ G4-LA4/G4-LA9/G4-LA10/G4-LA12/G4-LA13/ G4-LA16/G4-HR2/G4-HR3/ G4-HR4	
Responsibility management		
Strategy	G4-35/G4-56	
Research		
Honor		P5.2/P5.3
Governance	G4-35/G4-56	G1.1/G1.4/G2.1/G2.3/G2.4/G2.5/G5.4/G6.1/G6.2/G6.3/G6.4/A1
Communication with stakeholders	G4-24/G4-25/G4-26/G4-27/G4-37	G2.2/G5.1/G5.2/G5.3/G5.5/G5.6
Communication	G4-SO1	P5.1/G3.1/G4.3
Outlook for 2015	G4-2	A1
About the report	G4-17/G4-22/G4-23/G4-28G4-29/G4-30/G4-31	P1.1/P1.2/P1.3/P1.4/P1.5
Report Rating		
Third Party Comments		A2
UN Global	G4-EN3/G4-EN6/G4-EN7/G4-EN18 /G4-EN27/ G4-LA13/ G4-HR3/ G4-HR4/G4-HR5/G4-HR6	
Report Index	G4-32	A3
Feedback form	G4-31	A4
Report compilation stage	G4-48/G4-49	P2.1/P2.2/P2.3/G1.3/G4.1/G4.2/G5.2/G6.4/A1
Back cover	G4-31	

UN The Global Compact

CSG has observed the Ten Principles in its decision making and operation process ever since its entry into UN Global Compact in 2010. The company actively participates and supports events held by the Global Compact in China.

	Ten Principles	In the chapter of the Report	Compliance and progress made in year 2014
Human rights	Businesses should support and respect the protection of internationally proclaimed human rights	Rights and interests Democratic management	Comply with laws and regulations, implement Labor Law and rules. Pay full respect to, and guarantee, staff’s right to know, right to participate, right to supervise and right to express. CSG phased in standardized staff management. Respect ethnic minorities’ languages and offer power service in local languages.
	Make sure that they are not complicit in human rights abuses	Staff’s Rights and interests. Serve Agriculture, Farmers and Rural Development. Promote harmony among different ethnic groups.	
Employees	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	Democratic management	In strict compliance with the Labor and Contract Law of People’s Republic of China, and sticks to fair employment and equal pay. Frontline staff receive preferential compensation packages. Every plant eligible for trade union establishment has established a trade union. Every staff at grass roots level is a trade union member. Carry out staff mentoring programmes, and help staff alleviate psychological pressure and strike a balance between life and work. Staff’s average paid annual leave is 9 days. Reinforce democratic management and standardize employee representative meeting and transparency in factory affairs. Absolute elimination of child labor and CSG acts as an equal opportunity employer, employ any qualified people regardless of his/her disability.
	The elimination of all forms of forced and compulsory labor	Staff’s rights, occupational safety and health	
	The effective abolition of child labor	Staff’s rights	
	The elimination of discrimination in respect to employment and occupation	Staff’s rights	
Environment	Businesses are asked to support a precautionary approach to environmental challenges	Environmental Protection	Fossil fuel consumption for unit power generation is 191 grams standard coal per kwh. West-to-East” power transmission hit 92Twh. 10.96 million tons of standard coal saving achieved by energy-saving power generation and dispatching. The average coal consumption of coal-fired power generation was 319 grams/KWh, representing 2 grams/KWh reduction than that of previous year. Grid-wide line loss rate was 6.94% in 2014.
	Undertake initiatives to promote greater environmental responsibility	Environmental Protection	
	Encourage the development and diffusion of environmentally friendly technologies	Facilitate optimized energy portfolio Energy Efficient Operation	
Anti-corruption	Businesses should work against corruption in all its forms, including extortion and bribery	Govern the company by law	CSG actively facilitates Ethical Central Enterprise Initiative, and avoid legal risks, with focuses on internal control enhancement, performance supervision, and put supervision of important decision implementation in place. CSG is dedicated to establishing itself as a zero-corruption and clean company by practicing a dual accountability system, namely, clean party system and supervisory system. CSG’s long term corporate credit rating is super AAA In 2013, no major law/regulation breaches have happened.

Feedback form

Dear readers:

Thank you for reading our Report. CSG will make every effort to improve the Report. We would appreciate if you could let us know our comments.

Multiple choice questions: (please tick your choice)

- 1

You overall comments on the Report is:

☐ Excellent ☐ Very Good ☐ Average ☐ Poor ☐ Very Poor
- 2

You think the quality of the information disclosed is

☐ Excellent ☐ Very Good ☐ Average ☐ Poor ☐ Very Poor
- 3

You think the structure of the Report is:

☐ Excellent ☐ Very Good ☐ Average ☐ Poor ☐ Very Poor
- 4

You think the layout design of the Report is:

☐ Excellent ☐ Very Good ☐ Average ☐ Poor ☐ Very Poor
- 5

The readability of the Report is

☐ Excellent ☐ Very Good ☐ Average ☐ Poor ☐ Very Poor

Open-ended questions

- 1

In your opinion, what improvements should the Report make?
- 2

Please specify information you find useful.
- 3

What other social responsibility information should the Report disclose?
- 4

Any suggestions on CSG’s social responsibility practice , please specify:

(Feedback Fax: 020-38122187)



Report Compilation Process

Report compilation process

We adopted process management in the report compilation process. The Report helps disseminate philosophy, improve practice and enhance management capacity. CSG watches its own social responsibility practice and service closely, timely understand and responds to requirements and expectations of the stakeholders, strives to boost its service and meets its mission as a leading international power grid.

Time spanned is 3 calendar years	2013
	2014
	2015
Three stages	Planning
	Research
	Writing & Release
Three roles	Disseminate philosophy
	Improve practice
	Enhance management

