2016 CORPORATE SOCIAL RESPONSIBILITY REPORT
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Address by the Chairman

Build a responsible brand of Shandong Nuclear Power Company, and create a more sustainable future with stakeholders

Dear stakeholders,

Welcome to read the fourth Corporate Social Responsibility Report released by Shandong Nuclear Power Company. The Report systematically reviewed social responsibility management of Shandong Nuclear Power Company in 2016, and accurately introduced the progress made in safety and quality assurance, project construction, public service and contribution to local development. The detailed and enriched contents of the Report opened a window for your better understanding of Shandong Nuclear Power Company.

During development, we have always given top priority to nuclear safety to keep it from being influenced by construction, production and economic factors. In 2016, to improve our nuclear safety management system, we compiled and published the Nuclear Safety Culture Promotion Plan, established the Nuclear Safety Review Committee and invited experts in the nuclear power industry to evaluate the nuclear safety supervision system. We promoted the corporate culture of mutual respect and trust, pursued excellent performance, and maintained stable and safe production.

We have always put safety and quality first. In the key stage when projects were transforming from commissioning to production, we enhanced the three specific works of nuclear safety culture improvement, the quality assurance system implementation improvement and quality improvement. Based on such improvements, we strengthened employees' sense of responsibility, executive ability, and mindset and behaviors in accordance with nuclear safety culture so as to build a high-quality team and carry out safe and competitive nuclear power projects.

We have always attached great significance to stakeholders' concerns. Through sticking of knowledge publicity, benefit compensation, shared development, supervision and engagement, we aimed to create a harmonious atmosphere jointly with stakeholders. In 2016, we innovated approaches to communicate with the public, reviewed our work from an external view. By doing so, we established benign and interactive relations to better promote the Project.

We have actively engaged ourselves in local development to contribute to the healthy and rapid economic development of local communities. Haiyang Nuclear Power Project provided thousands of jobs for locals, directly boosting local employment and taxation. In 2016, SDNPC was awarded Economic Development Pacesetter by Yantai Municipal Party Committee and the Yantai Municipal Government. The construction of Haiyang Nuclear Power Plant accelerated the development of related local industries which formed into a nuclear power industry cluster integrating R&D, design, equipment manufacturing and operation services, making nuclear power a key industry in Yantai City and Shandong Province.

Efforts of SDNPC employees were indispensable to the achievements of Haiyang Nuclear Power Project. Every SDNPC employee is a practitioner of striving spirit, and a creator of a responsible brand. We advocated striver-oriented corporate culture, aimed to create a safe, healthy, democratic, harmonious and environment for employees and a paradise for talents, and fulfilled our dream of empowering China with nuclear power and green energy.

In 2017, SDNPC will stay true to its mission with step-by-step efforts. We will connect Unit 1 to the grid, and finish the cold hydro test of Unit 2. We will create a responsible brand with concrete actions, and strive for a more sustainable future together with stakeholders.

Wu Fang, Chairman, Secretary of Party Leadership Group, SDNPC
About Shandong Nuclear Power Company and Haiyang Nuclear Power Project

Among the sustainable development goals (SDGs) published by the United Nations, Goal 7 of Affordable Clean Energy and Goal 13 of Climate Action are closely related to the nuclear power industry.

SDNPC undertakes the historic mission of introducing, digesting and absorbing the third-generation AP1000 nuclear power technology. In more than one decade, we have born the mission deeply in our mind, carried out construction, commissioning and operation of Haiyang Nuclear Power Plant safely and superiorly, and fulfilled our economic, social and environmental responsibilities conscientiously.

Haiyang Nuclear Power Project adopts world advanced third-generation AP1000 nuclear power technology. The most distinguishing feature of the technology is its passive safety system. With the function of modular construction, it improves project safety and cost effectiveness.

With AP1000 nuclear power technology, a water tank is installed at the top of the nuclear island to serve as a heat sink. Due to gravity and the natural convection, diffusion, evaporation and condensation of liquids, the heat sink can cool down the containment and take away residual heat of the reactor core without the assistance of any active devices such as pump, fan, diesel generator or cooling water machine at emergency time. The reactor building has a one-meter thick reinforced concrete wall with a 40mm thick steel containment inside to effectively prevent radioactive substances from entering the environment.

About Us

Founded in September 2004 in Haiyang, Yantai, Shandong Province, Shandong Nuclear Power Company (hereinafter referred to as SDNPC) is the subsidiary of State Power Investment Corporation (hereinafter referred to as SPIC) and the owner of Haiyang Nuclear Power Plant which is the supporting project for the introduced third-generation AP1000 nuclear power technology.

SDNPC is fully responsible for the design, construction and operation management of Haiyang Nuclear Power Project. The project is planned to construct six 1,000MW-level PWR units while reserving space for another 2 units. The two 1,250 MW-level AP1000 nuclear power units of Haiyang Nuclear Power Plant Phase I Project started first concrete date (FCD) respectively on September 24, 2009 and June 20, 2010. In 2016, Unit 1 of Haiyang Nuclear Power Plant finished cold hydro test and launched hot functional test and Unit 2 entered the commissioning stage. The construction of Haiyang Nuclear Power Plant Phase II Project is to be launched after the approval of relevant authorities.
Corporate Governance

The Company has established standardized General Meeting of Shareholders, Board of Directors and Board of Supervisors, and holds meetings on a regular basis each year to review proposals and reports before giving relevant opinions and making decisions. The Company’s Executives lead all employees to strictly implement all policies and decisions of Board of Directors to ensure standardized and refined working procedures.

Board of Directors (Up to June 30, 2017)

Chairman
Wu Fang
State Nuclear Power Technology Corporation

Directors
Chen Yumin, Chen Zhigang, Ding Yunfeng, Zhang Zhen
Shandong Nuclear Power Company Ltd.
Ni Shoumin
Yantai Bluesky Investment Holding Co., Ltd.
Xie Hong
China Guardian Corporation
Xu Liansheng
China National Nuclear Power Co., Ltd.
Gu Yingbin
Huaxi Nuclear Power Development Co., Ltd.
Zhang Fengwei
Staff Director of Shandong Nuclear Power Company
Guo Lei

Board of Supervisors (Up to June 30, 2017)

State Nuclear Power Technology Corporation
Zhang Yunio
Shandong Nuclear Power Company Ltd.
Chen Wei
Yantai Bluesky Investment Holding Co., Ltd.
Liu Liang
China Guardian Corporation
Hu Xuedong
China National Nuclear Power Co., Ltd.
Hong Meigu
Huaxi Nuclear Power Development Co., Ltd.
Tan Yiyun
Staff Supervisor of Shandong Nuclear Power Company
Pang Hongsheng

Leadership Team (Up to June 30, 2017)

Chairman, Secretary of Party Leadership Group
Wu Fang
President, Deputy Secretary of Party Leadership Group
Zhang Zhen
Vice President, Standing Committee Member of Party Leadership Group
Xue Yiming
Vice President, Standing Committee Member of Party Leadership Group
Li Zhenghe
Secretary of Discipline Inspection Group, Chairman of Labor Union,
Standing Committee Member of Party Leadership Group
Guo Lei
Vice President, Standing Committee Member of Party Leadership Group
Hao Hongliang
Chief Engineer, Standing Committee Member of Party Leadership Group
Guo Hong’en
Chief Engineer, Standing Committee Member of Party Leadership Group
Yan Yan
Chief Financial Officer
Pang Jiaqiao

Organization Structure
In 2016, Haiyang Nuclear Power Plant Unit 1 completed the installation, bumping and operation of the Reactor Coolant Pump (RCP), the cold hydro test, and part of the hot functional test. The on-site Pre-Start Up Peer Review (PSUR) was highly praised by the expert team. In order to ensure the success of the project, SDNPC established an integrated coordination mechanism, enhanced the control of critical paths, technical preparation and experience feedback, and realized the smooth gradual transition of Unit 1 from commissioning to production.

In 2016, Haiyang Nuclear Power Plant Unit 1 completed the installation and operation of RCPs.

- In March 2016, the first batch of RCPs of Haiyang Nuclear Power Plant Unit 1 arrived at the port; In April, all the four RCPs of Unit 1 completed installation; In June, all the four RCPs of Unit 1 completed initial running; In October, all the four RCPs of Unit 1 reached 100% rotation speed for the first time. During the operation, all parameters of the RCPs proved normal, which fully validated the reliability and stability of the performance of the RCPs.

RCPs of the Nuclear Power Unit

RCPs are the “heart” of the nuclear power unit. During the normal operation of the nuclear power plant, RCPs provide source power for the reactor coolant system. RCPs are classified as the Level 1 equipment concerning nuclear safety of the nuclear power plant. The RCP adopted by the AP1000 nuclear power plant is a canned pump, which is used at the nuclear power plant for the first time. It is the only rotated equipment in the primary loop and the world’s largest canned pump that serves as the RCP.

The AP1000 passive pressurized water reactor (PWR) nuclear power technology is a third-generation nuclear power technology. Introduced from Westinghouse Electric Company in 2006, the technology was absorbed, digested and renovated by China. The AP1000 nuclear power technology is the only third-generation nuclear power technology approved by Nuclear Regulatory Commission (NRC). Haiyang Nuclear Power Plant, constructed and operated by SDNPC, is one of the first batch of nuclear power plants in China that adopted AP1000 nuclear power technology.

Efforts made for the research, development and production of RCPs

Since 2009, we have sent 22 personnel in total in 8 consecutive years to help the manufacture of RCPs in the United States. All parties held discussions over and made analyses of technological problems of RCPs by holding executive meetings, weekly meetings, biweekly meetings, special meetings, seminars, dialogue meetings and video conferences.

Though many experiment-related witness points worked at night and even after midnight, constructors had arrived at the spots on time. Including dailies, weeklies, monthlies, reports on weekly meetings, inspection reports, witness point inspection reports and special reports.

The installation of the first RCP had 203 steps in seven stages, and each step was implemented under strict control. The installation team made technical briefing and safety briefing before each work shift to ensure every step in every stage could reach the high-level requirements of refined, precise and stable installation, showing great spirit of craftsmanship.
In 2016, Haiyang Nuclear Power Plant Unit 1 was transiting from commissioning to production.

- On April 29, the whole set start-up of the conventional island of Unit 1 was completed laying a solid foundation for subsequent production and operation. The start-up complied with the production and operation management criteria of large-scale production activities. The conventional island was transited to steam turbine running stage from the stage of maintenance and repair.
- On July 2, the cold hydro test of Unit 1 was completed.

**What is the cold hydro test?**

The primary loop of a nuclear island is the source of heat for nuclear power plants. Through fission reaction, great heat is generated and conducted to the secondary loop in the form of electric power. Cool hydro test is generally called the test of water pressure in the primary loop. It refers to the strength test conducted for checking equipment quality, pipeline quality and relevant complementary systems of the primary loop in the nuclear island after RCP is installed before fuel load. The aim of the cool hydro test is to examine if there is any leakage, venting or other potential safety hazards.

The pressure boundary of reactor coolant system serves as an important barrier for nuclear safety, which has a working pressure of about 15.5 MPa. In the cold hydro test, the pressure of the reactor coolant system shall reach about 22 MPa to validate if the system can still bear the high pressure after dozens of years of service, which is far greater than the designed pressure.

Within five hours and forty-five minutes, over 1,700 welding lines and over 200 machinery joints of Unit 1 within the test boundary went through comprehensive and detailed examination on all pressure platforms. The results showed that they reached the design requirements.

- On July 20, the hot functional test (hot test) command center of Unit 1 was initiated.
- On July 26, the 25-day pre-service inspection of Unit 1 was fully completed after the cool hydro test, laying a solid foundation for the hot functional test.
- On August 31, Unit 1 officially entered the hot functional test.

**Hot functional test (hot test)**

In the hot functional test (hot test), the water temperature of the reactor coolant system is maintained at around 300℃. The hot test is a holistic drill before the nuclear fuel is loaded. Before fuel load, the temperature, pressure and flow during actual operation of the nuclear power plant are mainly simulated. Moreover, the systemic alignment test and the expected event test are conducted to verify if the main system of Unit 1 can meet the operation requirement of the nuclear power station.

- On November 26, the nonnuclear steam rotation of the steam turbine generator of Unit 1 completed all the expectation tests. Properties and parameters of the main steam turbine generator met the design requirements, symbolizing the successful test of the nonnuclear steam rotation of Unit 1.

Nonnuclear steam rotation of the steam turbine generator is a key program in the hot test, serving as an integrated test covering several companies or organizations, and different areas and domains. Under the framework of Unit 1 hot test commanding system, SDNPC set up a special organization for nonnuclear steam rotation, and eight teams including the special working team, expert team and operation team, etc. Nine companies that coordinated with SDNPC also dispatched professionals to participate in the test, such as CPI Power Engineering Company and Shanghai State Nuclear Power Engineering Company Limited (SNPEC), etc.

With the centralized direction of the hot test command center, all organizations and teams adhered to the principle of ‘Do It Right the First Time’. They made adequate preparation, formulated detailed testing plans, and conducted several simulated drills in order to obtain a good understanding of test steps, risks and emergency response. They carried out relevant work in strict accordance with the standard procedures. With close collaborations in the process, nonnuclear steam rotation test only took less than six hours to finish the test.

- From December 5 to December 16, the on-site Pre-Start Up Peer Review (PSUR) of Unit 1 was performed. Evaluation experts spoke highly of the Company’s measures of nuclear safety culture improvement and the corporate culture of continuous learning. Besides, they proposed improvement recommendations in the production preparation stage of Haiyang Nuclear Power Plant before fuel load.

The evaluation team consists of 21 experts from WANO Atlanta Center, WANO Paris Center, WANO Moscow Center and WANO Hong Kong Office. In line with the international standard of excellence, the general production preparation of SDNPC was fully inspected. The evaluation covers 13 areas including operation and maintenance, etc. During the two-week evaluation process, evaluation experts made over 50 inspection walkthrough on site, held over 60 observations and interviewed 230 employees.

After the two-week evaluation, these experts recognized the production preparation state of Haiyang Nuclear Power Plant before fuel load, and praised SDNPC’s measures of improving nuclear safety culture. The PSUR of SDNPC is also the first case where a Chinese nuclear power plant has been evaluated before fuel load by WANO Atlanta. This is of vital importance for us to prepare for the initial fuel load. The evaluation reached the expected goal, exerting a positive impact on SDNPC’s constant improvement of production management system, and safe and stable operation during the production.

From March 16 to March 23, 2017, WANO-AC conducted the follow-up visit of the PSUR, during which it reviewed the areas for improvement (AFI) and corrective actions of problems detected in fire protection and equipment management. The evaluation team of review experts remarked that improvement had been achieved in fire protection and equipment management as well as on-site conditions.
Safety: Cultivating Excellent Safety Culture

Our philosophy:

Nuclear safety is the lifeline of nuclear power development. Nuclear power enterprises unswervingly regard nuclear safety as the top priority of management. Nuclear safety is the cornerstone of successfully guaranteeing the harmony among and the stability of the society, the government and the public. Nuclear safety is an essential condition to guarantee the sustained and healthy development of nuclear power plants. Nuclear safety is the best testimony for increasingly complicated public opinions on nuclear power.

CSR practice in 2016:

SDNPC compiled and released the Nuclear Safety Culture Promotion Plan, and established the safety team and the enterprise culture atmosphere of mutual respect and mutual trust, striving to achieve excellent performance; SDNPC improved the nuclear safety management system, and established the Nuclear Safety Review Committee and an effective correction and prevention mechanism to ensure the effectiveness of the safety countermeasure of Defense in Depth through supervision; SDNPC successfully held the first pre-start up comprehensive emergency drill of Haiyang Nuclear Power Plant Unit 1.

CSR performance in 2016:

<table>
<thead>
<tr>
<th>Safety production accident happened</th>
<th>Case of radioactive sources loss</th>
<th>Accident of unexpected human exposure to radioactive material</th>
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<td>0</td>
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SDNPC honored Excellent Unit of the Cup of Safety & Health in China.

NI Testing Division of Commissioning & Start-up Management Department honored "National Youth Safe Production Model Unit".
Publicity of Nuclear Safety Culture

Nuclear safety culture is the important guarantee for the development of nuclear industry, a code of conduct needed to be obeyed by the whole industry. In order to coordinate the work of promoting nuclear safety culture and the implementation and integration of nuclear safety culture, SDNPC compiled and released the Nuclear Safety Culture Promotion Plan. The plan covers eight aspects including system optimization, working mechanism, the exemplary role of the decision-making leadership and the management, employees’ individual behavior habits and sense of responsibility, and experience feedback, etc. Through the implementation of the plan, SDNPC intends to build up a corporate atmosphere of mutual respect and mutual trust for the pursuit of excellence.

The Exemplary Role of the Leadership

SDNPC comprehensively upgraded the work observation and guidance procedure, optimized the information system for work observation, improved requirements of work observation and guidance management, and raised the frequency of work observations. Through the statistical analysis of strong and weak points detected during work observations, SDNPC carried out work on further improvement of management accordingly.

The system of leadership pre-job briefing or pre-shift briefing was implemented. Officials above the level of deputy manager of frontline departments held the pre-job briefing or pre-shift briefing; When key departments implemented important activities, the system of leadership pre-job briefing or pre-shift briefing was implemented. Officials above the level of deputy manager of frontline positions participated in the pre-job briefing or pre-shift briefing. Problems and critical points in the daily operation were discussed. The capacity of staff on-site operation and management was enhanced.

Nuclear Safety Culture Training

Since 2016, SDNPC has formulated the principle of “getting nuclear safety rooted in heart, specifying nuclear safety in systems, and implementing nuclear safety with actions” to improve nuclear safety culture. SDNPC carried out activities of nuclear safety culture improvement in eight aspects.

Key activities of safety culture training sessions and publicity activities held by SDNPC:

- Held the three-level safety education activity participated by production departments, divisions (Operation Shifts), and teams (including contractors managed by the teams).
- Held the safety culture article composition activity with 70 articles were collected.
- Provided a platform for employees to discuss nuclear safety culture and released information that inspired employees on nuclear safety culture forums.
- SDNPC departments set up the Safety TOPIC session before meetings, covering engineering safety quality information, adjustment safety quality information, as well as cases released by organizations such as WANO, INPO and CNEA, etc.

Case: Human Error-proof skill competition

The promotion and application of human error-proof tools are important means to improve employees’ skills. In 2016, SDNPC held the Human Error-proof skill competition. With the goal of serving production and the principle of joining theory with practice, the competition took full consideration of the site work (e.g. the cold test and the hot test). The competition scenes were the predesigned tasks of all teams; The competition involved a wider participant scope, including 10 professional teams of SDNPC and the professional team of production contractors. Through the competition, the site staff further identified main problems of the on-site application of human error-proof tools and specified work focus and direction for further improvement.

We mainly built safety culture through encouragement, claimed responsibility for and made reflections on employees’ behavior bias, and dug into the reasons behind problems. Staff teams were encouraged to help each other and make self reflection. We carried out work on developing employees’ code of conduct and enhanced the implementation of the code of conduct by means of technical comparisons, work observations and supervision, etc.; We valued employees’ individual good behavioral habits and improved safety awareness, and built experience feedback activities into the portal to demonstrate individual values.

We advocated the work attitude of keeping questioning, the stringent work style and the work habit of mutual communication to ensure that all work is done according to the standard procedure while keeping records and leaving proof.

- Establish the real-time safety communication channel: We established the WeChat group of the Safety Committee of Haiyang Nuclear Power Plant project and that of relevant production departments of SDNPC to communicate safety information at any time.
- Benchmark against the ten characteristics of health and safety culture: SDNPC organized symposiums of benchmarking and self reflection to discuss and identify gaps in safety culture for the typical cases occurred during the on-site commissioning and production.
- Encourage employees to initiate safety problem inspection through condition report(CR): CR was included into SDNPC’s safety supervision link to ensure that problems detected on site are timely analyzed and handled in hierarchical level. In 2016, a total of over 13,000 CRs were initiated.
Nuclear Safety Management System

SDNPC improved the nuclear safety management system and established an effective correction and prevention mechanism at levels of organization, institution and measure to ensure the overall effectiveness of the risk management of defense in depth through supervision.

China advocates the concept of exquisiteness and strives to explore effective approaches of enhancing nuclear safety. China has already included nuclear safety into the national safety system and the national safety law, and specified the strategic positioning for nuclear safety.

——President Xi Jinping, at the 4th Nuclear Safety Summit in April 2016 (Washington, USA)

Improving Organizational System

SDNPC improved the nuclear safety management organization system, optimized the safety production committee, and implemented centralized leadership of project safety, occupational health and environmental work. The Nuclear Safety Review Committee serves as the highest-level supervision institution of nuclear safety issues of nuclear power stations, and has 11 supporting committees including the operation, review committee and the experience feedback committee, etc., preliminarily formulating a set of nuclear safety organization and supervision system covering all functional areas and coordinated from top to down. In 2016, SDNPC held the first meeting for the Nuclear Safety Review Committee and invited external senior experts in the industry to conduct evaluation of SDNPC nuclear safety supervision system.

SDNPC safety management network include a safety supervision line and a safety guarantee line. The supervision line consists of SDNPC’s construction and production departments, the supervisory organization, the engineering management organizations, and safety personnel and part-time personnel of the construction organizations. The project has 144 safety personnel, with the staff placement ratio of 2.7%.

The guarantee line consists of relevant business departments of SDNPC, the engineering management organizations and the construction organizations.

HSE System Establishment

Amending procedures is improving management. SDNPC built up 32 safety management procedure systems led by HSE Management Program, covering aspects such as safety production accountability, hazardous chemicals management, accidents and incidents management, etc. Procedures are reviewed, timely amended and improved every year.

In June 2016, SDNPC formulated and released the HSE system research and evaluation work plan, organized symposiums of the HSE system in construction commissioning and production areas, and sorted out and improved the standards of all elements of the guideline. Moreover, SDNPC formulated the rectification plan to resolve problems detected by the external HSE system evaluation. By the end of 2016, all problems had been rectified.

SDNPC organized the review and amendment of HSE Standardization Brochure and HSE Management Manual, strived to promote the standardization of ten aspects including the general layout of the construction site, the installation of protective facilities, protective commodities wearing and safety channels, etc., and urged the management organization to organize monthly on-site standardization reception work.

Improving Risk Evaluation Mechanism

We highly valued scientific, compliant and effective decision making concerning risks in case of changes. In order to ensure the safety during the outage (one year and a half after fuel load) and daily operation, SDNPC improved the risk evaluation and decision-making procedure mechanism. The mechanism could instantly identify and evaluate problems that exert potential impacts on safety, timely handle, rectify and prevent these problems in prioritized order. The risk evacuation mechanism could also realize the effective closed-loop control and high-standard validation deficiencies and condition reports, etc., as well as the timely and effective process monitoring, trend analysis and performance appraisal of safety indicators.

SDNPC implemented the five-level risk prevention and control system, and combined risk prevention and control with potential risk investigation to ensure clear accountability and clear division of labor. On-site supervision was conducted for major risks. The management organizations, the construction organizations and the owner dispatched supervisory personnel to implement supervision. Major risk operations were forbidden during festivals and holidays. Before festivals, safety inspections were conducted with safety, quality and technical personnel on duty to ensure the controllability of risks.

Taking into consideration the characteristics of the hot test stage of Haiyang Nuclear Power Project, SDNPC selected internal and external cases of typical safety production accidents, and proposed risk control approaches. A total of 12 safety warning and education activities were organized and over 800 employees participated in the activity. SDNPC cultivated employees’ safety values and behavioral habits concerning risks, procedures and standards, and enhanced their awareness of risk prevention and control.
Radiation Protection Management

SDNPC established a complete radiation protection management system and implemented strict control and management of occupational radiation activities such as entering radiation areas, using radiation sources and radiographic inspection operations. The individual radiation exposure dose of the staff was much lower than the national standard while all links including the procurement, entry, transportation, utilization, storage and discard, etc. of radiation sources of the plant were under control. In 2016, there was no incident of radiation source loss and theft, and no accident of unexpected staff exposure.

Emergency Response Management

Haiyang Nuclear Power Plant established an integrated emergency response management system combining nuclear emergency response and normal emergency response. In 2016, SDNPC organized several individual drills or collaborative drills for all contingency teams. SDNPC successfully held the first pre-fuel load comprehensive on-site emergency drill of Haiyang Nuclear Power Plant Unit 1.

Case: SDNPC successfully held the first pre-fuel load comprehensive on-site emergency drill of Haiyang Nuclear Power Plant Unit 1

On December 26, 2016, the first pre-fuel load comprehensive on-site emergency drill of Haiyang Nuclear Power Plant Unit 1 was successfully held. Over 300 employees participated in the five-hour drill. Taking into account the lessons of Fukushima Daiichi nuclear disaster, the drill covered most of emergency actions regulated in the on-site emergency plan. Besides, the public opinions reflected in the Internet were also timely tracked and reflected. Public information was compiled and published and the press release scene was simulated. The successful drill laid a foundation for smooth installation of Unit 1.

External emergency response organizations and companies such as National Nuclear Safety Administration, National Energy Administration, National Nuclear Emergency Response Office, East China Regional Office of Nuclear and Radiation Inspector, Shandong Nuclear Emergency Response Office, and the nuclear Emergency Response Office of State Power Investment Corporation supported and responded to the drill.
Quality: Pursuing Superior Quality and Creating Outstanding Projects

Our philosophy:
Operational safety depends on the quality of construction. All builders of the Haiyang Nuclear Power Project integrate “the spirit of craftsmanship” into every step of nuclear power development and implement it meticulously in nuclear power management. They are committed to building an outstanding project, creating a new era of the third-generation AP1000 nuclear power technology, and building a long-lasting SDNPC.

CSR practice in 2016:
The year 2016 witnessed intensive cross-operations of construction and commissioning for the Haiyang Nuclear Power Project. This year, SDNPC launched a special program to improve the performance of the quality assurance system, including implementing quality assurance procedures, holding civilized construction contests, and “Five-Star Model Teams of Safety and Quality” activities etc. The Company was committed to continuously improving project quality, building excellent teams, setting up strict safety and quality standards, and creating outstanding projects.

CSR performance in 2016:
34 Quality-themed conferences were held
1,880 Trainees received quality training
8 Skill contests were organized
42 Programs for technical and management improvement were implemented
61 Quality management regulations and documents were compiled
Ensuring Effective Implementation of the Quality Assurance System

The Company implemented the quality policy of “putting safety first, prioritizing quality, seeking continuous improvement, and pursuing excellence”, and published “No.1 Quality Document” for five successive years to outline the vision for quality management and strengthen quality management requirements. In 2016, in compliance with the changes in production related situation the Company initiated a special program to improve the performance of the quality assurance system, so as to constantly improve the quality assurance system, project quality and management capabilities.

Ensuring the engineering quality

Draw up follow-up checklists. With regard to many changes to project drawings, we drew up special follow-up checklists to keep engineering modifications in line with practical constructions, so as to ensure the implementation of our design philosophy in the construction.

Ensure smooth turnover from commissioning to production. The year 2016 was a peak season for TOTO (Turnover for Temporary Operation). To ensure safe post-turnover operations, we prepared turnover packages according to specific system functions for the production department; also, we made physical protection cards and physical protection procedures for different facilities to ensure long-term functionality of the equipment.

Launching Civilized Construction

Strengthen safety awareness. We kept enhancing the awareness of the “red lines” of production safety, and would suspend and blacklist those who crossed the 15 “red lines” of production safety.

Conduct quality supervision. When a problem was found during the supervision, we would punish the violator and the relevant manager by exposing the violation, imposing a fine, suspending work to receive training and arranging an interview with the management.

Focus on perennial problems. To address the “four types of perennial problems”, we imposed the “four 1s” punishment in major risk fields, such as scaffold work, hole-related and near-edge work protection, and power consumption of construction.

Improve construction techniques. Based on the AP1000 technology and domestic technical practice, we compiled standardization manuals and provided training courses for construction workers to ensure that the project is both functional and pleasing to the eye. Also, we prepared model construction areas for exchanges and mutual learning between industrial peers.

Ensuring Equipment Quality

We implemented strict management and control procedures for plant equipment to ensure their quality and lay a strong foundation for operation safety in the future.

Ensuring the Quality of Commissioning

In 2016, Unit 1 was faced with urgent commissioning schedule, heavy tasks, high cross-operation risks, and numerous inspection items. Hence, SDNPC and other project participants kept in close touch and worked in coordination. We drew up special implementation schemes to reasonably and comprehensively arrange commissioning test plans and made thorough preparation for component check-ups. Also, we strictly complied with the procedures in latter work and never crossed the bottom line of work safety to ensure the accomplishment of commissioning.

Case: Unit 2 entered a peak phase of comprehensive joint commissioning

On December 22, Unit 2 steam generator secondary hydro test (SGSH) was completed, which indicated that Unit 2 entered the peak phase of comprehensive joint commissioning. This test covered the secondary side of the steam generator of the nuclear island and the major steam pipe of the conventional island. The water capacity and the structural complexity both surpassed those of Unit 1.
Building a Professional Team

A professional team is a determinant of high-standard, high-quality work. Haiyang Nuclear Power Project has a professional team jointly built by its owner, management unit, designer, constructor and equipment manufacture, providing effective human resources for construction and commissioning of the Project.

Improving Skills of Frontline Workers

Level-by-level training. We implemented a rigorous level-by-level training system, and strictly conducted a series of procedures including pre-shift briefings and pre-job briefing.

Interactive training. Given that young workers usually have an active mind, we provided them with interactive training courses and encouraged them to give feedbacks on the training for two-way communication. Also, we paid attention to handover training for on-site employees and conduct random checks, keeping a closed-loop control mechanism.

Skill improvement. We focused on improving skills required at significant positions; for example, we conducted anti-electric shock and anti-empyrosis training for the hot functional test of Unit 1.

Holding Labor Contests

To incentivize employees of all joined parties of Haiyang Nuclear Power Project and activate their creativity, sense of responsibility and sense of mission, SDNPC held regular labor contests, which helped ensure the operational quality of projects while activating all workers. In 2016, the Company carried out the activity of ‘Five-Star Model Teams of Safety and Quality’ with 165 registered teams. Six of them won the title of ‘Five-Star Model Team’ and 53 won the title of ‘Four-Star Model Team’.

SDNPC carried out a series of quality improvement activities at the construction site of Haiyang Nuclear Power Project, including 51 activities, 15 inspections, 34 quality-themed conferences, quality education training for 1,880 trainees, and 8 technical skill contests. Also, we launched 42 technical and management improvement programs, and revised and compiled 61 quality management regulations & documents.

In December 2016, the Haiyang Nuclear Power Project Provincial-Level Key Demonstration Project Labor Contest was held, which was participated in by the owner of the Project, the engineering management unit, the constructor and all project builders. The contest activated the working passion of all workers of the Project, created a good atmosphere of competition, and promoted the development of the Project.

Case: Technical skill contests

In order to improve the SF₆ gas operation skill of the electrical maintenance staff and standardize operation acts, the maintenance sector organized a standard SF₆ gas operation skill contest on December 23. This contest was mainly about the standards and requirements of SF₆ gas operations, including preparation of SF₆ gas operation documents, preparation of equipment and consumables, gas operation equipment connection standards, gas operation conduct, and on-site emergency drills.
Innovation: Promoting Development through Win-Win Cooperation

Our philosophy:

We strengthen the awareness of being a community of shared interests with our partners and provide a platform for them to promote the development of China’s nuclear power industry and related equipment manufacturing industry; and we ensure the most valuable and safest assets for our shareholders and repay them with long-term benefits.

CSR practice in 2016:

The Company promoted the AP1000 project standardization and production standardization. We held academic workshops, promoted industrial exchanges, and established sound interaction with business partners to push forward energy technology innovation to realize the change from importing nuclear technology to developing the technology ourselves. The Company also promoted the development of an industrial ecosphere, fueled local nuclear power industry upgrading, contributed to local economic and social development, and realized win-win results.

CSR performance in 2016:

243
Owner project standardization documents were completed

36
Standardization products of the production and operation were finished

232
Million RMB of taxes was paid

The first domestic AP1000 nuclear power project construction quality standard manual was compiled

Honored as the Economic Development Pacesetter by Yantai Municipal Party Committee and Yantai Municipal Government
Leading Industry Development with Entrepreneurship

Constant innovation is an essential driving force for China to develop from a nuclear power country of quantity to one of quality. SDNPC plays an active role in undertaking responsibilities of the times, cooperates with both domestic and overseas nuclear power enterprises, keeps introducing, digesting and absorbing nuclear technologies, and builds up China’s national nuclear power brand through technological innovation. At the same time, we strengthen the awareness of being a community of shared interests with partners and proactively establish cooperation and communication platforms to promote the development of China’s nuclear power industry and relevant equipment manufacturing industries.

Project Management and Standardization Construction

We actively undertake the AP1000 project and the mission of production standardization, and have compiled Work Guidance, Technical Essentials and other standardization texts, and have finished 243 owner project standardization documents and 36 production and operation standardization products.

Case: The first AP1000 nuclear power project construction quality standard manual in China

In June 2016, AP1000 Nuclear Power Project Construction Quality and Process Standardization Tutorial Manual passed the technological achievement authentication by China Nuclear Energy Association, which filled the blank of domestic AP1000 nuclear power project construction quality standard manual and reached a world’s leading level. The popularization and implementation of the manual at Haiyang Nuclear Power Phase I Project greatly improved the effectiveness of project management and had positive impact on shortening the construction period of the AP1000 nuclear power project and reducing costs. This achievement will be further applied to future nuclear power projects and units of the same kind of the Corporation Group.

Experience feedback:
- Improved the experience feedback system and published Corrective Action Program and Operation Experience Program.
- Implemented a hierarchical processing model, refined analytical methods, and enhanced the examination of the effectiveness of corrective actions.
- More members took part in the condition report system with better quality.
- Created new experience feedback channels and forms.

Industrial Exchanges and Cooperation

We keep deepening cooperation with organizations and enterprises of the nuclear power industry and stick to the principle of "complementarity and mutual development" to achieve all-win results.

Case: Signed a strategic cooperation framework agreement

In December 2016, SDNPC and CNNC Nuclear Power Operation Management Co., Ltd. signed a strategic cooperation framework agreement, which enabled the two sides to give full play to the advantages of the cooperation and mobilize good resources to promote mutual development and win-win results.
Driving Technological Advance through Innovation

SDNPC popularizes and implements nuclear technology in Shandong Province through Haiyang Nuclear Power Project.

Innovative Technological Achievements

By thoroughly summarizing results of nuclear power technology researches, the Company has made a number of high-tech achievements with good prospects of application. Yantai Nuclear Power Research Center, whose construction was participated in by the Company, is China’s first new-type scientific and technological research institution in the field of nuclear power. Its research covers various fields, including comprehensive use of nuclear energy, nuclear equipment material, radiation protection and large energy storage capacity.


The “Interactive 3D Simulation Platform for AP1000 Reactor Coolant Pump Maintenance Plans” formulated plans for the dis-assembly, installation and transport of AP1000 reactor coolant pump. It is for the first time that a Chinese company developed a 3D simulation model of special tools and devices and built a 3D removable simulation platform. The platform can help with the disassembly, installation and transport of AP1000 reactor coolant pump.

The “AP1000 Nuclear Island Construction Quality Supervision and Acceptance Guidelines” is a complete and systematic set of guidelines, which includes a quality acceptance table for key processes for major construction fields of the nuclear island. The table is simple, detailed, easy to consult and practical. Thus, it can bring good social and economic benefits and can be applied to future programs of Haiyang Nuclear Power Project and to the engineering management of other AP1000 units.

Holding Academic Seminars

As Haiyang Project is the first nuclear power project in Shandong, the Company has great advantages in talent reserve, technological achievement, management experience, scientific research innovation, etc. SDNPC promotes academic exchanges and technological development by holding or attending various academic seminars.

To utilize technological resources more efficiently, Shandong Nuclear Society made an agreement with the Company to publish combined issues of Shandong Nuclear Technology and Shandong Nuclear Science and Technology. Their cooperation indicates deep integration of nuclear power theories and application, creating an academic and technological exchange platform for Shandong nuclear industry and nuclear technology practitioners.

In June 16, SDNPC presided over the Second Membership Representative Conference and Academic Seminar of Nuclear Science and Technology of Shandong Nuclear Society. We invited Li Guanxing, an academician of the Chinese Academy of Engineering, and Wang Xuelin, Associate Dean of the School of Physics of Shandong University to give keynote speeches, attracting wide attention within the industry.

The meeting was hosted by Shandong Nuclear Society and co-organized by Nuclear Power Study Committee of the Chinese Society of Electrical Engineering and Nuclear Power Industrial Park Management Committee of Haiyang Government. It aimed to promote the application of nuclear technologies and the coordinated development of the nuclear industry in Shandong. More than 30 committee members from nuclear power and nuclear equipment manufacturing companies attended this meeting.

On December 23, SDNPC as Vice President of the SNS attended and presided over the Fourth Session of the First Council of Shandong Nuclear Society and the First Nuclear Science and Technology Forum. Two technological achievements of the Company—the AP1000 Nuclear Island Project Construction Quality Supervision and Acceptance Guidelines and AP1000 Human Performance Training System Development and Construction—which won the third prize of 2016 Shandong Excellent Nuclear Scientific and Technology Achievement Award.
Extending Industrial Value Chain through Creativity

SDNPC proactively participates in local development planning and construction. Based on nuclear power technology, SDNPC promoted the development of signed cooperative projects, studied industrial cooperation planning, and conducted joint protection for new plant sites. Also, the Company extended industrial value chain to attract relevant industries to Haiyang and make the city well-known for the nuclear power industry. SDNPC proactively took on the obligation of paying taxes to create new driving forces to local social and economic development.

Adding Dynamic to Local Industrial Layout

The establishment of Haiyang Nuclear Power Plant pushed forward the development of relevant industries and gave birth to a nuclear power industry cluster that covers R&D, design, equipment manufacturing and operation. Haiyang Nuclear Power Equipment Manufacturing Zone is the east wing of Haiyang City’s “One Body Two Wings” economic development strategy. It focuses on the production of large nuclear power-related equipment and nuclear-class supporting equipment, engineering design and management, and independent R&D as well as port-surrounding economy, such as large-scale heavy industries and logistics.

Haiyang Nuclear Power Equipment Manufacturing Zone contains 21 projects each with an investment of over 100 million RMB (including 5 new projects signed in 2016), mainly covering three sectors: nuclear power industry, non-nuclear new energy equipment manufacturing and port-surrounding industry. Among these projects, 14 projects are nuclear-related with a total investment of nearly 60 billion RMB, 4 billion RMB of which has been put into construction. There are 13 projects funded by 16 central state owned enterprises (SOE), 10 of which are nuclear-related. Besides, Yantai SPIC Nuclear Training Base, Shandong Nuclear Science and Technology Museum, and other projects have also brought good economic and social benefits.

Yantai Nuclear Power Industrial Park has two zones: Haiyang Nuclear Power Equipment Manufacturing Industrial Zone and Laishan Nuclear Power Equipment Manufacturing Industrial Zone. 12 major enterprises including Taihai Manoir Nuclear Equipment Company have moved to Laishan Nuclear Power Equipment Manufacturing Industrial Zone. In 2016, the business revenue of the zone totaled 2 billion RMB with 170 million RMB of capital gains tax paid.
Green: Safeguarding the Blue Sky through Clean Energy

Our philosophy:
Nuclear power is clean, efficient and green energy and it plays a significant role in improving atmospheric environment, providing energy support and adjusting the energy structure. We proactively promoted nuclear power construction to provide clean energy to the world, integrated the philosophy of green development into production and operation, and realized the coordinated development of energy, economy and ecological environment.

CSR practice in 2016:
SDNPC improved the environmental protection system, set up environmental protection leading group and water & soil conservation leading group and promoted the formulation of on-site ecological conservation plan and related measures. We pushed forward energy saving and emission reduction, carried out three-level waste management and control, strictly supervised environmental radiation of the plant to make sure it would not threat public environmental security, and strictly avoided excessive emission or losing control of radioactive materials to safeguard the blue sea and sky.

CSR performance in 2016:
20,000 kWh
Saved each month due to optimization of lighting inside the nuclear island

The disposal capacity of the Site Radwaste Treatment Facility (SRTF) of Haiyang Nuclear Power Project could support the operation of six AP1000 units.
Clean Energy Supply

Taking actions to tackle climate change and its impact is an important part of the United Nations’ 2030 Agenda for Sustainable Development. Under the framework of Paris Agreement on climate change, China has pledged to reduce its CO₂ emission intensity (CO₂ emissions per unit of economic activity) to 60-65% below 2005 levels by 2030, and increase the share of non-fossil energy to 20% of total energy consumption in 2030.

Optimizing energy structure is an inevitable requirement if China hopes to realize low-carbon development and tackle climate change. As renewable energy, nuclear power is clean and pollution-free, has low unit cost and can bring obvious environmental benefits. Based on preliminary measurement, after Haiyang Nuclear Power Phase I Project is put into operation and successfully replaces desulfurized coal-fired units with equal capacity, it will make prominent contribution to the low-carbon development of Shandong Province.

17.5 billion kWh of electricity saved means

<table>
<thead>
<tr>
<th>Saving coal equivalent</th>
<th>Reducing the emission of CO₂</th>
<th>Reducing the emission of NOx</th>
<th>Plutonium of broad-leaved forest</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 million tons</td>
<td>15.6 million tons</td>
<td>44,000 tons</td>
<td>42,000 hectares</td>
</tr>
</tbody>
</table>

Clean energy and environmental benefits brought by Haiyang Nuclear Power Phase I Project after it is put into operation.

Note: CO₂ emissions formula: \( W_{CO₂} = Q \times E_{ce} \times EF \), in which \( W_{CO₂} \) refers to the volume of CO₂ emissions (t); \( Q \) refers to energy output (100-million kWh); \( E_{ce} \) is 31,200 t (ce) / (100-million kWh) according to statistics published by China Electricity Council in 2016; and \( EF \), the CO₂ emission factor of standard coal, is 2.567 t (CO₂) /t (ce) as recommended in the Handbook of Energy Saving and Emission Reduction published by the Ministry of Science and Technology in 2007.

According to Development Research Center of the State Council, one hectare of broad-leaved forest can absorb approximately 365 tons of CO₂ every year.

Environmental Radiation Monitoring

Currently, SDNPC is undergoing a crucial transforming period from commissioning to production, so the Company is strictly monitoring environmental radiation and evaluating, managing and controlling the environmental risks that might be caused by activities of the nuclear power plant. Through such efforts, SDNPC aims to make sure radiation protection and radwaste management are properly implemented, and strictly avoid excessive emission or losing control of radioactive materials.

Radiation Protection

Carry out nuclear radiation environmental monitoring. SDNPC set up specific labs to monitor air, sea water, underground water, soil and crops surrounding the plant. Waste water emitted by the plant is tested by the labs before being discharged so as to eliminate excessive emission of radiation.

Establish a supervisory testing system. Complying with relevant state laws and regulations, SDNPC installed nuclear radiation monitoring system on the periphery of Haiyang Nuclear Power Plant and handed it over to the environmental protection departments of Shandong Province Government to operate while independently monitoring environmental protection statistics, so as to supervise the power plant on behalf of the general public.

Implement environmental supervision requirements. SDNPC proactively coordinated with the environmental protection departments and regularly submit documents on environmental protection measures and achievements to relevant authorities including Huaihe Water Conservancy Committee, Water Resources Department of Shandong Province and Haiyang Water Resources Bureau. It also regularly carried out supervision inspections on the Company’s environmental protection and water & soil conservation work, monitors emitted pollutants and accepted public supervision.

Radwaste Management

We strictly manage all produced radwaste and control the production through adopting multiple management and technical measures in accordance with the principle of minimizing the amount of radioactive waste.

Haiyang Nuclear Power Plant has built SRIF and adopted advanced radwaste treatment technologies to sort, collect, compress, measure, solidify and store radwaste produced by the plant and strictly avoided emitting radwaste into the natural environment. The disposal capacity of Haiyang SRIF could support the operation of six AP1000 units.

![Treatment processes of “three wastes” in Haiyang Nuclear Power Plant](image)
Promoting Energy Saving and Environmental Protection

SDNPC proactively implemented national strategic plans, strictly abided by state and local laws and regulations, and laid emphasis on energy saving and emission reduction as well as environmental protection during production and operation so as to contribute to building a resource-saving and environmental-friendly society. We offered training on environmental protection skills and knowledge to staff members on environmental protection-related posts and organized knowledge competitions to check the training result and raise employees’ awareness of environmental protection.

Energy Saving and Emission Reduction

We continuously optimized measures in energy saving and emission reduction, promoted green office and called on employees to pay attention to energy saving and environmental protection during work. In the production process of the plant, we laid emphasis on optimization and upgrading of equipment, strictly implemented the principle of “three simultaneous actions” in waste disposal to reduce waste emission and minimize the negative impact of waste on the environment.

Energy Saving

- Upgrade power plant facilities to reduce energy consumption.
- In 2016, the Company optimized lights inside the nuclear island, effectively cutting down monthly power consumption by 20,000 kWh.

Waste Emission Reduction

- Monitor waste management conducted by construction companies and contractors as to where the waste goes and whether the hazardous water treatment agreement has been signed.
- Categorize all kinds of waste produced at the construction site, deliver them to qualified waste treatment companies, and forbid on-site landfill.

Green Office

- Implement the green office strategy in the entire Company and give guidance to employees on power and water saving in daily work so as to integrate the idea of low-carbon into their work.

Ecological Protection

We paid attention to ecological environmental protection and stuck to the principle of “protecting while developing, and developing while protecting”. We set up a leading group of environmental protection and water & soil conservation jointly with the constructor to compile ecological protection plans and measures at the construction site and supervise ecological protection work during construction.

Water & Soil Conservation

- Hire water & soil conservation managers for on-site surveillance.
- Strictly follow construction plans to prevent landslide.
- Pre-control construction risks to avoid damage to the environment that can be caused by soil erosion.

Construction Site Restoration

- Recover environmental losses resulting from construction.
- Carry out restoration work for the sand and gravel processing factory near the original construction site, making it up to environmental standards.

Construction Site Greening

- Grow plants at the construction site to maintain the greening rate.

SDNPC enhances employees’ awareness of environmental protection

SDNPC staff participate in waste collection activities

Measures for protecting the ecological environment
Sharing: Building Harmonious Family and Creating Benefits

Our philosophy:
We proactively carried out SPIC’s “harmony” culture by putting harmony first and striving to co-exist, share and cooperate with stakeholders. We have built a human-oriented, honest and transparent working environment to provide a career development platform for employees, and cultivate talents to contribute to nuclear power development in SPIC and China. We also took an active part in public welfare activities, shouldered social responsibilities, strived to be a excellent corporate citizen and made contributions to regional economic prosperity and environmental protection.

CSR practice in 2016:
SDNPC paid attention to rights and interests of employees, steadily promoted occupational health in Haiyang Nuclear Power Project, guaranteed the occupational health of employees, gave more consideration to workers at the production frontline in terms of salaries and benefits, and built “one talent pool and four platforms” for young employees. We actively facilitated community development, set up volunteer teams, carried out volunteer activities such as education assistance and shared the fruits of development with communities.

CSR performance in 2016:

<table>
<thead>
<tr>
<th>Training sessions</th>
<th>376</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man-hours in total of training</td>
<td>340,850</td>
</tr>
<tr>
<td>Employees obtained the license for senior reactor operator (SRO)</td>
<td>42</td>
</tr>
<tr>
<td>Employees obtained the license for reactor operator</td>
<td>98</td>
</tr>
<tr>
<td>Employees had occupational health examination</td>
<td>889</td>
</tr>
<tr>
<td>Employees gained the certificate of “Red Cross Rescuer of Shandong Province”</td>
<td>130</td>
</tr>
<tr>
<td>RMB were donated</td>
<td>82,200</td>
</tr>
</tbody>
</table>

The honors which SDNPC awarded:
- Ethical Enterprise of Shandong Province
- Provincial March 8 Red-Banner Group
- Benevolent Enterprise of Haiyang
Cultivating Strivers

SDNPC’s prosperity is impossible without the hard work of its employees. We always followed the “striver-oriented” talent philosophy, encouraged and guided employees to maintain the spirit of being pragmatic and hard-working, and become determined, loyal, dedicated strivers who can create values. We treasured the dedication of employees, paid close attention to their growth, and practically improved the capabilities of employees at different posts through providing them with diversified professional training courses and a well-designed talent cultivation system and sound leader management system, thus fulfilling our dream of empowering China with nuclear power and green energy.

Vocational Training

We provided employees with training courses meeting the demand of their working posts. Based on the training program and the progress of construction and production preparation, we formulated an annual training plan to make our training more targeted. In 2016, 42 SDNPC employees obtained the license of senior reactor operator, and 98 obtained the license of reactor operator. The selection and training of the third batch of reactor operators were finished. In 2016, SDNPC carried out 376 training sessions of 340,850 man-hours in total.

Youth Talent Cultivation

Young employees are fresh blood for nuclear power plant’s construction. We carried out young talents tackling key problems specific activities, highly valued the cultivation of young talents, and guided the mindset of young employees. We have built and will continuously improve the young talent pool system, fully carry out talent cultivation and pay attention to their growth on different posts. Many organizations under SDNPC and individual employees won awards at the Shandong province, the Corporation Group and central SOE level.

We love you wholeheartedly, accompany you till the moment of generating power. A million times in our dreams, we dream of you successfully generating power. After dawn, we continue our journey. Because we believe, firmly, that day will finally come!

——SDNPC Strivers
Leader Management

We highly valued leader management and continuously optimized the leader management system. By revising and improving relevant procedures, we accelerated the improvement of quality as well as professional capabilities of leaders. We also examined and evaluated reserve leaders to strengthen the reserve force for the Company’s development.

Select Leaders
- Improve procedures regarding the selection, appointment and management of leaders in accordance with requirements released by the Corporation Group and SNPTC.

Examine and Evaluate Leaders
- Compile and issue cadre examination and evaluation procedures, set up and improve examination and evaluation system and mechanism, and scientifically evaluate the comprehensive quality, professional capabilities and performance of leaders.

Manage Reserve Leaders
- Improve the reserve leader management mechanism and leader examination and evaluation system, make adaptive adjustments in the management principle, conditions and qualification of reserve leaders.

Protecting Employees’ Rights and Interests

After a long period of continuous development, SDNPC has formed a human-oriented corporate culture. We insisted on creating a safe, healthy, democratic and harmonious working environment for employees, and escorted for their happy life. We facilitated occupational health system construction, improved the salary and benefit system, and encouraged employees to participate in democratic management to practically protect their rights and interests.

Gender structure of employees in 2016
- Male employees: 77.22%
- Female employees: 22.78%

Age structure of employees in 2016
- 21-30: 15.87%
- 31-40: 30.70%
- 41-50: 51.49%
- Above 50: 1.94%

Educational structure of employees in 2016
- Ph.D.: 0.01%
- Master: 20.58%
- Undergraduate: 77.22%
- Junior college education: 2.01%
In terms of occupational health, we have built sound occupational health management systems aiming at nuclear-related occupational health and regular occupational health separately. We carried out specific occupational health work for Haiyang Nuclear Power Project, and continuously improved the rescue management system. In 2016, we organized occupational health examinations for 889 employees (including special examinations for 131 operators), and regular health examinations for 542 employees. We organized rescuer training through which 130 employees gained the certificate of “Red Cross Rescuer of Shandong Province”.

**Occupational Health**

We improved the rescue management system, strengthened skill and standardized management of medical care personnel, and organized training for first-aiders.

We proactively coordinated with major activities and key projects of the Company, and allocated first-aid teams and ambulances to the construction site to provide medical care guarantee.

In 2016, we organized 18 first aid training sessions and 10 first aid drills.

We carried out authorization training and RP (radiation protection) training for nuclear-related staff, and regarded RP training as a prerequisite of working in nuclear-related posts.

We organized regular health examinations for non-nuclear-related employees.

We identified health hazards and employed a third party to measure them, thus making sure the working place accords with national safety standards.

We regularly monitored occupational hazard factors of occupational diseases not related to radiation quarterly for turned over buildings, and specifically monitored methanol and noise during Hot Functional Test.

We provided employees at the construction site with earplugs, earmuffs and other noise prevention equipment.

**Democratic Management**

SDNPC attached importance to the construction of the trade union, and continuously improved the system of Workers’ Congress. We newly compiled Assets Management of Trade Union and Recreational & Sports Facilities and Site Management, updated Management Methods for Rationalization Proposal, and compiled Implementing Rules for the Use of Trade Union Expenditure to make trade union management better programmed and more standardized. The Company actively organized collective negotiation when it came to salary, labor protection and protecting special rights and interests of female employees, timely followed up, supervised and examined the implementation of proposals passed by the Workers’ Congress, and ensured closed-loop management of these proposals.

**Salaries and Benefits**

SDNPC strictly abided by state laws and regulations, paid five insurances and housing fund for employees and offered them favorable accommodation. In terms of salaries, the Company insisted on the principle of “giving more consideration to workers at the production frontline” and improved the proportion of incentive salaries. In 2016, SDNPC formulated salary adjustment scheme for senior reactor operator and reactor operator, and implemented the vertical promotion of 313 employees and horizontal promotion of 220 employees.

**Enriching Employees’ Life**

SDNPC cared for employees and advocated “healthy life and happy work”. It encouraged employees to balance work and life, enriched their lives through various recreational and sports activities that were welcomed by employees, such as “Cultural Activities Festival”, so as to create opportunities for employees to communicate and feel the warmth of the SDNPC big family. The Company held Family Open Day and organized “Happy SDNPC Family” activities to strengthen the relationship between employees and their families.

**Case: SDNPC opened Staff Library to enrich the cultural life of employees**

In 2016, to enrich employees’ cultural life, SDNPC opened Staff Library. The library has a reading room and a reading salon area, which can meet employees’ demands of reading alone, having discussions or watching films. Currently, the library has over 2,700 books, and has established an electronic management system. It provides a platform for employees to enrich their cultural life.
Driving Local Development

An enterprise’s sustainable development cannot be separated from the development of local communities. SDNPC could not have reached such prosperity without the understanding and support of local communities. Therefore, we have always included our company’s development into the development of local economic society. Since Haiyang Nuclear Power Project was officially launched in 2009, the local government has given strong support to the project. In return, SDNPC proactively served the surrounding communities, focused on improving the local people’s livelihood and promoting social progress, and shared its development results with communities.

Supporting Community Construction

We took advantage of our business edge to be a good neighbor, and strived to build a harmonious neighborhood.

- In more than 10 years, our nuclear power plant provided more than five thousand jobs for surrounding villagers and town dwellers. Many villagers got jobs near their homes, which enabled them to spend more time with family.
- For villagers who relocated due to the construction of nuclear power plant, we regularly invited them back home and introduce the nuclear power plant’s construction progress. This not only strengthened villagers’ sense of participation, but also enriched their cultural life.
- We actively communicated with the local government and tried to do things for surrounding villages. We set up knowledge and traditional culture publicity walls in villages near the nuclear power industrial park to help build literate villages.

Twelve years ago, we left homeland to support nuclear power plant construction for the greater good. Seeing the clean, tidy and well-aligned plant area, tall and magnificent buildings, advanced and reliable technologies today, I feel very proud. If you need us to stand out to give our help in the future, we will continue to support you.

—Residents in surrounding communities

Assisting Local Education

Education is the cornerstone of social progress. We proactively carried out various activities to do our part to help assist local education.

In 2016, we donated 82,200 RMB to help 103 students. We jointly organized a series of volunteer activities with Yantai Hope Project Office and Haiyang Youth League, including helping Liuge Junior High School build a Hope Project computer classroom.

We gave full play to our resource advantage and invited surrounding primary schools to our fire camp to learn first-aid knowledge and promoted safety knowledge.

We invited foreign experts in the nuclear power plant to organize English Corner in surrounding primary schools to popularize nuclear power knowledge and arouse the students’ learning interest, so as to broaden their horizon and open a window for them to enjoy the charm of science and technology.

Teaching firefighting knowledge to primary students

In 2014, we donated $3,500 RMB to help 103 students. We jointly organized a series of volunteer activities with Yantai Hope Project Office and Haiyang Youth League, including helping Liuge Junior High School build a Hope Project computer classroom.

SDNPC helped Liuge Junior High School build Hope Project computer classroom

Visiting Shandong Nuclear Science and Technology Museum

Education assistance measures
Providing Voluntary Services

SDNPC had a team of warmhearted, passionate and high-quality employees. Our employees took an active part in various volunteer activities and made contribution to community development and organizing competitions or forums. SDNPC volunteer team is growing stronger day by day. All volunteers are fulfilling their duties and shouldering their responsibilities to serve the society and the country as a member of a central state-owned enterprise.

Volunteer Team

We encouraged employees to participate in volunteer activities in communities and cultivated their spirit of dedication and serving. We set up a Youth Volunteer Team, formulated the volunteer management system and action plan, offered volunteer training and regularly examined their qualification.

We have built a warmhearted, high-quality and dedicated volunteer team that can endure hardship. The volunteer team has won honorary titles several times such as Outstanding Volunteer Team in Haiyang City, Yantai City and Shandong Province.

Voluntary Service Activities

The journey of a thousand miles begins beneath one’s feet. River and sea begin as small streams. Over the last ten years, SDNPC never stopped its volunteer activities. It is now providing volunteer services at a larger scale and on a more regular basis. SDNPC employees pooled their drops of effort to form a flood current to serve the public and the society.

We carried out “Azalea – Love of SDNPC” Student Assistance Project for seven consecutive years, and donated 485,419 RMB in total to help 668 students in poverty. In 2016, we donated 82,200 RMB to help 103 students.

We continuously provided translation service for major sport events held by the government. 82 SDNPC volunteers served in Asian Beach Games, Asian Beach Soccer Cup, Climbing World Cup and other events for 8,780 hours in total.

We carried out clothes donation activities during which we donated over 5,095 pieces of clothing in three years.

We organized tree planting activities for ten consecutive years during which over 1,000 trees in total were planted.

Case: SDNPC volunteers made contribution to the Belt and Road Forum for International Cooperation

In September 2016, The Belt and Road Ambassador Forum was held in Haiyang. Diplomatic envoys and counselors from 10 countries along the Belt and Road gathered in Haiyang. Under the topic of “opportunity, communication, win-win”, they had discussions to seek co-development.

During the forum, SDNPC sent six volunteers to assist the organization and preparatory work of the forum. The volunteer team won high appreciation of participating ambassadors, the organization committee of the forum and Haiyang municipal government with their enthusiasm and accurate English translation. In this grand event that Haiyang had face-to-face communication with the world, SDNPC volunteers showed the world the earnest, meticulous and dedicative image of SDNPC people.
Openness: Public Engagement

Our philosophy

Nuclear power is an unrelenting undertaking that needs to be jointly pushed by all sectors of society, and the growth of nuclear power companies is closely linked to the recognition of the whole society. SDNPC constantly innovates its communication and publicity mechanism, and exchanges views with stakeholders in an open and sincere manner while encouraging them to make their voices heard.

CSR practice in 2016

As we created new communication and publicity mechanisms, we reached out to the public mainly by knowledge publicity, information disclosure, and public participation. Lectures on nuclear power, public open days, and other activities were launched continuously. By regularly publishing CSR reports and posting articles on Weibo and WeChat official accounts, our transparent operations united all sectors of society to work together in pushing for sustainable energy development.

CSR performance in 2016

- **30** Public Open Day activities were carried out
- **15,000** People received at Open Day activities
- **2,406** Original articles were published

SDNPC won the Best Organization Award of "The First China Nuclear Science Popularization Award"
Maintaining YIMBY Situation through Public Participation

We continued to seek stakeholders’ opinions, advance public communication and review our publicity and communication work from an external perspective. We advocated that activities should be launched in a way that stakeholders prefer, and we established sound interactive relations with local governments and the public, thereby maintaining YIMBY situation of nuclear power project.

Organizing Public Seminars

We always put stakeholders’ expectations first. Public seminars were organized regularly, engaging the public in providing insights into nuclear power plant building. In 2016, our Company invited Publicity Department of Haiyang Municipal Party Committee to organize 16 organizations, including departments directly under the municipal government, villages, schools and so on to hold seminars where every organization was encouraged to raise questions and come up with suggestions.

Joint Construction

We sincerely and graciously called on the public to join in the construction of nuclear power plant, encouraged stakeholders to make their voice heard and share their knowledge about nuclear power plant. Our sincerity and passion attracted stakeholders’ attention and recognition of nuclear power plant construction, and more and more stakeholders began to participate in the publicity of nuclear power plant.

Case: The Launch of the first ever MV under the theme of the public’s visit to a nuclear power plant

Jointly produced by No.9 High School of Haiyang and SDNPC, the MV “My Dad Asks Me to Visit Nuclear Power Plant” recorded the experience of students visiting the nuclear power plant, which reflected the sound integration of nuclear power literacy with social practice education of schools. It was also China’s first ever MV under the theme of the public’s visit to a nuclear power plant.

Case: SDNPC invited middle school students to write science popularization book

SDNPC worked with Haiyang Municipal Government to call on middle school students to join the compilation of a science popularization book from the view of audience. The book was continuously revised based on public feedback, and the 5th updated edition has been released.

Building a Communication Channel through science popularization

We actively conducted the publicity of nuclear power knowledge among the public to “demystify the nuclear power technology” and help the public recognize the safety of nuclear power technology.

Nuclear Science and Technology Museum

Shandong Nuclear Science and Technology Museum is the first nuclear power-themed museum in China open to the public, especially to teenagers. It provides a window for them to understand nuclear power rationally and appreciate its charm.

In 2015, based on the Internet Plus model, SDNPC developed the first online nuclear science and technology museum in China, “moving” the existing Shandong Nuclear Science and Technology Museum onto the internet and providing online service of knowledge publicity for the public.

In 2016, Shandong Nuclear Science and Technology Museum received 9,975 visitors including Tibetan students and summer camps of foreign teenagers with Chinese origin etc.

In 2016, Shandong Nuclear Science and Technology Museum was named “Science Popularization Education Base” by both Shandong Nuclear Society and Shandong Association for Science & Technology.

As a nuclear power enterprise, you have done a great job. This museum looks so interesting, and I would like to visit and do a field research in Yantai when I get the chance. You have established the first nuclear science and technology museum in China when we have yet to build, and when we are all going to take action, you have already moved it from offline to online. This online museum could be shared by the entire industry. Excellent job!

——Ms Chen, from Shanghai Nuclear Power Office
Lectures on Nuclear Power

Lectures on Nuclear Power have always been our brand activity to communicate with the general public, and an important carrier of regular nuclear power knowledge popularization. Focusing on the audience, we continuously explored new forms of activities. For different audience groups, we sent different publicity staff to reach out to the public and communicate with them in a way that made the knowledge more easily understood. This transformed the cut-and-dried science popularization into a vivid journey of science exploration.

Case: “Dream Classroom” got close to nuclear power

On 22th July, “Dream Classroom”, a program organized by China Youth Development Foundation, entered SDNPC, which enabled over 120 teachers and students from 6 Hope Primary Schools in Jiangsu, Shandong and other provinces to “get close to” nuclear power.

Young volunteers of the Company handed out science popularization booklets to teachers and students, and also organized them to watch publicity films about SDNPC and nuclear power. They also visited the sand table model, exhibition room and project field. The volunteers brought to teachers and students a vivid nuclear power publicity class to introduce the status quo of nuclear power's development, features of AP1000 technology and so on.

After the activity, both teachers and students said the class had broadened their horizon, enhanced their knowledge and was very rewarding. They would take the initiative to become messengers for nuclear science and introduce SDNPC to the public in surrounding areas, so that the public could correctly understand nuclear power and support the construction of nuclear power plants.

Public Open Day

We regularly launched Public Open Day activities, and invited the general public to get close to nuclear power enterprises. By holding theme forums, making public communication MVs, holding staff photography exhibitions, organizing visits to nuclear power plant and other activities, we shared the idea of harmony between nuclear power plant and local communities, and showed the charm of nuclear science and technology.

In 2016, over 30 Public Open Day activities were held, among which 2 were in English. 2,000 volumes of nuclear power popularization books were donated, and 15,000 visitors came to our nuclear power plant during the Public Open Days.

Promoting Transparent Operation through Information Disclosure

For years, we have stuck to transparent operation, disclosed information on the production and operation of the nuclear power plant actively, and invited governments and the public to supervise the operation of the nuclear power plant. By doing so, we won trust among the public and eliminated their fear for nuclear power.

SDNPC has issued CSR reports in both Chinese and English for the third consecutive year. The 2015 CSR Report illustrated the Company’s push for common development and community co-establishment from eight aspects, including safety, quality, environment, talent, innovation, responsibility and so forth. As the first Chinese nuclear power plant in the construction stage to release CSR reports three years in a run, we have formed a steady “new channel” for open communication.

Releasing CSR Report Regularly

SDNPC has issued CSR reports in both Chinese and English for the third consecutive year. The 2015 CSR Report illustrated the Company’s push for common development and community co-establishment from eight aspects, including safety, quality, environment, talent, innovation, responsibility and so forth. As the first Chinese nuclear power plant in the construction stage to release CSR reports three years in a run, we have formed a steady “new channel” for open communication.

Creating an Online Information Disclosure Platform

We were committed to creating an online publicity platform for multimedia interaction in different forms. We also applied the Company’s external website, official Weibo and WeChat accounts as well as other We-Media to regularly disclose the latest information of nuclear power operation. In 2016, we published 43 articles on People’s Daily, Xinhua News Agency and other external media, 2,406 original articles on SDNPC website, 93 on SPIC website, 55 on SNPTC website and 176 on the official WeChat account.

Case: SDNPC’s official WeChat account was awarded Top 100 WeChat Public Accounts of Energy Companies

Three official WeChat accounts including SDNPC, Shandong Nuclear Science and Technology Museum and SDNPC Youth League Committee were launched by SDNPC which released a total of 122 original articles with an overall page view of more than 90,000, and the spread index ranked within top 15 among SOEs for several times. In 2016, SDNPC official WeChat account was recognized as one of Top 100 Public WeChat Accounts of Energy Companies.
Cornerstone of Sustainable Development

SDNPC established a social responsibility organizational system, identified leaders’ responsibilities and the departments that they were responsible for, and clearly defined duties and tasks for different positions. Meanwhile, Regulations on SDNPC Social Responsibility Management were compiled, which made social responsibility management scientific, systemic and standardized. SDNPC releases CSR reports regularly to present the Company’s progress in fulfilling social responsibilities and realizing sustainable development.

Social Responsibility Philosophy System

SDNPC established a corporate culture system of “led by nuclear and joined with heart”.

Social Responsibility Management

Social Responsibility Organizational System

We integrated social responsibility into the whole process of operation and management. We also improved the setting of CSR Managing Committee, creating a well-established social responsibility management system.

Social Responsibility Promotion

We valued CSR capability building, enhanced learning and communication within and outside of the company, and disclosed CSR information in order to promote our CSR performance.

Internal study and communication

All departments communicated with one another regularly to promote the understanding of responsibility practice and spread and exchange social responsibility information.

Specific training on CSR

Specific training on CSR was launched in March 2016. GoldenBee CSR Consulting offered training sessions among leaders of all departments and CSR liaison staff on basic knowledge of CSR, the compilation of CSR reports and “case study of CSR competitiveness”, etc.

Materiality Issues Analysis

We attached great importance to the identification and management of materiality issues of sustainable development. Targeting at the characteristics of the Company in the construction and commissioning stage, we comprehensively considered aspirations of stakeholders, industry development and suggestions of CSR experts and other factors to identify major tasks of the Company in promoting social responsibilities, and developed strategies of fulfilling social responsibilities accordingly.

Influence on stakeholders

Highest

Information disclosure

Growing of young talents

Humanitarian activities

Volunteer activities

Construction households

Occupational health

Growth of contractors

Publicity

Growth of contractors

Communications and exchanges among industries

Independent construction

Nuclear safety culture

Occupational health

HSE System

Nuclear safety training

Equipment localization

Independent construction

Risky-tolerant

Dedication to low-carbon clean energy

Missions concept action guide

Values concept action guide

Visions concept action guide

Management concept action guide

Safety concept action guide

Quality concept action guide

Work concept action guide

Define strategic direction of the social responsibility development

Social Responsibility Management Committee

Evaluate the performance of the social responsibility work

Social Responsibility Working Group

Promote social responsibility work

Organize social responsibility training

Each department

Carry out social responsibility practice

SDNPC social responsibility organizational system
### Stakeholder Engagement

We developed and improved the stakeholder communication and engagement mechanism, through which we identified expectations and appeals of stakeholders, set up diversified communication and feedback channels so as to enhance stakeholders’ understanding of and support for the Company.

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Expectations and requirements</th>
<th>Communication channels</th>
<th>Communication effect</th>
</tr>
</thead>
</table>
| Governments       | • Paying tax pursuant to law  
                   • Compliance operation  
                   • Promoting local development  
                   • Safe construction and operation | • Work reporting  
                   • Information disclosure  
                   • Research and discussion | • Strategic cooperation with local governments                                         |
| Shareholders      | • Safe production  
                   • Stable operation  
                   • Investment return | • Shareholders’ meeting  
                   • Company reports  
                   • The Board of Directors | • Gathering support from investors and shareholders                                     |
| Employees         | • Occupational health  
                   • Occupational Safety  
                   • Salaries and benefits  
                   • Personal development  
                   • Education and training | • Workers Congress and trade unions  
                   • Culture and sports association  
                   • Safety open-day | • Creating a harmonious and caring work atmosphere                                    |
| Suppliers and contractors | • Honoring commitments and fulfilling contracts  
                           • Mutual benefit and win-win result  
                           • Open and fair procurement | • Authorized training  
                           • Experience sharing meeting | • Driving the mutual development of upstream and downstream partners                  |
| The public        | • Protecting ecological environment  
                   • Information disclosure  
                   • Nuclear safety | • Knowledge publicity  
                   • Public Open Day | • Continuously improving public trust                                                 |
| Industry organizations and partners | • Resource sharing  
                           • Experience sharing  
                           • Joint training of talents | • Subject research  
                           • Seminar | • Promoting industry development                                                    |
| Community         | • Serving community construction and development  
                   • Supporting the cause of public welfare  
                   • Environmental protection | • Community publicity  
                           • Employee volunteer activities | • Creating a good external environment for corporate development                      |

### Our Key Performance

#### HSE Performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety training</td>
<td></td>
</tr>
<tr>
<td>Participants in authorized training on basic safety (person-time)</td>
<td>2,220</td>
</tr>
<tr>
<td>Total safety training time (hour)</td>
<td>18,000</td>
</tr>
<tr>
<td>Per capita safety training time (hour)</td>
<td>20</td>
</tr>
<tr>
<td>Personal safety</td>
<td></td>
</tr>
<tr>
<td>Death toll (person)</td>
<td>0</td>
</tr>
<tr>
<td>Seriously injured (person)</td>
<td>0</td>
</tr>
<tr>
<td>Radiation protection safety</td>
<td></td>
</tr>
<tr>
<td>Radioactive source loss (times)</td>
<td>0</td>
</tr>
<tr>
<td>Internal contamination (times)</td>
<td>0</td>
</tr>
<tr>
<td>Environmental management</td>
<td></td>
</tr>
<tr>
<td>Environmental pollution events (times)</td>
<td>0</td>
</tr>
<tr>
<td>HSE training (persons)</td>
<td>2,000</td>
</tr>
</tbody>
</table>

#### Economic Performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated total investment (100 million RMB)</td>
<td>563</td>
</tr>
<tr>
<td>Economic contract fulfillment rate (%)</td>
<td>100</td>
</tr>
<tr>
<td>Number of scientific and technological programs (ton)</td>
<td>6</td>
</tr>
<tr>
<td>Scientific and technological investment (10,000 RMB)</td>
<td>30*</td>
</tr>
<tr>
<td>Participants in scientific and technological programs (person)</td>
<td>60*</td>
</tr>
</tbody>
</table>

Note: The Corporation Group optimized its technological and scientific R&D structure to include SDNPC as part of the supporting strength.
### Employee Performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total employees (person)</td>
<td>1,443</td>
</tr>
<tr>
<td>Collective contract coverage (%)</td>
<td>100</td>
</tr>
<tr>
<td>Social insurance coverage (%)</td>
<td>100</td>
</tr>
<tr>
<td>Labor union membership rate (%)</td>
<td>100</td>
</tr>
<tr>
<td>Proportion of female managers (%)</td>
<td>7.2</td>
</tr>
<tr>
<td>Proportion of staff with senior and intermediate professional titles (%)</td>
<td>54.6</td>
</tr>
<tr>
<td>Labor contract signing rate (%)</td>
<td>100</td>
</tr>
<tr>
<td>Coverage of physical examination and health record (%)</td>
<td>100</td>
</tr>
<tr>
<td>Various training (times)</td>
<td>376</td>
</tr>
<tr>
<td>Employees trained (man-hour)</td>
<td>340,850</td>
</tr>
<tr>
<td>Expense on helping poor employees (10,000 RMB)</td>
<td>16</td>
</tr>
</tbody>
</table>

### Social Performance

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local tax payment (10,000 RMB)</td>
<td>6,000</td>
</tr>
<tr>
<td>Time of volunteer service (hour)</td>
<td>700</td>
</tr>
<tr>
<td>Students assisted by “Azalea—Love of SDNPC” Student Assistance Project (person)</td>
<td>103</td>
</tr>
<tr>
<td>Donation amount of “Azalea—Love of SDNPC” Student Assistance Project (10,000 RMB)</td>
<td>82,200</td>
</tr>
</tbody>
</table>

#### 2004-16 in total

<table>
<thead>
<tr>
<th>Indicator</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Student assistance donation (RMB)</td>
<td>485,423</td>
</tr>
<tr>
<td>Attending voluntary services (person-time)</td>
<td>1,126</td>
</tr>
<tr>
<td>Time of volunteer service (hour)</td>
<td>31,500</td>
</tr>
<tr>
<td>Registered volunteers (people)</td>
<td>258</td>
</tr>
</tbody>
</table>

### Outlook 2017

2017 marks an important year for China to deepen energy reform, and a vital year for Haiyang Nuclear Power Plant to transfer from construction and installation stage to production stage. In this period, opportunities and challenges will coexist.

We will stay firmly rooted in the present while looking ahead to the future. At SDNPC, we will fully integrate social responsibility into the Company’s operation and management, improve the social responsibility management system and expand the talent pool of social responsibility management, so as to improve our management level while creating comprehensive economic, environmental and social values. That are great efforts we will make to fight for a “long-standing SDNPC”.

#### Team building

Rooted in nuclear safety, we will actively practice the Corporation Group’s “harmony” culture. We will carry forward the self-reliance spirit of the third-generation nuclear technology and strengthen our “striver-oriented” values to maintain the “energy” for forging ahead.

#### Safe operation

We will launch a series of activities in “Nuclear Power Safety Management Promotion Year”. We will give top priority to safety, and fully foster management in the preparation, construction, commission and operation stages of projects to guarantee safe production in the long run.

#### Operation efficiency

We will complete the connection of Unit 1 to the grid for power generation in Project Phase I and finish the cold hydro test of Unit 2. We will actively follow up the progress of electric power reform, improve electric marketing capability and participate in electric market transactions. Meanwhile, we will complete our annual investment plan.

#### Harmonious society

We will communicate and interact with stakeholders in a more sincere and open manner, and encourage stakeholders to engage in and promote the Company’s transparent operation. We will share our benefits with stakeholders to enhance their livelihood.

#### Environmental protection and energy conservation

To further improve our environmental management system and actively respond to SDNPC’s transformation of nuclear operation, we will launch supervision and inspection of environmental protection at the Company while promoting green operation to keep water clear and the sky blue.

#### CSR management

We value capability building, and will enhance both expertise and management skills of nuclear practitioners. We will strive to form a stable corporate structure led by advanced culture and supported by well-established system and solid skills, so as to continuously promote the Company’s development and prosperity.
Shandong Nuclear Power Company 2016 Social Responsibility Report shows an enterprise eager for sincere communication. As an owner of nuclear power project under construction, SDNPC has issued social responsibility reports for four consecutive years to disclose its responsibility concepts, measures and performance in detail. Besides, while efficiently implementing heavy production tasks, SDNPC also communicates with the community through various ways, such as organizing Public Open Day activities, opening the Nuclear Science and Technology Museum to the public, and giving Lectures on Nuclear Power and the creating an information publication online platform, etc. In 2016 alone, SDNPC held more than 30 Public Open Day activities, attracting the participation of 15,000 people, and published 2,406 original articles. Shandong Nuclear Science and Technology Museum received 9,975 visitors in 2016.

SDNPC continues innovating communication approaches and calls on the public to participate in the construction of nuclear power plants with sincerity and enthusiasm. It encourages stakeholders to make their voice heard, share their knowledge about nuclear power plant. SDNPC has attracted more and more stakeholders have participated in the publicity of nuclear power plants with positive attitude, guaranteeing the YIMBY situation.

I wish SDNPC can go further in shaping responsibility brand and make new contributions!
Feedback from Readers

Dear readers:

Thank you for reading our report! This is the fourth Corporate Social Responsibility Report that we have published. We look forward to your opinions and recommendations so that we can improve future reports.

Please answer the following questions and fax the table to +86-535-3871700 or mail it to us.

Please tick ✓ the appropriate answer

- Do you think the Report highlights our economic, social and environmental work and our significant impacts?
  - Yes ✓ Partially □ No
- Do you think the information and indicators provided in the Report are clear, accurate and complete?
  - Yes ✓ Partially □ No
- Do you think the arrangement of the content and style of the Report help your reading and understanding of the report?
  - Yes ✓ Partially □ No

Open-ended questions:
1. Which part of the Report were you most interested in?

________________________________________________________________________________________________________________________________________

2. What information do you think needs to be provided about SDNPC that is not provided in the Report?

________________________________________________________________________________________________________________________________________

3. What are your recommendations for our future social responsibility reports?

________________________________________________________________________________________________________________________________________

If you wish, please provide us with the following information:
Name: ____________________________ Company: ____________________________
Tel.: ____________________________ Address: ____________________________
E-mail: ____________________________