



中国核能行业协会
CHINA NUCLEAR ENERGY ASSOCIATION

The Country Report of China

11/23/2016 Tokyo, Japan

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1.The International Situation of Nuclear Power

- At present, the world pattern is undergoing profound changes. The global governance system is at a historical turning point. The global economy is facing multiple risks and challenges, including slow economic growth, weak energy demand, severe counter-terrorism and security situation, environmental pollution and climate change.
- Faced with complex international situation, in September this year, the G20 summit was held successfully in Hangzhou, China. The leaders discussed the theme of building an innovative, invigorated, interconnected and inclusive world economy.



1.The International Situation of Nuclear Power

- The Summit placed the development issue on the outstanding position in the global macroeconomic policy framework and for the first time developed an action plan for



implementation of the 2030 Agenda for Sustainable Development. Nuclear energy and technology can be widely used in ensuring energy security, dealing with environmental pollution and climate change, and strengthening counter-terrorism and security. They will have a greater role to play in the sustainable development agenda.



中国核能行业协会
CHINA NUCLEAR ENERGY ASSOCIATION

2. China's nuclear industry situation

- The Chinese government attaches great importance to sustainable development and climate change. In September this year, Chinese President Xi Jinping personally deposited the ratification instrument of Paris Agreement, best illustrating China's role as a major responsible country.
- China will develop nuclear power as an important measure to promote energy conservation and emission reduction, stabilize economic growth, optimize energy structure, and realize green and sustainable development.



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CHINA NUCLEAR ENERGY ASSOCIATION

2. China's nuclear industry situation

- In March this year, China issued the 13th Five-Year Plan for National Economic and Social Development, which put forward the development concept of "innovation, coordination, green, openness and sharing", and reiterated the policy of developing nuclear power in a safe and efficient manner.
- At present, China has 35 nuclear power units in operation and 20 units under construction, with rich experience in design, construction and operation of nuclear power plants.
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3.The Development of NPPs in China

- As we accelerate the construction of nuclear power plants, great attention is paid to innovation and development. Hualong One is China's self-developed third-generation reactor design. The first plants of its kind have started construction both at home and abroad, and well progressed. This indicates that the safety and economics of this technology have been widely recognized. Large advanced pressurized water reactor CAP1400 and small multi-purpose reactor ACP100 have passed IAEA's generic safety review, and met conditions for project implementation.



NPP in operation and under construction in China

35 units / 33.6 GW

In operation

20 units / 23.2 GW

Under construction

MWe

Hongyanhe 4 × 1080
+ 2 × 1080

HTGR demo 1 × 200

Haiyang 2 × 1250

Tianwan 2 × 1060
+ 2 × 1120 + 2 × 1118

Qinshan 1 × 310 + 4 × 650
+ 2 × 728 + 2 × 1080

Sanmem 2 × 1250

Ningde 4 × 1080

Fuqing 3 × 1080
+ 1 × 1080 + 2 × 1150

Daya Bay 2 × 980
+ 2 × 990 + 2 × 1089

Taishan 2 × 1750

Yangjiang 3 ×
1080 + 3 × 1080

Fangchenggang 2 × 1080 + 1 × 1080

Changjiang 2 × 650

南海诸岛

(Note: As of 11/23/2016
Taiwan region not
included)

11/23/2016



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4. Nuclear Safety Regulation and Policy

- Nuclear safety is the cornerstone of sustainable nuclear energy development. China has always adhered to the guidelines of "safety first, quality first" in nuclear energy development, established a set of strict nuclear safety regulatory systems, and maintained a good nuclear safety record. Since Fukushima nuclear accident, the Chinese government has fully analyzed the lessons learned from the accident, carried out a comprehensive inspection of nuclear safety, identified and eliminated potential risks, formulated rectification programs, improved nuclear regulatory system and management system, and provided adequate personnel for nuclear safety regulation and emergency management.



5. Nuclear Security

- Building global nuclear security system is the shared responsibility of international community. At the Fourth Nuclear Security Summit held in Washington in April this year, President Xi Jinping has put forward the proposals for strengthening political input, state responsibility, international cooperation and nuclear safety culture in order to build a lasting and balanced global nuclear security framework. This showed the responsibilities and obligations that China and other countries have assumed in jointly promoting global governance in nuclear field.



5. Nuclear Security

- Since its launch in March this year, the Center of Excellence on Nuclear Security has conducted international nuclear security training activities in cooperation with the Agency. We would like to take advantage of this platform to build a nuclear security capacity-building network for the Asia-Pacific region and other developing countries to carry out nuclear security practitioner trainings, nuclear security technology exercises and exchange activities.



中国核能行业协会
CHINA NUCLEAR ENERGY ASSOCIATION

6. Nuclear International Cooperation

- In the utilization of nuclear technology for the benefits of people, China actively carries out exchanges and cooperation with foreign countries, and helps other countries to enhance the level of nuclear science and technology and application capabilities. In this regard, China hosted the 20th Pacific Basin Nuclear Conference in April and the 9th International Youth Nuclear Congress in July, providing a platform for cooperation and exchange among the counterparts in nuclear field and stimulating young people to join nuclear power industry.



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CHINA NUCLEAR ENERGY ASSOCIATION

6. Nuclear International Cooperation

- Within the framework of the Agency's technical cooperation, more than 3,000 fellowships, scientific visits and trainings have been conducted for the participants from other countries in China, and more than 2,000 expert services have been provided to developing countries, covering nuclear agriculture, radiation processing, nuclear medicine, nuclear application and other areas.



6. Nuclear International Cooperation

- China has been actively involved in the activities under the framework of Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology for Asia and the Pacific, and has been the lead country in the field of nuclear agriculture. China actively supported the Agency's project on Renovation of the Nuclear Applications Laboratories. In addition to a new irradiation system valued 2.5 million USD, it provided 2 million Euros for laboratory infrastructure construction, equipment procurement and expert services.



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CHINA NUCLEAR ENERGY ASSOCIATION

7. Summary

- The FNCA experienced an extraordinary journey in the past 17 years. Looking back, with mutual trust and assistance and aiming at the needs of countries, we actively carried out cooperation and exchanges, and made important contributions to promoting economic and social development in Asia. Looking ahead, Asia will be the world's most active region to develop nuclear power. It is full of vigor and vitality. The FNCA will have a great role to play. China is ready to work with other members of the Forum to write a gorgeous chapter on nuclear energy for the benefits of Asian people.



Thank You for your kind attention !

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