PROMOTING NUCLEAR POWER CONSTRUCTION IN CHINA

Brief Presentation At FNCA Special Panel Session

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1. Status of the Peaceful Use of Nuclear Energy in the Mainland of China

China's nuclear power has gone through more than 20 years of development. China's nuclear power industry is developing steadily. In the past two decades, China has built 9 nuclear reactor units, two more reactor units are under construction and will be put into commercial operation at the end of 2005, with a total installed capacity of 8700 MW. The annual generation output reached 50.469 TWh in 2004, accounting for 2.3% of the total generation nationwide.

The existing nuclear power plants are all located in economically-developed eastern coastal areas, and the proportion of nuclear power in Zhejiang and Guangdong provinces has run up to 13%. Nuclear power has played a vital role in mitigating the shortage of local power supply, adjusting the energy mix and improving the environment. The development of nuclear energy has actively improved and optimized the human living condition. The total electricity generation by nuclear energy in 2004, if converted to coal consumption, would be equivalent to 14.93 million tons of standard coal. In the 1990s, China rapidly expanded its applied nuclear technology to be used in industry, agriculture and medicine. More than 300 domestic enterprises specialize in developing such technologies.

Nuclear power development achievements provide persuasive facts and cases for PI activities, and the good performance of nuclear power plants construction and operation enhances the public confidence on nuclear energy and hence promotes public acceptance. Good construction achievements and operation performance of nuclear power plants formed the basis for decision-making by the Government to speed up

nuclear power development.

2. Chinese Government New Nuclear Power Policy——To Accelerate Nuclear Power Development

The sustained and rapid economic growth and continuous upgrading of people's living standards in China has posed great demand to energy and power supply, which creates a rare opportunity for developing nuclear power and the industry. For the sake of meeting energy needs, adjusting energy mix and protecting environment, the Chinese government has adjusted the principle for nuclear power development from the previous moderate development to the present actively pushing forward. Nuclear power has been taken into the national electricity development planning as an integral component of China's national energy strategy. The nuclear power scale in China is targeted to reach 40 GW by 2020, accounting for about 4% of the total installed capacity of electric power nationwide. Nearly 30 units of 1000MW will be built in the next 15 years. Developing nuclear power is an important step toward optimizing energy mix, protecting the environment and achieving sustainable development.

In July 2004, the State Council made decisions on further promoting China's nuclear power construction and approved eight new nuclear power units to be built. Accelerating nuclear power construction would help to improve China's energy structure, boost the development of related industries and safeguard the national economic and energy security. This poses a great challenge and provides a rare opportunity for China's nuclear industry at the same time.

3. Strict Safety Management and Good Operation Record of Nuclear Power NPPs in China

China has always paid great attention to the issue of safety in nuclear energy development and stick to the principle of "quality and safety come first". With years of efforts, the nuclear safety regulation system and supervision and management system have been set up in China. The Chinese Government issued the Regulations on Safety

Supervision and Management of Civil Nuclear Facilities and the Regulations on NPP Nuclear Accidents Emergency Management in the last two decades. Based upon these regulations, related government departments issued a series of rules, guidance, standards and technological documents in compliance with international practice. An independent nuclear safety regulatory institution was established in the early days of nuclear power development in China to carry out independent supervision on safety of civil nuclear facilities. It takes safety licensing management throughout the whole process from siting, design, construction to operation of NPPs and other civil nuclear facilities. The rigid, effective and independent supervision of the regulatory institution ensured the construction quality and safety conditions of nuclear facilities that have maintained a good record of operation safety.

4. The FNCA PI project has enhanced promotion of public understanding of nuclear energy in Asia

FNCA has long played an important role in promoting peaceful uses of nuclear energy and the relevant international cooperation. China appreciates the FNCA's efforts in recent years in strengthening international cooperation in various fields. Frequent PI related information exchange promoteed the acceptance and recognition of the public. The web-site of FNCA is a platform to publicize PI information, also serve as easy and fast way for various professionals and relevant PI staff and officials to learn the status and activities of relevant activities. The distribution of published materials is useful to the member countries.

Through the Cross-national Joint Survey on Understanding and Interest in Radiation Among High School Students was conducted in 2002 in FNCA countries, a lot of valuable data were collected and analyzed. The results show a comparatively full picture of the interest and perception of high school students on radiation. The percentage of students with experience visiting radiation-related facilities is the lowest in China (less than 10%) while nearly 90% of Chinese students have visited a scientific institution. More than 70% of the respondents associate “Hiroshima and Nagasaki (nuclear weapons)” with “radiation”

and associate “nuclear power generation” with “radiation” in 4 out of 6 countries. This shows that misconception and misunderstanding toward radiation is serious and common among high school students. Thus it is critical and significant to improve PI activities and education in high schools. The results provide the basis for improvement of PI activities toward the high school students.

Under the FNCA framework, through relevant activities, a better public understanding of nuclear technology and its applications can be achieved, hence promotion of nuclear energy and application of nuclear technology can be sustained. The Asian people will better enjoy the benefit of peaceful uses of nuclear energy.