Views on the Development of Nuclear Power

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Abstract

In this passage, we would get to know nuclear power from various angles. The development of nuclear power in our country would be showed in the passage, and then we would discuss the advantages of nuclear power, which can help us to understand the significance of developing nuclear power. In order to guarantee the security of the nuclear power generation, some suggestions would be bought out, which can not only express the public's expectations but also provide help for the development nuclear power.

Keywords

Development, advantages, suggestions.

1. Introduction

As the growth of the demand for energy, more and more new forms of energy are being developed nationwide. Therefore, as one of the most environmental friendly and economical energy, the nuclear power received extensive attention recently. However the dual character of nuclear power has caused public concern and spark discussion in public, especially after the Fukushima nuclear disaster. So in this passage we would discuss about how to develop nuclear power safely.

2. Development of the Nuclear Power

Development of nuclear industry in China has a history of nearly 50 years. In 1954, China began to uranium prospecting. China successfully exploded its first atomic bomb on October 16, 1964. On June 17, 1967 launched the first hydrogen bomb successfully. In September 1970, China's first nuclear submarine completed and got trial success. Our country had prepared to construct a nuclear power plant since 1970s. On December 15, 1991, the first nuclear power plant, Qinshan nuclear power plant with independent design was combined to the grid successfully. The construction of the Qinshan nuclear power plant symbolized that our country had the ability to design and build a small power plant.

Our country owns nuclear power plants that have been built or under construction include LingAo nuclear power plant, Qinshan Phase II nuclear power plant, Qinshan Phase III nuclear power plant, Tianwan nuclear power station, etc. After all the units completed, the installed nuclear power capacity will reach 8500 MW which accounts for the 2.3% of installed capacity. The other nuclear power plants are in preparation in southern provinces.

3. Advantages of the nuclear power

As a new industry，nuclear power has great advantages. Firstly, nuclear power can ease the tension of coal resources. My country is rich in coal resources but the per capita has less content. What's more the distribution is very uneven. The cost of freight and coal for thermal power has increased sharply which leads to the southeast coast of China has an urgent need to build new nuclear power plants.

Secondly, nuclear power can reduce pollution. There is no pollution emission produced by nuclear power, although we had to handle the nuclear waste carefully. However, as long as nuclear waste is handled reasonably and deeply buried, it can reduce the environmental pollution greatly compared to

fossil energy. Therefore, nuclear power is one of the good choices to solve the energy problem and protect out environment at the same time.

Thirdly，nuclear power can save energy. Nuclear power has the characteristic that the energy is highly concentrated. And at the same time, our country has an abundant of uranium resource which can provide more energy than the whole energy provided by all the available coal, oil and natural gas.

4. Suggestions for the development of nuclear power

As recently the nuclear power reaches at the Large-scale development stage, we should make some suggestions for the development of nuclear power in order to guarantee the security of the nuclear power generation, environment and human health.

1. Nuclear power technologies cannot be varied. If the nuclear power technologies are various, it would cause great difficulties to authenticate and normalize these technologies, because the nuclear power technologies are often related to the security of county and society. In this way, it is conducive for the independent innovation as well as the standardization of the design. As we know, China is making great efforts to extend the AP1000.

2. The nuclear power generation companies should be sorted in order to avoid the disorder of nuclear power site competition. Nuclear power station siting policy should be conduct by the government to maintain the industry order. So the technical characteristics and the construction area of each company should be cleared. Only in this way, the construction distribution of nuclear power can be arranged reasonably and promoted well-organized.

3. Our manufacturing capability should be promoted and standardized, especially in the terms of large forgings, nuclear grade valve, pipe and pump. Because the development of nuclear power in China is restricted not by the design capacity but by research of the material and manufacturing basic science most of the time. What's more, if the substandard parts are used in the reactor, they may greatly threaten the generation security.

4. Attention should be paid to the dispose and utilization of nuclear waste. As a commonly concerned problem, the disposal affects the public confidence in the development of the nuclear power. The processing and disposal of nuclear waste should be managed and supervised by the China National Nuclear Corporation. Because only the government can guarantee the disposal of the nuclear waste properly. The nuclear power enterprises should pay the disposal charge in accordance with the provisions.

5. Conclusion

The security of nuclear power generation is related social stability and human health, so it is never too carefully to develop nuclear power. We are supposed to learn more about nuclear power, have courage to put up our suggestions, play a role of supervision and keep confident for the nuclear power development. Only in this way, can we make out the nuclear power development sustainable.

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