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Nuclear Security 2012

**: Challenges of Proliferation and
Implication for the Korean Peninsula**

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: Challenges of Proliferation and Implication for the Korean Peninsula

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IX. China's Way to Go Nuclear

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Nuclear technology has always had two distinct uses: it has been used to design and produce nuclear bombs and it has been used to produce nuclear power as well as facilitate medical and agricultural activities. China has taken advantage of both uses of nuclear technology: first in the military and then in the civilian sector. In this paper, I will provide an overview of the development of China's nuclear capability and the evolution of its nuclear policy, followed by an exploration of China's nuclear disarmament policy that discusses the challenges and opportunities for China in this area. At the end of this paper, I will give a brief summary of China's civilian use of nuclear technology and the efforts the country has made in recent years to use nuclear power in a safer and more secure way.



1. To Build the Nuclear Capability

To Build the Bomb

China's decision-makers showed interest in nuclear technology as early as the 1930s. At that time, the first generation of Communist Party leaders was facing war with Japan and struggles with the Guomindang. Nevertheless, they were very much aware of the newly created weapon system, especially when the United States used two atomic bombs against Japan at the end of World War II. In August 1946, Chairman Mao Zedong had a famous dialogue with U.S. journalist Anna Louise Strong where he expressed his belief that imperialists and reactionaries are all paper tigers. He also said that the

atomic bomb was a paper tiger that had been used by the United States to blackmail others. The atomic bomb looked very powerful, but Mao believed that it was not. This argument has been taken as the first view of the Chinese Communist leaders with respect to nuclear technology.

Despite this view, the Chinese government decided to add a nuclear project to its national development program. In the spring of 1956, the Central Government drafted the “1956–1967 Science and Technology Development Plan” in which the acquisition of atomic energy, rockets and jet planes were put at the top of the agenda. In October of the same year, China and the Soviet Union signed the “Agreement on the Production of New Weapons, Military Equipment and the Establishment of China’s Atomic Industry.” According to this agreement, the Soviet Union would supply China with atomic and missile technology assistance.

Not long afterwards, however, relations between China and the Soviet Union began to deteriorate, and in June 1959 the Soviet Union withdrew from the agreement. All cooperation on the project stopped in October of the same year and in August of 1960 around 200 Soviet experts and engineers returned to their countries along with all their materials. Meanwhile, China had entered a period of economic difficulty.

Though there were differing views among China’s decision-makers at that time over whether to develop atomic bombs, the nuclear project continued. The Central Government named the project “596”, an allusion to the point when the Soviet Union withdrew all its nuclear support from China. In the summer of 1960, China’s top

leaders held a meeting and decided to increase their technology; it was at this point that the leaders made the final decision to perform a nuclear test in 1964.

The Central Government held a military industrial meeting in July 1961 where several arrangements were made for the nuclear test. In order to have a good overview of the nuclear project, a special committee was set up in November 1962. Premier Zhou En'lai was nominated as the head of the committee, which was composed of 15 members including seven vice premiers and other top military leaders. Over the course of two years, the committee held at least nine meetings to coordinate the atomic project and discuss hundreds of tough issues. On 16 October, 1964, China successfully performed its first nuclear test in Luobupo in Xinjiang Province. With this test, China became the world's fifth nuclear weapons state.

To Build the Second Artillery Force

While working to develop an atomic bomb, China also began building a second artillery force. In December 1957, the Central Government established a special unit to train the strategic missile commanding and engineering officers. The members of this unit were mainly drawn from the PLA artillery force and the 5th research institute of the Ministry of Defense. The following June, the Central Military Committee decided to establish a commanding headquarters created mainly from the Public Security Force and strategic missile force at that time. According to Premier Zhou En'lai's suggestion, the



newly founded force was named the Second Artillery Force.

The Second Artillery Force was established in 1968 with the development of strategic missiles. It was gradually equipped with short-range, middle-range and long-range land-based missiles along with a series of logistical and supporting units. Throughout the 1970s, China quickly developed its strategic forces. In January 1970 China tested its first two-stage mid-range missile, and in 1971 it tested an intercontinental missile. After a series of tests, China launched this intercontinental missile from the Jiuquan launching site; the missile splashed down into the Pacific Ocean in May 1980. By this time, the Second Artillery Force was equipped with a range of missile systems that could launch any kind of warhead.

China started its sea-based strategic force in the late 1960s. On 12 October, 1982, the PLA Navy finished its first submarine-based ballistic missile test. Then in the mid-1980s, the PLA Navy acquired a nuclear-powered submarine. On two separate occasions in September 1988, China tested its sea-based ballistic missiles from a nuclear-powered submarine. Today, the sea-based sub-marine and land-based ballistic missiles have become the most important parts of China's nuclear arsenal.

To Find Reasons for the Nuclear Bomb

As argued by scholars at home and abroad, there are several reasons to explain why China developed nuclear weapons immediately after the Communist Party established the People's Republic. Among them, two are mentioned most often:

(1) Response to the Threat of Nuclear Blackmail by The United States, First, and The Soviet Union, Second.

As a newly formed republic, China felt that its survival and security were paramount. During the 1950s, the largest nuclear threat came from the United States due to the Korean War, the Indochina War and the treaty signed between the United States and Chinese Taiwan. All of these situations deeply influenced the decision-making of the first generation of PRC leaders concerning the security and survival of the new government. Several times, U.S. leaders publicly announced that nuclear bombs could be included in a military attack against China. For example, on 30 November, 1950, U.S. President Truman told correspondents that the United States had been considering the use of nuclear bombs. Then during a TV speech on 18 March, 1955, President Eisenhower told the American public that nuclear weapons were not only strategic weapons, but also tactical weapons for the purpose of peace.

After Sino-Soviet relations began deteriorating in the 1950s, China had to face another nuclear power—the Soviet Union. According to an Indian scholar, China faced nuclear threats several times, both from the United States and the Soviet Union, during the Korean War, over the Taiwan issue and China’s nuclear project, and during the Sino-Soviet border conflict which lasted from the 1950s to the 1970s.¹ The drive to go nuclear during the 1950s and 1960s, therefore, can

¹ Jasjit Singh, “Why Nuclear Weapons?” in Jasjit Singh (ed.), *Nuclear India* (New Delhi: Institute for Defence Studies and Analysis, 1998), pp. 12–13.



be understood as an effort to counter the threat of nuclear blackmail from these two superpowers. As Devin T. Hagerty points out, “China’s 1964 nuclear test and subsequent weaponization were rooted in Beijing’s concern over the United States and later the Soviet Union as threatening adversaries.”²

(2) Opposing Monopolies and War with Nuclear Weapons.

For the first generation of Chinese leaders, the atomic bomb was a form of political leverage rather than a military weapon. They surely were quite familiar with the destructive power of nuclear weapons. So breaking up the Western imperialist monopoly on nuclear technology - for example, by the United States and the Soviet Union - was considered one of the most important tasks for the leaders. Traditional Chinese military thought, which sought to avoid war through thorough preparation, as well as the military theories of Marxism and Leninism, which argued for the use of force against imperialism, also deeply influenced the attitudes of the first generation of leaders towards nuclear weapons.

Immediately after the first nuclear test in October 1964, Beijing stated that its development of nuclear weapons did not mean China would necessarily use them, since the Chinese did not believe nuclear weapons could solve anything by themselves. On the contrary, this development was mainly a means to break up the Western imperialist

²- Devin T. Hagerty, *The Consequences of Nuclear Proliferation: Lessons from South Asia* (Cambridge, MA: MIT Press, 1998), p. 72.

monopoly of nuclear technology.

Beijing's logic was the following: if the U.S. government and its allies monopolized the use of nuclear weapons, the danger of nuclear war would be much greater. Thus, since the United States had nuclear weapons, China should have them as well. Only in this way, the Chinese leaders believed, could the elimination of nuclear weapons be possible. After a new test in June 1966, the Chinese government repeated in an announcement its belief that the purpose of China's nuclear weapons development was to oppose the monopoly of nuclear weapon technology by the Western imperialist countries. After China's first successful hydrogen bomb test on 17 June, 1967, an announcement made it clear that Beijing believed it had succeeded in breaking up the nuclear monopoly by the United States and the Soviet Union even further. Beijing believed this was a heavy strike against the nuclear blackmail policy of the Western imperialist countries.

From October 1964 to June 1987, China performed 33 nuclear tests. However, among the five nuclear weapons states at that time, China had tested the least number of nuclear weapons. According to the philosophy of avoiding war through nuclear capability, only a small number of nuclear warheads and missiles are necessary as it is not the number but the quality of the nuclear weapons that matters. If we carefully study the statements of the previous three generations of China's leaders, we will find that they repeated the same message regarding the development of nuclear weapons: China should have its own nuclear weapons as leverage against the monopoly held by the United States and the Soviet Union and the threat of blackmail these



states could potentially use. Consequently, for years China has been taking the most economical road in its development of nuclear weapons.

2. To Build the Nuclear Policy and Strategy

The release of the *China's National Defense in 2006 White Paper* in December of that year marked the first time that China announced its overall nuclear strategy specifically in terms of self defense. Scholars and correspondents tend to conclude that such an announcement is part of the country's endeavors to make the workings of its national military more transparent, something Beijing has been attempting to do for years.

The basic framework of China's nuclear policy was laid out by the first leaders of the PRC. In 1970, Mao Zedong said, "It is possible that only the big powers could wage a global war with nuclear weapons, but they are not going to war because of the atomic bombs they have." As for China, he said, "Our country will make a few atomic bombs in the future, which does not mean that we are going to use them ... what we are going to do is to take it as a defensive weapon ... Atomic bombs cannot be dropped causally. Even when we have acquired atomic bombs we should not drop them causally, otherwise, any casual use will violate the law."³

China's decision-makers have continued to carry out this policy. During a meeting with the PLA Second Artillery Force leaders in

³- *Selected Work of Mao Zedong on Diplomatic Affairs*, p. 541; p. 453.



May 1978, Deng Xiaoping pointed out that China's possession of nuclear weapons was necessary to show China's capabilities: "You have and I have; if you want to destroy us then you will be retaliated against a little bit."⁴ President Jiang Zemin explained China's nuclear policy further during a meeting with the Second Artillery leaders. He told them that the purpose of developing strategic nuclear weapons was not offensive but defensive. He argued that such a capability provided China with a strong deterrent against other nuclear-weapons states, thus proving the defensive value of the weapons. Moreover, he wrote: "Enhance the construction of the strategic missile force to safeguard the motherland and maintain world peace."⁵ This strategic nuclear thought, which was made clear through the declarations and remarks of China's leaders, reflects and reinforces the core elements of China's nuclear policy, which is that: ① nuclear weapons must be used as a last resort for China; ② it is the quality not the quantity of the nuclear weapons that is important.

China believed then, as it does now, that it should have such weapons as a basic means of defense for the country. It was due to these understandings and principles that China developed its nuclear force. China's central objective is to maintain the minimum number of nuclear weapons to ensure effective self-defense. That is to say, China's intent is that its nuclear force will survive a first nuclear strike from any country and will then be able to retaliate in kind.

4- "Interviews by *Xinhua* News Agency Correspondent with the Second Artillery Leaders," *Xinhua*, <www.xinhuanet.com/mil/2006-06/27/content_4753519.htm>.

5- *Ibid.*

However, it seems unlikely that China will change its non-first-use policy for the following reasons:

① It is a state policy that reflects Chinese philosophy and culture on warfare.

Just as Sun Tzu wrote in his work *Art of War*, war is considered very seriously by the state. It is a matter of life and death, a road either to safety or to ruin. Hence, it is too important of an issue to be neglected or de-structured from the non-first-use policy. To have a good understanding of China's nuclear policy, one must also be aware of China's culture and history.

② In the foreseeable future, there is only a slim possibility of a large-scale conventional war against China.

According to government and scholarly assessments, China currently enjoys its most favorable relations with the world's big powers and its neighboring countries since the establishment of the PRC. The war alert status is at the lowest level it has been at for years and this is not expected to change.

③ The PLA, which has been modernizing over the last 30 years, has the capability to defend the mainland from any invasion and prevent the separation of Taiwan, its chief security issue.

Since the early 1990s, the strategic guideline for national defense has shifted to focus on the potential for any crisis happening across the Taiwan Strait, which will absolutely not require a nuclear bomb.

④ Tactically speaking, changing its nuclear policy would completely change the structure and deployment posture of China’s nuclear force, which would cost billions of Chinese Yuan.

Over the past 30 years, the Chinese have been putting all their efforts into developing the economy and improving society; it seems unlikely then that the government would want to pay for the large change in economic priorities that dropping the non-first-use policy would entail.

Today, the Chinese government still insists on its “Five No’s” principle with respect to nuclear weapons development, further demonstrating its commitment to minimal capacity. According to this principle, China will have: ① no competition with other nuclear powers; ② no dependence on other nuclear powers; ③ no proliferation of nuclear weapons; ④ no deployment of nuclear weapons abroad; and ⑤ no nuclear alliance with any other countries.

As mentioned above, in 2006 the government announced clearly that its nuclear strategy was one of self-defense:

China’s nuclear strategy is subject to the state’s nuclear policy and military strategy. Its fundamental goal is to deter other countries from using or threatening to use nuclear weapons against China. China upholds the principles of counterattack in self-defense and limited development of nuclear weapons. It aims to build a lean and effective nuclear force capable of meeting national security needs. It endeavors to ensure the security and reliability of its nuclear weapons and maintain a credible nuclear deterrent force. China’s nuclear force is under the direct command of the Central Military Commission (CMC). China exercises great restraint



in developing its nuclear force. It has never entered into and will never enter into a nuclear arms race with any other country.⁶

3. To Control the Nuclear Capability

The resumption of disarmament talks between the United States and Russia has raised questions about how China will respond. Scholars and officials all over the world have repeatedly asked the question, “If other nuclear powers begin the process of in-depth nuclear disarmament, will China follow suit?” Recent reports by the U.S. government and speeches by high-ranking U.S. officials have even suggested that the United States should put more effort into persuading China to join the U.S.-Russia nuclear disarmament negotiations as they did during the Cold War era.

The irony is that China is not in a position to “follow” any state in this trend, as it has been at the forefront of the disarmament issue for several decades. While Obama’s ideas on a nuclear-free world are not original, he wrapped them in new packaging before presenting them to the international community, which lent them greater attention. This instance of Obama “going against the wind” was beneficial to the international security situation, the recent adjustment of relations among great powers and each country’s efforts to mitigate the threats they face from nuclear terrorism.

⁶—Information Office of the State Council of the People’s Republic of China, *China’s National Defense in 2006* (Beijing: December 2006).

Beijing's Roadmap to Nuclear Disarmament

Nuclear disarmament is a phrase used to describe the reduction, limitation and destruction of nuclear weapons and their delivery systems through bilateral or multilateral negotiations and treaties. China's nuclear disarmament policy is an important part of its nuclear policy. Just as with other countries, nuclear disarmament has pros and cons: on one side, it is a guideline for the modernization and reduction of a nuclear weapon stockpile. So to some extent, nuclear disarmament falls into the category of domestic issues. On the other side, it is an effort made by a government which concerns the international process of nuclear arms control and disarmament. In this paper, the discussion will be mainly focused on this latter side.

As previously stated, from the founding of the PRC in 1949 through the 1960s, the country's nuclear policy was primarily influenced by the policies of the Soviet Union, China's socialist ideology and, of course, the country's perception of war and peace as understood through Marxism and Leninism. Under this logic, only the accumulation of nuclear weapons could dissuade other countries from attacking. Yet, when the relationship between the two communist countries began to fall apart, China adjusted its positions on both its nuclear and nuclear disarmament policies in order to face the changed international situation. On 16 October, 1964, after having successfully completed its first nuclear test, China reiterated its stance regarding the complete prohibition and thorough destruction of all nuclear weapons. China declared that it would never use nuclear weapons offensively at any



time or under any circumstances. It then called for an international conference to discuss the complete prohibition and eventual elimination of nuclear weapons.

In order to accomplish nuclear disarmament, China proposed that the first step should be to create agreements banning the use of nuclear weapons. This basic principle of “complete prohibition” followed by “thorough destruction” of nuclear weapons has continued to serve as the foundation of China’s nuclear policy.

In the reform and opening era, China has increasingly participated in international nuclear disarmament and anti-proliferation processes. In March of 1993, China entered into the Nuclear Non-Proliferation Treaty(NPT), and in September of 1996, China signed on to the Comprehensive Nuclear Test Ban Treaty(CTBT). In May of 2004, China was also admitted as a member of the Nuclear Suppliers Group, which seeks to curb proliferation through guidelines for nuclear-related exports. Meanwhile, the Chinese government endorsed a substantial body of laws and regulations to control its indigenous nuclear industry.

After 50 years, China’s nuclear disarmament policy has proven to be thorough, fair and morally just. With regard to thoroughness, China requests nuclear weapons states to legislate at an international level the complete prohibition of nuclear weapons, with a “no first use” pledge as a necessary condition for progress. The policy is fair because Beijing has insisted that relying only on great powers and bilateral agreements to resolve the nuclear disarmament issue is unacceptable, since this often leads to acts of intimidation towards weaker countries. Instead, China advocates the equal and universal

participation of all concerned countries in the negotiations on nuclear disarmament. Rational armaments and disarmaments should be reached through dialogue and cooperation among all nations rather than through power politics and double standards. Finally, China's policy is morally just because it has been put into practice for many decades: In the face of significant pressure, China has maintained a "no first use" policy of nuclear weapons commitment and the promise not to attack non-nuclear weapon states with nuclear weapons. Moreover, China itself has stated its willingness to start its own disarmament as soon as the United States and Russia have fairly reduced their nuclear armaments to a lower level.



A New Direction for China's Nuclear Disarmament Policy

At the UN Security Council summit meeting last September, China's President Hu Jintao gave a clear-cut response to questions about China's position on disarmament: "When conditions are ripe, the other nuclear-armed countries should enter into a course of multilateral disarmament talks. In order to bring about complete and thorough nuclear disarmament, the international community should, at a suitable point in time, formulate a feasible long-term plan with separate stages, including the establishment of a 'Treaty on the Complete Prohibition of Nuclear Weapons'." Of course, "other countries" includes China.

While President Hu's statement leaves no doubt as to China's commitment to a nuclear free world, there are still a number of questions relevant to the country's nuclear disarmament policy in the

foreseeable future. In order to establish a reputation as a responsible power that upholds international security and regional stability, China could make a serious and comprehensive assessment of its current nuclear disarmament policy.

Recently, as the United States and Russia move towards large reductions in their nuclear weapons caches, there has been a profound change in the international security environment. Now, even medium-sized nuclear-armed countries are considering reductions. In this context, China's nuclear disarmament policy will be adjusted in its form rather than its content, as we all have seen, through the addition of a new security concept to its nuclear disarmament policy. However, in the foreseeable future, China could not completely abandon its long-held "complete prohibition" and "thorough destruction" policy.

China's position on disarmament will be determined by its strategic considerations such as its ability to deter foreign attacks and the necessity of closely guarding the exact extent of its military capabilities. China's current nuclear modernization is first and foremost for guaranteeing the safety, survival and reliability of its nuclear weapons. This modernization also guarantees that China's deterrent force is not weakened in the face of external threats such as the construction of the U.S. missile defense program. Furthermore, the policy of hiding capabilities and biding time has long been a guiding principle in China's nuclear disarmament policy. China will not compete for credit with the United States in a new campaign for global disarmament. On the contrary, China will quietly wait and see, and then it will respond at the appropriate time. This is precisely the reason why both Chinese

officials and scholars reacted with what some may call indifference to the proposition of a nuclear-free world. China is more concerned with actions than with words.

China has actively participated in international arms control and disarmament, signed nearly all treaties and conventions on arms control and disarmament and entered into all anti-proliferation mechanisms. Compared with its policy during the pre-reform and open-up period, China's current nuclear disarmament policy places more importance on moral considerations. Upholding moral considerations in the debate over nuclear disarmament is not only important as a declaration of China's position, but also as a key component of constructing strategic stability with other countries, especially with the United States. Currently, most U.S. attention with regard to nuclear disarmament is focused on Russia. But as the two countries make bilateral progress, the United States will certainly pay more attention to China's nuclear disarmament policy. The United States and China both have moral requirements in this perspective. That is to say, nuclear disarmament measures taken by any country will be regarded as important steps toward abolishing the nuclear threat, which should be done by any responsible state for world peace and regional stability. The moral requirement is also a foundation for the two countries' cooperation in dealing with nuclear threats today.

Disputes still exist within China, however, as to how the country should approach America's nuclear disarmament policy. For example, with regard to the issue of when the CTBT should take effect, some scholars feel that China should do so before the United States in order



to take the moral high ground. However, some worry that once China ratifies the treaty, it would face a “Catch-22” situation. Thus, they feel that only after the United States ratifies the treaty should China begin considering this issue. This debate has not been concluded yet and will certainly continue.

At present, there seems to be little need for China to rethink its approach to nuclear disarmament. China’s nuclear disarmament policy was formulated after careful consideration by the first generation of China’s Communist Party leadership and has proven to be strategically sound. This type of policy does not rely on changes in any one area, but instead states that China should continue nuclear disarmament from a macroscopic level. It guarantees the development of China’s nuclear forces and states that nuclear policy and nuclear disarmament policy will not undergo any large twists and turns. This is not only the most economical nuclear disarmament policy, but also the most effective. Even though we face all kinds of changes today, China’s nuclear disarmament policy will not undergo any fundamental alteration in the foreseeable future. Changes will only come in the form of packaging and not in basic meaning. The reason for this is not that China is complacent and conservative, or that it does not strive for new thinking; instead, it is because the nuclear disarmament policy formulated by China’s first generation of leaders remains irreplaceable.

4. To Secure the Nuclear Capability

The fast development of the economy, the thirst for energy and the high pressure on environmental protection has already made the world rethink the use of nuclear energy. In 2007, a “Medium and Long Term Development Plan for Nuclear Power(2005 – 2020)” was issued by the Chinese government which changed the guidelines for the use of nuclear technology from proper development into active development, the main ideas in this document can be divided into several aspects: ① to vigorously promote nuclear power development; ② to develop nuclear technology of 1000MW class advanced PWR; ③ the total installed nuclear power capacity in operation will reach 40GW(giga/bw) by 2020 and another 18GW installed capacity under construction will continue after 2020. The nuclear power proportion over the total installed power capacity will increase from less than 2% at present to 4%. Such an ambitious enlargement of nuclear energy will widely expand the construction and security of safety management. Nuclear safety and security have also become a real challenge for the government and industry.

The Use and Construction of Nuclear Power

After years of development, China now has 11 nuclear power units in operation with a total capacity of 9,000MW. There are also more than 20 units under construction, including four AP1000 units. According to China’s nuclear development plan, by the year 2012, the total



number of nuclear power units in operation and under construction in China will exceed 50, including AP1000, EPR and HTGR units. In 2020, the estimated number of units will exceed 100. Nuclear power plants in China have had good records of safety operations and their primary operational parameters are superior to the world average. In addition, their discharge volume of radioactive waste is far below the national standard limits.

The Secure Measures Taken by the Government

For a long time, the Chinese Government has been emphasizing the security of nuclear material and nuclear facilities. According to “The Regulations for the Supervision and Management of Civilian Nuclear Facilities” and “Regulations for Safety and Protection of Radioactive Isotope and Radial Facility” issued by the State Council, the National Nuclear Safety Administration(NNSA) is responsible for the supervision of nuclear facilities and radioactive sources, including the supervision of security. NNSA not only reviews the ability of each facility to prevent radioactive harm on the people and environment, but also reviews the design of each facility’s physical protection system. If the physical protection system fails to pass the review, the facility will not be constructed.

To ensure the safe and lawful use of nuclear materials, as well as to prevent theft, sabotage, loss, unlawful diversion and unlawful use, the State Council released “Regulations on Nuclear Materials Control” in 1987. These regulations established the legal base for nuclear

security. Based on these regulations, “Code for the Implementation of Regulations on Nuclear Materials Control” was issued in 1991.

China has adopted a licensing system for owning, using, producing, storing, transporting and disposing of nuclear materials. Any licensee should establish a strict security and guarding system for their nuclear material adopt reliable security protection measures and take strict precautions against accidents, theft or sabotage.

5. China’s Way to Go Nuclear

In conclusion, China’s way to go nuclear first started from the military’s decision to make atomic bombs in order to defend against the threat of nuclear blackmail and nuclear war. The normalization of relations with the United States and the Soviet Union in the 1980s fundamentally changed the threats posed by these countries. At this time, the Chinese government began to attach great importance to the peaceful use of nuclear energy.

In terms of civilian use of nuclear technology, the construction of the Qinshan nuclear power plant was a milestone for China. However, for at least 20 years the development of this capability has deliberately been kept at a slow speed. The increased use of nuclear energy since 2007 also presented new challenges for the government: how China will deal with such a fast expansion is an issue that not only concerns the use of nuclear technology but also the management of these facilities.



On the military use of nuclear technology, as China's white paper on defense pointed out, China has been following the principle of building a lean and effective force and going with the tide of the development of military science and technology. The Second Artillery Force strives to raise the information level of its weaponry and equipment, ensure its safety and reliability, and enhance its capabilities in protection, rapid reaction, penetration, damage and precision strikes. After several decades of development, China has created a weaponry and equipment system with both nuclear and conventional missiles, both solid-fueled and liquid-fueled missiles, different launching ranges and different types of warheads.

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