

**Statement of Lt. Gen. Frank G. Klotz, USAF (Ret.)
Under Secretary for Nuclear Security
U.S. Department of Energy
on the
United States-China Agreement for Peaceful Nuclear Cooperation
Before the Senate Foreign Relations Committee**

May 12, 2015

Chairman Corker, Ranking Member Cardin, and distinguished members of the Committee, I appreciate the opportunity to submit this testimony in support of the proposed successor U.S.-China agreement for peaceful nuclear cooperation, or the so-called “123 Agreement.” The proposed agreement provides a comprehensive framework for peaceful nuclear cooperation with China based on a mutual commitment to nuclear nonproliferation. The Department of Energy (DOE), as a member of the interagency negotiating team, strongly supports entry into force of this agreement following the requisite Congressional review period. This Agreement is fully consistent with the law and incorporates all of the terms required by Section 123 of the Atomic Energy Act of 1954 (AEA). This Agreement will replace an existing 123 Agreement with China that has been in place since 1985.

Status of the Agreement

The Agreement was submitted by President Obama for congressional review on April 21, 2015, along with the required unclassified Nuclear Proliferation Assessment Statement (NPAS) and two accompanying classified annexes. The Secretary of State and the Secretary of Energy recommended that the President make the legal determination that the Agreement “will promote, and will not constitute an unreasonable risk to, the common defense and security.” The Secretary of Energy and I share that view based upon a number of factors detailed in this testimony. Our complex relationship with China presents both challenges and opportunities. One of the most dynamic areas of collaboration we have is in the energy sector, which is why continuing U.S.-China civil nuclear cooperation remains in the best interest of the United States.

Justification for the Agreement

The State Department will review the Agreement, and the accompanying NPAS provides details on all of the provisions of the Agreement, but let me briefly highlight some important elements and why this agreement is essential for upholding our shared nonproliferation, energy, and commercial goals.

The proposed 123 Agreement is an important element in promoting strong nonproliferation policies and our interest in seeing China further advance its already improved record on proliferation issues. The successor agreement not only complies with all of the nonproliferation measures and controls required by U.S. law, but it also includes new elements that provide for further assurances that this cooperation is solely peaceful in nature and will not be re-directed for other purposes. In particular, the Agreement includes requirements that adequate physical

protection measures be maintained with respect to U.S.-obligated nuclear material and equipment; the U.S. right to prior consent to any retransfer from China of U.S.-obligated nuclear material, equipment, or components; and the requirement that no U.S.-obligated nuclear material may be enriched or reprocessed without the prior approval of the United States.

Many on this committee may be interested to know how we can proceed with nuclear cooperation with China in a way that protects our vital national security interests. In the view of the Department of Energy, the conclusion of a 123 Agreement with China will enhance our ability to manage and mitigate the risk of China diverting sensitive nuclear technology to its military programs or re-exporting it without U.S. permission. Indeed, it is my view that we are better off from a national security perspective by completing this agreement than we are without any 123 agreement in place at all.

Technology Transfer Provisions in the Successor Agreement

The challenges that arise regarding nuclear cooperation with China are not unique to China. In working with any foreign partner, the United States places emphasis on measures to ensure that nuclear technology transferred from U.S. companies is not used or retransferred in a manner that is prohibited by the terms of the Nuclear Non-Proliferation Treaty (NPT), other treaties, or U.S. statutory law, or is inconsistent with U.S. commitments to the Nuclear Suppliers Group (NSG), and all other U.S. nonproliferation commitments and policies.

To address the opportunities and challenges presented in ongoing civil nuclear cooperation with China, the United States negotiated new and unique provisions in the proposed 123 Agreement.

First, we elevated the level of authorization required for the provision or transfer of civil nuclear technology to China. Under the new agreement, technology transfers will now be authorized under the provisions of the 123 agreement itself. The terms of the proposed 123 Agreement establish a mechanism for the United States to greatly increase our oversight of proposed technology transfers from the United States to China. In effect, all of the nonproliferation assurances and other provisions in the 123 Agreement would now apply to technology covered by subsequent arrangements that the Secretary may issue pursuant to Section 131 of the AEA. This is a far more robust process than the government-to-government nonproliferation assurances that are provided by the Government of China for technology transfers authorized by the Secretary of Energy pursuant to 10 CFR Part 810 (Part 810).

Furthermore, under the proposed Agreement, the United States and China would now review on an annual basis requests from U.S. industry to identify projects and end-users that are eligible for receipt of nuclear technology subject to the 123 Agreement, upon entry into Section 131 subsequent arrangements. This is a new element that was not included in the 1985 Agreement and would provide an unprecedented level of insight into commercial transactions.

As compared to the current regulatory pathway, this method would provide for greater oversight of all the covered activities, and would allow for more timely decisions regarding technology transfer requests so that U.S. companies may be increasingly competitive in the Chinese market. It would also make the failure to comply with the technology transfer authorizations issued under the 123 Agreement a breach of the legally binding terms of the Agreement.

Joint Training Requirements in the Successor Agreement

It is important to highlight that the new terms regarding technology control also mean that both the United States and China will need to educate our respective industries on the new process, its goals, how it would work, and most importantly, the terms and limitations of the successor 123 Agreement. We are building upon the significant efforts already underway regarding the training of China's export control officials and experts. To do so, we have included as a requirement in the Agreement that the United States and China jointly provide training to commercial entities in both countries regarding the requirements of the successor 123 Agreement, including controls and policies applicable to exports and imports subject to the Agreement. This training would emphasize the legal obligations that: (1) there would be no diversion of materials, equipment, components, technology, or assistance to non-peaceful or military uses; and (2) there would be no retransfer without prior consent. This is the first time that this kind of training and educational component has been included in any 123 Agreement; neither U.S. nor Chinese commercial entities will be able to claim to be unaware of the terms of the Agreement or their corresponding legal obligations.

Commercial Implications

DOE and State considered many factors in the negotiation of this Agreement, including the recognition that China has an advanced civil nuclear program that is heavily dependent on U.S. commercial vendors. The Department of Commerce has identified China as one of the largest and most important markets for the U.S. nuclear industry. China has the fastest growing nuclear energy program in the world with 26 nuclear power plants in operation, 24 under construction, and dozens more planned. China increasingly seeks services, technology, and equipment from U.S. and other foreign commercial vendors for its civil nuclear program. We believe it is in the best interest of the United States to continue to support U.S. vendors' ability to compete in this fast growing market.

The growth of Chinese clean nuclear energy demonstrates its commitment to combatting the challenges of global climate change. Last November, in a Joint Announcement between our two Presidents, China announced its intention to increase the share of non-fossil fuels in its primary energy consumption to around 20 percent by 2030 as part of its effort to meet its post-2020 climate change targets. Nuclear power will be an important part of those targets, providing a significant commercial opportunity for U.S. vendors while advancing U.S. interests in facilitating China's pledge to peak its greenhouse gas emissions by about 2030.

A failure to allow the proposed 123 Agreement to go forward would essentially cut off U.S. vendors from this market, constituting a potential serious commercial threat to the overall health and well-being of our civil nuclear industry. For example, DOE invests in a variety of research and development programs that work with industry to develop the next generation of nuclear reactors. These interactions have yielded significant commercial interest from Chinese entities seeking U.S. nuclear technologies. Absent a successor 123 Agreement, these vendors will be unable to compete in a burgeoning Chinese market.

U.S.-China collaboration on peaceful nuclear cooperation provides us with invaluable insights into not only China's civil nuclear program, but also its science, engineering, and technology

programs, as well as its research and development priorities. If the United States fails to replace the expiring U.S.-China 123 Agreement, all of this important work could be put in jeopardy.

Finally, failure to bring the Agreement into force with China would significantly impact diplomatic relations and likely eliminate the broad range of U.S.-China cooperative programs that the United States uses to strengthen China's nonproliferation, safety, and security culture in its nuclear industry, which are intended to ensure that China develops its civil nuclear program in a safe and responsible manner. Should Chinese civil nuclear programs no longer be able to rely on technology, material, and equipment from the United States, they will turn to other providers whose nonproliferation and safety standards may not be on par with those of the United States.

Export Control and Peaceful Use Cooperation with China

Bilateral cooperation on the peaceful uses of nuclear technology is governed by the legal framework provided in the subsequent 1998 U.S.-China Peaceful Uses of Nuclear Technology (PUNT) Agreement, which falls under the umbrella of the current U.S.-China 123 Agreement. This cooperation has been invaluable in strengthening both countries' civil nuclear power programs. Without a legal framework to facilitate collaboration with China, the United States ability to influence safety and nonproliferation design considerations in China as it moves forward with the development and deployment of advanced reactor and fuel cycle technologies would be diminished. This is especially important in light of China's growing efforts to promote its technologies worldwide.

DOE/NNSA's export control outreach program is also reliant on the 123 Agreement and PUNT framework, which has been working since 2007 in China under the PUNT umbrella. This program has trained over 100 governmental officials per year from six different Chinese agencies that have various export control and internal compliance responsibilities. DOE/NNSA also has trained dozens of additional industry personnel on the subjects of internal compliance and best practices of China's export controls. Provided the successor 123 Agreement is brought into force, DOE/NNSA expects to expand significantly the number of industry officials engaged through a train-the-trainer awareness-raising approach, to underscore the importance of the principal of non-diversion to non-peaceful or military purposes which is outlined under the 123 Agreement.

Science and Energy Cooperation with China

The Department also has broader science and energy cooperation with China that is made possible by the 123 Agreement. Collaboration has been taking place for over thirty years in important areas including high energy physics, magnetic fusion, materials research, synchrotron and neutron science, and topics relevant to environmental management (EM). U.S.-China cooperation in these areas continues to benefit the United States as China has increased its funding significantly for basic research and our scientists have the chance to work with some of the world's brightest scientists and engineers. There is also extensive cooperation with China in the area of civil nuclear energy research and development. The scope of this collaboration is broad and deep; it includes advanced R&D in separations technologies, fast reactor technologies and safety analysis, molten salt reactor coolant systems, fuels and materials

development, nuclear safety enhancement, spent fuel storage, repository science, and uranium extraction from seawater.

Conclusion

When reviewing the successor 123 Agreement, it is important to consider the specific provisions of all our 123 Agreements. The United States requires our trading partners to provide guaranties consistent with the legal requirements contained in Section 123 of the AEA. These requirements are intentionally stringent and set the global standard for nuclear commerce. It is therefore in the U.S. national interest to encourage other governments that are considering commercial nuclear programs and that are in compliance with their nuclear nonproliferation obligations to sign 123 Agreements with the United States. Our 123 Agreements feature the highest nonproliferation standards, thereby discouraging a nonproliferation “race to the bottom,” in which potential partners negotiate peaceful nuclear cooperation Agreements with suboptimal nonproliferation controls.

Replacing the 123 Agreement with China continues a path that Congress started down 30 years ago when the current 123 Agreement was negotiated. Since the 1985 Agreement was negotiated, the United States has witnessed China make great strides in the area of nonproliferation and in its civil nuclear program, even though we know there is more work to do. Some of these strides were made specifically because of the value that China placed on having a 123 Agreement with the United States and the desire to cooperate with the most advanced, safest, and reliable civil nuclear program in the world. Without this 123 Agreement, the United States will lose a critical mechanism for influencing China’s nonproliferation behavior, and the insight and transparency into China’s nuclear programs as a result of the thirty years of cooperation to date in this area.

Thank you for the opportunity to provide this testimony to the Committee.