

Statement for the Record

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Hearing on The Future of U.S. International Nuclear Cooperation
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Subcommittee on Terrorism, Nonproliferation and Trade

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Mr. Chairman, Members of the Subcommittee, I am pleased to be invited to testify today on the future of U.S. international nuclear cooperation. My testimony is presented on behalf of the Nuclear Energy Institute (NEI). NEI is responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including regulatory, financial, technical and legislative issues. NEI members include all companies licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

My law firm, Pillsbury Winthrop Shaw Pittman LLP, is a longstanding member of NEI. I have participated for many years in NEI programs dealing with peaceful nuclear commerce issues and opportunities. In addition, while serving as an attorney at the U.S. Department of Energy from 1977-1981, I was a member of the U.S. Government teams that negotiated U.S. agreements for cooperation with the European Atomic Energy Community (EURATOM) and several countries in Asia and the Middle East. Over several decades of private law practice, I have advised clients concerning international nuclear commerce matters and presented papers on this subject at conferences held by the American Nuclear Society, World Nuclear Association, Uranium Institute, U.S. Council for Energy Awareness, and NEI.

It is appropriate that this hearing is being held this week as the Review Conference for the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) begins in New York. For 40 years, the NPT has served as the principal international agreement that provides a global barrier to the spread of nuclear weapons. The NPT rests on three interrelated and mutually reinforcing pillars – non-proliferation, peaceful uses of nuclear energy and disarmament. Although tested by the actions of a few rogue nations, this framework remains as valid and essential today as it was when the NPT entered into force 40 years ago. The private sector is an essential component of the global non-proliferation regime, since it is through industry that nations gain access to the peaceful uses of nuclear technologies, subject to appropriate government controls.

My testimony this morning will deal only in passing with the foreign policy considerations that are best left to the Department of State. Instead, I will focus primarily on the unique role that the U.S. nuclear industry plays in helping the U.S. Government achieve its nuclear non-proliferation and security objectives while also providing a substantial number of American jobs.

U.S. Nuclear Industry Participation in the International Nuclear Renaissance

As has been frequently discussed during Congressional hearings over the last three decades, the United States can best achieve its non-proliferation objectives when U.S. companies are major suppliers of nuclear reactor components, services and the nuclear materials to produce the low-enriched uranium needed to fuel those reactors. Recognition by U.S. trading partners that the United States is a reliable supplier gives the United States the ability to influence the type of nuclear power programs implemented in countries that have begun such programs or have announced an intent to do so. Simply stated, the United States has no influence over non-proliferation policy if American companies are not participating in the market.

Shortly after the Eisenhower Atoms for Peace Program was announced in 1953, many countries entered into peaceful nuclear cooperation agreements with the U.S. Since such agreements are merely a legal framework for U.S. supply of nuclear materials, components and services, the influence that the U.S. gained with these trading partners depended largely on the ability of U.S. companies to supply research and power reactors, and associated nuclear fuel and services, to customers in South America, Europe, Asia and Africa. For several decades, U.S. reactor designs and U.S. reactor manufacturers and fuel suppliers had the dominant market share in the Western World.

Beginning in the 1970s, and steadily increasing since then, vendors of nuclear reactors in Europe and Asia developed their own reactor designs and capacity to manufacture components and fuel. By the 1980s, buyers of power reactors could choose among reactor suppliers in France, Canada, Japan, Russia and several other countries. Today, reactor design and manufacturing capacity is further spread around the world, and new international suppliers are emerging, as illustrated by the Emirates Nuclear Energy Corporation's (ENEC's) selection of Korea Electric Power Company (KEPCO) to supply four power reactors to the United Arab Emirates (UAE).

The International Atomic Energy Agency has estimated that the market that will emerge out of the coming global nuclear renaissance will range from 178 to 357 new reactors worldwide. This potential market represents substantial economic opportunity for U.S. companies. As a rule of thumb, the Commerce Department estimates that every \$1 billion of exports by U.S. companies represents 5,000 to 10,000 jobs. Additional overseas orders for new reactors, components, engineering services, and fuel would create even more jobs. In the near-term, job creation in the United States and rebuilding of the nuclear supply chain will be heavily dependent on overseas orders.

Given the changes in the world market for nuclear energy goods and services, it is important to consider the continuing strengths of the U.S. nuclear power industry, and the central role that U.S. companies can and should play as the pace of nuclear power development quickens around the globe. The U.S. nuclear industry includes companies that are majority-owned by U.S. shareholders as well as other companies that have a substantial presence in the United States but are majority-owned by non-U.S. interests. As is true of many industries, the U.S. nuclear power industry is increasingly global, not only from the perspective of U.S. suppliers but also of U.S. nuclear utilities, which increasingly procure reactor components and nuclear services in many countries that have a strong peaceful nuclear cooperation relationship with the United States.

Thus, the U.S. industry increasingly must understand and comply with a complex web of multilateral and bilateral agreements, laws of various countries and detailed import and export regulations to function successfully in a global marketplace. In dealing with these laws, rules and agreements, NEI and its members have acquired a perspective that should be valuable to the Executive Branch and Congress as they exercise their important responsibilities under the Atomic Energy Act and other applicable laws and agreements that govern U.S. peaceful nuclear commerce.

Leveling the Playing Field to Allow U.S. Companies to Compete with Overseas Suppliers of Nuclear Power Plant Equipment, Materials and Technical Data

The ability of U.S. companies to supply materials, engineering services, components and technical data for the construction and operation of nuclear power stations outside the U.S. depends mainly on (1) U.S. agreements for cooperation; (2) timely issuance of U.S. export licenses and authorizations; (3) multilateral agreements, such as the Treaty on the Non-proliferation of Nuclear Weapons (NPT) and organizations, such as the Nuclear Suppliers Group (NSG); and (4) U.S. government support for U.S. companies during international competition for contracts to construct and operate nuclear power stations in other countries.

1. Eliminating Unnecessary DOE Controls Over U.S. Companies' Assistance to Foreign Nuclear Power Programs

As specified in Section 57b of the Atomic Energy Act, U.S. companies may not provide assistance to other countries with respect to their nuclear power programs except as provided in an agreement for cooperation or as authorized by the Department of Energy (DOE). Enacted in 1954, Section 57b of the Atomic Energy Act sought to protect U.S. national security at a time when nuclear power was in its infancy. Despite the far-reaching changes in the nuclear power industry since enactment of this provision, the rules promulgated by the U.S. Atomic Energy Commission more than 50 years ago to implement Section 57b are unchanged in many important respects.

NEI applauds DOE's intent to initiate a rulemaking to revise its rules that implement Section 57b (codified at 10 CFR Part 810). Unless rewritten, these rules could diminish the U.S. nuclear industry's ability to reach its full potential in peaceful nuclear commerce.

Briefly, Part 810 prohibits U.S. companies from assisting existing and new nuclear power programs unless such assistance is within the scope of a general or specific authorization issued by the Secretary of Energy, following an interagency review process specified by the Atomic Energy Act. Since specific DOE authorizations by the Secretary of Energy are necessary, these DOE rules can create an impediment to U.S. nuclear companies' ability to conduct routine business – including, for example, hiring nuclear engineers and technically qualified workers from several countries, including Russia, China, and India, to assist in the design of new reactors and operation and maintenance of U.S. power reactors. DOE needs to assure that the rules finally adopted are effective in applying non-proliferation principles without creating unnecessary burdens.

A substantial amount of technical data concerning nuclear power reactors is related to the safe operation and maintenance of these units. Further, a significant percentage of information exchange between U.S. and foreign entities regarding the use of nuclear energy involves benign matters from the standpoint of non-proliferation, such as procurement of components and systems by U.S. nuclear companies and benchmarking on safety issues between U.S. and foreign utilities and vendors. The current Part 810 rules have the unintended effect of standing in the way of cooperative programs and information exchange designed to improve the operational safety of nuclear power reactors around the world.

Some of the controls imposed by Part 810 on U.S. companies' transfer of power reactor technical data to non-U.S. individuals are no longer necessary in the interest of U.S. security. By constraining U.S. companies' participation in peaceful nuclear power programs in many countries, DOE's current rules confer a substantial competitive advantage on foreign suppliers with no corresponding benefit to U.S. non-proliferation objectives. NEI believes that Part 810 should be revised to remove restrictions that are no longer needed to protect U.S. security interests, focusing instead on data and assistance concerning aspects of the nuclear fuel cycle that are sensitive from a non-proliferation perspective, such as enrichment of uranium and reprocessing of used fuel.

These rules should also conform to requirements imposed by other members of the Nuclear Suppliers Group, to ensure that U.S. companies are not placed at a disadvantage.

2. New Multilateral Agreements to Achieve U.S. Non-proliferation Objectives and Create a Level Playing Field to Allow U.S. Companies to Compete for International Nuclear Power Contracts

(a) International Agreements to Provide Assured Long-Term Supply of Nuclear Fuel to Countries that Pledge Not to Pursue Reprocessing or Enrichment

Mechanisms to provide long-term nuclear fuel supply assurances to countries that agree not to design or build uranium enrichment or used fuel reprocessing facilities have been discussed in Congressional Committee hearings and reports of the Congressional Research Service. A central feature of the Agreement for Cooperation between the United States and the United Arab Emirates is the UAE's pledge not to acquire reprocessing or enrichment technology or facilities. However, if countries that are pursuing new nuclear programs agree not to obtain such facilities, they must rely on the commercial market suppliers – the United States, France, the United Kingdom, the Netherlands, Germany and Russia – that possess enrichment and reprocessing capacity to supply fresh fuel and take back used fuel, and possibly to recycle the fissile materials and reduce the volume of nuclear waste. Obviously, none of these activities can take place without Section 123 agreements for cooperation.

The U.S. nuclear industry is able to make a substantial contribution to establishing long-term fuel assurances that will complement the U.S. Government's ongoing efforts to convince additional countries in the Middle East and elsewhere to enter into binding commitments to forego developing enrichment or reprocessing facilities. U.S. providers of uranium and suppliers of

conversion, enrichment and nuclear fuel fabrication services are familiar with innovative contractual mechanisms for achieving long-term fuel supply arrangements. Nuclear fuel assurances clearly must be acceptable to the governments that are launching new nuclear power programs and to the private sector entities that will provide the financing for such undertakings. Nuclear fuel leasing is a promising means of providing the requisite assurances while also maintaining governmental control over the used fuel after it is discharged from reactors.

(b) Binding International Commitments by Supplier Countries to Refrain from Providing Enrichment and Reprocessing Technology and Facilities to Countries that Currently Do Not Have Such Capability

The Nuclear Suppliers Group (NSG) Guidelines currently impose significant constraints on NSG members' export of technical data and nuclear technologies that are sensitive from a non-proliferation perspective, such as enrichment and reprocessing facilities. It may be appropriate to consider negotiation of a multilateral agreement that would require Member States to refrain from transferring such sensitive facilities, technologies or technical data to countries currently lacking such capability, which could then be incorporated into bilateral arrangements to supply nuclear power components and materials to countries that are launching new nuclear power programs. In testimony on October 7, 2009, before the Senate Foreign Relations Subcommittee on Near Eastern and South and Central Asian Affairs, the State Department observed that establishing such international binding commitments is a difficult task that will take substantial time to pursue, with an uncertain outcome..

(c) U.S. Government Support for the U.S. Industry in Connection with International Procurement of Nuclear Power Stations

Countries that pursue plans to develop a nuclear power program typically do so by issuing an invitation to tender, and conducting a lengthy evaluation process that culminates with the award of an engineering, procurement and construction (EPC) contract or other appropriate contract to the winning entity. During such competition, support for the bidders by their governments often is a major factor. For example, as has been publicly reported, the President of France and the President of the Republic of Korea each visited the UAE in connection with proposals to the Emirates Nuclear Energy Corporation. A similar level of U.S. Government support may be vital to the ability of U.S. companies to prevail in major competitions to supply nuclear power reactors to other countries that are developing new nuclear power programs, when coupled with commercial proposals that are competitive from an economic standpoint. U.S. economic support for such proposals is also necessary to match the financing mechanisms and assurances offered by the Governments of France, Japan, South Korea and other countries.

NEI commends the Department of Commerce for recognizing the need for greater Federal advocacy and support of U.S. industry through the formation of the Civil Nuclear Trade Advisory Committee. This advisory committee will play an important role in providing consensus advice to the Secretary of Commerce on the specific needs of the U.S. nuclear industry as it pursues opportunities globally. To create a level playing field for U.S. industry, more is needed, however. Such joint industry-government initiatives, to identify and implement the economic support that is needed for the U.S. nuclear power industry to compete, should be

assigned high priority. As noted earlier, the United States gains leverage over other nations' non-proliferation policies and programs only through active participation in the commercial nuclear energy business worldwide.

Bilateral Agreements for Cooperation Concerning Peaceful Uses of Nuclear Energy

1. Importance of Agreements for Cooperation

As NEI and its members have long recognized, the ability of U.S. companies to supply nuclear materials, products and services to customers in other countries for peaceful purposes is significantly affected – indeed precluded in some instances – by U.S. laws, regulations and bilateral agreements that govern U.S. exports of such materials and components and participation in overseas nuclear power programs.

Major developments with respect to U.S. peaceful nuclear cooperation with other countries have occurred recently, including entry into force of the U.S. Agreement for Cooperation with the UAE in December of 2009 and an Agreement for Cooperation with India in 2008. Yet many major challenges and opportunities lie ahead, including negotiation of new and amended Section 123 agreements. Timely U.S. entry into such new and amended agreements is essential. Without such agreements, the U.S. industry will have little or no chance to supply power reactors to the growing number of countries that have announced plans to build nuclear power stations.

When assessing whether U.S. national security interests are well-served by U.S. entry into agreements for cooperation concerning peaceful uses of nuclear energy (Section 123 agreements), a major consideration is the fact that such agreements are merely a framework for U.S. peaceful nuclear cooperation. Such agreements are a prerequisite to U.S. supply of power reactors, major reactor components and nuclear fuel. Without exports of nuclear material and components and transfer of technical assistance as needed for nuclear power programs, U.S. agreements for cooperation pursuant to Section 123 remain empty shells that cannot achieve their intended purpose of U.S. engagement in peaceful nuclear commerce. As State Department officials have often observed in testimony before House and Senate Committees, such agreements do not obligate the United States to make any exports of nuclear material or components or transfer any technical data. Moreover, exports of nuclear material and equipment must satisfy the criteria set forth in the Atomic Energy Act and may take place only as authorized by the U.S. Nuclear Regulatory Commission (NRC) in general or specific export licenses.

2. Congress' Role with Respect to Section 123 Agreements

Among other objectives, this hearing is intended to examine whether additional requirements should be imposed on the Executive Branch with respect to negotiation of Section 123 agreements and preparation of the non-proliferation assessment statement (NPAS) that the President is required to submit to Congress in connection with its review of such agreements. Section 123 already requires the State Department, with the assistance of DOE, to provide to Congress a detailed NPAS, in both classified and unclassified versions, to assess whether a proposed agreement meets all of the criteria specified in Section 123 and other applicable

provisions of the Atomic Energy Act. NEI believes that establishing additional requirements of this nature is unlikely to improve U.S. ability to achieve its non-proliferation goals. Additional requirements could, in fact, result in a further decline in the U.S. nuclear industry's ability to design and build new nuclear power stations throughout the world, which would only compromise U.S. achievement of its non-proliferation goals.

This Subcommittee is considering whether changes are needed in the Atomic Energy Act provisions, such as Section 123, that govern U.S. entry into agreements for cooperation with other countries and entities such as EURATOM and the IAEA. In NEI's view, Section 123 appropriately assigns to the State Department, assisted by DOE, responsibility for negotiating agreements for cooperation. Congress' role is to review such agreements for 90 days of continuous session, after which the State Department may bring them into force, if the Congress does not enact a joint resolution of disapproval that is signed into law by the President.

A bill pending in the House (H.R. 547) seeks to amend Section 123 of the Atomic Energy Act to prevent the United States from entering into peaceful nuclear cooperation agreements unless they are approved by a joint resolution enacted by the House and Senate. Amending Section 123 in this manner would be a significant departure from the 50 years of experience with Section 123's allocation to Congress of the authority to review such agreements, after which they may enter into force unless they are disapproved.

Over the years, Congress has strengthened its review authority over Section 123 agreements. After significantly revising Section 123 through enactment of the Nuclear Non-proliferation Act of 1978 (NNPA), Congress added an initial 30-day consultation period to the requirement that Section 123 agreements be reviewed by Congress for 60 days of continuous session. This initial 30-day period is intended to allow Congress to focus on whether a proposed agreement for cooperation satisfies the requirements specified in Section 123 for such agreements. If an agreement does not satisfy all of those requirements, the President may submit it to Congress with a waiver of one or more of Section 123's requirements. In that event, the Agreement may not enter into force unless Congress affirmatively approves it.

NEI submits that the substantial role already established for Congress in Section 123 for reviewing agreements for cooperation is working well, and has proven effective in improving the quality of Section 123 agreements. Hearings by the House and Senate on proposed agreements have effectively probed matters of concern and prompted detailed responses by the State Department to questions raised during the hearings. Despite occasional concerns raised in such hearings, resolutions of disapproval have rarely been introduced and, when introduced, have not been passed by either the House or Senate. However, in 1985, Congress enacted substantial restrictions on the implementation of the U.S.-China Agreement for Cooperation, which entered into force later that year.

Amending Section 123 procedures to prevent new agreements from coming into force unless Congress enacted a joint resolution to approve the agreement would create the possibility that such agreements could be delayed. Such delay could harm the U.S. ability to achieve its strategic, foreign policy and non-proliferation objectives, which depend largely on U.S. companies' supply of nuclear materials and components pursuant to Section 123 agreements.

Further, abandoning Section 123's carefully crafted balance of authority between the President and the Congress, and substituting a Congressional approval requirement for Section 123 agreements, could impede the ability of the President, under Article II of the Constitution, to negotiate international agreements and conduct the foreign policy of the United States.

The delays and uncertainty that would accompany any significant revisions to Congress' authority pursuant to Section 123 would come at an especially critical time. The long-standing U.S. Agreement for Cooperation with Australia, a major supplier of uranium to U.S. utilities, has expired. I understand that the negotiations to extend the Agreement have been completed and the Agreement will soon be sent to Congress for its review. Two agreements with major buyers of U.S. nuclear products and services (South Korea and Taiwan) will reach the end of their terms in 2014 and must be comprehensively amended, or replaced by new agreements, in order to meet the requirements of the NNPA. Upon the expiration of these Agreements, U.S. exports of nuclear fuel and major reactor components to such countries will not be possible until new or amended agreements are brought into force. Several new agreements for cooperation are being negotiated. Moreover, while the U.S.-Russia Agreement was submitted to Congress in 2008, it was then withdrawn by the Bush Administration. That proposed agreement apparently will be sent to Congress for review in the near future.

In summary, the vital interest of the United States in the expeditious renewal of Section 123 agreements that have recently expired, and entry into new agreements with countries that have announced an intent to pursue nuclear power programs, should not be jeopardized by enactment of an amendment to Section 123 that attempts to alter the constitutional allocation of power to the President and the Congress.

Conclusion

NEI appreciates this opportunity to provide its views. NEI believes U.S. industry can and must play an essential role in achieving U.S. non-proliferation goals. The private sector is the instrument by which one of the three pillars of the Non-Proliferation Treaty – assured access to the peaceful uses of nuclear technology – is accomplished. The U.S. nuclear industry welcomes the opportunity to participate in industry-government collaboration to improve the U.S. government's ability to achieve its non-proliferation goals, and strengthen the U.S. nuclear industry's ability to compete on a level playing field for contracts to construct and operate nuclear power stations and provide the nuclear fuel and services that these plants require.