

Testimony for the Record

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**Hearing: What's Next for the U.S.-Korea Alliance?
June 6, 2012**

**House Committee on Foreign Affairs
Subcommittee on Asia and the Pacific
Washington, D.C.**

Chairman Manzullo and Ranking Member Faleomavaega, thank you for the opportunity to testify today. My name is Dan Lipman. I am a Senior Vice President at Westinghouse Electric Company, headquartered near Pittsburgh, Pennsylvania. Westinghouse's 15,000 employees (9,000 in the U.S.) work around the world and around the clock to provide fuel, services, technology, plant design and equipment to electric utility and industrial customers in the worldwide commercial nuclear electric power industry.

Westinghouse has played a leading role in nuclear plant design for six decades. Sixty percent of the 104 commercial reactors in America are Westinghouse designs and four of the five new reactors under construction in the U.S. today are Westinghouse AP1000™ designs.

Globally, Westinghouse is recognized as a leader in safe and reliable nuclear energy and has been at the forefront of the U.S.-South Korea partnership in nuclear energy for nearly four decades. Since the start-up of South Korea's first commercial nuclear energy facility in 1978 (Kori-1), Westinghouse technology has formed the foundation of the South Korean nuclear energy program. Today, Westinghouse's commercial relationships with South Korea have grown beyond reactor supply for the Korean market.

To ensure the continuation of these relationships, Westinghouse strongly supports the early renewal of the U.S.-South Korea Agreement for Peaceful Nuclear Energy Cooperation. The 30-year term of this pact, also known as a Section 123 agreement, will expire in 2014. Much is at stake in its timely renewal.

Korea is a significant part of our country's extensive trade and investment relationships. The economic benefits of U.S.-South Korea commercial nuclear trade include U.S. exports to South Korea, U.S. exports to third countries to supply South Korean projects and U.S.-South Korean joint ventures, imports of materials from South Korea to supply projects in the United States, and a variety of joint R&D projects. The deep links between our nuclear energy sectors contribute significantly to the U.S. economy, supporting tens of thousands of American jobs.

U.S. Exports to South Korea

South Korea is one of the major nuclear energy countries of the world – and a large market for U.S. suppliers. Twenty-three reactors with 20,700 megawatts of plant capacity provide one-third of South Korea's electricity. Nineteen of these reactors – and all under construction, on order or planned – are

based on U.S. technology.¹ South Korea's licensing of U.S. technologies has earned billions for Westinghouse and other U.S. suppliers.

Although the percentage of U.S. content in South Korean nuclear power projects has declined over the years, as Korean content has increased, Westinghouse and other U.S. suppliers still supply South Korea with significant content, including instrumentation and control, pumps, and other major components. U.S. suppliers have also provided South Korean reactors with nuclear fuel and fuel services. For example, since the inception of the South Korean civil nuclear program, a facility in Metropolis, Illinois, has provided uranium conversion services to Korea Electric Power Company (KEPCO). Such exports help support 400 jobs at the sole U.S. conversion plant in Illinois and the ConverDyn headquarters in Colorado.

The South Korean nuclear energy market continues to grow. South Korea plans to increase its nuclear generating capacity by 56 percent to 27,300 megawatts by 2020, and to 43,000 megawatts by 2030. Three reactors are under construction and another six are planned or on order.²

U.S. Exports Supply South Korean Joint Ventures and Projects in Third Countries

South Korea's national nuclear power plant supplier, KEPCO, is a major supplier to international markets, with power generation projects in eight countries.³ KEPCO's successful \$20.4 billion⁴ bid to build four APR-1400 reactors in U.A.E. was a major win for the South Korean nuclear energy industry. The APR-1400 design is Westinghouse-based, and as such, is subject to U.S. export controls. Due to significant U.S. content in the APR-1400 reactor and other U.S.-Korea supply relationships, the United States will benefit significantly from the U.A.E. projects.

As a result of U.S. supply relationships with South Korea, U.S. exports to the U.A.E. projects will exceed \$1.5 billion. For example, Westinghouse's scope includes design, technical support services, consulting on licensing issues and providing control equipment, instrumentation and major components. This work will create and sustain U.S. jobs in California, Connecticut, New Hampshire, Ohio, Pennsylvania, South Carolina, Texas and other states home to Westinghouse sub-suppliers.

In addition, multiple U.S. firms have provided a range of services to the U.A.E., including engineering, construction management, training, legal, regulatory, environmental and other services.

South Korea Supplies Components for Westinghouse AP1000™ Projects

Beyond U.S. exports to South Korea and U.S. participation in South Korean-led nuclear projects in third countries, South Korean firms are significant suppliers to the eight Westinghouse AP1000™ reactors under construction in the United States and in China. For example, the two Westinghouse AP1000™ reactors currently under construction in South Carolina will use reactor vessels and steam generators from Changwon, condensers from Sacheon, demineralizers and heat exchangers from Ansan-City, and valves from Cheonan.

¹ World Nuclear Association, April 2012.

² Ibid.

³ Korea Industry and Technology Times, June 23, 2011.

⁴ World Nuclear Association, April 2012.

Strategic Benefits of Continued Cooperation

Extensive cooperation in nuclear energy between the United States and South Korea is a pillar of our countries' strategic partnership. The U.S.-South Korea alliance is exemplified by our collaboration in nuclear energy R&D, safety and security.

In nuclear safety, security and nonproliferation, South Korea has assumed the responsibilities expected of one of the world's leading nuclear energy countries. South Korea in March demonstrated its partnership with the United States by hosting 53 heads of state and government for the second Nuclear Security Summit, a major U.S.-led initiative. South Korea has also supported other U.S. nonproliferation initiatives, including signing the IAEA Additional Protocol, supporting the Nuclear Suppliers Group objective criteria for transfers of enrichment and reprocessing technologies, and joining the Proliferation Security Initiative.

Safety has always been of paramount importance for the nuclear industry, and the global industry is committed to enhancing safety based on lessons learned from the accident at Fukushima Dai-ichi. South Korea's use of U.S.-based technology and the continued involvement of U.S. personnel in South Korea's growing nuclear industry will help assure that nuclear safety in South Korea continues to meet the highest standards. Further, KEPCO's nuclear operating subsidiary is an active participant in the World Association of Nuclear Operators, which promotes the highest standards of nuclear safety globally. Along with Westinghouse, KEPCO is one of eleven global suppliers that have adopted the "Nuclear Power Plant Exporters' Principles of Conduct." Sponsored by the Carnegie Endowment for International Peace, the principles set high standards of practice for companies in the areas of safety, security, nonproliferation, environmental protection, ethics and liability insurance.⁵

Timely Renewal of the U.S.-Korea Section 123 Agreement

Many of these economic and strategic benefits of U.S.-South Korea commercial nuclear cooperation would be put at risk by unnecessary delaying the renewal of a Section 123 agreement with South Korea, which expires in 2014. In the commercial nuclear industry – where long-lead items are commonplace and long-term contracts are standard – it is critical that a supplier be stable and reliable.

Serious concerns about the reliability of the United States as a partner and supplier would be raised if the United States allows the expiration of the U.S.-South Korea Section 123 agreement to draw near. Under those circumstances, South Korea – and other countries – might reduce their reliance on U.S. sources of nuclear components, technology and services. The deep links between the U.S. and South Korean industries could be disrupted even before the agreement expires.

Today's global commercial nuclear market is highly competitive. Other countries understand that being a stable and reliable supplier is necessary to the commercial success of their domestic suppliers. Similar consequences could befall the cooperation between our governments, if South Korea concludes that the U.S. commitment to our partnership in nuclear energy is unstable and prone to unilateral change.

⁵ Nuclear Power Plant Exporters' Principles of Conduct, Carnegie Endowment, September 15, 2011.

United States Must Conclude 123 Agreement Negotiations Promptly

Although South Korea's Section 123 agreement does not expire until 2014, the administration must take prompt action on renewing the agreement. Bringing a new or renewed Section 123 agreement into force requires many months, even after the negotiation is completed.

Under the Atomic Energy Act, Congress requires the Executive Branch to follow a lengthy and rigorous process after negotiating a Section 123 Agreement, including a series of presidential findings and a Nonproliferation Assessment Statement from the State Department. After the agreement is submitted to Congress, the law provides Congress with 90 continuous session days to consider the agreement and hold hearings. This typically requires most of a year. In 2010, an agreement renewing the U.S.-Australia Section 123 agreement was submitted to Congress on May 5, but did not achieve the requisite 90 days of continuous session until mid-December – more than seven months later.

The U.S.-South Korea agreement is not the only renewal Section 123 agreement that will demand attention from this committee. Eight other Section 123 agreements – including agreements of major commercial importance with China, Taiwan, and the IAEA – will lapse by 2015 unless they are renewed. While renewal of some agreements will entail little more than changing the date of expiration, others will require substantial renegotiation. Unless the United States expedites negotiations on the South Korea agreement and others, the nation will face severe implications to commercial trade due to a backlog of agreements that expire in the 2012-2015 timeframe.

Benefits of Section 123 Agreements

The global expansion of nuclear energy offers the United States the opportunity to promote several national interests at once, but only if the government concludes new and renewal Section 123 agreements. These agreements include significant commitments from countries to safeguard materials, prevent material diversion for non-peaceful purposes and provide security for materials. They can also require consent rights over the enrichment, reprocessing and retransfer of U.S. materials exported under the agreement.

Section 123 agreements must be in place for the United States to export America's advanced reactor designs and world-class operational expertise. Only with these agreements can we ensure the highest possible levels of nuclear power plant safety and reliability around the world, and maintain U.S. leadership in nuclear energy technology and policy.

Foregoing these agreements puts at risk tens of thousands of American jobs at a time when we can least afford to squander job creation. The global commercial nuclear market is large and growing. Worldwide, 66 commercial nuclear reactors are under construction and an additional 160 are planned or on order. The Commerce Department estimates the commercial opportunity over the next decade at as much as \$740 billion. U.S. companies compete across the breadth of the commercial nuclear supply chain, from nuclear power plant design, to component and fuel manufacturing, architect/engineering services and more. During operation of nuclear energy facilities, U.S. firms will remain engaged in operational support, training, supply of fuel and other services for several decades.

Conclusion

The U.S.-South Korea Section 123 agreement is the basis for a robust U.S. partnership in nuclear energy cooperation. Swift renewal of this and other Section 123 agreements is critical for the United States to compete in the growing global marketplace and maintain its influence over global nonproliferation policy and international nuclear safety, while creating and sustaining tens of thousands of American jobs.



United States House of Representatives
Committee on Foreign Affairs

“TRUTH IN TESTIMONY” DISCLOSURE FORM

Clause 2(g) of rule XI of the Rules of the House of Representatives and the Rules of the Committee require the disclosure of the following information. A copy of this form should be attached to your written testimony and will be made publicly available in electronic format, per House Rules.

1. Name:	2. Organization or organizations you are representing:
Daniel S. Lipman	Westinghouse Electric Company
3. Date of Committee hearing:	
June 6, 2012	
4. Have <u>you</u> received any Federal grants or contracts (including any subgrants and subcontracts) since October 1, 2008 related to the subject on which you have been invited to testify?	5. Have any of the <u>organizations you are representing</u> received any Federal grants or contracts (including any subgrants and subcontracts) since October 1, 2008 related to the subject on which you have been invited to testify?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
6. If you answered yes to either item 4 or 5, please list the source and amount of each grant or contract, and indicate whether the recipient of such grant was you or the organization(s) you are representing. You may list additional grants or contracts on additional sheets.	
U.S. Department of Energy funding has been received over the years for AP1000 development. This is completely unrelated to my testimony.	
7. Signature:	
	

Please attach a copy of this form to your written testimony.

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