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# U.S. Nuclear Cooperation Agreements and Their Relationship with the U.S. Nuclear Industry

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## Presentation Outline



- Introduction
- Agreements for Peaceful Nuclear Cooperation (123 Agreements) Recently Submitted to Congress
- 123 Agreements Under Negotiation
- Prominent 123 Agreements and Their Impact on the Global Market
- The Role of NMMSS Reporting
- Conclusion



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# Introduction



- 123 agreements allow for the lawful export of U.S. nuclear material, reactors, and significant reactor components
- The U.S. is likely to undertake more nuclear cooperation with a greater number of partners in the future
- This will have consequences for the U.S. nuclear industry
- U.S. nuclear cooperation is dependent upon NMMSS reporting to meet its international legal obligations



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## II. 123 Agreements Recently Submitted to Congress



- American Institute in Taiwan-Taipei Economic and Cultural Representative Office (entered into force June 22, 2014)
  - AKA U.S.-Taiwan 123 Agreement
  - Serves as a conduit for all nuclear fuel imports into Taiwan
- International Atomic Energy Agency (entered into force June 6, 2014)
  - Allows U.S. exports to states lacking a 123 agreement
  - Power reactors in Mexico and Slovenia supplied via this 123 agreement



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## II. 123 Agreements Recently Submitted to Congress



NNSA



- Vietnam (entered into force October 3, 2014)
  - Vietnam has previously contracted for 2 Russian reactors and 2 Japanese reactors (with potential U.S. technology)
  - Vietnamese nuclear program is first in southeast Asia and may serve as example to others in region
  - Vietnamese obligated material unlikely to come to the U.S. anytime soon

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## II. 123 Agreements Recently Submitted to Congress



NNSA



### ■ China

- Negotiations began in 2013, completed earlier this year
- President Obama submitted Agreement to Congress on April 21, 2015
- Agreement contains enhanced nonproliferation and technology transfer provisions compared to 1985 agreement
- Grants China advance consent to reprocess under jointly agreed upon arrangements and procedures
- New agreement reflects the growing U.S.-China nuclear relationship



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## III. 123 Agreements Under Negotiation



### ■ Republic of Korea

- Negotiations began in 2010, completed on April 22, 2015
- Both governments currently undertaking domestic review procedures
- Mutual goal is to reflect ROK's status as a major global supplier and the importance both governments place on high standards of safety, security, and nonproliferation
- Agreement does not provide advance consent to enrich or reprocess but does leave open the possibility of future decision to do so
- High Level Bilateral Commission created to discuss spent fuel management, assured fuel supply, export cooperation, and nuclear security issues

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## III. 123 Agreements Under Negotiation



- Saudi Arabia
  - Negotiations began in 2012; little recent progress has occurred
  - Saudi Arabia is considering its plans for nuclear power among its overall energy supply mix
- Jordan
  - Negotiations began in 2007
  - Adequate financing and extent of public support for nuclear power are also relevant factors
- Norway
  - Negotiations began in 2014
  - Primary U.S. equity is research activities at Haldon research reactor



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## IV. Prominent 123 Agreements and Their Impact on the Global Market



### ■ India

- 2008 U.S.-India 123 Agreement and Nuclear Suppliers Group exemption opened the path for nuclear cooperation with India
- U.S. and Indian governments recently reached agreement on liability and material accountancy issues
- If cooperation increases, Indian obligated material in U.S. still unlikely in near future

### ■ Russia

- Agreement entered into force in 2011; agreement has only been used on a handful of occasions



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## V. The Role of NMMSS Reporting



- The U.S. government relies on U.S. suppliers to report foreign obligated nuclear material in order to maintain its international legal commitments
- Most U.S. 123 agreements contain requirements for the United States to report on the current inventories of material transferred subject to the agreement
  - Administrative Arrangements
- The U.S. government relies on accurate and comprehensive NMMSS reporting to meet these requirements



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## V. The Role of NMMSS Reporting



- U.S.-Japan 123 Agreement Agreed Minute (1988)
  - Paragraph 8(a)- “With reference to the provisions of Article 9 of the Agreement, it is confirmed that for the effective implementation of the said Article the parties shall exchange annually the then current inventories of material, nuclear material, equipment and components subject to the Agreement . . . .”
  - Paragraph 8(b)- “With reference to paragraph 1 of Article 9 of the Agreement, it is confirmed that each party has established and will maintain in accordance with relevant laws and regulations in force in each country a national system of accounting for and control of nuclear material covering all nuclear material subject to the Agreement.”



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## V. The Role of NMMSS Reporting



- U.S.-United Arab Emirates 123 Agreement (2009)
  - Article 10(6)- “Each Party shall establish and maintain a system of accounting and control of source material and special fissionable material transferred pursuant to this Agreement and source material and special fissionable material used in or produced through the use of any material, equipment or components so transferred.”
  - Article 10(7)- “Upon the request of either Party, the other Party shall report or permit the IAEA to report to the requesting Party on the status of all inventories of material subject to this Agreement.”

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## VI. Conclusion



- The number of U.S. nuclear cooperation partners is likely to increase in future years but new types of foreign obligated nuclear material unlikely to come to United States soon
- Future actions of China, India, and Russia will have significant impact on global nuclear market in decades to come
- Accurate NMMSS reporting allows U.S. government to adhere to its international legal commitments (Thank you!)



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- Questions/comments?
- Thank you for your attention

