
Preparatory Committee for the 2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons

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Implementing the Treaty on the Non-Proliferation of Nuclear Weapons: Peaceful uses of nuclear energy

Working paper submitted by the United States of America¹

Action 20 of the 2010 Action Plan calls for NPT parties to report on activities related to the Non-Proliferation Treaty. In response, this U.S. report highlights steps the United States is taking to promote the peaceful uses of nuclear energy.

Article IV of the NPT acknowledges the right of NPT Parties to conduct research and to pursue the development of nuclear energy for peaceful purposes without discrimination and “in conformity with Articles I and II of the Treaty.” Together with Article III (safeguards), Articles I and II comprise the nonproliferation obligations of the Treaty. Article IV also calls for “the fullest possible exchange of equipment, materials, and scientific and technical information” for developing nuclear energy for peaceful purposes, “with due consideration for the needs of the developing areas of the world.”

The United States is fully committed to cooperating with other states and the International Atomic Energy Agency (IAEA) to support the use of nuclear energy for peaceful purposes throughout the world in accordance with Article IV and with the corresponding items of the 2010 NPT Review Conference Action Plan. In Seoul last year President Obama reiterated this commitment “to harnessing the power of the atom, not for war, but for peaceful purposes.” To help ensure the safety and security of our own nuclear activities and to contribute to international cooperation in these areas, the United States is party to several relevant international conventions: Convention on Nuclear Safety, Convention on Early Notification of a Nuclear Accident, Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Joint Convention on the Safety of Spent Fuel Management and Radioactive Waste Management, and Convention on the Physical Protection of Nuclear Material. The United States has signed the amendment to the Convention on Physical Protection of Nuclear Material (CPPNM) and also the International Convention for the Suppression of Acts of Nuclear Terrorism (ICSANT). The U.S.

¹ This paper updates the U.S. paper on the same subject submitted at the first session (2012) of the Preparatory Committee for 2015 NPT Review Conference (NPT/CONF.2015/PC.I/WP.19).



Senate provided advice and consent to ratification of both ICSANT and the CPPNM amendment in 2008, and the Treaties are now awaiting implementing legislation.

The United States meets our commitment to Article IV in many ways, bilaterally and multilaterally, including: support for IAEA Technical Cooperation and other programs such as nuclear safety; peaceful nuclear cooperation agreements between the United States and other countries, which provide the legal framework for nuclear commerce; and cooperation programs between U.S. Government agencies and their foreign counterparts.

IAEA Technical Assistance

The IAEA's Statute contains the objective of accelerating and enlarging "the contribution of atomic energy to peace, health, and prosperity throughout the world." A major component of the IAEA's efforts in this area is carried out through its Technical Cooperation program, supported by contributions to the Technical Cooperation Fund (TCF). The United States remains the largest single contributor to the TCF, contributing more than one-quarter of the Fund's total since the 2010 Review Conference. Last year alone, the United States made a voluntary contribution of nearly 22 million dollars to the TCF; we sent approximately 500 experts to participate in IAEA technical meetings; and we pledged over four million dollars in additional funding toward training, fellowships, cost-free experts, and a Coordinated Research Project (CRP) on Ocean Acidification and the Economic Impact on Fisheries and Coastal Society, which is aimed at furthering research efforts on the implications of ocean acidification to regions with large fishery yield and a high dependence on seafood. This vital support goes back decades and reflects our history of strong support for the Agency's Technical Cooperation activities, which we remain firmly committed to continuing to support in future years. We also encourage all states to meet their TCF commitments, which provide critical stability into the TC planning and implementation process. At the same time, we will continue to work with the IAEA and Member States to ensure that the program continues to respond efficiently and effectively to the needs of all Members States.

IAEA Peaceful Uses Initiative

At the 2010 NPT Review Conference the United States announced the IAEA Peaceful Uses Initiative (PUI), to raise \$100 million in additional funding for IAEA activities for peaceful uses of nuclear energy over five years. The United States pledged \$50 million towards this goal and is working with the IAEA and other countries and contributors to match that U.S. pledge before the next NPT Review Conference, in 2015. We welcome the partnership of Japan, the Republic of Korea, New Zealand, Australia, the Czech Republic, Hungary, Sweden, France, Indonesia, Brazil, Italy, the United Kingdom, and Kazakhstan, and we encourage other states to contribute this effort.

The PUI allows contributors to support unfunded projects that have been developed and prioritized by the IAEA in consultation with IAEA Member States. In addition, PUI support has also provided the Agency with additional flexibility to develop and implement projects responding to unanticipated or urgent needs, such as responding to sustained drought in the Sahel region and monitoring radioactivity in the marine environment from the Fukushima accident. Both of these projects have received significant PUI support from several Member States. Providing additional

funding for peaceful uses through the IAEA will help meet the objective of Action 55 in the 2010 NPT Action Plan, and would expand the IAEA's unique ability to contribute to sustainable international development and environment goals. All U.S. PUI and other extra-budgetary contributions are made in addition to our ongoing support to the TCF, and we continue to emphasize to potential contributors that the PUI complements, but in no way replaces, the traditional mechanism of support through the TCF. In the three years since the 2010 Review Conference, the U.S. contribution has funded more than \$24 million in specific national and regional PUI projects benefitting nearly 120 IAEA Member States, with a particular focus on providing developing countries with training and equipment to apply nuclear techniques in human health, food security, water resource management, and developing infrastructure for the safe and secure operation of nuclear power. We are also planning to soon commit close to \$4 million toward additional PUI projects in the areas of nuclear power infrastructure development, food safety, and protection of the marine environment.

Support for the PUI demonstrates the ongoing commitment of the United States and other contributing NPT Parties to fulfill our Article IV commitment to international cooperation in the peaceful uses of nuclear energy and to strengthen IAEA activities in this important area. We look forward to continuing to work with the IAEA and other contributing states to support additional projects in the coming years, and to learning more about the peaceful uses priorities for all NPT Parties. To learn more about the IAEA PUI and to explore potential projects to fund, please visit: <http://www.iaea.org/newscenter/focus/pui/>.

Please also see the written description of the U.S. contribution to the PUI, which can be obtained from U.S. PrepCom delegation members.

U.S. Nuclear Cooperation Agreements

President Eisenhower's 1953 "Atoms for Peace" address to the General Assembly laid the foundation for civil nuclear cooperation between the United States and other countries and organizations. Currently, the United States has entered into formal, legally-binding nuclear cooperation agreements involving 49 states. When engaging in nuclear cooperation, the United States is mindful of the importance of encouraging the highest standards for nuclear nonproliferation. These agreements provide the legal framework for nuclear commerce, including the export of nuclear material, nuclear reactors, and significant reactor components. In the last two years, the United States has brought into force a new nuclear cooperation agreement with Russia and renewed an existing agreement with Australia.

In addition to nuclear cooperation agreements between the United States and other states allowing nuclear commerce, U.S. technical agencies have cooperative arrangements with their counterparts in more than 40 countries. Such arrangements allow for the exchange of some scientific and technological information, best practices, and training. In particular, much of this cooperation seeks to develop the skilled workforce needed for the peaceful uses of nuclear energy, with necessary attention to nuclear safety, security, and safeguards. Finally, the United States has bilateral nuclear cooperation committees with several countries, which provide for exchanges on a broad range of nuclear policy issues and facilitate coordination of projects in technology development, reactor and radioisotope safety, emergency management, security, and safeguards.

In order to encourage states to minimize the use of highly enriched uranium (HEU) in civilian stocks, the United States implements a reactor conversion program, which supports the conversion of domestic and international civilian research reactors and isotope production facilities from the use of HEU to low-enriched uranium (LEU) fuel, where technically and economically feasible.

A New Framework for Civil Nuclear Cooperation

In April 2009, President Obama stated at Prague that, “we should build a new framework for civil nuclear cooperation, including an international fuel bank, so that countries can access peaceful power without increasing the risks of proliferation.” Last year in Seoul, he referred to this new framework in calling for “an international commitment to unlocking the fuel cycle of the future.” Countries in compliance with their nonproliferation obligations and considering or expanding nuclear power programs should be assured that they will have reliable access both to peaceful nuclear technologies and to fuel services, and that they need not consider the expense and difficulty of developing indigenous enrichment or reprocessing capabilities. While the global demand for reactor fuel is expected to be met through the well-functioning international nuclear fuel market, establishing additional fuel assurance mechanisms, such as an international fuel bank, reinforces confidence. The United States has strongly supported the development of such mechanisms. We have welcomed approval by the IAEA’s Board of Governors of three fuel assurance mechanisms for IAEA member states. These include the nuclear fuel reserve in Angarsk, Russia, which the IAEA Board of Governors approved in 2009; the low-enriched uranium (LEU) bank under IAEA auspices, approved in 2010; and the Model Nuclear Fuel Assurances Agreement proposed by the United Kingdom and approved in 2011, which provides a mechanism for assured supply between partner states and the IAEA. The IAEA LEU bank will be funded through contributions of nearly \$50 million from the United States, \$50 million from the Nuclear Threat Initiative, 25 million euros from the EU, \$10 million from the UAE, \$10 million from Kuwait, and \$5 million from Norway. The United States has fully supported each of these measures, and will continue to consider additional multilateral measures to ensure reliable access to nuclear fuel, an objective of Action 58 in the 2010 NPT Action Plan.

In addition, in August 2011, Energy Secretary Chu formally announced the availability of nuclear fuel from the American Assured Fuel Supply (AFS). The AFS is a reserve of about 230 tons of LEU, compared with the future IAEA LEU bank of about 60 to 80 tons, derived from highly enriched uranium excess to defense needs. As previously announced, in 2005, by Energy Secretary Bodman, this material was made available from 17.4 metric tons of excess highly enriched uranium, which was blended down to LEU and is held in reserve to deal with disruptions in the nuclear fuel supply. It is stored at Westinghouse’s South Carolina fuel fabrication site. Any U.S. supplier experiencing a fuel supply disruption for which LEU cannot be obtained through normal market conditions can apply for use of the AFS, after which it would be able to supply that fuel to foreign entities under appropriate conditions.