U.S. Policy Directions in Limiting Enrichment and Reprocessing
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On April 21, 2016 the Proliferation Prevention Program at the Center for Strategic and International Studies hosted Assistant Secretary of State for International Security and Nonproliferation Thomas Countryman, Deputy Assistant Secretary of Energy for International Nuclear Energy Policy and Cooperation Edward McGinnis, and Ambassador Robert Gallucci, currently Georgetown University Distinguished Professor in the Practice of Diplomacy. The panel discussed the benefits and risks of nuclear energy and the challenges and successes in U.S. diplomatic and technical approaches to mitigating especially risks of nuclear proliferation from the spread of enrichment and reprocessing technology.

In his remarks, Assistant Secretary Countryman noted nuclear energy’s important role in the global energy mix, and suggested it would be difficult to meet climate change mitigation goals without nuclear energy. And yet, issues of cost and significant infrastructure may make nuclear energy a suboptimal choice for many countries. He noted that countries embarking on a nuclear energy program for the first time must carefully consider how to manage the security and safety risks of nuclear power, train the necessary human and physical capital, and build the required regulatory infrastructure. Mr. Countryman held up the United Arab Emirates and Vietnam as two examples of states that have taken a considered and cautious approach to the development of nuclear energy.

The United States seeks to promote nuclear energy but also mitigate its risks through peaceful nuclear cooperation agreements. The U.S. has two major interests: to maximize the number of countries with which we have agreements and to maintain U.S. leadership and partnerships. U.S. peaceful nuclear cooperation agreements contain stringent requirements regarding security and nonproliferation but also allow for significant technical assistance. Mr. Countryman stressed that U.S. nonproliferation objectives, particularly those related to uranium enrichment and spent fuel reprocessing, are consistent with its support for the expansion of peaceful uses of nuclear energy. Mr. Countryman shared his view that it is impractical and unjustifiable for countries that do not already have enrichment and reprocessing capabilities to develop these capabilities. There are no credible economic reasons to pursue indigenous enrichment or reprocessing since the international fuel market provides adequate (and even a surfeit of) supply. For the foreseeable future, low-enriched uranium fuel will be less expensive than MOX fuel.

Deputy Assistant Secretary McGinnis echoed the theme of U.S. leadership in his remarks. McGinnis strongly supported the need to promote transparency from relatively new nuclear suppliers and emphasized the importance of a competitive market with multiple, diverse sources of fuel supply. Mr. McGinnis expressed his concern that if the United States falls further behind in the nuclear energy market now, it may never be able to re-exert its influence.
Ambassador Gallucci argued that a focus on reducing access to fissile material is the only effective strategy to prevent nuclear terrorism. Ambassador Gallucci suggested that upcoming fuel cycle decisions in Northeast Asia not only will lead to a spread of enrichment and reprocessing, but will also result in the expansion of fissile material stockpiles and contribute to nuclear latency. Even if the resultant separated plutonium is used to fuel reactors, and there are significant doubts that this will actually happen, the plutonium will need to be transported to various reactor sites, increasing risks with each shipment. Ambassador Gallucci then shifted to discuss the 2015 Joint Comprehensive Plan of Action (JCPOA) and its impact on enrichment and reprocessing. The JCPOA enabled Iran to maintain its enrichment capacity and legitimized centrifuge possession and research. Although Iran cannot enrich uranium to weapons usable enrichment levels, the restrictions will expire at the end of the JCPOA. The normalization of sensitive fuel cycle capabilities and the failure to press all states, including France, Japan and China, raise concerned about the future strength of arguments against enrichment and reprocessing.

In subsequent discussion moderated by Proliferation Prevention Program Director and Senior Fellow Sharon Squassoni, Mr. McGinnis emphasized the importance of transparency and a competitive market in assuring countries considering developing enrichment and reprocessing capabilities that there will be an assured fuel supply. Mr. Countryman called for transparency in financial and economic arrangements, particularly as a deterrent to corruption. Mr. McGinnis also discussed efforts by the International Framework for Nuclear Energy Cooperation (IFNEC) and the IAEA to develop multilateral storage and disposal programs that will consolidate nuclear material to reduce proliferation risks while also providing further reasons to eschew reprocessing. In response to a question about recent terror and security concerns in Belgium, Mr. McGinnis again emphasized the importance of an independent and transparent regulator in promoting nuclear security.

Ms. Squassoni raised the question of whether state sovereignty should always be dominant in fuel cycle decisions. She cited the prevalence of sovereignty arguments used by U.S. policymakers in considering whether to allow Japan to reprocess U.S.-origin fuel at Tokai more than 40 years ago and the fact that these same arguments are being used today to support Japanese reprocessing, despite the fact that the situation in Japan with respect to nuclear energy has changed drastically. Mr. Countryman stated that the choice of a fuel cycle is Japan’s to make and Ambassador Gallucci agreed, but stressed that Japan’s choices affect U.S. national security and those of its allies. Ambassador Gallucci questioned whether the Administration has been clear or forceful in managing this situation. Mr. Countryman stressed Japan’s commitment and leadership in nonproliferation.

The issue of sovereignty re-emerged during the panelists’ discussion of Iran. Asked whether there are elements of the JCPOA that might be useful to internationalize, Mr. Countryman noted the provision in the JCPOA that specifically prohibits the application of measures elsewhere. Nonetheless, he acknowledged the benefits of extending facility and supply chain monitoring approaches and technologies within the IAEA safeguards system. In his concluding remarks, Mr. Countryman declared that nonproliferation will likely be more important to the United States than other states’ perceptions of sovereignty. Mr. Countryman called attention to the fact that all international agreements, including the Nuclear Non-Proliferation Treaty, require countries to give up some element of sovereignty. Moreover, the United States appropriately discriminates
between countries that comply with international agreements and those that violate them. In this way, treating Japan and Iran differently is not problematic. Ambassador Gallucci, however, noted that the debate over enrichment and reprocessing technologies in the context of security will need to continue throughout the lifespan of the JCPOA and upon its expiration.