



# The United Arab Emirates Nuclear Program and Proposed U.S. Nuclear Cooperation

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## Summary

The United Arab Emirates (UAE) has embarked on a program to build civilian nuclear power plants and is seeking cooperation and technical assistance from the United States and others. The 111<sup>th</sup> Congress approved a U.S.-UAE bilateral agreement on peaceful nuclear cooperation pursuant to Section 123 of the Atomic Energy Act (AEA) of 1954. Then-U.S. Secretary of State Condoleezza Rice signed the proposed agreement on peaceful nuclear cooperation with the UAE January 15, 2009. Deputy Secretary of State James Steinberg signed a new version of the agreement May 21, 2009; the Obama Administration submitted the proposed agreement to Congress the same day.

Congress had the opportunity to review the proposed agreement for 90 days of continuous session, a period which ended on October 17, 2009. The UAE cabinet approved the agreement on October 26. The agreement entered into force after the two governments exchanged diplomatic notes on December 17, 2009. The agreement text states the intent of both governments to cooperate in a number of areas including, but not limited to, the development of the UAE's "civilian nuclear energy use in a manner that contributes to global efforts to prevent nuclear proliferation" and, "the establishment of reliable sources of nuclear fuel for future civilian light water reactors deployed" in the UAE. In January 2010, the UAE announced that it had chosen the Korea Electric Power Corporation (KEPCO of South Korea) to construct four APR1400 reactors. During 2010, the UAE's administrative preparations have continued apace, including site selection, environmental surveys, and security planning. All four plants are scheduled to be online by 2020. The UAE brought into force the Additional Protocol to its IAEA Safeguards agreement on December 20, 2010.

Some members of Congress welcomed the UAE government's stated commitments not to pursue proliferation-sensitive nuclear capabilities, such as uranium enrichment or spent fuel reprocessing. Other members signaled their intention to weigh the proposed bilateral agreement in light of parallel and specific concerns about the UAE's cooperation with international efforts (such as sanctions) to prevent Iran from developing nuclear weapons and ballistic missiles, as well as the potential proliferation or safety risks inherent to exporting U.S. nuclear technology.

In the 111<sup>th</sup> Congress, legislation was introduced that would have required President Obama to certify that the UAE had taken a number of steps to strengthen its export controls and stem illicit trade with Iran before any agreement could come into effect or related U.S. exports of nuclear technology to the UAE could be approved. In 2007, the UAE adopted a stronger export control law, but as of mid-2010 had not issued implementing regulations for the law or fully staffed a national export control body to enforce it. In the interim, export control enforcement functions remain the responsibility of authorities in the UAE's individual emirates, in coordination with a new national interagency Committee on Commodities Subject to Import and Export Control established in April 2009. According to UAE officials, cooperation with the United States has resulted in a number of joint interdiction operations.

This report provides background information on the UAE nuclear program, reviews developments to date, analyzes proposed nuclear cooperation with the United States, and discusses relevant legislative proposals and options. See also CRS Report RS21852, *The United Arab Emirates (UAE): Issues for U.S. Policy*, by Kenneth Katzman, and CRS Report RS22937, *Nuclear Cooperation with Other Countries: A Primer*, by Paul K. Kerr and Mary Beth Nikitin.

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## **The United Arab Emirates: Background and U.S. Relations<sup>1</sup>**

The United Arab Emirates (UAE) is a federation of seven emirates (principalities): Abu Dhabi, Dubai, Sharjah, Ajman, Fujayrah, Umm Al Qawayn, and Ras Al Khaymah. National authority rests in the hands of a Federal Supreme Council, which is composed of the hereditary rulers of the country's constituent emirates and elects the national president from among its members. Sheikh Khalifa bin Zayed Al Nahyan, the ruler of Abu Dhabi, was elected UAE president in 2004 following the death of his father Sheikh Zayed bin Sultan Al Nahyan, who had ruled Abu Dhabi since 1966 and served as UAE president since 1971. Sheikh Khalifa was reelected for a second five-year term in November 2009. In practice, the wealthier and more powerful emirates of Abu Dhabi and Dubai exercise the strongest influence over the country's affairs; under current convention, the ruler of oil-rich Abu Dhabi serves as the UAE president, and the ruler of the UAE's commercial hub, Dubai, serves as vice president. The Supreme Council appoints the Prime Minister and the Council of Ministers (cabinet), which initiates legislation for ratification by the Supreme Council and the president.

The United States and the UAE have enjoyed close and cooperative relations in recent years, in spite of periodic differences with regard to political reform, the Israel-Palestinian conflict, counterterrorism, and U.S. policies regarding Iraq and Iran. Military cooperation and arms sales form a key pillar of U.S.-UAE relations. The UAE hosts frequent port calls and shore visits for U.S. naval vessels and allows the U.S. military to use Al Dhafra air base in support of a variety of missions in the U.S. Central Command (CENTCOM) area of operations. In 2007 and 2008, the Bush Administration notified Congress of over \$19.4 billion in potential arms sales to the UAE, including what would be the first overseas sale of the Terminal High Altitude Air Defense system. In 2009 and 2010, the Obama Administration notified Congress of a further \$8.8 billion in potential sales, including the potential sale of 60 remanufactured and new AH-64D Block III APACHE helicopters.

Bilateral trade has increased in recent years, with 2009 U.S. exports valued at over \$12.2 billion, making the UAE the largest U.S. export market in the Middle East. The Bush Administration began negotiating a free trade agreement with the UAE in 2004, but did not conclude the negotiations. The United States does not import a significant amount of oil from the UAE. However, the UAE exports over 2 million barrels of oil per day, making it a key global energy producer.

## **The United Arab Emirates Nuclear Program**

The government of the United Arab Emirates (UAE), like others in the Middle East, has announced plans to acquire nuclear energy production technology as a means of meeting projected national energy consumption needs.<sup>2</sup> Renewed global interest in nuclear power has led

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<sup>1</sup> For more information, see CRS Report RS21852, *The United Arab Emirates (UAE): Issues for U.S. Policy* by Kenneth Katzman.

<sup>2</sup> The governments of Turkey, Egypt, Jordan, Saudi Arabia, and Algeria have announced their intent to acquire nuclear energy production capabilities; their respective programs have moved forward in recent years with varying degrees of specificity and commitment. To date, Turkey, Jordan, and Egypt appear to have made the most progress toward their (continued...)

some experts and observers to express concern that the projected spread of nuclear technology in coming years could contribute to nuclear proliferation. In the Middle East, added scrutiny is often applied to the motives and choices of regional actors regarding nuclear technology because of concern that Iran's nuclear program and Israel's presumed nuclear weapons may motivate other regional governments to seek nuclear technology for strategic or military purposes. Other concerns about nuclear safety relate to potential terrorist attacks or political instability, both of which have threatened some regional countries in recent years. UAE officials report that they have considered these potential risks carefully, and have announced plans and measures intended to address proliferation and security concerns. Most prominently, the UAE has based its nuclear program on a decision to forgo domestic uranium enrichment or fuel reprocessing and to rely on international market sources for its nuclear fuel services. This decision has significantly reduced proliferation concerns among many observers, including some members of Congress.<sup>3</sup>

Policymakers and advisers in the government of Abu Dhabi, in consultation with representatives from the other six emirates, have set out an ambitious agenda for the program and are guiding its implementation. In April 2008, the UAE government issued a policy statement<sup>4</sup> that provides a rationale for the country's perceived need for nuclear energy and states guiding principles for the nuclear energy program. Operating and regulatory bodies have been formed and have begun their formal work. The end goal of the program, according to officials and related documents, is to build and operate a "fleet" of nuclear power plants to generate electricity for the UAE, supported by advanced, indigenously managed safety, regulatory, and security agencies.

In January 2010, the UAE announced that it had chosen the Korea Electric Power Corporation (KEPCO of South Korea) to construct the first of four APR1400 nuclear reactors that would sell electricity to the Abu Dhabi Water and Electricity Authority. During 2010, the UAE's administrative preparations have continued apace, including site selection, environmental surveys, and security planning. The plant construction is to take place at Baraka, near Abu Dhabi's western border with Saudi Arabia (see **Figure 1** below). All four plants are scheduled to be online by 2020. South Korea's export financing bank Kexim has agreed to supply \$10 billion in financing to support the KEPCO project in Abu Dhabi.<sup>5</sup> In November 2010, KEPCO was invited to purchase shares in the Emirates Nuclear Energy Corporation (ENEC) that is to operate the plants.<sup>6</sup>

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(...continued)

stated goals of constructing and operating domestic nuclear power plants. Like the UAE, their plans do not envision operational plants before 2015. Turkey and Egypt have active peaceful nuclear cooperation agreements with the United States pursuant to Section 123 of the Atomic Energy Act (AEA) of 1954.

<sup>3</sup> The UAE government also pledged \$10 million in August 2008 toward an international nuclear fuel bank proposed by the Nuclear Threat Initiative, a non-governmental organization. The bank, which the International Atomic Energy Agency Board of Governors approved December 3, 2010, is to be administered by the agency ... Mr. Hamad Al Kaabi, UAE Special Representative for International Nuclear Cooperation, explained August 7, 2008 that the contribution is part of the UAE's policy to support multilateral fuel supply efforts—a policy consistent with the country's decision to rely on foreign fuel suppliers and forgo domestic uranium enrichment or fuel reprocessing.

<sup>4</sup> Policy of the United Arab Emirates on the Evaluation and Potential Development of Peaceful Nuclear Energy, released April 20, 2008. Available at <https://pcs.enec.gov.ae/Content/Home.aspx>.

<sup>5</sup> Emily Meredith and Song Yen Ling, "Cash-Rich Abu Dhabi Seeks Nuclear Financing," *Uranium Intelligence Weekly*, October 18, 2010.

<sup>6</sup> Samji Chung, "ENEC Asks KEPCO to Buy Shares for UAE Nuclear Power Plant," *Maeil Business Newspaper*, November 14, 2010.

**Figure I. Map of United Arab Emirates**



Source: CRS Graphics.

## Rationale

UAE officials estimate that their country must expand its power generation and transmission capacity from the current level of 16 gigawatts to 40 gigawatts by 2020 in order to meet projected demand increases, which they estimate will continue growing at a 9% annual rate. In spite of the recent slowdown in global and domestic economic activity, representatives of the UAE nuclear program believe that the energy demand projections they are using to justify and plan the acquisition of nuclear plants remain accurate, particularly in light of planned industrial and commercial projects in energy-intensive sectors in the emirate of Abu Dhabi.<sup>7</sup> To date, UAE officials and representatives have not publicly shared economic cost and energy use data referred to in briefings on their nuclear program.

<sup>7</sup> CRS meeting with Abu Dhabi Executive Authority and Emirates Nuclear Energy Corporation representatives, Abu Dhabi, December 14, 2008. Large scale petrochemicals and aluminum production projects are already underway in Abu Dhabi's Kalifa Industrial Zone. See Chris Stanton, "Taweelah to host chemical city," *The National* (Abu Dhabi), May 4, 2008; and, Chris Stanton and Ivan Gale, "EMAL smelter remains on schedule," *The National* (Abu Dhabi), January 13, 2009.

In arguing for nuclear energy as a solution to the country's projected energy needs, the UAE government policy statement concludes that "known volumes of natural gas that could be made available to the nation's electricity sector would be insufficient to meet future demand."<sup>8</sup> The UAE currently exports roughly 600 million standard cubic feet per day of natural gas to Japan under long-term supply arrangements and imports roughly 2 billion cubic feet of natural gas from Qatar via the underwater Dolphin pipeline system.<sup>9</sup> Similarly, UAE officials believe that crude oil and diesel could be "logistically viable" sources of energy, but would impose high economic opportunity costs (as a result of lost export revenue) and environmental costs. Officials determined that coal could be a more economical solution, but would have even greater environmental costs and, as an import, also would raise concerns for the UAE about the security of supply. UAE officials believe that solar and wind energy sources could supply "only 6-7% of peak electricity demand by 2020," even after "aggressive development."

## **Development Plans**

The end goal of the program, according to officials and related documents, is to build and operate a "fleet"<sup>10</sup> of nuclear power plants to generate electricity for the UAE, supported by advanced, indigenously managed safety, regulatory, and security agencies that will be developed over time and with outside assistance. The UAE government is seeking to bring its first nuclear power plant online by 2017 along with required facilities and equipment for safety, storage, and system management. Under current plans, capacity would expand thereafter to three further nuclear power plants. A contract bidding and award process concluded in late 2009, and UAE officials chose South Korea's Korea Electric Power Corporation (KEPCO) as the primary engineering, procurement, and construction contractor. A number of U.S. and European firms have secured administrative and financial advisory contracts with the program. No specific decisions have been made regarding the source of nuclear fuel for the planned nuclear reactor or on handling spent reactor fuel.

## **Current Infrastructure and Regulatory Regime**

The UAE currently has no nuclear material under IAEA safeguards. It signed the NPT in 1995 and completed a Small Quantities Protocol in 2003. Non-nuclear weapons states without significant nuclear programs or nuclear material are permitted to conclude such Protocols. The UAE also has undertaken Technical Cooperation projects with the Agency, some of which are directly related to nuclear electricity generation. For example, a project begun in 1977 advised the government "on the establishment of a nuclear energy administration." A 1984 project focused on uranium exploration. More recently, a Technical Cooperation project approved in 2005 was designed to assess the "technical and economic feasibility" of a nuclear power and desalination plant. Active IAEA Technical Cooperation projects with the UAE focus on human resources

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<sup>8</sup> "Policy of the United Arab Emirates on the Evaluation and Potential Development of Peaceful Nuclear Energy," released April 20, 2008. Available at <https://pcs.enec.gov.ae/Content/Home.aspx>.

<sup>9</sup> One economic press report suggested that the UAE may be paying as little as \$1.25/million BTU of natural gas. *Middle East Economic Digest*, "UAE purchases gas from Dolphin pipeline at reduced rate," May 16, 2008. For more information on the pipeline, see [http://www.oxy.com/Our\\_Businesses/oil\\_and\\_gas/Pages/og\\_mena\\_dolphin.aspx](http://www.oxy.com/Our_Businesses/oil_and_gas/Pages/og_mena_dolphin.aspx).

<sup>10</sup> Correspondence between CH2M Hill and U.S. Department of Energy, National Nuclear Security Administration, June 2008.

development for atomic energy, feasibility studies for waste management, environmental monitoring, and nuclear accident early warning preparedness and response.<sup>11</sup>

A national law authorizing the program was adopted by the Federal Supreme Council in early October 2009. According to the State Department, the law, Federal Law 6 of 2009, “prohibits uranium enrichment and spent fuel reprocessing, creates a Federal Authority for Nuclear Regulation (FANR), and develops a nuclear material licensing and control system.”<sup>12</sup> UAE government representatives report that the UAE sought and received input on its draft nuclear law from the United States, United Kingdom, Japan, Korea, and France.<sup>13</sup> In conjunction with the issuance of the law, a Board of Management for the FANR was announced, and the board named former U.S. Nuclear Regulatory Commission Executive Director for Operations Dr. William Travers as the FANR’s first Director General. A nuclear energy policy advisory board reportedly has been formed, and UAE officials report that its members, though unnamed, include leading international nuclear energy industry officials.<sup>14</sup> The UAE has also adopted a law governing export controls, but has not yet issued implementing regulations (see section on “Export Control Concerns”). The UAE has also stated that it intends to establish a “separate nuclear liability regime for third-party compensation modeled on the four as-yet un-ratified IAEA instruments on nuclear liability.”<sup>15</sup>

Consulting and contracting between U.S. firms and the UAE related to the UAE’s nuclear program has already taken place. In August 2008, Virginia’s Thorium Power Ltd. signed two consulting and advisory services contracts related to the establishment of the Abu Dhabi-based Emirates Nuclear Energy Corporation (ENEC)<sup>16</sup> and the FANR. In October 2008, ENEC announced that Colorado’s CH2M Hill, Inc. was selected for a 10-year contract as the managing agent for the evaluation and design stage of the nuclear energy program. Pennsylvania-based Rizzo and Associates Inc., has been hired to survey potential nuclear plant sites in the UAE. The contracts were signed with the government of Abu Dhabi.

## U.S.-UAE Nuclear Cooperation

During 2008 and early 2009, the Bush Administration and the UAE government negotiated and signed a Memorandum of Understanding (MOU) (see below) and a proposed bilateral agreement on peaceful nuclear cooperation pursuant to Section 123 of the Atomic Energy Act (AEA) of

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<sup>11</sup> See IAEA-Technical Cooperation, National and Regional Asia and the Pacific Projects query page at <http://www-tc.iaea.org/tcweb/tcprogramme/recipients/eastasiapacific/query/default.asp>.

<sup>12</sup> Statement of Vann H. Van Diepen, Acting Assistant Secretary, State Department Bureau of International Security and Nonproliferation before the Senate Foreign Relations Subcommittee on Near Eastern and South and Central Asian Affairs, October 7, 2009.

<sup>13</sup> CRS analyst interview with UAE official, Washington, DC, March 6, 2009.

<sup>14</sup> UAE Minister of Foreign Affairs Shaykh Abdullah bin Zayed Al Nahyan, “Why Go Nuclear?” *Bulletin of the Atomic Scientists*, September/October 2008; and, CRS meeting with Abu Dhabi Executive Authority and Emirates Nuclear Energy Corporation representatives, Abu Dhabi, December 14, 2008.

<sup>15</sup> “Policy of the United Arab Emirates.” The four instruments are: the Vienna Convention on Civil Liability for Nuclear Damage, the Protocol to Amend the Vienna Convention on Civil Liability, the Joint Protocol on the Application of the Vienna and Paris Conventions, and the Convention on Supplementary Compensation for Nuclear Damage.

<sup>16</sup> See ENEC homepage at <https://pcs.enec.gov.ae/Content/Home.aspx>.

1954. The nuclear cooperation agreement entered into force after the two governments exchanged the relevant diplomatic notes on December 17, 2009.

## **Memorandum of Understanding**

On April 21, 2008, the United States and the UAE signed a MOU “Concerning Cooperation in Peaceful Uses of Nuclear Energy.” The MOU states that the two countries “intend to cooperate, subject to their respective national laws,” in a variety of nuclear activities. The MOU is a statement of intent regarding future cooperation, but is not legally binding. Although such memoranda are not prerequisites for concluding future nuclear cooperation agreements, the State Department has argued that they are useful tools for cooperating with countries which are interested in the responsible use of nuclear energy because they create opportunities to solicit specific commitments with regard to safeguards and technology choices. An April 21, 2008, State Department press release described the U.S.-UAE MOU as a “tangible expression of the United States’ desire to cooperate with states in the Middle East, and elsewhere, that want to develop peaceful nuclear power in a manner consistent with the highest standards of safety, security and nonproliferation.” The United States has concluded similar MOUs with Bahrain, Jordan, and Saudi Arabia in May 2008.

## **Proposed Bilateral Agreement Pursuant to Section 123 of the Atomic Energy Act of 1954**

On May 21, 2009, Deputy Secretary of State James Steinberg and UAE Ambassador to the United States Yousef Al Otaiba signed the text of a bilateral agreement on peaceful nuclear cooperation. Although then-Secretary of State Condoleezza Rice and UAE Foreign Minister Abdullah bin Zayed Al Nahyan signed a similar agreement in January 2009, the two governments reopened the text for negotiation after the Obama Administration took office.

Under the Atomic Energy Act of 1954 (AEA), all significant nuclear cooperation with other countries requires a peaceful nuclear cooperation agreement. Such agreements, which require congressional approval, are “framework” agreements which set the terms of reference and provide authorization for cooperation. The AEA includes requirements for an agreement’s content, presidential determinations, and other supporting information to be submitted to Congress, conditions affecting the implementation of an agreement once it takes effect, as well as procedures for Congress to consider and approve the agreement (see “Nuclear Cooperation Agreements, Approval Process, and Proposed Changes” below). The agreement would enter into force on the date when the two governments “exchange diplomatic notes informing each other that they have completed all applicable requirements.” As noted, the two governments exchanged these notes December 17, 2009.

According to the proposed U.S.-UAE agreement,<sup>17</sup> the two countries “intend to cooperate” on a variety of nuclear activities, including

- Developing “requirements for grid-appropriate power reactors and fuel service arrangements;”

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<sup>17</sup> The full text of the agreement is available in House Document 111-43, Agreement for Cooperation Between the Government of the United States and the Government of the United Arab Emirates, May 21, 2009.

- Promoting the “establishment of a reliable source of nuclear fuel for future civil light water nuclear reactors;”
- “Civil nuclear energy training, human resource and infrastructure development;”
- Cooperating on nuclear security and nonproliferation, “including physical protection, export control and border security;”
- Developing the UAE’s “civil nuclear energy use in a manner that supports global efforts to prevent nuclear proliferation, including, for example, the Global Nuclear Energy Partnership;”<sup>18</sup>
- Applying “radioisotopes and radiation in industry, agriculture, medicine and the environment;”
- Managing “radioactive waste and spent fuel;” and
- Identifying “uranium mining and milling resources.”

According to the agreement, cooperation could include

- “Exchange of scientific and technical information and documentation;”
- “Exchange and training of personnel;”
- “Organization of symposia and seminars;”
- “Provision of relevant technical assistance and services;”
- Transfers of “material, equipment and components.”

The agreement contains a variety of provisions which are required by the AEA and are designed to ensure that the UAE’s nuclear program remains exclusively for peaceful purposes. It also includes two provisions which are not found in any other U.S. nuclear cooperation agreement. First, the agreement provides that the UAE bring into force its Additional Protocol to its IAEA safeguards agreement before the United States licenses “exports of nuclear material, equipment, components, or technology” pursuant to the agreement. The IAEA Board of Governors approved the Protocol March 3, 2009. The UAE signed it April 8, 2009, and brought it into force on December 20, 2010.<sup>19</sup> Such protocols give IAEA officials greater access to an NPT state’s nuclear-related facilities and information.

Second, the agreement states that the UAE

shall not possess sensitive nuclear facilities within its territory or otherwise engage in activities within its territory for, or relating to, the enrichment or reprocessing of material, or for the alternation in form or content (except by irradiation or further irradiation or, if agreed by the Parties, post-irradiation examination) of plutonium, uranium 233, high enriched uranium, or irradiated source or special fissionable material.

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<sup>18</sup> For more information on the Partnership, see CRS Report RL34234, *Managing the Nuclear Fuel Cycle: Policy Implications of Expanding Global Access to Nuclear Power*, coordinated by Mary Beth Nikitin.

<sup>19</sup> “UAE Brings into Force Additional Protocol to Safeguards Agreement with the IAEA,” Emirates News Agency (WAM), December 20, 2010.

A May 21, 2009, letter to Congress, which President Obama submitted along with the agreement, described this provision as a “legally binding obligation.” According to the Nuclear Proliferation Assessment Statement submitted with the agreement, this provision “survives any termination of the Agreement so long as nuclear items subject to the Agreement remain in the territory of the UAE or under its jurisdiction or control anywhere.” Furthermore, the agreement provides the United States with the right to terminate nuclear cooperation and to require the return of any nuclear “material, equipment or components ... and any special fissionable material produced through their use” if, after the agreement’s entry into force, the UAE “possesses sensitive nuclear facilities within its territory or otherwise engages in activities within its territory relating to enrichment of uranium or reprocessing of nuclear fuel.”<sup>20</sup>

Another provision, which is not typically included in nuclear cooperation agreements, requires both parties to give “due consideration ... to non-proliferation and physical protection aspects” when selecting a storage facility for special fissionable material.<sup>21</sup>

According to the agreement, the United States may also require that any special fissionable material that has been transferred to the UAE or “used in or produced through the use of any material or equipment” transferred pursuant to the agreement be transferred to either the United States or an unspecified “third country” if Washington “considers that exceptional circumstances of concern from a nonproliferation standpoint so require.” A 1981 U.S. nuclear cooperation agreement with Egypt contains a similar restriction.

It is worth noting that an Agreed Minute to the U.S.-UAE agreement includes a provision which establishes its conditions as minimum standards for future such U.S. agreements in the Middle East. Stating that “the fields of cooperation, terms and conditions” accorded by the U.S.-UAE agreement “shall be no less favorable in scope and effect than those which may be accorded, from time to time, to any other non-nuclear-weapon State in the Middle East in a peaceful nuclear cooperation agreement,” the Minute explains that, in the event that Washington concludes a more-favorable agreement with another regional government, the United States will, at the UAE’s request, consult with the UAE “regarding the possibility of amending” the agreement in order to make its terms equally favorable to the new agreement.

A similar provision in the U.S.-Egypt agreement meant that the United States had to ensure that the agreement with the UAE would be at least as stringent. Since the latter agreement is more stringent, it has established a higher standard for future such U.S. agreements in the region.<sup>22</sup> (See the **Appendix**.)

Additionally, the U.S.-UAE agreement provides a potential way for the UAE to transfer spent nuclear fuel to other countries. The Agreed Minute states that the UAE may transfer spent nuclear fuel to France or the United Kingdom for storage or reprocessing. In the past, such advance U.S.

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<sup>20</sup> Uranium enrichment and reprocessing spent nuclear fuel are the dual-use nuclear activities of greatest proliferation concern. Uranium enrichment can produce low-enriched uranium for nuclear reactor fuel or highly enriched uranium, which can be used as fissile material in nuclear weapons. Reprocessing spent nuclear fuel separates plutonium from that fuel. Plutonium can also be used as fissile material in nuclear weapons.

<sup>21</sup> According to the agreement text, “special fissionable material means (1) plutonium, uranium 233, or uranium enriched in the isotope 235, or (2) any other material so designated by agreement of the Parties.” A similar provision is contained in a 1981 U.S. nuclear cooperation agreement with Egypt.

<sup>22</sup> CRS Analyst interview with State Department official March 9, 2009.

consent has been given only to Japan, Switzerland, and Norway.<sup>23</sup> The transferred material is to be held within EURATOM, and any separated plutonium cannot be returned to the UAE without additional U.S. consent.<sup>24 25</sup> According to the agreement, approval for such UAE spent fuel transfers would be subject to several conditions, including the UAE's adherence to its declared policy of refraining from enrichment and reprocessing. The UAE may also not engage in fabricating nuclear fuel containing plutonium. Additionally, the United States can terminate an agreement regarding spent fuel transfers if Washington decides that the UAE has not met one of the relevant conditions or if the United States "considers that exceptional circumstances of concern from a non-proliferation or security standpoint so require." The agreement explains that "[s]uch circumstances include, but are not limited to, a determination ... that the approval cannot be continued without a significant increase of the risk of proliferation or without jeopardizing its national security."

## **Nuclear Cooperation Agreements, Approval Process, and Proposed Changes**

As noted, all significant nuclear cooperation<sup>26</sup> with other countries requires a peaceful nuclear cooperation agreement.<sup>27</sup> Section 123 of the Atomic Energy Act (AEA) specifies that proposed nuclear cooperation agreements are to include the terms, conditions, duration, nature, and scope of cooperation. It also requires that any such agreement meet a series of nonproliferation criteria and that the President submit any such agreement to the House Committee on Foreign Affairs and the Senate Committee on Foreign Relations. The Department of State is required to provide the President an unclassified Nuclear Proliferation Assessment Statement (NPAS), which the President is to submit to the committees of referral along with the agreement. The State Department also is required to provide a classified annex to the NPAS, prepared in consultation with the Director of National Intelligence. The NPAS is meant to explain how a proposed agreement would meet the aforementioned nonproliferation criteria. The President also must make a written determination "that the performance of the proposed agreement will promote and will not constitute an unreasonable risk to, the common defense and security." President Bush issued such a determination November 14, 2008.<sup>28</sup> President Obama issued an identical determination May 19, 2009, and submitted the agreement, along with the unclassified NPAS, May 21. President Obama also submitted the classified NPAS.

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<sup>23</sup> U.S. agreements with Finland and Sweden also granted such consent rights, but those agreements have been replaced by the 1996 U.S.-EURATOM agreement.

<sup>24</sup> Japan and Switzerland have received advance consent to take back recovered plutonium for use in their civil nuclear programs.

<sup>25</sup> CRS Analyst interviews with State Department official March 12, 2009 and former State Department official Fred McGoldrick March 10, 2009.

<sup>26</sup> Significant nuclear cooperation includes the transfer of U.S.-origin special nuclear material subject to licensing for commercial, medical, and industrial purposes. The term "special nuclear material," as well as other terms used in the statute, is defined in 42 U.S.C. §2014. "Special nuclear material" means (1) plutonium, uranium enriched in the isotopes 233 or 235, and any other material that is determined to be special nuclear material, but does not include source material, or (2) any material artificially enriched by any of the foregoing, but does not include source material.

<sup>27</sup> For a primer on such agreements, which are frequently referred to as "123 agreements," see CRS Report RS22937, *Nuclear Cooperation with Other Countries: A Primer*, by Paul K. Kerr and Mary Beth Nikitin.

<sup>28</sup> Presidential Determination No. 2009-7, November 14, 2008.

Under the AEA, Congress has the opportunity to review a 123 agreement for two time periods totaling 90 days of continuous session.<sup>29</sup> The President must submit the text of the proposed nuclear cooperation agreement, along with required supporting documents (including the unclassified NPAS) to the House Foreign Affairs Committee and the Senate Foreign Relations Committee. The President is to consult with the committees “for a period of not less than 30 days of continuous session.” After this period of consultation, the President is to submit the agreement to Congress, along with the classified annex to the NPAS and a statement of his approval of the agreement and determination that it will not damage the national security interests of the United States. This action begins the second period, which spans 60 days of continuous session. In practice, the President has submitted the agreement to Congress, along with the unclassified NPAS, its classified annex, and his approval and determination, at the beginning of the full 90-day period. The 60-day period has been considered as following immediately upon the expiration of the 30-day period. If the President has not exempted the agreement from any requirements of Section 123(a), it becomes effective at the end of the 60-day period unless, during that time, Congress adopts a joint resolution disapproving the agreement and the resolution becomes law.<sup>30</sup> The agreement with the UAE was not an exempt agreement.

In the 110<sup>th</sup> Congress, some members of Congress proposed several amendments to the AEA that would have changed the AEA’s procedures for the negotiation and approval of peaceful nuclear cooperation agreements.<sup>31</sup> For example, H.R. 7316, which Representative Ileana Ros-Lehtinen introduced in December 2008, would have required Congress to enact a joint resolution of approval before any peaceful nuclear cooperation agreement could become effective. As noted above, such agreements currently become effective unless Congress enacts a joint resolution of disapproval. The bill also proposed adding a section to the AEA which would have required the President to keep the House Foreign Affairs Committee and the Senate Foreign Relations Committee “fully and currently informed of any initiative or negotiations relating to a new or amended agreement for peaceful nuclear cooperation ... prior to the President’s announcement of such initiative or negotiations.” The proposed section also would have mandated periodic presidential consultation with the committees about the progress of negotiations concerning such agreements. In the 111<sup>th</sup> Congress, H.R. 547, which Representative Ros-Lehtinen introduced January 15, 2009, contains the same language.

## Issues for Congress

Although the final text of the proposed U.S.-UAE nuclear agreement was agreed in early November 2008, the Bush Administration, reportedly at the UAE’s request, did not submit the agreement to the 110<sup>th</sup> Congress.<sup>32</sup> After the Obama Administration took office, the UAE agreed

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<sup>29</sup> When calculating periods of “continuous session” under the AEA, every calendar day is counted, including Saturdays and Sundays. Only days on which either chamber has adjourned for more than three days pursuant to the adoption of a concurrent resolution authorizing the adjournment do not count toward the total. If Congress adjourns its final session *sine die*, continuity of session is broken, and the count must start anew when it reconvenes.

<sup>30</sup> The AEA allows the President to exempt a proposed nuclear cooperation agreement from the nonproliferation criteria specified in Section 123. Such agreements have different procedures for Congressional review. Since the proposed agreement with the UAE is apparently a non-exempt agreement, those procedures are not discussed here.

<sup>31</sup> For additional details on these proposals, see CRS Report RS22937, *Nuclear Cooperation with Other Countries: A Primer*, by Paul K. Kerr and Mary Beth Nikitin.

<sup>32</sup> “UAE, USA Complete Negotiations on Peaceful Nuclear Energy Agreement,” Emirates News Agency, December 15, 2008; and, Mark Hibbs, “US-UAE Cooperation Pact Initialed; Approval Left to Obama, New Congress,” (continued...)

to reopen the text for negotiation. On May 21, 2009, the Administration submitted the agreement to Congress to begin the consultation periods required under the AEA. Some members of Congress welcomed the UAE government's stated commitments to forswear proliferation-sensitive nuclear capabilities, such as uranium enrichment or spent fuel reprocessing. Other members signaled their intention to evaluate the proposed bilateral agreement in light of parallel and specific concerns about the UAE's cooperation with international efforts to prevent Iran from developing nuclear weapons and the potential proliferation or safety risks inherent to exporting U.S. nuclear technology.<sup>33</sup> Broader diplomatic implications of the proposed agreement also were being weighed by concerned parties on all sides. The agreement, however, entered into force following the December 17, 2009 exchange of diplomatic notes because the 90 days of continuous session expired on October 17, 2009. State Department spokesperson Ian Kelly told reporters October 22 that the United States has "completed all ... internal procedures" for the agreement to enter into force. The UAE cabinet approved the agreement October 26.<sup>34</sup>

## **Congressional Concerns**

### **Export Control Concerns**

Since 2001, the UAE has been under increased U.S. scrutiny as an alleged transshipment point for military and dual-use exports to Iran, as an alleged hub of operations for weapons proliferators,<sup>35</sup> and as an alleged transit zone and financial conduit for terrorists and money launderers. At present, particular attention remains focused on U.S. concerns about the UAE government's willingness and ability to halt transfers of militarily sensitive technology to Iran. Some members of Congress have claimed that the UAE has not acted sufficiently to halt transfers of militarily sensitive technology to Iran and argued that the UAE should not have been able to conclude a nuclear cooperation agreement with the United States until the UAE government had taken additional measures against Iranian procurement activities of concern.

The United States government has stated publicly that some UAE-based entities have been involved in Iranian weapons procurement, nuclear, and ballistic missile program activities.<sup>36</sup> The Department of the Treasury designated two such entities under Executive Order 13382, which freezes assets under U.S. jurisdiction belonging to designated foreign entities engaged in

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(...continued)

Nucleonics Week, November 20, 2008.

<sup>33</sup> See, for example, a November 24, 2008, statement from Representative Brad Sherman, a January 15, 2009, letter from Representative Edward Markey, and an April 6, 2009, letter from Markey, Sherman, and Representative Ileana Ros-Lehtinen.

<sup>34</sup> "Cabinet Approves UAE-U.S. Agreement on Peaceful Nuclear Cooperation," *Emirates News Agency*, October 26, 2009.

<sup>35</sup> In connection with revelations of illicit sales of nuclear technology to Iran, Libya, and North Korea by Pakistan's nuclear scientist A.Q. Khan, Dubai was named as a key transfer point for Khan's shipments of nuclear components. For more detail, see CRS Report RL32745, *Pakistan's Nuclear Proliferation Activities and the Recommendations of the 9/11 Commission: U.S. Policy Constraints and Options*.

<sup>36</sup> For example, an October 2008 Department of Justice fact sheet states that eight companies, five of which are based in the UAE, were charged the previous month with crimes related to their participation in exporting dual-use items to Iran. Additionally, two men were indicted in July 2008 for "participation in a conspiracy to export U.S.-made military aircraft parts to Iran" via a company based in the UAE, according to the fact sheet. "Fact Sheet: Major U.S. Export Enforcement Prosecutions During Past Two Years," U.S. Department of Justice, October 28, 2008.

activities related to the proliferation of Weapons of Mass Destruction (WMD).<sup>37</sup> The Treasury Department has also designated other UAE-based entities under the same executive order because of their ties to Iranian banks which, according to the United States, are involved in proliferation activities.<sup>38</sup> The UAE has not been the only conduit for suspicious goods destined for Iran; Tehran has also used a network based in Malaysia for procuring dual-use items.

Administration and UAE officials have highlighted steps taken by the UAE in recent years to strengthen export controls and to take action against entities suspected of illicit proliferation activities, including targets associated with Iran. Concerns about suspicious transfers to Iran prompted U.S. action in 2007 to encourage the UAE to improve its national export control system. In February 2007, the U.S. Department of Commerce released an advanced notice of proposed rule-making that would have created a new export control designation known as “Country Group C” that would have established license requirements on exports and re-exports to countries that represent a diversion or transshipment risk for goods subject to the Export Administration Regulations.<sup>39</sup> Although no countries were mentioned in the notice, the proposal was widely considered to be directed at the UAE.<sup>40</sup>

In August 2007, the UAE adopted a stronger national export control law, but, as of July 2010, the government had yet to issue implementing regulations for the law or to fully staff a national export control body to enforce it. In the interim, export control enforcement functions remain the responsibility of authorities in the UAE’s individual emirates, and are being carried out in coordination with a national interagency Committee on Commodities Subject to Import and Export Control.<sup>41</sup> UAE Minister of State for Foreign Affairs Dr. Anwar Mohammed Gargash said in a statement released in conjunction with the April 2009 inaugural meeting of the committee that, “We will not compromise on issues of security and our export control reflects our intention to ensure tough safeguards over the movement of sensitive materials.” UAE Ambassador to the United States Yousef Al Otaiba described the law as a “work in progress” during a June 3, 2009, briefing. On July 22, 2010, Acting Assistant Secretary of State for International Security and Nonproliferation Vann Van Diepen stated in testimony before the House Foreign Affairs Subcommittee on Terrorism, Nonproliferation and Trade:

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<sup>37</sup> Specifically, the Treasury Department designated Oriental Oil Kish in October 2007 for unspecified “proliferation activities.” Oriental Oil Kish is an entity affiliated with Iran’s Islamic Revolutionary Guard Corps (IRGC), a department press release said, adding that the IRGC develops and tests ballistic missiles. In September 2008, the Treasury Department similarly designated Oasis Freight Agencies as a company affiliated with the Islamic Republic of Iran Shipping Lines (IRISL). Adam Szubin, director of the department’s Office of Foreign Assets Control, indicated during a September 10, 2008, press conference that IRISL has procured items for Iran’s ballistic missile programs.

<sup>38</sup> For example, the Department designated Melli Investment Holding International and BMIIC International General Trading Ltd. in March 2009 because of their ties to Iran’s Bank Melli, which, according to a March 3 Treasury Department statement, has been involved in procurement activities and other forms of support for Iran’s nuclear and missile programs. More recently, the Treasury Department announced May 12, 2009, that it had specifically designated several UAE-based branches of that bank. Previously, all worldwide offices of Bank Melli had been designated, but they were not named specifically. Additionally, the Department the same day designated the UAE office of Persia International Bank, a subsidiary of Bank Mellat. The Department stated in October 2007 that Bank Mellat has provided “banking services in support of Iran’s nuclear entities.”

<sup>39</sup> “Country Group C: Destinations of Diversion Control,” Advanced Notice of Proposed Rulemaking, 72 Federal Register 8315, February 26, 2007.

<sup>40</sup> *Inside U.S. Trade*, “UAE Drafts New Export Control Law With U.S. Help,” Vol. 25, No. 11, March 16, 2007.

<sup>41</sup> The Committee was authorized in April 2009. The Foreign Ministry serves as the chair, and other members include the Interior Ministry, the Armed Forces, the Ministry of Economy, and the Federal Customs Authority. The Committee met in May 2009 and reportedly discussed “creating a mechanism to implement the law.” Mahmoud Habboush, “Arms export control committee meets,” *The National* (Abu Dhabi), May 10, 2009.

they're continuing to staff up the implementation office that would oversee implementation of the law. Now, it's not the enforcement arm. That already exists. It's being enforced by the existing customs and law enforcement services, intelligence services and so on and so forth. But the people who would oversee the implementation of the law, that office is still being staffed up.<sup>42</sup>

U.S. cooperation with national and emirate level officials on proliferation issues appears to be strong. A bilateral nonproliferation working group meets annually to review and discuss nonproliferation issues of shared concern. In a September 2008 letter to then-U.S. Secretary of Commerce Carlos Gutierrez, Ambassador Otaiba detailed six joint and unilateral interdictions on Iran-bound ships completed since June 2008.<sup>43</sup> In 2009, the UAE seized "arms and related materials" from a ship en route to Iran, according to Australian officials. The UAE conducted the seizure, which reportedly took place in late July or early August 2009, pursuant to U.N. Security Council resolution 1874.<sup>44</sup> According to U.S. Permanent Representative to the United Nations Ambassador Susan Rice, the U.N. committee charged with monitoring implementation of the sanctions is investigating the matter.

Otaiba's letter further stated that "the UAE fully supports and has vigorously enforced United Nations resolutions barring the shipment of sensitive materials and technologies to Iran." The UAE also has "closed dozens of international and local companies involved in the transshipment of dual-use and controlled materials," according to the letter, which also highlighted the government's participation in several U.S. security initiatives, including the Container Security Initiative, the Proliferation Security Initiative, and the Department of Energy Megaports Initiative. UAE officials report they remain committed to fully implementing the 2007 law at the national level, including clarifying roles and responsibilities for export control enforcement. Acting Assistant Secretary Van Diepen confirmed the Administration's shared view of the UAE's commitment to export control enforcement in July 2010, stating:

it's very clear to us that the UAE government at the highest levels and also broadly throughout their interagency, you know, has internalized and understands the importance of nonproliferation and of dealing with the proliferation problems through effective action. And the UAE has taken a lot of very important steps, not just passing legislation but in terms of stopping specific shipments, shutting down companies, dealing with specific individuals. So a lot of concrete real world activities have been engaged in by the UAE to really do things in the real world that matter.

## **Nonproliferation Concerns**

The most proliferation-sensitive part of a nuclear power program is the capability to produce fuel for nuclear reactors, either by enriching uranium or reprocessing spent nuclear fuel to obtain plutonium. Low-enriched uranium is used as fuel for nuclear reactors. Both highly enriched

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<sup>42</sup> Vann Van Diepen, Acting Assistant Secretary Of State For The Bureau Of International Security And Nonproliferation before the Terrorism, Nonproliferation and Trade Subcommittee of the House Foreign Affairs Committee, July 22, 2010.

<sup>43</sup> Letter from UAE Ambassador to the United States Yousef Al Otaiba to U.S. Secretary of Commerce Carlos Gutierrez, September 17, 2008.

<sup>44</sup> Brendan Nicholson, "Australian Ship in Arms Row," *The Age*, August 31, 2009; Rod Mcguirk, "Australia Probes North Korean Weapons Shipment," *The Associated Press*, August 30, 2009. For additional information on the Security Council resolution, see CRS Report R40684, *North Korea's Second Nuclear Test: Implications of U.N. Security Council Resolution 1874*, coordinated by Mary Beth Nikitin and Mark E. Manyin.

uranium and plutonium can be used as fuel in some types of nuclear reactors but are also used as fissile material in nuclear weapons. The dual-use nature of nuclear fuel facilities frequently generates concern that ostensibly peaceful facilities may aid nuclear weapons programs.

The 2008 MOU states that the UAE has agreed to the policy commitments described earlier in its April 2008 policy statement, which are designed to boost confidence that the state's nuclear program is exclusively for peaceful purposes. For example, the statement indicates that the UAE will forgo "domestic enrichment and reprocessing capabilities in favor of long-term commitments of the secure external supply of nuclear fuel." Moreover, as noted above, the nuclear cooperation agreement's text states that the United States can end nuclear cooperation with the UAE if it acquires enrichment or reprocessing facilities. Without such capabilities, a nuclear program poses little proliferation risk. IAEA Director-General Mohamed ElBaradei explained in an August 2007 interview:

One nuclear reactor by itself means nothing, you are still far from having an atom bomb. I am more worried when a country has a plant for industrial-scale uranium enrichment... In this case it can make a nuclear bomb within a few months.<sup>45</sup>

As noted above, the U.S. State Department reports that the UAE's new nuclear regulatory law (Federal Law 6 of 2009) prohibits domestic enrichment and reprocessing.<sup>46</sup>

As a party to the nuclear Nonproliferation Treaty (NPT), any future UAE nuclear facilities would be subject to IAEA safeguards.<sup>47</sup> Additionally, the UAE agreed to conclude an Additional Protocol to its safeguards agreement. As noted, such protocols give IAEA officials greater access to an NPT state's nuclear-related facilities and information. The UAE currently has a Small Quantities Protocol to its safeguards agreement, but, according to the nuclear cooperation agreement, will terminate that Protocol before the United States issues export licenses for the export of "nuclear material, equipment, components, or technology" pursuant to the cooperation agreement.<sup>48</sup>

It is also worth noting that the UAE's 2008 policy statement on its nuclear program states that the government plans to rely on light-water reactors, which are considered among the most proliferation-resistant, partly because of the difficulty in producing and obtaining weapons-grade plutonium without detection. Moreover, a May 2008 International Institute for Strategic Studies report points out that "no successful nuclear-weapons program has ever relied on commercial reactors."<sup>49</sup> Although a civilian nuclear power program could provide cover for a country's

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<sup>45</sup> "We're approaching the brink: PROFIL Interview with Mohamed El Baradei." *Profil*, August 8, 2007. Available at <http://www.iaea.org/NewsCenter/Transcripts/2007/PROFIL3507.html>.

<sup>46</sup> Statement of Vann H. Van Diepen, Acting Assistant Secretary, State Department Bureau of International Security and Nonproliferation before the Senate Foreign Relations Subcommittee on Near Eastern and South and Central Asian Affairs, October 7, 2009.

<sup>47</sup> For more information about IAEA safeguards, see CRS Report RL33865, *Arms Control and Nonproliferation: A Catalog of Treaties and Agreements*, by Amy F. Woolf, Mary Beth Nikitin, and Paul K. Kerr. The UAE has had an IAEA safeguards agreement in force since 2003. The text is available at <http://www.iaea.org/Publications/Documents/Infcircs/2003/infirc622.pdf>.

<sup>48</sup> Some NPT state-parties with small quantities of fissionable materials have concluded a Small Quantities Protocol to their IAEA safeguards agreements. Certain IAEA verification requirements are suspended for such states.

<sup>49</sup> International Institute for Strategic Studies, *Nuclear Programmes in the Middle East: In the Shadow of Iran*, May 2008.

procurement of dual-use items that could aid a nuclear weapons program, such a program would need to include some covert facilities.

## **Human Rights Concerns**

A video depicting the torture of an Afghan grain merchant named Muhammad Shah Poor by Abu Dhabi ruling family member Sheikh Issa bin Zayed al Nahyan and uniformed security officers has drawn widespread condemnation following its publication by ABC News in April 2009.<sup>50</sup> In response, some members of Congress and congressional staff raised questions about the appropriateness of moving forward with the proposed U.S.-UAE nuclear cooperation agreement, pending UAE action on the case.<sup>51</sup> The U.S. State Department has indicated that the Obama Administration's review of the proposed nuclear cooperation agreement and concerns the Administration may have about the torture depicted on the video "are two separate issues."<sup>52</sup> Abu Dhabi authorities announced on May 11, 2009, that "the Public Prosecution Office has officially launched a criminal investigation into the events depicted on video, and detained Sheikh Issa bin Zayed Al Nahyan pending the outcome of this investigation."<sup>53</sup>

In January 2010, Sheikh Issa was acquitted following trial in which the court heard testimony that he had been drugged by Lebanese business associates who sought to use the video to blackmail him. The business partners were convicted in absentia and, along with others depicted in the tape, sentenced to serve terms ranging from one to five years. The victim reportedly settled out of court. In the wake of the acquittal, H.R. 5378 (introduced May 25, 2010) sought to make members of the royal families of the UAE and employees of the UAE government ineligible for non-immigrant visas to enter the United States until the Secretary of State "has determined that Sheikh Issa bin Zayed al Nahyan has been tried, in accordance with what the Secretary determines to be appropriate international legal norms and human rights standards." The bill would provide national interest waiver authority for the Secretary of State.

## **Possible Diplomatic Implications**

### *Shaping Nonproliferation Standards and Best Practices*

The Bush Administration argued that nuclear cooperation with the UAE could set a useful precedent for mitigating the dangers of nuclear proliferation as an increasing number of countries consider developing nuclear power. The State Department stated in April 2008 that the UAE's choice to forgo enrichment and reprocessing "serves as a model for the economical and responsible pursuit of nuclear power." Similarly, President Obama's May 21, 2009, letter of transmittal argued that the agreement "has the potential to serve as a model for other countries in

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<sup>50</sup> Vic Walter, Rehab El-Buri, Angela Hill, and Brian Ross, "Torture Tape Implicates UAE Royal Sheikh," *ABC News: Nightline*, April 22, 2009. Available at <http://abcnews.go.com/Blotter/Story?id=7402099&page=1>.

<sup>51</sup> For example, Congressman James McGovern, the co-chairman of the House Human Rights Commission has asked, "How can we move forward with such a delicate agreement in the face of such an atrocious human rights violation?" adding, "If it [the proposed 123 agreement] were brought to Congress now I would certainly ask that it be rejected." Robert F. Worth, "Abu Dhabi Torture Video Raises Doubts in U.S. About Nuclear Pact," *New York Times*, May 2, 2009.

<sup>52</sup> Robert Wood, Acting State Department Spokesman, Daily Press Briefing, Washington, DC, April 30, 2009.

<sup>53</sup> "Video matter referred to the Abu Dhabi Public Prosecution Office," Emirates News Agency (WAM), May 11, 2009.

the region that wish to pursue responsible nuclear energy development.” As noted, the proposed U.S.-UAE agreement includes a provision which apparently intends to establish the agreement’s conditions as minimum standards for future such agreements in the Middle East. On July 8, 2009, Under Secretary of State for Arms Control and International Security Ellen Tauscher testified before the House Foreign Affairs Committee on the proposed agreement and argued that

In addition to being indicative of our strong partnership with the UAE, the proposed Agreement is a tangible expression of the United States’ desire to cooperate with states in the Middle East, and elsewhere, that want to develop peaceful nuclear power in a manner consistent with the highest nonproliferation, safety, and security standards.... U.S. cooperation with the UAE will also serve as a distinct counterpoint to those countries that have chosen a different path, in particular Iran.<sup>54</sup>

However, the standard set by the UAE may not be preferred by other governments in the region seeking to develop nuclear energy programs of their own. Negotiations over a U.S.-Jordanian nuclear cooperation agreement were delayed during 2009 and 2010 as Jordanian officials debated the relative merits of adopting the UAE model or preserving their ability to pursue domestic uranium enrichment at some point in the future.<sup>55</sup> In July 2010, Representative Howard Berman stated in a letter to the *New York Times* about Jordan that “the more states that forswear enrichment, the safer the whole region.”<sup>56</sup>

### *Commercial Opportunities*

Licensed nuclear technology contracts with the UAE provide commercial benefits to the U.S. nuclear industry or its international competitors. While Emirati officials have stated their strong desire for nuclear cooperation with the United States and have incorporated former U.S. government officials and U.S. contractors into their early plans and activities, the UAE has similar cooperation from other international sources and awarded the main engineering and construction contracts (worth tens of billions of dollars) to South Korea’s KEPCO. The UAE and France signed a nuclear cooperation agreement in with France in January 2008 and a similar agreement with South Korea June 22, 2009. The UAE signed a nuclear cooperation agreement with Japan in January 2009 and approved a nuclear cooperation agreement with the United Kingdom in December 2010.

UAE officials explained during a June 3, 2009, briefing that the government’s nuclear cooperation agreement with France contains preambulatory language describing the UAE’s commitment to refrain from enrichment and reprocessing. However, the agreement does not explicitly refer to that commitment. Transferring such technologies is not within the agreement’s scope, the officials said, adding that all future UAE nuclear cooperation agreements with other countries will reflect the government’s policy regarding enrichment and reprocessing.

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<sup>54</sup> Testimony of Under Secretary Ellen Tauscher Before the House Foreign Affairs Committee, July 8, 2009.

<sup>55</sup> See Rana al Sabbagh, “Will Amman and Washington Sign Long-Awaited Peaceful Nuclear Cooperation Agreement?” *Al Arab Al Yawm*, July 25, 2010; and, Emily Meredith, “Jordan Hopes to Finalize Nuclear Accord Despite Enrichment Stance,” *The Oil Daily*, September 29, 2010.

<sup>56</sup> Hon. Howard Berman, “Jordan’s Nuclear Power: A View From Capitol Hill,” *New York Times*, July 10, 2010.

### ***Bilateral Relations and UAE Cooperation in Nonproliferation Activities***

As noted above, the United States and the UAE have enjoyed close and cooperative relations in recent years, in spite of periodic differences over some issues. Prior to the approval of the 123 agreement, some observers speculated that a failure to conclude the proposed nuclear cooperation agreement would have been viewed by officials and influential figures in the UAE as an indication of a lack of faith and commitment by the United States government in the UAE, which could have had negative implications for other aspects of the bilateral relationship. These fears appear to have been based largely on the perceived repercussions of Dubai Ports World's failed 2006 bid to acquire and operate U.S. port terminals. However, others believed that while the Dubai Ports World incident had undermined feelings of mutual trust and had set back some planned commercial ties, the failed initiative did not otherwise damage U.S.-Emirati political or military relations in any tangible, lasting way.

Emirati authorities continue to move forward with the implementation of their nuclear development plans and, while they appear to strongly desire U.S. technical assistance and advice, they have not chosen the United States as their main contracting partner for the program. To date, the U.S. government has not signaled that there has been any negative change in their view of the bilateral relationship because of the UAE government's decision to partner with South Korea. As noted above, other international parties are providing technical assistance on a commercial basis and others continue to seek contracts to support the implementation of the program. Some observers have argued that without U.S. involvement, the UAE program could adopt technology or systems more vulnerable to proliferation or security concerns. UAE representatives state that their commitment to forgo domestic enrichment or reprocessing is fundamental and applies under cooperative arrangements with non-U.S. suppliers.

### **Legislative Developments in the 110<sup>th</sup> and 111<sup>th</sup> Congress**

In the 110<sup>th</sup> Congress, Representative Ros-Lehtinen introduced H.R. 7316, the "Limitation on Nuclear Cooperation with the United Arab Emirates Act of 2008." The bill would have prohibited the proposed U.S.-UAE agreement from coming into effect without presidential certification that the UAE had taken specific steps to improve its export controls and to limit the transfer of certain items to Iran. As noted above, H.R. 7316 also sought to change the procedures for the negotiation and approval of peaceful nuclear cooperation agreements by amending the Atomic Energy Act. (See "Nuclear Cooperation Agreements, Approval Process, and Proposed Changes" above.)

In the 111<sup>th</sup> Congress, Representative Markey introduced a joint resolution of disapproval on May 21, 2009 (H.J.Res. 55). House and Senate joint resolutions of approval were introduced on July 13, 2009 (S.J.Res. 18 and H.J.Res. 60). Representative Ros-Lehtinen is an original co-sponsor of H.J.Res. 60, although she had previously introduced two pieces of legislation to establish conditions on U.S.-UAE nuclear cooperation and to change negotiation and approval procedures for nuclear cooperation agreements:

- H.R. 364, the "Limitation on Nuclear Cooperation with the United Arab Emirates Act of 2009" was introduced and referred to the House Foreign Affairs Committee on January 9, 2009. The bill states that a U.S. civil nuclear cooperation agreement with the UAE may not enter into force "unless not less than 30 legislative days prior to such entry into force the President certifies" to the House Foreign Affairs Committee and the Senate Foreign Relations Committee that the UAE has improved its export control system and halted

UAE-based entities' transfers of technology relating to Weapons of Mass Destruction programs, particularly to Iran. The bill also requires the UAE to stop the transfer of certain conventional weapons and related components to Iran. H.R. 364 also states that, if the United States and the UAE do conclude a nuclear cooperation agreement, the United States may not grant an export license for "nuclear material, equipment, or technology" to the UAE unless the President certifies within 30 legislative days that the UAE has met the above requirements.

- H.R. 547, was introduced and referred to the House Foreign Affairs Committee January 15, 2009. It contains the language from H.R. 7316 relating to procedural changes for nuclear cooperation agreements pursuant to the Atomic Energy Act.

## **Appendix. Provisions in U.S. Nuclear Cooperation Agreements with the UAE and Egypt Relevant to Establishing Standards for other Such Agreements**

### **UAE<sup>57</sup>**

The Government of the United States of America confirms that the fields of cooperation, terms and conditions accorded by the United States of America to the United Arab Emirates for cooperation in the peaceful uses of nuclear energy shall be no less favorable in scope and effect than those which may be accorded, from time to time, to any other non-nuclear-weapon State in the Middle East in a peaceful nuclear cooperation agreement. If this is, at any time, not the case, at the request of the Government of the United Arab Emirates the Government of the United States of America will provide full details of the improved terms agreed with another non-nuclear-weapon State in the Middle East, to the extent consistent with its national legislation and regulations and any relevant agreements with such other non-nuclear weapon State, and if requested by the Government of the United Arab Emirates, will consult with the Government of the United Arab Emirates regarding the possibility of amending this Agreement so that the position described above is restored.

### **EGYPT<sup>58</sup>**

The Government of the United States confirms that fields of cooperation, terms and conditions accorded by the United States to the Arab Republic of Egypt for cooperation in the peaceful uses of nuclear energy shall be no less favorable in scope and effect than those which may be accorded by the United States to any other non-nuclear weapon state in the Middle East in a peaceful nuclear cooperation agreement. In this connection it is understood that the safeguards required by this agreement shall be no more restrictive than those which may be required in any peaceful nuclear cooperation agreement between the United States and any other state in the region. By entering into this agreement the United States confirms its recognition of the importance of the Arab Republic of Egypt's adherence to the NPT, and its longstanding support of international non-proliferation measures, including establishment of a nuclear weapon free zone in the Middle East. If any situation arises which could increase the risk of proliferation of nuclear weapons, the United States and the Arab Republic of Egypt, at the request of either, shall enter into consultations with respect thereto with a view to maintaining the objectives of the NPT.

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<sup>57</sup> House Document 111-43, Agreement for Cooperation Between the Government of the United States and the Government of the United Arab Emirates, May 21, 2009, p. 36.

<sup>58</sup> "Agreement for Cooperation Between the Government of the United States of America and the Government of the Arab Republic of Egypt Concerning Peaceful Uses of Nuclear Energy," Treaties and Other International Acts Series (TIAS) 10208, December 29, 1981.

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