



## U.S.-U.A.E. Agreement for Peaceful Nuclear Energy Cooperation: Advancing Mutual U.S. and U.A.E Security and Economic Interests

April 08, 2009

The United States Congress has a unique opportunity to accomplish multiple foreign policy, security, and economic goals by supporting a nuclear energy cooperation agreement with the United Arab Emirates. The agreement supports and advances long-term American interests in the Middle East region, while simultaneously allowing U.S. companies to compete for new business that will result in creating high paying, skilled jobs.

The 123 Agreement with the U.A.E. creates a gold standard for the development of peaceful and safe civilian nuclear energy, as a response to urgent electricity needs. This agreement will become a model for other countries in the region hoping to acquire nuclear power capabilities in the future. There is already evidence that the U.A.E.'s actions on nonproliferation have had a positive influence on others in the region.

The U.S.-U.A.E. 123 Agreement will advance and promote American interests in peaceful and secure civilian nuclear energy development. Civilian nuclear cooperation with the U.A.E. will deepen bilateral strategic and economic ties and yield wide-scale commercial opportunities for American companies beyond traditional business sectors. The U.A.E. program will generate contracts for services, construction, equipment, and long-term operations that could exceed \$40 billion.

### **The Requirement: Skyrocketing Electricity Demand**

Annual peak demand for electricity in the U.A.E. is likely to rise to more than 40,000 megawatts by 2020, reflecting a cumulative annual growth rate of about nine percent since 2007. Current capacity can meet only half these increased requirements. This intense demand is driven by expanded urbanization, industry growth, and enormous water desalination requirements.

The U.A.E. demand is reflected across the region. Moody's Investor Service recently observed that "the Gulf is likely to see more power shortages as regional utilities struggle to deal with fast-rising power demand." In February 2008, AT Kearney noted that "Growing demographics and wealth in the Middle East will lead to an ongoing increased demand for utilities of more than four percent per annum in the coming decades, with selected countries such as United Arab Emirates growing even stronger."

The U.A.E. is oil-rich, but burning petroleum for base-load electricity makes little sense from a global oil supply standpoint, an economic perspective, and an environmental perspective. Fuel accounts for 80 percent to 90 percent of electricity costs produced by fossil fuel-fired generation, while nuclear power is the lowest variable cost producer of base-load electricity. Currently, the U.A.E. burns natural gas for the majority of its electricity. The U.A.E. is a net importer natural gas, with roughly 60% of natural gas used in the utility sector being imported from outside of the U.A.E. Nuclear power generation will best help the country meet the electricity challenge with a clean and reliable supply.

### **New Non-Proliferation Benchmark**

Acknowledging the sensitivities related to the acquisition (or even consideration) of nuclear energy production capabilities, the U.A.E. set out to develop a civilian nuclear energy program that provided rock-solid assurances as to its peaceful goals and intent. Working closely with other responsible governments (including the United States), the International Atomic Energy Agency (I.A.E.A.), and reputable advisory firms, the U.A.E. has developed a peaceful civilian nuclear energy policy that commits to the highest standards of nonproliferation, safety, security, and operational transparency.

Within this policy framework, the U.A.E. officially renounced uranium enrichment and spent fuel reprocessing, creating a significant barrier to any possible future militarization. As part the overall process of developing its program, the U.A.E. is committing to all major international nonproliferation instruments, including the I.A.E.A. Additional Protocol to the Safeguards Agreement which the U.A.E. and the I.A.E.A. signed on April 8<sup>th</sup>, 2009. The U.A.E. is ascribing to the N.S.G. Export Guidelines and the I.A.E.A. Amendment to the Convention on Physical Protection. The U.A.E. also contributed \$10 million towards an I.A.E.A. fuel bank proposal launched by the Nuclear Threat Initiative. The fuel bank helps create a dedicated low-enriched uranium I.A.E.A. stockpile to provide states with assurances of nuclear fuel supply.

These steps have influenced other states in the region:

- Saudi Arabia and Bahrain signed separate MoU's on Nuclear Energy Cooperation with the U.S. in May 2008. Both included the same commitments to forego domestic enrichment and reprocessing that the U.A.E. had earlier put forward in its policy white paper.
- Earlier this year, Kuwait also contributed \$10 million to the NTI-sponsored fuel bank, following the U.A.E.'s lead.
- U.A.E. actions continue to positively impact the broader regional discussion concerning internationally acceptable paths to nuclear power.

With the policy established, the U.A.E. has begun to develop the regulatory, operational, and commercial framework necessary to ensure that

these standards are implemented and enforced. They also began negotiating nuclear energy cooperation agreements with other countries that supply nuclear energy technology and know-how. Known as a "123 Agreement" in the United States, after the relevant section of the Atomic Energy Act, these agreements provide the legal framework which allows commerce in nuclear technology, equipment, and know how.

The next step in finalizing the U.S.-U.A.E. 123 Agreement is for the Obama Administration to transmit the Agreement to Congress for a 90-day period. Once Congress has allowed the agreement to come into force, U.S. companies will be fully competitive in the procurement process, which is well underway. Because of the its urgent electricity needs, the U.A.E. is on a tight timeline and intends to select, in the fall of 2009, the consortium of companies which will design, build, and operate a planned fleet of nuclear reactors.

### **American Jobs**

U.S. companies are best served--and the creation of and support for American jobs is best facilitated--by access to credible nuclear energy programs such the U.A.E.'s. Furthermore, the I.A.E.A. estimates the market that emerges out of the coming global nuclear energy renaissance ranges from 178 to 357 new reactors worldwide. The approach being taken by the U.A.E. is creating a global model which the U.S. should strongly promote and in which U.S. companies should be allowed take part.

American companies could participate in the U.A.E. civilian nuclear program as suppliers or as central players in consortiums bidding on projects. Those contracts would create jobs in the United States (even though the plants would be located in the U.A.E.). For example, the nuclear power plants that Westinghouse is building in China and that GE is building in Taiwan have helped create and support over 10,000 U.S. jobs over a period of years. Moreover, the jobs themselves are high-quality, skilled craft, and engineering positions.

The agreement would unlock business for a range of U.S. firms supporting the civilian nuclear effort, such as services in construction, plant management, operations, logistics, plant safety, training, and transportation for the plant workers. A formula developed by the U.S. Department of Commerce is that every \$1 billion in U.S. exports supports 11,000 to 12,000 U.S. jobs. With more than \$40 billion in potential contracts, even a portion of the business would be significant to U.S. job creation in the current economic downturn.

### **Current U.S. Business**

Key U.S. companies have already won business and are involved in the U.A.E.'s nuclear energy policy formulation and technology evaluation process:

- CH2MHILL, headquartered in Colorado with 25,000 employees worldwide, is serving as managing agent for the potential U.A.E. Civil Nuclear Power Program currently under evaluation. Interestingly, CH2MHILL is also program manager for the development of Masdar City, a sustainable city in the heart of Abu Dhabi which is focused on the development and commercialization of advanced and innovative renewables, and alternative and sustainable energy technologies.
- Thorium Power, based in Virginia, is providing extensive consulting services to help ensure that the U.A.E. nuclear energy program meets its goals of operational transparency and the highest standards of nonproliferation, safety and security.
- Paul C. Rizzo Associates, a leading global engineering and consulting firm based in Pennsylvania, is working on power plant siting and engineering during the preliminary planning process

#### **No Agreement Destabilizes Industry, Undermines Policy.**

A 123 Agreement is the only way for the U.A.E. to consider American technologies for its program. Failure to complete the U.S.-U.A.E. Agreement would mean U.S. companies could not compete in the U.A.E process. It would also put U.S. companies at a significant, long-term disadvantage in the global marketplace. Without an agreement with the U.S., the U.A.E. government will pursue its civilian nuclear energy program with the assistance of other nations. The global civilian nuclear energy industry is very competitive, with companies from the E.U. and the Far East competing for these types of projects. The U.S. should work to keep its competitive advantage. France, Japan, South Korea, and other countries in Europe and Asia are the most likely beneficiaries of a U.S. decision not to go forward, as such a decision would not only make it impossible for U.S. firms to participate, but may also raise concerns about U.S. reliability as a nuclear supplier in the other emerging markets as well.

The U.A.E. is creating an important model for others in meeting the global increase in nuclear energy needs. For the United States to turn its back on this “gold standard” template would be a serious setback to broad global nonproliferation efforts and specific policy goals in the Middle East region. Finally, in rejecting the U.S.-U.A.E. 123 Agreement, the United States could also boost Iran’s standing in the region. Iran promotes the concept that the United States does not really want the region to obtain nuclear energy technology—even in the case of the most non-proliferative and collaborative program like the U.A.E.’s.

#### **A Vital American Partner and Friend**

A 123 Agreement between our two countries will further bolster a vital American partner in a strategically important region. The U.A.E. and the U.S. are close allies with shared security and economic interests. Both countries are focused on stability and security in the Arabian Gulf, confronting terrorism and extremism, and encouraging global trade.

The U.A.E. is the largest export market for U.S. goods in the Middle East, generating \$15.7 billion in exports during 2008—ahead of countries like Spain, Ireland and Indonesia. There are over 30,000 Americans and 750 U.S. companies operating in the U.A.E. U.A.E. investment has been a dependable and long-term engine of growth for the U.S. economy, injecting capital, expanding market access, creating jobs and contributing to mutual prosperity.

More U.S. naval vessels—over 600 in 2006—visit U.A.E. ports than any other port outside of the United States. The last Congress has already given a new vote of support to U.A.E.-U.S. relationship by approving a highly sophisticated defensive arms package totaling approximately \$15 billion, including the sale of PATRIOT PAC-III and THAAD missile defense systems. The U.A.E. is not only a consumer of security, but it is also a provider. The U.A.E. works closely on the ground with the U.S. and N.A.T.O. in Afghanistan and in re-integrating Iraq into the international community.

The U.A.E. stands today as a critical partner and friend to the United States. This historic opportunity to enhance U.S. security by advancing our global non-proliferation goals, to create new jobs at home, to increase foreign trade, and to bolster the civilian nuclear sector must not be squandered.