

ACU Strategic Partners LLC

ACU / International Power Generators / X-Co Dynamics A U.S.-Based Project Providing Nuclear Power Plants, a Secure Fuel Cycle and a Shared Security Partnership for the Middle East

Overview

Over 20 nuclear power projects are now under development in the Middle East. Saudi Arabia, Egypt, Kuwait, Jordan and the UAE, among others, are now constructing nuclear power plants or examining ways of establishing their nuclear power capabilities. These development efforts present a number of major challenges involving the potential proliferation of nuclear weapons.

ACU, a U.S. company, has developed a practical strategy to prevent nuclear weapons proliferation in the Middle East that simultaneously reinforces shared interests of the U.S., Saudi Arabia, Egypt, Israel and other Mid-East countries in security, stability, and shared prosperity.

ACU is developing International Power Generators (IPG), a partnership among the U.S., Saudi Arabia, Egypt, Jordan, Kuwait and the UAE that is designed to own and operate 40 nuclear power reactors in the Middle East with a fully integrated secure in-and-out fuel service. Of these reactors, 18 will be in Saudi Arabia, a minimum of 10 are designated for Egypt and the remainder will be constructed in Kuwait, the UAE and Jordan. IPG is also establishing X-Co Dynamics, a new public/private partnership developed in concert with relevant U.S. government agencies and the countries of the Gulf Cooperation Council, to protect the nuclear power plants, related infrastructure, and the surrounding region, in order to provide zones of security, stability and prosperity for at least the full life of the reactors, approximately 80 years. Together, the components of the IPG project create a Middle East “Marshall Plan” funded by the Mid-East governments. No U.S. government funding or guarantees are required to finance the IPG project as it will be funded entirely by Saudi Arabia and other Gulf countries.

The two essential features of the IPG nuclear power project that distinguish it from the nuclear power plants already under construction and in the planning stage in the Mid-East are: 1) its extensive and pervasive shared security partnership; and 2) its secure in-and-out fuel cycle. These features make the IPG project starkly different from the Mid-East nuclear plants currently under construction and proposed by Korea, Russia, France, and China, which provide neither a secure fuel cycle nor the type of advanced and broad security protections required to ensure the reliability of operation and the safety of the reactors from hostile elements such as ISIS and Al Qaeda.

IPG will provide a program of mutually assured security to all participating Mid-East countries through establishing X-Co Dynamics (X-Co) – a public/private partnership which will rely on leading companies in the defense and intelligence industries for state-of-the-art security tools and technologies to provide new shared intelligence awareness, enhanced warning and more effective defense architectures. Building on U.S. and allied defense architectures already in place in the region, the partnership will provide new opportunities and additional capabilities to address a multitude of security-related concerns. It will stabilize the region as well as promote economic development and shared prosperity. It will serve as an “Iron Bridge,” tying together the national interests of the U.S. and its Middle East allies.

The IPG fuel cycle will be secured by ensuring that all enrichment of nuclear fuel for the fleet of power reactors will be performed outside the Middle East and all spent fuel will be removed from the region as soon as it has cooled sufficiently by highly secure transport. The enrichment services in the U.S. will be supplied by a “black box” company that controls the materials and technology under U.S. national and IAEA safeguards in a facility jointly owned by the U.S. and Gulf States that is dedicated solely to providing enrichment and fabrication of fuel for IPG. All spent nuclear fuel will be removed from the Middle East and stored in secure, safe facilities subject to U.S. consent rights and IAEA oversight. This long-term, secure in-and-out nuclear fuel cycle is an essential strategic component of IPG that provides unique security advantages for Mid-East stability and preventing nuclear proliferation, thus strengthening Israel’s security. The ACU/IPG architecture is specifically designed to provide nuclear power to the Middle East consistent with the U.S. nonproliferation “gold standard” without the risks of uranium enrichment, spent fuel reprocessing, plutonium separation, or responsibility for nuclear waste, any of which could undermine regional security as well as erode U.S. defense support.

This project aims to fundamentally alter regional economic and political dynamics, reinvigorate faltering U.S. relationships with key allies, and provide the long-term industrial and economic initiatives needed to stabilize the region by adapting the successful post-World War II Marshall Plan to the present needs of the Mid-East. Investment in the region, partnerships with regional governments and local companies, as well as the infrastructure build-out to support the fleet of power plants will begin immediately upon project launch so participating countries immediately realize the economic benefits, security improvements, and long term U.S. commitment.

Implementation

In Phase 1 of the project, IPG will form new partnerships among the U.S. and participating Mid-East countries to build and own a state-of-the art enrichment and fuel fabrication facility in Tennessee near Oak Ridge as well as a heavy nuclear component manufacturing plant in Virginia near Hampton Roads. ACU has entered into a critical partnership with Mammoet, the premier Dutch logistics and nuclear construction firm, to advise on the construction of these plants, transport their output of nuclear fuel and reactor components to the Middle East, and help oversee the planning for building 40 reactors in the region. Both U.S. facilities are being designed by CH2M Hill, a leading U.S. engineering firm. By building the two U.S. plants, the IPG project will bind the United States and participating Middle East nations together both economically (with up to \$200 billion in U.S. nuclear export opportunities over the life of the project) and in a new expanded security relationship.

In Phase 2, the output of the secure enrichment and fuel fabrication facility as well as the heavy nuclear component manufacturing plant will be dedicated to serving only the IPG owned Mid-East reactors. Spare enrichment and manufacturing capacity will be made available to the U.S. Navy. IPG, the project company, will be paid directly by the Saudi and other host country governments at a pre-negotiated price to provide both the power plants and a robust, comprehensive security package for the plants as well as associated infrastructure. The participating Mid-East governments will be able to sell electricity from the plants in their respective countries through their utilities but the key value of the project is the mutual assurance of security and prosperity resulting from the IPG architecture and broad economic benefits of the project, rather than profits from sales of electricity.

By providing all the nuclear fuel necessary, including a fuel bank to ensure timely delivery, the IPG project removes any incentive for the Middle East partner countries to build their own enrichment capability in the region. It also eliminates the need for spent fuel storage and geologic disposal in the Mid-East by removing the spent fuel to an approved country outside the Middle East. (The U.S. currently has no capability to take spent fuel.)

ACU/IPG Project Key Points

- **Middle East countries underwrite and operate Mid-East regional security** – The 40 reactor project will include extensive security arrangements and build an industrial infrastructure that will create jobs and revenue in both the U.S. and the Mid-East.
- **IPG provides mutually assured security with state-of-the-art technologies and close coordination with governments** – In order to protect the reactors and supporting infrastructure against physical, cyber and insider threats such as the risk of non-state actors gaining access to nuclear materials, X-Co Dynamics, a public/private security partnership developed in concert with relevant U.S. government agencies, the host country governments, the Gulf Cooperation Council, and regional defense forces, will use cutting-edge technologies to ensure the security of all associated facilities; tailor each security zone to its specific environs; protect the supporting infrastructure against physical, cyber and insider threats; minimize risk that non-state actors could gain access to nuclear materials; and analyze and share actionable intelligence. X-Co will extend security zones beyond the immediate areas surrounding facilities and infrastructure so the partnership can strengthen collective regional efforts to address internal and external threats.
- **A Middle East “Marshall Plan”** – Together, the components of the project create a Middle East “Marshall Plan,” funded by Middle East governments, to bring economic development, jobs, security, stability and shared prosperity to the region. No U.S. government guarantees or U.S. taxpayer dollars are required to finance the project.
- **Two major plants, jointly owned with Gulf State partners, will be built in the U.S., for manufacturing heavy nuclear components in Virginia and for enrichment and fuel fabrication in Tennessee** – These plants will be dedicated to IPG but also will improve the defense and industrial capabilities of the U.S., thus binding the national interests together.
- **ACU/IPG Project can “fix” the 4 non-secure South Korean nuclear reactors under construction in the UAE** – The Korea-UAE nuclear project does not provide a secure in-and-out nuclear fuel cycle and therefore presents a strategic risk for release of potentially weaponizable material, a risk that the ACU/IPG Project would address while preventing similar risks from other Mid-East nuclear projects.
- **Israeli security** – Because both the fuel cycle and the reactors will be secure, including the removal of spent fuel for safe-keeping outside the region, the project will eliminate potentially significant threats to Israel’s security from current Mid-East nuclear power developments. The project will strengthen Israel’s energy security by providing Israel with the energy output of two reactors (c. 2400 MW) that are located in either Egypt or Jordan.