



KING ABDULLAH ECONOMIC CITY, THE FLAGSHIP METROPOLIS OF THE SIX ECONOMIC CITIES PROJECT IN SAUDI ARABIA, WILL SERVE AS A HUB TO 2,700 MANUFACTURING COMPANIES AND 2 MILLION PEOPLE UPON COMPLETION IN 2030.

Saudi Arabia Commits \$100 billion for Civil Nuclear Program

BY EDWARD BURTON, PRESIDENT AND MANAGING DIRECTOR, U.S.-SAUDI ARABIAN BUSINESS COUNCIL

The attention of the nuclear industry is shifting toward Saudi Arabia. In June the Saudi Government announced that it will commit more than \$100 billion over the next 20 years to develop a civil nuclear program.

The Kingdom is planning to build 16 nuclear reactors at a projected cost of \$7

billion each, according to an announcement at the Gulf Environment Forum by Abdul Ghani bin Melaibari, Coordinator of Scientific Collaboration at King Abdullah City for Atomic and Renewable Energy (KACARE).

While much of the global community remains uncertain about future developments in the industry following the incident at the Fukushima Dai-ichi nuclear plant in Japan, Saudi Arabia has signaled that it will not reverse its intention to develop nuclear power. According to Mr. Melaibari, Saudi Arabia plans to have its first two reactors within the next 10 years and will thereafter construct two additional reactors every two years until the Kingdom reaches 16 by 2030. Some sources project that unforeseen costs and potential construction delays could escalate the cost to reach \$300 billion for the project.

Although Saudi Arabia possesses one-fifth of the world's proven oil reserves, the country has emerged as the fastest-growing consumer of energy in the Middle East North Africa (MENA)

region. The Saudi Government projects the country's demand for electricity to nearly triple from its current level by 2030, reaching an estimated 120 GW.

In order to preserve its hydrocarbons for export, Saudi Arabia will supplement its energy sources with a combination of nuclear and renewable energy. The government is looking to have 20 percent of the Kingdom's electricity fueled by nuclear energy.

KACARE

Saudi Arabia took its first major step toward creating a civil nuclear program in April 2010, through the establishment of KACARE, which is designed to address the country's growing need for energy and desalinated water through the utilization of innovation, science, research, and industries related to atomic and renewable energy for peaceful purposes.

Nuclear cogeneration units will produce clean energy, while water desalination plants will simultaneously use the waste heat created by the power

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plants to boil seawater. The project is supported by an initial \$133.33 million allocation from the Saudi Government's 2011 national budget.

Headquartered in Riyadh, KACARE consists of a 13-member council of high ranking ministers to advise the president and vice presidents of operations. H.E. Dr. Hashim bin Abdullah Yamani, former Saudi Minister of Commerce and Industry and a Harvard-trained physicist, has been appointed president. Appointed vice presidents are Dr. Khalid Al-Sulaiman, former deputy minister of Commerce and Industry, and Walid bin Hussein Abu Al-Faraj, current Rector of Umm Al-Qura University in Makkah and a nuclear engineer.

The council is responsible for formulating a national policy on nuclear development, supervising all commercial use of nuclear power, and handling radioactive waste, as well as representing Saudi Arabia to the International Atomic Energy Agency (IAEA).

FOREIGN INVESTMENT

The Saudi Government is seeking foreign expertise and investment in KACARE activities. As an incentive, all machinery and equipment imported for scientific activities is now exempted from tariffs and taxes. In June 2010, the government appointed Finnish company Pöyry as adviser to KACARE. Pöyry is formulating an operating model, outlining short and long-term priorities and devising an action plan for the nuclear development program. The strategy covers electricity generation and will also look at the decommissioning of nuclear power plants and the handling of radioactive waste.

U.S.-based McKinsey & Co. was selected as financial adviser in June 2010 and in November 2010, KACARE appointed U.S. law firms Vinson & Elkins LLP and Morgan, Lewis & Bockius LLP, as well as Saudi law firm of Motasem Khashoggi, as its legal advisors. The firms are drafting a national policy on nuclear energy development that will

address the commercial use of nuclear power in the Kingdom and the monitoring of the disposal of radioactive waste.

Companies from around the world have expressed interest in the Kingdom's nascent industry. In July 2010, The Shaw Group Inc., Toshiba International Corp., and Exelon Nuclear Partners, a unit of Exelon Corp., announced their intention to collaborate in order to pursue nuclear power contracts in Saudi Arabia. Shaw and Toshiba will provide design, engineering, procurement and construction, while Exelon will provide operations and related services to the projects.

General Electric Co. has also indicated interest in taking a larger role in the nuclear program, as half of Saudi Arabia's electricity is generated using GE turbines. Local businesses are also looking to capitalize on the opportunity. Saudi Binladin Group announced in January 2011, that it will collaborate with French company Areva in the areas of nuclear and solar energy.

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INTERNATIONAL SUPPORT FOR CIVIL NUCLEAR DEVELOPMENT

The U.S. has pledged its support for Saudi Arabia to develop a civil nuclear program that benefits its people, observes international nonproliferation standards, and prevents the spread of nuclear weapons.

During a May 2008 meeting with Custodian of the Two Holy Mosques King Abdullah, in Saudi Arabia, President George Bush announced an agreement to provide training and support to build a civil nuclear program that will operate according to guidelines established by the IAEA. The agreement served as the first official step toward building a comprehensive framework for future U.S.-Saudi nuclear cooperation. Currently, the U.S. does not have a 123 Agreement with Saudi Arabia.

Governments from the world's largest economies have stepped forward to partner with the Kingdom as it develops its civil nuclear program. Saudi Arabia entered its first nuclear treaty with France in February 2011.

In June 2011, the Kingdom entered an agreement with Argentina in the area of nuclear desalination. The Saudi Government is in discussions to sign similar cooperation agreements with Russia, China and South Korea.

OPPORTUNITIES AROUND FOR THE PRIVATE SECTOR

The nuclear plants in Saudi Arabia hold promise to become one of the most lucrative energy-contract opportunities in the MENA region in the near to mid-term future. Sitting on \$480.5 billion in foreign assets and a consolidated debt below 4 percent of GDP, the Kingdom is well positioned to execute necessary projects in order to keep pace with the country's unrelenting power demand.

Saudi Arabia is looking to the international community to provide advanced technologies and services in nuclear energy, which will translate into sizable opportunities for U.S. and international firms. To succeed in this market, companies need to move early and stay committed. 



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