New Chairman of the Nuclear Power Plants Authority in First Dialogue with “Rosa El Youssef”: Signing Contract on Dabaa Nuclear Power Plant Expected within 45 Days

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A few weeks ago, Dr. Amgad Alwakeel, head of the Nuclear Power Plants Authority, conducted the first press conference on Egypt and Russia’s signing of the contract for the nuclear power plant in Dabaa. He began the press conference by saying: “the nuclear dream will come true. Egyptians are capable of achieving miracles. Those who achieved the dream of winning the glorious October war … and establishing the Suez Canal in one year … are no strangers to the nuclear dream.”

The program will begin in Dabaa, followed by the establishment of a number of other plants in several locations. The head of the Nuclear Power Plants Authority assured the Egyptian people that the nuclear reactor is safe and has high technological safety standards, and he stressed that the Authority is waiting to determine the signing date based on the agendas of presidents el-Sisi and Putin. Dr. Amgad Alwakeel responded to our many questions throughout this dialogue:

You’ve recently said that the signing of the Dabaa nuclear contract will be soon … some were even signed during October’s celebrations, correct?

The contract to establish an Egyptian nuclear power plant in Dabaa is expected to be signed with the Russian company Rosatom before the end of the year, with implementation stages beginning at the start of 2018.

What about contracts being signed with Russia?

There are 4 contracts to be signed related to the nuclear plant. The first is the main contract on construction details, the second is focused on fuel supply, the third involves operation and maintenance details, and the fourth concerns the stages of spent fuel disposal.

But the reviewing of these contracts has taken a long time since the initial signing of the cooperation agreement between Egypt and Russia in November 2015.

This is Egypt’s first experience with a nuclear program, so review is necessary. We’re checking the details of the contracts to ensure that they serve the interests of both sides, and there have been meetings between Egyptian and Russian delegations over the past two years.
But from time to time, we hear media statements saying that there are comments on the signing of finalized contracts.

99% of the comments are about adjusting the wording of the contracts and there are no substantial changes. The contracts have been reviewed by the Russian Ministry of Finance and, from our side, by the Council of State, and they have been translated from English to Arabic and vice-versa within the Armed Forces Language Institute.

We’d like to identify the stages after the contract is signed by Egypt and Russia.

After the completion of the signing ceremony between the two countries, the implementation of the Egyptian nuclear program will be initiated, and there are many steps. The first is called the preparatory stage and it will take up to two and a half years, during which the design of the site will be approved. Then we must obtain permission to build the site from the Nuclear Regulatory Commission. Next comes the stage of construction and experimental operation and this take 5 years ... Within 7 years of signing, we’ll have our first nuclear power plant.

Has an appointment been made to sign the four contracts for the Dabaa nuclear plant?

God willing, the signing will take place before the end of the year. We hope to carry this out within the next few weeks, but the timing is set according to the agendas of President Abdel Fattah el-Sisi and Russian President Vladimir Putin. However, there are discussions with the Russians to determine a specific time to be announced to the media in order to avoid any confusion. This will happen, but the specific day depends on el-Sisi and Putin. After that, the local and foreign media will be informed and there will be a festive atmosphere, whether at the Heliopolis Palace where the signing will take place or at the Dabaa site in Matrouh.

What about safety at Dabaa station?

I can say that the Dabaa station has the highest safety requirements in the world. Security systems for the Russian VVER-1200 reactors provide an unprecedented level of protection against both internal and external factors and effects. For example, the outer shell is designed to withstand collision with a large commercial airplane weighing 400 tons, loaded with fuel and flying 150 meters per second (~335 mph). This is in addition to the safety features included in modern third-generation reactors, which have fire extinguishers and are able to cope with external hazards, such as earthquakes and tsunamis reaching up to 14 meters, to stop safely in the event of human error, and to operate for 72 hours in case of emergency.

When the Egyptian nuclear program is initiated, will the two national projects promised by el-Sisi after taking office be achieved?

First of all, President el-Sisi has given special attention to reviving the Egyptian nuclear program, as he considers the Dabaa nuclear project as one of the two giant national projects (that and the Suez Canal project) according to his speech to the Egyptian people in June 2014.

Since then, the Nuclear Power Plants Authority implemented the President’s decision and it made contact with some countries that export nuclear technology. These communications led to the start of preliminary
negotiations with these countries to build a number of nuclear power units at the Dabaa site, taking into account the economic and financial factors that would contribute to the selection of a strategic partner who will implement the project. A number of countries that had been approached responded to the beginning of talks to determine the steps to implement Egypt’s peaceful nuclear program.

In this context, many bilateral meetings and negotiations were held with each country separately. A number of specialists from these countries visited the nuclear site of Dabaa, where they were handed copies of the Egyptian technical, economic, and financial requirements for the nuclear plant in order to prepare technical and financial proposals for the project.

**What happened during the flood of offers to build the nuclear reactor?**

After studying the results of the negotiations with these countries, Russia was chosen as a strategic partner to participate in implementing the Egyptian nuclear program. A number of executive measures were adopted with the signing of the Project Development Agreement (PDA) by the two countries in February 2015, followed by the signing of the Intergovernmental Agreement (IGA) and the Financial Intergovernmental Agreement (FIGA) by the Egyptian and Russian governments in November 2015.

**Does Egyptian society accept nuclear energy after being reassured?**

There are three strategies being implemented through the direct signing with Rosatom. The first is a media strategy aiming to inform citizens about the stages of implementing the nuclear program, and it promotes the project as one of the pillars of Egypt’s energy strategy. The second is a training strategy that includes preparing staff to operate the plant in all specialties. The third is a strategy to educate citizens about the use of nuclear energy for peaceful purposes and about the fact that this plant is the first of its kind in the region; this strategy aims to clarify how nuclear energy can contribute to economic development and to quell fears about the use of nuclear energy.

**How much power is the nuclear plant capable of generating?**

The plant includes 4 reactors, each with a generation capacity of 1200 MW for a total of 4800 MW, and I would like to point out that the site has room to build an additional 4 reactors.

**Does the Nuclear Power Plants Authority have other sites in areas other than Dabaa?**

The Egyptian nuclear program is beginning in Dabaa and will continue in several other areas. Najila 1 and Najila 2 are two promising locations for establishing nuclear plants.

**What are your thoughts on the staff qualified to administer the nuclear program, especially considering that many of them migrated to other Arab or European countries after the nuclear program was repeatedly postponed?**

There are a number of sectors within the government that have provided us with staff and helped the Egyptian nuclear program. The principle supporters are Prime Minister Sherif Ismail and the Ministers of Electricity, Finance, Planning, and Military Production, as well as the Head of the Central Organization of Management and Administration. There were periodic meetings about overcoming obstacles, helping the
Nuclear Power Plants Authority, and training staff. We’re longing to complete our nuclear dream so much that the Ministry of Military Production is leading a campaign to “nationalize nuclear technology” and Dr. Mohammad Shaker, the Minister of Electricity and Renewable Energy, is sparing no effort to create the appropriate climate for the Authority to play its role.

But Egypt is in the process of amending the law governing the Authority, correct?

We are waiting for the House of Representatives to amend the law concerning the Authority, Law 13 of 1976, to give the Authority more dynamism and vitality in dealing with governmental and international bodies.

What about the role of other agencies within the ministry?

There is complete cooperation and coordination between the agencies of atomic energy, nuclear resources, and nuclear regulation and the Nuclear Power Plants Authority. We all have one goal and one interest: the Egyptian nuclear program.

The Road to Dabaa

- The Egyptian nuclear program began in 1961 with the establishment of the ETRR-1 reactor during the reign of President Gamal Abdel Nasser. He then decided to start a nuclear plant for electricity production and water desalination in the area of Sidi Kerir.
- The 1967 War followed and postponed the project. After the October War, Richard Dixon and President Sadat agreed to set up two nuclear plants from the United States. The specifications were provided to two American companies, but before the signing, America imposed conditions that President Sadat could not accept, and the project that would have produced 600 MW in Sidi Kerir was halted.
- President Sadat planned to establish 8 nuclear plants and presented this to countries including France. After the project in Sidi Kerir was discontinued, the site of Dabaa was chosen. Then Sadat was assassinated and Mubarak came into power in 1981; he said he would announce a public tender, which delayed the project by 3 years. Then the Chernobyl accident happened and was exploited by Mubarak, who said “we will not operate the reactor to protect the health of the people.”
- In 2007, Mubarak revived the nuclear energy project. He issued a law on nuclear activities and established the Egyptian Atomic Energy Authority in 2010. This was a big step in the project, and the site was brought up to date.