

The United Arab Emirates (UAE) and the first nuclear energy plant

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The start-up of the Arab world's first nuclear reactor - in the United Arab Emirates - has been delayed and should start operations between the end of 2019 and early 2020. The Barakah power plant project was originally scheduled to open in 2017.¹

The \$24.4 billion Barakah power plant is the world's largest nuclear project under construction and will be the first in the Arab world. "Barakah One" is the first of four reactors being built by Korea Electric Power Corporation (KEPCO) in the UAE and a joint venture between Emirates Nuclear Energy Corporation (ENEC) and KEPCO.²

The second reactor is 92 percent complete, the third 81 percent while 66 percent of the fourth has been completed. When fully operational, the four reactors will produce 5,600 megawatts of electricity, or around 25 percent of the country's needs, according to the UAE energy ministry.³ UAE says it aims to continue diversifying toward its goal of 50-percent clean energy by 2050.⁴

The UAE is building a nuclear industry from scratch, hiring nuclear physicists, setting up a regulator, training operators and establishing institutes for radiation monitoring and accident prevention.⁵

In an April 2008 white paper, Abu Dhabi made a commitment to forgo uranium enrichment. The same was reflected in its 2009 “123” nuclear cooperation agreement with the United States (named after Section 123 of the US Atomic Energy Act of 1954), whose language barring enrichment and reprocessing is often referred to in the nuclear community as the “nonproliferation gold standard.”⁶

According to the UAE's Ambassador and Permanent Representative to the International Atomic Energy Agency (IAEA), Hamad al-Kaabi, the UAE has been continuously providing assistance to regional countries interested in launching nuclear programs. The UAE has shared its experience with all the interested partners and this

goes with the assistance and support it can provide in the development of resources, approaches, regulations when it comes to building and licensing a power plant.⁷

“When the UAE developed its approach for nuclear power it looked for a responsible approach with a commitment to the highest standards of nuclear safety and nonproliferation, part of it was to share that information with other countries who are interested in nuclear power,” al-Kaabi said.⁸ The UAE has committed not to enrich uranium itself and not to reprocess spent fuel.⁹

Yemen's Houthi rebels claimed on December 3, 2017, that they have launched a cruise missile towards a nuclear plant in Abu Dhabi. According to a report in the Saba news agency, the missile hit the Barakah nuclear power station.¹⁰

The UAE has denied claims made by the Houthi militias in Yemen of a missile launch towards the UAE's airspace. In a statement, UAE emphasized that the air defense system is capable of dealing with any threats and the Barakah Nuclear Power Plant has all necessary safety and security measures in place to avert crises.¹¹

Summary

The Middle East is in the process of going nuclear. Several countries in the Middle East and North Africa (MENA) including UAE, have announced plans to build nuclear power plants. Countries in MENA have justified their pursuit of nuclear energy, in the desire to meet a rapidly rising demand for electricity, support economic growth, achieve greater security of supply and diversify their energy mix. But the nuclear initiative among the MENA countries can also be considered as a status symbol and a response to the Iranian nuclear program in the context of their strategic competition with Iran.

Israel has long argued that a nuclear Iran would set off a regional nuclear race, as Tehran's traditional rivals in the Middle East — Egypt, Saudi Arabia, Turkey, Jordan and the Persian Gulf states — would quickly move to respond to the Iranian nuclear program challenge.

Egypt's, Saudi Arabia's and the UAE's desire for a nuclear program could also be seen as part of the greater Sunni reaction to Iran's program and what they fear will be a Shia nuclear bomb, which will cast a shadow over the entire region. Iran's program has already triggered a number of civilian nuclear programs in other Sunni Arab countries.¹²

The Arab states are concerned from the Iranian nuclear program, especially in light of the Joint Comprehensive Plan of Action (JCPOA). The JCPOA, if it remains intact, buys Iran's neighbors a decade during which they can continue with their nuclear push to better prepare themselves for Tehran's rise.

The transition from civil nuclear power to nuclear weapons, however, is not that straightforward, although it can be argued that the technology required for peaceful purposes makes militarization easier.

Notes

¹ The UAE will be the first new country to acquire nuclear power in more than two decades.

² UAE's first nuclear reactor start-up delayed, says operator, Al Arabiya, May 26, 2018.

³ UAE says its first nuclear reactor complete: Mohamed Bin Zayed, Al Arabiya, March 26, 2018.

⁴ UAE says its first nuclear reactor complete: Mohamed Bin Zayed, Al Arabiya, March 26, 2018.

⁵ A year's delay for UAE's first nuclear plant, Al Arabiya, May 5, 2017.

⁶ UAE to become first Arab country to join civilian nuclear club within weeks, Al Arabiya, February 21, 2017.

⁷ Awad Mustafa, UAE working with regional countries on nuclear power, Al Arabiya, Al Arabiya September 25, 2017.

⁸ Awad Mustafa, UAE working with regional countries on nuclear power, Al Arabiya, Al Arabiya September 25, 2017.

⁹ Sylvia Westall, Saudi Arabia to extract uranium for 'self-sufficient' nuclear program, Reuters, October 30, 2017.

¹⁰ Yemen's Houthis report missile launched towards UAE, Al Jazeera. December 3, 2017.

¹¹ UAE denies Houthi allegations of missile launch against nuclear plant, Al Arabiya, December 3, 2017.

¹² Ariel ben Solomon, Why is impoverished Egypt seeking a nuclear program? Jerusalem Post, April 25, 2013.