

Saudi Arabia and the "Nuclearization" of the Middle East

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Prime Minister Benjamin Netanyahu warned against “nuclearizing the Middle East,” saying that the Iran nuclear deal, in its current form, could lead to a dangerous arms race. Prime Minister Benjamin Netanyahu added that: “the way to prevent this danger, the “nuclearization” of the Middle East, is to either thoroughly correct the [Iran nuclear] agreement or abrogate it.”¹

Few days later, Saudi Crown Prince Mohammed bin Salman who is also the kingdom's deputy prime minister and its defense minister, has said that his country will build its own nuclear capabilities if Iran develops a bomb.² “Saudi Arabia does not want to acquire any nuclear bomb, but without a doubt, if Iran developed a nuclear bomb, we will follow suit as soon as possible,” the Crown Prince told CBS.³

The crown prince also likened Iran's supreme leader to Adolf Hitler during the rise of Nazi Germany.⁴ Khamenei “wants to expand. He wants to create his own project in the Middle East very much like Hitler who wanted to expand at the time. Many countries around the world and in Europe did not realize how dangerous Hitler was until what happened,” he said. “I don't want to see the same events happening in the Middle East,” the Crown Prince told his interviewer.⁵

Saudi Arabia would be the second country in the Gulf Arab region (after UAE) to tap nuclear power after the United Arab Emirates. Over the past decade, Saudi Arabia has shown interest in developing its civil nuclear program. In August 2009 the Saudi government announced that it was considering a nuclear power program on its own. The Saudi focus on nuclear serves various of the kingdom's goals: diversification of its economy, reduction of its dependence on fossil fuels, countering a potential future Iranian nuclear capability, and enhancing efforts to ensure that Saudi Arabia rather than Iran emerges as the Middle East's long-term, dominant power.

Saudi Arabia and "uranium enrichment"

In recent months Saudi Arabia has announced its intentions of embarking on a massive program to become "self-sufficient" in producing nuclear fuel. Saudi Arabia has large uranium deposits of its own. Saudi Arabia plans to extract uranium domestically as part of its nuclear power program and sees this as a step towards "self-sufficiency" in producing atomic fuel. Preliminary studies have estimated Saudi Arabia has around 60,000 tons of uranium.

In a speech at an international nuclear power conference in Abu Dhabi, Hashim bin Abdullah Yamani, head of the Saudi government agency tasked with the nuclear plans⁶, did not specify whether Saudi Arabia seeks to also enrich and reprocess uranium, steps in the fuel cycle which are especially sensitive as they can open up the possibility of military uses of the material.⁷

The Saudis are reportedly demanding the right to enrich uranium and have made it a condition to awarding the contracts, expected to be worth tens of billions of dollars, to US companies.

In his meeting with President Trump, Prime Minister Netanyahu reportedly requested that, if the Americans insist on going ahead with building nuclear reactors, Saudi Arabia be prevented from enriching uranium by itself. He demanded that this be a precondition for the entire deal.⁸

The Saudi nuclear program.

In June 2011, Saudi Arabia announced an ambitious plan to build sixteen nuclear power reactors by 2030 at a cost of an estimated \$100 billion. These would generate about 20% of Saudi Arabia's electricity.

To advance its program, Saudi Arabia established the King Abdullah Atomic and Renewable Energy City (KA-CARE) devoted to research and application of nuclear technology. It is also responsible for supervising works related to nuclear energy and radioactive waste projects.⁹

In November 2011, Riyadh appointed Worley Parsons to conduct site surveys and regional analysis to identify potential sites, to select candidate sites then compare and rank them, and to develop technical specifications for a planned tender for the next stage of the Saudi nuclear power project. Three sites were short-listed as of September 2013: Jubail on the Gulf, and Tabuk and Jizan on the Red Sea. The Nuclear Holding Company was being set up in 2013.

Riyadh has taken a series of steps to develop commercial relationships with major nuclear suppliers, signing a memorandum of understanding with the United States(2008), France (February 2011), Argentina (June 2011), South Korea(November 2011), China (January 2012) and Russia(June 2015).¹⁰

Saudi Arabia's nuclear agency has suggested that various steps of the nuclear fuel cycle, including fuel fabrication, processing, and enrichment, would lend themselves to local production.

Cooperation on nuclear energy was one of 14 agreements worth \$65 billion signed during the visit of Saudi King Salman to China. The agreement is for a feasibility study for the construction of high-temperature gas-cooled (HTGR) nuclear power plants in the kingdom as well as cooperation in intellectual property and the development of a domestic industrial supply chain for HTGRs built in Saudi Arabia.

Saudi Arabia acceded to the NPT as a non-nuclear weapon state in 1988, and signed a comprehensive safeguards agreement with the International Atomic Energy Agency (IAEA) in 2005, eventually bringing it into force in 2009. Saudi Arabia expressed its support for the establishment of a WMD-free zone in the Middle East.¹¹

Saudi officials have repeatedly insisted that the kingdom is developing nuclear capabilities for peaceful purposes such as medicine, electricity generation, and desalination of sea water. They said Saudi Arabia is committed to putting its future facilities under the supervision of the International Atomic Energy Agency (IAEA).

The Saudi cabinet said its nuclear program will be in "full compliance with the principle of transparency" and meet nuclear safety standards "in accordance with an independent regulatory and supervisory framework".¹²

Saudi Arabia is expected to shortlist in April 2018, two to three international firms out of five bidders from China, South Korea, Russia, France and the United States, according to Abdulmalik al-Sabery, a consultant in the business development department at King Abdullah City for Atomic and Renewable Energy (KACARE). In December, one firm will be selected to build the first two nuclear reactors. The projects will cost the kingdom around \$67 billion over the next five years.¹³

The Kingdom has also played a central role in the Gulf Cooperation Council's (GCC) efforts to launch a regional initiative in 2006 to examine and eventually develop a joint civil nuclear energy program.¹⁴

Saudi Arabia would, for now, focus on building up its civilian nuclear infrastructure as well as a robust nuclear engineering and scientific workforce. This would allow the kingdom to take command of all aspects of the nuclear fuel cycle at some point in the future.

Saudi Arabia is likely to maintain its position as long as Iran adheres to the nuclear agreement and US President Donald J. Trump does not act on his campaign promise to tear up the accord. President Trump has toughened US attitudes towards Iran but has so far backed away from tinkering with the nuclear agreement.

Saudi cooperation with Pakistan

Saudi Arabia has long aspired to achieve nuclear capacity of its own, in order to counter Iran's atomic ambitions. Saudi Arabia hasn't hidden its ambition, openly stating to the U.S. as early as 2009 that it would also seek capacity if "Iran crossed the threshold." In May 2012, former senior U.S. diplomat Dennis Ross confirmed for the first time that Saudi Arabia's King Abdullah explicitly warned that if Iran obtains nuclear weapons, Saudi Arabia would seek to do so as well. Saudi Arabia has had the missile technology to deliver warheads since the late 1980s.¹⁵

Saudi Arabia has little nuclear infrastructure of its own and it could rely on its close ally, Pakistan, that has a history of proliferating nuclear technology and equipment. Saudi Arabia provided generous financial support to Pakistan that enabled the nuclear program to continue, especially when the country was under sanctions. Saudi cooperation with nuclear power Pakistan has been a source of speculation about the kingdom's ambition. It has long been rumored, that in return for bankrolling the Pakistani nuclear weapons project, Saudi Arabia has a claim on some of those weapons in time of need.¹⁶

There are two main versions:

- Future Pakistani assistance would not involve Pakistan supplying Saudi Arabia with a full nuclear weapon or weapons, however, Pakistan may assist in other important ways, such as supplying sensitive equipment, materials, and know-how used in enrichment or reprocessing.
- Saudi Arabia has purchased nuclear weapons from Pakistan which are ready for delivery to the kingdom and that it possesses missiles capable of delivering nuclear warheads.

It has never been proved though, nor has it ever been clear how such a deal would work.

Egypt – Saudi Arabia nuclear cooperation

Egypt's President Abdel-Fattah El-Sisi has approved an agreement on cooperation in peaceful uses of nuclear energy with Saudi Arabia. The agreement, which was initially signed in April 2016 during a visit to Cairo by Saudi King Salman, involves cooperation on peaceful uses of nuclear power, nuclear security and an exchange of information on nuclear safety.

Egypt and Saudi Arabia are already working on connecting their power grids through a \$1.6 billion deal, approved by Egypt's cabinet in January 2015, where they would share 3,000 megawatts of electricity.¹⁷

Committees within Egypt's parliament discussed on August 7, 2016, a nuclear power agreement signed during Saudi King Salman's visit to Cairo in April 8, 2016. Egypt's cabinet approved the deal with Saudi Arabia on May 27, 2016.¹⁸

A report prepared by parliament's Legislative and Constitutional Affairs Committee, explains that the agreement covers important areas of cooperation between Egypt and Saudi Arabia in the field of "peaceful use of nuclear power." The report disclosed that the cabinet of Saudi Arabia, headed by deputy Crown Prince Mohamed Bin Nayef, proposed in September 2015 that an agreement be signed with Egypt in the area of nuclear power generation due to Egypt's experience in this sector.¹⁹

The nuclear agreement between Egypt and Saudi Arabia is a part of a strategic alliance between the countries to redesign the regional security issues. President Abdel Fattah El-Sisi described the relations between the countries as "a paradigm shift for the upcoming generations of both countries."²⁰

Saudi Arabia and U.S

Saudi Arabia is interested in reaching a civilian nuclear cooperation agreement with Washington, and Riyadh has invited US firms to take part in developing the kingdom's first atomic energy program. Saudi Arabia aims to start talks with Washington on an agreement to allow US firms to participate in its nascent civilian nuclear energy program, with the first tender expected in 2018.²¹

Washington usually requires a country to sign a peaceful nuclear cooperation pact - known as a 123 agreement - that blocks steps in fuel production with potential bomb-making applications before US technology can be used.²²

The Trump administration briefed congressional staff on how the White House was considering non-proliferation standards in a potential pact to sell nuclear reactor technology to Saudi Arabia, but did not indicate whether allowing uranium enrichment would be part of any deal.²³

Toshiba-owned Westinghouse and two other US-based companies are in talks to form a consortium to bid on the project and are pushing Washington to restart talks with Riyadh on a civil nuclear cooperation pact.²⁴

Saudi Arabia and China

Saudi Arabia and China signed in 2012 a memorandum of understanding to cooperate on the civilian use of nuclear energy.²⁵ Cooperation on nuclear energy was one of 14 agreements worth \$65 billion signed during the visit of Saudi King Salman to China. The agreement is for a feasibility study for the construction of high-temperature gas-cooled (HTGR) nuclear power plants in the kingdom as well as cooperation in intellectual property and the development of a domestic industrial supply chain for HTGRs built in Saudi Arabia.

China's leading state nuclear project developer China National Nuclear Corp (CNNC) has signed in August 2016, a memorandum of understanding with the Saudi Geological Survey (SGS) to promote further existing cooperation between the two sides to explore and assess uranium and thorium resources.²⁶ The Saudi Technology Development and Investment Co (Taqnia) signed a memorandum of understanding with China Nuclear Engineering Group Corp to develop water desalination projects using gas-cooled nuclear reactors.

Hashim Yamani, the president of King Abdullah City for Atomic and Renewable Energy (KACARE), which is responsible for the country's nuclear plans, met officials in China on August 23-24, 2017. Their discussions included cooperation in areas such as pre-feasibility study to build the first two nuclear reactors in the kingdom, and exploration for uranium and thorium.²⁷

Saudi Arabia and Russia

The intergovernmental agreement on cooperation between Rosatom and King Abdulaziz City for Science and Technology (KACST) was signed in June of 2015. Saudi Arabia and Russia have also established a joint coordination committee and held its first meeting.²⁸

Russia's State Atomic Energy Corporation (Rosatom) has offered to build 16 nuclear power units in Saudi Arabia. The project valued at \$100 billion is to be completed by 2030.²⁹

Over the past decade, Saudi Arabia has shown interest in developing its civil nuclear power. Under an economic reform program launched in 2016, Saudi Arabia is seeking to diversify away from oil for much of its additional future energy needs because oil resources are needed to generate revenue through exports. Nuclear energy will help Saudi Arabia to develop water desalination plants, of which it is a leading producer.³⁰ Saudi Arabia would be the second country in the Gulf Arab region to tap nuclear power after the United Arab Emirates.

Saudi Arabia's energy minister, Khalid al-Falih, said that Riyadh was currently evaluating requirements from five countries; China, Russia, South Korea, France and the United States, and he expected to sign contracts to build two nuclear reactors by the end of 2018.³¹ Russian and South Korean companies have said they plan to

bid and Toshiba-owned U.S. company Westinghouse is in talks with U.S. rivals to form a bidding consortium. French state-controlled utility EDF also intends to take part in the tender.

Saudi Arabia plans to prequalify for bidding firms from two or three countries by April or May 2018 for the first nuclear reactors it wants to build. It plans to build 17.6 gigawatts (GW) of nuclear capacity by 2032, the equivalent of around 16 reactors.³²

Summary

Saudi Crown Prince Mohammed bin Salman has said that his country will build its own nuclear capabilities if Iran develops a bomb. The nuclear initiative of Saudi Arabia should be considered as a response to the Iranian nuclear program in the context of its strategic competition with Iran.

Saudi Arabia criticized the 2015 deal between world powers and Tehran under which economic sanctions on Iran were lifted in return for the Islamic Republic curbing its nuclear energy program. US sanctions will resume unless Mr Trump issues fresh waivers to suspend them on May 12, 2018.

The UAE will be launching its first reactors by the end of this year while Saudi Arabia is looking to build 16 reactors in the kingdom and planning to supply a whopping 17.6 gigawatts of power generated from nuclear energy.

Saudi Arabia would, for now, focus on building up its civilian nuclear infrastructure as well as a robust nuclear engineering and scientific workforce. This would allow the kingdom to take command of all aspects of the nuclear fuel cycle at some point in the future and the capacity to produce nuclear energy could potentially open the door to military options.

Israel has long argued that a nuclear Iran would set off a regional nuclear race, as Tehran's traditional rivals in the Middle East including Saudi Arabia, would quickly move to respond to the Iranian nuclear program challenge.

Saudi Arabia and Iran have long been at loggerheads, backing rival sides in armed conflicts and political crises in Iraq, Syria, Lebanon and Yemen. Saudi Arabia's desire for a nuclear program could 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.

Notes

- ¹ Netanyahu warns of Mideast nuclear arms race, Times of Israel. March 11, 2018.
- ² He made the statement to "CBS This Morning" co-host Norah O'Donnell in a much-anticipated interview set to air on March 18 ahead of his state-visit to the United States.
- ³ Crown Prince Says Saudi will Develop Nuclear Bomb if Iran Does, Asharq Al Awsat, March 15, 2018.
- ⁴ Saudi Crown Prince: If Iran obtains nuclear bomb, we will do the same, Al Arabiya, March 15, 2018.
- ⁵ Crown Prince Says Saudi will Develop Nuclear Bomb if Iran Does, Asharq Al Awsat, March 15, 2018.
- ⁶ Hashim bin Abdullah Yamani, is the head of the Saudi government agency tasked with the nuclear plans, the King Abdullah City for Atomic and Renewable Energy (KACARE).
- ⁷ Sylvia Westall, Saudi Arabia to extract uranium for 'self-sufficient' nuclear program, Reuters, October 30, 2017.
- ⁸ Netanyahu warns of Mideast nuclear arms race, Times of Israel. March 11, 2018.
- ⁹ Nuclear Power in Saudi Arabia, World Nuclear Association, Updated January 2016.
- ¹⁰ Colin H. Kahl, Melissa G. Dalton and Matthew Irvine, "Atomic Kingdom: If Iran Builds the Bomb, Will Saudi Arabia Be Next?" Center for a New American Security (CNAS), February 2013, p. 22.
- ¹¹ The Nuclear Threat Initiative, Saudi Arabia, <http://www.nti.org/learn/countries/saudi-arabia/treaties/>
- ¹² Saudi Arabia turns to nuclear power to curb oil addiction, AFP, March 14, 2018.
- ¹³ Saudi Arabia turns to nuclear power to curb oil addiction, AFP, March 14, 2018.
- ¹⁴ Colin H. Kahl, Melissa G. Dalton and Matthew Irvine, "Atomic Kingdom: If Iran Builds the Bomb, Will Saudi Arabia Be Next?" Center for a New American Security (CNAS), February 2013, p. 22.
- ¹⁵ Anshel Pfeffer, Pakistan Ready to Give Saudi Arabia Nuclear Bombs, Experts Say, haaretz.com. November 7, 2013.
- ¹⁶ Does Pakistan have nuclear weapons ready to ship to Saudi Arabia? The Guardian, November 7, 2013.
- ¹⁷ Sisi approves cooperation agreement on peaceful use of nuclear energy with Saudi Arabia, Ahram Online, September 28, 2017.
- ¹⁸ Egypt approves Saudi Arabia cooperation agreement on nuclear power, Ahram Online, May 27, 2016.
- ¹⁹ Egypt approves Saudi Arabia cooperation agreement on nuclear power, Ahram Online, May 27, 2016.
- ²⁰ Egypt, Saudi Arabia to construct Red Sea Bridge, Ahram Online, April 8, 2016.
- ²¹ Saudi Arabia hopes to start nuclear pact talks with US in weeks, Al Arabiya, December 21, 2018.
- ²² Saudi Arabia hopes to start nuclear pact talks with US in weeks, Al Arabiya, December 21, 2018.
- ²³ Saudi Arabia hopes to start nuclear pact talks with US in weeks, Al Arabiya, December 21, 2018.
- ²⁴ Saudi Arabia hopes to start nuclear pact talks with US in weeks, Al Arabiya, December 21, 2018.
- ²⁵ Saudi Arabia signs cooperation deals with China on nuclear energy, Al Arabiya, August 25, 2018.
- ²⁶ Saudi Arabia signs cooperation deals with China on nuclear energy, Al Arabiya, August 25, 2018.
- ²⁷ Saudi Arabia signs cooperation deals with China on nuclear energy, Al Arabiya, August 25, 2018.
- ²⁸ Russia offers to build 16 nuke power plants in Saudi Arabia, Al Arabiya, September 6, 2017.
- ²⁹ Russia offers to build 16 nuke power plants in Saudi Arabia, Al Arabiya, September 6, 2017.
- ³⁰ Saudi Arabia signs cooperation deals with China on nuclear energy, Al Arabiya, August 25, 2018.
- ³¹ Saudi Arabia aims to prequalify firms for first nuclear plant, Al Arabiya, January 15, 2018.
- ³² Saudi Arabia aims to prequalify firms for first nuclear plant, Al Arabiya, January 15, 2018.