

Saudi Arabia's Nuclear Ambitions: Frozen Once Again?

by Manuel Herrera

On 20 September 2023, less than three weeks before Hamas's violent attacks on Israel, Saudi Crown Prince Mohammed bin Salman suggested in an interview with *Fox News* that his country "will have to get" a nuclear weapon should Iran develop its own.¹ In recent years, frequent declarations from the Saudi Crown Prince and prominent government officials regarding the nation's pursuit of nuclear energy for civilian applications² have indeed prompted concerns about their true intentions. Saudi Arabia has not only made it publicly known that it aims to attain full autonomy over the entire

nuclear fuel cycle³ – encompassing enrichment and reprocessing capabilities – but has also hinted at the potential utilisation of this technology for the development of a nuclear arsenal if circumstances dictate – as bin Salman made clear in his interview with *Fox News*. As a result, Saudi Arabia has faced difficulties in procuring both nuclear technology and fuel for its programme. True, the efforts to normalise diplomatic relations with Israel before the 7 October attacks seemed to potentially open the door for the United States to offer Riyadh the required technology and fuel. The crisis unleashed in the region as a result of Hamas's aggression against Israel, however, calls into question the feasibility of the whole process.

¹ Julian Borger, "Crown Prince Confirms Saudi Arabia Will Seek Nuclear Arsenal If Iran Develops One", in *The Guardian*, 21 September 2023, <https://www.theguardian.com/p/zq6nf>.

² Natasha Turak, "Saudi Arabia Announces Crucial Step Forward in Its Nascent Nuclear Power Plans", in *CNBC*, 26 September 2023, <https://www.cnbc.com/2023/09/26/saudi-arabia-announces-step-forward-in-its-nascent-nuclear-power-plans.html>.

³ Luke Caggiano, "Saudi Arabia Aiming for Complete Nuclear Fuel Cycle", in *Arms Control Today*, Vol. 53, No. 2 (March 2023), p. 33, <https://www.armscontrol.org/node/13475>.

Manuel Herrera is Researcher in the Multilateralism and Global Governance Programme at the Istituto Affari Internazionali (IAI).

The Saudi nuclear programme and proliferation concerns

In the 1960s, Saudi Arabia expressed a keen interest in nuclear energy and subsequently initiated its civil nuclear programme in the 1970s. The cornerstone of this endeavour, known as the King Abdulaziz City for Science and Technology (KACST), was established in 1977 in Riyadh. Building on this foundation, the Atomic Energy Research Institute (AERI) came into existence in 1988.⁴ Nevertheless, it was only in 2006 that Saudi Arabia and six other member states of the Gulf Cooperation Council (GCC) jointly declared their intention to initiate a comprehensive study on the peaceful application of nuclear energy.⁵ Later, in 2011, Saudi Arabia unveiled its ambitious strategy, revealing its plan to construct as many as 16 nuclear reactors within a span of 20 to 25 years.⁶ However, as of 2023, it's evident that substantial progress has not been achieved in pursuit of Saudi Arabia's nuclear energy goals.

Several key factors have contributed to this. A fundamental one has been the absence of comprehensive legislation

pertaining to nuclear security and safety within the country. The lack of a legal framework has created obstacles to the development of nuclear infrastructure and regulatory oversight. The most critical factor, however, has been the nuclear proliferation concerns surrounding Saudi Arabia's nuclear ambitions. In fact, there have been speculations that Riyadh may have explored the possibility of acquiring nuclear weapons since the mid-1970s.⁷ Indeed, Saudi Arabia became entangled in the nuclear weapons programmes of both Pakistan and Iraq, primarily through financial support. The underlying objective appeared to be the long-term acquisition of knowledge and technology from these two nations, potentially for the purpose of advancing Saudi Arabia's own nuclear weapons programme.⁸ Rumours and speculation have been recurring about the potential for collaboration in a joint nuclear weapons programme between Pakistan and Saudi Arabia.⁹

The key regional players: Iran and Israel

The repeated statements from Saudi Arabia regarding the potential development of a nuclear arsenal are closely tied to developments in Iran's nuclear programme. Riyadh's strategic considerations in this regard seem to be heavily contingent upon Tehran's actions and intentions. Recent

⁴ John Chipman et al., *Nuclear Programmes in the Middle East. In the Shadow of Iran*, London, International Institute for Strategic Studies, 2008, p. 40.

⁵ Colin H. Kahl, Melissa G. Dalton and Matthew Irvine, *Atomic Kingdom. If Iran Builds the Bomb, Will Saudi Arabia Be Next?*, Washington, Center for New American Security, February 2013, p. 22, <https://www.jstor.org/stable/resrep06372>.

⁶ Luke Caggiano, "Saudi Arabia Aiming for Complete Nuclear Fuel Cycle", cit.; "Saudi Plans to Build 16 Nuclear Reactors by 2030", in *Reuters*, 1 June 2011, <https://www.reuters.com/article/saudi-nuclear-idAFLDE75004Q20110601>.

⁷ Colin H. Kahl, Melissa G. Dalton and Matthew Irvine, *Atomic Kingdom*, cit., p. 24.

⁸ John Chipman et al., *Nuclear Programmes in the Middle East*, cit., p. 42.

⁹ Ibid., p. 43-44; Kate Amlin, "Will Saudi Arabia Acquire Nuclear Weapons?", in *NTI Reports*, 31 July 2008, <https://www.nti.org/?p=21335>.

developments in Iran, such as the expansion of uranium enrichment capacity at the Fordow facility and the increase in the stockpile of enriched uranium to 60 per cent, have raised concerns in Saudi Arabia about a possible resumption of weaponisation research by Tehran. Such concerns have been exacerbated by reports from the International Atomic Energy Agency (IAEA), indicating that as of early September 2023, there has been limited progress in the Agency's efforts to monitor Iran's nuclear activities.¹⁰ Iran's decision to cease implementing its nuclear-related commitments under the Joint Comprehensive Plan of Action (JCPOA) also significantly hampered verification and monitoring efforts.

These developments have contributed to Saudi Arabia's apprehension and underscore the intricate and volatile nature of nuclear security in the region. The lack of transparency surrounding Iran's nuclear activities indeed heightens Riyadh's security concerns. While Tehran's actions may arguably be perceived as a strategy of pressure on the international community, particularly the United States, rather than a clear intent to develop nuclear weapons, the uncertainty surrounding its intentions remains a significant source of tension in the region.

For its part, Israel's position on the matter is clear, as articulated by its Atomic Energy Commission. Israel – notably, a country that is not party to the Non-Proliferation Treaty (NPT) and

¹⁰ International Atomic Energy Agency, *IAEA Director General's Statement on Verification in Iran*, 16 September 2023, <https://www.iaea.org/node/125122>.

which is widely believed to possess nuclear weapons – has expressed concerns that giving in to Saudi Arabia's request to build a nuclear power plant as part of a normalisation agreement could set a dangerous precedent and potentially trigger a nuclear arms race in the Middle East.¹¹ The concerns expressed by Israel regarding the potential acquisition of nuclear fuel enrichment and reprocessing capabilities by Saudi Arabia point to the reality that such capabilities would bring Saudi Arabia closer to Iran in terms of nuclear programme development. Such a situation could further intensify regional competition and security dynamics, given the longstanding rivalry between Riyadh and Tehran.

More generally, allowing Saudi Arabia to acquire such capabilities could set a problematic precedent at the international level. It could possibly encourage other countries in the region, such as Egypt or Turkey, to pursue similar nuclear capabilities, leading to a proliferation cascade in an already volatile Middle East.

Prospects of extra-regional cooperation: The US and China

Before the 7 October attacks, the Biden Administration adopted a somewhat peculiar approach to nuclear cooperation with Saudi Arabia, with an emphasis on diplomacy and

¹¹ Tal Schneider, "Saudi Arabia Could Convert Civilian Nuclear to Military, Israeli Expert Warns", in *The Times of Israel*, 2 August 2023, <https://www.timesofisrael.com/saudi-arabia-could-convert-civilian-nuclear-to-military-israeli-expert-warns>.

regional dynamics. The normalisation of relations between Israel and Saudi Arabia was framed as a potential trade-off for a nuclear cooperation deal between Washington and Riyadh. Reports of high-level talks to provide Saudi Arabia with US-enriched uranium and other nuclear supply alternatives suggested ongoing efforts to negotiate a nuclear cooperation agreement between the two countries.¹²

However, Mohammed bin Salman's demands, particularly those related to the acquisition of enrichment and reprocessing technologies, as well as the fallout of the 7 October attacks, pose a conundrum for the United States. While the Saudi regime has been carefully balancing its response to the Israel-Hamas war in order not to jeopardise relations with any of the parties involved (including Israel),¹³ a diplomatic breakthrough is now unlikely in the near future. Furthermore, in the US Congress and Senate, many have always been wary of providing Riyadh with sensitive nuclear technologies,¹⁴ as they believe it could increase the likelihood of a Middle East arms race. As a consequence, the

¹² Daryl G. Kimball, "Just Say 'No' to Uranium-Enrichment Cooperation with Saudi Arabia", in *Arms Control Today*, Vol. 53, No. 8 (October 2023), <https://www.armscontrol.org/node/13785>.

¹³ Giulia Daga and Luigi Simonelli, "Saudi Arabia's Balancing Game: The Palestinian Cause and Regional Leadership", in *IAI Commentaries*, No. 23|57 (November 2023), <https://www.iai.it/en/node/17748>.

¹⁴ Matt Spetalnick and Patricia Zengerle, "Twenty US Democrats Express Concerns about Possible US-Israel-Saudi Diplomatic Deal", in *Reuters*, 4 October 2023, <https://www.reuters.com/world/twenty-us-democrats-express-concerns-about-possible-israel-saudi-deal-2023-10-04>.

Biden Administration must navigate competing interests and concerns to achieve a balanced and responsible approach to nuclear cooperation with Saudi Arabia. An option for the Biden administration may be to push forward a 123 agreement with the Saudis that would mimic the Emirati nuclear development model, which excludes the provision of enrichment and reprocessing technologies and thus poses no risk in terms of the possible development of a military nuclear programme. The Saudis, however, have been steadfast in defending their right to possess these technologies under Article IV of the NPT, which does not explicitly prohibit them.

Against this backdrop, Saudi Arabia may also consider alternative offers for nuclear cooperation – first and foremost, from China. While Saudi Arabia would prefer to partner with the United States due to its advanced technology and existing relations, Washington's restrictions on uranium enrichment pose a significant hurdle.

The proposal from the China National Nuclear Corporation (CNNC) to build a nuclear power plant near the border with Qatar and the United Arab Emirates¹⁵ presents an interesting alternative. China may indeed have a less restrictive approach compared to the US when it comes to nuclear cooperation. Unsurprisingly, closer ties between Saudi Arabia and China

¹⁵ Summer Said, Sha Hua and Dion Nissenbaum, "Saudi Arabia Eyes Chinese Bid for Nuclear Plant", in *The Wall Street Journal*, 25 August 2023, <https://www.wsj.com/world/middle-east/saudi-arabia-eyes-chinese-bid-for-nuclear-plant-e4a56f>.

in recent years – epitomised by Chinese President Xi Jinping's visit to Saudi Arabia in December 2022 and the announcement of substantial investment deals totalling 10 billion US dollars during a business summit in Riyadh in June¹⁶ – have raised concerns in Washington.

Chinese President Xi Jinping's pledge to pursue a "multi-faceted energy cooperation" model with Gulf countries¹⁷ aligns with China's strategy to secure energy resources to meet its growing energy demand as the world's largest energy consumer. The Gulf region, with its significant oil and gas reserves, plays a crucial role in this strategy.¹⁸

Overall, Saudi Arabia's effort to balance between China and the United States reflects its complex geopolitical positioning and strategic considerations. While Saudi Arabia has been forging closer economic ties with Beijing, Washington remains the most important security partner. On the other hand, China's economic engagement, including investment and trade, presents opportunities for Saudi Arabia's economic diversification and development plans, such as Vision 2030. As far as nuclear cooperation

is concerned, for Riyadh, closer ties with China may also be a negotiating tool vis-à-vis Washington. Indeed, China's involvement in the Saudi nuclear programme could potentially influence the Biden administration to reconsider its conditions for nuclear cooperation, particularly regarding uranium enrichment and uranium mining, forcing the US to lower its standards lest Riyadh goes the Chinese way. The way in which the regional security environment will shape up in the aftermath of the Israel-Hamas war will also have a bearing on the US's future stance on nuclear cooperation.

Looking ahead

In recent weeks, Saudi Arabia's ambitions for the development of nuclear energy have been frozen once again, as a result of the 7 October attacks and the subsequent Israel-Hamas war, which has put the normalisation of Tel Aviv-Riyadh relations on hold. Nonetheless, the Saudi leadership continues to see the development of nuclear energy as a feasible plan for the future and hopes that a diplomatic solution to the conflict could bring talks back on track.

At a broader level, however, the biggest hurdle in moving forward with such plans remains: that is, the international community's lack of confidence in the Saudi regime, particularly given its lack of transparency and threats to develop a nuclear bomb in response to any similar development by Tehran. To minimise these concerns, Saudi Arabia could accept to include in any nuclear cooperation agreement the obligation for Riyadh to sign the IAEA

¹⁶ "Saudi Arabia, China Ink \$10bn in Investment Deals", in *The Cradle*, 12 June 2023, <https://new.thecradle.co/articles-id/156>.

¹⁷ Xinhua, "Full Text of Xi's Signed Article on Saudi Media", in *China Daily*, 8 December 2022, <https://www.chinadaily.com.cn/a/202212/08/WS6391317da31057c47eba3418.html>.

¹⁸ Jonathan Fulton, "Systemic Change and Regional Orders: Asian Responses to a Gulf in Transition", in *The International Spectator*, Vol. 57, No. 4 (December 2022), p. 1-19, <https://doi.org/10.1080/03932729.2022.2107843>.

additional protocol, also clarifying that technology and fuel will be provided by external suppliers in order to close the uranium enrichment door for weapons development. A further push for normalisation of relations between Saudi Arabia and Iran, especially with regard to consultations on regional security and to avoid miscommunications regarding the respective nuclear development, could be another means for assuaging these concerns. More generally, there is a pressing need for Saudi Arabia to increase transparency with respect to its nuclear programme and cooperate effectively with the IAEA.

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Via dei Montecatini, 17

I-00186 Rome, Italy

Tel. +39 066976831

iai@iai.it

www.iai.it

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