



Saudi Arabia's Nuclear Power Ambitions

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Saudi Arabia, best known for its large oil reserves, is planning to pursue nuclear power. Saudi Arabia plans to construct 17 nuclear power reactors over the next 20-25 years at a cost of more than \$80 billion. It projects 17.6 GWe of nuclear capacity by 2032 to provide 15% of the power.¹ Riyadh is looking to diversify its energy supply for its 32 million population.

Saudi Arabia is the second country in this region to pursue nuclear energy. The first one was UAE whose first plant is expected to come online in the 2018. The world's biggest exporter of oil wants to reduce the amount of crude oil it burns at home to generate electricity so that it can export more of it. Saudi Arabia is also looking to retard the consumption of country's fossil fuel and diversify the economics of the nation.

The country wants to start construction on two power plants as early as 2018 with a total capacity of up to 2.8 gigawatts. The country is already floating tenders and the competition is expected to be fierce for an industry that is struggling for contracts following the 2011 nuclear disaster in Fukushima, Japan.

Ever since the economic reforms launched in 2016 by the Crown Prince Mohammed bin Salman, energy supply and has received extra momentum as part of its Vision 2030. The government agency in charge of the nuclear plans, the King Abdullah City for Atomic and Renewable Energy (KACARE), already sent a Request for Information (RFI) to suppliers at the end of October 2017, marking the official start of the tender process following feasibility studies. The five potential bidders for the two power plants are South Korea, China, France, Russia, Japan and US.

¹ "Saudi Arabia takes first step towards nuclear plant tender: sources," *Reuters*, October 31, 2017.

Supplier countries have already been working on acquiring the power plant contracts. France has spent several years trying to make its case for selling its reactors to the Kingdom. A top French minister and chief executives of French utility EDF and reactor builder Areva visited the Kingdom in 2013, while a Saudi delegation led by KACARE chief Hashim bin Abdullah Yamani went to Paris in July 2017 to discuss Riyadh's plans for nuclear energy. KACARE also discussed feasibility studies to build the first two reactors in the Kingdom with Chinese officials in Beijing in August. Russia's state-owned nuclear company Rosatom has also been in talks with KACARE about Saudi Arabia's atomic ambitions.² They will all face tough competition from the US, Japanese and South Korean consortia. Westinghouse-Toshiba has deep ties with the Middle East, and a South Korean-led consortium dealt the French a blow with its surprise win of a \$40 billion contract in Abu Dhabi in 2009.

Hashim bin Abdullah Yamani head of the KACARE has said that Saudi Arabia is also planning to extract uranium domestically as part of its nuclear power programme and sees this as a step towards "self-sufficiency" in producing atomic fuel. This also makes sense from an economic point of view.³ He 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. Nuclear reactors require uranium enriched to 5% and military grade uranium has to be enriched close to 90%.

Saudi Arabia has, in recent years, increased efforts to forge new alliances to counter a perceived threat from Iran. Its pursuit of nuclear power is also very much part of the efforts to seek closer ties with influential countries. A nuclear power program worth \$80 billion is a huge business deal that would have supplier countries scrambling to acquire the contract. There may be politics involved as well. Russia is a good candidate, since Saudi Arabia's King Salman has now moved to seek better ties by visiting Moscow for the first time in October 2017. Both countries have also signed some defense deals. The US would also be on top of the list of contenders for the power plant contracts since Saudi Arabia has been an ally of Washington.

² "Exclusive: Saudi Arabia plans to launch nuclear power tender next month - sources," *Reuters*, September 14, 2017.

³ "Saudi Arabia to begin uranium extraction as kingdom seeks self-sufficient nuclear programme," *The Independent*, October 31, 2017, <http://www.independent.co.uk/news/world/middle-east/saudi-arabia-nuclear-programme-uranium-extraction-atomic-power-self-sufficiency-a8029331.html>