

Chapter 10

Washington and Moscow Should Focus on Keeping Nuclear Energy Out of the Middle East¹

Alexander Savelyev and Henry D Sokolski

Although there are an ever increasing number of disputes between Washington and Moscow, one thing President Trump and Vladimir Putin ought to agree on is how reckless it would be to lose money creating additional nuclear security threats in the Middle East. You'd think this, yet both are now pushing construction of large nuclear power plants in Saudi Arabia. It is uncertain if either will win the Saudi bid (a South Korean reactor seems most likely).² But what's clear is that if Washington and Moscow are intent on selling large energy projects in the Middle East, they would do well by all parties if they reconsidered and began competing selling nonnuclear alternatives instead.

Why?

First and foremost, building a large reactor in the Middle East accomplishes little more than building a proven military target. History has validated this. Iran, Israel and, later, the United States all bombed Iraq's Osirak reactor. The Iraqis bombed Bushehr. During Desert Storm, Saddam fired a Scud toward Israel reactor at Dimona. Later in 2007, Israel bombed Syria's reactor near Deirdre al Zour. More recently, the Houthis claimed they aimed their long-range missiles against the United Arab Emirates nuclear reactors at Barakah.

One has also to worry about possible terrorist attacks. The Shia Muslim minority in Saudi Arabia account for 10 to 15 percent of the population. Just last summer, armed resistance by one Shia enclave was brutally put down by Saudi security forces.³ The government blamed "terrorists." Human Rights Watch has documented persuasive Saudi discrimination against this group. And there also have been armed "terrorist" attacks against large Saudi energy facilities, including Saudi Arabia's giant oil cracking plant at Abqaiq.⁴

Protecting against such military and terrorist attacks won't be cheap. Riyadh just bought a \$15 billion U.S.

1. This piece originally appeared as Alexander Savelyev and Henry Sokolski, "Washington and Moscow should focus on keeping nuclear energy out of the Middle East," *The Hill*, April 20, 2018, available from <http://thehill.com/opinion/national-security/384172-washington-and-moscow-should-focus-on-keeping-nuclear-energy-out-of>.

2. See Chapter 7 of this volume.

3. Adam Coogle, "Saudi Arabia's 'War on Terror' is Now Targeting Saudi Shiites," *Foreign Policy*, August 23, 2017, available from <http://foreignpolicy.com/2017/08/23/saudi-arabias-war-on-terror-is-now-targeting-saudi-shia>.

4. "Saudis 'foil oil facility attack,'" *BBC News*, February 24, 2006, available from <http://news.bbc.co.uk/2/hi/middle-east/4747488.stm>.

Terminal High Altitude Area Defense system and is reportedly in talks with Moscow to buy an equally large S-400 missile defense system.⁵ Some of these defenses, undoubtedly, would be deployed to defend whatever nuclear power plants Riyadh might build. Of course, none of these defense costs are included in the price of any reactor. They should be.

This brings us to the second count against nuclear power in the Middle East: It's now become expensive, uneconomical and obsolete. Reactors are technically complex but having been first developed more than a half century ago, they are no longer cutting edge. Worse, they can no longer compete economically against natural gas and, now, are failing behind renewables, such as wind and solar, particularly in the Middle East.⁶ Putting aside the significant external costs of defending these plants against attacks, the costs of developing sufficient electrical distribution systems to support such large generators (which can easily equal or exceed the cost of the reactors), and the costs of nuclear waste management and decommissioning, nuclear power plants themselves cannot compete against their alternatives.

No, we are not talking about burning cheap Middle Eastern oil or imported coal, but exploiting proven conventional natural gas in Saudi Arabia and throughout the Middle East. Gas-fired electrical plants cost less than 6 cents per installed kilowatt hour, nearly half the cost of nuclear. Then, there is solar. Photo voltaics are now being bid in the Middle East below 2 cents per installed kilowatt hour. Concentrated solar power, which heats up sodium during the day and operates all night, is coming in well below 8 cents. Nuclear, in contrast, is now pegged to cost roughly 11 cents. It is no wonder, then, that the United Arab Emirates recently announced that it would not build any more nuclear power plants.⁷

Why, then, would anyone in the Middle East bother to build a large reactor? Increasingly, the unspoken rationale is to gear up to develop a nuclear weapons option. Israel used its nuclear plants to make bombs. Syria, Iraq and Iran have all been suspected of having planned to do likewise. Crown Prince Mohammed Bin Salman recently announced that the Kingdom would get nuclear weapons “as soon as possible” if Iran does.⁸ Certainly, working with large reactors and their related fuel systems gives states a leg up to do so.

What, then, should Russia and the United States do? Two things. First, it would be nice if Washington and Moscow could coordinate their energy policies in the Middle East. For the moment, however, this is unlikely. What is totally feasible, however, is that the two states could refocus their current energy competitions in the region to secure nonnuclear contracts rather than nuclear ones. Competing in this sector would not only be safer for the region, it would help push both the American and Russian energy sectors focus on promising energy technologies for themselves.

Second, it would be useful for the two countries to compete limiting the most dangerous of nuclear activities—enrichment and reprocessing, which can bring states within weeks of acquiring nuclear explosives.

5. “U.S. approves possible \$15 billion sale of THAAD missiles to Saudi Arabia,” *Reuters*, October 6, 2017, available from <https://www.reuters.com/article/us-usa-saudi-missiles/u-s-approves-possible-15-billion-sale-of-thaad-missiles-to-saudi-arabia-idUSKBN1CB2IN> and “Saudi ambassador to Moscow: S-400 missile deal with Saudi Arabia in final stages,” *Al Arabiya English*, February 20, 2018, available from <https://english.alarabiya.net/en/News/gulf/2018/02/20/Saudi-ambassador-to-Moscow-S-400-missile-deal-with-Saudi-Arabia-in-final-stages.html>.

6. Ali Ahmad, “Economic Considerations of Nuclear Power Deployment in Saudi Arabia,” *Nonproliferation Policy Education Center*, November 2017, available from http://npolicy.org/Articles/March%202018%20Drafts/Ahmad_SaudiArabia_Nov17.pdf.

7. Peter Fairly, “The United Arab Emirates’ Nuclear Power Gambit,” *IEEE Spectrum*, January 4, 2018, available from <https://spectrum.ieee.org/energy/nuclear/the-united-arab-emirates-nuclear-power-gambit>.

8. “Saudi crown prince: If Iran develops a nuclear bomb, so will we,” *CBS News*, March 15, 2018, available from <https://www.cbsnews.com/news/saudi-crown-prince-mohammed-bin-salman-iran-nuclear-bomb-saudi-arabia/>.

Russia already takes back spent fuel after several years on the understanding that the client state has no need to recycle spent fuel. The United States leads in once-through nuclear technologies, including dry cask spent fuel storage, which makes reprocessing unnecessary and less economical. So, there is a bit of healthy competition already. Both countries, however, could be more firm in requiring all Middle Eastern non-weapons states under the Nuclear Nonproliferation Treaty not to reprocess or enrich.