

## **UAE's Quest for a Peaceful Nuclear Energy and the Political Environment of the Region**

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**Abstract:** *A number of countries in the Middle East have announced their plans to encompass nuclear power as part of their future energy mix. Indeed, countries like the United Arab Emirates (UAE) have even reached advanced stages in this quest, making it ahead of its peers in building the first Arab nuclear power plant, which is expected to start generating electricity in 2017.*

*However, The MENA region faces unique challenges when it comes to nuclear power. The tense political environment makes nuclear power an even more controversial issue in the region than elsewhere, prompting states to be suspicious of other states' intention of using their civilian nuclear programs for military purposes, which is clear in the Iranian nuclear program as an example, which was subject to sanctions by the international community followed by years of negotiations. Examining some aspects of the political environment associated with notion of introducing nuclear energy in the Middle East helps in developing an understanding on the feasibility of such notion, taking the interactions between the UAE nuclear program, as one of the most advanced in the region, and some of the region's political considerations as a case study to illustrate such feasibility.*

**Keywords:** *UAE, nuclear energy, Middle East, Political, GCC*

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### **I. Introduction**

The Arab Gulf Cooperation Countries (GCC) are some of the main producers and suppliers of oil and natural gas to the world. They possess an estimate of about 57% of the world petroleum oil reserves, and 28% of world natural gas reserves.<sup>1</sup>

However, a notion that such huge reserves and high productions of prime energy would guarantee a sustained and long-lasting energy sources for the GCC is questionable.<sup>2</sup> The high level of fuel and electricity consumption, which is motivated by the low prices resulting from governments' price-subsidized policies for fuel and electricity, places pressure on the region's energy sources. Such high-consumption pressure is also increased as a result of climate factors of the region, namely scarcity of fresh water resources.<sup>3</sup> The dependence on seawater desalination systems increases the demand for energy sources to run such systems, adding to the high level of energy consumption currently taking place.<sup>4</sup> Therefore, it is rational to entertain the notion that the GCC petroleum products can be locally consumed within two or three decades under the current rate of fuel consumption.<sup>5</sup>

The fact that the GCC are facing a potential energy crisis affected by increased electricity consumption and water desalination capacity has prompted the GCC to begin to realize the problem of their overdependence on oil and natural gas as a sole source of energy, and to consider developing other forms of alternative energy.<sup>6</sup> While solar and wind could be developed as available options for energy, they fall behind in meeting the increasing demand, as it was suggested in the evaluation conducted in the United Arab Emirates (UAE) that even an aggressive development of those options could only supply 6 – 7 % of peak electricity demand by 2020.<sup>7</sup>

Unlike the above options, nuclear power could represent an attractive form of alternative energy.<sup>8</sup> Not only that it could be seen as more environmentally-friendly, when compared to burning liquid oil or coal for

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<sup>1</sup>Darwish, Mohamed. And Mohtar, Rabi. "Prime energy challenges for operating power plants in the GCC." *Energy and power engineering journal* 5 (2013):109. Accessed February 28, 2016, doi:10.4236/epe.2013.51011.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid, 114

<sup>4</sup> Ibid

<sup>5</sup> Ibid

<sup>6</sup> Wadham, David. "Middle East: The nuclear option" *The Lawyer*, Vol.22 (17) April 28, 2008. Accessed February 25, 2016 from <http://search.proquest.com/docview/218682763?accountid=145382>.

<sup>7</sup> Policy of the United Arab Emirates on the evaluation and potential development of peaceful nuclear energy. Federal Authority of Nuclear Regulation of the UAE (2008). Accessed February 25, 2016 from <https://www.fanr.gov.ae/En/Documents/whitepaper.pdf>.

<sup>8</sup> Wadham, "Middle East: The nuclear option", above n. 6

energy, but also it could be considered as commercially competitive as well.<sup>9</sup> In this regard, despite the fact that the capital cost of developing, constructing, and commissioning a nuclear power plant is high; the operating cost is similar to that of gas and coal-fired plants.<sup>10</sup> In addition, nuclear energy is by far a better performer than wind and solar energy in satisfying energy demand.<sup>11</sup>

The UAE is more aware of the energy problem than the rest of the GCC. It has shown a genuine interest in nuclear power as an alternative source of energy, and has actually begun in developing and constructing its nuclear energy program.<sup>12</sup> In this regard, taking the leading role in adopting the nuclear option as an alternative for energy in the GCC region means that the UAE will be dealing with various considerations, challenges, and obstacles first hand; and the outcome of such interactions is integral in shaping the attitude of the rest of the GCC towards considering nuclear power as an alternative source of energy in the near future. This article will be focusing on some political issues that are associated with tackling the nuclear energy option in the region, which could have an impact on UAE position as an initiator in the field of nuclear energy under which the UAE has to adjust its policies and conduct to accommodate all dimensions of such issues.

### **The political environment of the Middle East**

There is no doubt that the Middle East has a unique situation in terms of security and stability when compared to other regions in the world. It has always been considered as a 'hot spot' in the context of international relations and politics. This is due largely to a number of factors, such as the Israel-Arab conflict, the expanding influence of the Iranian state, and most recently the explosion of Islamic extremism in the region, which is considered as one of the indirect consequences to the Israel-Arab conflict which has created a fertile environment for such ideologies to feed on.

The Gulf States have not been in isolation from what has been taking place in the region. In fact the increasing Iranian influence could be viewed as the biggest threat facing the security of the Arab Gulf States, not to mention that the alliance built between the West and the states of the Arabian Gulf has made them a target for extremist groups, describing such alliance as being as far as a betrayal to the Islamic religion.

Since the creation of the Islamic Republic of Iran, security has always been one of the main concerns of Iran. Security concerns of Iran arise from the military presence of the US near its east and west borders (Iraq and Afghanistan), neighbors that are allies of the US (the Gulf states, Turkey, Azerbaijan), nuclear neighbors that are also allies of the US (India and Pakistan), and Israel (the declared ultimate enemy of Iran which, in addition to its nuclear power, is considered as the source of unstable security for most states in the region).<sup>13</sup>

Those factors, in addition to the political prestige as a great power in the region, have been considered as the motivation behind Iran's move to strengthen their security system through the nuclear option.<sup>14</sup>

Arab states, especially the GCC states, are aware of the threatening concerns the Iranian nuclear program represent to their own security.<sup>15</sup> Despite the declared Iranian position that its nuclear plans are for peaceful energy purposes, only few accepted such rationale.<sup>16</sup> In fact, the GCC states have re-evaluated their security systems as a direct consequence to what they consider as a growing threat to their security coming from the progressing development of Iran's nuclear program.<sup>17</sup>

The threat of the Iranian nuclear program on the security of the region, especially the GCC region, could also compel key Middle East states, such as Egypt, to embark on a nuclear arms race.<sup>18</sup> Those considerations have prompted the GCC states to propose the establishment of a nuclear-free zone in what is considered as an invitation for Iran to prove its peaceful intention for its nuclear program.<sup>19</sup>

However, recent developments in Iran's nuclear file, and the recent signed agreement between Iran on one side and the West led by the US has not helped easing the GCC states' concerns over the consequences of having a nuclear Iran, taking into consideration the cautiousness that has marked the relationship of the two sides over the years.

Also, discussing the politically charged issue of nuclear option in the GCC region without addressing Israel's unsafeguarded nuclear program would be pointless, as the Palestinian-Israeli conflict could be regarded by many as the fuel feeding the raging fire of instability in the region. As far as the security of the Gulf States is

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<sup>9</sup>Policy of the United Arab Emirates on the evaluation and potential development of peaceful nuclear energy, above n. 7.

<sup>10</sup>Wadham, "Middle East: The nuclear option", above n. 6

<sup>11</sup>Policy of the United Arab Emirates on the evaluation and potential development of peaceful nuclear energy, above n. 7.

<sup>12</sup>Darwish, and Mohtar, "Prime energy challenges for operating power plants in the GCC", above n.1, 115.

<sup>13</sup>Mirhosseini, Seyed. and Sandhu Sarvinder. "The role of Iran regarding the U.S. security systems in the Persian Gulf region, Cross Cultural Communication, Vol 6(4) (2010), 126.

<sup>14</sup>Ibid.

<sup>15</sup>Kechichian, Joseph. "Can conservative Arab Gulf monarchies endure a fourth war in the Persian Gulf?"The Middle East Journal, Vol. 61(2) 2007),285.

<sup>16</sup>Ibid.

<sup>17</sup>Ibid.

<sup>18</sup>Ibid.

<sup>19</sup>Ibid.

concerned, the Israeli's nuclear program is regarded as a direct threat to that security, especially in the absence of a peace treaty between Israel and the GCC states, making it considered implicitly as an enemy state to countries of the region.<sup>20</sup>

In this context, the silence about Israel's nuclear program only serves in supporting the argument that the nuclear policy practiced in the Middle East is selective in character, which ignores Israel's current breach to the nonproliferation policy, and impose restrictive limitations on Iran and the Arab states to acquire nuclear energy in general, as the ambition of any of these states to build a peaceful program of nuclear power would be struck by strict restrictive requirements. In this case, the nuclear question has sprung between the extremes in the same region, from complete ignorance to an exhausting strictness.

As a result of the implicit support of the US for Israel's unsafeguarded nuclear program, and the silence of the rest of the world in this regard, Israel has not been in a hurry to act favorably to regional calls for a nuclear-free zone in the region.<sup>21</sup> In this context, Israel has linked its involvement with an idea of a nuclear-free zone with a "comprehensive, lasting and stable peace" in the region. However, the ongoing crisis with the Palestinians, and, consequently, the absence of a declared peace status with most of the Middle East states has made Israel cautious about giving up the nuclear option. In this regard, the weakness in the international enforcement of the nonproliferation rules, or more precisely, the intentional disregard to the unstabilizing effect of the Israeli nuclear program on the region illustrates the selective nature of the current nonproliferation regimes.<sup>22</sup>

### **1. UAE' nuclear program and its political impact on the Region**

All these interactions and factors impose a reality in the region that have to be addressed by the international community regardless to how the region views these interactions and the fairness of their consequences. This reality introduces nuclear energy in the Gulf as a politically a touchy subject to a degree that certain Western circles and some politicians have shown some concerns over the UAE nuclear program, as the leading country in the region in the process of possessing nuclear energy. The rationale behind their concerns is that such programs in the region could trigger a nuclear race in a region that is generally considered as unstable.<sup>23</sup> Other concerns relate to the always present risk of a wide spread of nuclear technology expertise that could subsequently be acquired by unwanted third parties.<sup>24</sup> Such concern is clearly evident in the disastrous consequences that could have been occurred had Kuwait been in possession of nuclear technology when occupied by Iraq during the 1990/91 Gulf Crisis.<sup>25</sup> This risk was reflected in a 2008 US Congress report that criticizes US political support for nuclear programs in the GCC as follows:

This growing presence of nuclear energy in the Middle East will exacerbate current global trends in which nuclear materials and technology are becoming increasingly available. Without comprehensive international reform. This increased availability of nuclear materials and technology will reduce the supply-side obstacles to acquiring a nuclear weapons capability, thereby shifting the cost-benefit analysis of many states in a dangerous direction. Increasingly, states that seek a nuclear weapons capability will have access to the knowledge and materials necessary to obtain it.<sup>26</sup>

In addition, a country like the UAE, which lies in a volatile region that is known for its wars and insurgencies in countries like Iraq and Syria, along with anti-government insurgencies in countries like Yemen, could face threat to its nuclear infrastructure that are much larger than those to other countries, especially that certain groups like Al Qaida have considered the Gulf energy projects as prime targets, making UAE's nuclear installations potential targets.<sup>27</sup>

In relation to the risk of nuclear proliferation, it has been dealt with in the GCC region through a number of nuclear security and non-proliferation agreements that the GCC states have signed. In this regard, the UAE in particular, and the GCC states in general have been stressing to draw a line of distinction between their nuclear ambitions and the use of nuclear energy in countries like Pakistan, Israel, India, and North Korea, where a military nuclear program has been developed.

The UAE and the rest of the GCC states are all members of the IAEA and have signed all its agreements that restrict nuclear proliferation risks. In addition, they have engaged with a number of agreements with the United States and Europe that regulate dealing with sensitive technology or highly enriched materials

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<sup>20</sup>Yaffe, Michael. "The Gulf and new Middle East security system", Middle East Policy, Vol. 11(3) (2004), 128.

<sup>21</sup>Ibid, 128-129.

<sup>22</sup>Ibid.

<sup>23</sup>Wigglesworth, Robin. "Case study: UAE pursues its nuclear option", Financial Times, January 15, 2015. Accessed February 25, 2016 from <http://www.ft.com/intl/cms/s/0/dae1ed5e-0160-11df-8c54-00144feabdc0.html#axzz41dMsDBXM>

<sup>24</sup>El-Katiri, Laura. "The GCC and the nuclear question", The Oxford institute for energy studies, (December, 2012), 5.

<sup>25</sup>Ibid, 6.

<sup>26</sup>"Chain reaction: Avoiding a nuclear arms race in the Middle East", Report to the Committee on Foreign Relations, United States Senate. 110<sup>th</sup> Congress, 2<sup>nd</sup> Session, Washington D.C., 2008, 1,9.

<sup>27</sup>Abdel Raouf, Mohamed. "UAE: The nuclear program and renewable energy alternatives", Perspectives, Vol. 1,(April, 2011) 20.

one of was the so-called “123 Agreement” which the UAE signed with the US,<sup>28</sup> and established a legal framework for civilian nuclear energy technology and material that assured the renouncement of any intention to develop domestic nuclear processing capabilities that could lead to the production of nuclear weapons.<sup>29</sup> However, one may still argue that despite the fact that such agreements regulate the formal position and actions of states concerned, they do not exclude the possibility of involuntary proliferation of nuclear technology during wars or circumstances of unstable security.<sup>30</sup>

The other concern, relate to the argument that a nuclear program in a country like the UAE would have the risk of triggering a nuclear race in the region, especially after Iran was recently given the green light to pursue its much debatable peaceful nuclear program, which would make an already rough region even more insecure and unstable, and the combination of fragile states, terrorist organizations, and nuclear weapons would create a horror story for the rest of the world.<sup>31</sup>

Civilian nuclear program, like the one the UAE is constructing, do not represent a security threat. On the contrary, it is a given right under the Non-Proliferation Treaty (NPT) that countries explore civilian nuclear programs as an option to meet their growing energy demand.<sup>32</sup> Therefore, the concerns over a nuclear race in the region is centered on the military use of nuclear power rather than the nuclear option as a whole. However, initiating a military nuclear program or converting a civil nuclear program into a military one is not an easy task, especially in the Region. To illustrate the extent of such claim that the region is capable or not in exploring its chances with a nuclear program for military purposes, it is rational to examine, under the current circumstances, the position of the main potential countries in the region that have considered, or currently considering, the development of nuclear energy, and their willingness or ability to convert such energy for military purposes. Some countries in the region, such as Saudi Arabia, Turkey, Egypt, and Jordan have declared their interest in a nuclear program, but they generally face many obstacles that make nuclear weapons development very difficult and unlikely. Although factors that could affect the ability to produce nuclear weapons vary from one country to another, those potential nuclear players share an array of technical, political, and even financial for some, restrictions that limit considerably their ability or willingness to utilize nuclear energy for the production of nuclear weapons.<sup>33</sup>

It could be argued that Saudi Arabia is the country that is most likely to become a nuclear proliferator in the Middle East to counter any threat it sees possible from the recently approved Iranian nuclear program.<sup>34</sup> However, this argument ignores that even if Saudi Arabia overcomes its technical shortcomings in the field of nuclear power, which is represented in their capacity to develop and operate its own nuclear infrastructure,<sup>35</sup> it is still hugely influenced by political considerations and alliance settings in the region that makes any military development of nuclear energy for Saudi Arabia an unlikely option. In this regard, the position of the US, which is considered the main ally and security guarantor for Saudi Arabia, would have an influence on Saudi Arabia's decision with regards to a very sensitive issue like nuclear weapons acquisitions.<sup>36</sup>

It could also be argued that Turkey has the potential to contemplate the option of nuclear weaponization as a tool to enhance its leading position in the region. However, aside from the fact that Turkey has declared that it has no plans to develop an enrichment or reprocessing capacity, and entered a safeguard agreement with the IAEA and has agreed to the Additional Protocol to support such declarations; and apart from the technical limitations it also suffers from in a field that it lacks experience in; the strategic and political aspects play an integral role in discouraging Turkey to weaponize.<sup>37</sup>

The fact that Turkey is a member of NATO and a US ally makes its security needs achieved without the trouble of struggling through a resource-exhausting program of nuclear weaponization that would stain and significantly weakens its alliance with the US and considerably affect its membership in NATO, which utilized its nuclear umbrella by default to Turkey.

Egypt, on the other hand, might be considered as one of the countries with the most potential to acquire a nuclear weapon program, as it had one under development up until its defeat in the 1967 Six-Day War with Israel. It also has a nuclear infrastructure that is more developed than other nuclear candidates in the region, as it

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<sup>28</sup>“Section 123. Cooperation With Other Nations”, U.S. ATOMIC ENERGY ACT of 1954.

<sup>29</sup>El-Katiri, “The GCC and the nuclear question”, above n. 24, 6.

<sup>30</sup>Ibid.

<sup>31</sup>Esfandiary, Dina. and Tabatabai, Ariane. “Why nuclear dominoes won't fall in the Middle East”, Bulletin of the Atomic Scientists, Accessed on (21/2/2016) from <http://thebulletin.org/why-nuclear-dominoes-wont-fall-middle-east8236>.

<sup>32</sup>Ibid.

<sup>33</sup>Ibid.

<sup>34</sup>Ibid.

<sup>35</sup>“Prospects for nuclear power in the Middle East: Russia's interests”, Valdai Discussion Club/ Grantees Report, (2016), 62.

<sup>36</sup>Esfandiary and Tabatabai, “Why nuclear dominoes won't fall in the Middle East”, above n. 31.

<sup>37</sup>Ibid.

has research and development-focused reactors in addition to small scale spent-fuel-management and plutonium-separation capabilities.<sup>38</sup>

The existence of some kind of technical capability, to a degree, and buried intentions of developing a nuclear weapon program that marked a certain stage of its history, could be argued by some to be the re-ignition for reinitiating its previous ambitions of becoming a nuclear country in the military sense if other countries in the region do so. After all, Egypt has been for a considerable period of time playing the leadership role of the Arab World and of the main powers in the region, and its regression in this field, unlike other countries, could be viewed by Egypt as a threat to its position in the region.

This argument, however, ignored the general climate of instability that Egypt has been suffering from after the Arab Spring, which witnessed multiple changes in government, domestic unrest, and economic near collapse, which have affected any Egyptian nuclear ambitions, at least in the near future, prompting its internal security to be its priority rather than its external one.<sup>39</sup>

In fact, when security is concerned, a counter argument could also have its own rationale that brings into attention the relationship between Israel and Egypt and the sensitive peace treaty signed by them, which could stand as a considerable obstacle in the path of any Egyptian nuclear ambitions. In this regard, regardless to the peace treaty's rationale, a rational question could put the whole issue to rest, which provides that if nuclear-armed Israel, the hostile country before the peace treaty, didn't cause Egypt to pursue its nuclear weapons program, when it was in the heights of its image as the mother of the Arab identity and the protector of the Arabic cause against Israel, why would civilian nuclear programs of other countries in the region trigger Egypt to make such move?<sup>40</sup>

For those who have concerns over Jordan's ambitions for a civilian nuclear program, especially after its refusal to sign a 123 nuclear cooperation agreement with the US, the risk issue could be argued by many to be the less complicated in this case than others. In addition to the fact that Jordan lacks the technology, human resources, experience, or infrastructure necessary for a nuclear weapons program,<sup>41</sup> it has been an upstanding non-proliferation advocate and a party to the Non-Proliferation Treaty. Also, its alliance with the US, and the relationship that places the US as Jordan's security guarantor to the full extent of the word, makes jeopardizing such alliance by Jordan through a military nuclear program a far from reality option.<sup>42</sup> Therefore, Jordan refusal to sign a 123 nuclear cooperation agreement with the US is merely based on pure economic considerations, as a result of Jordan's significant uranium reserves, making domestic uranium enrichment vital for economically viable program.

## II. Conclusion

The UAE was described by the World Nuclear Association in 2011 to have the most advanced civil nuclear program in the Gulf region that is supplemented by a solid legal and regulatory infrastructure.<sup>43</sup> The UAE program, which has so far shown a commendable commitment towards completing operational transparency, pursuing the highest standards of non-proliferation, achieving highest standards of safety and security, and working closely with IAEA and its evaluation standards,<sup>44</sup> is not only an option to fulfil its basic energy civic needs but it also empowers the GCC in political and economic terms.<sup>45</sup> In this regards, the peaceful nature of the UAE nuclear program is increasingly considered as a new regional model for forgoing sensitive technologies, which will strengthen the UAE-GCC strategic commitment to the non-proliferation system.<sup>46</sup> Therefore, regardless to the complexity of the political challenges in the region, UAE's investment in peaceful nuclear energy can set an example for all countries in the region on the great advantage such program represents in introducing a diversified balanced energy package to serve growing human needs.<sup>47</sup>

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<sup>38</sup>Ibid.

<sup>39</sup>"Prospects for nuclear power in the Middle East: Russia's interests", above n. 35, 63.

<sup>40</sup>Esfandiary and Tabatabai "Why nuclear dominoes won't fall in the Middle East, above n. 31.

<sup>41</sup>"Prospects for nuclear power in the Middle East: Russia's interests", above n. 35, 62.

<sup>42</sup>Ibid.

<sup>43</sup>Shikara, Ahmed. "The UAE nuclear model: Overcoming energy, and geo-strategic challenges", *The nuclear forum: views from the Middle East*, (September, 2014) 4. See also, Sharma, Ashtosh. , Sultan Nabil. & Weir, David. "Going nuclear in the GCC countries: Rationale, challenges and politics", Chapter 6 in *The GCC: Stepping up to future challenges*, edited by Ramady, M. A. Springer Science and Business Media, New York(2011).

<sup>44</sup>Ebinger, Charles. , Banks, John. , Massy, Kevin&Avasarala, Govinda"Energy security initiative – Models for Aspirant civil energy nations in the Middle East(September 3, 2011), 3.

<sup>45</sup>Shikara, "The UAE nuclear model: Overcoming energy, and geo-strategic challenges", above n. 43.

<sup>46</sup>Fitzpatrick, Mark. "Drawing a bright redline: Forestalling nuclear proliferation in the Middle East", *Arms Control Association* (2009). Accessed from <http://www.armscontrol.org/act/2009> on 15/1/2016.

<sup>47</sup>Shikara, "The UAE nuclear model: Overcoming energy, and geo-strategic challenges", above n. 43.

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