מרכז עזרי לחקר איראן והמפרץ הפרסי
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Challenges and potential solutions: Should Saudi Arabia and Israel move towards energy cooperation?

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Challenges and potential solutions: Should Saudi Arabia and Israel move towards energy cooperation?

By Samuel Willner

The Kingdom of Saudi Arabia is currently experiencing unprecedented changes and challenges – both in the realms of economics and politics – which, principally, could become an opening for many unforeseen opportunities and ventures. One important avenue could involve exploring energy cooperation with Israel.

As the House of Saud is in a process of transferring power from King Salman bin Abd al-Aziz to his son, Crown Prince Mohammad, several significant developments have taken place in the past twelve months. In September 2017 Saudi Arabia announced that it will allow women to drive in a change that would take effect in June 2018. In addition, ambitious privatization plans are taking place, of which the most significant is the privatization of the Saudi national oil company Aramco, which is estimated to become world's most valuable publicly listed company.

Further, in November 2017 Crown Prince Mohammad bin Salman launched an unprecedented campaign against corruption, and as a result hundreds of Saudis were arrested, including several royal princes. In fact, it has been estimated that roughly 10 percent of all Saudi government spending has been siphoned off annually. However, perhaps the most interesting of the Crown Prince's initiatives is his ambitious economic modernization program "Vision 2030" which aims to dramatically diversify the Saudi economy by 2030.

In foreign policy, the Iranian hegemony is understandably on top of the list of concerns as the wars in Syria, Iraq and Yemen seem to cause major shift in the regional balance of power. In addition, the political and economic isolation of Qatar, which is expected to last for several years, is reshaping the regional alliances**.** While these changes are taking place, enormous economic challenges lie ahead: A combination of diminishing oil revenues, growing public dept – which are causing imminent challenges for the Saudi government to finance its public spending – and fast population growth (around 32 million in 2016 and is estimated to grow roughly 1 million annually), is shifting the gears of the Saudi government towards accommodating major economic and political changes.

NEOM

Undoubtedly the most ambitious initiative the Saudi government has launched under the leadership of Crown Prince Mohammad is its plan to build a new mega city called NEOM – the "new future" as the name stands for – by transforming hundreds of miles of Red Sea coast into a future commerce capital of Saudi Arabia and into a semi-autonomous world-class destination of tourism. According to an official Saudi press statement, the project is "developed to be independent of the Kingdom's existing governmental framework, excluding sovereignty." This would mean that, while Saudi Arabia would still be in charge of the foreign policy and defense in the area, the project would be modeled to a concept of free zone, and as such it would be exempt from tariffs, regulations and laws of Saudi Arabia.

The size of the $500 billion project is some 25,900 square kilometers (10,000 square miles). According to a report published in Bloomberg News in October 2017, Crown Prince Mohammad has stated that the mega project would be powered by clean energy and would have no room "for anything traditional." However, the challenge would seem to go as follows: how to speed up the political and economic changes without crippling the Saudi economy and clashing with the kingdom's conservative religious establishment?

ELECTRICITY AND ENERGY COOPERATION

Currently, Saudi Arabia's electricity is generated almost exclusively by thermal power plants powered by oil and gas. The overall demand for energy in Saudi Arabia is over three million barrels of oil-equivalent per day (2010). Some sources have estimated that crude oil for electricity is priced around 4 dollars per barrel in Saudi Arabia, which means major losses in export revenues. What is alarming is that the domestic demand for energy in the Saudi Kingdom could reach eight million barrels of oil-equivalent per day ten years from now.

Saudi Arabia would benefit greatly from electricity cooperation with its neighboring countries. In the past several years the member countries of the Gulf Cooperation Council (GCC) have been considering the feasibility of linking their electricity grids in order to strengthen the reliability of their electricity infrastructure in case of emergencies. For instance, if there would be an event of total electricity blackout in one of the member states, the interconnectivity would become highly beneficial.

In addition, such interconnectivity would create synergy, as it would minimize investment in power generation while providing the basis for energy exchange. Although this procedure is improving energy security, it will not solve the issue of balancing the peak power production as all the Gulf countries share similar peak demand conditions. Here, establishing pumped-storage hydropower stations could be one solution for the Saudis. According to preliminary studies a number of dry riverbeds draining to the Gulf of Aqaba could be harnessed to produce hydropower through pumped-storage, and where massive reservoirs would store water in the mountains 1000 meters above sea level.

Currently Egypt and Saudi Arabia are planning to build hundreds of miles of electric lines to connect their electricity grids and to exchange 3000 MW at peak times.

On the other hand, if Saudi Arabia and Israel would decide to come to an agreement in the future, the two countries could connect their electricity grids as well. The Saudi border is less than 25 kilometers from the city of Eilat, while from the Taba border crossing the distance to Saudi territory is less than 15 kilometers across the Bay of Aqaba. Israel and Saudi Arabia could connect their power grids to exchange, at first stage some 100-300 MW of electricity at peak times, and later extend this even further. This would increase the energy security in both countries.

It seems very likely that Saudi Arabia would establish several gas turbine power stations to supply electricity to its planned Red Sea coastal city. In terms of reliability and closeness of the possible energy supply, Israel would probably be the most attractive source of natural gas due to its high security and stability. Egypt has a history of several terror attacks that have targeted its natural gas infrastructure in the Sinai Peninsula. However, it is likely that, as Egypt develops its recently discovered massive Mediterranean Sea gas fields, it would desire to sign long-term supply contracts with Saudi Arabia. Israeli natural gas could be an attractive alternative energy source for

the new Saudi mega city as Israeli supply would be significantly closer to it than what the existing Saudi main gas pipelines in Yanbu.

Instead of building a pipeline of over 200 kilometers through Saudi Arabia, Israel could supply the Kingdom natural gas through an underwater pipeline, in which case it would need to build significantly shorter, perhaps some 50-70 kilometers. Further, instead of building an entirely new pipeline from the Mediterranean Sea to the Red Sea, Israel could also explore the feasibility of reversing one of its existing Eilat-Ashqelon oil pipelines – that were built in the end of 1960s to supply Israel Iranian oil – in order to supply natural gas from its Mediterranean Sea gas fields to Saudi Arabia. In turn, Saudi Arabia could sell Israel electricity it produces in its Red Sea power stations.

In addition to energy, Israel could supply Saudi Arabia technology for renewable energy, water treatment and agriculture worth of billions of dollars. Further, Israel's advanced desalination technology could supply water for NEOM, while the new Israeli experience with pumped-storage technology could be utilized in storing energy. The Israeli experience could be phenomenal in helping Saudi Arabia to transform according to its ambitious Vision 2030.

As such, there is no doubt that the common interests – both economic and political – are absolutely great between the two countries: even the Saudis know that what they can get from Israel as a regional partner is something they cannot get from anyone else in the region. Cooperation in the field of energy could be an excellent opportunity for Israel to look for new practical avenues of collaboration with Saudi Arabia and the Arab world. Here one should consider the mutual advantage between Saudi Arabia and Israel that could develop into mutual interest, and perhaps one day, into an unforeseen alliance.

Samuel Willner is a Fellow at the Ezri Center for Iran & Persian Gulf Studies and a PhD Candidate at the Department of Middle Eastern and Islamic Studies at the University of Haifa.