Protecting Foreign Manpower in the Israeli Gas Industry: Lessons from Nigeria

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Global experience with oil and natural gas production indicates that international energy companies do not refrain from operating in areas of conflict and are not easily deterred by periodic terrorist attacks on their facilities. However, the case of the Nigerian Movement for the Emancipation of the Niger Delta (MEND) shows that even large corporations are liable to close their facilities when there is a direct attack on their foreign (non-local) employees. Israel can learn from the Nigerian experience how to cope with the vulnerability created by its dependence on foreign employees and consequential threats directed against its natural gas resources. A short term lesson is that Israel must ensure the safety of employees in its Exclusive Economic Zone (EEZ), even when they are employed by a foreign company that is obligated to protect them. A long term lesson is that Israel must reduce its dependence on foreign experts by training a local workforce that may be less affected during times of national crisis.
These aspects are as important for Israel's energy security as the facilities' physical protection.

Keywords: Energy security, energy policy in Israel, natural gas infrastructure, terrorist threats, international terror, foreign employees, protection of employees

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Introduction

The Israeli defense establishment is currently assessing possible threats to natural gas production and export facilities that are scheduled to be built in Israel and in Israel's Exclusive Economic Zone (EEZ). In their initial phase, these facilities include drilling rigs and intermediate platforms, followed by production facilities, underwater pipelines, and onshore gas reception facilities. In the future, they will probably include land or sea facilities for producing Liquefied Natural Gas (LNG) for export. The various facilities will be mainly managed and operated by a number of foreign corporations. Currently these include Noble Energy, an American company, which is already operating the drilling and production facilities at the Tamar and Leviathan natural gas fields, and Edison, an Italian company, which has joined Israel's Delek Corporation in implementing a number of exploration licenses. In addition, Woodside Petroleum, an Australian company, was until recently signed on to operate the future gas liquefaction facilities.[1] Like the employees in the Yam Tethys production facilities,[2] the vast majority of those who operate and maintain the Tamar and Leviathan drilling rigs for Noble Energy are not Israeli citizens; they are a small group of American and Eastern European engineers and professionals. It is reasonable to assume that the majority of personnel who will operate and maintain the future liquefaction facilities (whether operated by Woodside Petroleum or another company) will not be Israeli citizens either, due to the unique expertise required to operate an advanced gas liquefaction project and the significant shortage of manpower for energy and gas engineering in Israel.

Meanwhile, the Israeli defense establishment is preparing to provide the many security measures required for ensuring the safety of the production and export facilities throughout their construction, as well as during their operation. Most of the preparations focus on protecting the physical infrastructure connected to the regular production and export of natural gas (pipelines, rigs, onshore reception facilities, and the like). At a conference held by the Institute for National Security Studies in November 2010, Brigadier General (ret.) Noam Feig, former deputy commander of the Israel Navy, presented a list of possible threats to infrastructure posed by hostile states and terror organizations. The threats included firing of missiles at gas reception facilities along Israel's coast during wartime, underwater pipeline sabotage, hostile aircrafts deployment to the high seas, and detonation of production facilities using naval vessels.[3] Nevertheless, an important subject that appears to have thus far been neglected is the manpower involved in operating the facilities, and in particular, those in Israel's EEZ, outside the borders of the country.

Counter to popular perception, large oil and gas companies are not easily deterred from working in areas of conflict, despite repeated attacks on their physical infrastructure. The reason for this resilience is that these companies take into account acts of sabotage against their production and export facilities, whether directed against the facilities themselves or the pipelines attached to them. American, French, Italian, and British energy companies operating in high-risk areas, such as Iraq, Nigeria, the Ivory Coast, or the Congo, usually display a relatively rapid return to full production following such events. The case of Iraq is especially instructive; in 2013 alone, a central pipeline carrying oil from the Kirkuk field in the Kurdish region to the port city of Ceyhan in Turkey was bombed thirty times.[4] Though these incidents led to a significant decrease in the flow of oil from northern Iraq, the pipelines were repaired very shortly after and the companies continued to operate in Iraq throughout that year.

State-owned national oil companies are better equipped to weather the storm of a national or international crisis, as can be seen in the case of the 1980-1988 Iran-Iraq War. Despite repeated attacks carried out by the Iraqi Air Force specifically targeting Iran's oil industry, Iran was able to continue production and export of large quantities of oil. Iran's success was the result of carefully planned infrastructure, including high redundancy of pipelines and facilities, as well as a competent and resilient local workforce that was able to work under fire and quickly rebuild the damaged infrastructure.[5]

Notwithstanding their remarkable resilience and speedy return to normal following sabotage, it seems that the international oil and gas companies' Achilles' heel lies within its workforce. Global experience indicates that when faced with clear and present danger, Western production companies (especially in north and central Africa), tend to avoid risks involving direct harm to their employees. Such companies have been known to suspend their activities in light of danger to their employees, even though they may breach their contractual obligations to the host country. Such danger to the workforce may be caused by an eruption of a violent conflict in the host country or specific attacks carried out by extremist groups, targeting the company's employees and executives. Temporary shut-downs significantly reduce output over time, and may cause the companies to condition their continued operations upon concrete security guarantees given to them by the host country.[6] This so-called "weak spot" is not only a result of the management's responsibility to its employees; it is also a result of the great difficulty in persuading foreign experts to remain in the host country when their lives and the lives of their families are in danger, as well as the difficulty to replace foreign experts and provide insurance coverage for the period of time they spend in the production facility.

This issue is especially pertinent when examining the Israeli case, since its dependence on foreign companies and experts for operating its gas industry exposes it to threats that could paralyze gas infrastructures, even without direct physical harm. These threats are further emphasized by the international nature of the organizations that operate against Israel. In the past, these organizations were shown to have the ability to strike Israeli and Jewish targets overseas, whether they were official targets (Israeli embassies and Jewish institutions around the world), unofficial targets (Chabad houses and Israeli tourist groups), or individuals (Israeli ambassadors and delegates). These organizations' proven ability and willingness to operate outside of Israel makes Israel's dependence on foreign employees for producing its natural resources especially sensitive.

The potential threats facing companies such as Noble Energy or Woodside Petroleum due to their activity in Israel could involve attacks against their branches and facilities in various locations around the world (West Africa, East Asia, and South America), or even individuals, such as employees and senior managers. Even a direct verbal threat made against specific targets connected to these companies would be sufficient to potentially obstruct continued operations in Israel, and to spur new demands by the companies to ensure their safety (which would also entail additional implications for the Israeli economy). It is reasonable to assume that these demands would increase precisely in times of emergency such as an eruption of war, when the continued production of gas for electricity would be the most crucial.

The problematic nature of Israeli energy dependence upon foreign companies has proven to be critical at times of crisis. In 2006, during the Second Lebanon War, foreign ships and oil tankers refused to dock in the port of Haifa and deliver fuel to Israel's refineries (Oil Refineries Ltd. – ORL) because the state did not guarantee insurance coverage in the event of collateral damage. Given the fact that Israel could not force any ship to anchor in its ports under fire, and since it did not have oil tankers of its own, the Israeli Air Force suffered from a fuel shortage towards the end of the war. This strategic weakness resulted in a report issued by the state comptroller, who demanded in 2008 that ORL purchase an oil tanker and prepare an Israeli crew to operate it in order to ensure regular fuel import even during times of emergency.[7]

The events of the Second Lebanon War clearly demonstrated the potential danger posed by the excessive reliance on a third party. This danger is exacerbated when discussing Israel's natural gas resources, since by 2020 production of 70 percent of the country's electricity will rely on these resources. The fact that such a fundamental component of the Israeli electricity sector is based on foreign expertise exposes Israel's economy to harm which is not evident in other locally-managed infrastructure in the country (such as water and communications). It appears that lessons have indeed been learned since the Second Lebanon War in regards to Israeli maritime transport procedures, and a similar move must be made in the Israeli gas industry as well.[8]

The case of Nigeria's oil and gas industry can be used to demonstrate the great vulnerability created by dependence on outside expertise to operate and produce natural resources. The Nigerian oil and gas industry's bitter experience coping with the militant Movement for the Emancipation of the Niger Delta (MEND) serves as an important case study. MEND's success in paralyzing parts of the Nigerian oil industry since 2006 is a result of its choice to directly attack the large oil and gas companies' foreign employees, rather than just focusing on their physical infrastructures, as has been the common practice among other groups in the region. Despite evident disparities between the two countries in question, the case of Nigeria can provide Israel with indications to the regular response patterns of Western oil and gas companies in cases where there is a clear danger to their employees.

Through an examination of the Nigerian case, this paper will suggest a number of possible ways of facing these threats, both in the short term and in the long term.

The Case of MEND in Nigeria

Nigeria is the largest oil producer in Africa and the fifth largest oil exporter in the world, with some 2.3 million barrels of oil exported a day.[9] It has also been an official member of OPEC, the Organization of the Petroleum

Exporting Countries, since 1971. In addition, Nigeria possesses proven reserves of some 5,100 BCM (billion cubic meters) of natural gas, ranking it ninth in the world and the fifth largest global LNG exporter, with exports of some 25 BCM in 2010 alone. Exports of oil and natural gas constitute approximately 40 percent of government revenues and some 95 percent of the country's earnings from exports. Consequently, Nigeria is completely dependent on this industry for balancing its annual budget.

Most of Nigeria's active oil and gas reserves are located in the Niger Delta region in the south of the country, a swampy area whose residents suffer from grave poverty. The oil and gas fields' development creates serious pollution and harms the local agriculture and fishing industries which constitute the local residents' livelihood. Development and production is carried out through a Production Sharing Agreement (PSA) between the Nigerian National Petroleum Company (NNPC) and international oil and gas companies operating in the country. These include Shell, which produces some 1.2 million barrels of oil a day; ExxonMobil, which produces some 800,000 barrels a day; Chevron, which produces some 500,000 barrels a day, as well as Total and Eni.

Most of the oil and gas fields in Nigeria are located on shore and in shallow water, though since 2003, the country has also begun deep water production at a rate of 800,000 barrels of oil a day. While it is the fifth largest LNG exporter in the world, Nigeria's vast gas reserves remain largely unexploited, and some of the gas is even burned in order to speed up oil production in areas where gas and oil are mixed.

Notwithstanding the extent of its export activity, Nigeria is far from exploiting its full production potential due to an ongoing state of insecurity and instability. For many years, the oil and gas industry suffered violent attacks by local armed groups in the Niger Delta region, demanding rights, money, or independence for the province. These attacks mostly included oil theft through pipeline sabotage (also known as "bunkering," a practice that continues to this day), pipeline bombing, and takeover of production facilities, which temporarily decreased activity. Although these attacks were numerous, they did not achieve their long-term objective since companies were able to quickly repair the damage, and Nigeria's overall annual production rates were hardly affected.

This situation changed in 2006, with the appearance of the MEND militant group, calling for a redistribution of oil profits in the country and for greater independence for residents of the Niger Delta region. The group's success in promoting its objectives stemmed from the new tactic it adopted against foreign oil and gas companies. MEND, unlike other organizations, chose to focus on the foreign employees operating the facilities rather than the facilities themselves. The organization's actions included abducting Western oil and gas employees (particularly from the United States, Great Britain, France, and Japan), murdering local employees, torching the homes of foreign managers, threatening company executives, and making numerous demands for ransom.[10]

MEND first made headlines following the abduction of four foreign employees from Nigeria's shallow-water drilling rigs in January 2006. In the same month, it had also attacked a production facility and killed 17 employees. Following that attack, it issued an e-mail stating "It must be clear that the Nigerian government cannot protect your workers or assets. Leave our land while you can or die in it." It added that "our aim is to totally destroy the Nigerian government's ability to export oil."[11] MEND continued to make use of guerilla tactics including firing machine guns from motorboats and detonating dynamite. In its first year, the organization managed to cause extensive damage to the Nigerian oil industry, resulting in a decline of some 400,000 barrels of oil a day in the country's general production.[12] Between 2007 and 2010, MEND was responsible for 114 employee abductions and approximately 200 murders,[13] and in 2010 alone, it abducted 64 employees.

The deliberate attacks on international oil and gas companies' employees resulted in closing the facilities located in the Niger Delta region for lengthy periods, evacuating foreign employees from Nigeria, and declaring "force majeure" in their production and export contracts both with the host-country and the various importers. Shell and Chevron became main targets for attacks by MEND because of their extensive operations in the area, and since 2006 several of their facilities have been permanently shut down. Plans for continued expansion of production in the oil fields have been abandoned for a long period, as have plans to develop the extensive natural gas fields discovered in the region. A number of smaller oil companies have completely discontinued their operations in Nigeria, while large international companies have notified the government that the continued oil production is conditioned upon their employees' safety.[14]

Since 2006, the repeated attacks on oil facilities have led to a 25 percent decline in Nigeria's average production and export rate, even reaching a 40 percent reduction, translating into almost one million barrels a day.[15] Thus, for example, of an estimated production potential of 2.9 million barrels a day, in 2009, Nigeria produced an average of only 2.2 million barrels a day. Of all the foreign companies operating in the region, Shell suffered the most serious damage to production capacity, seeing as most of its facilities are located on shore or in shallow water. While its maximum production capacity was estimated at 1.3 million barrels a day, in 2011, it was able to produce a little less than 1 million barrels a day.

Natural gas production capacity in Nigeria was also severely affected, especially after Shell closed its large Soku plant that had come under attack in 2008. The company was only able to reopen the plant five months later, partly because of difficulties in recruiting and insuring outside experts, and it did not return to its original rate of production until 2010. As a result, during 2009 Nigerian LNG exports dropped by 33 percent.

The unstable supply also led to a lack of confidence among importing countries regarding Nigeria's ability to keep its export commitments. The United States, the largest customer for Nigerian oil, reduced its imports from Nigeria from about 1.1 million barrels a day in 2005 to 800,000 barrels a day in 2009. The decrease was partly caused by the Shale Oil and Gas Revolution in the United States, which reduced dependence on oil imports and allowed the country to give preference to more stable sources of oil than Nigeria.

Over the years, the Nigerian government's efforts to launch a military strike against MEND were futile. The harsh swampy terrain in the Niger Delta and MEND members' familiarity with the area have circumvented several military strikes. In 2009, the government attempted to sign an amnesty agreement with MEND, with OPEC's mediation. The agreement included disarming the organization in exchange for payments for its members' rehabilitation and reentry into society, as well as the restoration of civilian infrastructure in the Niger Delta region. Although the agreement was officially signed, it was not fully implemented due to Nigeria's failure to provide the required payments, and MEND resumed its operations in early 2010. As a result, the Nigerian government submitted a formal request to the United Nations to establish a commission to recommend ways of handling the organization, and foreign oil companies realized that they must provide security for their employees through private companies pending a sustainable solution.

Since 2011, MEND has reduced the frequency of its attacks against Chevron and Shell, and a number of reports have speculated the reason being "protection money" paid to the organization by the companies themselves. MEND serves as one of the "security companies" hired to protect these facilities. A special report issued in 2012 by an independent organization called "Platform" claimed that in 2009, Shell alone was forced to pay some $75 million to MEND and similar organizations for "security purposes."[16] This solution is not unreasonable in Nigeria, where even the government itself occasionally signs "security contracts" with heads of local militias in exchange for peace.[17]

Another unexpected problem resulting from MEND's violent actions is connected to human rights and environmental organizations speaking out against the international oil companies operating in Nigeria. Since the beginning of MEND operations, allegations of widespread pollution in the Niger Delta area and harm to the residents' livelihood have received greater exposure in the international media, raising awareness of the area's dire state. The reports on protection money have also provoked harsh reactions among human rights' organizations, arguing that the international oil companies are actually funding the violence in the area by making payments to the organizations that perpetrate it.[18] It should be noted that though the international companies' image had arguably suffered a blow, their operations in Nigeria remained unaffected.

Lessons for Israel

The Nigerian experience illustrates the ways in which violent organizations can significantly disrupt a country's production and export of natural resources. MEND's success in hindering the Nigerian oil and gas industry's operations since 2006 indicates the Western energy companies' vulnerability when facing direct and prolonged attacks against their employees. Chevron and shell's response to the threats against them shows that even the largest oil and gas companies will not hesitate to close their facilities and breach their contractual obligations when their employees become a target, while smaller companies completely stop their operations in the country.

These companies' response patterns should be studied by Israel, since the tensions between the Nigerian government and the international oil and gas companies, which ultimately led to a breach of the contract between them, have arisen in the wake of attacks on their personnel, not their facilities. Specifically, they have raised the question of who is ultimately responsible for the employees' safety. This question must also be at the center of discussions in Israel. Experience shows that if the foreign company fails to provide appropriate protection, the host country will suffer the consequences, and ultimately, it will be forced to take this role upon itself. This principle is especially evident in the case of Israel; if the foreign employees abandon the gas production facilities during emergencies, Israel, whose electricity production depends on gas, may suffer a serious crisis. In such a crisis, the government and military may be forced to intervene, regardless of the presence of alternative security measures such as private security firms. The many threats from terror organizations to Israel's gas reserves (whether or not they are fulfilled) emphasize the need to provide government guarantees for protecting the personal security of foreign employees in Israel's EEZ.

It should be noted that Israel and Nigeria present quite different cases in terms of threats; while Israel's production facilities are in the sea, not on land or in shallow water, making them a more difficult target, most of the attacks against personnel in Nigeria have taken place within the country's borders (aside from a number of threatening messages sent to the foreign companies' executives). Unlike Nigeria, the scope of the threat to foreign companies operating in Israel is not limited to Israeli soil. In addition, the threats posed to Nigeria by MEND cannot be compared to those posed by organizations such as Hizbollah and Hamas to Israel, since the nature of their activity, their internal organization, and their declared goals are very different. The involvement of external actors in acts of terror against Israel also adds a unique dimension. For example, because Hizbollah is located in Lebanon, this turns any action it carries out against Israeli gas facilities (or alternatively, any retaliatory action by Israel against Hizbollah) into an international incident, while a similar military action by Nigeria against MEND would be considered suppression of a local uprising.

As noted before, Israel's security establishment is currently assessing the possible threats to the natural gas industry facilities located in its EEZ, as well as to those that may take place on land and in its sovereign waters. Hizbollah, which has already expressed its intention to target the Tamar and Leviathan gas fields,[19] is a key threat, as it can control Lebanon's maritime border with Israel.[20]

Israel's gas and oil production will rely on two international companies: the American Noble Energy and Australian Woodside Petroleum, both of which significantly depend on foreign employees to operate their rigs and infrastructure (it is reasonable to assume that in the future this will also be the case in the exploration industry in Lebanon). This makes the threat profile for Israel especially high due to Hizbollah's capabilities which include possible attacks targeting foreign executives and employees while they are abroad; attacks on the companies' facilities in other areas of operation around the world (for Woodside Petroleum, facilities located in South Korea, Peru, and Brazil,[21] and for Noble Energy, facilities in Cameroon, Equatorial Guinea, Sierra Leone, Nicaragua, and the Falkland Islands);[22] and attacks on various offices around the world (Woodside Petroleum's branches in Australia, East Timor, South Korea, China, and Japan and Noble Energy's branches in the United States, South America, West Africa, and London). A personal attack on company employees and managers, while they are in the United States or Europe, appears less likely. However, their operation in regions such as West Africa, South America, and East Asia—areas in which Jewish and Israeli targets were attacked in the past—further complicates the situation. The very fact that a terrorist organization like Hizbollah is making explicit, public threats against foreign companies' executives (for example, threats that mention them by name and give their address, as had happened in Nigeria) could lead to increased tension and a demand for greater security guarantees from the state as a condition for continuing their operations in Israel. Furthermore, a threat against the employees themselves could complicate their stationing in Israel due to insurance considerations, as well as a demand by companies to reopen existing contracts with the state in order to cover additional costs. If threats are carried out—such as a threat to detonate a production facility belonging to the company in Africa, or to sabotage one of its branches around the world—this could later lead to the suspension of operations in Israel. At least theoretically, an organization such as Hizbollah could thus cause significant damage to Israel's gas production and export capabilities, even without striking any physical gas infrastructure within the borders of the state of Israel.

Nigeria's bitter experience since 2006 and the threat profile faced by Israel indicate that when a state is dependent on foreign production companies (and even more importantly, foreign employees) to produce the energy resources in its possession, it must place an emphasis not only on protecting the physical production infrastructure in its territory (pipelines, reception and export facilities), but also the safety of the foreign employees operating them outside its territory. Israel's options for providing such protection can be divided into two time periods: In the short term, the state may pay for foreign employees' protection, or at the very least, supervise it, since in the event of a crisis the state will be forced to absorb the damage and find a solution. It appears that in this case, economic considerations dictate a preference for immediate and controlled expenditures on manpower security over a future risk of incalculable damage to the electricity sector. Such protection must include personnel working in facilities while they are in Israel's exclusive economic zone or sovereign waters (as is the case on existing rigs), and possibly also include the foreign companies' offices and facilities around the world, as well as their executives. It is likely that this protection will involve hiring third-party services.

Although it can provide physical protection from attacks, it appears that there is little Israel can do to prevent verbal threats made by terror organizations against foreign companies and their officials outside of Israel. The unofficial solution to this issue adopted in Nigeria is paying protection money in exchange for their employees' safety. The Israeli defense establishment will probably refuse to discuss such a course of action, even though it might be acceptable to the foreign companies themselves.[23]

Another option for ensuring employee safety comes in the form of cooperation with Lebanon on exploration licenses. This option assumes that if companies engage in resource exploration and production in Israel and Lebanon, linkage may be formed between the facilities on both sides, wherein an attack on facilities in one country may affect the operation of the facilities in the other. A similar solution could appear in the form of sharing reserves, in which Israel would export part of its gas to the Palestinian Authority and Jordan, thus turning the gas reserves' security into a regional interest.[24] Such decisions could provide a long-term and effective solution, exceeding that of a purely military approach, which would be focused on protecting Israeli gas facilities through a "balance of terror" in which every threat or action against Israeli facilities would be met by a similar Israeli response against gas facilities in Lebanon. Such an approach cannot be considered as a long-term solution since even if Lebanon is able to establish natural gas production facilities on its soil,these will be owned and operated by international companies. Therefore, it is highly unlikely that Israel would retaliate by attacking American, French, or Russian facilities on the Lebanese side.

In the long run, Israel can significantly reduce the danger of foreign employees' desertion in the face of security threats by promoting programs to train local experts in their stead. The case of Nigeria shows that the oil companies' main concern is their foreign employees (engineers, managers, and technicians, who generally come from the West), while the local employees tend to continue to function even during emergencies. In order to ensure the facilities' operation during war or other security crises, Israel must promote professional training for Israeli personnel in energy and gas engineering. Such experts could gradually replace the foreign employees and therefore alleviate some of the concerns regarding the cost-effective nature of increased insurance and security. Though there is a cost involved in training local experts, it may be less expensive than that incurred by interrupting manufacturing processes in the event of a national crisis.

Efforts in this direction are already being made by the Israeli Ministry of National Infrastructures, Energy, and Water Resources. For the past three years, the ministry has been promoting a scholarship fund for students pursuing a bachelor's, master's, or PhD degree in engineering, physics, geology, and seismology in order to train manpower in energy-related fields.[25] However, this fund is limited in scope, and so far there are only a few dozen scholarship recipients. In order to attain more ambitious goals and allocate larger budgets for training local engineers and employees in the natural gas industry (with a specific emphasis on the low-tech professions connected to this industry), training a local workforce should be made a national strategic priority as part of Israel's efforts to ensure its energy security in the coming years.

Conclusion

The defense establishment in Israel places an emphasis on the need to physically protect Israeli gas installations against terrorist threats. The case of Nigeria demonstrates that ensuring the protection of the human infrastructure needed to operate these installations is no less important and can provide a long-term (and more cost efficient) solution to some of these threats. The case of Nigeria also indicates that when dealing with infrastructure that is critical to the economy, it is the state that is responsible for the safety of the employees operating it, even when these employees are foreigners who only operate in the state's exclusive economic zone, since it is the state that suffers should they abandon their work.

In the long run, true energy security can only be achieved by developing local expertise. This can be done by training Israeli personnel in the fields relevant to the industry (energy and gas engineering, physics and geology, and low-tech professions) who can be used even in emergencies and under fire. In a more optimistic scenario, other long-term solutions could include sharing reserves by exporting gas to Israel's neighbors (Jordan, Egypt, and the Palestinian Authority) or sharing exploration licenses in maritime conflict zones (the Israel-Lebanon border) in a manner that would transform the stability of production and export into a strategic interest for the entire region, and not just for Israel.

Notes

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