Egypt’s Energy Sector:
Regional Cooperation Outlook and Prospects of Furthering Engagement with the Energy Charter

Occasional Paper

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Abstract

Egypt’s energy sector is currently facing a variety of conflicting and overlapping challenges. This is mainly seen in Egypt’s gruelling efforts to strike a balance between production, domestic consumption, and export revenue, while seeking to maintain internal political harmony. Despite the fact that Egypt is the largest non-OPEC oil producer in Africa and the second largest gas producer in the continent, as well as the vital role it plays in regional and global energy markets, the country’s energy status throughout the last four years reflects a reversal on all levels. This crisis is as much the consequence of historical ‘mal-planning’ as it is the short-term consequence of the country’s past three years of political turmoil following 2011 revolution. However, starting from late 2014 investment and economic growth started picking up on the back of political stability. Fixed investment was set to be the primary driver of growth as a result of greater clarity and transparency in Egypt’s economic policy. Furthermore, the current government firmly displayed some decisive measures to further patch-up the energy sector. This is most likely disclosed under the pillars of the new energy strategy, including: (1) Security, by boosting and diversifying and improving energy efficiency; (2) Sustainability, by addressing debt build-up and phasing out of subsidies in a socially responsible manner and (3) Governance, by improving and modernizing the oil and gas sector’s governance and encouraging private sector investment.

In light of the above, and in the framework of the Energy Charter’s modernization process and the efforts to attract newcomer countries—mainly key countries in MENA region—to the organization, Egypt was a high priority in the Energy Charter’s enlargement agenda. This interest was mainly unveiled within the modernization process during the negotiations of the ‘International Energy Charter’ political declaration. Egypt, then, proceeding from the country’s explicit interest to take part in the Charter’s modernization process, engaged actively in the four rounds of negotiations on the IEC, but still holds some remarks with regard to the text. This said, both parties are most likely keen to pursue a strategic approach in maintaining their presumably win-win relationship.
An outlook on the major features of the Egyptian Energy Sector

Egypt’s energy sector has been recently characterized as being highly auspicious but peculiar. Although Egypt is the largest non-OPEC oil producer in Africa and the second largest gas producer on the continent, the Egyptian energy sector is currently witnessing enormous challenges. It is important to notice that energy production has been dominated largely by fossil fuels. Egypt has never been a major oil producer, however, until the 1990s proven oil reserves were able to meet domestic demands. In addition, despite the well-established reputation of Egypt as a major regional producer and exporter of natural gas, the country’s current status with regard to natural gas is a reversal on all levels.

In principle, the hydrocarbon sector is a vital source of foreign currency and a key destination for foreign direct investment. Until the end of 2010 net energy exports generated a good surplus, averaged around $4bn. The Egyptian energy sector has been considered to some extent partially liberal in comparison with other neighbouring countries. Egypt used to have close and successful partnerships and cooperation with some major international oil and gas companies. The country’s record in this regard has been positive for decades (until the uprisings by early 2011). In Egypt, there is a strong conviction that the full utilization of the country’s hydrocarbon reserves relies mainly on the nature and strength of the partnership between the government and international companies. Furthermore, Egypt has a pivotal role to play in international energy transit. The country’s potential as a major transit country has not yet been fully utilized. However, Egypt possesses a key role in regional and global energy markets. This is, most likely, attributed to its geographical proximity and strategic location at the crossroad of international trade of oil and gas, in addition to the control of two major transit routs: the Suez Canal and the Suez-Mediterranean Pipeline (SUMED).

Over the last decade, Egypt’s energy policies and energy sector have witnessed fundamental changes. Accordingly, several characteristics of the country’s energy sector could be identified. Egypt’s growing population and economic (industrial) development led to a significant rise in the demand for energy products in all sectors (residential, transportation and industrial). Subsequently the consumption of oil, gas and electricity has been boosted. As a result, in recent years domestic supplies have fallen short of demand, due to the ongoing increase in consumption, stagnation in production, and a very generous subsidy policy which heavily contributed to increasing consumption. Further deepening the situation is that some oil and gas fields have reached maturity or are in decline, and there has been a withdrawal of foreign investment in the last four years which has prevented production growth. Thus, the economic consequences of this decline in production and fast growing consumption are seen in higher import volumes and a drop-off in natural gas exports, which have turned Egypt’s hydrocarbon trade balance negative over the course of fiscal year 2012-2013.

Moreover, the political upheaval and instability since the Egyptian revolution in 2011 have had a robust impact on the overall energy sector, particularly with regard to foreign investment (which

3 Ibid., p.12.
retreated by 3.7% in 2013), economic growth and employment. In addition to political instability, the subsidy system, mainly for energy products, contributed heavily to the budget deficit and hindered the government’s capacity to pay off its debts to foreign operators, which consequently impeded new investments in oil sector. However, the private sector still has the potential to enable the country to achieve real economic transformation. Currently, and in the wake of Egypt’s economic development conference, the government seeks not only to redefine the role of the private sector clearly within the ongoing economic strategy, but also to better structure public-private partnerships. Hence, improved energy governance is crucial in creating a favourable climate for private sector development.

Nevertheless, starting from late 2014 and shortly after new Egyptian president Abdel Fattah El-Sisi assumed power, investment and economic growth started picking up on the back of relative political stability. Fixed investment was set to be the primary driver of growth as a result of greater clarity and transparency in economic policy. As a result, the government is currently leaping towards attracting impressive FDI in the energy sector. Based on the latest Business Monitor International forecast, investor sentiment in Egypt has significantly improved as political stability returns and the government begins repayments owed to oil companies. In addition, as forecasted, the Egyptian economy will be expanding by 3.0% in FY2014/15 and 3.8% in FY2015/16. An estimated shift in economic growth is seen after several quarters of stagnation and decline. Relative political stability is expected to continue over the coming quarters, giving Egypt a degree of ‘policy certainty and political continuity’ which the country has not experienced since the uprising of the Arab Spring in January 2011. In addition, Egypt issued a unified investment law, prior to the Economic Development Conference (13-15 March 2015 in Sharm al-Shaikh). This would improve the business climate and put incentives for potential investors in place. Finally, Egypt is amending and redrafting a number of economic laws to attract fresh investments and grow its economy out of weakness caused by the political turmoil since early 2011.

Another dimension to better understand the modulation in Egypt’s energy sector could be framed by taking a close look at previous energy strategy. The implementation of the energy strategy of 2007 has been successful—to some extent—on the supply side, but not on the demand side. Price reform, refocusing subsidies and sector reform were not achieved. This has negatively affected energy efficiency and diversification, energy availability and supply security, the state’s budget, and the sector’s financial capacity. It causes rising energy import requirements and increasing risks to the current account balance.

Therefore, the features of the former Egyptian energy strategy are now being substantially adjusted to meet the circumstances that led to an entire shift of Egypt’s energy situation. The Egyptian government resumed the implementation of a short- to medium-term strategy designed to revive the sector and bridge the gap between supply and demand over five years, backed up by issuing a new unified investment law. One vital aspect of this new strategy is a profound subsidy reform

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7 Middle East Economic Survey MEES, vol. 58, no.8, 2015, p.17, last checked online at: www.mees.com.
program, intended to reduce fiscal deficit.\textsuperscript{9} The main objectives of the new energy strategy include: ensuring energy security and satisfying domestic demand; maximising the added value of Egypt’s natural resources; and building national capacities with high efficiency.\textsuperscript{10}

Furthermore, key measures of this strategy aim at addressing: (1) Security, by boosting and diversifying and improving energy efficiency; (2) Sustainability, by addressing debt build-up and the phasing out of subsidies in a socially responsible manner and; (3) Governance, by improving and modernizing the oil and gas sector’s governance and encouraging private sector investment.\textsuperscript{11}

On the security level, the new strategy entails:

- Acceleration of existing gas field development (e.g. North Alex);
- Encouraging new exploration (56 concessions and agreements being concluded in 2014 and Q1 2015 for investments of $12.2 billion);
- Awarding concessions for unconventional oil and gas;
- Awarding contracts for refineries and petrochemical projects (work on a $3.7 billion cracking plant was resumed, following resolution of impediments facing the project, and it is expected to start operations in 2017);
- Securing LNG import contracts until 2020 through negotiations that are expected to continue this year. Five LNG shipments have been agreed upon with Algeria and are expected to cover consumption until September 2015. A 5-year regasification unit contract was also signed and the unit is expected to be operational in 2015;
- Implementing energy efficiency measures with the new electricity law.\textsuperscript{12}

As for sustainability, the main objectives are:

- Paying down arrears to international oil and gas companies ($5 billion was paid to International Oil Companies in Q4 2104, reducing arrears to $3.1 from $11 billion);
- Restructuring energy subsidies (resumed in July 2014);
- Rolling out smart cards for gasoline and gas oil, and the establishment of a database on the consumption rates of different energy products;
- Mitigating the impact of subsidy removals through a range of measures, including the acceleration of residential connections to natural gas and allocating savings to boost social spending.\textsuperscript{13}

Finally, on the Governance’s level the key objectives comprise:

- Development of a national energy strategy;
- Further opening of the sector to private investment;

\textsuperscript{9} Arab Republic of Egypt Ministry of Petroleum, last checked online at: http://www.petroleum.gov.eg/en/Pages/default.aspx.
\textsuperscript{11} Ibid.
\textsuperscript{12} Arab Republic of Egypt Ministry of Petroleum, last checked online at: http://www.petroleum.gov.eg/en/Pages/default.aspx.
\textsuperscript{13} Ibid.
- Enhancing the governance of the gas sector. The government is planning to carry out certain sectorial reforms and to eventually limit its role to simply regulating the sector, and eliminate the dual role currently played by some government bodies as both producer and regulator.  

Regarding subsidies, it is important to notice that Egypt used to spend around $26 billion on fossil fuel subsidies. For decades energy and food has been considered the core of a comprehensive system of public subsidies, a system that used to absorb almost 30% of the government’s spending, two-thirds of which went to energy subsidies. In this respect, in July 2014 the government, in a very bold action, lifted almost 22% of energy subsidies, with the aim of stabilizing budget imbalances. It intends to continue a long process of subsidy reform, aiming at eliminating all but those that target the most needed poor sectors. Egypt’s decision to reduce subsidies on the country’s heaviest users of fuel is a positive development for fiscal sustainability, bodes well for the government’s commitment to economic reform, and will, most likely, result in further closing of the budget deficit (BMI forecasts Egypt’s budget deficit to fall from an estimated 12.1% of GDP in FY2014 to 7.3% in FY2017). Also, energy subsidy reform will contribute to stabilizing the structural trade deficit. Hence, it is clear that the current government is quite firm in reforming the country’s burdensome subsidy system.

Moreover, in an attempt to further liberalize the energy sector, the Egyptian Ministry of Petroleum plans to partially privatize several state-owned oil related companies. However, this may require some restructuring of these companies and a review of their finances. The aim is to raise capital to finance their operations rather than depend on direct financing from the state’s treasury, which would worsen the already high budget deficit.

At the sectorial level, the Egyptian petroleum sector is headed by the Ministry of Petroleum. Based on the former integrated energy strategy, the Ministry of Petroleum developed the structure of the Egyptian petroleum sector through separating the activities of natural gas and petrochemicals from the activities of the Egyptian General Petroleum Corporation (EGPC), and establishing a strong entity for each of them. That strategy included drawing more attention to Upper Egypt through establishing an independent entity for this region.

The petroleum sector’s structure consists of five major state entities: the Egyptian General Petroleum Corporation (EGPC), the Egyptian National Gas holding Company (EGAS), the Egyptian Petrochemicals Holding Company (ECHEM), Ganoub El-Wadi Holding Company (GANOP) and the Egyptian Mineral Resources Authority (EMRA). The EGPC is the national oil company in charge of managing upstream and downstream activities in the oil sector as well as the exploration and production operations of more than ninety affiliated joint venture companies. It holds several exploration licenses in the Western Desert, Sinai and the Gulf of Suez. It also owns and operates much of the country’s refining industries. The Egyptian Natural Gas Holding Company, EGAS, is the national authority in charge of natural gas activities both upstream and downstream, most importantly through managing exploration and production operations with a number of joint venture companies.

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14 Ibid.
Oil Sector

Egypt’s oil sector witnessed a stark change beginning in the early 2000s. The country drifted away from being an oil exporter to a net oil importer, as domestic supplies have fallen short of demand. This was mainly due to different factors including: the enormous rise in population; growing economic development mainly in projects generated by fuel; and a drop in new investments in the oil sector (most likely as a repercussion of the energy subsidy system along with the political instability since 2011). This led to an increase in oil consumption in parallel with stagnation in production. Egypt’s oil consumption has clearly outpaced production since 2010.19

One major challenge in Egypt’s oil sector is how to maintain a minimum level of oil exports in order to maximize foreign exchange revenue. It has been known that any barrel consumed domestically—especially when consumption outpaced production—is a barrel not exported, depriving Egypt of foreign exchange. Like many other developing nations, Egypt is seeking to strike a balance between crude oil production, domestic consumption, and export revenue, while seeking to maintain internal political harmony.20

Despite declining production and becoming a net oil importer, Egypt’s crude oil exports have remained virtually flat over the past few years, mainly to secure a share in foreign currency. As a result, there is a lower volume of domestic crude oil available for domestic refineries, and Egypt must then compensate the difference by importing petroleum products and/or crude oil.21

Controlling domestic oil consumption has become a ‘thorny’ issue for many countries, sharpening the trade-off between consumer demands and export earnings. This trade-off is hindered by a subsidy system of governmentally controlled domestic energy price supports. In the light of the above mentioned subsidy reforms, and faced with the high rates of growth in consumption, the government has recently raised domestic prices in an attempt to curb this explosive growth and re-allocate resources more effectively.22

In 2014 Egyptian oil production reached 713,000 bbl/d, with proven oil reserves of about 4.2 bn/ bbl, though production is forecasted to drop to 703,000 bbl/d in 2018. Meanwhile total oil consumption reached almost 770,000 bbl/d, as it has grown by an annual average of 3% over the last 10 years. Oil consumption mainly goes to areas including the transportation sector, heavy industries such as iron, cement and petrochemicals, and oil-fired power generation. The transportation sector accounts for the largest share of oil demand.23

Oil in Egypt comes from seven main areas: the Western Desert (51%), the Gulf of Suez (20%, the most prolific oil province in the country by area), the Eastern Desert (12%), Sinai (10%), the Mediterranean Sea (5%), the Nile Delta (1%) and Upper Egypt (less than 1%).24

19 Ibid., p.4.
24 Ibid., p.4.
In general, Egypt lacks giant oil fields; most of the country’s production comes from relatively small fields. However, Egypt has the largest oil refinery capacity in Africa, though it operates below capacity. Egypt’s oil refinery capacity is around 700,000 bbl/d, while the country’s refined petroleum output is around 450,000 bbl/d. The refinery output declined from 2009-2013 by almost 28%, as some reports attribute this decline to Egypt’s policy that permits foreign oil companies to export crude oil as a repayment for the country’s financial debt. Subsequently, the supply of crude oil available for domestic refineries has declined, and Egypt started importing petroleum products (which reached almost 170,000 bbl/d in 2013). In recent years, there were plans to expand the country’s refining capacity through building more refineries in partnership with foreign companies, though they have not been realised yet. The petroleum industry is a key component of Egypt’s economic performance, thus the decline of oil exports in the last few years had a significant impact on the country’s economic development.

Some reports give indications that Egypt will see an ‘upswing’ in investment in the oil sector in the coming years. With the political situation now looking more stable than at any time in the past three years, oil investment has started picking up. This foreseen improvement in oil investment in Egypt relies mainly on the hydrocarbon potential of certain underexplored areas. In particular, the Western Desert has shown very significant and promising hydrocarbon potential, given that it has been underexplored and offers comparatively low-cost onshore development opportunities.

In addition, some new oil discoveries have boosted Egypt’s reserve estimate over the past few years. Egypt has maintained a sustainable level of exploration, with a number of oil discoveries made every year. However, it is expected that Egypt will struggle to increase crude oil output due to limited overall oil potential. The majority of Egypt’s below-ground hydrocarbon potential has proven to be gas, thus what new liquid product develops is likely to come from gas condensates and not traditional oil.

**Natural Gas**

Since the early 2000s, Egypt has emerged as an important producer and exporter of natural gas. Egypt started turning to gas to replace oil in the domestic market, most importantly for fuelling heavy industries and electric power plants in order to save more crude oil for exports. Until 2011 about 18% of gas production was exported. Around 80% of Egypt’s natural gas reserves are in the Mediterranean and the Nile Delta, followed by smaller amounts in the Western Desert and the Gulf of Suez.

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25 Ibid.
Egypt’s domestic gas crisis is as much the consequence of historical ‘mal-planning’ as it is the short-term consequence of the country’s past three years of political turmoil. Since 2011 Egypt’s natural gas production has declined sharply and a stalled power sector started to become apparent. The decline was by an annual average of 3% from 2009-2013; meanwhile, Egypt’s total gas exports have declined substantially by an annual average of 30% from 2010-2013. This is ascribed not only to the decline of production, but also to the enormous rise in domestic demand, particularly in the power sector. Starting from the 1990s the government encouraged households, businesses and the industrial sector to consider natural gas as substitute for petroleum products. Therefore, the consumption increased by an annual average of 7%, and as a result Egypt started importing liquefied natural gas (LNG) to satisfy its consumption.

Many argue that Egypt’s gas production decline was by no means inevitable. Egypt faces rapid depletion rates in many of its existing reservoirs, rendering consistent investment in new reserves essential to maintaining and expanding gas production. Many of these new reserves are in higher risk, higher-cost areas, particularly the offshore Nile Delta, where access to more sophisticated technology and foreign capital are key factors in determining the pace by which new resources could enter the Egyptian gas market. The political turmoil following Egypt’s 2011 revolution has considerably hindered these offshore developments, directly through temporary shut-downs in production, but more structurally by depriving the Egyptian government of essential fiscal resources to meet various contract commitments towards international companies. Egypt owed foreign operators substantial debt of approximately $7.5bn by June 2014. Some of these operators have reduced their exploratory activities and delayed project investment. In a broader sense, however, Egypt’s post-revolutionary turmoil merely accelerated the severity of existing long-term deficiencies in Egypt’s energy sector that have existed for at least a decade. Successive governments have inherited a gas sector hampered by the conflicting requirements of Egypt’s rising domestic energy demand and already existing export contracts with Egyptian gas customers.

Moreover, one additional factor that contributed in hindering natural gas production was the low price the government used to pay foreign operators. It presented a major obstacle for operators interested in investing in Egypt’s energy sector, as these price conditions rendered such projects economically unviable for many. Hence, substantial gas discoveries in the deep offshore Mediterranean and other areas remained undeveloped. A history of exceptionally low domestic energy prices—many multiples below international prices and increasingly below the long-run marginal cost of production for more gas production projects—has systematically distorted Egypt’s domestic energy market. This leads to extremely low levels of industrial energy efficiency and subsequently wasteful energy consumption, both by energy-intensive industries and high-end energy users. Surging domestic energy consumption forced the government to divert a growing share of its natural gas production to the domestic market, where low domestic prices are paid instead of high international prices.

Nevertheless, after the last presidential elections in 2014 Egypt started witnessing remarkable progress on the level of political stability and economic development. Fundamental steps have been

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33 Ibid., p.2.
35 Ibid.
carried out by the current government to foster the energy sector and boost the economy including, as mentioned: paying down arrears to international oil and gas companies; accelerating existing gas field development; encouraging new exploration; securing LNG import contracts until 2020, particularly regarding five LNG shipments from Algeria that are expected to cover consumption until September 2015; signing a 5-year regasification unit contract; and mitigating the impact of subsidy removals, within the overall subsidy reforms strategy, through a range of measures including the acceleration of residential connections to natural gas and allocating savings to boost social spending.36 For example, and in a reflection of what could be considered a vote of confidence in Egypt’s investment climate and economic potentials, in March 2015 BP finalized agreements for a $12 billion project to produce offshore natural gas.37

However, while invigorating foreign investment in the gas sector, Egypt realizes that such an objective could not be achieved in one fell swoop. The low gas price causes a bias in favour of gas export projects while at the same time reduces investors’ interest in the upstream and downstream gas sector. This requires Egypt to revisit its gas allocation policy, especially if the government is trying to de-link investors’ interest from domestic gas prices.38

In the long-term Egypt is looking to reverse the decline in gas supply by spurring deep-water exploration with improved terms, but in the meantime it is looking to the country’s first-ever LNG imports to make up the shortfall. It has already signed agreements to import 81 LNG cargoes over the next two years, with more deals likely to follow. Egypt plans to import 500mn cubic feet/day (CFD) for the July 2015-June 2016 Egyptian financial year, and 1bn CFD for 2016-17, according to the Ministry of Petroleum’s latest forecasts. Egypt is also targeting Algeria and Russia for a longer term supply deal.39

**Electricity and Renewable Energy**

Power generation in Egypt is integrated by a Unified Power System, upon which all power stations of the national electricity grid are linked. Electricity consumption in Egypt is increasing faster than capacity expansion, and the country is currently witnessing a substantial power crisis. Egypt’s power generation capacity is around 27 GW per year, though only about 60-70% of its capacity is operating, mainly due to the country’s inability to import raw materials necessary to produce power.40 Egypt had originally outlined plans to install 30 GW of capacity between 2010 and 2020, with annual investment in power infrastructure initially targeted at $3bn, including significant investments in renewable energy. However, the political unrest following 2011 has disrupted these plans, discouraging investment and draining government finances.41

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37 Geoffrey Smith, “BP commits to $12 billion Egypt deal...and look who’s back with them,” last checked online at: http://fortune.com/2015/03/06/bp-commits-to-12-billion-egypt-deal-and-look-whos-back-with-them/.
Electricity generation is fuelled by around 80% natural gas and 20% oil and renewable sources. The electricity sector is by far the largest gas consumer, accounting for over half of the total gas consumption in the country. Overall, Egypt’s power crisis is a result of a number of overlapping factors including: rising demand, natural gas supply shortages, aging infrastructure, political instability, and inadequate generation and transmission capacity.\(^{42}\)

To overcome the crisis, the ministry of electricity and renewable energy has taken numerous steps to better implement an integrated strategy for electricity through 2027. It is based on specific pillars including: wide implementation of energy efficiency policies; diversifying sources of electricity production; expanding the usage of renewable energy (to reach 20% of production by 2020); and improving and maximizing the local component in the manufacturing process of electricity grids and infrastructure.\(^{43}\)

Furthermore, shortly after regaining political and economic stability in 2014, certain measures have been taken in this regard including: cutting gas supply to certain fertilizers and cement factories in order to increase gas supply for power plants; channelling huge investment towards the sector, as giant deals have been signed with international operators (mainly GE and Siemens) to further expand, develop and increase the capacity of existing power plants; implementing concrete reforms in energy subsidies, to pre-empt consumers such as factories, business, wealthy citizens from benefiting from the canopy of subsidies; and enhancing initiatives to instil energy efficiency and robustly eliminate overconsumption practices such as wasteful storage, daytime street lighting, and excessively late work hours (mainly in entertainment venues).\(^{44}\)

As for renewable energy, Egypt is considered by many observers to be a country which has the right environment to meet a large proportion of its energy needs by utilizing wind and solar power. However, the country’s potential in renewable energy is not properly utilized and it accounts for a minor share for Egypt’s energy mix. The wind conditions in Egypt, as some might argue, are among the best in the world and almost 90% of its land is suitable for setting up wind turbines.\(^{45}\)

Over the years, Egypt has been trying to expand its utilization of renewable energy. The Supreme Council of Energy in February 2008 approved a plan to generate 20% of their electricity from renewable energy by 2020, including a 12% contribution from wind energy.\(^{46}\) Recently, and in the framework of expanding power production and overcoming the shortage of oil and gas supply, the government started implementing ambitious plans to further expand electricity capacity generated by wind and solar power, particularly to increase wind generations to 7.2 GW by 2020.\(^{47}\) Egypt currently has a significant interest in promoting foreign investment in renewable energy projects to meet energy production shortfalls. This trend has gained momentum lately, especially in the wake of increased political and economic stability.

and significant investment attracted at an economic development conference held in March 2015. In early 2015, Egypt’s New and Renewable Energy Authority (NREA) announced that almost 70 companies have been selected to take part in developing 4.3 GW of renewable energy projects in the country.\textsuperscript{48} In particular, a number of wind projects in planning promise to greatly increase Egypt’s installed wind capacity. Germany, Japan, Spain, France, and the European Union are all involved in these projects through governmental cooperation agreements.\textsuperscript{49}

Furthermore, and with regard to nuclear power, it is important to notice that after years of uncertainty the proposed Egyptian plan to build a nuclear power plant at EL Dabaa on the Mediterranean coast is coming into effect. In February 2015 Egypt signed a preliminary agreement with Russia to build the nuclear power station, planned to have four blocks providing 1200 MW each.\textsuperscript{50}

Despite the significant measures carried out by the government recently to further maximize the share of renewable energy in Egypt’s mix, Egypt has still a long way to go in this field. Striking a plausible balance between conventional energy sources and renewables in shaping the country’s energy map requires not only a robust political will, but also eclectic measures in developing and promoting the renewable energy industry.

**Energy Transit**

Egypt has always been a promising hub for energy transit, and it plays a vital role in international energy markets. This role becomes clear through ruminating the operation of two strategic energy routes in the region: the Suez Canal and Suez-Mediterranean (SUMED) pipeline.

The Suez Canal, connecting the Red Sea with the Mediterranean Sea, is an important transit route for oil and LNG shipments traveling northbound from the GCC zone to Europe and North America and southbound from the Mediterranean and North Africa to Asia. It is widely considered reliable and the shortest link between east and west. In 2012, for instance, about 7% of all seaborne traded oil and 13% of LNG went through the canal. More specifically, oil exports from GCC countries accounted for 79% of Suez Canal northbound oil flows. The largest importers of northbound oil flows through the Suez Canal in 2013 were European countries (68%) and the United States (16%). Oil exports from European countries made up the majority (66%) of Suez southbound oil flows, followed by North Africa (Algeria and Libya combined made up 16%). The largest importers of Suez southbound oil flows through the Suez Canal were Asian countries (74%).\textsuperscript{51}

Over the years, the Suez Canal Authority has carried out different projects to increase the capacity of the canal to enable "very large" and "ultra-large" crude carriers to travel through the canal. In 2014, Egypt unveiled a very ambitious project of expanding the canal by doubling its size. The project aims at expanding shipping facilities and establishing a new port by the canal, as well as a new port city. It seeks

\textsuperscript{49} “Sector In Egypt,” last checked online at: http://cairo-energy.com/index.php/sector-in-egypt.
\textsuperscript{50} “Nuclear power agreement between Russia and Egypt,” last checked online at: http://nuclear-news.net/category/2-world/middle-east/egypt/.
\textsuperscript{51} U.S. Energy Information Administration, “Suez Canal, Sumed Pipeline are key parts of Egypt’s role in international energy markets,” 2013, last checked online at: http://www.eia.gov/todayinenergy/detail.cfm?id=12371.
to raise Egypt’s international profile and to establish it as a major transit hub. This huge project involves the creation of a new Suez Canal parallel to the current one, with a total length of 72 kilometres.

Since the late 2000s, some developments have led to a decline in the total oil flow through the canal, such as: the global economic slowdown which has drastically reduced demand for oil, and led OPEC to cut production; fundamental changes in the international economic system and the global energy markets; and the rise of China, India, and other Asian countries, transforming them into major oil and gas consumers and re-routing oil and gas exports to be transported east instead of west.\(^{52}\) Hence, the government—by launching this project—is seeking to maintain a stable source of maximum income from the canal and to avoid volatile situations, heavy shocks and high vulnerability with regard to international developments.

The SUMED pipeline connects the Red Sea with the Mediterranean. It was built as an alternative route and a complement to the canal. The SUMED is owned by the Arab Petroleum Pipeline Company, a joint venture among Egypt, Saudi Arabia, Kuwait, United Arab Emirates, and Qatar.\(^ {53}\) If there are problems with the Suez Canal, the SUMED pipeline is the only route to directly transport crude oil from the Red Sea to the Mediterranean Sea. It runs 320 kilometres from the Ain Sukhna terminal on the Gulf of Suez to the offshore terminal Sidi Kerir, near Alexandria, consists of two parallel pipelines, has a capacity of 2.3 million barrels per day (bpd). When considering tankers too large to fit through the Suez, the pipeline alternative can shorten transit time by 12 days, as tankers do not have to ship around the southern tip of Africa.\(^ {54}\) Though SUMED crude flows have decreased over the past few years, the line still transited around 1.4 million bbl/d of crude oil in 2013 according to the EIA.\(^ {55}\)

If Egypt is still firm in expanding its role in international energy markets and energy transit, there is no optimal way to materialize this better than reviving the potential of its geographical location, through maximizing the capacity of the Suez Canal and SUMED pipeline.

**Egypt’s Regional and International Energy Cooperation**

Egypt’s regional and international cooperation efforts are a cornerstone in the country’s energy security. Some consider the goal of self-sufficiency and energy independence to be obsolete, and that energy security is an issue that necessarily entails a growing interdependence between major producers and consumers. In this context, Egypt’s international energy policy is based on the conviction that no country or region alone can achieve a state of energy security. Both producers and consumers share mutual interest in promoting stability and predictability of energy supplies and prices. On the other hand, a country like Egypt is seen as an attractive energy partner. The low costs of production, high quality of oil and gas, geographical proximity and explicit welcoming of foreign investment suggest that energy partnerships between international players (such as the EU) and Egypt is vital for both parties, and all parties are likely to win from expanding such a partnership.\(^ {56}\)

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\(^{53}\) Ibid., p.24.

\(^{54}\) Tom Doggett, “UPDATE 1-Shutdown of Suez Canal, SUMED won’t stop oil-EIA,” 2011, last checked online at: http://www.reuters.com/article/2011/02/10/suez-oil-shipping-idAFN1027464520110210.

\(^{55}\) Ibid.

In general, Egypt’s main trading partners include the EU (27% of exports and 30.7% of imports), Arab countries (20% of exports and 19.6% of imports), and Asian countries (17.6% of exports and 21% of imports). Although Egypt’s trade with African countries is limited, recently the country has shown high interest in boosting trade and commercial cooperation with Africa, especially in energy business. Egypt is trying to expand its electricity grid towards the south to further enhance energy partnerships with African countries, most importantly the Nile Basin ones. The current government is also keen to overcome some thorny issues that have impeded its cooperation with Africa for decades. For example, in this regard it worked with the African Development Bank on how to maximize Egypt’s benefits from trading with COMESA members.57

Hence, the framework of Egypt’s energy cooperation is diverse and to some extent significant. It reveals the country’s scope of interest in international energy systems as well as the geographical direction it is heading towards. Egypt has relationships and enjoys the membership of multiple international and regional organizations including: the International Energy Forum (IEF); the Gas Exporting Countries Forum (GECF); the World Energy Council (WEC); the World Petroleum Council (WPC); the Organization of Arab Petroleum Exporting Countries (OAPEC); the African Petroleum Producers’ Association (APPA); and the International Renewable Energy Agency (IRENA).

On the bilateral level, and in addition to almost 50 new oil and gas exploration agreements which the Ministry of Petroleum has signed since November 2013, recently Egypt has signed a variety of Memorandums of Understanding (MoU) on oil and gas sector cooperation with a number of countries. They comprise the following:

- MoU with Jordan, which aims at tapping into the infrastructure and facilities available in the two countries, as well as to develop Egyptian-Jordanian cooperation in expanding Iraq’s gas pipelines;
- MoU with Cyprus, which authorizes EGAS and the Cyprus Hydrocarbons Company to examine potential pipeline and onshore facilities options for transporting natural gas from the Aphrodite field to Egypt; and
- MoU with Kuwait in order to invest in petrochemical projects and phosphate fertilizers.58

Trade data suggest that most of Egypt’s imports came from countries in the European Union and Asia. In addition, some Gulf countries such as Saudi Arabia, Kuwait, and the United Arab Emirates have sent Egypt around $3 billion in petroleum supplies to help the country handle domestic refinery output and natural gas shortfalls, necessary to help fuel the country’s power plants. As for securing gas supplies, EGAS secured contracts to import LNG from different partners including Russia, Algeria and France, to meet the country’s natural gas consumption.59

Overall, Egypt’s international cooperation spectrum indicates a number of determinants shaping its international energy policy:

- Maximizing and developing oil and gas production in order to maintain the minimum amount of exports required for securing foreign currency, and to strike a balance between production, domestic consumption, and export revenue.

• Enhancing the country’s active participation, and consequently impact, in the international energy system, most importantly in the fields of gas and renewable energy. Egypt’s highly ambitious strategy for reinforcing its regional clout, mainly in energy transit, stimulates not only an eclectic expansion of activities with international organizations, but also more contribution from Egypt’s oil and gas institutions (EGAS, EGPC) in development and capacity building of energy sectors in certain regional countries, mainly Eastern Arab countries and southern African neighbours.

• In addition to the giant bilateral agreements with international oil and gas companies (such as BP and Eni), priority has been given to invigorate cooperation with the GCC and countries such as Algeria and Cyprus.

Moreover, Egypt is planning to expand its power system interconnection with African and Middle Eastern countries, most importantly towards the Gulf region. For example, a $1.6 bn project to link Saudi Arabia and Egypt via a 3000 MW electricity cable is expected to be materialized. According to Business Monitor International, the project will not only allow the two countries to meet peak demands, but will also benefit the wider Gulf region by enabling broader electricity trade between GCC members and Egypt, and most likely put an end to electricity shortages at peak times across the region. Egypt could ultimately trade electricity more widely than just with Saudi Arabia, and such trade would benefit the entire region and would justify the interconnections due to it lessening the need for GCC states to construct or maintain costly reserve generating capacity. 

The Energy Charter

Overall, and in the light of these challenges and developments that Egypt’s energy sector is witnessing, it is crucial to highlight to what extent an international organization such as the Energy Charter can contribute in helping a key regional player like Egypt materialise its energy-related objectives, particularly with regard to energy security, transit and public-private partnerships.

First, it is important to notice that the Energy Charter is an international energy governance organization founded on the basis of a series of intergovernmental agreements promoting cooperation and energy security across the territories of its member countries. The Energy Charter is comprised of certain foundation documents, decision-making organs and operational bodies including:

(1) the European Energy Charter (EEC) Declaration of 1991 (a non-binding political declaration espousing a range of principles on international energy cooperation).

(2) The Energy Charter Treaty (ECT) of 1994, which is a legally binding, multilateral treaty on investment protection in the energy sector. The 49 countries that have ratified the treaty are fully bound by its provisions.

(3) The Energy Charter Conference, the annual ministerial summit of the ECT member states, which is also the main decision making organ of the Energy Charter Process.

(4) The Energy Charter Process, which is the policy forum fostering political-technical dialogue and information sharing amongst the ECT constituency.

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(5) The Energy Charter Secretariat, the technical-administrative body of experts and support staff helping to manage and administer the Energy Charter Process.\(^61\)

Historically, the Energy Charter was established as a result of changing circumstances in international relations. The roots of the Energy Charter date back to June 1990, through the emergence of the so-called European Energy Charter (EEC) declaration, which aimed at stimulating economic growth with measures intended to liberalize investment and trade in energy products. With the collapse of the Soviet Union in 1991, the Energy Charter enjoyed diverse support in both East and West.\(^62\)

Continued extensive negotiations between countries across Europe, the former-Soviet Union and some Asian states led to the adoption of the Energy Charter Treaty in December 1994. The ECT provides a legally binding, multilateral framework for the energy trade in the territories of its member countries, aiming to build a legal foundation for energy security based upon the principles of the EEC/1991. Furthermore, the Treaty seeks to minimize the risks associated with trade and investments in the energy sector. Since the overarching majority of the provisions of the Treaty address investment protection and related issues, the ECT became the world’s first and only multilateral investment treaty which applies specifically to the energy sector.\(^63\)

Effective international cooperation in energy markets often involves efforts to establish institutions and the laying down of normative frameworks in order to set out the rules of the game by which all parties ought to abide.\(^64\) While such efforts can include instruments of the so-called Global Energy Governance dialectic,\(^65\) such as ‘talk shops’ providing for dialogue-diplomacy, they can also include sophisticated institutions with binding rules and effective enforcement mechanisms.\(^66\) The Energy Charter is a solid example of such an institution, given the existence of the ECT amongst its package of documents and physical organs.\(^67\)

Moreover, the Energy Charter witnessed some key developments since its adoption in 1994. During the 1990s, the ECT was increasingly seen as a legal instrument of practical relevance and a factor of confidence building, for its ultimate task was to extend the rule of law into the evolving Eurasian energy markets.\(^68\) By the end of the 2000s, however, much had changed in global energy architecture. Oil and gas production in Russia and other ex-Soviet energy producers had recovered significantly; gas transit security had become a major concern for Europeans; China, India, Brazil and other emerging countries had arisen as major players in global energy; and climate debate rose to greater political prominence. All of these developments impacted on the Charter Process.\(^69\)


\(^63\) Ibid.


\(^66\) Leal-Arcas, “Energy Transit Activities,” p.16.


\(^68\) Ibid.

\(^69\) Ibid.
Hence, these developments, which collectively put the relevance of the Energy Charter under question, compelled ECT member states to launch a process of modernization of the international energy organization. At the 20th meeting of the Energy Charter Conference, which took place in Rome in December 2009, ECT member states promulgated that the Energy Charter needs to be reformed or modernized, in order to shore up its relevance in the rapidly changing global energy architecture of the early 21st century.\(^\text{70}\) The process of modernization mainly entailed an effort by the Charter Secretariat to attract newcomer countries to the organization, particularly the fast growing energy powers in Asia and Africa, with a view to eventually having these countries accede to the ECT. While some critics questioned the relevance of the Energy Charter for the changing nature of energy security in Europe, it was deemed that the principles of the EEC/1991 on energy cooperation, as well as the experience of the Charter Process, would bear relevance for developing states in Asia and Africa.\(^\text{71}\)

While the Charter helped former Soviet Republics attract investment and strengthen their domestic energy legislation during the 1990s, the modernization initiative assumed that it could now play a similar role in Asia and Africa. Modernization would not entail any reform to the ECT itself, however, which remains a central part of international law in the global energy sector. Modernisation of the Energy Charter remains an ongoing process. One major feature of this modernization process comprises an expansion-based approach and attraction of newcomer countries, in parallel with adopting a new international political declaration, which is more comprehensive in nature and could better reflect the interests and priorities of all categories of countries: consumers, producers and transit countries. This is expected to culminate in a high-level ministerial summit in The Hague, the Netherlands, in May 2015, when up to 100 countries are expected to endorse the new ‘International Energy Charter’ (IEC) political declaration. The new declaration will ultimately supersede the EEC of 1991 as the world’s premier initiative promoting cooperation and interdependence in the international energy sector.\(^\text{72}\)

**Egypt and the International Energy Charter**

In the framework of the Charter’s modernization process and the efforts to attract newcomer countries to the organization, an approach towards Egypt was first initiated in 2008. By November the same year, Egypt became an observer by invitation at the Energy Charter. Nevertheless, no major progress was achieved until the modernization process unveiled the new ‘International Energy Charter’ political declaration. Egypt, proceeding from the country’s explicit interest to take part in the Charter’s modernization process, then actively engaged in the four rounds of negotiations on the IEC which took place in Brussels and were concluded in September 2014.

Throughout the IEC negotiations, Egypt was tiptoeing its way around legal or political commitments which might overburden the country, wary due to efforts to invigorate the economy and pay back financial debts, especially during this critical transitional period. Furthermore, Egypt explicitly raised some remarks with regard to the IEC draft text, which mainly involved the following:

(1) Delineate sovereignty: emphasizing states’ sovereignty over their energy resources and the transportation routes and transmission lines passing within their territories, and outlining that

\(^{70}\) Ibid.  
\(^{71}\) Ibid.  
\(^{72}\) Ibid.
any additional rights could be done through mutual bilateral agreements. This is a well-established principle in international law, and has no contradiction with the rights of investors and corporations, whether national or international.

(2) Shun linking trade in energy with the provisions of the WTO agreement and its related instruments, and assuring that energy is a strategic commodity and service, which needs special modality in governing its supply and demand. The current international trading system within the WTO, with its challenges, could be a burden through linking energy to a specific international trade agreement.

(3) Considerations of energy pricing: stressing on the importance of not only the environmental aspects, but also the social and developmental considerations in shaping energy prices.

Although the Energy Charter’s member states, with the support of the Secretariat, have tried to some extent to tone down and redraft few passages in order to meet some of the Egyptian remarks, the outcome of the final text did not display intrinsic changes suitable to fit Egypt’s demands, most importantly with regard to WTO linkages. However, even with the ongoing disagreement on the IEC text, Egypt robustly expresses its desire to actively engage with the Energy Charter’s activities, and explore the variety of services and technical support the Charter could offer. This is in line with the country’s interest to play a vital role in international and regional energy markets and to enhance its status as a key player in energy transit.

On the other hand, the Energy Charter realizes the indisputable economic and political importance of Egypt as a key country in the Middle East, as well as the remarkable potential the country possesses in international energy trade. The Charter governing bodies have a clear conviction to build a stronger partnership with Egypt compared to the present relationship, and believe that the Charter Process does provide several instruments and services that can be quite beneficial to the Egyptian government in the areas of investment promotion, transit, energy efficiency, government/industry dialogue and capacity building/technical training. The Charter, thus, believes that developing a sustainable relationship with Egypt is worth considerable efforts on the longer term. And with the economic progress and political stability the current government has managed to achieve, after three years of fuzziness and instability, strong momentum for further engagement with Egypt has developed.

Many factors contributed in stimulating better engagement with Egypt at this stage, including, the latest economic development, progress in the investment climate, and Egypt’s efforts to further attract huge foreign investments, especially in the energy sector. Egypt’s leaps to attract investment and rein in stifling bureaucracy are clearly reflected in the issuance of the new unified investment law. The law addresses concerns for foreign investors such as changes in government, giving protection to deals in legal disputes, and preserving the price of land agreed to in contracts. It also includes amendments over micro industries and mining, as well as providing many other incentives that could boost investors.

**The way ahead: Recommendations**

In the light of the above, taking into consideration the critical phase the Egyptian energy sector is now witnessing, as well as in the context of the serious, determinant and enthusiastic approach of the Energy Charter to improve its partnership with Egypt, it could be useful to outline a few recommendations for both parties to consider while engaging in fostering their partnership:
• The Charter needs to carry out regular visits and arrange a variety of events aiming at providing the Egyptian authorities—on a cross ministerial level—with detailed and insightful explanations about the Energy Charter in terms of the following: its key objectives; services provided; benefits, rights and obligations for observers and contracting parties; advisory frameworks provided (such as the IAP); its relationship with major international oil and gas companies, mainly those who are well experienced in the Egyptian market; and its role in global energy governance.

• A better understanding of the Egyptian energy market is a necessity, mainly with regard to its dynamics, determinants and key players. This is especially true at this stage, which follows a number of plausible and encouraging steps that have been recently taken by the Egyptian government to further clear the path for reaping concrete economic benefits and establishing an attractive investment climate in key sectors. Hence, having a better understanding, along with maintaining a ground-level first-hand analysis of the current Egyptian energy environment is a considerable step in shaping a solid relationship with Egypt.

• The Charter has to focus on how and to what extent it can change the image it has in some countries, mainly producers and transit countries such as Egypt, of being an organization that serves, and to some extent represents, big energy consuming countries. In this respect, more elaboration and open discussions should be conducted in order to refute this argument.

• In order for the Charter to create a sustainable partnership with Egypt, a strategic approach should be highly considered. A relationship with a country like Egypt, with all the geopolitical and economic potentials it comprises, requires a strategy transcending a micromanagement-based approach. For example, despite the importance of The Hague conference as a turning point in the history of the Energy Charter Process, the relationship with Egypt has to be shaped beyond this short-term objective, regardless of the Egyptian position towards the IEC.

• One significant short-term policy in further developing the relationship with Egypt could be the activation of certain technical assistance programs, such as Secondments and training courses for young energy experts. Such programs help bridge the chasm of the lack of information between the two parties.

• It is important if Egypt, for its part, could follow a broader approach with the Energy Charter Process. This can only take place if the Egyptian authorities are briefed with more details and information about the Charter and its foundation documents, in order to be aware of all relevant dynamics.

• Egypt should precisely demonstrate its requirements, inquiries and demands towards the overall process of the Energy Charter. This requires providing the Charter with more details about Egypt’s current status pertaining to its energy sector including achievements, challenges and risks, as well as its relevant regional and international energy policies. In addition, this purpose also entails re-emphasizing, in a detailed manner, Egypt’s concerns regarding both the IEC text and the core process of Energy Charter.

• Egyptian authorities should be aware that their current policy pursued with the Charter, particularly the keen desire to actively engage, will be unlikely to continue without plunging deeper into an initial commitment with the Charter. This is because Charter regulations dictate that countries who will not sign the IEC will be automatically phased out of the Energy Charter Process.