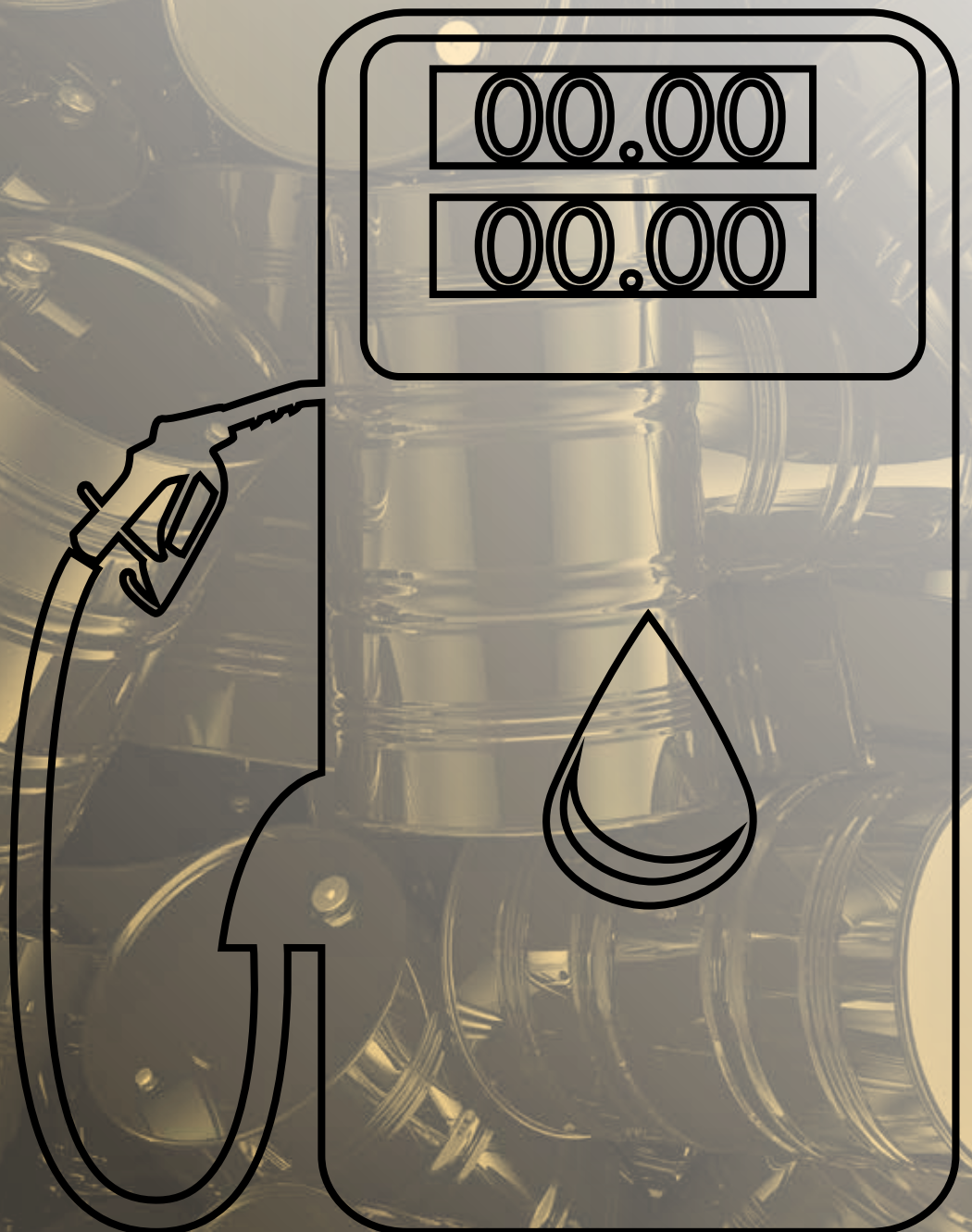


Egypt's Energy Subsidies: **A COMPLETE PROFILE**





By Tamer Mahfouz

Egypt's Energy Subsidies: A COMPLETE PROFILE

With the fuel subsidies bill rising above EGP 100 billion since fiscal year (FY) 2014/2015, the Egyptian state need to speed up its subsidies reform program, a feat that became imminent after the \$12 billion IMF loan, which required commitment to an economic reform program. Yet, even with falling global oil prices, the burden remained more than the government's finances could bear. As such, the government aims to reduce the fiscal burden to EGP 33 billion by the end of the 2017-2018 FY.

The impact of this policy change is most evident at the fuel pump. Over the past 12 months, prices have doubled. After more than a decade of relative price stability in Egypt's energy sector, this rise in prices will cause rippling effects throughout

the economy – impacting both consumers and producers.

A Hard Environment to Reform

By reducing the cost and the final price of all government-supplied commodities, products, and utilities, the energy-subsidy system benefits both individuals and corporations in Egypt. For example, in electricity production, the fuel used to generate electricity is subsidized, and then the produced electricity reaching homes and commercial buildings is also subsidized.

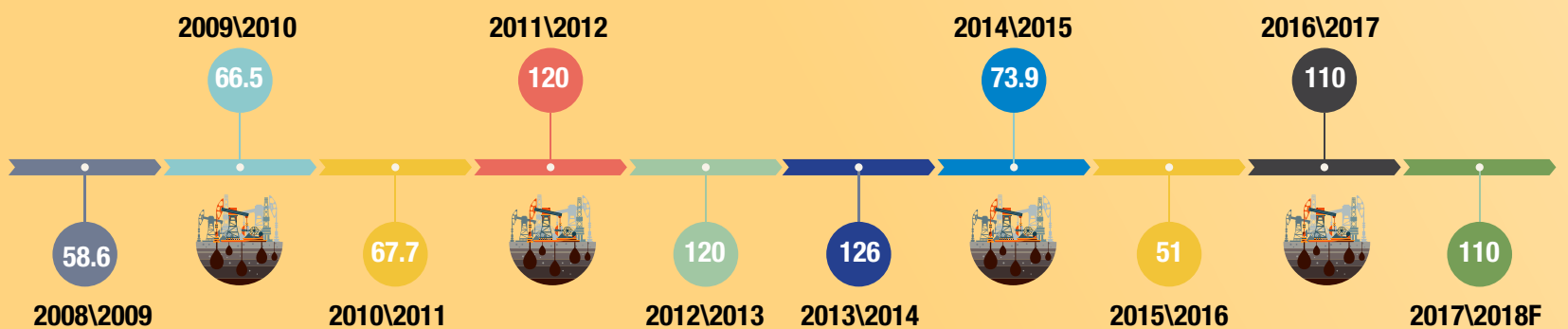
This system appears to need a reshuffle; according to a September 2014 report by Sherif Zoheir, a senior tariff specialist at the Ministry of Finance, the poorest 20% of the population, who consume the least, receive around 10% of

the subsidies value. Meanwhile, the middle 60% of the population consume 45% of the subsidy and the richest 20%, and hence citizens who consume the most, receive 45% of the subsidy.

As of 2017, Egypt is the sixth cheapest place in the world to fuel a car, according to Global Petrol Prices website, this approach may lack the incentive to limit waste and to seek cheaper more sustainable energy. As a result, petroleum and natural gas represent approximately 96% of Egypt's energy consumption.

Similarly, electricity generation relies heavily on natural gas with 83% of electricity produced from natural gas. According to government figures, the industrial sector utilizes natural gas for 61% of its needs, mazut for 27%, and diesel fuel for 12%.

Value of Subsidies 2008 – 2018



Source: Egypt Oil & Gas

Unit: Billion EGP

becoming a Net Oil Importer: From Fiscal 2005/2006 to Fiscal 2010/2011

In fiscal year 2005/2006, the government hiked electricity prices by 8.7% and then by an additional 5%. These were the first hikes since 1993, when pump prices were equal to the cost of fuel. These price increases didn't prevent Egypt from becoming a net importer of energy. By the end of the fiscal year, it had spent \$5.36 billion to keep up with local demand. Fuel subsidies cost the government EGP 41.7 billion, almost 77% of the entire subsidy budget, in fiscal year 2005/2006, according to CBE. By fiscal year 2010/2011, the fuel subsidy was almost EGP 67.7 billion (a 62.3% hike compared to 2005) while imports topped \$9.26 billion (a 72.7% hike), according to CBE's monthly statistical bulletins.

Crude oil production during this timeframe remained well below 600,000 barrels a day (b/d), reaching that benchmark only in 2009. In 2010, production averaged 568,000 b/d, according to Index Mundi, a statistics-gathering website. Meanwhile, natural gas production held steady, reaching 62.96 billion cubic meters (bcm) in 2009 and then dropping slightly to 61.33 bcm in 2010.

While production remained static, consumption increased. Demand for crude oil reached 706,000 b/d in 2010 (a 7.3% increase over 2005). This increase in demand occurred despite the global economic crisis in 2008, which caused Egypt's GDP growth to decline from 7.2% in 2008 to 4.69% in 2009. Before the crisis, consumption topped 715,000 b/d in 2007. Natural gas consumption had also increased to 46.17 bcm by 2010 after remaining almost flat at 31.8 bcm prior to 2007. This 45% increase was because the government had started to connect households to the natural gas infrastructure and factories were opting to switch to natural gas from oil in order to reduce production costs amid a poor economic outlook.

With the subsidy budget skyrocketing, the government announced in 2007 that fuel prices for electricity generation would increase by 9% annually while electricity prices to consumers would rise by 7.5% annually until 2013. The government quickly retreated from this policy and abandoned the rate increases in 2008. That year, saw a major change in how fuel was subsidized with the government resorting to tiers based on consumption levels to determine how much of the fuel price would be subsidized.

In fiscal 2008/2009, with investors certain that the subsidy will keep prices fixed and Egypt going through other positive economic reforms, foreign investment inflow directed to energy investments increased massively. It accounted for 75.8% of FDI, according to press releases published by the Ministry of Petroleum. Oil and natural gas investments reached EGP 37 billion in fiscal 2010/2011, a 156.2% increase compared to

fiscal 2004/2005.

The Dry Spell: Fiscal 2011/2012 to Fiscal 2013/2014

This era was characterized by massive political instability in the aftermaths of the January 25th 2011 and June 30th 2013 revolutions. This resulted in almost no new foreign oil investments in Egypt. It also saw the government steadfast on the notion of not increasing fuel prices in an attempt to achieve some sort of societal stability, which will reflect on Egypt's political stability. The fuel subsidy budget reached EGP 95.5 billion in fiscal 2011/2012, while imports topped \$11.77 billion. By mid-2014, fuel subsidies had reached EGP 126 million (around 32% increase over fiscal 2011/2012) while imports recorded \$13.24 billion (a 12.5% increase), according to CBE.

Production of crude oil continued to drop during this period, reaching 514,000 barrels a day by the end of 2013. This was a 6.7% drop in production compared to 2011. Natural gas production also declined. In 2011 production topped 61.2 billion cubic meters. However, with few new investments and several bombing incidents of natural gas pipes in Sinai, production dropped in 2012 to 68 billion cubic meters, and in 2013 production reached 56.07 billion cubic meters, according to data compiled by Ycharts, a data-compiling website, using Ministry of Petroleum figures.

In terms of crude oil consumption, Egypt saw its consumption reach 752,000 barrels per day by the end of 2013, this was a 6% increase over 2011. Meanwhile, despite factories running at a fraction of their capacity due to low demand, natural gas consumption was increasing. By 2013, natural gas consumption had reached 51.43 billion cubic meters. This is a 3.6% increase in consumption compared to 2011.

There were several discoveries during this period, mainly by state-owned oil firms. In 2011, state-owned Balaeem Petroleum Company announced that it discovered an oil reservoir in the Balaeem region in Sinai without giving details on how large the reservoir is. To date, no excavation activities were reported. By year's end, the company had increased its production of crude oil from existing wells by 5000 barrels a day and almost 3.4 million cubic meter of natural gas. Meanwhile, Badr el Din Petroleum, another SOE, dug 22 wells to produce an additional 14,000 barrels a day and 4.5 million cubic meters of natural gas a day. By year's end, the company's total production was 40,000 barrels of oil a day and 12.3 million cubic meters of natural gas.

By the end of 2013, there were 20 discovery and excavation deals signed between the government and foreign investors promising an investment floor of \$700 million at some point in the future. The Ministry of Petroleum also gave these foreign companies contract-signing bonuses worth

\$120.5 million to dig 107 wells, according to press releases from the Ministry of Petroleum. These were the first deals to be signed since 2010, but there was no new investment on the ground. Oil and natural gas investments reached EGP 28.738 billion in fiscal 2013/2014, a 23.2% drop compared to fiscal 2010/2011.

During this timeframe there were severe power cuts during summer, with residents in busy neighbourhoods such as Mohandseen complaining of cut outs lasting several hours, happening several times a day, especially during Ramadan which came in July. There were also noticeable shortages at the pumps, leading to long lines and, in some cases, altercations among drivers or with station employees. The height of the petrol shortage came a few days before the June 30 revolution, which overthrew of then President Mohamed Morsi.

When Everything Changed: Fiscal 2014/2015 to Fiscal 2016/2017

With renewed political stability, and the country ultimately led by Abdel Fattah el Sisi, the former chief of the armed forces and a head figure during the June 30 2013 revolution, foreign investors started to invest in arising opportunities. They came amid resilient energy subsidies, which ensured prices remained fixed, despite falling reserves. Also, starting 2015, the country was suffering from a strong foreign currency black market that led to unfavorable decisions by CBE, such a limiting repatriation of profits.

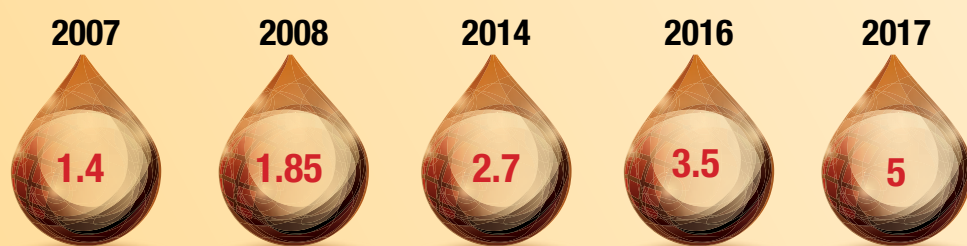
A major game changer during this timeframe was that global oil prices dropped from around \$115 a barrel to just over \$40 a barrel by mid-2014. As a result, fuel subsidies in Egypt dropped to EGP 73.9 billion in fiscal 2014/2015 (a 43.4% decline compared to just before the drop). By mid-2016 (the most recent annual statistic), subsidies reached \$51 billion as global oil prices bottomed at around \$30 a barrel. Import costs dropped as well to \$12.36 billion in fiscal 2014/2015, representing a 6.67% drop compared to previous period. By mid-2016, import costs dropped to \$9.29 billion.

This downward trend will reverse when fiscal 2016/2017 figures are reported because of the November 2016 float of the pound. The FX rate neared EGP 20 to the dollar by December compared to EGP 8.89 before the decision. It is currently hovering closer to the EGP 18 mark. Observers anticipate that fuel subsidies and import bill will likely double at the end of fiscal 2016/2017, given that Egypt is still a net importer of oil and natural gas.

During this timeframe, crude oil production in Egypt continued to decline as oil investors cut investment budgets to deal with lower global oil prices. Crude oil production eventually dropped to 491,000 barrels a day by the end of 2016. This was a 4.8% drop compared to mid-2014 (just before the crash in global oil prices). Natural gas production also declined, reaching 45.58 billion cubic meter by the end of 2015. This was a near 6.6% drop compared to 2014.

However, crude oil consumption continued to increase. In 2014, it reached 797,000 barrels, according to data compiled by The Global Economy website citing government data. Consumption ultimately reached 853,600 barrels a day by the end of 2016, as reported by Egypt Oil & Gas late June citing a report by BP. (A 7% increase.) On the other hand, natural gas consumption almost stabilized as companies

Gasoline 92 Prices



Source: Egypt Oil & Gas

Unit: EGP/Liter

had to cut production output amid harder-to-get foreign currency and slowing domestic demand. Consumption ultimately reached 47.81 billion cubic meter by the end of 2015, this was only a 0.4% drop compared to 2014.

During the second half of 2014, Egypt was focused on signing oil-import deals to plug the country's energy gap. The Minister of Petroleum (MoP) visited Saudi Arabia twice during the year to secure oil shipments. In September, a presidential decree opened the door to Cypriot oil firms to excavate for oil and natural gas reservoirs at the borderline. In December, the government signed agreements to secure six LNG shipments from Algeria totaling 750 million cubic meters of natural gas to be delivered between April 2015 and September 2015. EGAS, the MoP executive arm for natural gas activities, signed six exploration and excavation deals with Emirati Dana Gas, Irish Petroceltic and Italy's Edison as well as British and Canadian companies. By September, two new oil reservoirs were discovered in West Kanayes region and Siwa Oasis, both in the Western Desert.

During summer and Ramadan, power outages to residential units were almost eliminated. However, factories were being extremely vocal about power outages to their factories which would last a few hours, several times a day. At the time, many factories were contemplating building their own power generators and buying fuel from the open market to stay open. In an effort to increase national electricity production, the government in November 2015 announced a feed-in tariff system that allows private energy companies to supply the national grid and get paid for the electricity they provide.

In 2015, the mega investment conference; Egypt Economic Development Conference held in March; saw 17 new agreements signed to excavate oil and natural gas in the Western Desert, Gulf of Suez, the Mediterranean and Nile Delta, according to MoP. The EEDC yielded a \$12 billion agreement with BP to start new projects. Several MoUs and development agreements were signed with new-to-Egypt and existing multinational oil and gas firms such as Kuwait Energy Company, Cyprus Hydrocarbons Limited and BG.

Regarding local explorations, EGAS announced an auction for eight natural gas blocks in the

Mediterranean. Meanwhile, Ganoub el Wadi Petroleum Holding Company, an SOE, and BG both made natural gas discoveries in Upper Egypt and the Mediterranean, respectively. After the EEDC, two agreements were signed with MIDOR and UOP. Also, the discovery of the supergiant natural gas field Zohr (aka Shrouk) was made by ENI. This is the biggest reservoir in the Mediterranean, and the government is pinning hopes that it would make Egypt meet local demand by 2019, and become a net exporter by 2020.

To secure local supply, EGAS signed an agreement with Trafigura to supply Egypt with 33 shipments of LNG in 2015 and 2016. EGAS also signed an agreement with Noble Clean Fuels to supply seven LNG shipments starting June 2015. Meanwhile, Swiss-based Vitol will supply Egypt with nine shipments of LNG. Lastly, EGAS signed a 5-year agreement with Russia's Gazprom LNG Trade to supply Egypt with five shipments of LNG a year.

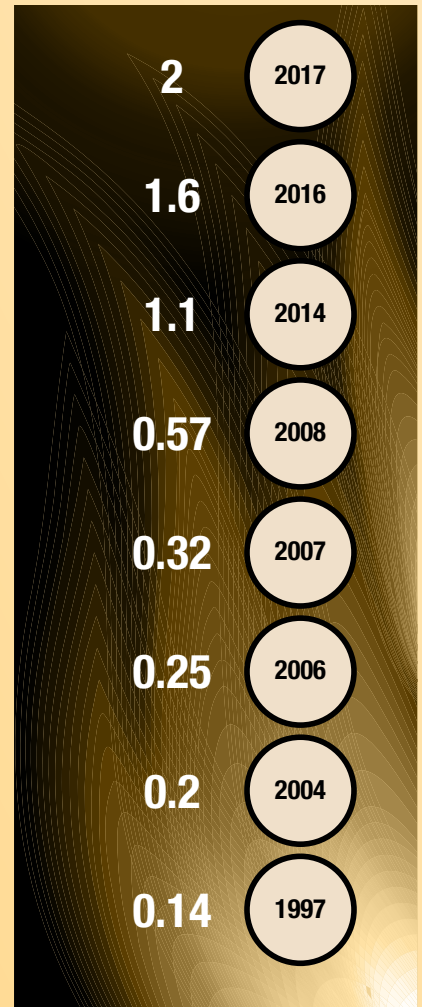
During the summer and Ramadan, no complaints were voiced from residences and factories about power outages. That year marked the start of the government strategy to increase in electricity prices for households at the start of every fiscal year. In fiscal 2015/2016, the increase was up to 27.1%.

In 2016, there were two major bids by the Egyptian General Petroleum Corporation (EGPC) and state-owned Ganoub el Wadi Petroleum Holding Company. EGPC got six proposals to excavate in the Suez Gulf and Western Desert with a minimum investment budget of \$200 million, of which \$68.2 million are already signed. The Ganoub el Wadi bid didn't see any proposals to date. Meanwhile, MoP signed 10 agreements with local and international firms to search for oil and gas in the Red Sea, Nile Delta Eastern and Western Deserts, Gulf of Suez and Upper Egypt. The combined minimum investment budget for them is \$83.8 million to dig 37 new oil and natural gas wells.

Throughout the year, there were several new discoveries in existing concessions such as North Nidoco-1 and West Nidoco-2 in West Baltim in the Nile Delta, producing a combined 870 million cubic meter of natural gas and BTE-2 in the Western Desert which will produce 12 million cubic meters

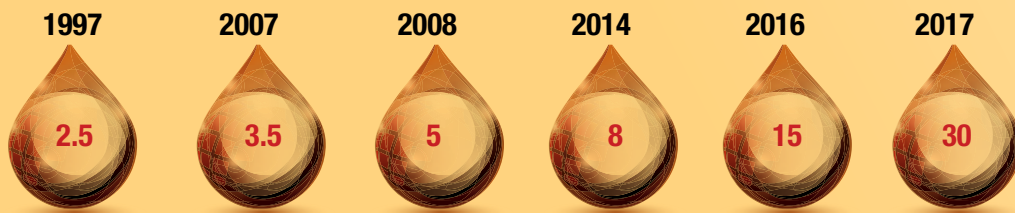
of natural gas. Oil discoveries included a new well in Gabal el Zeit, in the Suez Gulf, which will produce 3000 oil barrels a day and in Abu Senan in the Western Desert producing 3800 barrels a day. Meanwhile, the government invested close to \$31 billion in the North Alexandria and Zohr fields, according to MoP press releases. Oil and natural gas investments reached EGP 46.3 billion in fiscal

Natural Gas Prices



Unit: EGP/m3
Source: Egypt Oil & Gas

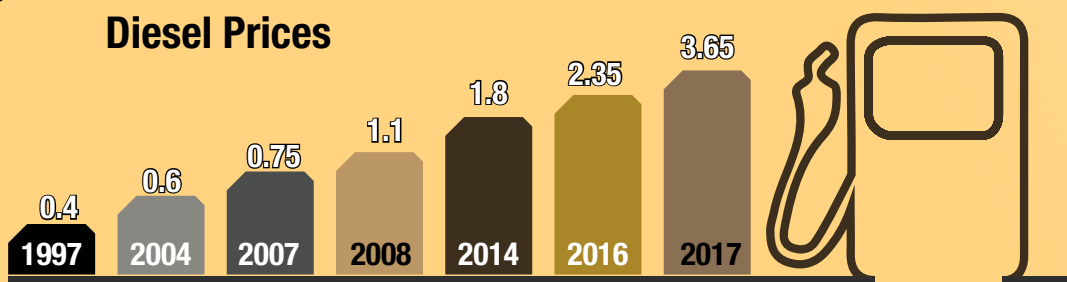
LPG Cylinders Prices



Source: Egypt Oil & Gas

Unit: EGP/cylinder

Diesel Prices



Source: Egypt Oil & Gas

Unit: EGP/Liter

2015/2016, a 61.1% increase over 2013/2014.

Also in 2016, BoP announced its five year strategic plan, which will end in 2021. The biggest news however was in November 2016 when the pound was floated, dropping instantly to EGP 13.4 to the dollar from an artificially propped LE8.89 FX rate. Fuel prices at the pumps went from EGP 2.6 a liter to EGP 3.5 for Octane 92 and from EGP 1.6 to EGP 2.35 a litre for Octane 80, the two most widely used fuel categories. These were the first of many reforms that have to be implemented after Egypt got the IMF approval earlier in 2016 for an extended fund facility amounting to \$12 billion. Continuing its electricity price hike strategy, the government increased prices by up to 41% for fiscal 2016/2017.

Throughout the first six months of 2017, existing oil and gas companies were announcing expansions and new discoveries. Khalda Petroleum Company, a private oil firm, started production on the eight wells it had discovered since July 2016, increasing its output by 3 million barrels a day. Their plan for fiscal 2017/2018, as announced in an MoP press release, is to dig 53 wells with a minimum investment budget of

around \$800 million. Meanwhile, EGAS signed four agreements in January with a minimum investment budget of \$306 million.

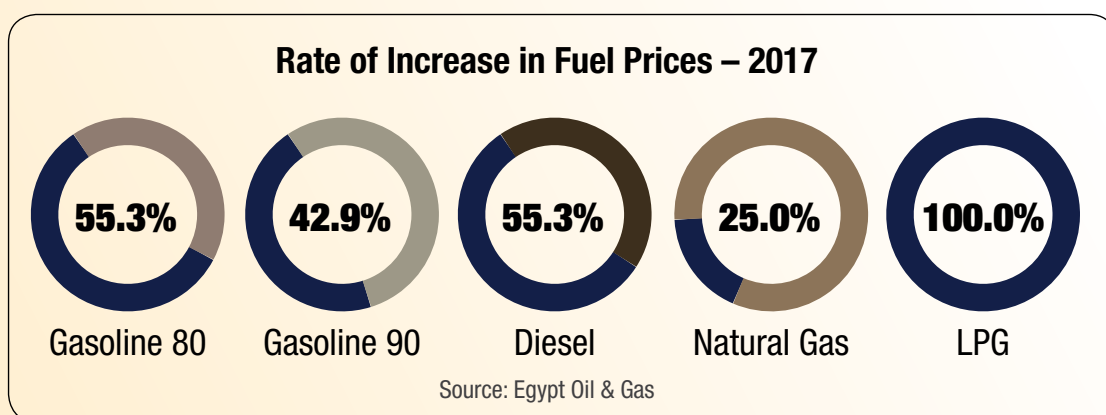
Future Plans

In efforts to reduce the forecasted increase in fuel subsidies and fuel import bills, prices were increased at the start of fiscal 2017/2018, between 5% to 42%. After the hike, the government announced that the top tier Octane 95 petrol was now selling at cost.

Moving forward, the main aim of the government is to reduce consumption growth rates, which are currently between 7% and 9%. "This is too high," said Tarek el Molla, the Minister of Petroleum, when announcing the 2017/2018 fuel price hikes. "We need to drop growth in consumption to between 5% and 6%. We will do this by reducing subsidies on fuel." The aim for fiscal year 2017/2018 is to drop fuel imports to \$8 billion, a 13.3% drop from fiscal 2015/2016.

On the other hand, the government has been working on eliminating smuggling throughout the supply chain when it introduced fuel smart cards in 2014. They are currently used between the main national depot and petrol stations. The second phase, from stations to individual cars, should be up and running some time this fiscal year, thereby keeping the entire supply network under tight monitoring.

Some news reports anticipate that energy subsidies would be removed by 2022, or at least become highly targeted to Egypt's poorest.



Growth rate of Petroleum Products 2004 - 2017

Year	Gasoline 80	Gasoline 90	Diesel	Natural Gas	LPG
7/1/17	55%	43%	55%	25%	100%
11/1/16	47%	30%	31%	46%	88%
7/1/14	78%	46%	64%	93%	60%
1/1/08	0%	32%	47%	78%	43%
1/1/07	0%	0%	0%	28%	0%
1/1/06	0%	0%	25%	35%	0%
1/4/04	0%	0%	40%	36%	40%

Source: Egypt Oil & Gas

"Overall, our industry vision is [...] to establish Egypt as a more deregulated market, working with dynamic supply and demand forces, to become a net exporter of gas with a more diverse energy mix," said Molla to Energy Egypt Magazine in March.

