

Invest In Egypt

Petrochemicals

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Petrochemicals

Sector History

Petrochemical industries started in Egypt during the early 1950's in Suez where ammonia was produced from surplus fuel gas from refineries. In the early 1960's, ammonia production continued in parallel with the development of a coking plant based on onshore Belayim crude oil to produce dodecyl benzene, the primary material for detergent production.

In the early 1980's, production in two petrochemical complexes: Aromatic Complex in Suez and Olefins Complex in Amerya near Alexandria started.

This was followed by the construction of two plants for producing 300,000 tones per annum (tpa) of ethylene and 200,000 tpa of polyethylene (HDPE,LLDPE).

Local production gradually substituted for imports used as intermediate materials in the production of final products, for example ethylene, which was imported until 2000 for the production of PVC, was then produced at Sidi Kerir petrochemical Co. ; also the local production of Linear Alkyl Benzene used in detergents products, began in 1980 with a capacity of 40.000 tpa.

Sector Overview

The petrochemicals sector represents approximately 12% of Egypt's total industrial production and is worth around USD 7 billion. While this figure is equivalent to just 3% of Egypt's total GDP, international industry experts and national industrial strategists alike believe that the country is set to become one of the region's leading players, especially with the implementation of the National Plan for Petrochemicals (2002-2022).

In the Middle Eastern Petrochemicals Business Environment Rankings matrix 2010, Egypt is ranked eighth with 48.7 points - up 1.5 points since the previous quarter due to planned increases in petrochemical production capacities. The country is 3.1 points behind Kuwait and 2.1 points ahead of Turkey. It ranks above Algeria because of higher production and a significantly better national (as opposed to sector specific) business environment.

In 2009, Egypt had an ethylene production capacity of 300,000 tpa with PP and PE capacities at 225,000 tpa and 220,000 tpa respectively. Industry experts expect ethylene capacity to rise from 300,000 tpa to 600,000 tpa, and PE capacity to rise from 225,000 tpa in 2009 to 600,000 tpa in 2010.

As for the fertilizers industry, the country had ammonia and urea capacities of 7.52 million tpa and 4.32 million tpa respectively. The nitrogen-based fertilizer sector is also expected to expand, with EBIC and Agrium adding around 2.2 million tpa of ammonia production capacity by 2010.

A wide variety of plastics, fertilizers and acrylics are already being produced in the country. Egypt's exports of organic and inorganic chemicals, carbon and fertilizers reached USD 1.52 billion in 2009 as opposed to USD 971.89 million in 2007, according to the Egyptian Chemical and Fertilizers Export Council. The government hopes to further boost petrochemicals exports to reach a total of USD 1.7 billion annually.

The sector is expected to bring in more than USD 7 billion in annual revenue and create around 100,000 new jobs by the year 2020, according to the Egyptian Petrochemicals Holding company (Echem). Egypt plans to raise domestic capacities to 600,000 tons per annum (tpa) of ethylene and 1.18 million tpa of polymers, by the end of 2010

Competitive Strengths and Capabilities

Core Areas for Investment: Natural gas, petroleum, plastics, acrylics and fertilizers

Abundant Reserves In 2008/2009, natural gas reserves reached 77.2 trillion cubic feet (TCF), with production rated at 45.8 billion cubic meters.

Massive Local Demand. 31.4 million metric tons of petroleum and petrochemical products are consumed by the local market in 2008/2009.

Significant Regional Demand. Gulf Cooperation Council (GCC) countries are also consuming increasingly large amounts of plastics. GCC demand is projected to reach 3.2 million tons annually by 2012, up from 2.3 million tons at present, according to a study by the Gulf Organization for Industrial Consultancy. Egypt is ideally suited to become a major supplier of plastics to the GCC.

Increase in Global Demand. Demand for urea fertilizer is expected to rise globally due to population increases. Manufacturing and exporting fertilizer from Egypt allows producers to benefit from discounted feedstock prices.

Competitive Production Costs. As natural gas prices continue to rise, the production of petrochemicals is migrating towards countries with lower natural gas costs, such as Egypt.

Exports

Egypt supplies petrochemical products to about 50 countries worldwide, with Europe consuming the majority of Egyptian exports.

France and UK are the largest importers of the Egyptian fertilizers with about 50% of total fertilizers while 30% of total plastic exports were directed to both Germany and Belgium.

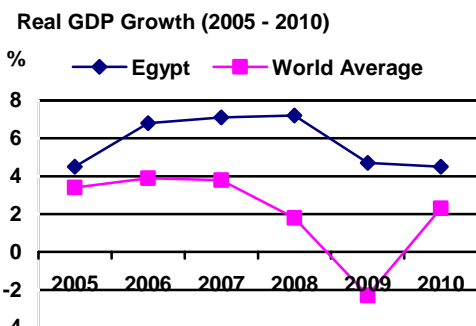
According to the Egyptian Chemical and Fertilizers Export Council, Egypt's exports of organic and inorganic chemicals, carbon and fertilizers exceeded USD 3 billion in 2009.

Petrochemicals and Natural Gas Hold a Special Place in Egypt's Economy

The petrochemical sector is one of the most dynamic in the Egyptian economy.

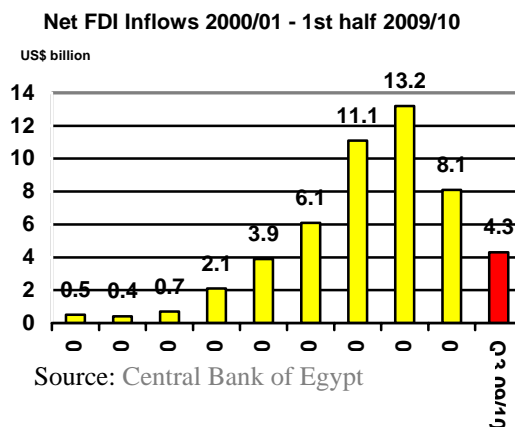
- Egypt is one of the largest markets for lubricants in Africa and is the continent's second-largest refining center.
- Egypt supplies petrochemical products to about 50 countries worldwide, with Europe being the largest market for Egyptian exports.
- Egypt ranks eighth in natural gas exports worldwide, which has helped boost the petrochemicals industry.
- The natural gas liquefaction plant in Damietta Free Zone is considered the largest in the world, handling 7.5 billion m³ of natural gas annually, enough to produce 4.8 million tons of liquefied natural gas.
- Egypt ranks among the top 10 countries using natural gas as car fuel worldwide, with more than 110,000 NG vehicles conversion and 50 fueling stations and 16 fully equipped conversion centers, Egypt was also the first nation in Africa and the Middle East to open a public CNG conversion center and fueling station.

- Natural gas production topped 45.8 m³ in 2008/09, while natural gas reserves rose to 77.2 TCF the same year.
- As of February 2010, the petrochemical industry consisted of 71 companies operating inland and 15 companies operating in free zones areas.



Calculated averages

Source: International Monetary Fund (2009) World Economic Outlook Database



Source: Central Bank of Egypt

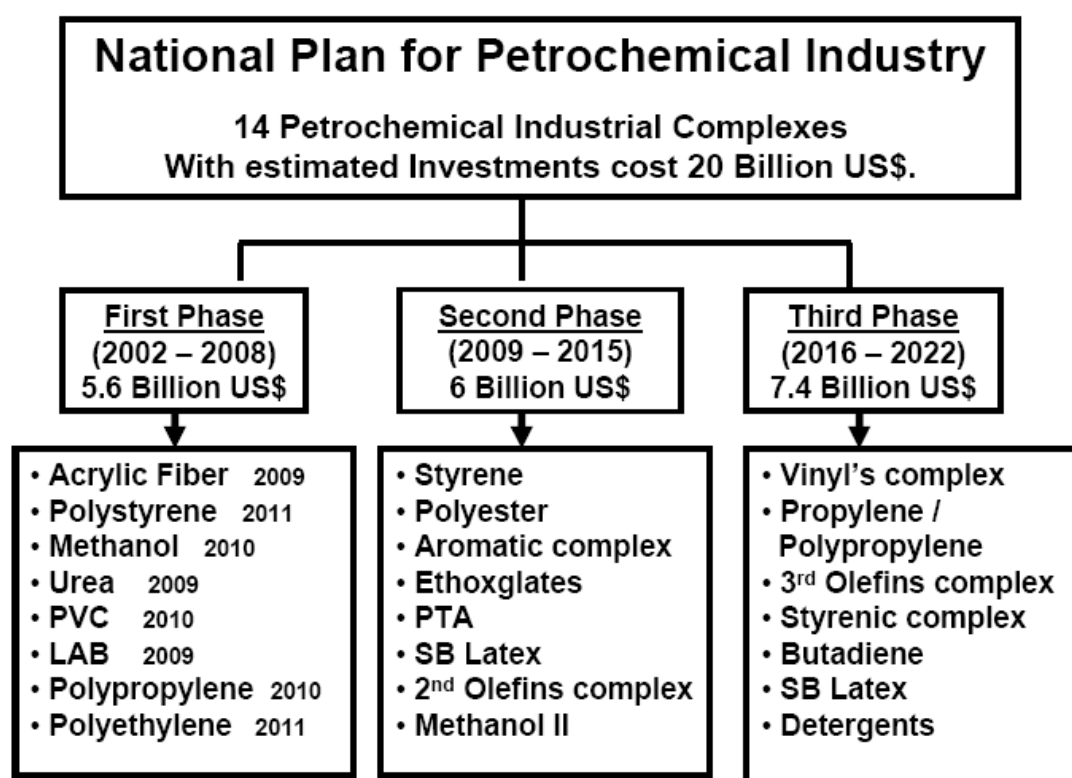
| Sector Drivers | Egypt's Value Proposition | Investor Benefits |
|-------------------------------|--|---|
| Natural Resources | In addition to abundant natural gas reserves, Egypt has reserves of many raw materials needed for the manufacture of any number of petrochemical products. | Locally available raw materials reduce the costs of manufacturing. |
| Feeder and Support Industries | Egypt has numerous feeder industries to support the petrochemicals sector. | Presence of locally based feeder and support industries facilitates doing business and reduces outsourcing costs. |
| Proximity to Customers | Egypt is close to major petrochemical consumers in Europe, Africa and the Middle East. | Strong regional markets and proximity to major export markets decreases the time it takes to get products to customers. |
| Infrastructure | Egypt has 15 commercial and 51 specialized ports, including 15 for petroleum. Egypt also has international ports, airports and highways, as well as an in-country rail system. Egypt also boasts world-class telecom and internet infrastructure. All major urban centers have cutting-edge telecommunications technology. | Flexible export options, ease of transport, excellent infrastructure to support communications and research. |
| Built-in Market | With a population of 78 million, Egypt's domestic consumption of petrochemical products is expected to increase in the coming years. In addition, Egypt supplies petrochemical products to about 50 countries worldwide. | Large built-in market provides a steady consumer base. |

Strong Policy Support for Petrochemicals Industry

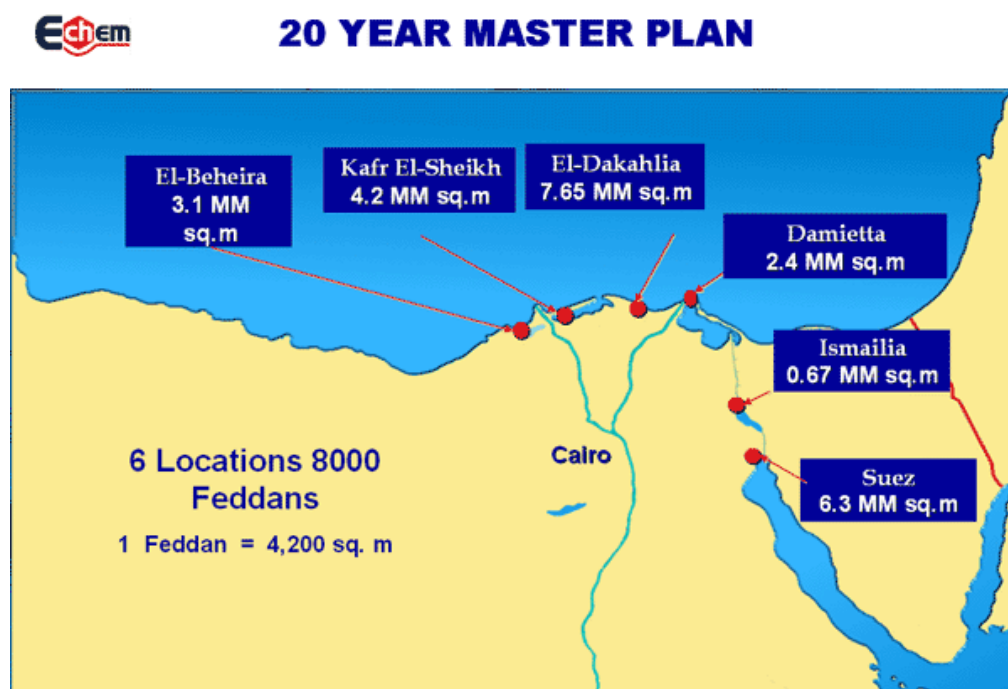
The Egyptian government continues to work with the private sector to expand business opportunities in the petrochemical sector through public private partnerships (PPP).

The Egyptian Ministry of Petroleum has established the Egyptian Petrochemicals Holding Company (Echem) to accelerate the implementation of new petrochemicals projects, it welcomes foreign investments in the sector.

The government has set in motion a three-phase, 20-year master plan (2002-2022) to guide investment decisions in the petrochemical industry, with an investment budget of USD 20 billion. Phase two (2009- 2015) is underway through a set of projects with a total investment cost of USD 6 billion. The master plan calls for displacing imports by providing investors with financial and technical assistance to support domestic project construction and operation.



As a bonus facility offered to investors, 33 million square meters of land in 7 governorates are reserved for petrochemical projects. The proposed locations for petrochemical industries are: Alexandria, north Gulf of Suez, Damietta/ Post Said, Zaafarana and Rosetta.



Phase II Projects

| Product | Company | Capacity | Status | Due On Stream |
|---------------------------|---|-----------------------------|---|---------------|
| Polystyrene | E-Chem Ministry of Finance National Investment Bank Tecnicas Reunidas | 200,000 tpa | Under Construction | 2011 |
| PVC | E-Chem Private sector | 120,000 tpa | Under Construction | 2010 |
| Methanol | E-Chem Methanex (60%) | 1.3 million tpa | Under Construction | 2010 |
| Propylene, PP | Egyptian Co. for Propylene & Polypropylene (E-Chem & OPC) | 350,000 tpa of each | Under Construction | 2010 |
| Ethylene, Polyethylene | E-Chem | 1 million tpa of each | Delayed, joint venture agreement expected "soon" | 2014 |

Source: Ministry of Petroleum & Mineral Resources , Egypt & Business Monitor International Ltd.

Success Stories

Oriental Petrochemicals Company (OPC)

OPC is a joint-stock company established in Egypt in 1996, specializing in the production of polypropylene. It started production in 2001, at a working capacity of 160,000 MT/year. It is located in the industrial zone of the North West Gulf of Suez. OPC is a successful example of multinational private-sector Company.

OPC is the sole producer of polypropylene in Egypt, it is covering almost 85% of the local market demand of Homopolymer polypropylene, and is looking forward to cover 100% of the expected demand during the coming few years by the new polypropylene plant located at the North gate of Suez Canal.

OPC currently exports to over 20 countries in three different continents. Its export markets are mainly focused in Europe (Belgium, Spain, Italy, Germany, Switzerland, Portugal, France and Greece), Africa and the Middle East (Morocco, Algeria, Tunisia, Libya, Ghana, Nigeria, Sudan, Jordan, Syria, Lebanon, and Dubai) and finally Asia (India, Pakistan and China).

Egyptian Petrochemicals Company (EPC)

EPC was established in 1981 as a public sector company entirely owned by the Egyptian general petroleum corporation (EGPC) and its affiliates. Its issued capital was LE 75 million and had increased to LE 105 million in 1984 to now reach LE 578 million. The EPC complex is located in Amryia - adjacent to Alexandria-Cairo desert road.

Sidi Kerir Petrochemicals

Established in 1997, Sidi Kerir Petrochemicals (SIDPEC) is the nation's only producer of ethylene and polyethylene (PE), a versatile plastic used in injection, blow molding and films.

In 2007, SIDPEC exported 109,000 tons of PE to 63 countries, along with 41,000 tons of polyvinyl chloride. The company has been diversifying its products, with ongoing projects to manufacture PE pipes for high-pressure transmission of water and natural gas as well as butadiene, a key component for making synthetic rubber. At the end of 2007, net profits stood at USD 220 million, compared to USD 189 million for 2006.

Egyptian Linear Alkyl Benzene (ELAB)

Established in 2003, as a joint stock company under Egyptian Investment Laws to execute and operate linear alkyl benzene project (LAB), the most common raw material in the manufacture of biodegradable detergent with annual capacity of 100,000 MT/year. LAB project is a grass-root world-class facility located in the Amerya area, Alexandria.

Methanex

Methanex is a truly global enterprise with an international management team that has guided its growth since Methanex was incorporated in 1992.

Methanex Egypt is in the process of constructing a 1.3 million ton per year methanol production facility at Damietta on Egypt. It owns 60% of the joint venture, with 33% held by Egyptian Government partners and 7% held by APICORP (Arab Petroleum Investments

Corporation). Commercial production from the project was expected to begin in early 2010. Methanex will off take 100% of the methanol to supply its customers and the Egyptian market demand through a distribution agreement signed between Methanex and Echem.

Methanex also believes there are interesting opportunities for growth of methanol derivatives to meet the Egyptian market demand. The company has recently executed a memorandum of understanding for the development of a dimethyl ether (DME) facility in Egypt, which will be located adjacent to the joint venture methanol plant. The new DME plant will have a production capacity of 200,000 tons of DME per year and will consume approximately 300,000 tons of methanol per year.

Alexandria National Refining and Petrochemicals Company

Founded in 1999, the Alexandria National Refining and Petrochemicals Company (ANRPC) has a total investment of 618 million, to execute and operate refining units to produce various high quality petroleum and petrochemical products.

ANRPC is in the phase of implementing a new Naptha hydro-treating unit with a design capacity of 824000 ton/year. It is introducing 400000 ton/year as a first stage into the unit to produce 116000 ton/year of Light Naptha , 271000 ton of heavy Naptha a year and 5500 ton of LPG yearly.

Alexandria Mineral Oils Company

Operating since 2002, the Alexandria Mineral Oils Company (AMOC) conducts refining activities and produces a number of petroleum-based products such as gas and blended fuel, base oils, transformer oils, automatic transmission fluids and waxes. AMOC has two factory complexes near Alexandria. The Lube and Special Oils complex produces natural oils, paraffin wax and soft waxes. Gas oil, liquid petroleum gas and biological sulfur are produced at the Maximization of Gas Oil complex. Local AMOC clients include Exxon-Mobil, Total, Shell and COOP, while exports head primarily toward Europe and North Africa.



Oriental Weavers

As a leading industrial conglomerate in Egypt, the Orientals Group incorporates several subsidiary companies throughout its production processes related to the manufacture of carpets and rugs at its four integrated factories in Tenth of Ramadan City. Among its assets is a polypropylene plant in Suez that supplies artificial fibers to carpet factories and also exports chemical products. The company has increased its production of bulked continuous filament (BCF) yarn fourfold in the past six years. Oriental Weavers exports to 82 countries, with two subsidiaries focusing on US and UK markets.

Egyptian Fertilizers Company

Founded in 1998, the Egyptian Fertilizers Company (EFC) has an annual production capacity of 650,000 tons of urea fertilizer from two production lines located near the Ain Sokhna Port. EFC is the largest private-sector producer of nitrogen fertilizers in Egypt and is the largest Egyptian exporter of fertilizers.

Originally established as a public-private enterprise — 54% owned by Egyptian and Arab private-sector bodies while the remaining 46% controlled by public-sector organizations — EFC was sold in 2005 to a consortium of private investors led by the private equity firm Citadel Capital for USD 739 million. Three years later, EFC was sold by Citadel Capital to private equity firm Abraaj Capital of Emirates for USD 1.41 billion in, what was then, the largest M&A in Egypt's history and the largest private equity deal in the Middle East. In February 2008, the company was purchased by Orascom Construction Industries (OCI) for USD 1.59 billion.

EFC's production has doubled since 2000, with nearly 100% of its output exported. Revenues from exports rose to USD 59 million in 2007 as compared to USD 30 million in 2006. Total revenue in 2007 was approximately USD 72 million up from USD 55 million in 2006 and continues to expand.

Orascom Construction Industries

Orascom Construction Industries (OCI) launched its fertilizer group more than five years ago to capitalize on the competitive prices of gas supplied in the region. Today, the group has investments in four different fertilizer companies in Algeria, Nigeria and Egypt. The group has investments in one operational fertilizer plant, one currently being rehabilitated and two Greenfield plants under construction. OCI's fertilizer group is expected to rank among the top 10 nitrogen-based fertilizer producers worldwide, in terms of production capacity, in 2010.

While still involved in construction and building materials, OCI has stepped up its attention to the fertilizers industry. In the first quarter of 2008, OCI divested its cement group and fully acquired the very profitable Egyptian Fertilizers Company. At the same time, it obtained a 20% stake in the Nigeria-based Notore Chemical Industries.

Alexandria Carbon Black

Located in Amreya near Alexandria in Egypt, Alexandria Carbon Black is an Indo-Egyptian joint venture of the Aditya Birla Group of India. Established in 1994, the company went on stream with technological participation from Continental Carbon Company, USA, a world leader in carbon black. The state-of-the-art plant grew in capacity from 20,000 tpa at inception to the present capacity of 200,000 tpa — a tenfold increase in 10 years, making Alexandria the fastest-growing carbon black company in the world.

Leading Petrochemical Firms Operating in Egypt

Abu Kir Fertilizer and Chemical Industries

www.abuqir.com

Abu Zaabal Fertilizers Company

www.abu-zaabal.com

Alexandria Carbon Black Company (ACBC)

www.birlacarbon.com

Egyptian Financial and Industrial Company (EFIC)

www.sfie.com.eg

Egyptian General Petroleum Company (EGPC)

www.egpc.com.eg

Egyptian Petrochemicals Holding Company (Echem)

www.echem-eg.com

National Plastics Company

(202) 2 591-9494

Orascom Construction Industries (OCI)

www.orascomci.com

Oriental Petrochemicals Company (OPC)

www.opcegypt.com

Sidi Kerir Petrochemicals Company (SIDPEC)

www.sidpec.com

Egyptian Petrochemicals Company EPC

www.egy-petrochem.com/index.html

Egyptian Linear Alkyl Benzene

www.egylab.com

Methanex Egypt

http://www.methanex.com/ourcompany/locations_egypt.html

Oriental Weavers

www.orientalweavers.com

Alexandria National Refining and Petrochemicals Company(ANRPC)

<http://anrpc.com/company.htm>

Alexandria Mineral oils co.

<http://amocalex.mkhoster.com>