

## How to: Finance a Petroleum Refinery

### ► The Opportunity

#### A mismatch between decades of under-investment and fast-rising national demand for refined product

Decades of under-investment in refining capacity has seen Egypt become a net importer of refined products. Of nine refineries in five primary locations across the nation, only three have been built since 1973, with the nation's second-largest facility dating back to 1913.

The Cairo Oil Refinery Company (CORC) is the nation's largest refinery and is located at the hub of Egypt's pipeline network. In operation since 1969, it has a refining capacity of 160,000 barrels of oil per day and is ideally situated to serve the needs of the Greater Cairo Area and Upper Egypt, which between them account for 65% of national fuel-oil consumption and around 44% of diesel demand.

Owing to its reliance on decades-old technology, CORC accounts for only 20% of the nation's total refining capacity and delivers 67% of its production as fuel oil.

With fast-rising demand for diesel and gasoline (petrol) outstripping supply, while the Government of Egypt is simultaneously gradually decreasing its sizeable fuel subsidy, Qalaa Holdings and its partners saw substantial room for a refining project that would ease reliance on imports and produce cleaner-burning fuels as one of the cornerstones of Egypt's energy security policy.

### ► The Solution

#### Egyptian Refining Company

In late 2006 Qalaa Holdings began planning the Egyptian Refining Company (ERC) and quickly earned the backing of the Egyptian General Petroleum Corporation (EGPC), the state-owned entity that effectively administers the industry under the supervision of the Ministry of Petroleum.

The idea was simple: CORC would provide feedstock (straight run atmospheric residue) to ERC, which ERC would then refine into higher value products. All refined products would be sold to EGPC at international prices in US dollars, helping close the import gap. And with a business model that emphasized the production of Euro V diesel (a very low-sulfur product that is effectively the cleanest-burning diesel fuel in the world), the project would not only curb Egypt's reliance on petroleum imports, but would substantially reduce the nation's sulfur dioxide emissions.

### ► The Challenges

#### Translate broad-based public and private sector support into practical financial support

Since the early days of planning in 2006, the idea of a modern, greenfield petroleum refining upgrade and import-substitution project in Egypt has received enthusiastic support from both government and private sector players

globally. Despite this support, achieving financial close proved to be a serious challenge and the project spent more than five years in development.

Throughout the project cycle, Qalaa Holdings had to overcome several obstacles successively. The global financial crisis put significant pressure on banks to retrench their operations, prompting Qalaa to seek funding from export credit agencies from Japan, Korea, and Europe.

The fact that Qalaa Holdings and ERC successfully kept the lender group and all other stakeholders engaged during this period is a testament to the economic strength of the project, its importance in addressing Egypt's increasing demand for refined products, and the stakeholders' long-term commitment to support Egypt's economic and political development.

### ► The Financing

#### Create an investment opportunity attractive to sophisticated global investors, allowing the company to transform a US\$ 4.3 billion project into a reality

From the outset, Qalaa Holdings knew it would need to call not just on its own financial resources, but on a deep network of international investors, banks and guarantors to transform a US\$ 4.3 billion project into a reality. This landmark investment attracted the support of top Egyptian, Gulf and international investors, global export credit agencies and development finance institutions.

The US\$ 1.1 billion equity component of the transaction, which reached final close on 14 June 2012, proved to be the biggest equity raising in Egypt since 2007 and the largest in the MENA region in 2012. Equity was provided by a broad spectrum of investors including EGPC, Qalaa Holdings, Qatar Petroleum International (QPI), investors from Egypt and the Gulf Cooperation Council countries, the International Finance Corporation, the Dutch development bank FMO, Germany's DEG, and the InfraMed Fund. Contributions were also made by Middle Eastern and African joint-investment funds. By 2018, ERC's equity package stood at US\$ 1.4 billion.

Compelling fundamentals, unwavering support from the government and the dedication of debt partners were key to the successful closing of the equity component of the deal (originally expected to be finalized in early 2011).

The US\$ 2.6 billion debt package was announced in August 2010. The package includes US\$ 2.35 billion of senior debt and US\$ 225 million of subordinated debt. Institutions participating in the senior debt package include the Japan Bank for International Cooperation (JBIC), Nippon Export and Investment Insurance (NEXI), the Export-Import Bank of Korea (KEXIM), the European Investment Bank (EIB) and the African Development Bank (AfDB). Mitsui & Co. (which is part of the contractor consortium building the refinery) and the African Development Bank are providing the subordinated debt financing. In 2018, an additional US\$ 300 million in senior debt was added, bringing the total package to US\$ 2.9 billion.

### ► Economic Benefits to Egypt

#### Reduced diesel imports help reduce Egypt's annual subsidy bill, and provide US\$ 300 million in additional direct benefits to the state annually while boosting employment

- Fully-funded US\$ 4.3 billion refinery is Egypt's largest in progress, private sector-led mega project.
- Import substitution project which will produce c. 4.7 million tons of refined products and high-quality oil derivatives, representing more than 30-40% of Egypt's current imports.

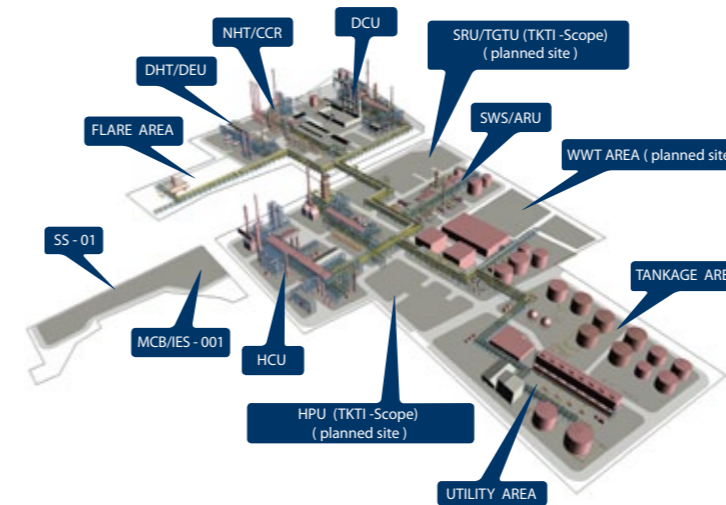
- An estimated US\$ 300 million in annual savings and revenues to state coffers.
- The project created over 700 permanent jobs and 16.5 thousand jobs during peak construction.

### ► Environmental Benefits to Egypt

#### Improved air quality, production to global standards

- ERC will use cutting-edge technology to abide by the environmental standards stipulated by international financial institutions.
- ERC will prevent the release of 96,000 tons of sulfur annually, or c.29% of Egypt's present-day total.
- ERC will open the first Egyptian refinery to produce European (EURO V) grade diesel and IATA worldwide specification jet fuel.
- ERC will produce reformat and naphtha, which EGPC will blend with existing stocks, increasing overall quality of products in Egypt.
- ERC will minimize the overall environmental footprint of the site through environmental investments in the Petroleum Pipeline Company (PPC) and CORC.

### ► ERC Refinery Overall Site Plan



### ► Social Impact and Community Benefits

Based on a comprehensive environmental and social impact assessment study (ESIA), ERC has focused its community development program on four pillars:

#### 1. Educational Support Program - "Mostakbaly"

- ERC's "Mostakbaly" program sponsors scholarships and educational grants for students and teachers. "Mostakbaly" has sponsored 60 scholarships for teachers attending the Graduate School of Education at the American University in Cairo. Two students pursuing master's degrees at institutions in the United Kingdom have also been sponsored by the program. ERC has also sponsored undergraduate education at top Egyptian universities for 51 honors students graduating from local secondary schools.

#### 2. Economic Opportunity and Income Raising Program - "Tamkeen" and "Mashrouy"

- Sponsored 215 small projects for youths and women, in addition to launching four employment centers that link 30,000 local youths to the job market.

#### 3. Youth Volunteering and Capacity Building Program - "Reyada"

- Through Reyada, over 100 volunteering youth to date have received training in volunteering social work and management and youth initiatives with 30 youth already managing volunteer teams and recruiting new volunteers.

#### 4. Special Needs Support Program - "Takaful"

- In partnership with government institutions, local community development associations and social rehabilitation centers, ERC has sponsored to date three childcare centers serving more than 2,000 children and has supported more than 390 children with hearing aids and other medical devices to further the process of their social integration.



### ► The Progress

#### ERC is more than 98% complete

ERC is fully on track to begin operations in the first half of 2019 and has now neared the completion mark. ERC's Korean-made, 1,280 ton hydrocracker unit (HCU) is the largest piece of equipment that has ever entered an Egyptian port, and is now ready for operations. The HCU is a critical component whose role is to increase the yield of light petroleum products that ERC will produce. The HCU upgrades low-quality heavy gas oils from the vacuum distillation tower and the coking units into high-quality, clean-burning jet fuel, diesel and gasoline. Trial runs are under way for the plant air system, the instrument air system, the demineralized water system, the cooling water system, and fire fighting system.

ERC has employed 16,500 people at the site, 30% of whom were drawn from the local community. ERC has transferred industry knowledge to thousands of local workers who have received extensive on the job training from some of the world's leading experts in the field. Local staff worked alongside dozens of nationalities on site including Egyptians, Americans, South Koreans, and Australians with years of expertise in the refining and construction sectors.



## Key Facts About ERC

Headquartered in	Cairo, Egypt
Total Production of Refined Products and high-quality oil derivatives (annually)	4.7 million tons
Production of Euro-V Standard Diesel (annually)	2.3 million tons
Jobs Created	16.5 thousand at peak of construction, 700 permanent positions
Expected Date of Operations	2019
Total Reduction in Egypt's SO <sub>2</sub> Emissions*	29.1%
Total Reduction in Egypt's Diesel Imports*	30-40%
Value of Debt Package for ERC	US\$ 2.9 billion
Total Equity Invested in ERC	c. US\$ 1.4 billion
Qalaa Holdings' Effective Ownership	16.9%

\* Percent reduction from present-day levels



Egyptian Refining Company is a subsidiary of Qalaa Holdings

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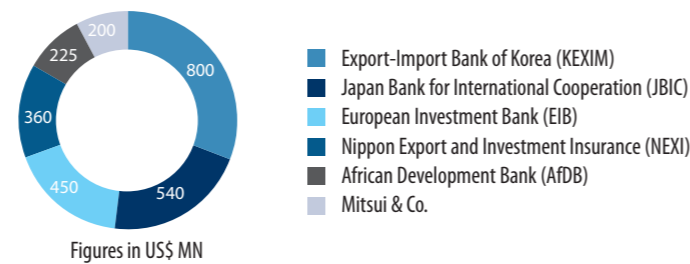
## The Backers

Partnerships with key development finance institutions and sophisticated international investors allowed Qalaa Holdings to raise c. US\$ 1.4 billion in equity and US\$ 2.9 billion in debt for the Egyptian Refining Company. These backers include:

### c. US\$ 1.4 billion equity package with participation of:



### c. US\$ 2.9 billion debt package, with participation of:



## Investing in Sustainability



## About Egyptian Refining Co.

Egyptian Refining Company is a Qalaa Holdings' state-of-the-art US\$ 4.3 billion greenfield oil refinery in the Greater Cairo Area, which will produce more than 4.7 million tons of refined products per annum, including 860,000 tons of gasoline components, 2.3 million tons of Euro V diesel and 600,000 tons of jet fuel. ERC is the largest in-progress private sector mega project that will contribute to Egypt's national growth in a manner that not only adds value to existing resources, but also brings in billions in foreign direct investment to develop an environmentally and socially responsible project. The project is on track to begin production in 2019.



## About Qalaa Holdings

Qalaa Holdings (CCAP.CA on the Egyptian Stock Exchange) is an African leader in energy and infrastructure. Qalaa Holdings controls subsidiaries in industries including energy, cement, agri-foods, transportation and logistics, and mining. For more information please visit [www.qalaa.holdings.com](http://www.qalaa.holdings.com).



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