



Bechtel in Egypt



Bechtel

Bechtel is a trusted engineering, construction and project management partner to industry and government. Differentiated by the quality of our people and our relentless drive to deliver the most successful outcomes, we align our capabilities to our customers' objectives to create a lasting positive impact. Since 1898, we have helped customers complete more than 25,000 projects in 160 countries on all seven continents that have created jobs, grown economies, improved the resiliency of the world's infrastructure, increased access to energy, resources, and vital services, and made the world a safer, cleaner place.

Bechtel serves the Energy; Infrastructure; Mining & Metals; Nuclear; and Security & Environmental markets. Our services span from initial planning and investment, through start-up and operations. www.bechtel.com

Market Expertise

Energy focused on delivery of liquefied natural gas capacity, refineries and petrochemical plants, pipelines, offshore facilities, tanks, terminal facilities, and water solutions.

Infrastructure focused on the delivery of rail systems, roads, bridges, aviation facilities, ports, power plants, transmission networks, hydroelectric installations, communications networks, and water systems.

Mining and Metals focused on delivery of natural resource processing facilities and infrastructure for ferrous, nonferrous, precious, and light metals, as well as industrial metals.

Nuclear, Security and Environmental focused on delivery of services in defense, global security, nuclear energy, and environmental stewardship.

Comms to update our business units
General: review the wording

1. Pennsylvania Chemicals
Pennsylvania, USA
2. Hamad International Airport
Doha, Qatar
3. Kooragang Coal Terminal
Newcastle, Australia
4. Watts Bar 2 Nuclear Plant
Tennessee, USA



Bechtel in Egypt

Bechtel is privileged to have worked in Egypt for over 45 years, developing megaprojects in the petroleum, power, commercial buildings, telecommunications, industrial, defence, infrastructure and energy sectors. Bechtel's corporate objective in Egypt is to provide the highest quality services using the best worldwide technical resources combined with talented and trained national staff. Bechtel is committed to continuing our long working association in Egypt.

One of Bechtel's most significant engagements in Egypt commenced in 1993, when the Power Generation Engineering and Services Company (PGESCO) was formed jointly between the Ministry of Electricity, Bechtel, and a third party for the advancement of electric power in Egypt. PGESCO helped take Egypt from 11,000 MW of electric power in the mid-1990s to 26,000 MW only 15 years later. Bechtel's role was to provide the management expertise, processes and procedures and personnel to perform the engineering, procurement and project and construction management as appropriate for the power plants that the Ministry of Electricity wanted to build. Local talent was hired by PGESCO and these worked alongside their Bechtel partners, adopting Bechtel's standards and methods. In this way, PGESCO was set up as an Egyptian company.

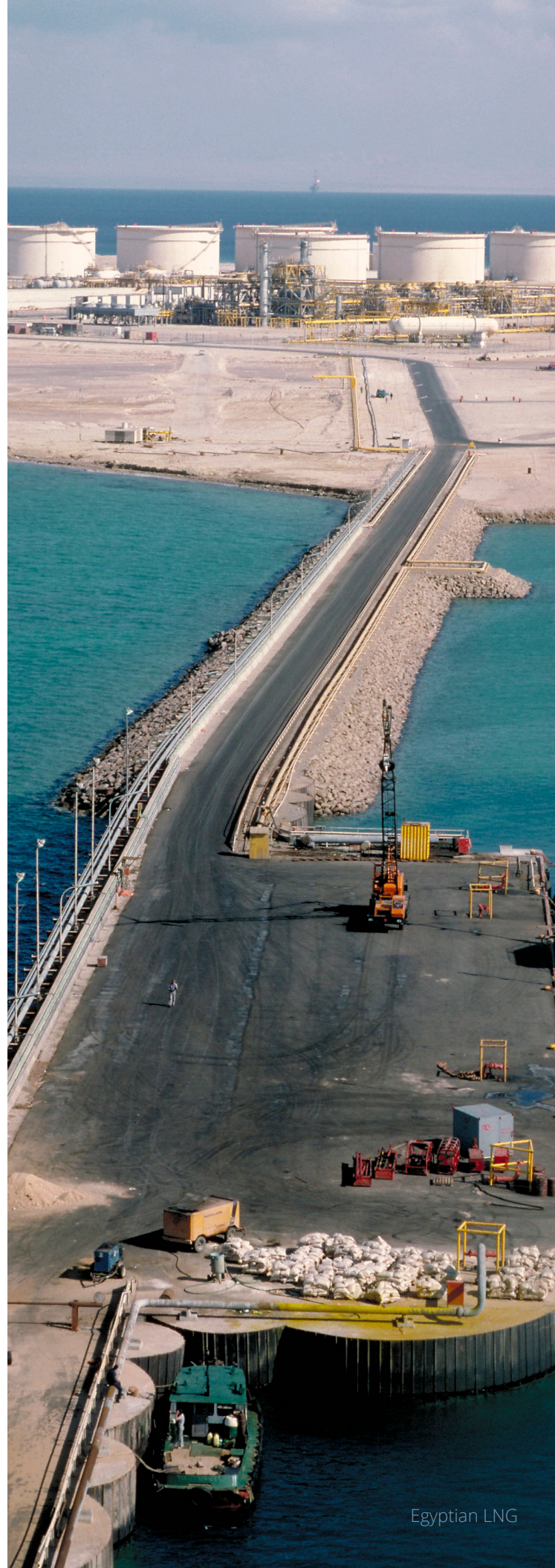
Bechtel is committed to building local capacities for the long term, including advancing initiatives that help local suppliers develop critical skills to be more competitive in future opportunities — whether with Bechtel or other projects.

Technology

Bechtel Energy Technology Solutions (BETS) BETS is a stand-alone Center of Excellence focused on technology evaluation and front-end engineering studies serving the refining, gasification, and emerging energy markets. Our staff of technical specialists provides expertise in a wide range of process technologies, complemented by many years of operations experience. Through BETS, we have successfully licensed the ThruPlus® Delayed Coking Technology in Egypt, such as on the Middle East Oil Refinery (MIDOR) located in Alexandria.

In addition to building some of the world's modern marvels, Bechtel plays a role in developing and financing projects in the power, oil and gas, and civil-infrastructure markets through Bechtel Enterprises (BEn). To date, BEn has developed or participated in the financing of more than 100 projects around the globe* both directly, such as on the Sidi Krir 3 & 4 Power Plants in Egypt and through joint-development companies, such as USGen in North America and InterGen for international power projects. These projects represent over \$85 billion of capital investment.

*Securities services provided by Bechtel Financing Services, LLC, a broker-dealer registered under the Securities Exchange Act of 1934, as amended, and a member of the Financial Industry Regulatory Authority.



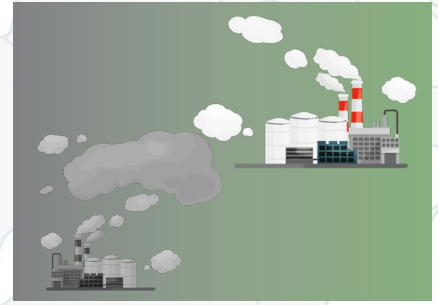
Project Highlights

Bechtel-led Coalition for Decarbonization in Egypt

Bechtel is proud to be leading a Coalition of Energy Transition companies to deliver a program to decarbonize existing onshore oil and gas facilities across Egypt by proposing facility modifications that provide meaningful emissions reduction, energy efficiency, and operating cost savings.

We developed an economically viable six-year master plan to decarbonize onshore facilities across the country to be executed by clusters in order to effectively progress the modification implementation for gas plants, LNG plants, refineries, and petrochemicals facilities. The implementation of the plan has already commenced in Idku cluster with commencement of the first two projects:

- Shell Idku Power Unification Hub; and
- Egyptian LNG Zero Routine Flaring.



West Nile Delta

Bechtel was awarded the major gas development project by British Petroleum (BP) in May 2011, following a competitive bidding period. Bechtel's scope included FEED verification, FEED completion, and the EPC execution of the onshore facilities.

The development will produce hydrocarbon fluids from three core offshore fields: Giza, Fayoum, and Raven. The initial capacity was a nominal 1 billion standard cubic feet per day sales gas but was debottlenecked to a capacity of 1.6 billion standard cubic feet per day. The project was mechanically complete in June 2019.

Key features of Bechtel's scope include:

- Site preparation, including clearing and grubbing, fencing, and earth bund sea defenses
- Installation of approximately 6,000 piles
- Installation of more than 47,000 cubic meters of concrete
- Fabrication and installation of more than 16,000 metric tons of steel
- Purchase and installation of approximately 400 pieces of equipment
- Installation of approximately 160,000 linear meters of pipe, with more than half the quantity requiring pre-fabrication
- Installation of 2,350,000 linear meters of cable
- Installation of 3500 instruments
- Craft labor supplied through local subcontractors with a peak of approximately 7,000



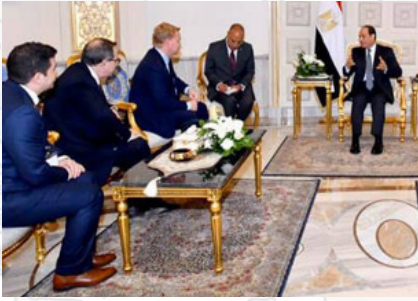
Suez Mediterranean Pipeline Project (SUMED)

One of Bechtel's first Egypt engagements in the 1970s included a Project Management role over a critical development for the nation. The SUMED pipeline project was of significant importance to the country as its operation further strengthened Egypt's vital role in international energy markets.

The project included storage tanks and two parallel crude oil pipelines 307 km long × 42-inch diameter each, transporting crude oil, linking Ain El-Sokhna on the Red Sea to Sidi Kirir on the Mediterranean.

Bechtel remained engaged and later helped evaluate the feasibility of a further expansion at the Ain El-Sokhna Tank Terminal.





Meeting with President El Sisi after signing the Heads of Agreement for Suez project in 2020.

Suez Corridor Petrochemicals Complex

The Suez Petrochemicals will be the largest Petrochemicals complex in Africa. The Project is planned to produce a range of petrochemical products with an average production capacity of 4 million ton/year. The Project is a gateway to Africa and the Middle East market and ideally situated to become a logistics hub for petrochemical operations in the region.

Bechtel signed the Front-End Engineering Design contract in 2021. Bechtel also entered into a consortium agreement with Petrojet and Enppi to execute this strategic mega-project.

Egyptian LNG (ELNG)

The Egyptian LNG (ELNG) plant is one of Bechtel's most remarkable achievements. In early 2001, Bechtel helped ELNG prepare a fast-track LNG development proposal to the Egyptian government that would enable the monetization of gas resources discovered off the Nile Delta. Bechtel's engagement commenced at the Feasibility Study stage and continued all the way through to the Lump Sum Turn Key execution of the entire facility.



ELNG Trains 1 and 2 is a grassroots LNG plant, located at Idku on the Mediterranean coast of Egypt 50 km east of Alexandria, that include common facilities such as storage tanks, loading jetty and utilities.

The plant uses the ConocoPhillips Optimized Cascade™ Liquefaction Process to produce 8.2 million tons of LNG per year for shipment to markets in North America and Europe. Feed gas is provided from offshore gas fields in the West Delta Deep Marine Concession area 120 km northeast of Alexandria.

Significant Accomplishments:

- First LNG was delivered from Train 1 over three months ahead of an already aggressive schedule
- Train 2 was completed and turned over to the client nearly nine months ahead of schedule due to Bechtel's ability to capitalize on the synergies of replicating Train 1
- The project worked more than 7.4 million job-hours without a lost time incident — better than any previous construction project in Egypt
- More than 11,000 employees participated in the project's safety program

Ain El-Sokhna Supercritical Thermal Power Plant

Bechtel and its affiliate, PGESCo provided East Delta Electricity Production Company with engineering, procurement, and project and construction management services for Ain El-Sokhna 1,300 MW supercritical thermal power plant, located 90 km east of Cairo.

The plant comprises two identical Rankine cycle turbine generator units firing natural gas, residual (mazout) oil, or a combination of both. Plant construction began in 2008, and commercial operation began in 2013.



1976

Egypt Ministry of Communications Telecommunications
(Study)

1977

SUMED
Suez Mediterranean Pipelines Project, (CM)

1985

WEPCO
Abu Qir Development, (EP)

CONOCO Geisum
Oil Field Project Onshore/Offshore, (EP)

1986

Egyptian Electrical Authority
Shoubra El Kheima Thermal Power Station, (EPCM)

Khalda Petroleum Company
Meliaha Pipeline System, (C)

1988

EGPC
Assiut Refinery, (PMC)

Egyptian Electrical Authority
Shoubra Thermal Power Station, (EPC)

1989

Arab International Bank (AIB)
World Trade Center, (PMC)

1993

Suez Oil Company SUCO
Zeit Bay LNG/LPG, (E)

1994

Egyptian Electrical Authority
South Cairo Combined Cycle, (E)

Saudi Egyptian Group
Hurghada Sheraton Expansion, (Study)

2001

Egyptian Electrical Authority
Ayoun Moussa 1&2 Thermal Power (EPCM)

Egyptian LNG
Screening & Conceptual NGL/LNG Integration, (Study)

Midor
Delayed Coker License, (PDP)



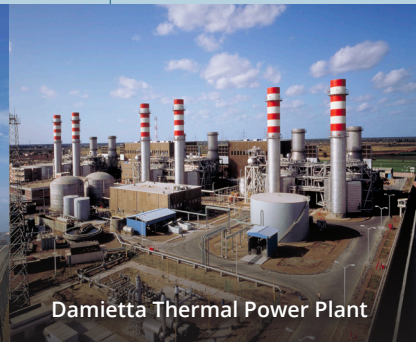
El Kureimat Cycle Power Plant



Zeit Bay Oil Field



Sidi Krir 3 and 4



Damietta Thermal Power Plant

1980

Nuclear Power Plant Authority
Candu Reactors, (E)

1984

Suez Oil Company SUCO
Zeit Bay & Ras Budran Field Development, (EPCM)

1987

SUCO
Zeit Bay Field Development Onshore/Offshore, (EPCM)

Egyptian Petrochemicals Co. (EPC)
Ethylene Handling Facilities, (PMC)

1990

BADR Petroleum (BAPETCO)
Oil & Gas Development, (E)

1992

Suez Oil Company SUCO
Zeit Bay Field Development Onshore/Offshore Pipelines, (EPC)

1996

BAPETCO
BED-3 Integrated Development, (E)

2000

West Delta Electricity Production Company
Sidi Krir 1 & 2 Thermal Power, (EPCM)

British Gas
Egypt/Turkey LNG, (Study)

2002

Egyptian LNG
Train 1 and Tank, (PreFEED, FEED)

Burullus Gas Company
Simian Development Project, (PreFEED)

West Delta Electricity Production Company
Sidi Krir 3 & 4, (EPCM)

45 YEARS

2003

Burullus Gas Company

Scarab/Saffron Development, (FEED, EPCM)

Saudi Egyptian Group

Cairo Meridien Hotel, (PMC)

International Company for Tourist Development

Conrad Cairo Hotel, (PMC)

2006

Middle Delta Electricity Production Company

Nubaria I and II Combined Cycle Power Plant, (EPCM)

Nova Park Cairo Company

Four Seasons Nile Plaza Complex, (PMC)

2010

Middle Delta Electricity Production Company

Nubaria III Combined Cycle Power Plant, (EPCM)

West Delta Electricity Production Company

Sidi Krir 5 and 6 Combined Cycle Power Plant, (EPCM)

Cairo Electricity Production Company

El-Tebbin Thermal Power Plant, (EPCM)

2019

BP

West Nile Delta Onshore Gas Processing Facilities (EPC)

Assiut Oil Refining Company (ASORC)

Delayed Coker License, (PDP)

MIDOR

Delayed Coker Revamp, (License, PDP)

2022

Petrojet

Commissioning Services Agreement, (E)

Shell Egypt

Idku Power Unification Hub (FEED leading to EPC)

BP

WND Condensate Storage and Compression System Expansions (Study leading to EPC)



Assiut Refinery



Cairo North Combined Cycle Project



Egyptian LNG



West Nile Delta

2005

Egyptian LNG

Trains 1&2 Grassroots LNG complex and Tank Scope, (EPC)

Cairo Electricity Production Company

Cairo North I, (EPCM)

Alexander Urban Projects Sharm El Sheikh

Four Seasons Resort, (PMC)

2008

Cairo Electricity Production Company

Cairo North II Combined Cycle Power Plant, (EPCM)

Middle Delta Electricity Production Company

New Talkha Combined Cycle Power Plant, (EPCM)

2009

Upper Egypt Electric Production Company

El-Kureimat III, (EPCM)

2011

West Delta Electricity Production Company

New Abu Qir Thermal Power Plant, (EPCM)

2013

East Delta Electricity Production Company

El Ain Sokhna Supercritical Thermal Power Plant, (EPCM)

2014

Egyptian Electric Holding Co.

Banha Middle Delta & Giza North 2, (EPCM)

2018

Egyptian Refining Company (ERC)

Delayed Coker, (License, PDP)

2020

ENPPI

Engineering Support Services Agreement, (E)

Suez Oil Processing Company (SOPC)

Package for Delayed Coker (License, PDP)

Suez Oil Processing Company (SOPC)

Coker Furnace, (Supply)

ONGOING

2021

Red Sea Petrochemicals Co.

Suez Petrochemicals Complex (FEED, leading to EPC)

Anchorage Investments

Anchor Benitoite, (TSA Leading to PMC)

Suez Oil Processing Company (SOPC)

Coker Furnace Unit, (FEED)

Egyptian LNG

Zero Routine Flaring (Feasibility Study)

Ministry of Petroleum

Program to Decarbonize Existing Onshore Facilities in Egypt (Study to EPC)

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Reston
San Francisco
Santiago
Shanghai
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