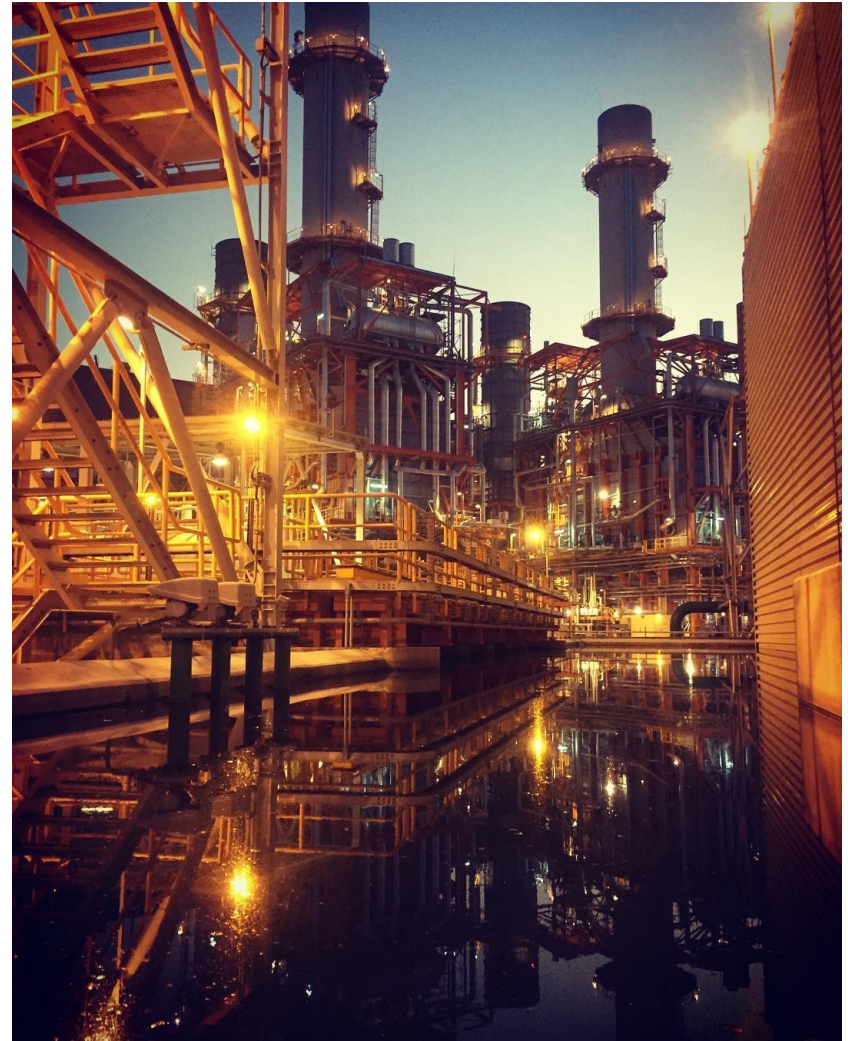


INTRODUCING **ENKA**

64 years of engineering & construction experience worldwide

- More than 544 projects in 46 countries, with a historical contract value of US\$ 51 billion
- Employs more than 20,000 personnel worldwide
- Among the world's top contractors since 1981 (Engineering News-Record (ENR))
- 2020 Annual Revenue, comprising the revenues of following business lines corresponding to USD 1.7 billion
 - Engineering & Construction
 - Power
 - Real Estate
 - Trade
- Traded publicly in Borsa Istanbul (BIST) with a Market Cap of US\$ 5 billion.
- 64 subsidiaries operating in America, Asia, Europe, Africa and Middle East
- Signatory to UN Global Compact

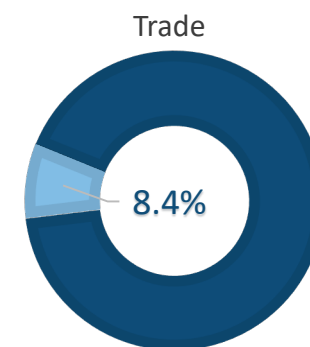
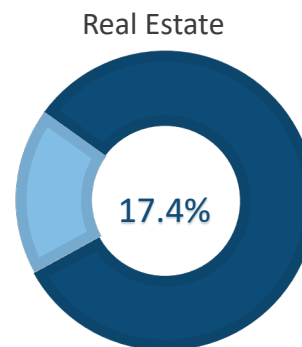
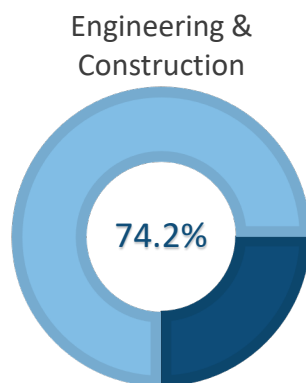


TURNOVER RECORDS

Note: All amounts are annual figures in million US Dollars

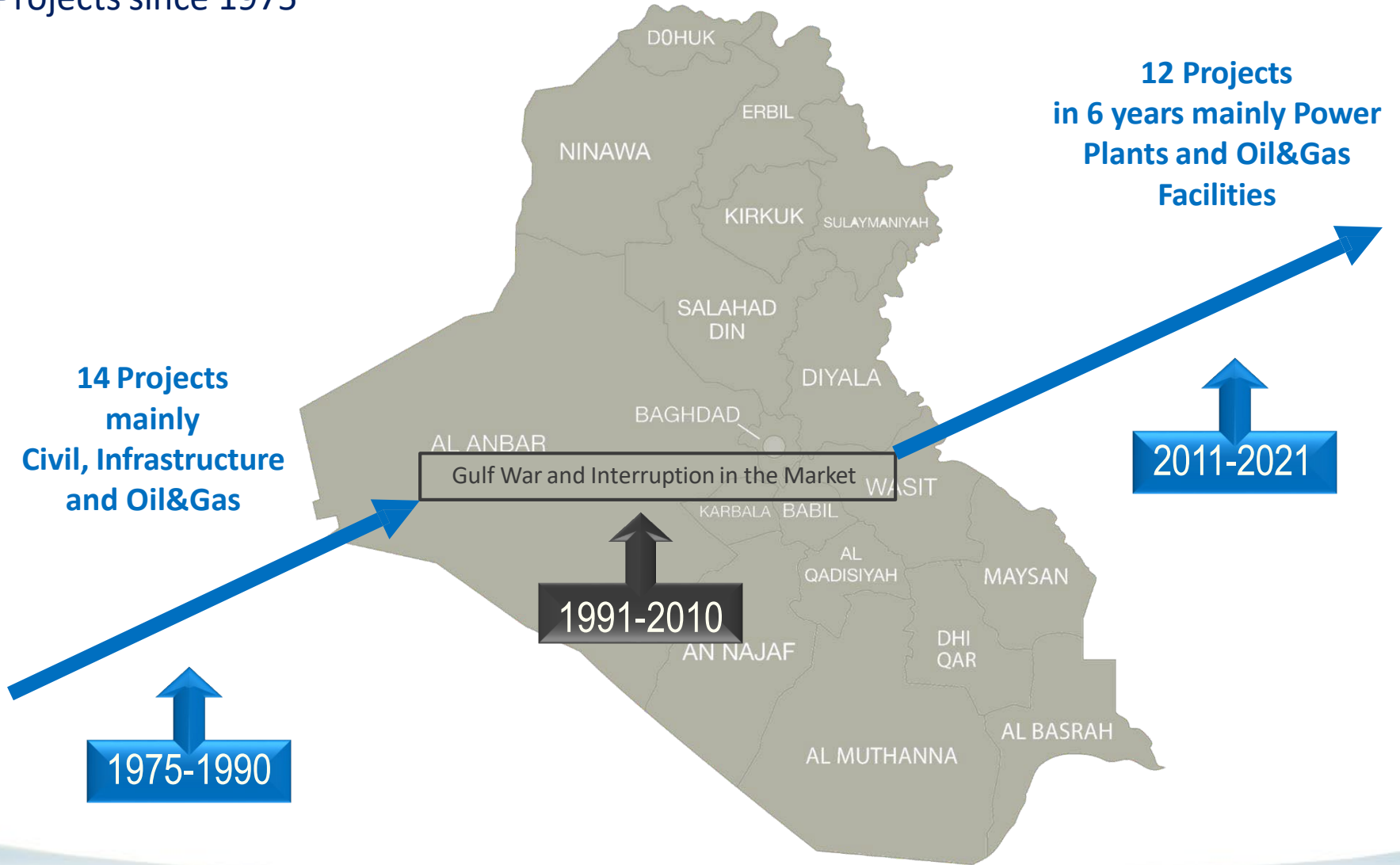
Year	ENKA Group Turnover	"Engineering & Construction only" Turnover	Share of onshore oil, gas, chemicals, and power projects in "Engineering & Construction only" turnover	
			(%)	Total
2015	4,555	1,492	71.9%	1,073
2016	3,506	1,453	68.0%	988
2017	2,900	1,195	59.3%	708
2018	2,881	1,011	64.2%	650
2019	1,893	1,147	70.0%	803
2020	1,659	1,263	61.0%	767

TURNOVER DISTRIBUTION



ENKA IN IRAQ

Projects since 1975



ENKA IN IRAQ

- ❖ Experience specific to Iraq dates back to 1970's
- ❖ Mostly EPC infrastructure, pipeline and buildings projects
- ❖ Major projects include:

<p>Client: State Organization for Roads and Bridges - SORB</p> <p>Project: Shatt Al Arab Bridge, Basrah</p> <p>Contract Period: 1975 - 1979 Contract Value: \$26 Million Scope Summary: Construction of a 761 m. long prestressed concrete bridge</p>	<p>Client: State Organization for Construction Industries - STOKI</p> <p>Project: Kerbela Cement Plant, Kerbela</p> <p>Contract Period: 1981 - 1985 Contract Value: \$30 Million Scope Summary: Civil and building works for 1 MM ton/day Cement Plant</p>
<p>Client: State Organization for Construction Industries - STOKI</p> <p>Project: Kerbela Water Pipeline and Pumping Station, Kerbela</p> <p>Contract Period: 1982 - 1983 Contract Value: \$20 Million Scope Summary: Turnkey delivery of 70 km Water Pipeline and Pump Stations</p>	<p>Client: State Organization for Construction Industries - STOKI</p> <p>Project: Tasluja Cement Plant, Tasluja</p> <p>Contract Period: 1981 - 1985 Contract Value: \$39 Million Scope Summary: Civil and building works for 1 MM ton/day Cement Plant</p>
<p>Client: State Organization for Construction Industries - STOKI</p> <p>Project: Tasluja Water Pipeline and Pumping Station, Tasluja</p> <p>Contract Period: 1982 - 1983 Contract Value: \$7 Million Scope Summary: Turnkey delivery of 23 km Water Pipeline and Pump Stations</p>	<p>Client: State Organization for Industrial Projects - SOIP</p> <p>Project: Baghdad Cigarette Factory, Baghdad</p> <p>Contract Period: 1984 - 1987 Contract Value: \$26 Million Scope Summary: EPC delivery of all civil works and buildings for the Factory</p>
<p>Client: State Organization for Oil Projects - SCOP</p> <p>Project: Iraq-Turkey Crude Oil Pipeline Expansion Project (Iraqi Part)</p> <p>Contract Period: 1983 - 1984 Contract Value: \$30 Million Scope Summary: Expansion of existing 40" Pipeline from 35 MM m³/yr to 50 MM m³/yr</p>	<p>Client: State Commission for Dams (SCD) - Ministry of Irrigation</p> <p>Project: Bekhme Dam and Employer's Housing Project, Mosul</p> <p>Contract Period: 1986 - 1991 Contract Value: Dam Contract \$1.472 Billion + Housing Contract \$122 Million Scope Summary: EPC delivery of Bekhme Dam and Employee Housing</p>

ENKA IN IRAQ

14 PROJECTS IN THE LAST 7 YEARS

Contract Value > US\$ 4 Billion

Mass Global Holding Limited
Erbil 1500 MW CC Power Plant Project
EPC and Commissioning

Mass Energy Group Holding Limited
Erbil Training Center Project
Design and Build

Ministry of Electricity of Iraq
Samawa 750 MW Combined Cycle Power Plant
EPC&CSU + Financing

Ministry of Electricity of Iraq
Dhi Qar 750 MW Combined Cycle Power Plant
EPC&CSU + Financing

Lukoil Mid-East Limited
West Qurna 2 Gas Treatment, Power Generation and Power Distribution Project
EPC, CSU and Initial Operations

ExxonMobil
West Qurna 1 Initial Oil Train
EPC and Commissioning w/ Kentz Global

ExxonMobil
West Qurna 1 Produced Water 2 (PW2) Project
EPC and Commissioning

South Oil Company of Iraq
North Rumaila PS-1 Crude Oil Pump Station
EPC and Commissioning

Mass Global Holding Limited
Sulaymaniyah 1500 MW CC Power Plant Project
EPC and Commissioning

Qaiwan Company for Trading
Bazian 500 MW Simple Cycle Power Plant
EPC and Commissioning

Mass Energy Group Holding Limited
Besmaya 1500 MW Combined Cycle Power Plant
EPC and Commissioning

Shell Iraq Petroleum Development BV
MEI Works for Majnoon Early Production Facility and Brownfield Works for DS-2
Construction and Commissioning Support

Ministry of Electricity of Iraq
Al Najbiyah 500 MW Simple Cycle GTPP
EPC and Commissioning

Aloreen Investment Ltd.
Umm Qasr Basra Multi Purpose Terminal (BMT) Container Terminal 5, Quay Wall & Marine Works
EPC

No	Project Title	Business Line	Country	Location	Start Date	Finish Date
1	ISBL IOT8 Tie-In	Oil & Gas, Petrochemicals	Iraq	Basra	25/02/2018	28/05/2019
2	Port of Umm Qasr - BMT Container Terminal Yard 5, Quay Wall & Marine Works	Infrastructure	Iraq	Basra	03/12/2018	14/06/2021
3	Samawa 750 MW Combined Cycle Power Plant	Power Plant	Iraq	Samawa	18/03/2019	31/07/2021 Ph1
4	Dhi Qar 750 MW Combined Cycle Power Plant	Power Plant	Iraq	Nasiriyah	18/03/2019	31/07/2021 Ph1
5	West Qurna 1 (WQ1) Produced Water 2 Facility Project	Oil & Gas, Petrochemicals	Iraq	Basra	01/12/2019	22/12/2022
6	West Qurna-I Initial Oil Train (IOT) Project	Oil & Gas, Petrochemicals	Iraq	Basra	16/08/2015	10/02/2020
7	Baghdad 1500 MW Combined Cycle Power Plant - Besmaya	Power Plant	Iraq	Baghdad	01/10/2014	23/02/2018
8	Sulaymaniyah 1500 MW Combined Cycle Power Plant Project	Power Plant	Iraq	Sulaymaniyah	01/07/2013	27/07/2016
9	North Rumaila Crude Oil Turbo Pump Station (PS-1) Project	Oil & Gas, Petrochemicals	Iraq	Basra	01/12/2013	23/04/2016
10	Bazyan 500 MW Simple Cycle Power Plant	Power Plant	Iraq	Sulaymaniyah	01/09/2014	15/01/2016
11	Erbil 1,500 MW Combined Cycle Power Plant Conversion	Power Plant	Iraq	Erbil	07/04/2012	17/10/2015
12	Erbil Training Center Project - EPCC	Civil	Iraq	Erbil	01/12/2013	01/06/2015
13	4x125 Najybia Gas Turbine Power Plant	Power Plant	Iraq	Basra	01/05/2013	19/05/2015
14	West Qurna-2, Gas Treatment, Power Generation & Distribution Project	Power Plant	Iraq	Basra	20/12/2011	21/07/2014
15	Brownfield Works for Majnoon Oil Field Development	Oil & Gas, Petrochemicals	Iraq	Basra	01/07/2012	01/12/2013
16	Greenfield Works - MEI (Mechanical, Electrical, Instrument and Telecommunication) Works for Majnoon Oil Field Development	Oil & Gas, Petrochemicals	Iraq	Basra	29/07/2011	01/12/2013
17	500 MWA Haydariyah Simple Cycle Power Plant	Power Plant	Iraq	Al Najaf	01/04/2012	01/12/2013
18	Haydaria 4xGE Fr9E Gas Power Plant - Engineering Services	Power Plant	Iraq	Haydaria	30/09/2011	30/07/2012
19	Um-Qasr Rail Tanker Off-Loading Cement Silos Feeding Project	Civil	Iraq	Um-Qasr	01/11/1989	01/08/1990
20	Falluja White Cement Plant	Civil	Iraq	Falluja	01/01/1988	01/01/1990
21	Bekhme Dam	Infrastructure	Iraq	Bekhme	01/09/1986	01/08/1990
22	Kubaisa Cement Plant	Civil	Iraq	Kubaisa	01/01/1986	01/10/1987
23	Tasluja Cement Plant	Civil	Iraq	Tasluja	01/01/1986	01/01/1987
24	Baghdad Cigarettes Plant	Civil	Iraq	Baghdad	01/01/1985	01/01/1989
25	Falluja White Cement Plant	Civil	Iraq	Falluja	01/01/1985	01/01/1987
26	Nahrawan Industrial Estate Water Supply Scheme - EPC	Civil	Iraq	Baghdad	01/08/1984	01/03/1986
27	Nahrawan Industrial Estate, Water Supply Scheme and Water Treatment Plant	Civil	Iraq	Nahrawan	01/08/1984	01/07/1986
28	Baghdad Cigarette Factory - EPC	Civil	Iraq	Baghdad	01/07/1984	01/07/1987
29	Habur Bridge Iraqi-Turkish Border - EPC	Infrastructure	Iraq		01/06/1984	01/01/1986
30	Kerbela Cement Plant	Civil	Iraq	Kerbela	01/01/1984	01/01/1986
31	Bazian Quarry Road - EPC	Infrastructure	Iraq	Tasluja	01/10/1983	01/01/1984
32	Iraq-Turkey Crude Oil Expansion Project	Oil & Gas, Petrochemicals	Iraq		01/03/1983	01/10/1984
33	Badoosh Cement Plant	Civil	Iraq	Badoosh	01/01/1983	31/12/1985
34	Kerbela Water Pipeline and Pumping Station - EPCC	Infrastructure	Iraq	Kerbela	01/05/1982	01/11/1983
35	Tasluja Water Pipeline and Pumping Station - EPCC	Infrastructure	Iraq	Tasluja	01/03/1982	01/12/1983
36	First Extension of Kerbela Cement Plant - EPC	Civil	Iraq	Tasluja	01/09/1981	01/08/1985
37	First Extension of Tasluja Cement Plant - EPC	Civil	Iraq	Tasluja	01/05/1981	01/10/1985
38	Kerbela Cement Plant - EPC	Civil	Iraq	Kerbela	01/05/1981	01/03/1985
39	Tasluja Cement Plant - EPC	Civil	Iraq	Tasluja	01/03/1981	01/07/1985
40	Badoosh Cement Plant - EPC	Civil	Iraq	Mosul	01/10/1980	01/03/1983
41	Shatt Al Arab Bridge - EPC	Infrastructure	Iraq	Basra	01/03/1975	01/08/1979

SAMAWA 750 MW COMBINED CYCLE POWER PLANT – IRAQ



- **Location:** Samawa - Iraq
- **Client:** Ministry of Electricity of Iraq
- **Construction Period:**
 - Phase 1: March 2019 - July 2021
 - Phase 2: 34 months from the start of Phase 2
- **Project Value:** US\$ 562 Million
- **Project Description:**

ENKA entered into a consortium agreement with General Electric (GE) on January 3rd 2017, to undertake works on the Samawa Combined Cycle Power Plant project which was awarded to GE by the Ministry of Electricity of Iraq under a contract dated February 5th 2017. The contract, which was awarded on an Engineering, Procurement and Construction (EPC) basis, includes design works, manufacturing, deliveries to site, construction and assembly works, operation, commissioning, start up and testing.

The gas turbines and generators and their off-base auxiliaries supplied by employer were to be installed and commissioned by the GE-ENKA consortium in simple-cycle mode and then converted to combined-cycle through the addition of a steam tail (the "Add-On") and associated equipment.

Main Work Item	Quantity	Unit	Design & Eng.	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	585.000	m ³			N/A		N/A
Concrete	82.500	m ³					N/A
Structural Steel	1.800	ton					
Piping Erection	900	ton					
Cabling	1.285.000	m			N/A		
Field Erected Tanks	2.700	ton					
Equipment Erection	11.513	ton					

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

DHI QAR 750 MW COMBINED CYCLE POWER PLANT – IRAQ



- **Location:** Nasiriyah - Iraq
- **Client:** Ministry of Electricity of Iraq
- **Construction Period:**
 - Phase 1: March 2019 - July 2021
 - Phase 2: 34 months from the start of Phase 2
- **Project Value:** US\$ 561 Million
- **Project Description:**

ENKA entered into a consortium agreement with General Electric (GE) on January 3rd 2017, to undertake works on the Dhi Qar Combined Cycle Power Plant project which was awarded to GE by the Ministry of Electricity of Iraq under a contract signed on February 5th 2017.

The contract, which was awarded on an Engineering, Procurement and Construction (EPC) basis, includes design works, manufacturing, deliveries to site, construction and assembly works, operation, commissioning, start up and testing.

The gas turbines and generators and their off-base auxiliaries supplied by employer were to be installed and commissioned by the GE-ENKA consortium in simple-cycle mode and then converted to combined-cycle through the addition of a steam tail (the "Add-On") and associated equipment.

Main Work Item	Quantity	Unit	Design & Eng.	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	550.000	m ³			N/A		N/A
Concrete	77.000	m3					N/A
Structural Steel	1.500	ton					
Piping Erection	820	ton					
Cabling	1,110,000	m			N/A		
Field Erected Tanks	2.500	ton					
Equipment Erection	10.185	ton					

■	Not by ENKA
■	Partially by ENKA
■	Fully by ENKA

BESMAYA 1,500 MW COMBINED CYCLE POWER STATION – IRAQ



- **Location:** Baghdad - Iraq
- **Client:** Mass Group Holding Limited
- **Construction Period:** October 2014 – February 2018
- **Project Value:** US\$ 569 Million
- **Project Description:**

The Baghdad Electrical Power Station - Besmaya Project is an EPC contract undertaken and executed by ENKA, on a lump sum turnkey basis, including engineering, procurement, construction, commissioning, start-up and performance testing.

The contract, signed between ENKA and Mass Energy Group Holding Ltd., comprised the first phase of the project, namely a 1,500 MW gas fired Combined Cycle Power Plant including all the infrastructure and utilities to serve also the future extension of the plant capacity to 3,000 MW. Phase-1, configured as 2 blocks of 2 x 2 x 1 combined cycle (1,500 MW), was designed and built to make 1,000 MW available for commercial operation on simple cycle mode by the end of 2016 and to add 500 MW with steam cycle by the end of 2017.

The combined cycle part of the plant consists of 4 Heat Recovery Steam Generators including surface type condensers, 2 nominal rated 250 MW steam turbine generators, 2 wet type mechanical draft cooling towers, all the requisite equipment and systems for a safe, reliable and efficient combined cycle power generating facility.

Main Work Item	Quantity	Unit	Design& Eng.	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	300,000	m ³			N/A		N/A
Concrete	60,000	m ³					N/A
Structural Steel	9,000	ton					
Piping	3,000	ton					
E&I Cabling	1,000,000	lm			N/A		
Equipment Erection	35,000	ton					
Field Erected Tanks	2,500	ton					

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

SULAYMANIYAH 1,500 MW COMBINED CYCLE POWER PLANT – IRAQ



- **Location:** Sulaymaniyah - Iraq
- **Client:** Mass Group Holding Ltd.
- **Construction Period:** July 2013 - July 2016
- **Project Value:** US\$ 434 Million
- **Project Description:**

The existing simple cycle Sulaymaniyah Gas Power Station had been developed by MGH - Mass Group Holding Ltd. with a capacity of 1,000 MW with eight GE - 9E gas turbines. Through the use of steam turbines manufactured by GE, the combined cycle gas turbines conversion added 500 MW installed capacity to the plant, making an overall capacity of 1,500 MW. The Sulaymaniyah Combined Cycle Power Plant Project was designed to work on two types of fuel – natural gas as the primary and diesel as the secondary source and to utilize the exhaust heat produced by the existing Sulaymaniyah Gas Power Station.

The major works under the contract were the design, engineering, procurement, shipment/ delivery, installation construction, interconnection, pre-commissioning, commissioning and start-up of eight Heat Recovery Steam Generators, two nominally rated 250 MW GE Steam Turbine Generators, two GSU Transformers, two 40-cell Air Cooled Condenser systems and all other Balance of Plant equipment to convert the simple cycle plant into two blocks of 4x4x1 combined cycle configuration, as well as demonstrating parallel operation with the grid at the required net output, performance testing, training of the operating and maintenance personnel, and preparation of the integrated operation and maintenance manuals.

Main Work Item	Quantity	Unit	Design & Eng	Proc.	Fabric.	Constr.	Comm & Start-Up
Earth Works	260,000	m3			N/A		N/A
Concrete	45,000	m3					N/A
Structural Steel	5,800	ton					
Piping Erection	2,000	ton					
Cabling	1,100,000	lm			N/A		
Equipment Erect.	36,000	ton					
Insulation & Paint	52,000	m2					N/A
Buildings	6,500	m2					

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

BAZYAN 500 MW SIMPLE CYCLE POWER PLANT – IRAQ






- **Location:** Sulaymaniyah - Iraq
- **Client:** Qaiwan Company for Trading, General Contracts, Oil Services & General Transport Ltd.
- **Construction Period:** September 2014 – March 2016
- **Project Value:** US\$ 222 Million
- **Project Description:**

The Qaiwan Group awarded ENKA the Bazyan Simple Cycle Power Plant Project on an EPC turnkey basis.

The power capacity of the plant is 500 MW generated by four GE-9E-3 gas turbines, an air insulated switchyard of 132kV, fuel gas conditioning system, three Distillate Fuel Oil tanks, each of 15,000 m³ capacity, a water treatment plant and all Balance of Plant systems, complete with all accessories, including piping, wiring, instrumentation controls and panels and all other facilities and required capabilities.

The scope of the work covered all engineering, design, procurement, manufacturing, shipment/ delivery, construction, installation, testing, interconnection, pre-commissioning, commissioning, start-up, demonstration of parallel operation with the grid at the required net output and performance testing activities as well as preparation of operation & maintenance manuals and classroom training of the operating and maintenance personnel.

Main Work Item	Quantity	Unit	Design& Eng	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	250,000	m ³			N/A		N/A
Concrete	25,000	m ³					N/A
Structural Steel	500	ton					
A/G Piping	260	ton					
Cabling	395,000	lm			N/A		
Mech. Equipment	12,000	ton					
Insulation & Paint	32,500	lm					N/A
Buildings	4,800	m ²					

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

ERBIL 1,500 MW COMBINED CYCLE POWER PLANT – IRAQ



- **Location:** Erbil - Iraq
- **Client:** Mass Group Holding Ltd.
- **Construction Period:** April 2012 – October 2015
- **Project Value:** US\$ 488 Million
- **Project Description:**

ENKA executed the design, procurement, installation and start-up of eight Heat Recovery Steam Generators, two nominally rated 250 MW Steam Turbine Generators, two GSU Transformers, two 40-cell Air Cooled Condenser systems and all other equipment, to convert the simple cycle plant into two blocks of 4x4x1 combined cycle configuration, including all civil and erection works.

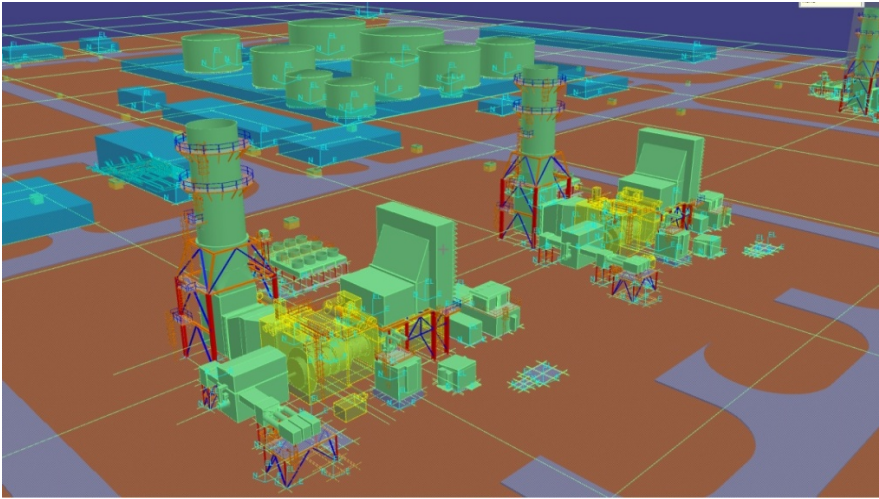
Erbil Combined Cycle Power Plant project was designed to work on two types of fuel – natural gas as the primary and diesel as the secondary source and utilizes the exhaust heat produced by the existing Erbil Gas Power Station.

The Erbil 1,500 MW Combined Cycle Power Plant project was Iraq's first conversion project from simple cycle to combined cycle and the first combined cycle power plant in the country.

Main Work Item	Quantity	Unit	Design, Engin.	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	345,000	m ³			N/A		N/A
Concrete	30,000	m ³					N/A
Structural Steel	3,800	ton					
Piping Erection	2,000	ton					
Cabling	600,000	lm			N/A		
Mech. Equipment	25,000	ton					
Insulation & Paint	50,000	m ²					N/A
Buildings	6,500	m ²					N/A

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

AL HAYDARIYAH 500 MW SIMPLE CYCLE POWER PLANT – IRAQ



- **Location:** Al Najaf - Iraq
- **Client:** Ministry of Electricity of Iraq
- **Construction Period:** April 2012 – December 2013
- **Project Value:** US\$ 2,5 Million USD
- **Project Description:**

Basic & Detail Design and Engineering of a 4 x 125 MW Simple Cycle Power Generation Plant with all Balance of Plant (BOP) systems to support safe and efficient operation of the whole Power Plant.

The produced number of engineering documents was approximately 1,050 including engineering specifications, operation descriptions, operation and maintenance instructions and technical requisitions.

NAJIBIYAH 500 MW SIMPLE CYCLE POWER PLANT – IRAQ



- **Location:** Basra - Iraq
- **Client:** Ministry of Electricity of Iraq
- **Construction Period:** May 2013 – May 2015
- **Project Value:** US\$ 271 Million
- **Project Description:**

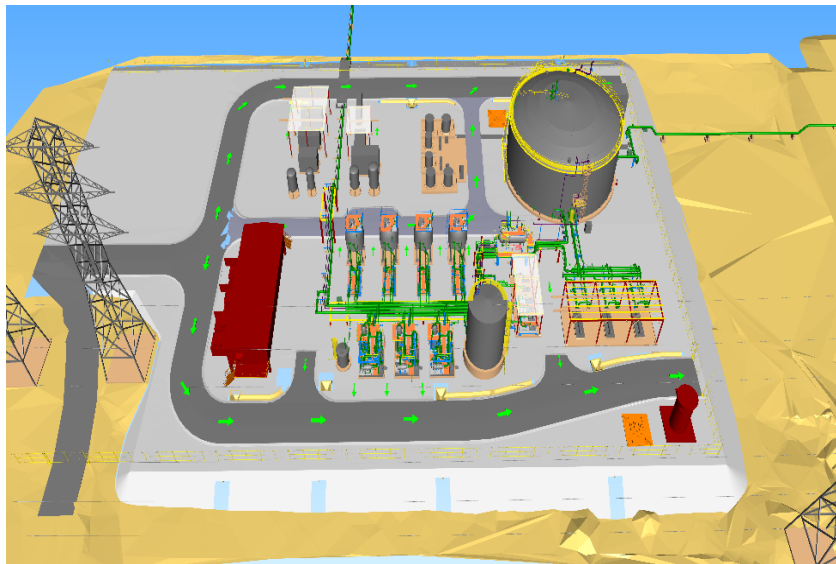
The project comprised engineering, procurement, construction, commissioning and start-up, for a 4 x 125 MW Power Generation Plant, to operate in simple cycle mode of operation with three types of fuel, heavy fuel oil, natural gas and light distillate oil, complete with all balance of plant systems, to support the safe and efficient operation of Combustion Turbine Generators units.

The scope of the services provided by ENKA included: complete basic and detailed design and engineering of the plant, utilizing in-house resources, supply of all balance of plant systems and equipment, all civil works unloading, metering and fuel treatment systems, Auxiliary Boiler System, 400 kV and 132 kV GIS Systems with step-up transformers, MV and LV Substation with auxiliary transformers, cabling, instrument and plant air supply systems, Black Start and Emergency Diesel Generators fire protection, detection, alarm and extinguishing systems, water storage, pre-treatment and demineralization plant, waste collection and treatment system, power plant distributed control system, construction of buildings, supply of spare parts, and start-up and commissioning of the plant on a lump sum turnkey basis.

Main Work Item	Quantity	Unit	Design, Eng.	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	119,000	m ³		N/A	N/A		N/A
Concrete	102,000	m ³					N/A
Structural Steel	1,600	ton					
A/G Piping	1,600	ton					
Cabling	858,000	lm			N/A		
Mech. Equipment	9,400	ton					
Insulation & Paint	70,000	m ²					N/A
Buildings	6,638	m ²					

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

WEST QURNA I PRODUCED WATER 2 (PW2) FACILITY- IRAQ



- **Location:** Basra - Iraq
- **Client:** ExxonMobil Iraq Limited
- **Construction Period:** December 2019 – December 2022
- **Project Value:** US\$ 70 Million
- **Project Description:**

On December 31, 2019, ENKA signed an agreement with ExxonMobil Iraq Limited to construct a West Qurna I Produced Water 2 Facility with a capacity of 210,000 barrels of water per day, located within the West Qurna-1 oil field near the city of Basra in Iraq.

The project includes the detailed engineering, procurement, construction, and commissioning of three water treatment trains, one produced water tank, one local equipment room, transfer pumps and all associated systems.

The treated produced water will be sent to the Water Injection Storage Tank that feeds the High Pressure Water Injection Pump System for injection wells.

The West Qurna I Produced Water 2 Facility project is scheduled to begin operation in December 2022.

Main Work Item	Quantity	Unit	FEED	Eng.	Proc.	Transport & Logistic	Fab.	Constr.
Earth Works	41,500	m ³						
Concrete	1,047	m ³						
Structural Steel	171	ton						
Piping	311	ton						
Cabling	52,620	lm						
Mechanical Equipment	1,145	ton						
Insulation & Paint	3,760	m ²						

Not by ENKA
Partially by ENKA
Fully by ENKA

WEST QURNA 2 PGP & POWER DISTRIBUTION SYSTEM – IRAQ



- **Location:** Basra - Iraq
- **Client:** LUKOIL Mid-East Limited
- **Construction Period:** December 2011 – July 2014
- **Project Value:** US\$ 387 Million
- **Project Description:**

ENKA performed the full front-end engineering design, detailed engineering, procurement, construction, commissioning, start-up and performance testing scope of works for the West Qurna 2 Power Generation Plant & Power Distribution System project, utilizing in-house resources on a lump sum turnkey basis.

The specific content of the plant consisted of three (3) GE MS6001B Heavy Duty Dual Fuel Gas Turbine Generators - Simple Cycle - 42 MW each, a Fuel Gas Treatment Plant (45,000 Nm³/hour capacity) and a compression system included with fuel gas buffer storage, a liquid fuel unloading, storage and distribution system; 33kV/132kV GIS switchgear, power management system, a water treatment plant; firefighting and protection systems, utilities' networks; all associated balance of plant, buildings and infrastructure.

The project has a high level of operational intelligence and reliability, compared to a standard power plant, due to its being the sole source of electric power for a giant oil field.

Main Work Item	Quantity	Unit	Design, Eng.	Proc.	Fabric.	Constr.	Comm. & Start-Up
Earth Works	120,000	m ³			N/A		N/A
Concrete	32,000	m ³					N/A
Structural Steel	600	ton					
A/G Piping	300	ton					
Cabling	385,000	lm			N/A		
Mech. Equipment	5,250	ton					
Buildings	3,200	m ²					

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

MAJNOON OIL FIELD– MEI WORKS OF CPF – IRAQ



- **Location:** Basra - Iraq
- **Client:** Shell Iraq Petroleum Development BV
- **Construction Period:** July 2011 – December 2013
- **Project Value:** US\$ 247 Million
- **Project Description:**

Central Processing Facility of Early Production Phase (Greenfield)

- 100,000 bpd capacity with 2 trains
- ENKA scope: Mechanical, Piping, Electrical, Instrumentation works, Pre-commissioning, Commissioning Support



DS-2 Mechanical Works (Brownfield)

Main Work Item	Quantity	Unit	FEED	Eng.	Proc.	Transport & Logistic	Fab.	Constr.
Earth Works	25,000	m ³			N/A	N/A	N/A	
Tank Works	1,000	ton						
Structural Steel	1,600	ton						
A/G Piping	2,500	ton						
Cabling	1,000,000	lm					N/A	
Mechanical Equipment	4,000	ton						
Insulation & Paint	20,000	m ²						
Module Erection	1,000	ton						

Not by ENKA
Partially by ENKA
Fully by ENKA

PS-1 CRUDE OIL TURBO PUMP STATION – IRAQ



- **Location:** Basra - Iraq
- **Client:** South Oil Company (SOC) of Ministry of Oil
- **Construction Period:** December 2013 – April 2016
- **Project Value:** US\$ 59 Million
- **Project Description :**

ENKA was awarded the EPC contract for the Crude Oil Turbo Pump Station by South Oil Company.

ENKA provided full detail engineering, procurement, construction, commissioning scope for the new pumping station of two 13 MW gas turbine driven turbo pump units delivering oil 6,100 m³/hr at a pressure of 685 m at the 42" discharge, fuel gas booster compressing and regulation station, compressed air system, crude oil drain tank, waste water tank, low voltage power distribution and control system, a station shelter complete with overhead cranes for maintenance.

The project was designed to a high level of operational intelligence and reliability due to being a critical facility for oil exports from a giant oil field. The plant was designed under strict oil and gas standards and specifications (API) with appropriate design margins and redundancy requirements.

Main Work Item	Quantity	Unit	Eng.	Proc.	Transport & Logistic	Construc.
Reinforced Concrete	6,393	m ³				
Structural Steel	440	ton				
Piping	1,088	ton				
Main Equipment Erection	478	ton				
Cabling	75,563	m				
Welding	11,245	Dia Inch				

	Not by ENKA
	Partially by ENKA
	Fully by ENKA

CEMENT PLANTS – IRAQ

The following cement plants were constructed by ENKA between 1981-1988 in Iraq:

- Tasluja Cement Plant (1,000,000 t/year) and Extension (1,000,000 t/year)
- Kerbela Cement Plant (1,000,000 t/year) and Extension (1,000,000 t/year)
- Badoosh Cement Plant - 1,000,000 t/year
- Falluja White Cement Plant - 1,000,000 t/year
- Kubaisa Cement Plant - 1,000,000 t/year



CEMENT PLANTS – FALLUJA

Between 1986 and 1988, ENKA's wholly owned subsidiary, ENKA Teknik managed Falluja White Cement for the Client, Central Cement State Enterprise.



CEMENT PLANTS – KUBAISA

Between 1986 and 1988, ENKA's wholly owned subsidiary, ENKA Teknik constructed the railcar bag and bulk cement loading facilities of the Kubaisa Cement Plant for SOIP - the Client, State Organization of Industrial Projects.



BUILDING WORKS – CEMENT PLANTS

CEMENT PLANTS – BADOOSH

In addition, the structural steel works of Badoosh Cement Plant and operation and maintenance of New Badoosh Cement Factory was undertaken by ENKA. The Clients were respectively, the Mosul Public Entreprise for Building Materials and State Entreprise for Cement in Ninevah.



Badoosh



New Badoosh



UMM QASR MULTI-PURPOSE TERMINAL – IRAQ

CONTAINER TERMINAL YARD 5, QUAY WALL & MARINE WORKS



Location: Basra - Iraq

Scope : Lump Sum Turn Key

Commencement: December 2018

Completion: June 2021

Client : Aloreen Investment Ltd.

The contract for the BMT Umm Qasr Yard-5 quay wall and marine works include engineering, design, procurement, transport and logistics, and construction.

The scope of the project includes the design and construction of quay wall structure; dredging; bedding layer; concrete block fabrication and installation; cope unit construction; marine fixtures and accessories installation and backfilling behind quay wall. Under the contract, a block work quay wall is to be installed at the end of the basin. The length of the main quay wall is approximately 611 m.

The works under the Part-1 of the project were %100 complete. The Part-2 of the project consisting of land side crane beam and bored piles is planned to be completed in June 2021.

Key Quantities	Dredging	997,762 m ³
	Backfilling	524,124 m ³
	Geotextile	39,104 m ²
	Revetment and scour protection	27,499 m ³
	Concrete	132,598 m ³
	Installation of Marine Fixtures & Accessories	52 ea

BEKHME DAM – IRAQ



Location: Mosul - Iraq

Commencement: September 1986

Completion: December 1993

Client: State Commission for Dams – SCD
Ministry of Irrigation of Iraq

Construction of civil works including supply and erection of the hydraulic steel structures for the Bekhme Dam Project and turn-key housing complex comprising of 350 villas and 17 social facilities such as Guest House, Restaurant, Club House, Supermarket, Dispensary, Kindergarten, School, Mosque, Bank, Post Office, Laundry and Offices.

Due to the Gulf crises and the war this project had been stopped indefinitely since August 1990, when 32% of the work progress had already been completed.

Key Quantities	Open Excavation	11,000,000 m ³
	Underground Excavation	2,500,000 m ³
	Concrete	3,000,000 m ³
	Hydraulic Structures	25,000 tons
	Drilling for Grouting	110,000 m
	Grouting	9,500 tons
	Housing Complex total flooe area	80,100 m ²

IRAQ – TURKEY CRUDE OIL PIPELINE EXPANSION



Location: Turkey and Iraq

Construction Period: March 1983 – October 1984

Client: BOTAS Transportation by Pipelines Inc.,
Turkey State Organization for Oil Projects - SCOP,
Iraq

The project included :

- Design and construction of expansion project to increase the capacity of existing 40", 1000 km crude oil line from 35 million tons/year to 50 million tons/year. Construction of 80 km of pipeline loop with 30" and 40" diameters. Replacement of pumps and motors at existing stations
- Modification of dispatching center
- Extension of the metering stations and addition of the 4th metering station
- Construction of five new pump stations complete with high voltage substation.
- Tie-in of new stations to existing pipeline



ENKA

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