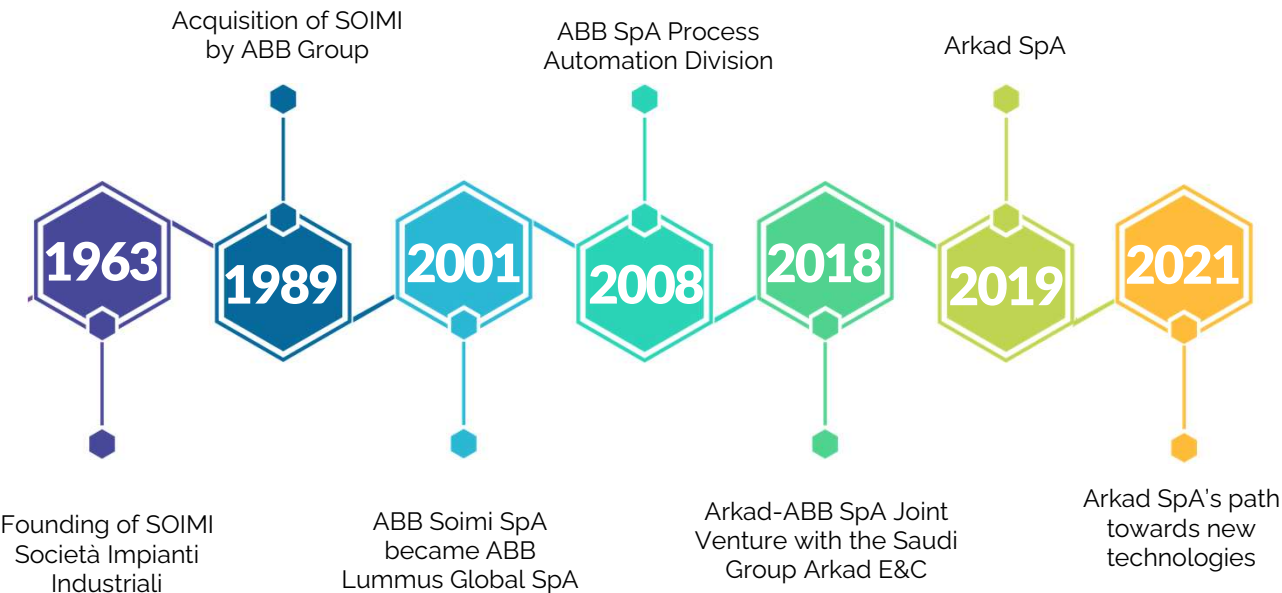


# COMPANY PROFILE

February 2024

# Arkad SpA Overview

“ Arkad S.p.A. is an engineering and construction company (EPC Contractor) operating in the Oil & Gas , Biofuel and Power sectors, including Green Transition, active both in the domestic and international markets and with almost 60 years of success history behind it. ”



## At a glance

- Mid-size EPC contractor
- Proven engineering, procurement, construction and commissioning capabilities.
- 300+ O&G and Power projects executed in 30 countries.
- Full range of Process Design, Engineering, Procurement, Construction and Commissioning solutions to the Energy Industries, with an increased focus on Energy Transition projects.
- Headquartered in Milan, Italy
- Branch offices in Algeria, Libya (Nov.23), Saudi Arabia, Abu Dhabi & Iraq.





# Corporate Structure



Arkad SpA is an international Company operating in the whole gas chain and in the new energies' economy



Can count on the unique expertise and strength of two leading EPC Contractors with complementary competences



Arkad E&C is the leading Saudi pipeline projects EPC contractor

# Technological Sectors

“ For over 50 years Arkad S.p.A. has been a world-leading ambassador for Italian capabilities and competencies, giving an important contribution to the growth of the national industries. The Company has become a leading champion of EPC contracting worldwide, with a substantial track record, thanks to its multidisciplinary skills approach and the capability to implement projects covering different technological segments in the energy industry. ”

## GAS

### Upstream

- Wellhead facilities and gathering systems
- Tri-phase separation (oil, gas and water)
- Gas, oil and effluent treatment
- Gas lift, gas injection and water injection
- Fixed platform topsides

### Midstream

- Onshore Pipelines
- Gas compressor stations
- Gas Processing and Treating
- Hydrocarbon pumping stations
- Metering stations
- Terminals and storage units

## NEW ENERGIES

- Biomethane, waste gasification
- Waste to fuels
- Waste treatment and recovery plants
- Biofuels

## POWER

- Open Cycle Power Plant
- Cogeneration
- Waste to Energy



# Services

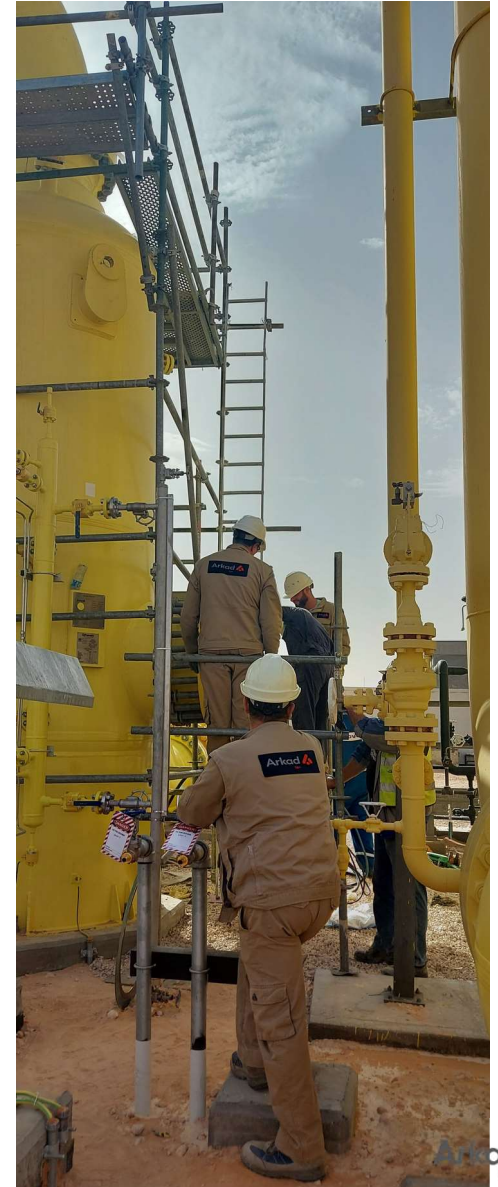
“ Arkad S.p.A. represents a powerful combination of expertise, resources and systems capabilities, synergistically integrated to deliver first-class end-to-end Engineering, Procurement and Construction (EPC) contracting solutions to our valued customers, worldwide. ”

## ENGINEERING SOLUTIONS

- Feasibility Studies
- Basic Design
- Front End Engineering
- Detailed Engineering
- Engineering Consultancy services

## EPC PROJECTS

- Project Management
- Process, Design HSE and Engineering
- Procurement
- Subcontracting
- Construction
- Commissioning & Start-Up



# Footprint & Key Projects

## Headquarter

Our Headquarters are in Sesto San Giovanni in the north of Milan. The Milan office acts as the financial services hub and provides the core engineering and management resources.



**Arkad SpA Headquarter**

## Arkad SpA Branches

- Abu Dhabi
- Algeria
- Iraq
- Libya
- Saudi Arabia

## Projects Executed

- Algeria
- Brazil
- Chile
- Congo
- Ecuador
- Iraq
- Italy
- Kazakhstan
- Kuwait
- Mexico
- Nigeria
- Oman
- Pakistan
- Thailand
- Tunisia
- Uzbekistan

## North Africa

Our presence in Algeria dates back to the 70's where we have operated in a wide range of key oil & gas infrastructures making us one of the most important EPC Contractors within the Country. In addition we have opened a branch in Libya on November 2023 to better participate into the Libyan market.

## Portfolio of key projects

Project Value mUSD

### Gas from Wells to CPF

CPF El Merk	GSA	Algeria	651
CPF MLE	ENI	Algeria	250

### Gas Compression

M'Boundi - ENI	ENI	Congo	150
Sawan	OMV	Pakistan	130

### Gas Treatment

LPG Nawara	OMV	Tunisia	310
LPG Rhourde Nouss	Sonatrach	Algeria	100

### Marine Facilities

Offshore Jetty Taranto	ENI	Italy	57.5
PK-KU-H Platform	Pemex	Mexico	380

### Pipelines

TL4 Transit Line	KOC	Kuwait	150
Balkan Stream	BTG	Bulgaria	1426

### Refining

CDU Sriracha	Thai Oil	Thailand	70
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### Power

320 Mw Djeno	ENI	Congo	470
50 Mw KAZ	Shell	Iraq	60
100 Mw Zirku	ADNOC	Abu Dhabi	180
120 Mw Barge	AGIP KCO	Kazakhstan	140

### Biorefinery

BioJet	ENI	Italy	55
3rd line Degumming	ENI	Italy	33

## Middle East

Middle East offices are located in Abu Dhabi from which we manage our Branch offices in Saudi and Iraq. Our track record in this area includes various projects (i.e., ADNOC on the Zirku Island, Shell Gas KAZ Power Plant in Iraq and TL4 pipeline in Kuwait. Beside local presence of the holding Company Arkad E&C, whose main field of activity is in pipeline construction, Arkad SpA has opened a Saudi Branch to pursue EPC contracts in its proper disciplines.



# What we believe in

## MISSION

Unlocking our potential providing competitive and inclusive solutions to today's needs of sustainable energy production and transportation.

## VISION

To be a leading enterprise with a global reach, passionately pursuing the creation of value for all stakeholders while respecting the needs of individuals, society and environment.



## BE LOCAL

The world is our home: our multi-location setup and the diversity of our staff allow us to rapidly integrate our organization within the territories.



## PEOPLE

Our added value is our people: their competencies, their passion, their capability to interact with the client. Their diversity in age, gender and nationality constitutes one of our strengths and guarantees our flexibility.



## IMPROVEMENTS

In a fast-changing business with higher and higher hurdles, we make of our continuous learning approach and improvement capabilities one of our major assets.



## CHALLENGES

Counting on our experience and wide knowledge of technologies and countries, difficult tasks in harsh environments allow us to take on and perform challenging issues.



## SAFETY

Health, Safety, Security and Environment (HSSE) are at the heart of what we do. Our goal is zero incidents and minimal environmental impact.

# Key figures

**+ 220**

talented employees

**+ 300**

projects completed

**+ 30**

countries we have worked in

**+ 15 mln**

construction  
man-hours w/o an LTI  
for ongoing projects

**60**

years of experience

**+ 400,000**

man-hours\*  
HO Project Execution

\* Including external

Arkad



# ESG Path

We push ourselves beyond mere economic objectives by setting environmental, social and governance goals.

We intend to use our talents and our abilities to contribute to building a sustainable ecosystem for industries and the planet. E.S.G. are the pillars which we build the future of our Company.

Through the path we have traced with the contribution of our people and our stakeholders, we want to deliver tangible sustainability added value within the markets we are working in, fostering the economic, social and environmental well being of our community.

Sustainability is our everyday goal, all along the value chain, towards partners and subcontractors in any location and project, the world over. Protecting the environment, creating a safe and healthy workplace wherever we operate, supporting diversity and inclusiveness, working ethically, spreading our beliefs towards any local partner company and making our supply chain as sustainable as possible.

We take full responsibility for such goals and we challenge ourselves to always measure and improve our performances.



## ENVIRONMENTAL

We are strongly committed to driving down our energy and carbon impacts, as we believe that climate change is one of the greatest risks to our world. We have set a long-term environmental performance target for the company that addresses energy and water consumption.



## SOCIAL

A deep commitment to social responsibility is core to who we are as a company. We believe people are at the heart of our business and take pride in our outstanding work culture.

We strive to be an optimal employer to our workforce and collaborators, as well as a valued partner to local communities interested by our projects.



## GOVERNANCE

We view good governance as essential to creating and preserving value for our shareholders and other stakeholders. This includes a sound approach to corporate governance that complies with all applicable laws, rules, regulations and policies as well as unwavering adherence to our values.



# ESG Engagements

As part of the path taken by our Company towards Green and Circular Economy initiatives, we joined the **Open-es Community**, the new digital platform born from the partnership between Eni, Boston Consulting Group (BCG) and Google Cloud, dedicated to sustainability in industrial supply chains and open to all companies wishing to undertake an energy transition path.

## Top Performer in ESG values



## water & carbon footprint

we are increasing our efforts to reduce the water consumption in our everyday life and the carbon footprint of our activities

Water Footprint  
(per hour worked)  
6,91 LtH<sub>2</sub>O/WMH

2021

Carbon Footprint  
382.349 kg CO<sub>2</sub>eq  
(GWP)

2021



# People Wellbeing


**Health, Safety, Security and Environment (HSSE) are core values of Arkad's Sustainability vision.**

HSSE values and culture are spread all along the value chain, towards partners and subcontractors in any location and project all over the world. This reflects directly and positively on the reputation of the business and on our stakeholder trust.

The effort and enthusiasm we put into safeguarding people and protecting the environment is demonstrated by solid HSE statistical track records and by the satisfaction of our customers.


Arkad Systems are structured aiming at striving for continual improvement by setting and ensuring the fulfillment of challenging HSSE goals, assigning leadership and accountability. Our HSSE and Environmental Management Systems are certified according to **ISO 45001 and ISO 14001.**

## TRAINING



**+120K HSSE Training hours in the last 5 years**  
**1.15% HSSE Training hours on total worked manhours at sites**

## LTI



**+15M Man-hours w/o LTI since last LTI**  
**0.60 TRIR performed during 2021**

# Cooperation Arkad SpA - KEW

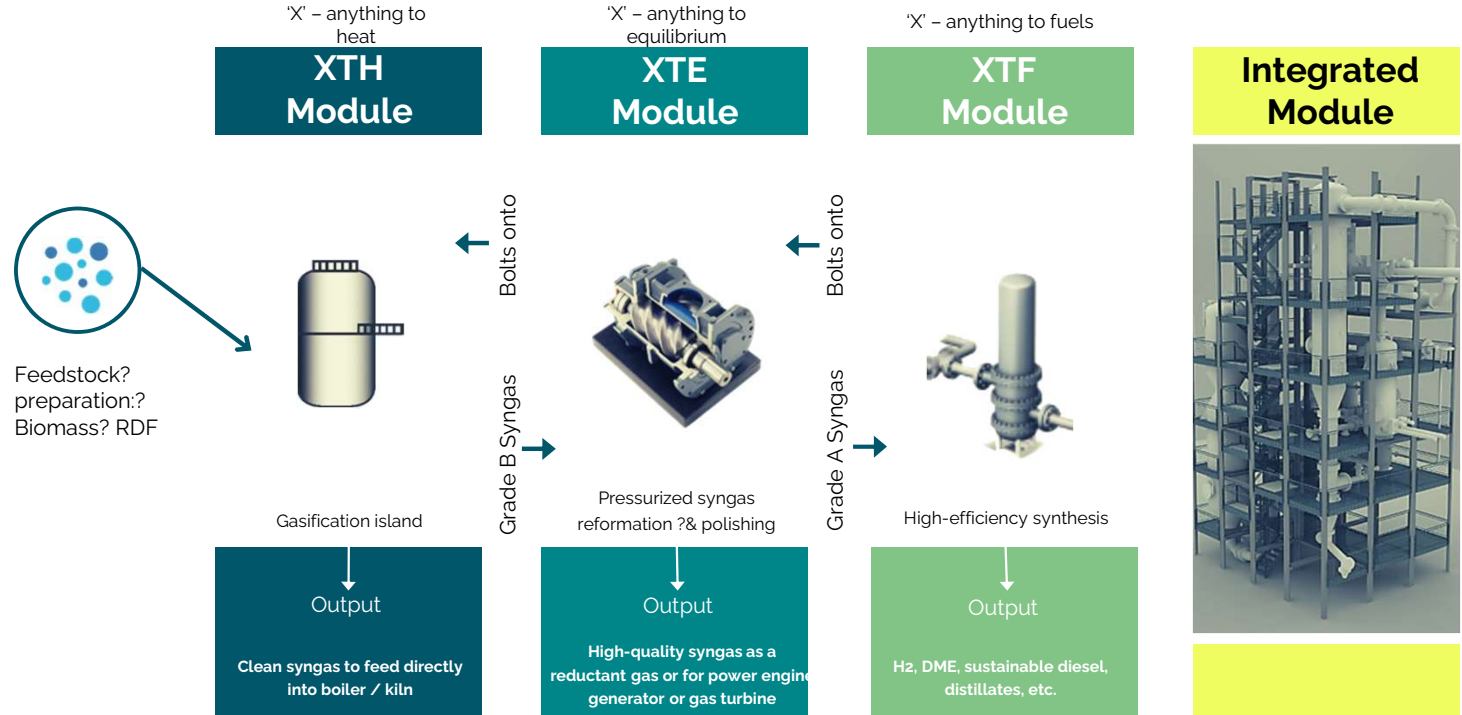
## NEW JOINT VENTURE TO COMMERCIALIZE AND DELIVER XTH, XTE AND XTF MODULAR UNITS

KEW Technology and Arkad SpA have agreed to start a consolidated cooperation to engineer, commercialize and deliver ready to operate biomass/waste to syngas modularized units.

Depending upon Customers needs, we can offer a full range of additional services from feedstock sourcing to operations of the units.

“We believe that the engineering and delivery capability of Arkad together with KEW proven pressurized gasification technology represent an unique in the market  
Andrea Brunetti, CEO Arkad SpA”

### KEW's Plants - Low capex, simple construction and low complexity





# Joint Cooperation Agreement Arkad SpA – JNG Technology

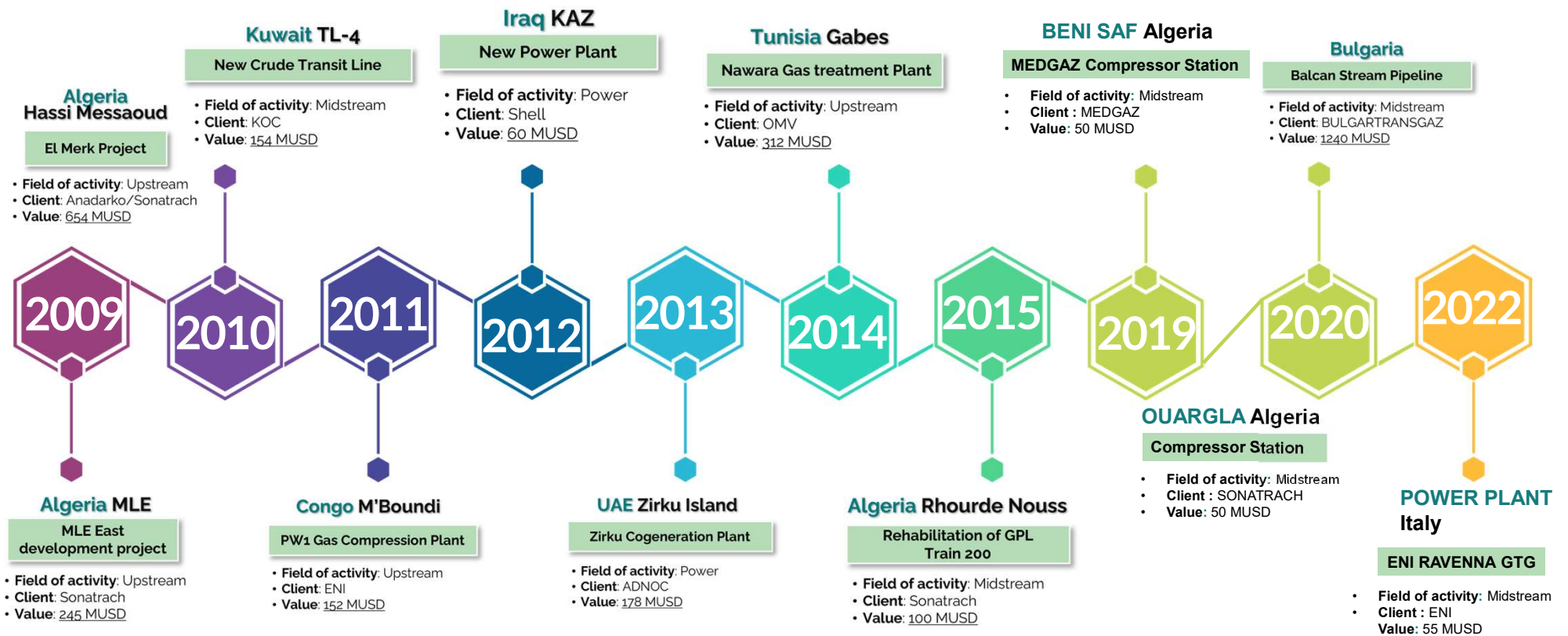
Arkad SpA and **JIANGNAN ENVIRONMENTAL PROTECTION GROUP** Inc., an international private technology company who has developed and owns the technologies with global intellectual property rights among which those related to **High Efficient Ammonia Based Desulfurization (EADS)** and **Integrated Ammonia-based Desulfurization and Decarbonization (ADSC)**, set up a long-term strategic commercial relationship to market the technologies and supply turn key solutions to many segments of the industrial sectors, in particular to the refining and power industries.

The agreement covers several important geographical areas around the world, in particular Italy, Algeria and Saudi Arabia and all countries neighboring the Mediterranean Sea.

The partnership will combine Arkad SpA's EPC works expertise and global footprint in the market, especially in the Countries named above, with JNG full mastery of the process.



# Our Major Projects



Project	<b>Peakers Project – Installation of new gas turbines 20TG1701 and 20TG1801</b>
Customer	Enipower
Location	Ravenna, Italy
Award Date	2021
Value	44 MUSD
Completion	Ongoing
Description	Engineering, supply, installation and testing activities of two 60MW open cycle gas turbines, relevant utilities systems, including new power substation, control station and high Voltage GIS distribution panel (132kV). The Project also includes the execution of <i>Tie ins</i> connections to the existing plant utilities, the installation of interconnecting piping & electrical and instrumental circuits between the two gas turbines.
Scope of Work	Engineering, supply, inspection and testing activities



Project	<b>KEW Arboretum (FEED)</b>
Customer	CIRCULAR FUELS L.t.d.
Location	Teesworks, United Kingdom
Award Date	2022
Value	530 kEUR
Completion	Ongoing
Description	FEED for 150tpd (equivalent to 50,000tpa) renewable DME (rDME) production facility including Feedstock Preparation and Modular Gasification Islands
Scope of Work	FEED

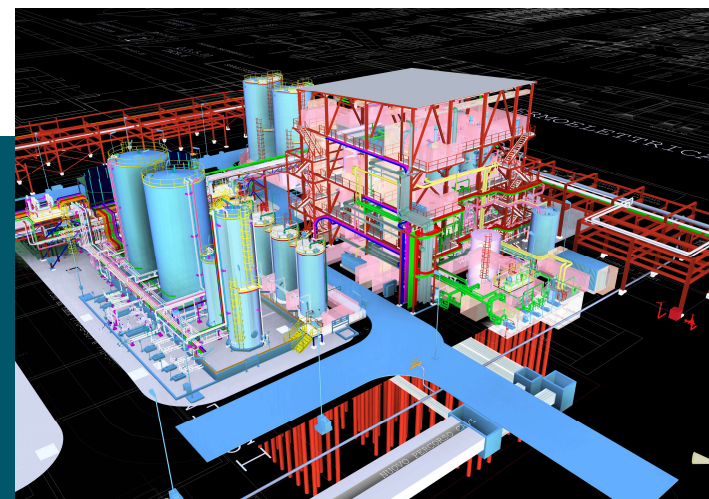




Project	BIOJET
Customer	ENI
Location	Gela, Italy
Award Date	Dec 2022
Value	55 MUSD
Description	Production of aviation biofuel (Biojet) within the new biorefinery, in addition to fuels already in production today, Naphtha, Diesel and GP. Variable 16% ; 31% up to 61% of total Biofuel production ( starting from 120,000 first year)
Scope of Work	Engineering, Procurement, Construction, Commissioning, Start-up services



Project	3rd line Degumming
Customer	ENI
Location	Gela, Italy
Award Date	Dec 2022
Value	33 MUSD
Description	Upgrade of the biomass pre-treatment plant of the Gela biorefinery for achieving the "Palm oil free" goal, adding a 3rd line of degumming with capacity from 28 t/h additional to the current one in operation and provision for a fourth future line. The upgrade of the pre-treatment plant will allow the replacement of Crude Palm Oil with the replacement fillers available on the market and the increase in the pre-treatment capacity of the charges
Scope of Work	Engineering, Procurement, Construction, Commissioning, Start-up services



Project	<b>Menzel Ledjmet East (MLE), Algeria</b>
Customer	Saipem SpA / Final Client : SH – First Calgary Petroleum
Location	Algeria
End	2013
Value	250 MUSD
Description	Utilities, storage and export facilities for the MLE Central Processing facilities. Including no. 4 LPG spheres, no. 10 tanks, hot oil system, electrical and instrumentation systems.
Scope of Work	Engineering, Procurement, Construction, Commissioning, Start-up



Project	<b>El Merk off site facilities</b>
Customer	Sonatrach
Location	Algeria
End	2014
Value	650 MUSD
Description	EPC for El Merk offsite facilities including no.120 well sites, no.10 field gathering stations, n.6 gas distribution manifolds, 900 km of flowlines and trunklines, water treatment units, utilities.
Scope of Work	Engineering, Procurement, Construction, Commissioning, Start-up



<b>Project</b>	<b>Gas compression and treatment plant</b>
<b>Customer</b>	ENI Congo SA
<b>Location</b>	Congo (Brazzaville), M'Boundi
<b>End</b>	2014
<b>Value</b>	150 MUSD
<b>Description</b>	Treatment plant for the dehydration of gas to reach the required water dew point. The excess of treated gas not delivered to Djeno PP will be re-injected in wells. In addition, a new gas compression station to increase pressure of gas separated in the existing oil plant up to 58 barg and then deliver it to the CEC and CED power plants in Djeno.
<b>Scope of Work</b>	Engineering, Procurement, Construction, Transport, Installation, Commissioning



<b>Project</b>	<b>Sawan gas compressor station</b>
<b>Customer</b>	OMV (Pakistan) Exploration Gmbh
<b>Location</b>	Pakistan, Sawan
<b>End</b>	2010
<b>Value</b>	130 MUSD
<b>Description</b>	New compressor station installed upstream of the existing Central Processing Plant to prevent reduced reservoir pressure. The plant includes no. 4 x 7.5 MW/each gas turbine compressors and auxiliaries
<b>Scope of Work</b>	Engineering, Procurement, Construction, Commissioning





<b>Project</b>	<b>Ouargla Compressor Station</b>
<b>Customer</b>	Sonatrach TRC
<b>Location</b>	Ouargla, Algeria
<b>End</b>	2022
<b>Value</b>	41 MUSD
<b>Description</b>	EPC project to expand a gas compression station at Ouargla, Southern Algeria. The project encompasses the addition of the 4th Turbo Compressor at SC3 station, the upgrading of the utilities, the electrical systems, the Distributed Control System (DCS) and relevant piping and civil works. Once completed the project will increase overall compressor capacity of the GR1/GR2 pipeline system.
<b>Scope of Work</b>	Engineering, Procurement, Construction, Commissioning



<b>Project</b>	<b>Beni Saf gas compression station – Phase 1</b>
<b>Customer</b>	MEDGAZ S.A. (Sonatrach, CEPESA, Naturgy)
<b>Location</b>	Beni Saf, Algeria
<b>End</b>	2022
<b>Value</b>	43 MUSD
<b>Description</b>	EPC for Beni Saf Compressor Station Phase 1 Expansion Project, to increase gas compression capacity through the addition of the fourth Turbo-Compressor Train and ancillaries. This will allow MEDGAZ to increase the gas export from current yearly 8 billion cubic meters to about 10.5 billion cubic meters through the existing 24" subsea pipeline.
<b>Scope of Work</b>	Engineering, Procurement, Construction, Pre commissioning, Commissioning, Start-up assistance



Project	<b>NAWARA Gas Treatment Plant</b>
Customer	OMV
Location	Tunisia
End	2021
Value	310 MUSD
Description	Gas Processing Plant through fractionation of raw gas into methane, propane, butane and condensate, for sale purposes
Scope of Work	Engineering, procurement, construction, installation, pre-commissioning and commissioning activities including gas separation and LPG extraction units



Project	<b>Rhourde Nouss revamping of LPG train</b>
Customer	Sonatrach
Location	Algeria, Rhourde Nouss
End	2019
Value	100 MUSD
Description	EPC for the revamping of one LPF Train (200) and upgrading of the existing LPG trains (100 and 300). New DCS/ESD/F&G System and Remote Control for Compressor Unit has been provided. Heavy activity of revamping on existing field.
Scope of Work	Engineering, Procurement, Construction, Commissioning



Project	<b>Offshore production platform</b>
Customer	Pemex E&P
Location	KU-Maloob Zaap, Campeche Bay, Gulf of Mexico
End	2009
Value	380 MUSD
Description	Realization of the PB-KU-H production platform – capacity 100,000 bbl/d oil and 90 MMscfd gas.
Scope of Work	Procurement, Fabrication, Commissioning



Project	<b>Offshore Jetty</b>
Customer	ENI
Location	Italy
End	2022
Value	57 MUSD
Description	Extension of the existing jetty (+ 500 m) and new Loading/Unloading Platform in the Taranto ENI Refinery.
Scope of Work	Engineering, Procurement, Construction





Project	<b>New crude transit line (TL-4)</b>
Customer	Kuwait Oil Company (KOC)
Location	Kuwait
End	2016
Value	150 MUSD
Description	EPC for new pipeline 30" – 123 km for a capacity of 315 mbopd with intermediate valve / gathering stations and relevant utilities
Scope of Work	Procurement, Construction, Transport, Installation, Commissioning



Project	<b>Bulgarian Balkan Stream</b>
Customer	BULGARTRANSGAZ EAD (as part of the consortium Arkad E&C)
Location	Bulgaria
End	2021
Value	1426 MUSD
Description	Engineering and Procurement for a gas pipeline system expansion. Scope of the contract is the construction and delivery of a 48inch 474 km (295 mile) pipeline linking Bulgaria's southern border with Turkey to its western border with Serbia.
Scope of Work	Engineering, Procurement, Support to Construction, Pre-commissioning Commissioning activities



Project	<b>Zirku power upgrade</b>
Customer	ADNOC (ZADCO)
Location	Abu Dhabi Zirku Island
End	2022
Value	175 MUSD
Description	Revamping of Power Generation Plant with n. 2 Gas turbine driven generators (50 MW) and ancillaries
Scope of Work	Engineering, Procurement, Construction, Installation, Pre-commissioning & Commissioning



Project	<b>Khor Al Zubair power plant</b>
Customer	Shell Gas Iraq BV
Location	Iraq, Basra (Khor Al Zubair field)
End	2017
Value	60 MUSD
Description	Power plant 50 MW, open cycle, within KAZ NGL/LPG plant.
Scope of Work	Engineering, Procurement, Construction, Commissioning and Start-up services



Project	<b>Integrated power plant</b>
Customer	ENI Congo SA
Location	Congo
End	2010
Value	470 MUSD
Description	Realization of a new power generation plant open cycle aimed at providing 320 MW electrical power to the ENI Oil & Gas plants. The plant includes 2 gas turbine generators 166 MW each.
Scope of Work	Procurement, Construction, Commissioning, Start-up services



Project	<b>Kashagan Power Barge</b>
Customer	Agip KCO
Location	Kazakhstan, off-shore Caspian Sea
End	2007
Value	140 MUSD
Description	Power generation barge complete of a steel hull (95 m L x 16 m W x 5 m H) equipped with a total 4 X 30 MWe jet derivative turbo generators, no. 3 diesel generators 2 MW, dedicated auxiliaries and topsides facilities.
Scope of Work	Procurement, Fabrication, Commissioning, Start-up services





THANK YOU

