



Oil, Gas & Petrochemical

Your total solution provider for Oil & Gas  
With extensive experience in executing  
EPC plants, ABB offers the largest  
breadth of solutions throughout the oil  
and gas supply chain

# ABB in the world

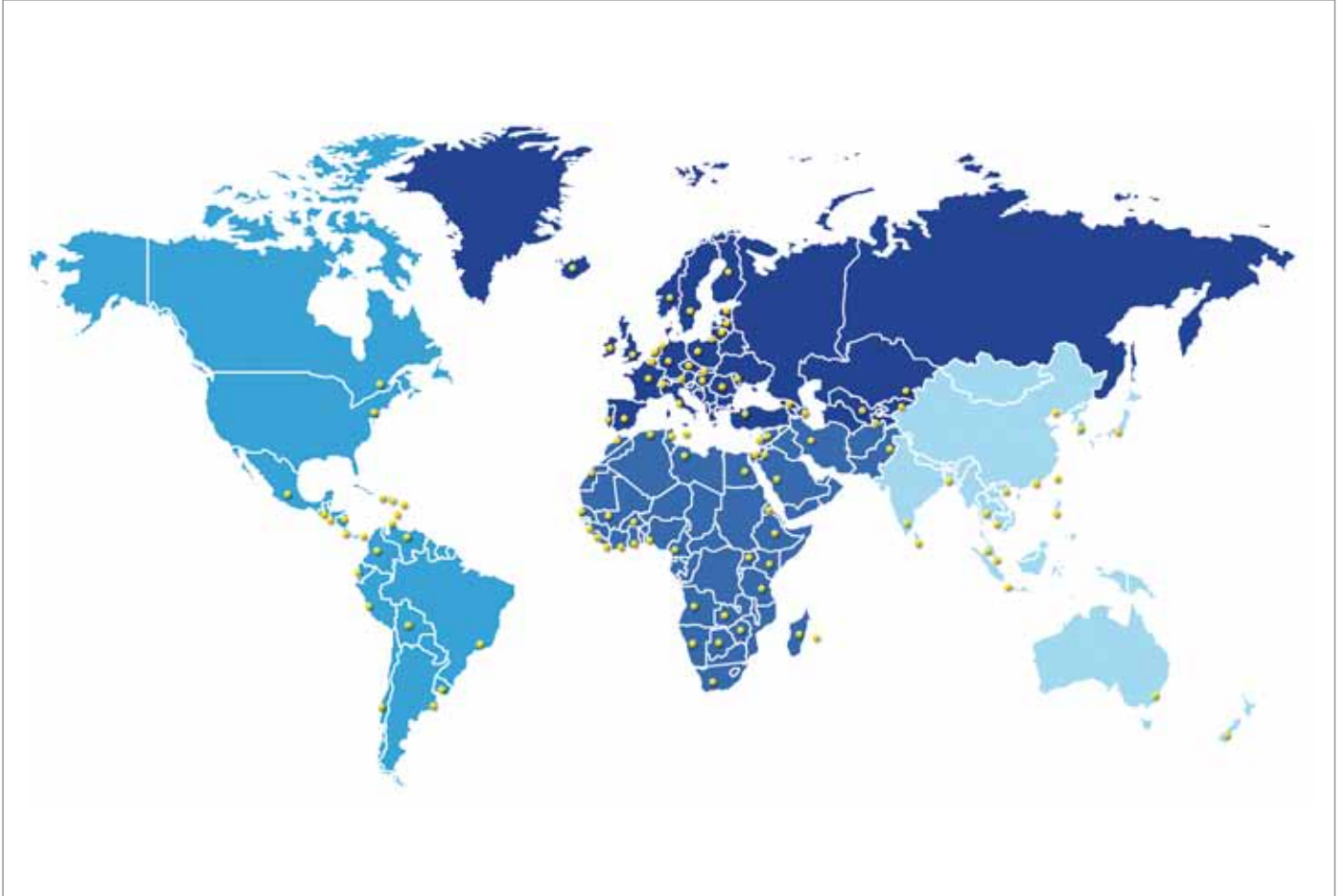


ABB is one of the world's leading engineering companies, helping customers to increase industrial productivity and to lower environmental impact in a sustainable way. With strong market positions in its core businesses, ABB Group operates in around 100 countries and employs about 120,000 people.

- Orders in 2008: \$38.3 billion
- Revenues in 2008: \$34.9 billion

ABB's technology competence, broad application, know-how and global presence offer customers easy access to leading engineering solutions and systems.

Innovation and quality are key characteristics of our service and product offering.

ABB is headquartered in Zurich, Switzerland. ABB Ltd shares are traded on the stock exchanges in Zurich, Stockholm and New York.

The ABB Group was formed in 1988, when the Swedish Asea and the Swiss BBC Brown Boveri merged under the name ABB. Asea's history dates back to 1883. BBC Brown Boveri was founded in 1891.

# Our history and background in the Oil & Gas

ABB SpA - Process Automation Division is a company of the ABB Group, leader in power and automation technologies that enable utility and industry customers to improve their performances while lowering environmental impact.

ABB SpA operates in the Oil & Gas contracting business through a devoted Centre of Excellence, delivering turnkey plants to the Oil & Gas Industry and Power Plants. We offer integrated services including multi-disciplinary engineering, procurement, construction, commissioning & start-up, maintenance engineering and global service. We have the back-up of a world-class international Group, providing multi-national networks and support.

Our extensive portfolio of projects makes ABB SpA one of the most experienced and successful contractors in the engineering and construction services.

We are particularly conversant with projects located in remote and often environmentally hostile regions of the world, where the logistical constraints of moving procured equipment, bulk materials, construction equipment and labour to multiple work-fronts creates a major challenge. We have also learned to cope with difficult and time-consuming customs controls and inland freight management in various countries around the world.

For more than 45 years ABB SpA has served customers worldwide completing over 300 EPC projects.

Combined with the traditional range of products, systems and solutions provided by the ABB Group, the Company can address every aspect of the oil and gas supply chain.

## Our offering

**Turnkey plants to the Oil & Gas industry onshore and offshore:**

- Upstream
- Midstream
- Downstream
- Power
- Special technological application
- Integrated electrification projects
- Integrated process control and information management systems
- Automation products for process control, security and analytical measures
- Full Service®

**Oil & Gas Companies are our customers. We are proud of our ability to find the proper solution to any problem, regardless of design, time or cost.**



# A commitment to Quality, Safety & Environment

Quality, safety and environmental protection are to us a must for any project we execute. They are a priority at every stage.

We operate in accordance with the major International Standards:

- Our quality system complies with the ISO 9001:2008 standard, certified for the different work areas by Det Norske Veritas (DNV), CSQ/IQNet.

We implement and maintain a Quality Management System to ensure the application of appropriate procedures in order to meet both company and project objectives. Our Quality Management System is regularly audited and monitored for continuous improvement.

- Our Safety Management System is certified by DNV and complies with the International standard OHSAS 18001.
- Our Environmental Management System is certified by DNV and complies with the ISO 14001:2004 standard.

It is our policy to ensure the welfare, health and safety of all our employees, customers, suppliers and subcontractors.

We execute all our activities with emphasis on protecting the environment and preventing pollution. We implement these policies in combination with the environmental requirements of our customers and in accordance with the applicable local laws and regulations.



# Our premises and resources

The headquarter of ABB SpA is in Sesto San Giovanni (Milan) Italy.

Our office complex is a 10 floors of an ultramodern building, with a total area of 20.000 sqm, which can provide adequate spaces and facilities to accommodate customer representatives when required. Our premises are fully equipped with the most up-to-date systems and facilities including conference rooms, wireless internet network and an automated auditorium for 200 people.

ABB SpA has local branches and offices in all the countries we operate. Dedicated local engineering and execution centers can be mobilized according to project requirements and/or the customer's specific needs.

The significant international presence of ABB SpA is enhanced by the multinational network and mobilization of the ABB Group, which gives us local support in:

- understanding local business practices and technical standards
- meeting laws, regulations and tax requirements
- partnering with financial institutions
- working with subcontractors
- accessing a worldwide procurement network

## IT Systems

To meet the challenges of a cost-effective project execution, ABB SpA adopts state-of-the-art IT Systems and tools. We use software solutions that cover the complete project execution life cycle, from materials specification and change management through procurement and tracking, to inventories, forecast, and material delivery including document and information management.

Our policy is based on maximizing the use of IT Systems to achieve faster information transmission, accurate and traceable documents storage, full and reliable data management.



## Our Team

**Our Home Office staff comprises more than 5,000 employees, out of which almost 800 devoted to the Oil and Gas with in-depth experience in their specialization fields:**

- project management
- planning and project control
- engineering
- procurement and sub-contracting
- testing, inspection and shipping
- fabrication and construction supervision
- commissioning & start-up
- maintenance and global service
- quality assurance, safety and environment protection

**Knowledgeable, enthusiastic and committed people are the keystone of our business**



# Focusing on the business needs of our customers



**Global**  
Responsibility



**Multiscope**  
Risk Management



**Life Cycle**  
Capital Productivity



**Enabling Technologies**  
Operational Profitability

## Everyday, everywhere onshore or offshore, ABB understands and meets the challenges of the Oil & Gas Industry

### **Global Responsibility**

We are everywhere you are – with our organization to meet your challenge. ABB is a global organization with global responsibilities. With a firm focus on health, safety, security and environment, we strive to provide customers with technology and services that have a positive effect on the world we are living in.

### **Multiscope - Risk Management**

ABB executes large industrial Oil & Gas projects with multiple scopes. We value that skill as a core competence. By combining our EPC capability with project forecasting and planning, we strive for flawless execution, reducing risk to project schedules, costs and safety.

### **Life Cycle - Capital productivity**

ABB's services and products enhance your project from the early stage to commissioning. We operate locally while drawing support from ABB resources around the globe. A partnership with ABB provides world-class expertise and continuity.

### **Enabling Technologies – Operational Profitability**

Our Oil & Gas plants take advantage of the Industrial IT-enabling technologies which provide fully integrated power and automation solutions with open interconnectivity to business and export systems. They achieve major contributions to safety, profitability and enhanced resource recovery.

# Innovative and efficient Oil & Gas solutions

Safety, Quality, Global Responsibility, Sustainability, Operational Excellence and Profitability are important to our customers and to us. For more than 50 years, ABB has worked closely with Oil & Gas companies worldwide to provide innovative solutions and services that meet the strictest requirements in these areas.

Our global capabilities allow us to deliver large lump sum turnkey projects anywhere in the world, regardless of size and complexity and no matter how remote the location is. Our hallmarks include on-time delivery, optimized EPC services and total life cycle support. Today ABB is the world's leading supplier of power, automation and telecommunication solutions to the Oil & Gas industry.

Our objective is to maintain recognized best-in-class positions with all of the customers we serve and in every project, system or product we deliver.

Innovation through real EPC project execution experience and proven ability to offer integrated solutions for automation, telecommunication and electrical systems, distinguish ABB as a true partner to the Oil & Gas Industry.

## Our achievements worldwide

- ABB Oil & Gas Centers in 40 countries
- 1,000's of successfully completed Oil & Gas projects worldwide
- Over 20 Centers of Excellence for project execution and R&D in Europe, the Americas and Asia
- Market leadership in major industries
- Comprehensive automation, instrumentation and electrification product portfolio

**Whatever challenge we face – geography, climate or politics – ABB has never failed to complete an Oil & Gas project**



# Multiscope Oil & Gas solutions

Upstream

Midstream

Downstream

Power

Automation &  
Electrification Systems

Full Service &  
Global Consulting

**Upstream:** our expertise in this field ranges from wellhead to treatment centers. Our management skills, engineering flexibility and ingenuity, enable us to successfully handle the most complex project situations.

**Midstream:** is our core business. Our extensive experience in the execution of complete hydrocarbon transport plants, is based on more than 30 years of activity in this field. Professional, proactive and integrated approach to customers are our values.

**Downstream:** we have built many Downstream projects, including some special applications such as modular mini-refineries and the revamping or installation of refinery units. We deliver mainly: refinery process units licensed by others or plant utilities including power distribution and oily water treatment plants.

**Power:** in-depth know-how combined with our valuable hands-on knowledge of rotating machines and a long-lasting relationship with turbine manufacturers, give us the edge in power generation.

**Automation & Electrification Systems:** as a leader in electrical and automation systems, we offer a wide portfolio of products, systems and electrification solutions tailored to the special demands of the Oil & Gas industry. By being involved from the FEED phase, we develop designs which help customers minimizing costs, timing and improving reliability and availability.

**Full Service & Global Consulting:** throughout the life cycle of each customer's facilities, we are uniquely positioned to support changing service requirements. Our full spectrum of services give our customers the flexibility to match their needs with our capabilities, from routine maintenance and remote monitoring to full service.





# EPC projects a core competence of ABB

ABB SpA – Process Automation Division has broad international experience in the design, engineering, procurement and construction of upstream plants – whether onshore or offshore - and midstream plants. We provide all the technical and management skills needed to complete the job.

Our professional project management, global presence and strict compliance with international standards ensure timely, high quality performances throughout all projects phases from design to commissioning and always with a firm focus on Health, Safety, Security and Environment.

As the project develops: from basic and detailed plant design, to project management and project control, procurement and subcontracting activities, construction supervision, commissioning & start-up, up to full service & maintenance services, we ensure a value-added return on your investments.

We execute EPC projects mainly on lump sum turnkey basis around the globe, with local content and support to ensure knowledge transfer. The combination of global execution and local involvement improves our project management efficiency in even the most remote locations.

ABB SpA contributes to lasting improvements across the projects' life cycle by combining its extensive project execution experience with in-depth product and system integration knowledge.

## Our Key Numbers

### ABB EPC Plants Key Numbers

- 300 EPC projects successfully completed worldwide
- Over 4 Million engineering man-hours in the last 5 years
- Over 20 Million construction man-hours in the last 5 years
- HSE record: 6 Million construction man-hours average without incidents
- More than 800 MW turbine installed in the last 5 years
- Over 600,000 I/O managed and 700 Human Machine Interface (HMI) designed and installed in the last 5 years

## Full scale EPC plants: services, products, systems and solutions throughout the Oil & Gas supply chain



# Upstream Plants

## Upstream

- Well head facilities
- Gathering systems
- Tri-phase separation (oil, gas, water)
- Gas treatment
- Oil treatment
- Gas lift/gas injection/water injection units
- Effluent treatment

## Midstream

## Downstream

## Power

## Automation & Electrification Systems

## Full Service & Global Consulting

ABB SpA designs and builds all types of upstream Oil & Gas plants, from wellhead to treatment centers, both onshore and offshore.

We provide a differentiated approach and innovative solutions to logistically difficult and technically complex projects.

Our highly skilled team of process engineers can provide the most cost-effective solution: cost, quality, and timing are the key drivers we pursue during project execution.

ABB SpA's capabilities in the offshore field allow providing on an integrated or segmented basis: fixed platform topsides (deck), Floating Production Storage and Offloading (FPSO) units, Floating Production Facilities, Floating power generation plants, modular units, I/E modules.

ABB SpA combines its design engineering expertise with its extensive fabrication knowledge, to provide our customers with design and optimal efficiency.

The services provided cover installations for both shallow and deep waters, including design, fabrication, installation, commissioning and start-up.

Multidisciplinary teams in a global project approach allow the best management of critical interfaces, topsides/structures, sealines/platform, hull/topsides.

ABB SpA has a long track record of projects successfully executed in the upstream Oil & Gas field. Our experience encompasses various complete oil/gas separation plants onshore, the recent completion of an offshore oil production platform, and special applications solutions.



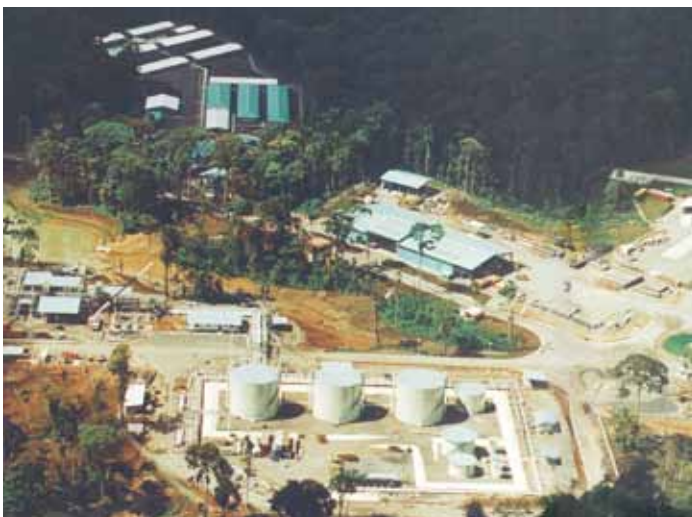
## Past experiences



**PB-KU-H Production Platform,  
Mexico for Pemex**



**Bir Berkine/Bir Berkine Nord Oil Treatment Plant,  
Algeria for Sonatrach**



**Expansion of Villano CPF Oil Treatment Plant,  
Ecuador for Agip Ecuador**

# Midstream Plants

## Upstream

## Midstream

- Gas compressor stations
- Oil pumping stations
- Block valve stations
- Metering stations
- Pressure reduction facilities
- Terminals and storage
- LNG Regasification plants

## Downstream

## Power

## Automation & Electrification Systems

## Full Service & Global Consulting

ABB SpA has achieved world-renown expertise in the design, construction and start-up of both onshore and offshore transport plants for large volumes of gas, crude oil, oil products over long distances.

As a leading EPC contractor we cover all activities related to oil & gas transportation: from production plant to distribution. In addition to compressor and pumping stations, ABB SpA has expertise in storage, including re-injection stations in underground storages and LNG Regasification plants.

For pipeline compressor/pumping stations we offer different solutions suitable to each customer's needs: compressors or pumps coupled to gas turbine, electrical motors with Variable Speed Drives or diesel/gas engines.

More than 30 projects have been executed on lump sum turnkey basis in various areas of the world. With a keen eye on the protection of the environment and territory, we have successfully completed such projects in the most hostile conditions: from the deserts of Africa, to the tropical area of Thailand and the cold climates of Eastern Europe.



## Past experiences



Saiyok Gas Compressor Station,  
Thailand for PTT



Hassi R'Mel Boosting Station,  
Algeria for Sonatrach



Mogilno underground natural gas storage and above ground gas  
compressor and treating station,  
Poland for Polish Oil Gas Co.

# Downstream Plants

## Upstream

## Midstream

## Downstream

- Refinery Process Units licensed by third parties
- Modular Units
- Petrochemical Plants
- Utilities and offsites

## Power

## Automation & Electrification Systems

## Full Service & Global Consulting

ABB SpA has built many downstream projects, including some special applications such as modular mini-refineries, and the revamping or installation of refinery units. We deliver mainly: refinery process units licensed by others or plant auxiliaries and utilities.

We are capable of developing process engineering in the refining sector with respect to licensed technologies. In addition ABB has a wide experience in the design and construction of auxiliaries services and off-sites for downstream plants: effluent treatment units, fire protection systems, nitrogen/compressed air systems, storage, electrical distribution, integrated control systems, flaring systems, etc.

ABB has gained also an extensive experience in chemicals and fertilizers having built process units for the production of ethylene, polyethylene, nitrate potassium (KNO<sub>3</sub>) and for medicinal oils.

Backed by a strong process and technology expertise, ABB provides also truly innovative solutions adapted to its Clients' needs; for bio-fuels market, ABB, through technology partnerships, enables the processing of any raw materials that may be used for the production of fermentation ethanol.

## Past experiences



**CDU 3 Refinery Revamping**  
Thailand for Thai Oil Ltd



**Modular Mini-Refinery**  
Suriname for Staatsolie



**Ethylene/Polyethylene Plant**  
Uzbekistan for Uzbekneftegas

# Power Plants

**Upstream**

**Midstream**

**Downstream**

**Power**

- Simple cycle power plants
- Combined cycle power plants
- Cogeneration
- Modular plants
- Balance of Plant

**Automation & Electrification Systems**

**Full Service & Global Consulting**

ABB Group has its roots in turbine manufacturing, giving us detailed and extensive knowledge of rotating machines and high-pressure piping systems. ABB SpA is a qualified supplier for complete power plants and/or balance of plants. We offer a comprehensive range of turnkey solutions, including: engineering, supply, construction and commissioning.

ABB SpA has the engineering capabilities to develop specifically tailored solutions in this field, from the Kashagan Power Module No. 8, a power generation barge 120 MW to provide electrical power to the Block D offshore complex of the Kashagan oil field, to traditional applications as the Djeno 320 MW Simple cycle power plant in Congo, where we are responsible for Engineering, Procurement and Construction activities on LSTK basis.

Our natural skill for electrical engineering and applications, coupled with our EPC contracting background, place us in the best position to serve the Power Generation Industry.





## Past experiences



Integrated Power Plant – 320 MW,  
Congo for ENI Congo S.A.



Power Generation Barge – 120 MW,  
Kazakhstan for Agip KCO



Milazzo Combined Cycle Power Plant  
Italy for Sondel

# Automation & Electrification Systems

**Upstream**

**Midstream**

**Downstream**

**Power**

**Automation & Electrification Systems**

**Integrated Control and Safety Systems for Process Automation:**

- Distributed Control Systems (DCS)
- Power & Energy Management Systems (PMD/PDCS)
- Emergency Shutdown (ESD) and Fire & Gas (F&G) systems
- Supervisory Control and Data Acquisition Systems (SCADA)
- Plant optimization and simulation
- Pipeline management and leak detection systems (GMIS, PLDS)
- Automation Engineering & Functionals Safety Management Services

**Electrical Systems and Drives:**

- Power Distribution Systems: HV, MV and LV switchgears and transformers
- MV, LV Motors and variable speed drives for compressor and pumping stations
- Pre-fabricated E-rooms (Ex and non EX) with utilities
- Telecommunication systems (F.O and wireless)
- CCTV, security systems
- UPS systems and photovoltaic power supply
- Load shedding, black starting
- Electrical Engineering Services

**Full Service & Global Consulting**

ABB has been ranked as the world's largest provider of process automation systems. This success is directly related to ABB ability to deliver a broad portfolio of automation solutions to customers in all industries and markets. ABB SpA has developed a specific expertise in automation solutions tailored to Oil & Gas customers.

Moreover, ABB is one of the largest manufacturer of electrical products and systems and the high-efficiency of all the product line (from Low Voltage to High Voltage) meets all the standards of the Oil & Gas industry. The high reliability and performances of our electrical solutions comply with the new requirements for energy efficiency, control and safety.

We achieve operational excellence by matching continuous improvement strategies with real-time feedback and analysis tools to maximize production, reduce operational costs and increase productivity.

System 800xA is the ABB common and scalable technology platform and architecture, providing a common set of engineering, operation and maintenance tools to meet all plants automation needs. This results in streamlined operation and simplified maintenance. Safety remains an indelible part of our automation solutions, and our broad range of safety system products meets the most stringent safety standards. Fully integrated with this technology platform are the electrical solutions for the power distribution, energy management and variable speed drives applications. Intelligent field Instrumentation and telecom are part of this seamless integration due to the open architecture of the ABB platform.

ABB SpA has completed modernization projects and developed proven procedures for the "hot switchover" of control systems on some of the world's largest production facilities in the world.

## Past experiences



### **SAHIL Gas Injection Compressor Trains**

- n°2 Synchronous Motors, 13.5MW 4 poles, LCI converters, Converter transformers, Power Factor compensator and Harmonic Filter, Chiller Units,

**UAE for ADCO SAS**

### **ASAB Gas Lift Compressor Trains**

- n°2 Synchronous Motors, 16.5MW 4 poles, LCI converters, Converter transformers, Power Factor compensator and Harmonic Filter, Chiller Units,

**UAE for ADCO SAS**



### **NMPP Alliance Electric Motors and Drives**

- n°14 Induction Motors Explosion Proof, 2.4MW 2 poles, ACS1000 VSI converters, Converter transformers, Chiller Units
- n°5 Induction Motors Explosion Proof, 1.1MW 2 poles, ACS1000 VSI converters with integrated transformer,

**South Africa for Transnet**



### **Large automation turn-key project (Main Automation Contractor)**

- DCS, ESD, F&G, Simulators, SCADA, RTU

# Full Service & Global Consulting

Upstream

Midstream

Downstream

Power

Automation &  
Electrification Systems

Full Service &  
Global Consulting

- Maintenance engineering and planning
- Consultancy service
- Plant assets maintenance and full service
- Turn-around maintenance (TAM)
- Plant revamping/upgrading/modifications
- Energy saving
- Alternative energies

Recognizing the balance required between capital and operational investments, ABB SpA offers a complete portfolio of optimization services which goes far beyond parts and repair, and even beyond our own products. We are prepared to share the risks and rewards of managing the total asset life cycle. Our global service and performance management programs help customers focus on their core business while ABB SpA performs the task we know best: optimizing asset performance, cost and reliability.

ABB SpA has built a solid experience in Full Service, in particular in the Oil & Gas segment. ABB Full Service agreements are long-term performance based agreements, a true “win-win” partnership, where the customer is able to maintain its core site competences and ABB’s technical knowledge and proficiency adds value to the business. We enhance plant competitiveness by lowering maintenance costs and improving overall equipment effectiveness.



# A surprising flexibility to build a wide array of plant typologies

ABB SpA – Process Automation Division stands out for the surprising flexibility and ability to build a wide range of plant typologies. Our competences span from:

## **Bio-Fuels:**

we have always been in the forefront of environmental protection. The increasing world demand for alternative energy sources has led ABB SpA to focus its EPC expertise in this direction. Through strategic partnership we offer a wide range of bio-ethanol plants using different vegetable sources. Our plants are designed to minimize the environmental impact of our technology.

## **E-LNG:**

we provide on EPC basis all electric LNG main refrigerant compressor train (E-LNG) by coupling ABB MV drives and ABB large sized motors to the best performing LNG compressors. As a result, we free up the mutual sizing constraint between the refrigerant compressors and the gas turbines and thereby improve the overall energy efficiency, operational flexibility and maintainability.

## **Local Execution Centers**

### **Algeria - 35 years of continuous presence**

- Sarpi a fully structured construction company owned by ABB and Sonatrach (50-50%)
- Headquarters in Algiers and prefabrication facilities in Hassi Messaoud and Hassi R'Mel
- 2,000 employees and average annual turnover of \$55 Million

### **India - 2 engineering centers in Mumbai and Bangalore**

- 150 specialized engineers providing detailed engineering
- IT System integrated with Italian headquarters
- Our office proves a bridge to Middle East and Far East

## **Procurement Satellites Centers:**

Chile, India, Algeria, China, Mexico

**The reliability of a major international group, combined with the versatility and flexibility of a lean organization**





## **Corporate Citizenship and Ethics**

To ABB sustainability means a triple bottom line approach: promoting sustainable economic, environmental and social development. Our products, services, systems and solutions are designed to provide safe and secure conditions for your employees and to minimize environmental impact.

Business ethics are an integral part of ABB's way of doing business. The business principles of responsibility, respect and determination were formulated to guide the way. ABB employees behave towards each other, towards our customers and business partners, and towards our shareholders and the communities where ABB does business.

Integrity is key to our company's reputation in the marketplace. The way we behave as individuals and a company - acting with integrity - builds that reputation.

## **Local Content**

Our practice globally is to recruit whenever possible from the local population near the facility site, and to use our training services to develop skills to operate and maintain the equipment. This has proven to be a very practical approach, and one that helps raise the standard-of-living in the region. We believe in a sustainable path that ensures knowledge transfer and allows local staff to develop their professional skills. Likewise, in all projects we execute, ABB SpA maximizes the use of local subcontractors, with the direct supervision of our management to ensure that project standards and objectives are met.

**We keep oil and gas moving from the wellhead to the customer while lowering environmental impact.**

**We support our customers with efficiency, quality and reliability to help them operate competitively in every step of the Oil&Gas supply chain.**



# Contact us

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