

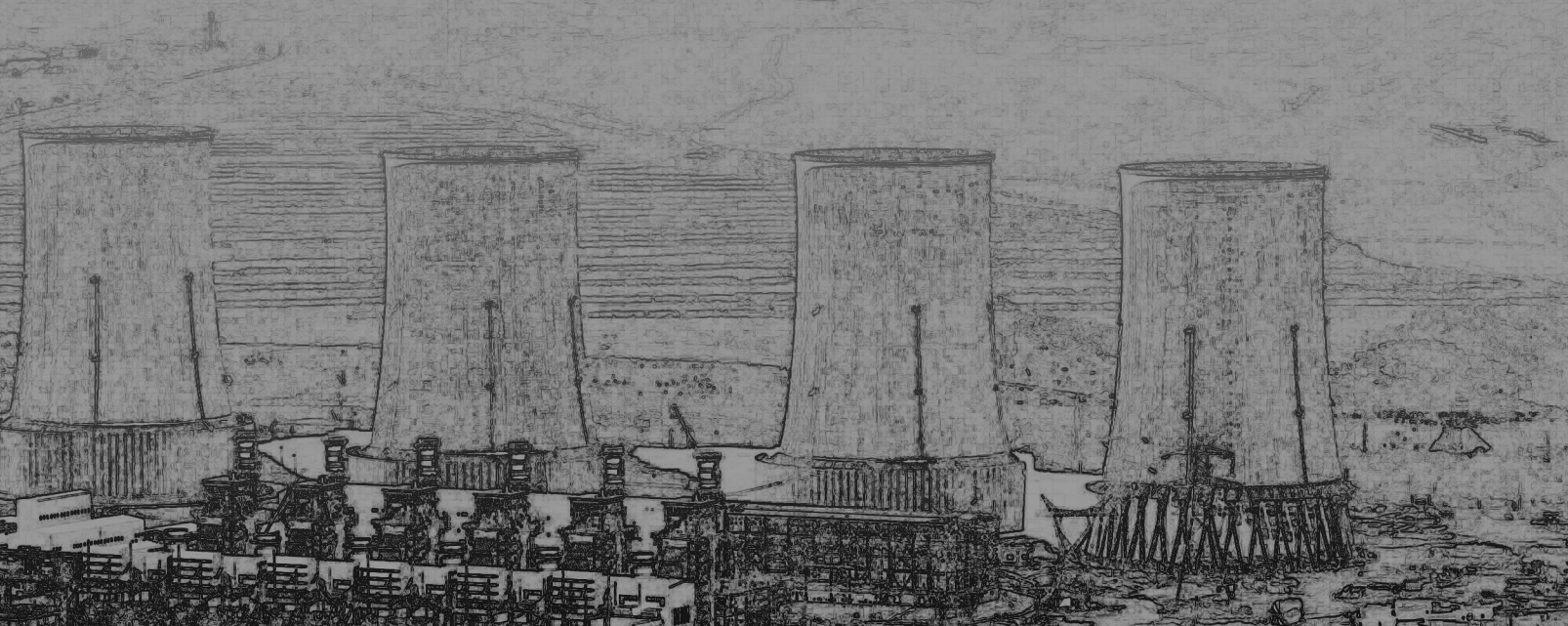


Monenco



Iran

2012 Annual Report





Abbasi Dam:

The oldest and thinnest arch dam in the world, Tabas, Yazd, Iran.

Constructed 600 years ago with more than 60m height which was the highest for 550 years.

Monenco Iran

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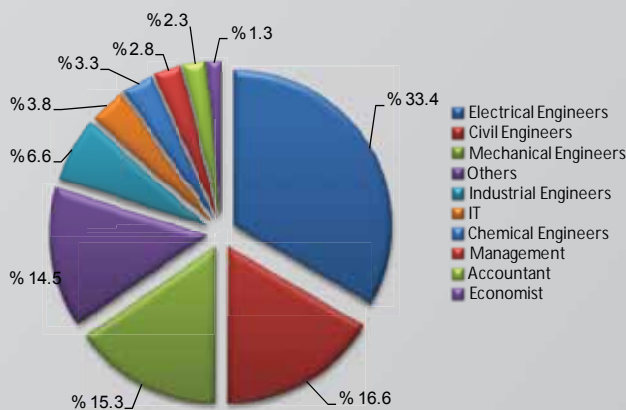
Monenco Iran

Monenco, a leading global provider of professional engineering and consulting services in Iran was formed in 1973 as a joint venture between the private sector of Iran and Montreal Engineering Company of Canada and started its activities in Iran energy industry. Since then, Monenco, by using modern systems and providing high quality services has grown widely and achieved significant success in the target markets that led Monenco to become the only consulting Engineering Company among 400 economical giants in Iran also ranked 144th consulting firm among the top 200 international design and consulting firms worldwide, as stated by ENR. Meanwhile, Monenco has a leading position and plays the main role in the world

power industry. However, Monenco is pioneer in providing services in a broad range of target markets including; Thermal Power Plants, Renewable and Cogeneration and Distributed Generation, Rehabilitation and Retrofitting, Electrical Power Transmission Lines, High Voltage Substations up to EHV and HVDC Systems, Telecommunication, Dispatching Centers, Electrical Railways, Electrical Network Studies, System and Energy Studies, Oil and Gas Infrastructure, Mining, Architecture, Civil, Urban Design and Roads.



Composition of Experts in 2012



The major experiences of Monenco in engineering and consulting services are as follow;

- ▶ Over 45,000 MW Power Plants
- ▶ 7 Renewable Energy Projects
- ▶ 12 Dispersed Generation Projects
- ▶ 12 Heat Recovery & Energy Optimization Projects
- ▶ 21,000 Km Transmission Lines & OPGW
- ▶ 19,500 MVA Substations
- ▶ 45 National & Regional Dispatching Centers
- ▶ 38 Telecommunication Systems & Networks and Master Plans
- ▶ 12 Metering System & Smart Grids
- ▶ 5 Electrical Railway Projects
- ▶ 19 Oil & Gas Complexes
- ▶ 13 Mining & Geology Projects
- ▶ 31 Economical & Technical Feasibility Studies
- ▶ 3 Projects on Iran Power Grid Study



Raeispour Samad:

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Obtained his B.Sc. and Master in Electrical Engineering from KNT University of Technology and Tehran University in 1991 and 1994, respectively. He joined Khuzestan Water & Power Authority (KWPA) at 1994. At the beginning, he was a high voltage substation designer and then, he followed up his carrier as the HV Substation Design and Construction Manager, and the Technical & Engineering Management of Transmission & High Voltage Substations Design. At 2003, he has got his new position as Planning & Research Deputy of KWPA which last 6 years. From 2009 to 2011, he joined Nosazi Karan Khuzestan as the Chairman & Technical Manager. Finally, He joined Monenco in 2011 as Department Manager of High Voltage Substations and was appointed as the Transmission and Dispatching Deputy in 2012.



Mohammad Dana Manavi:

Manavi.Mohammad@monenco.com

Obtained his B.Sc. in Civil Engineering from Sharif University of technology. From 1992 to 1996 he worked for Bonyad Sazeh Consulting Engineers. He joined Monenco in 1996 as Structural Designer. He continued his work till 2003 in Power Generation Department. From 2003 to 2006 his duty was Project Coordinator. From 2006 to 2008 he continued his duty as a Project Manager. From 2008 to 2011 he acted as the manager of Gas Turbine Power Plant and Utilities Section. In 2011 he was appointed as the Power Generation Deputy.



Mahmood Makhdoomi

Makhdoomi.Mahmood@monenco.com

Obtained his B.Sc. in 1992 and M.Sc. in 1995 in Electrical Engineering from Sharif University of Technology and University of Tehran respectively. From 1992 to 1996 he worked in Ghods Niroo Consulting Engineers as Head of MODEC Software and from 1997 to 2005, in Niroo Research Institute as Head of Control and Dispatching Reasech center. He has been Managing Director of Ofogh Consulting Engineers and SURENA Company in 2006-2007 and 2007-2009 respectively. It was 2009 when he was appointed as the Power Generation Deputy in Monenco until 2011 when he was appointed as the Oil & Gas Deputy in Monenco.



Hassan Siahkali

Siahkali.Hassan@monenco.com

Received his Ph.D. from Sharif University of Technology. his M.Sc. from Amirkabir University of Technology and his B.Sc from Tabriz University in Electrical Engineering. From 1996 to 1999 he worked in Iranian Center of Energy Studies (ICES) as Project Manager. From 1999 to 2006 he worked in Niroo Research Institute (NRI) as Project Manager. Since 2009 he has been working in Monenco. It was 2011 when he became the manager of Energy & System Studies Center in the company.



Ramin Khoshkho

Khoshkho.Ramin@monenco.com

Received his Ph.D. from University of Joseph Fourier of France, M.Sc. and B.Sc. from University of Tehran all in Mechanical Engineering. From 1990 to 1998, he worked in MATN Co. (Electric Power Research Center) as Senior Mechanical Engineer and Manager of Mechanical Department. From 1998 for two years, he has been Vice President of Power Generation Research Center, and in year 2007 he has been appointed as R&D Manager of Monenco.



Alireza Afsar

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Obtained his B.Sc. in Mechanical Engineering from University of Tehran. He started to work in Khaneh Sazi Iran Co. in 1995 as supervisor. From 2000, he has worked for seven years in Moshanir Consulting Engineers as Mechanical and Process Expert. Since 2007 he joined Monenco as Project Manager of Combined Cycle Power Plants and it was 2010 when he was appointed as Engineering Deputy of the Company.



Ahmad Massoudi

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Has obtained his Master in Chemical Engineering from Tehran Polytechnic University in 1969. He started his professional activities by joining National Petrochemical Company for 15 years, held different positions, which latest was Project Manager in Aromatic Project, then started working in Ministry of Industry for 5 years as Technical Expert. Next, in Alagas Company from 1991 to 1997 as Project Technical Manager and later as Managing Director in Nikoosarir Company from 1997 to 2003 and Kavir Phosphate from 2003 to 2008. Finally, he joined Monenco in 2008 as International Business Development Manager and in 2012 has been appointed as the Planning & System Deputy.



Faramarz Ghelichi:

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Obtained his B.Sc. in Electrical Engineering from Ferdowsi University. He is specialist in H.V. Transmission Lines. From 1992 to 1997, he has worked in Moshanir Consulting Engineers Company as Project Engineer, Site Manager and Project Manager. In 1997, he joined Monenco Iran then in 2007 he was appointed as the Transmission and Dispatching Deputy and finally in 2012 was appointed as MCE Managing Director in Oman.



Siamak Khalaj

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Obtained his B.Sc. in Electrical Engineering in 1997 from Iran University of Science and Technology. Since then he joined Monenco and has been working for the company for 15 years. He was the head of Power Transmission Department and in 2010 was promoted to be the Managing Director of MEL Nigeria.



Mehdi Shokri

Shokri.Mehdi@monenco.com

Obtained his B.Sc. in Industrial Engineering in 2001 from Iran University of Science & Technology (IUST). As the project & quality controller worked one year in Energy Technology Development Center. From 2003 to 2004 he has worked in Danesh Gostar Ariana Institute as Instructor & consultant in field of QMS & project control softwares and methods. From 2004 to 2010 he has worked as quality & project control expert, technical inspection project manager and QHSE head in Energy Technology Development Center. In June 2010 he joined Monenco as quality expert and later worked as head of quality section. He was appointed as the Quality & Productivity manager in June 2012.



Elham Sadeghian

Sadeghian.Elham@monenco.com

Obtained her B.Sc. in 1995 from Bahonar University and her M.Sc. in 1995 from Khaje Nasir Tusi University in Electrical Engineering. From 1999 to 2007 she worked in Niroo Research Institute as a Project Manager and as the Head of Electric Department. Since 2007 she has been working in Monenco as a Quality Manager and in 2010 she was appointed as the Financial and Administration Deputy.



International market penetration

Monenco was ranked 144th among top 200 international design firms by Mc-Graw Hill survey published in ENR magazine 2012. The technical growth of

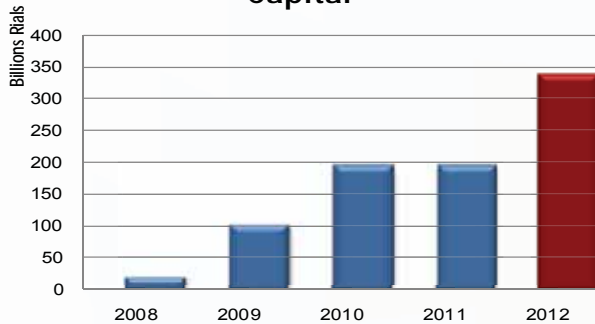
the company enabled Monenco this year to penetrate new markets such as Bangladesh, South Africa, Kenya, Iraq and UAE.

Expansion of Services

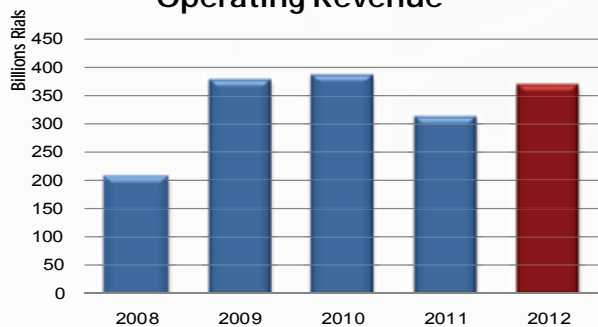
- ▶ CRU (Catalytic Reforming Unit)
- ▶ CFP (Condensate Fractionation Plant)
- ▶ Design of turbo expander
- ▶ Mini Refinery
- ▶ Urban Design
- ▶ Power Evacuation System Study
- ▶ Airport design and transportation infrastructure
- ▶ Fire Protection and Alarm System of oil fields of South Iran
- ▶ Control & monitoring system of oil fields (offshore/onshore)
- ▶ Computational Fluid Dynamic analysis of steam flow in duct of ACC cooling system
- ▶ Fiber to the X (FttX)
- ▶ Detailed design of transmission Lines
- ▶ Detailed design of power Substation using 3D modeling
- ▶ Detailed desing of towers for transmission lines
- ▶ Consultancy services and supervision in Oil & Gas Pipeline

MONENCO AMONG THE TOP 200 IN

Capital



Operating Revenue



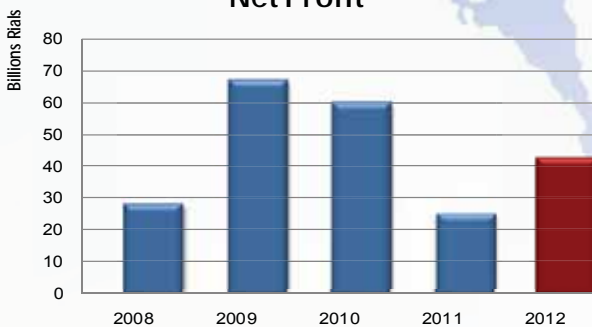
Geographical expansion

Successful geographical expansion of Monenco is due to the in-depth knowledge and know-how in several key areas; the regulatory environment, political climate, business opportunities, potential risks, and prospective customer base, among others.

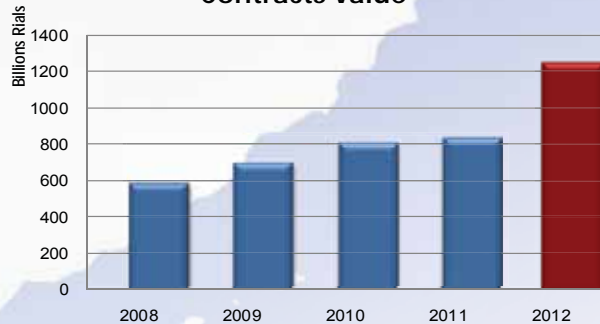
Monenco has selected channel partners and established distribution networks that will provide rapid access to the right markets internationally. In this regard, we could name the Middle East, Africa and CIS countries as well as Far East as the markets with Monenco presence.



Net Profit



Contracts Value



Certificates and Awards

- ▶ Ranked 144th on the McGraw-Hill among top 200 international consulting and design firms published by ENR
- ▶ Ranked 1st for publishing the second volume of the “Introduction on design of Thermal Power Plants” by the 27th Iran international power and electricity conference committee
- ▶ upgrade to 1st grade on “Feasibility Study and Supervision of High Technology Projects” by Banking & Credit Investment Consultant Centre of Iran
- ▶ Ranked 1st by 4th Iranian national festival of productivity in main section of Technical & Engineering services group, based on financial and economical results, from 2007 to 2011.
- ▶ Obtaining the Integrated Management System certificate IMS from Bureau Veritas (BV):
 - Quality Management System certificate ISO9001:2008
 - Environmental Management System certificates ISO14001:2004
 - Occupational Health & Safety Assessment Services OHSAS 18001:2007
 - Quality Management Systems for the Petroleum, Petrochemical and natural gas industries ISO/TS 29001:2010



Publications and Presence in the conferences

Due to the lack of appropriate references and with the aim of localization & development of technology and engineering design, Monenco has published the book “Design of High Voltage Transmission Lines” by its outstanding experts in 2012. 52 technical reports based on the latest technologies were prepared by Monenco technical team. In addition, 60 national and 10 international researches and technical papers were submitted to and got accepted by prestigious international and national conferences and journals.



Transmission & Distribution Achievements:

- ▶ Design, Consulting and Supervision of +/- 500 kV HVDC system, more than 700 km Transmission Lines up to 765 kV, Hot Line OPGW with the length of more than 550 Km and 7100 MVA Substations from 33 kV up to 400 kV, more than 22 Distribution Networks and Loss Reduction projects, 5 Dispatching and SCADA control centers, 8 Telecommunication Networks and AMI projects in 2012.
- ▶ Engineering, Design and Supervision Services of Electrical Railways & Subways of Shiraz (Iran) and Tabriz (Iran)
- ▶ Engineering and Supervision on Iran power grid's fiber optic networks
- ▶ Engineering services for Telecommunication system of Iran Western National Gas Pipeline
- ▶ Master Plan of IKIA airport Telecommunication Infrastructure
- ▶ Consultancy services of 765 kV super grid in Nigeria including 4600 Km Transmission Lines and 11 Substations
- ▶ Consultancy Services for Electrification of Oil Fields

Power Generation Achievements

- ▶ Synchronization of more than 4,000 MW Gas & Combined Cycle Power Plants in Iran
- ▶ Synchronizing the 2 largest power plants in Oman, 750 MW each

Oil and Gas Achievements

- ▶ Consultancy services and Supervision of Oil and Gas Pipeline
- ▶ Carbon Capture Storage from power generation units
- ▶ Supervision of CRU and CFP units in Bangladesh Refinery
- ▶ 3D Model of 167 off - shore platform with laser scan technology in South Iran

Alireza Shirani

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Obtained his B.Sc. in Electrical Engineering from Sharif University of Technology in 1988. He has passed two years in Ministry of Energy as a System Engineer in Energy Division. From 1990 to 1997, he joined in Electric Power Research Center and from 1994 he was appointed as the Head of Electric Department. Since 1997, he has been Vice President of Research in Niroo Research Institute. Finally in 2007, he was appointed as the Managing Director of Monenco.

Last year Monenco was the only consulting company among the 400 economical giants in Iran and this year was ranked 144th among top 200 international consulting and design firms on McGraw-Hill published by ENR.

Hoping for the continuation of these successes, Monenco goal is to be one of the top 10 international consulting firms worldwide. For this purpose it will be necessary for Monenco that not only expands its activities geographically more than before but also spreads its scope of services to the new fields which were not included in the core business of the company, namely water and gas pipelines, roads, railways and commercial buildings and finally mining.

It is no doubt that having design experiences of more than 45000 MW steam, gas and combined cycle power plants, more than 21000 Km transmission lines and more than 19500 MVA substations in various Scheme from +/- 500 kV DC to 765 kV AC and from 20 kV distribution system to UHV lines, and numerous projects in design of dispatching centers and telecommunication system, give a unique prestigious reputation to Monenco, but for reaching to the top 10 consulting firms Monenco needs to well present itself to those clients who haven't still benefit from Monenco world class engineering consultancy

services.

In 2012 while Monenco was successful in stabilizing its presence in the Middle East and West Africa, launched its activities in the South East Asia starting from Bangladesh and did the preliminary prerequisite to penetrate in East and South Africa. Hopefully in the coming year Monenco will establish a company in these regions. It is impossible to summarize Monenco achievements in a short note, so I leave the power plants, transmission lines, substations, dispatching and telecommunication projects for division reports and hereby emphasize on those topics that I think they are new and probably may be not well covered in the summarized divisions reports.

This year Oil & Gas Division of Monenco developed the technology of CO₂ injection, laser scanning of existing Oil and Gas infrastructure and Flare Gas Recovery. The outcome of these efforts was astonishing and welcomed by clients who were facing the oil well extraction reduction, aged off shore oil well installations and gas flaring problem in chemical and petrochemical plants respectively.





In 2012, Monenco Renewable Department finished the site surveys of 250 MW wind farms, and started the Commissioning of the first 50 MW farm with 2.5 wind turbines. This department also did a significant progress in CSP (Concentrated Solar Plant) design in Yazd province in Iran which will be the first in this kind of plant in the region.

As a leader in developing Smart Grid in the region, in 2012 Monenco completed the phase one of AMI project and now the EPC contractors are going to install the 1,000,000 smart meters in 5 pilot cities of the home country.

In addition, in Nigeria Monenco was awarded the consultancy services of the West African Super Grid, 765 kV, and in Oman Monenco was successful in following the timelines of synchronizing of the two biggest power plants, 750 MW each, largest in Oman, which must be in operation before 2013 peak period which is supposed to be in June 2013.

At last but not least, renovation of Monenco portals and data exchange system was another achievement which came to the reality as a result of the planning and system division efforts and gives the best possible environment for data exchanging and archiving, and consequently for the fast and efficient support and communication from Monenco Head Quarter to its overseas branch companies as well as it's local offices.

Transmission & Distribution

The Division of Power Transmission & Distribution handles projects in Networks, Substations, Transmission Lines, Distribution, Dispatching Centers and System Automation, Telecommunication Networks, Smart Grids and Advanced Metering Infrastructures (AMI). This Division has designed, consulted and supervised +/- 500 kV HVDC system, more than 700 km

Transmission Lines up to 765 Kv, Hot Line OPGW with the length of more than 550 km and 7100 MVA Substations from 33 kV up to 400 kV, more than 22 Distribution Networks, 5 Dispatching and SCADA control centers, 8 Telecommunication Networks and AMI projects in 2012.

Transmission Lines and Distribution Networks

Transmission Lines and Distribution Networks Department offers client responsive and high quality design and engineering services in all stages of projects in the fields of network system studies, power transmission lines designs and supervision, OPGW & engineering of network distribution. In addition, using the latest version of software such as PLSCADD, PLS-Tower, Cyme, Digsilent, ETAP also latest methods like intelligent GIS system for selecting the best route and surveying via (LiDAR) system enable us to reach the optimum design in our projects.



Substations

The High Voltage Substations Department is equipped to deal with all necessary aspects of engineering and construction supervision as well as asset management of HV substations. Substation engineering covers the design of the HV and LV parts, as well as control systems, auxiliary services, and civil and structural design; These designs are fully accomplished based on structural 3D design software. Consultancy of the projects also falls within our area of expertise. We also deal with control systems for equipment designed for energy production (hydroelectric and thermal plants) and petrochemical plant.



Dispatching & Automation

Dispatching and Automation Department has been serving consultancy services in various stages of the SCADA and automation plans of electricity industry including generation, transmission and distribution, copper and steel production industries, metro & railway, oil & gas and water distribution industries. In this regard this group has been taking advantages of up to date technologies in projects like WAMS systems and Smart Grids.

Furthermore, in this department some technical reports have been provided for many of the clients around the country in various fields such as smart grids, leak detection system in oil & gas and water industries, and environment monitoring systems.

Telecommunication



The Telecommunication Department is responsible for planning and supervision on all telecommunication infrastructure technologies to provide robust and reliable networks for industries, telecom operators and utilities.

This department provides engineering services to all related fields such as comprehensive ICT plans, fiber optic networks (TDM/IP), P2P and P2MP radio networks, FTTx, Unified communication and IP-PBX systems, Power Line Carrier (PLC) and Teleprotection networks and also M2M networks like Smart Grids and Advanced Metering Infrastructure (AMI).

Civil & Structures

By gaining experience in different fields of design and consultancy, Monenco Iran also offers civil services for industrial facilities.

This group provides consultancy and engineering services for industrial, commercial, residential buildings and civil parts of the transmission lines, high voltage substations, dispatching centers and railway transportation projects and other unusual structures. Also ergonomic construction and green buildings are in the scope of Monenco Iran



Important topics of ongoing projects:

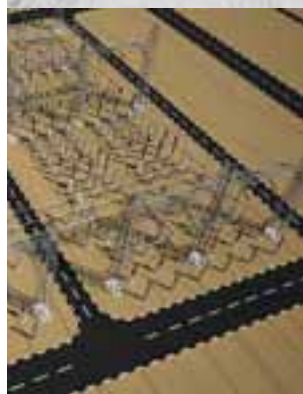
- ▶ Engineering, Design and Site Supervision services for HVDC Project of Semnan - Golpaygan (Iran)
- ▶ Consultancy Services For Electrification Of Roshd Oil Field (Transmission Lines and Substations)
- ▶ 400 kV ASALUYEH - FASA Transmission Line to/from JAHROM Power Plant
- ▶ 66 kV DEHNO - SIAKH DARANGOUN Transmission Line
- ▶ 400 kV Substation of Yazd2 Power Plant
- ▶ Al Kamel and Al Wafi 132/33 kV DCS Substations (Sultanate of Oman)
- ▶ Madinat Nizwa 132/33 kV DCS Substations (Sultanate of Oman)
- ▶ Engineering Services for implementation of 132 kV Network reinforcement work, 33 kV capacity expansion works and Transmission & Distribution System improvement works (Dhofar region, Sultanate of Oman)
- ▶ Engineering Services & Construction Supervision on Semnan - Golpaygan (Iran) HVDC Converter Substations
- ▶ Telecommunication and SCADA systems of Iran's 6th and 7th Gas pipeline
- ▶ Iran power grid optical telecommunication network
- ▶ Design of Iran Advanced Metering Infrastructure (AMI) and preparing national Smart Meter specifications
- ▶ Supervision on first phase of Iran Advanced Metering Infrastructure (FAHAM project)
- ▶ Comprehensive ICT plan for Tehran Regional Electric Company (TREC)
- ▶ Telecommunication system of Tehran Gas Company
- ▶ Iranian National Main and Backup SCADA/EMS Centers
- ▶ Consultancy services for Master Plan development of TREC Dispatching System
- ▶ Engineering and Design services for SCADA System of Tehran Subway Line 5
- ▶ Consultancy Services for EPC Project of SCADA and Communication Systems of Lane 1 of Tabriz Metro
- ▶ RDC SCADA Control Centers in Qazvin and Zanjan
- ▶ Design & document preparation of Distribution Automation for TEHRAN
- ▶ TEHRAN Regional Dispatching Control Centers
- ▶ AOC & RDC Control Centers in Tabriz
- ▶ Engineering and Design services for renewing Tehran area operating control center
- ▶ Engineering services and supervision of architectural and civil works, perway and specific installations and equipments of 2nd operational phase of lane No. 1 of Shiraz urban railway



Articles and Technical Reports:

T & D has published 11 technical reports, 5 international and 9 national articles and papers in the year 2012 to introduce new technologies & systems to its clients. Below is the selected list in this regard;

- ▶ Evaluation of «Subside Elimination Policies»
- ▶ Economical effects on applying photovoltaic systems for commercial buildings in Iran
- ▶ Evaluation of Switching Over Voltages on High Voltage Circuit-Breakers in 400/132 kV Fajr II Electrical Substation
- ▶ Fault Current Limitation (FCL) and voltage dip improvement thanks to Distributed Static Series Compensator (DSSC)
- ▶ Dynamic Maximum Available Power of Fixed-Speed Wind Turbine at Islanding Operation



Engineering Design and Site Supervision Services for HVDC Project of Semnan - Golpaygan (Iran)

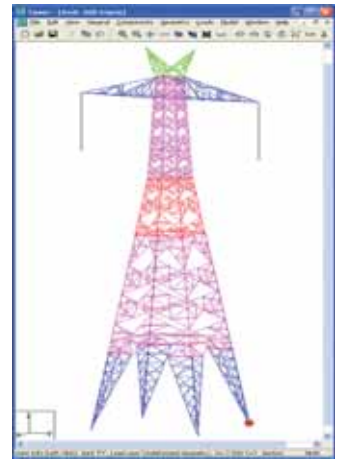
Start date: May 2012 Finish date: November 2013 Status: Ongoing Client: Semnan Regional Electric Company (SREC) Location: Semnan and Golpayegan Cities (Iran)

Scope of work:

- ▶ Performing design and supplementary Studies
- ▶ Preparing technical specifications of equipments and systems and designing executive drawings (Based on phase 1 outcome)
- ▶ Preparation of tender documents for Semnan and Golpayegan HVDC convertors
- ▶ Cooperation in floating tender
- ▶ Performing Contract Negotiation
- ▶ Design review of EPC contractor documents

Description: This transmission line is the first HVDC transmission line in Iran. For possibility of transferring power in large distances, TAVANIR has decided to build a transmission line in HVDC system. For this purpose connection of Golpaygan and Semnan has been selected. Engineering of HVDC substations is included in this project too. This transmission line will be bipolar with lattice towers. The length of this transmission line is about 600 kilometers and it begins from Golpaygan in Isfahan province and ends to Semnan. The client of this contract is

Semnan Regional Electrical Company (SREC). The consultant's services before contractor's contract awarding should be done in 18 months. The main services for this project include: System study, Route selection with GIS technology, Selecting the best position for substations, Surveying by LiDAR technology, Environmental studying, Soil investigation, Basic and conceptual Design, Detail design, Tendering and contract awarding to the contractors, Site supervision, FAT inspections, Project monitoring and management and etc.



Consultancy Services for Electrification of Roshd Oil Field (Substation Part and Transmission Line Part)

Start date: 2013 Finish date: 2015 Location: Lordegan

Client: Iranian Central Oil Fields Company.

Description: Iranian Central Oil field Company as the client of the project has decided to electrify the Roshd oil field in Lordegan. The feasibility studies concluded a 63 kV transmission line, a 63/33 kV substation and three 33 kV transmission lines for this electrification. The consultancy services should be done in less than 8 months and detail design will be done by selected EPC contractor. The consultancy scope is: Conceptual design, preparing EPC contractor's Scope of work, tendering and selecting EPC contractor, contractor's design inspection, FAT inspection, site supervision, project and contract management and etc.



400 kV ASALUYEH - FASA Transmission Line to/from JAHROM Power Plan

Start date: 2012 Finish date:2012 Status: Design & Supervision Location: FARS - JAHROM

Client: IRAN Power Development Company

Scope of work:

- ▶ Route selection
- ▶ Surveying
- ▶ Soil investigation
- ▶ Basic and Detail Design
- ▶ Tendering and contract awarding to the contractors
- ▶ Site supervision
- ▶ FAT inspections
- ▶ Project monitoring and management

Description: This transmission line is input and output line from 400 kV Asalouyeh – Fasa transmission line to Jahrom power plant. The mentioned transmission line was built in 2009 and Monenco Iran was the consultant of that project too. The purpose of this project is connecting Jahrom power plant to Asalouyeh and Fasa substations. The length of this LILO work is about 5 kilometers and the consultant services should be done in less than 3 months. The client of this contract is Iran Power Development Company (IPDC). This transmission line is a double circuit line, towers are lattice type, and 2 bundles curlew conductors will be used for this transmission line.



Asaluye-Isfahan 765kV transmission line

Start date: 2010 Finish date: 2015 Location: Asaluye-Isfahan

Client: Iran Power Development Company

Scope of work:

- ▶ Engineering Services
- ▶ System study
- ▶ Basic Design & Detail Design of transmission line
- ▶ Construction and Site Supervision

Description: This transmission line is the first transmission line in Iran in 765 kV Level. Due to Monenco Iran's wide experiences in transmission lines in Iran and other countries, our company was selected as the consultant of this project in competition with other consultants. The length of this transmission line is about 710 km and it begins from Asalouyeh power plants and ends to Isfahan substation. The transmission line will be designed as single circuit line with lattice towers. The client of this contract is Iran Power Development Company (IPDC). The consultant's services before contractor's contract awarding should be done in 12 months. The main services for this project include: System study, route selection, Surveying by LiDAR technology, environmental studying, Basic and Conceptual Design, Detail Design, tendering

and contract awarding to the contractors, site supervision, FAT inspections, project monitoring and management and etc.



Engineering and Construction of Al Kamil & Al Wafi 132/33 kV Grid Station & Associated Transmission Line

Project Type: GIS Substation **Duration:** 18 months **Capacity:** 132/33 kV, 2 * 125 MVA **Area:** 100*100 m2

Client: Oman Electricity Transmission Company (OETC) - Oman

Scope of work: Conceptual Study, Basic Design, Preparation of Tender Documents, Tendering and Bid Evaluation, Design Review, and Construction Supervision

Description: Al Kamil and Al Wafi 132/33 kV substations and associated transmission lines are in Oman Electricity Transmission Company (OETC) program for expanding Oman electricity network. The substations are GIS type and the capacity of transformers is 2x125 MVA. The length of associated transmission lines is about 39 km. These transmission lines are double circuits with twin YEW AAA Conductor, polymer insulators, and OPGW Shield conductor. The determined duration for consultancy services is about 6 months and the Scope of work for the consultant is: Conceptual design, Route selection and surveying for transmission lines, surveying substations location, Tendering and contract awarding, FAT inspection, Site supervision, Project monitoring and contract management and etc.



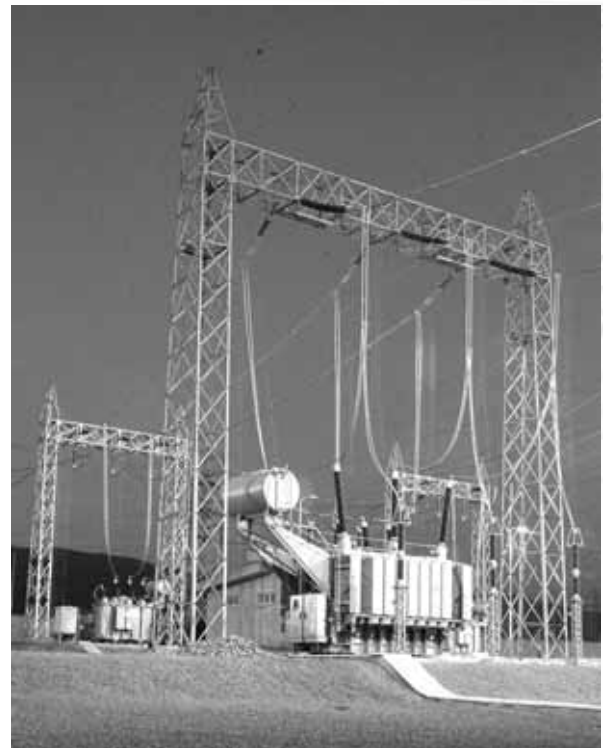
Engineering and construction of Madinat Barka and Al Khadra 132/33 kV Grid Station & associated LILO Works

Project Type: GIS Substation **Duration:** 24 months **Capacity:** 132/33 kV, 2 * 125 MVA **Area:** 100*100 m2

Client: Oman Electricity Transmission Company (OETC) - Oman

Scope of work: Conceptual Study, Basic Design, Preparation of Tender Documents, Tendering and Bid Evaluation, Design Review, and Construction Supervision

Description: The project consists of Construction of Madinat Barka and Al Khadra 132/33 kV Grid Station and associated 132kV Line Input Line Output (LILO) works. All the related works required for connecting 132 kV feeder at new 132 / 33 kV GS are included in new 132/33 Madinat Barka and Al Khadra Grid Station project. The design and the arrangement of the substations shall generally conform to relevant OES standards as well as BS & IEC and fully comply with Oman Grid Code where applicable. All equipment shall be designed for tropical conditions, heavily polluted salt laden air as well as sand pollution. The Project has started since April 2011.



Engineering and construction of Madinat Nizwa 132/33 kV Grid Station & associated Transmission Line

Project Type: GIS Substation **Duration:** 24 months **Capacity:** 132/33 kV, 2 * 125 MVA **Area:** 100*100 m²

Client: Oman Electricity Transmission Company (OETC)

Scope of work: Conceptual Study, Basic Design, Preparation of Tender Documents, Tendering and Bid Evaluation, Design Review, and Construction Supervision

Description: The project consists of Construction of Al Madinat Nizwa 132/33 kV Grid Station, Extension of 132/33kV Nizwa Grid Station, and Construction of 132 kV Nizwa-Madinat Nizwa Transmission Line. All the related works required for connecting 132 kV feeder at new 132 / 33 kV GS are included in new 132/33 Madinat Nizwa Grid Station project. The design and arrangement of the substations shall generally conform to relevant OES standards as well as BS & IEC and fully comply with Oman Grid Code where applicable. All equipment shall be designed for tropical conditions, heavily polluted salt laden air as well as sand pollution. The Project has started since April 2011.



Consulting services for construction of National Dispatching Centers

Start date: 2010 **Finish date:** 2013 **Status:** Ongoing **Location:** Main Center: Tehran Back Up Center:Zanjan

Client: MAPNA Company - Iran **Main Client:** Iran Grid Management Company- IGMC

Description: Consulting services for construction of two dispatching centers, namely main (located in Tehran) and backup (located in Zanjan) centers, are provided which includes engineering and supervisory services regarding basic and detail design, tender document provision, equipment procurement, construction, erection and commissioning. Three major disciplines, i.e. Dispatching, Telecommunication and Civil.



Power Generation

Power Generation Division covers all types of power generation projects from Combined Cycle, Thermal Power Plant, to Renewable and CHP, CCHP. More than 45000 MW power generation projects have been Engineered, Designed, and Suprvised by this department including 19,000 MW Gas Turbine and 26,000 MW Combined Cycle Power Plants. Also feasibility studies of more than 3000 MW Thermal Power Plants have been done by Monenco. In 2012, Monenco Iran was involved in 5500 MW power generation projects globally.



Desalination

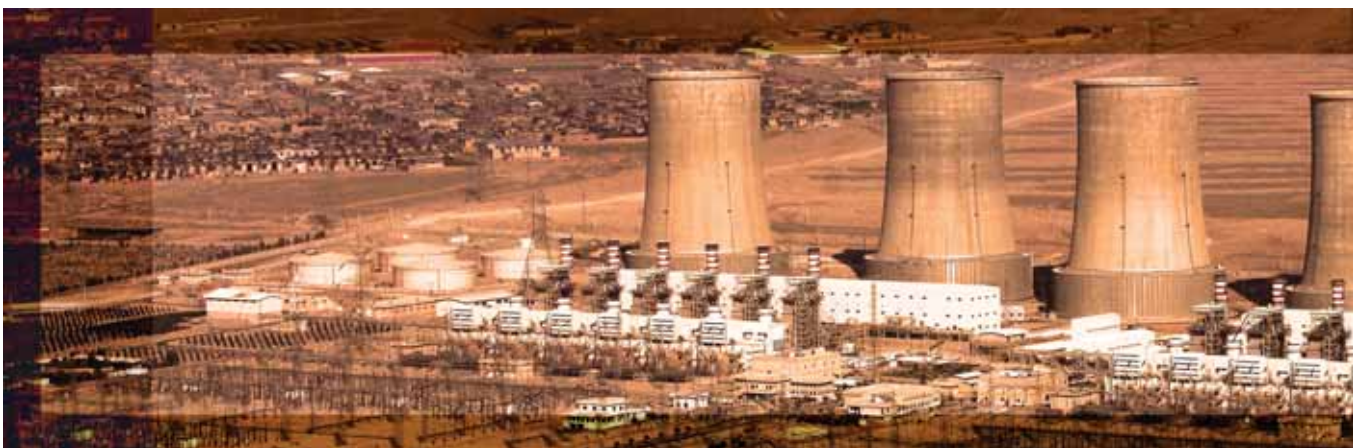
The desalination plants for supplying potable and industrial water, are frequently constructed as integrated part of power generation and sea water desalination plants. In this context it is very important to choose and optimise the most appropriate plant configuration and technology for the desalination process. This applies in particular to privately financed projects in public-private partnership models.

That is why Monenco always designs such facilities individually to best meet the specific project requirements. This includes both processes for sea water desalination as well as raw water treatment and also post-treatment and/or conditioning of product water according to the relevant requirements.



Combined Cycle Power Plants

Due to the economical and environmental concerns, there is general tendency towards constructing combined cycle power plants or converting gas turbine power plants into combined cycle power plants, to increase efficiency. Monenco is a pioneer company in offering engineering and consultancy services for different modules of combined cycle power plants.



Feasibility Studies

To start a business, there is a need for insight and vision in terms of the viability of the proposed project concept. Most rational decisions, taken either by existing or aspiring entrepreneurs to make a business investment, is preceded by an investigation of the feasibility of the project.

The analysis of the project involves a certain number of stages also some parameters and elements need to be analyzed in order to make decisions about the viability and direction of the business. In Monenco, we have an expert team for the technical and economical feasibility studies of the projects in all fields.



Gas Turbine Power Plants

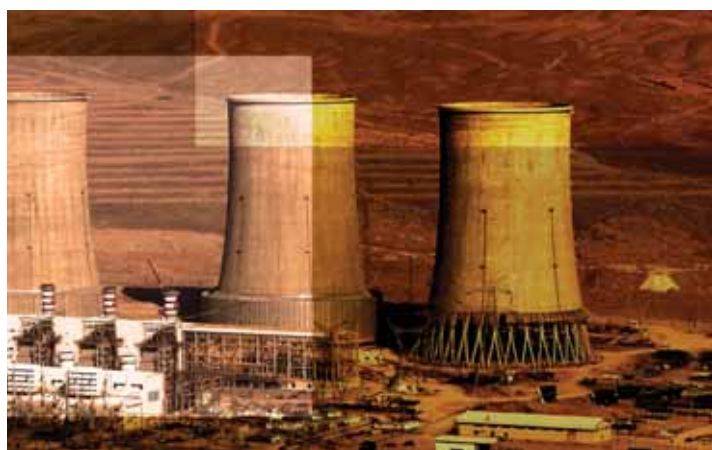
Currently a significant fraction of electrical power in Iran is generated through gas turbine power plants and this is growing rapidly. Monenco has long experience of offering engineering, design and consultancy services for gas turbine power plants.



Renewable/Green Energies & Distributed Generation

Monenco actively participates in eco-friendly and clean energy projects such as, renewable energy generation from water, wind and sunlight and distributed generation with use of combine heat and power generation (CHP). We are well aware that protecting and preserving the environment is both a social responsibility and a crucial element to sustainable development.

The renewable energy generation and distributed generation in Iran is increasing with a significant rate and this can be seen as an emerging market for Monenco. In 2009, Monenco started participating in this market.



Abumusa Power and Desalination Plant

Project Type: Power and Desalination Plant **Duration:** 17 Months

Owner: Iran Power Development Company

Client: Mapna Special Projects Construction & Development Co. (MD-3)

Capacity: 4 set of Desalination Plant (MED type) 400 M3/d
2 set of Heat Recovery Steam Generator (HRSG) 50 Ton/h
2 set of GTG 25 MW

Scope of work: Monenco has been assigned to prepare civil design, vendor design review, procurement services and tender documents.

Description: The plant located in Abumusa Island. In the plant, HRSG converts the thermal wasted energy into steam by two sets of gas turbine each one with capacity of 25MW, which is being used in the process of generating potable water from the sea water in MED type desalination units. Since, different industries are going to be prospered in the zone, this plant could provide the future demanded power and desalted water for more industry needs.

Consultancy Services for Saih Al-Khairat new Power Station

Project Type: D.G. Sets (6x8 MW) **Duration:** 30 Months

Owner: Rural Areas Electricity Co. S.A.O.C (RAECO) - in Oman

Capacity: 48 MW (6x8 MW New D.G. Sets) with a 2 MW (2x1MW) Black Start unit

Scope of work: Study, Design and Supervision for Construction of new power station at Saih Al-Khairat in Dhofar Governorate by supply, delivery, installation & commissioning of 48 MW (6x8 MW New D.G. Sets) with a 2 MW (2x1MW) Black Start unit completed with all their electrical systems including switchgear, transformers, control systems, Fuel Storage Tanks, Engine Hall, two Storey Control Room, Fire Fighting Pump House, Fuel Forwarding Pump House, Admin & Canteen unloading bay, unloading pump house, etc.

Description: Saih Al-Khairat in Dhofar is located 970 km from Muscat and 180 km from Salaleh. RAECO has entered into contract with EPC contractors for construction of these power plants. In case of increasing demand of power in Oman, these power plants will have crucial role for responding to the demands of

power grid in near future.

These projects will be connected to the 33 kV GIS grid substations and the Medium Voltage Transmission Lines that are owned and operated by Oman Transmission Electricity Company (OETC).

Tabas Thermal power plant

Project type: Coal fired power plant **Duration:** 32 months

Owner: Iran Power Development co (IPDC)

Client: Roshd sanat-omran azarestan joint

Capacity: 2×325 MW (Unit 1 & 2)

Scope of work: Engineering of BOP service

Description: this project is part of the «5050 MW Steam power plant projects», located in 85 Kilometers away from Tabas TABAS-YAZD road in Iran. Tabas power plant consists of two units of 325 MW each with all auxiliary and station service equipment.

The power plant will be operating with coal as main fuel and heavy fuel oil as secondary fuel and gas oil as start up fuel and or any combination of these fuels.

Supervision on Implementation of the Barka III & Sohar II Independent Power Projects

Project Type: Combined Cycle Power Plant **Duration:** 22 Months

Owner: Oman Power and Water Procurement Company SAOC (OPWP) - in Oman

Capacity: 750 MW (2 GTG * 250 + 1 STG * 250) for each power plant

Scope of work: Monenco Iran jointly with Monenco Oman were awarded an advisory consultancy services to supervise projects for achieving the goals of the project and fulfillment of obligations based on Power Purchase Agreement (PPA) that was made by OPWP. Monenco is in charge of coordination and monitoring of all beneficiaries and supervision on important tests.

Description: Barka III IPP is located 30 km from Muscat and Sohar II IPP is located 200 km from Muscat. OPWP has entered into contract with two EPC contractors for construction of these power plants. In case of increasing demand of power in Oman, these power plants will have crucial role for responding to the demands of power grid in near future.

Since both plants are located in coastal area, their cooling systems have been foreseen to be “Once Through”. These projects will be connected to the 220 kV GIS grid substations and the HV transmission lines that are owned and operated by Oman Transmission Electricity Company (OETC).



Qheshm Power and Desalination Plant

Project Type: Power and Desalination Plant **Duration:** 17 Months

Owner: Mapna Qheshm Water & Power Co. - Iran

Client: Mapna Special Projects Construction & Development Co. (MD-3)

Capacity: 4 set of Desalination Plant (MED type) 4500 M3/d
2 set of Heat Recovery Steam Generator (HRSG) 50 Ton/h
2 set of GTG 25 MW

Scope of work: Monenco has been assigned to prepare basic design, civil detail design, vendor design review, procurement services and tender documents.

Description: The plant is located in Qheshm Island, a free zone in the south of Iran and is performed under B.O.O Scheme by investment of private section. In the plant, HRSG converts the thermal wasted energy into steam by two sets of gas turbine each one with capacity of 25MW, which is being used in the process of generating potable water from the sea water in MED type desalination units. Since, different industries and also tourism industry are going to be prospered in the zone; this plant could provide the future demanded power and desalted water for more industry needs.



Feasibility evaluation and EPC contractor selection of Control System for Besat and Montazer-Ghaem Power Plant

Project Type: Feasibility Evaluation, Preparation of Tender Documents, EPC Contractor Selection
Duration: 8 Months

Client: SABA - Iran

Scope of work: Monenco reviews the existing documents of control system and suggests the modern and up to date control system, also prepares tender documents in order to select EPC contractor.

Description: As Besat and Montazer-Ghaem power plants were manufactured over 40 years ago, the control and protection system is old. This project considers changing the

control system in order to provide up to date capabilities for control and monitoring of the system to reach an optimum power generation.

Feasibility Studies and Engineering Services for construction of Makoo Combined Cycle Power Plant

Project Type: Combined Cycle Power Plant **Duration:** 7 Months

Owner: Mahan Power Development Co. - Iran

Capacity: 500 MW

Scope of work: Monenco provides technical, environmental and economical feasibility studies and engineering services for construction of Makoo combined cycle power plant. Also Monenco is in charge of offering possible alternatives on all related documents that should be presented in the final report.

Description: The plant is going to be constructed in the Azarbayejan province, near Makoo - city in Northwest of Iran, under B.O.O Scheme by investment of private section and generated power will be sold to the national power grid.

Sabzevar Combined Cycle Power Plant

Project Type: Thermal Power Plant **Duration:** 36 Months

Owner: Ofogh Tosee Energy Khalij Fars

Capacity: 968 MW (4 GTG *162 MW + 2 STG * 160 MW)

Scope of work: Monenco Iran provides Basic Design, Detail Design, Vendor Design Review, 3D Modeling of Plant and overall engineering

Description: The plant is located in northern east of Iran. This power plant is implemented by investment of private sector based on BOO scheme. Produced power will be sold to the national authority and transfer via electricity grid for urban and industrial demand in northern east of Iran and also have the potential for exporting to the neighbor countries. Project will be completed through 2 phases. In the first phase that is under construction at this moment, 2 GTG and 1 STG with common utilities will be installed and second phase includes 2 GTG and 1 STG will be developed in future. Also the design of 400 MVA Substation is being done by Monenco.



Sweidieh Combined Cycle Power Plant

Project Type: Thermal Power Plant **Duration:** 36 Months

Client: MAPNA Combined Cycle Power Plant Construction and Development Co. (MD-2)

Capacity: 484 MW (2 GTG *162 MW + 1 STG * 160 MW)

Scope of work: Monenco Iran provides Basic Design, Detail Design, Vendor Design Review, 3D Modeling of Plant and Overall Engineering

Description: The plant is located in northern east of Syria. Regarding to the industrial and oil and gas development plans that have been started in the region in recent years, this power plant plays a magnificent role in supplying required power and stability of grid.

The Monenco Iran Scope of works includes design of all industrial and non-industrial buildings, utility systems such as HVAC, firefighting, fire and gas detection, emergency power and diesel, fuel supply, water distribution, waste water collection and disposal, reviewing all vendors and manufacturer documents and controlling all terminal points among the parties for guarantee the appropriate engineering, construction and operation.

Yazd Integrated Solar Combined Cycle Power Plant

Project Type: Concentrated Solar Plant **Duration:** 24 Months

Owner: Iran Power Development Co (IPDC) - Iran

Client: MAPNA Combined Cycle Power Plant Construction and Development Co. (MD-2)

Capacity: 17 MWeI

Scope of work: In the formation of EPCM Monenco and the Spanish partner provide engineering on Basic & Detail Design and Procurement & Construction Management.

Description: The plant is located near Yazd – in the middle of Iran - beside existing combined cycle power plant. The design of the power plant is based on the Integrated Solar Combined Cycle (ISCC) configuration. The plant has nominal capacity of 474 MWeI, and consists of two gas turbines of 157 MWeI each. The gas turbines are linked with two Heat Recovery Steam Generators (HRSG) supplying steam to a 160 MWeI steam turbine. Additional steam is provided by the parabolic

mirror field via solar heat exchangers. Hot heat transfer fluid (HTF), is pumped from the parabolic mirror field through two heat exchangers where saturated steam is generated. This “solar” steam is admitted to the HRSGs, and contributes through the thermodynamic cycle of the steam turbine to an electrical power output of approximately 17 MWeI.



Feasibility study, wind resource assessment and detail design for development of 750MW wind farm in 11 sites in Iran

Project Type: Wind Power Plant **Duration:** 18 Months

Client: MAPNA Group- Renewable Energy Generation Company - Iran

Capacity: 750 MW

Scope of work: Scope of this project includes supervision on wind turbine transportation and erection, road construction, grid connection and wind farm commissioning.

Description: In this project, Monenco experts investigate suitable sites for construction of 750 MW wind farm in different windy areas. Site visiting, primary site selection, evaluation and review of the modern wind turbine technologies in the world were the most important duties of Monenco in this project. Also, engineers will supervise the construction phase of the project. This phase includes road construction, turbine erection, and wind farm commissioning. Our technical teams will collaborate with wind turbine manufacturer in order to obtain technical knowledge.



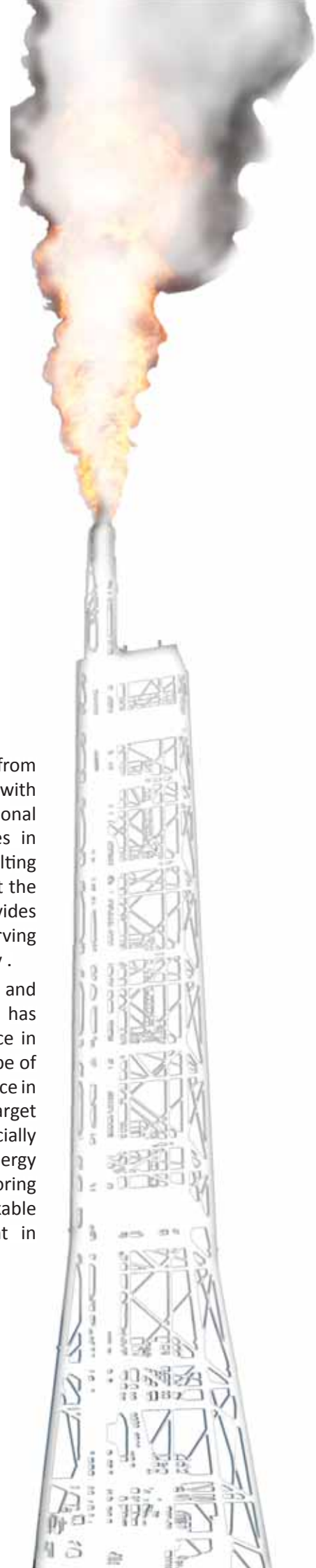
Oil & Gas

Oil & Gas and Petrochemical consultants across the globe are looking for timely solutions to help them address the current challenges of a global economic downturn, decline the overall margins and increase emphasis in process safety compliance. Monenco offers innovative engineering solutions that provide unique answers to these challenges in areas of auditing, metering, upstream and process safety management consulting of petrochemical plants, Oil & Gas complexes and transmission lines.

Our technical team has delivered leading methodologies, best practices and robust software solutions that reflect Oil & Gas industry insights and vast experience in our core competencies. We are, and will continue to be, second to none in understanding our client's needs and the most worthy steward of their resources.

This department benefits from participation and cooperation with prominent International and regional Engineering consultancy companies in joint ventures in rendering consulting and engineering services abroad. At the same time this partnership provides broader opportunities for serving domestic clients with higher quality.

Monenco, by having the major Oil and Gas projects in the work history has established an outstanding presence in this industry and expanded the scope of services in order to spread its presence in this market. Entering into the new target markets such as mini refinery especially in overseas & offshore projects, energy saving, safety, and control & monitoring system has been the most remarkable achievements for the department in 2012.



Furnishing Import & Export Stations of Iran Ministry of Petroleum with Custody Metering System

Client: Iran Ministry of Petroleum / NEYRPERSE - Iran

The Custody Metering System will be installed at onshore and offshore facilities of Crude Oil and refined petroleum products, NGL and Gas Condensate fields and main transmission lines, in Iran. The scope of the services includes sites visit, design and data gathering, endorsement of documents, basic and detail design.

TUGA Gas pressure reduction stations and transportation Pipeline

Client: Mapna Turbine Engineering and Manufacturing Co. (TUGA) - Iran

Project includes design and supervision on construction of gas pressure reduction stations with the following specifications:

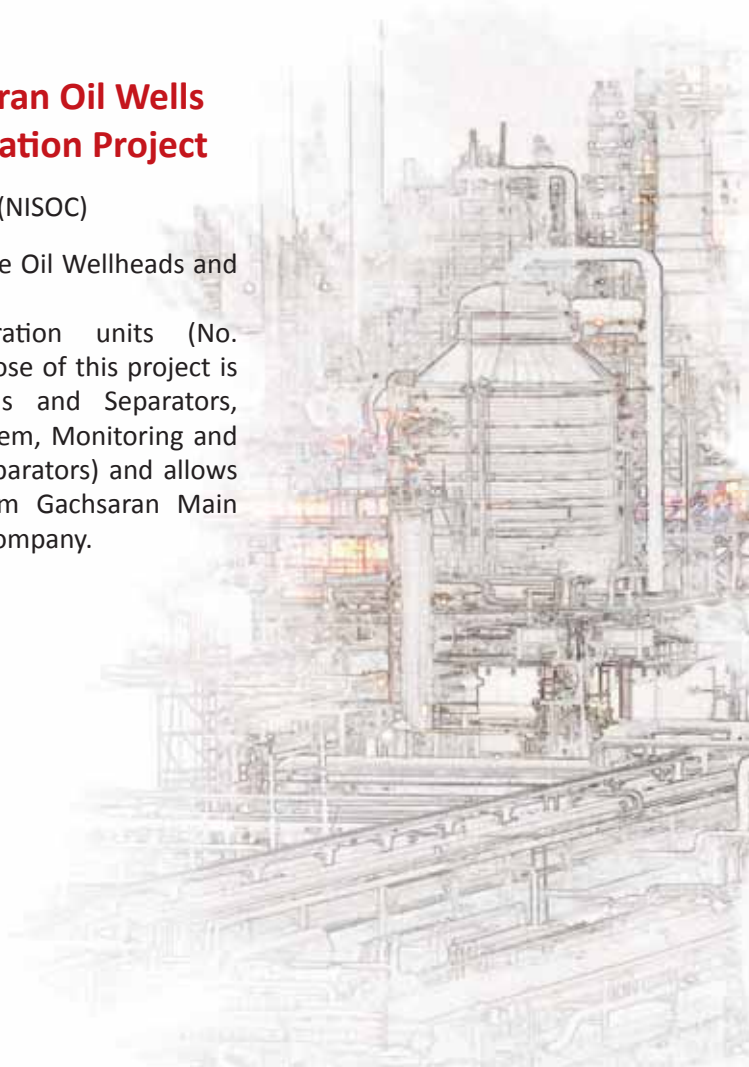
- ▶ Pressure reduction 1000 to 500 psi with 13000 Nm³/h capacity
- ▶ Pressure reduction 500 to 60 psi with 3000 Nm³/h capacity

Alternative Selection, Basic and Detailed Engineering of Gachsaran Oil Wells and Subsidiary Facilities Automation Project

Client: National Iranian South Oil Company (NISOC)

The intention of this project is to automate Oil Wellheads and related Separators in Gachsaran region.

This project consist of two Separation units (No. 301 and 167) and 25 Wellheads. The purpose of this project is renovation of instruments in wellheads and Separators, installation of new Control and Safety system, Monitoring and Control in the field (for Wellheads and Separators) and allows Control and Monitoring of all events from Gachsaran Main Control Room and Gachsaran Oil and Gas Company.



Engineering and tender documents preparation for Upgrading and Renewing of BALAL Platform ABB Control System work stations

Client: Iranian Offshore Oil Company (IOOC)

Scope of work:

- ▶ Supervisory system Reform in control room.
- ▶ Structure reform of Supervisory system at the local room WHP
- ▶ Improved monitoring and supervision software
- ▶ Reform the Architecture ABB Monitoring System, Separation of monitoring and automation layers
- ▶ Replacement of hardware for ES and OWS industrial computers
- ▶ Replacement the matching device and communication hardware on the bus MB300
- ▶ Replacement of fiber-optic cable connection

Consultancy Services for Installation of 1500bbl/Day Capacity Catalytic Reforming Unit (CRU) and 5000bbl/Day Condensate Fractionation Plant (CFP) at RASHIDPUR with Associated Facilities on Turn Key Basis Under EPC

Start date: 12/12/2012 **Finish date:** 12/12/2015 **Country:** Bangladesh

Client: Sylhet Gas Filed limited

Capacity: 5000 BBI / day CFP
 2500 BBI / day CRV
 1500 BBI / day CRV

Scope of Works: Consultancy services for basic design, engineering, procurement Construction, commissioning

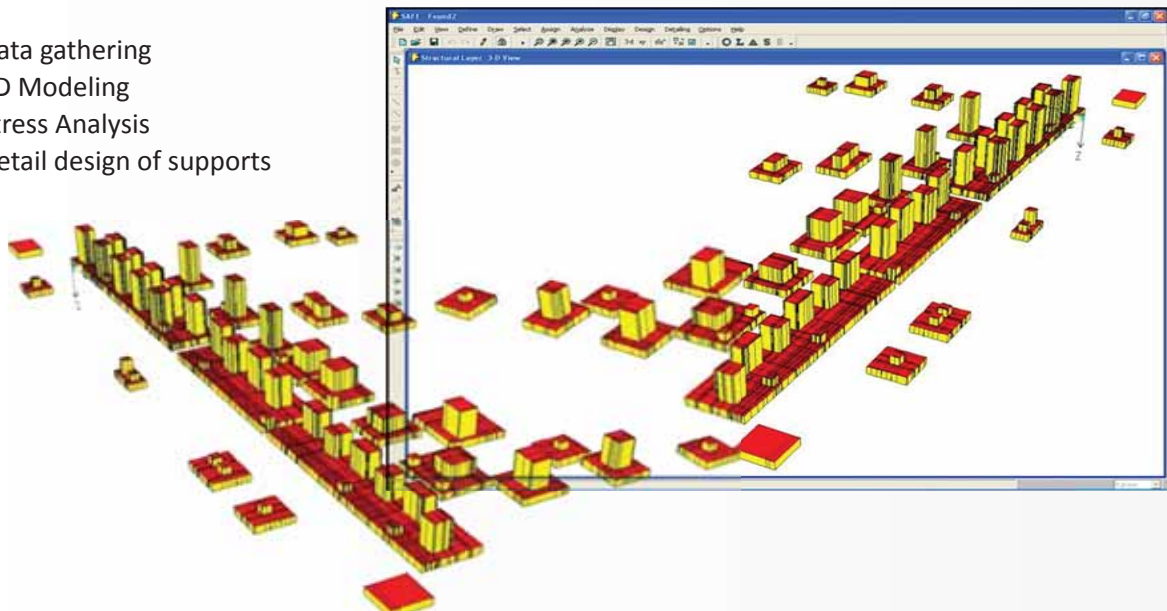
Description: The main purpose of this project is to produce octane 95+ and LPG. In fact , we have two feed lines .One of them comes from Bibyana gas field Chevron which contains condensate. This line goes to 5000 bbl /day Condensate Fractionation plant to Fractionate Condensate to Naphtha heavy and light, gasoil, diesel, and kerosene. Then Naphtha production will go through the pipe to 2500 bbl /day catalytic reforming unit. Final products of this stage is octane 95+ and LPG.The other feed line contains of Naphtha that will go directly through 5km pipeline to 1500 bbl/day Catalytic Reforming Unit.

Preparation 3D Modeling and As-Built documents for KHARG Island (Iran) loading and storage Manifold

Client: Iranian Offshore Oil Company

Scope of work:

- ▶ Data gathering
- ▶ 3D Modeling
- ▶ Stress Analysis
- ▶ Detail design of supports



Consulting Services, field engineering and construction supervision of unit No. 106 of South Pars gas field development phase 19

Client: Pars Oil and Gas Co. (POGC) / Petro Pars Iran / Neyerperse

Scope of work:

- ▶ Engineering Consulting Services , contractors design review and vendors print check
- ▶ Preparing technical reports
- ▶ Field engineering in site technical office
- ▶ Construction Supervision

Description: Phase 19 onshore complex is located on the Iranian coast of Persian Gulf in TOMBAK. The total capacity of phase 19 onshore facilities is 2000 MMSCFD of dry reservoir fluid. The lean gas from Ethane recovery unit (105) serves compression and export gas unit (106) to recompression. Unit 106 includes six centrifugal compressors in parallel plus two spare, each compression section includes one suction drum, one compressor and associated gas turbine and one after cooler. Compressed Export gas in unit 106 is delivered at 90.8 bar via metering system to connect to IGAT9.



Khorasan Petrochemical Plant Control and Monitoring Replacement

Client: Khorasan Petrochemical Company

Scope of work: The purpose of this project is to replace the existing control and monitoring system of power plant unit for KHORASAN Petrochemical Company with a state-of-the-art distributed control system (DCS) to reap the benefits of the latest technology.

This plant consisted of four boilers, three turbine/generators, four BFW pumps, ACC system, LPS, MPS, Blow-down system, Drain system and related equipments which were controlled by a SIEMENS DCS (TELEPERM MI).

In addition to the DCS, the project scope included marshaling cabinets, monitoring system, boiler management, integration of the subsystem interfaces & upgrading related systems with new DCS.

F/F reservoirs and water systems and fire pumps consulting services of Aghajari's operational activities.

Client: NISOC, Aghajari's Oil and gas operating company

Scope of work: National Iranian South Company (NISOC) is planning to rehabilitation of fire fighting system for 8 production units located in AGHAJARI area.

Engineering works for this project including basic and detail design as well as preparation of PC tender document is in Monenco Scope of work.

Consultancy services and supervision of Golestan Gas Company

Client: Golestan Gas Company - Iran

Scope of work: This project involves continuous supervision on installation, operation and commissioning of transmission line and the distribution networks as well as steel pipeline junctions, gas pressure reduction stations mechanical and foundation works, execution of tests and operation related to the electrical and the gas injection systems. Tasks are including;

- ▶ Supervision on the gas transmission projects in the Golestan province
- ▶ Supervision on the civil projects (residential and commercial)
- ▶ Supervision on the gas transmission to the industrial, commercial and residential complexes in Golestan province
- ▶ Supervision on the power projects and the rust protection in the Golestan province

Fire Protection & Alarm System for crude oil storage tanks in Kharg Island

Client: Iranian Oil Terminals Company (IOTC)

Scope of work:

- ▶ Review and endorsement of basic design package
- ▶ Preparing feed documents
- ▶ Detail design
- ▶ Preparing tender documents and evaluation of PC contractors

3D-Model Preparation for all IOOC (Iranian Offshore Oil Company) Offshore Platforms (Including Kharg, Lavan, Bahregan & Siri)

Client: Iranian Offshore Oil Company / TWI Persia

Description: The purpose of this project is to prepare 3D- Model of all IOOC's offshore platforms (176) located in persian gulf.

There are four main regions that we are gathering their data : KHARG , LAVAN , BAHREGAN and SIRI.

We are gathering all platform's data and scanning all existing installation in all platforms levels such as: equipments, piping, Instrument & electrical devices and all structure by LASER SCAN technology.

Until now the below 3 zones have been covered for data gathering with Laser Scan & 3D Modeling with PDMS.

- ▶ Aboozar Oil Field - Kharg Island
- ▶ Foroozan Oil Field - Kharg Island
- ▶ Dorood Oil Field - Kharg Island



Mining & Geology

Monenco Iran is committed to provide high quality services to the geology, Exploration and Mining community through its experienced staff as well as established cooperation with internationally known firm in the field of Geology, Exploration and Mining. We offer services in Geology, Exploration, Resource Geology, Geochemistry, Geophysics, Mining, Resource Estimate, Grade Control, Monitoring, Feasibility Studies, Soil Mechanics, Rock Mechanics, Open Pit Mine Design, Underground

Mine Design, Mine Optimization, Environmental Studies, Mine Planning and Hydrology. Monenco is equipped with sophisticated professional software such as Gemcom Surpac, Downhole Explorer, dataminestudio, FLAC, Gems, UDEC, GEO matica and prepared to provide consultancy in exploration and extraction of mineral deposits in other countries, partnering with highly skilled international companies and modern equipments and machineries.

Introduction of new technologies:

Directional Core Drilling

Exploration drilling is one of the most important steps in Geometry identification and estimation of reserves. Drilling is considered one of the most expensive mining activity.

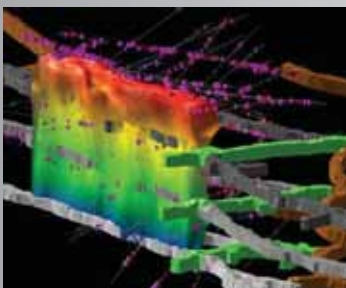
Geology and Mining Department with the introduction of new method of drilling as “Directional Core Drilling” to Iranian Clients active in mining is step forward saving time & money and improvement in exploration drilling in Iran.

Laser Scanning System for mine Survey

In mining operations determination block extraction in different period, geometry changes in place of extraction, volume of mineral depot, volume of waste depot, volume of waste depot are basis of mine design and planning. Now in our mines in Iran these works performed by manually surveying and followed by this method with human and system tolerance.

Geology & Mining Department with the

introduction of new method of surveying as “Laser Scanning System for mine surveying” to Iranian clients active in extraction mining is step toward saving time & money and improvement in mining in Iran.



Selection of important projects:

- ▶ Coal exploration and consultancy services in Gardaneh Sar Area in Mazandaran Province
- ▶ Coal exploration and consultancy services in Sefid Riz Area in Mazandaran Province
- ▶ Detailed exploration of Galali Iron Deposit



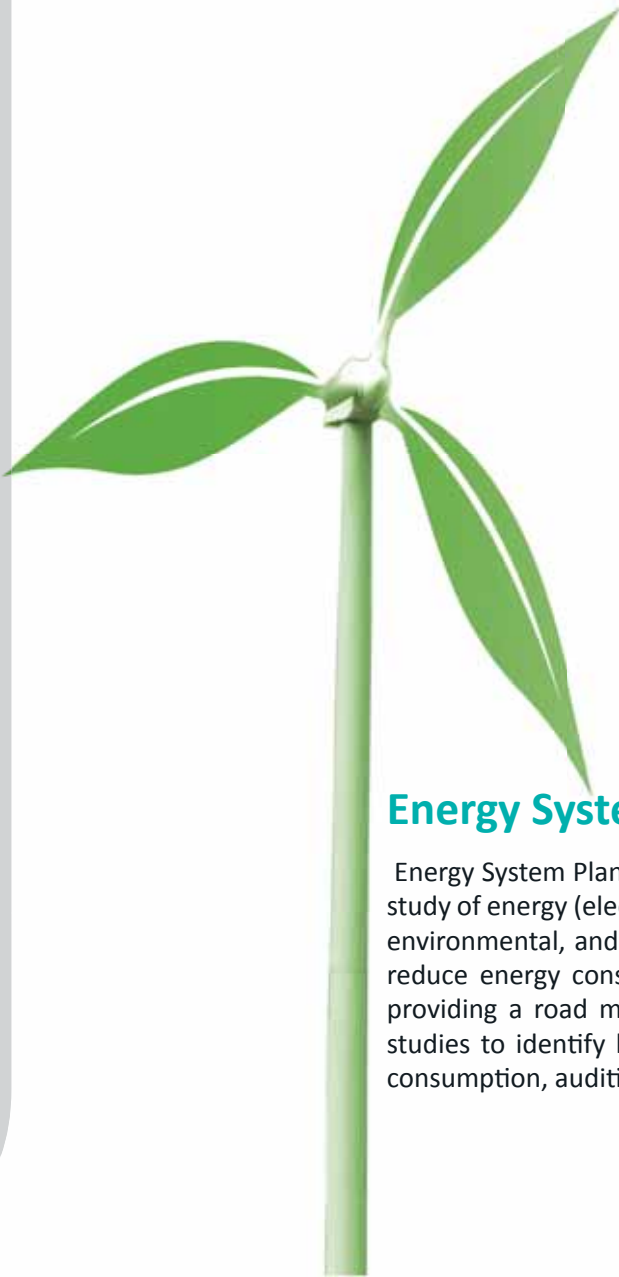
System & Energy Studies

Energy and System Study Center (ESSC) as a special studies division in Monenco was established in 2008 in order to provide services based on the new business environment and enhance its technical capabilities. This center by means of its talented experts and devoting efforts made it possible to take part in different consulting areas.

Activities of ESSC can be categorized into four groups as follows:

- ▶ Energy System Planning
- ▶ Strategic Planning and Management
- ▶ Power System Studies
- ▶ Economical Feasibility and Electricity Market

Besides, ESSC has held different trainings, workshops, and seminars to spread its achieved technical knowledge to everyone involved in Iranian electrical power industry and other industry related to the energy.



Energy System Planning

Energy System Planning department has been responsible for comprehensive study of energy (electricity, Oil and Gas etc.), studying the effect of economical, environmental, and social aspects of using new technologies to optimize and reduce energy consumption, establishment of energy management system, providing a road map for optimizing energy consumption in major centers, studies to identify bottlenecks and provide solutions to improve the energy consumption, auditing energy, and proposing tactics to save energy.

Strategic Planning and Management Group

Strategic Planning and Management Department has been performing as a consultancy group to provide services in the areas of strategic planning and management, evaluation of effectiveness and efficiency and planning for cascading strategies. Besides, this group has experience in management processes, operational planning, evaluating performance of companies and organizations, etc.



Power System Studies Group

Power System Studies Group as one of the main groups in ESSC offers services and activities related to the generation, transmission, and distribution grid. This group provides consultancy services for feasibility studies of connection power plants, analyzing power system events, studying technologies in power system, studying power quality, reducing loss in electrical networks etc.



Economical Feasibility and Electricity Market

Economical Feasibility and Electricity Market studies group covers all consulting services in the areas of economical feasibility and market studies. These services are not limited to electrical power industry but covers all industrial projects. Some of major tasks of this group are but not limited to: economical feasibility study for investment projects, developing the regulations related to the electricity market, electricity energy and services pricing, providing energy



selling bidding strategy for private owners in the electricity market, competitive market analysis indicators, economic studies on electricity transit and studying and predicting the behavior of other market players. Moreover, this group has recently entered Stock Valuation area and tried gaining experiences in the field of public-private-partnership.

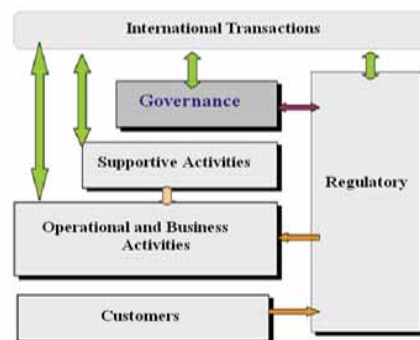
Iran Power Industry Restructuring

Client: Iran Power Generation Transmission and Distribution Management Company - Iran

Duration: 13 Months

Scope of work: Monenco develops a new structure for Iranian electric power sector.

Description: This study aims proposing a comprehensive structure for reorganizing Iran power sector. The purpose of this study is to strengthen Iran electricity supply industry to be able to satisfy future network needs regarding demand growth and enhance the efficiency and performance of the power infrastructure. Another driving force for this study is responding to Iran national policy of promoting the private sector participation in generation and distribution fields of electricity industry. In other words, realization of privatization is an important focus of this study.



Tehran Transmission Master Plan

Client: Tehran Regional Electric Company (TREC) - Iran

Duration: 16 months

Description: Development of a Master Plan for TREC Transmission Network (2014-2024) The outcome of this project is the transmission system expansion plan with aim of increasing the reliability of the system and its operational conditions. In addition, the characteristics and the time of need for enhancing the system (including installation of new power plants, transmission lines, and substations) are determined with the purpose of maintaining the adequacy of system in a least-cost manner.

Power Quality Improvement of Modern Steel Mills (MSM)

Client: Monenco Consulting Engineers (MCE) - Oman

Duration: 6 Months

Scope of work: Several solutions in order to solve major power quality problems specially flicker.

Description: Modern Steel Mills (MSM) is located in Rusayl Industrial Estate (RIE) in Muscat, Sultanate of Oman. The electrical utility company which provides the electricity for the MSM is the Muscat Electricity Distribution Company (MEDC).

There are some concerns regarding the MSM furnaces' operation on the power quality and their effects on the adjacent network such as load fluctuations leading to voltage drop on the connected busbars. Other than the effects of MSM

furnaces' operation, the interconnectivity of the RIE electrical network, reliability of the supply to the MSM and dynamic stability of the RIE grid with due consideration of Rusayl power plant controls setting are also points of concerns.



Finished Projects

- ▶ Save to Export (SAVEX)
- ▶ System Study of Asalouyeh-Esfahan 765 kV Transmission Line Project
- ▶ System study of Engineering Service and Supervision of Semnan - Golpaygan (Iran) HVDC Project
- ▶ Power System Studies and Connection to New Plant in Esfahan Refinery
- ▶ Economical Studies for Construction of Bafq Combined Cycle Power Plant
- ▶ Power System Studied and Connection of Mobarakeh Mills New Plant to the Iran Grid
- ▶ Feasibility studies for construction projects in connection of MAPNA CHP unit with capacity of 25 MW
- ▶ Studies of electrical and heat energy auditing in Pars Special Economic Zone
- ▶ Consultancy Services on the first Stage Studies for Usage FACTS Equipment in Electrical Grid
- ▶ Consultancy Services for Protection in Transmission and Sub-transmission Network Planning of Esfahan Regional Electrical Company

Important Topic of Ongoing Projects

- ▶ Power Evacuation System Study of Salah
- ▶ Power quality improvement of Modern Steel Mills (MSM) in Oman
- ▶ Power Industry Restructuring in Oman
- ▶ Feasibility Study of exporting electricity to Iran's neighboring countries
- ▶ Development of Master Plan for TREC Transmission Network
- ▶ Feasibility Study and Project Engineering for Super Grid (765 kV Transmission Lines and Associated Substations) in Nigeria
- ▶ Consultancy Services on the second Stage Studies for Usage FACTS Equipment in Electrical Grid
- ▶ Technical and Economical Feasibility Study for resumption of Thermal Energy in Steel Industry
- ▶ Consulting services for coordination revising of Toos power plant protection relays and its related substation project.
- ▶ Feasibility Study of 500 MW Wind Farm Construction in Iran
- ▶ Economical, Technical, and Market Studies for Stock Valuation for Power Distribution Companies

Awards

- ▶ Obtaining certification of gratitude for the performance of MSM project, 2012 from Monenco Consulting Engineers (MCE) – Oman.
- ▶ Obtaining certification of gratitude for the performance of «Power System Studies and Connection to New South Plant» project, 2012 from Esfahan Refinery Company.
- ▶ Obtaining certification of gratitude for the performance of «Protection in Transmission and Sub-transmission Network Planning» project, 2012 from Esfahan Regional Electrical Company.



Research and Development

Research and Development (R&D) in Monenco aims to apply new ideas in energy industries in order to enhance efficiency, reliability and productivity. We meet the present and future demands of industries, while helping clients to make a better use of available resources to reduce the environmental impact and maintenance costs by developing the systems and products. The main goals of R&D office are as follow:

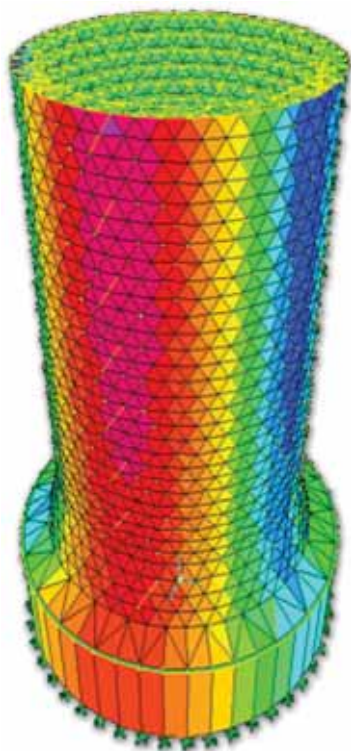
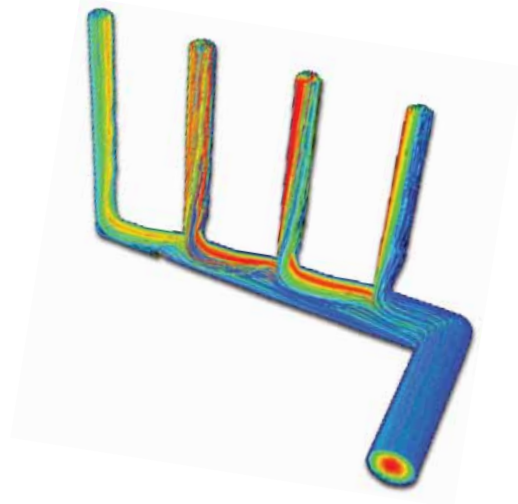
- ▶ Exploring research capabilities and capacities in different sections of Monenco
- ▶ Developing technical and scientific knowledge in new areas
- ▶ Know-how transfer of the new technologies to the design disciplines of Monenco
- ▶ Communication with academic and research centers in order to define and execute necessary research projects

Main ongoing R&D projects

CFD analysis of steam flow in duct of ACC cooling system

Client: Engineering Deputy of Monenco Iran / Mapna Development 2

Behbahan CCPP ACC duct is linear and asymmetric. In order to ensuring about equal steam flow in each roof, CFD (Computational Fluid Dynamics) analysis has been done in R&D office. Duct 3D model was generated and meshed in Gambit, boundary condition was applied and numerical solution has been done with Fluent software.



In-house Design of steel cooling tower for Heller cooling system

Client: Engineering Deputy of Monenco

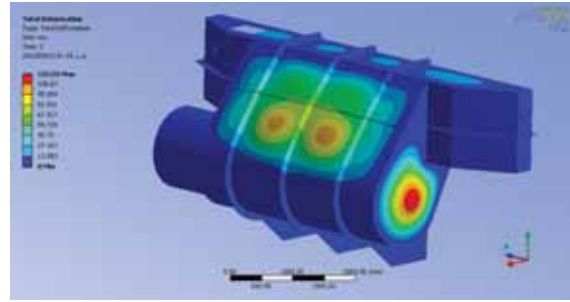
Heller cooling towers are two types, concrete towers and steel towers. This project's aim is to obtain know-how of steel cooling tower design for Heller cooling systems. Tower 3-D model has been generated, load cases have been defined and mechanical behavior of tower has been investigated using finite element software.



In-house Design of DC Jet Heller condenser for 325 MW Steam power plant

Client: Power Generation Deputy of Monenco

Designing of DC Jet condenser of Heller cooling system for 325 MW Steam power plant has been done in R&D office. The main activities are condenser sizing, CFD modeling of outside headers, 3-D modeling of condenser and Finite Element analysis of condenser.



Oil and Gas activities

Client: Oil and Gas Deputy of Monenco

According to the strategy of Monenco, efforts have been made to identify new technologies in the different fields of Oil, Gas and Refinery in order to have greater cooperation and partnership with reputable domestic and foreign companies. Some of these topics are Evaluation of Enhanced Oil Recovery by means of CO₂ capture from the power plants, Flue Gas Desulfurization, Flare Gas Recovery, Mini Refinery and Mini GTL (Gas to Liquid), as well as technical and economical evaluation of power generation by turbo expanders.

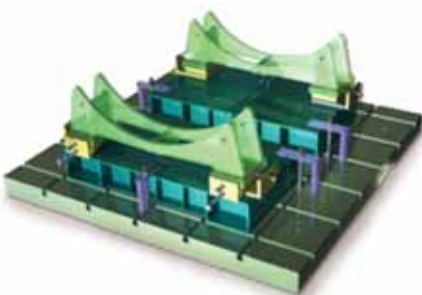


Designing test rig for 25 MW Gas turbine and centrifugal compressor

Client: MAPNA Turbine Engineering & Manufacturing Co. (TUGA)

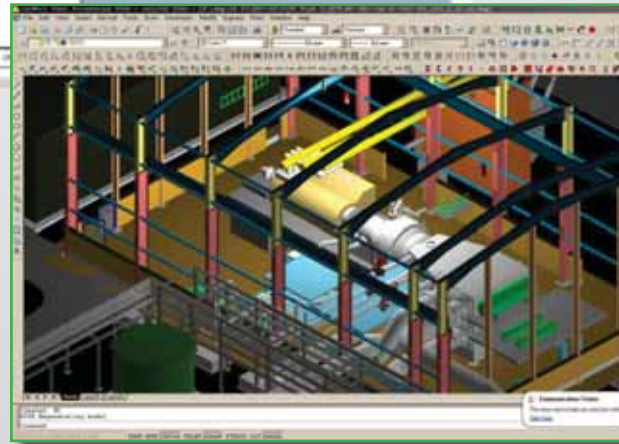
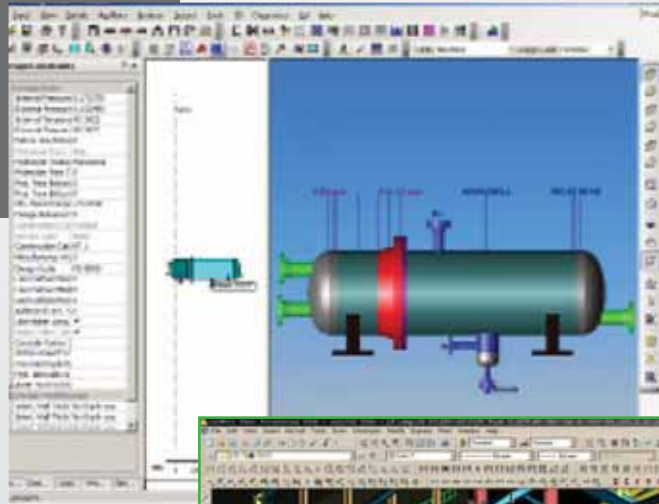
TUGA is in the process of manufacturing a 25 MW industrial gas turbines in cooperation with Zorya-Mashproket (Ukraine). The complete design of the test station together with the necessary test calculations has been done in R&D office. According to the plan, test bench will be started by June 2013.

The objective of designing this test rig is to conduct performance testing of a Frunze (Ukraine) compressor according to the latest international standards. The main objective of the test is about obtaining the performance curves of 4 type compressors (3 types for gas transmission and one type for refinery).



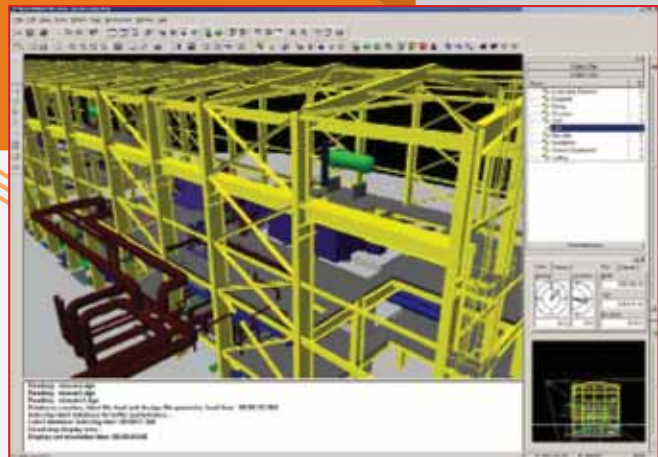
Engineering Capability

Engineering Division is the most significant division in Monenco that provides engineering services for a wide range of projects carried out in this company. It has been kept up to date by taking advantage of the latest science and technology in its daily tasks, providing services to the other engineering departments in a matrix based formation.



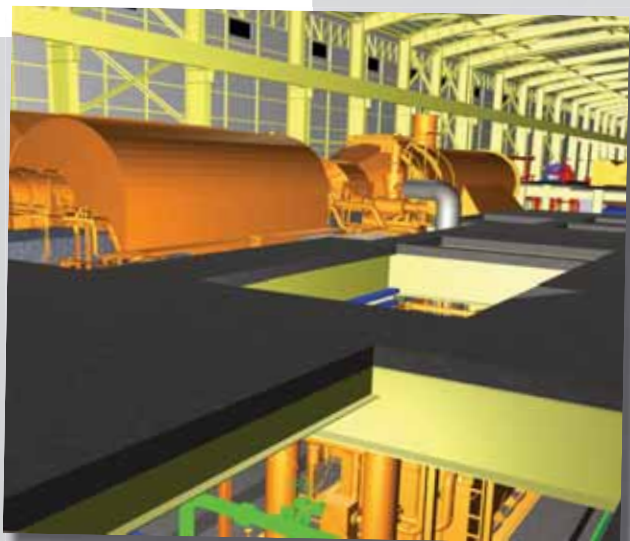
Moreover, this division has collaboration with Research and Development Department as well as several outstanding international companies in order to stay strong and innovative in the energy market.

This division consists of seven professional departments; Civil & Structure, Piping, Mechanic, Process, Electrical, Instrumentation & Control (I&C) and General. The specialized experts of this division, design, review, endorse and modify all engineering documents if needed, based on the project specification and client technical requirements.



In 2012 this division besides giving services for all projects of our company, it was successful to extend its knowledge to the following fields and subjects:

- ▶ Design of monolithic gas and steam turbine hall structure & architecture
- ▶ Design of concrete type ACC cooling system structure
- ▶ Design of heavy and light fuel high capacity storage tanks roofing structure
- ▶ Preparation of basic and detail design of LV Standalone Photovoltaic systems
- ▶ Power Distribution and lighting desing of Elevated Expressway
- ▶ Preparation FEED document for Renovation of ABB based DCS from AC 400 series to a new model
- ▶ Preparation of DCS basic and FEED document for upgrading of Telephermer ME DCS to a new model
- ▶ Preparation of Intelligent oil well concept in a telemetry and SCADA backbone
- ▶ Basic and detail design of ACC steam ducts
- ▶ Basic and detail design of different type steam condensers
- ▶ Using the Air Pack software in HVAC system designs
- ▶ Modeling the thermodynamic cycles of different types of fossil fuel power plants by using the Thermoflow software
- ▶ Complete design and consultancy of Air conditioning system for sensitive areas, special data centers, clean rooms and dispatching centers
- ▶ Providing engineering service for design reviewing technical documents of a 350MW thermal boiler
- ▶ Detail design of FM-200 fire extinguishing system for main control building of dispatching centers
- ▶ Detail Design of Water Treatment Plants
- ▶ Conceptual Design of Pre-treatment of raw water supplied from surface waters
- ▶ Conceptual Design of Distillation Desalination System (MED)



Information Technology Management

This year's IT Annual Performance Report provides insight into Monenco rapidly changing business environment and highlights the value that IT department continues to deliver towards these improvements. It has been a monumental year of transformation as Monenco pursues new opportunities worldwide.

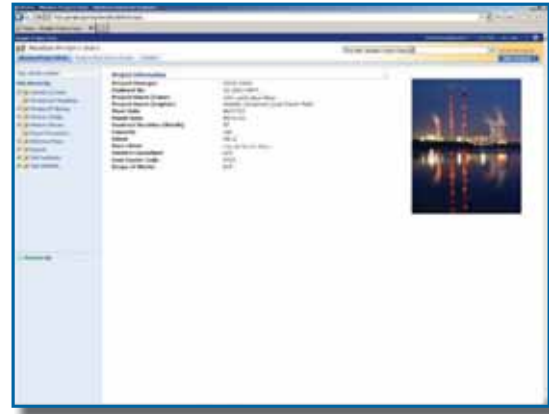
Following our Information Technology master plan we are reinventing the Document Control Electronic System in order to improve the integration of related processes. This new document control system will implement integration of project portals, Archive, EDMS, work flows and reporting systems.

The new version of internal projects time control system (eMonenco) was developed enabling us to keep the exact record of cost of projects.

These new lines of business create urgent, unique IT demands from Clients, international offices, internal technical team. By providing insight and innovation, Monenco IT department is influencing decision making by delivering technology solutions and systems of engagement across all of Monenco businesses areas. More than ever, IT is poised to advance our company's competitive advantage

by delivering results for the unique and evolving business needs.

Our mission is to "Grow Monenco's business through information technology." We did this in 2012 by applying New archive system based on SharePoint 2010, the Power Plant Master Document List (PPMDL), Final Book Electronic System and the Data Exchange Package (DEP) Monenco's business units, resulting in faster time to market for our services and improved efficiency.



Knowledge Management

Following the successful design and development of Knowledge Management System, 2012 was the year for implementation of this system. Reorganizing knowledge management teams, completion of the knowledge documents, developing design process feedback system, providing clients with numerous technical and knowledge reports, enhancement of the ICT infrastructure, application of different tools for extraction of tacit knowledge were the main achievements in 2012 for implementation of Knowledge Management System.



Strategic Management

As the previous years, development plans were defined to align all departments with company strategic plan. Results show that 2012 was a successful year for diversification of internal and international markets, increasing number of clients, engineering services and so on. Because of continuous change in external environment, review of previous strategies and modifications according to needs of market has been done.

Project control & Monitoring Department:

Monenco as the front-runner of engineering services consulting companies in Iran gained many national and international successes in past years.

In the path of company succession in its national and international projects, Project Control & Monitoring Department plays an important role and is the pioneer body of the firm. Agility, Professionalism and astuteness are the values that are the foundation of our department. Project Control & Monitoring Department is shaping the controlling and managing way of nearly all projects of the company to achieve their settled goals within optimum time and sharing resources.

As the Monenco project Control & Monitoring Department we proudly honor to have more than 30 high standing experts in project planning and controlling field, incorporating updated methodologies like PMBOK, ISO 21500 etc., using latest software such as Primavera packages, Microsoft Projects and modern tools for archiving projects documents. Specifically, we empower

the projects teams to achieve their specified goals with providing planning, monitoring and controlling services such as measuring the ongoing project activities, monitoring the project variables in terms of time, cost, scope, shared resources, risk etc. against the project management plan and incorporating corrective actions. Moreover, updating and improving the project management system of the company and collecting and keeping the lessons learned in past years have been the main concerns of this department.

Regarding the company strategy and goals to expand its overseas markets and entering the field of MC and advisory consultancy services to international clients, the project control and monitoring department is honored to adapt itself efficiently and effectively and has considerable role in helping the company to achieve its overseas projects goals which is considered as one of the significant competitive advantages of the Monenco.

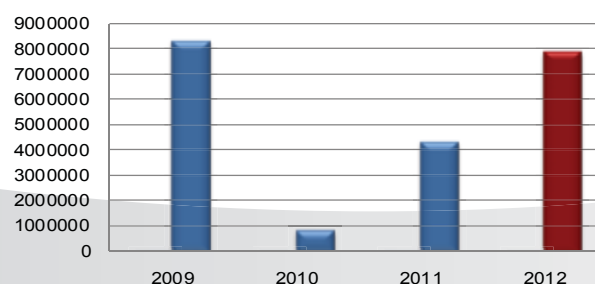
Global Presence

As the strategy of Monenco, diversification in services and geographical presence took place based on company's codes of conducts and guide lines, and main policy.

Despite high volume of pressure and restrictions imposed, impressive successes were gained in Africa, Middle East, and Far East. Our belief is, these success, could be multiplied, if these limitations were removed. Clever and weighted decisions made by top directors of company accompanied by high technical support of company's technical staff were the key factors of ever expanding successes. Now Monenco is a familiar name beside the technical giants in global market.

Our sister companies in Oman and Nigeria also gained great successes along with their parent company.

International Contracts Value (USD)



Quality work

In 2007 Monenco Iran established and implemented a Quality Management system (QMS) and certified according to International Standard ISO 9001:2000 in order to improve the quality of its engineering services and enhance the customer satisfaction. In 2011, Monenco Iran has certified in accordance with ISO/TS 29001:2010 for petroleum, petrochemical and natural gas projects.

The main achievements of QMS in 2012 are as follow:

- ▶ Increasing the customer satisfaction by 9.8%
- ▶ Obtaining the clients' letter of appreciation, 16 letters
- ▶ Decreasing the Revisions of issued drawings and technical documents by 5%
- ▶ Increasing the Tender technical score by 5% in which was led to being considered in the short list of clients or granting the project
- ▶ Documenting procedures, work instructions & quality plan for new types of projects
- ▶ Performing corrective & preventive actions according to weekly internal audits of projects departments
- ▶ Decreasing the number of projects and departments nonconformities based on the corrective & preventive actions

Health, Safety & Environment

of our Employees & Intrested Parties

In 2011, Monenco established and introduced HSE Management system and certified according to ISO 14001:2004 and OHSAS 18001:2007 In order to provide and increase personnel health and safety and environmental requirements. The main achievements of HSE-MS in 2012 are as follow:

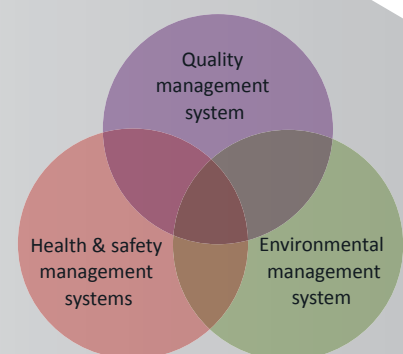
- ▶ To strive providing safe & healthy workplace continually.
- ▶ To perform HSE risks assessment & operational control for high risk activities continually.
- ▶ To perform first aid & fire fighting training course & developing emergency response plan (ERP) teams.
- ▶ To perform ERP scenario in order to increase personnel preparedness facing to emergency actions.
- ▶ To perform HSE training courses for improving HSE culture.
- ▶ To provide medical and dentistry services for personnel
- ▶ Recording, analyzing & identifying root causes of H&S incidents and accidents.
- ▶ To transmit drawings & documents electronically instead of hard copy system.
- ▶ To perform projects in field of energy audit and clean & renewable energy in order to sustainable development.

Integrated Management System

In 2012, Integrated Management System (IMS) in Monenco was implemented in order to achieve:

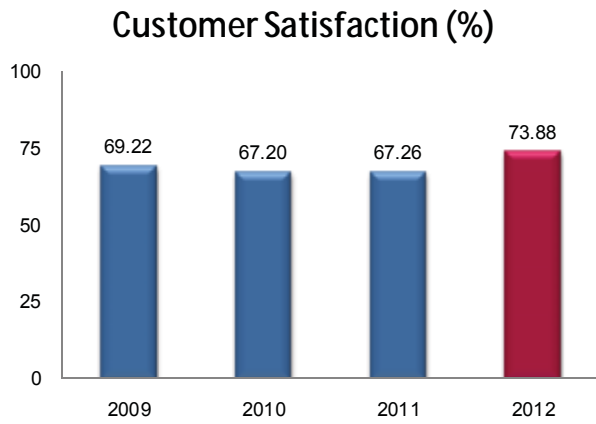
- ▶ Reduction of planning cost, establishing and maintaining QHSE management systems
- ▶ Increasing the productivity and efficiency of the systems
- ▶ Avoiding repeated tasks and omitting reworks
- ▶ Optimum usage of resources
- ▶ Increasing the confidence of clients and customers

Integrated management system =
 + ISO9001:2008, ISO/TS29001:2010
 + OHSAS18001:2007
 + ISO14001:2004



Customer Satisfaction

To ensure to meet customer requirements and perform corrective & preventive actions in appropriate time, QM section independently communicate with customers according to Monenco CRM method by face to face meeting, phone calls and sending questioners.



Objectives & Development plans

Based on IMS policy & Monenco strategies, objectives and development plans of each department are determined yearly by "Monenco Enhancement Work-Group" performing by "QHSE & Productivity Office". Each department is responsible for performing the relevant

plans & reporting the monthly progress. QHSE & Productivity Office is responsible to control progress plans and define appropriate corrective & preventive actions to achieve objectives.

Productivity

Monenco has successfully awarded to first rank of "4th Iranian national festival of productivity" in main section of Technical & Engineering services group, based on financial and economic results, from 2007 to 2011.

The Productivity Indicators and it's improvement in 2012 is demonstrated as below:

Indicator	Avg. score of Technical & engineering group	Monenco in 2010	Monenco in 2011	Improvement %
Labor productivity	2.38	1.35	2.6	92.6
Capital productivity	63.14	75.55	110.09	45.7
Total Factor productivity	6.83	2.22	4.25	91.4

Excellence Model

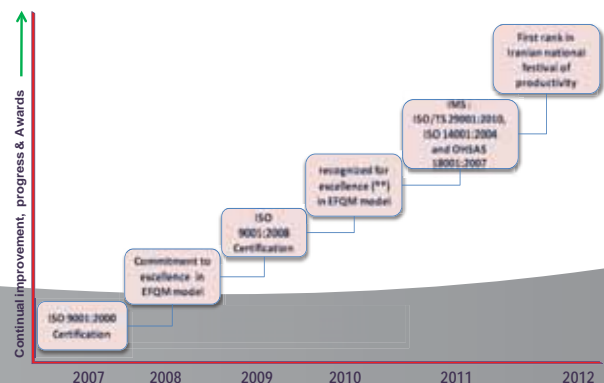
In order to provide sustainable excellence and achieving balanced results in all areas of organization, Monenco performance has been assessed based on EFQM excellence model and has awarded to "committed to excellence" level, in 2009. In 2011, Monenco has been awarded

"Recognized for Excellence" level, based on EFQM model (2010 version).

Improvement projects has been continually defined and developed in Monenco based on EFQM framework.

Continual Improvement

The effectiveness of implemented models & systems yearly is being controlled by QHSE and Productivity Office. The trend of Monenco Continual Improvement is demonstrated as shown in the picture.



Monenco in the Middle East

Growth and vitality in the Middle East continues to soar in response to increasing demand and rapid industrial developments which has placed the Middle East region as one of the most dynamic power sectors in the world.

To meet the estimated 6 to 10 percent annual surge in demand for power, which is around 8 GW of additional capacity, GCC countries are projected to invest more than \$300 billion in some 20 energy projects by 2020.

Monenco Consulting Engineers (MCE) had established a strong market presence in 2012 in the Sultanate of Oman and now is considered as a platform to enter new markets in GCC. MCE, along with its core business activities, has ventured significant new areas in 2012 for system studies with different major clients in the Sultanate of Oman.

MCE plans to expand its activities in 2013 to include Oil and Gas and to the vast potential in the renewable energy sector in the Sultanate of Oman. Some of our projects in 2012 are as follow:



Power Generation

- ▶ Technical Advisory Services for Implementation of Barka III & Sohar II Independent Power Projects (2 Combined Cycle 750 MW Power Plants with 2x250 MW Gas Turbines and 1x250 MW Steam Turbine)
- ▶ Consultancy Services for Rehabilitation and Upgrading of Saih Al Khairat Power Station in Dhofar Governorate (which changed to Consultancy Services for New Power Plant at Saih Al Khairat – 6x8 MW Diesel Generators)

Substation and Transmission Line

- ▶ Consultancy Services for Design & Supervision of Madinat Barka & Al Khadra Grid Stations and Associated 132kV LILO Works
- ▶ Consultancy Services for Madinat Nizwa 132/33kV Grid Station and Associated 132 kV OHL
- ▶ Consultancy Services for Al Kamil & Al Wafi 132/33kV Grid Station and Associated 132 kV OHL
- ▶ Consultancy Services for Modification of JBBA 132/33kV Grid Station
- ▶ Consultancy Services for Extension of Nizwa 132/33kV Grid Station
- ▶ Consultancy Services for Design & Construction Supervision Services for 33kV 2x20 MVA Airport Heights-04 Primary Substation
- ▶ Consultancy Services for Design & Construction Supervision Services for Upgrading Al Khuwair North 01 Primary Substation from 2x16 MVA to 3x20 MVA
- ▶ Consultancy Services for Design and Supervision Services for Construction of 33kV Switchgear Substation at RUSAYL
- ▶ Owners Engineer Services for Implementation of 132 kV Network Reinforcement Works, 33 kV Capacity Expansion Works and Transmission & Distribution System Improvement Works

Dispatching

- ▶ Supervision on SCADA/DMS Phase 3 Project of Majan Electricity Co. (MJEC)

System Study

- ▶ System Study Power Quality Improvement of Modern Steel Mills
- ▶ Consultancy Services for Power Evacuation System Study for IPP-2

New Areas of Activity in 2012:

Consultancy Services for Power Evacuation System Study for IPP-2 (300-400 MW) at Salalah

Description: The purpose of the project is to do detailed system study to determine size of the plant with capacity of 300-400 MW to be located in Raysut area to meet the future demand of Salalah Power System (SPS), point of injection, maximum unite size and additional transmission system requirements for power evacuation.

Consultancy Services for Rehabilitation and Upgrading of Saih Al Khairat Power Station in Dhofar Governorate

Description: The purpose of the project is to design and supervision for construction of new power station at Saih Al-Khairat in Dhofar Governorate by supply, delivery, installation & commissioning of 48 MW (6x8 MW New D.G. Sets) with a 500 kW Black Start unit.

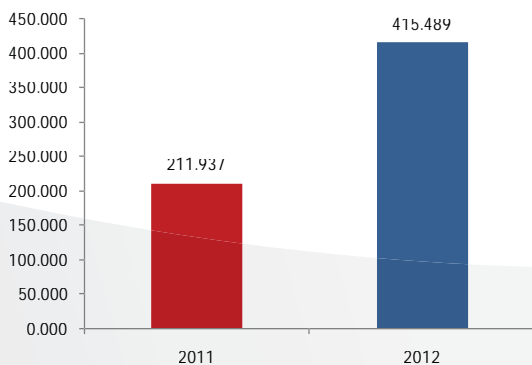
MCE Certificates

Oman Ministry of Commerce and Industry
 Oman Chamber of Commerce and Industry
 Oman Tender Board
 Oman Ministry of Defense

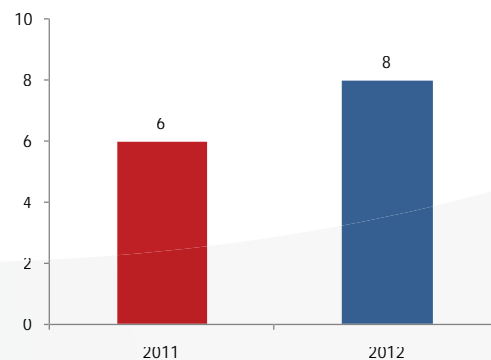
Number of projects with each Client

Client	No. of Project in 2012
Oman Electricity Transmission Company (OETC)	3
Muscat Electricity Distribution Company (MEDC)	3
Modern Steel Mills (MSM)	1
Majan Electricity Company (MJEC)	1
Oman Power and Water Procurement Company (OPWP)	1
Dhofar Power Company (DPC)	2
Rural Areas Electricity Company (RAECO)	1

MCE Revenue (RO) in 2011 & 2012



Number of Clients in 2011 & 2012



Monenco in Africa

In 2012 Monenco Engineering Ltd. (MEL) finished the 2nd year of operation. Combination of the international expertise with local experiences led us to become a strong and professional company and as a result at the very beginning of operation, two projects were awarded to the company from different Nigerian clients. Our goal is to achieve 100% client's satisfaction, so our focus would be on service quality; we will be by the side of our clients from very beginning to end and assist them from investment to the commissioning. At MEL we focused on delivering life of asset support to our clients assets and deploy both international and local expertise in order to meet clients' needs.

MEL provides consultancy and engineering service to infrastructure with focus on energy sector. Despite being new in Nigeria, MEL has contributed significantly in developing projects within the country and became a well reputable consultant.

In order to extend business opportunities, MEL has entered into partnership agreement with different international and local companies and participated in several pre-qualification and bidding exercises within Nigeria and the Continent and as a result following awards are expected soon:

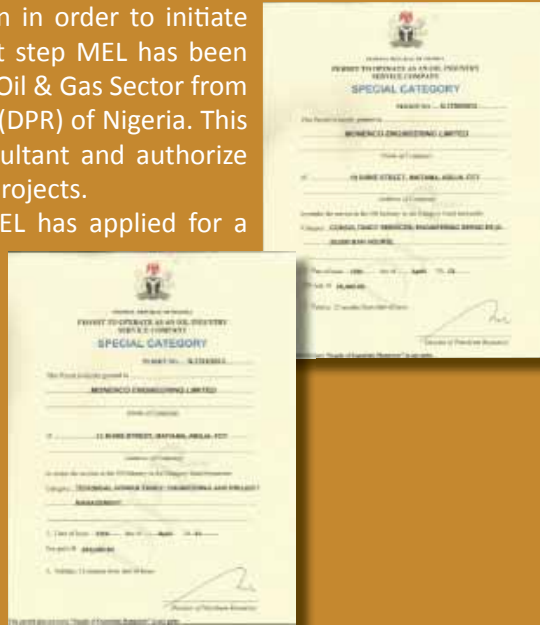
- ▶ Feasibility Studies and Engineering and Design of 765 kV Nigeria Super Grid project including 4600 Km Transmission Lines and 11 Substations
- ▶ Consultancy Service, Project Management & Site Supervision of 132kV Transmission Line and associated Substations
- ▶ Little Gombi – Mubi – Gulak 132 kV Double Circuit Transmission Line (225km)
- ▶ 2 × 60MVA, 132/33 kV Substation at Mubi
- ▶ 2 × 132 kV Line Bay Extension at Mubi Substation
- ▶ 2 × 60 MVA, 132/33 kV Substation at Gulak



Professional Affiliations:

Oil & Gas: With regards to recent field development and international investment in Nigeria Hydrocarbon Sector, MEL has put on place necessary provision in order to initiate its business in Oil sector. As the first step MEL has been granted a Consultancy Certificate for Oil & Gas Sector from Department of Petroleum Resources (DPR) of Nigeria. This certificate identifies MEL as an consultant and authorize the company to engage in Oil & Gas Projects.

General Consultancy Certificate: MEL has applied for a Consultancy Certificate under Council for Regulation of Engineers in Nigeria (COREN), the Individual Certificates has been secured and the Corporate Certificate will be granted in near future.



Updated and new pictures along with relevant explanations:

Collaboration: As part of its business development strategy MEL, has entered into several cooperation agreement with different well known companies all around the world.

Projects:

- ▶ Feasibility Studies, Engineering Design and Preparation of Contract Documents for 34MW Dadinkowa Hydro Dam: The engineering service was compacted and relevant bankable feasibility study report submitted to the client. Job Completion certificate was granted.
- ▶ Engineering Services for Kabompo Gorge Hydro power plant in Zambia: MEL received job satisfaction certificate from the client.
- ▶ EPC Bid evaluation (PHCN-TCN): Satisfaction certificate was received from the client.

Profit (Loss) Statement at 20 March 2013

	1391 (at 20 March 2013) Rials	1390 (at 20 March 2012) Rials
Services Income	368,201,257,840	311,987,230,849
Services Finished Price	-274,091,069,164	-227,833,934,368
Gross Profit	94,110,188,676	84,153,296,481
General & Administrative Costs	-39,000,000,000	-52,075,410,762
Other Operating Incom (net)	120,000,000	136,100,000
	-38,880,000,000	-51,939,310,762
Operating Profit	55,230,188,676	32,213,985,719
Financial Costs	0	0
Other non-operating income	1,000,000,000	105,988,002,722
	56,230,188,676	138,201,988,441
Tax on Income	-13,807,547,169	-8,175,396,759
Net profit	42,422,641,507	130,026,591,682
Accumulated Profit/Loss Account Turnover		
Net profit	42,422,641,507	130,026,591,682
Accumulated Profit in the beginning	236,071,800,117	122,302,513,294
Annual Modifications	-8,000,000,000	-10,210,076,640
Accumulated Profit in the beginning-modified	228,071,800,117	112,092,436,654
Profit Distribution	270,494,441,624	242,119,028,336
Appropriation of Profit		
Legal Reserve	-2,121,132,075	-6,501,329,584
Dividend	-4,242,264,151	-7,277,908,114
Board Bonus	-450,000,000	-344,444,443
	-6,813,396,226	-14,123,682,141
Accumulated Profit in the Final Period	263,681,045,398	227,995,346,195

Monenco Iran (Private Joint Stock Co.)							
Balance Sheet							
At 20 March 2013							
	Rial	Rial	Rial	Rial	Rial	Rial	Rial
<u>Assets</u>				<u>Liabilities And Equities</u>			
Current Asset:				Accounts Payable:			
Cash in Bank	1391,12/30	1390,12/30	1390,12/30	Accounts Payable:	20-Mar-13	20-Mar-12	20-Mar-12
	20-Mar-13	20-Mar-12	20-Mar-12				
Short-term Investments	3,203,700,382	5,826,020,296	5,091,190,732	Credit From Mapna Group	44,670,957,438	60,698,045,344	60,698,045,344
Accounts Receivable	4,589,475,009	4,493,297,501	294,186,485,123	Advanced Received	12,321,413,583	6,998,229,811	9,765,132,946
	104,358,656,454	16,397,798,194	29,946,314	Tax Provision	6,998,229,811	20,354,906,645	18,759,279,738
Debit Of Mapna Group	289,620,184,669	393,254,543,993	45,813,413,633	Dividen Payable	0	93,533,050,714	93,533,050,714
Other Accounts Receivable	52,721,858,697	0	0	Portion Of Borrowing	93,312,969,284	0	0
Project In Progress	0	14,946,314	0				
Material & Gooda Inventory	621,908,088	516,820,160	0				
Prepayments	140,711,847,641	17,287,353,122	0				
Total Current Assets	595,827,630,941	543,664,193,213	476,996,212,676	Total Current Liabilities	476,996,212,676	543,664,193,213	543,664,193,213
Fix Assets:				Non-Current Liabilities:			
Tangible Assets	5/0,063,091,521	590,450,331,214	62,537,128,091	Long-term Accounts Payable	25,386,404,855	27,175,767,249	19,465,915,124
Long-term Investments	5,644,528,405	2,053,692,031	87,923,532,946	Benefits Reservation For Employees	0	46,641,682,373	46,641,682,373
Intangible Assets	0	5,092,521,355	0	Total Non- Current Liabilities	25,386,404,855	73,817,454,622	66,107,600,503
Other Assets	12,565,351,312	1,619,422,003	0				
Total Fix Assets	588,272,977,244	605,275,978,663	564,919,745,622	Total Liabilities	564,919,745,622	592,158,748,929	592,158,748,929
				Equities:			
				Capital	338,333,250,000	195,118,180,000	195,118,180,000
				prepayment of capital increased	0	110,000,000,000	110,000,000,000
				Legal Reserve	9,993,035,256	16,494,364,840	16,494,364,840
				Other Reserve	1,173,531,909	1,173,531,912	1,173,531,912
				Accumulated Profit	263,681,045,398	227,995,346,195	227,995,346,195
				Total Equities:	619,180,862,563	556,781,422,947	556,781,422,947
				Total Liabilities and Equities	1,184,100,608,185	1,148,940,171,876	1,148,940,171,876
	1,184,100,608,185	1,148,940,171,876	1,148,940,171,876				

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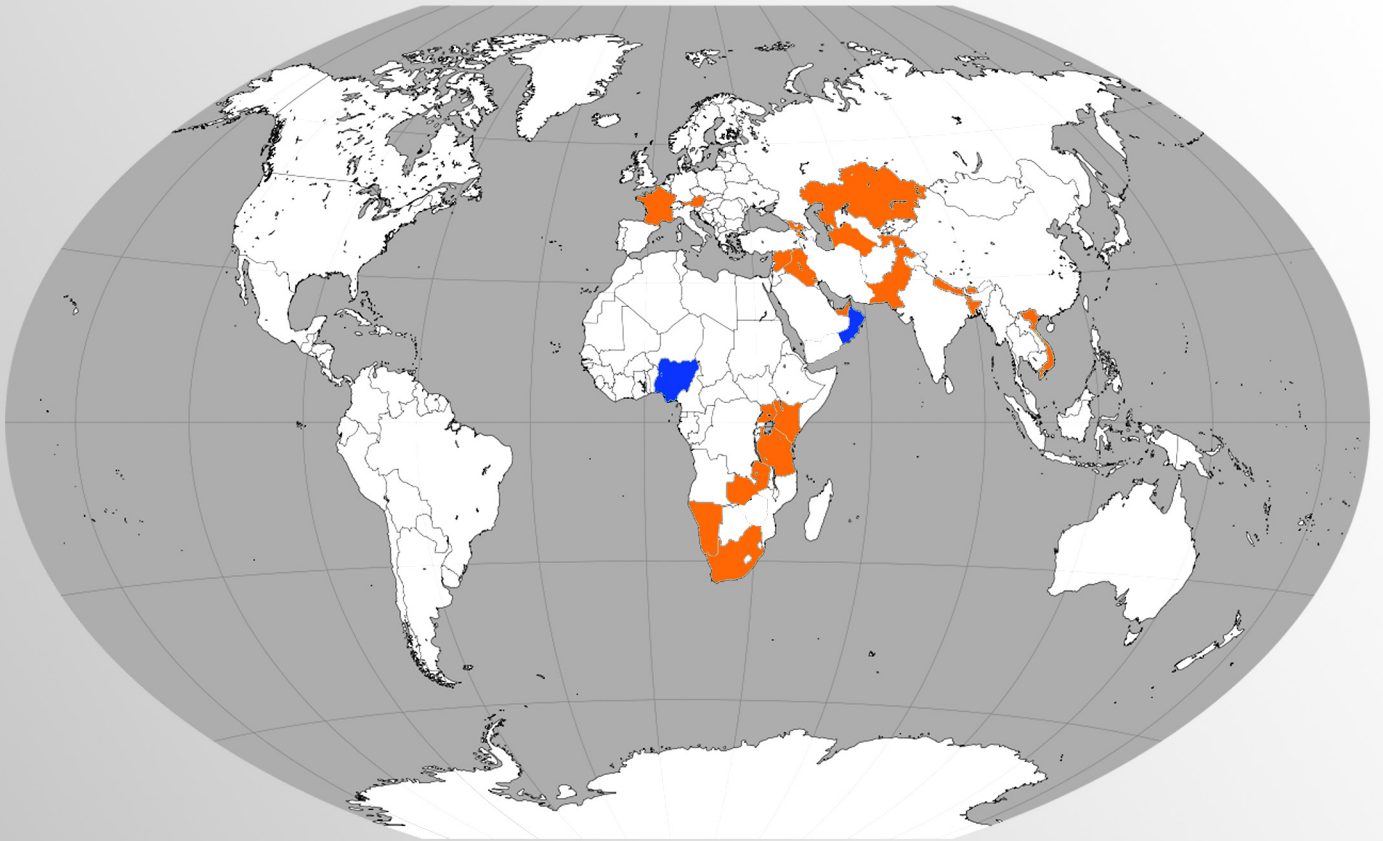
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