



موننکو ایران
Monenco Iran

Infrastructure Division



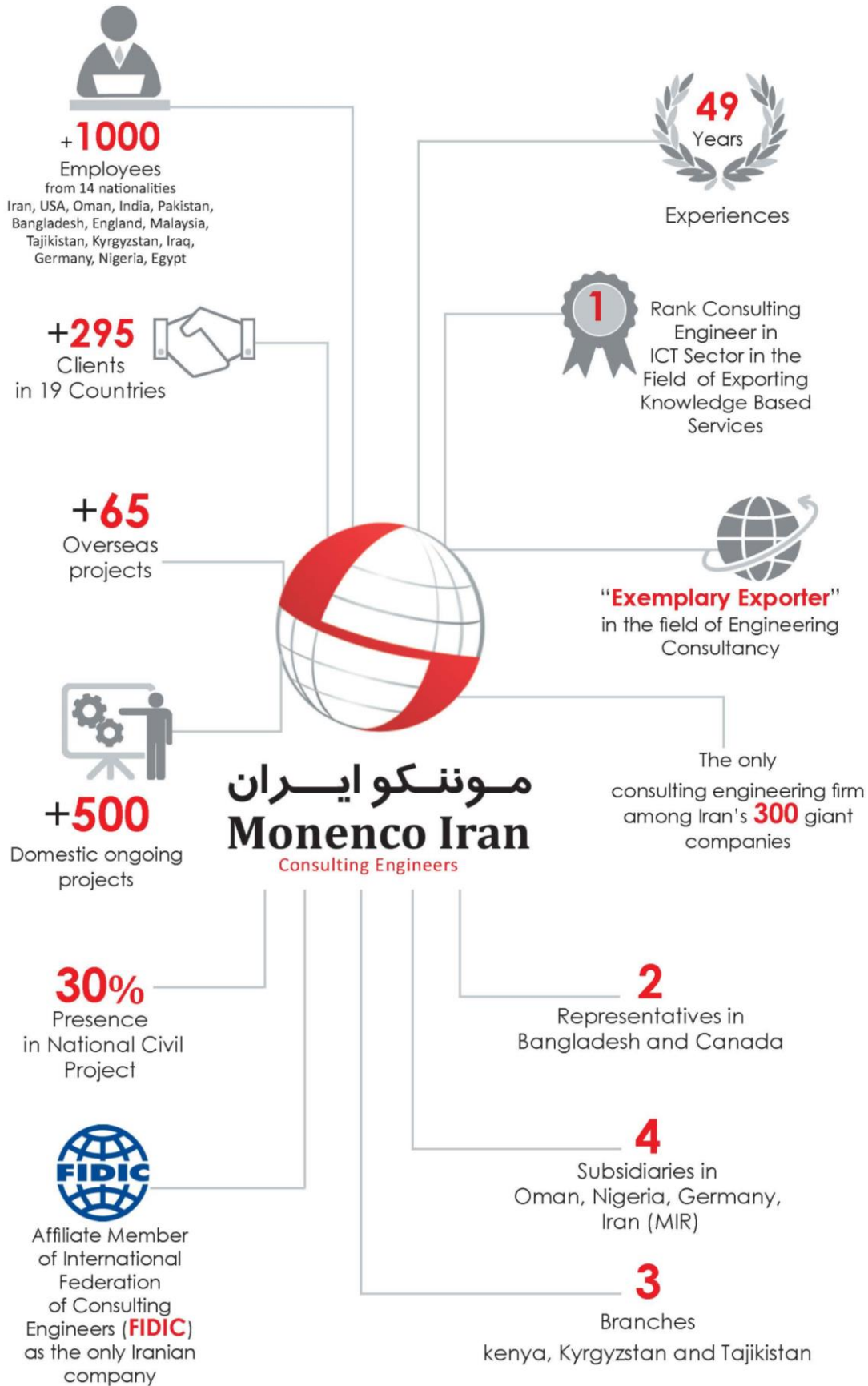
**Power Distribution
Networks Department**

www.monencogroup.com
info@monencogroup.com

Table of Contents

1. Monenco Iran at a Glance
2. Infrastructure Division
3. Power Distribution Networks Department
4. Fields of Expertise
5. Selected Projects
6. Clients
7. Certificates of appreciation





2. Infrastructure Division

Infrastructure Director: Faramarz Ghelichi
ghelichi.faramarz@monencogroup.com



Monenco Iran skills in the field of transmission lines and distribution extend from the design and modifications of existing infrastructure, improvements to grid stations and to major electrical transmission infrastructure design.

In this field, the division of Infrastructure by 5 departments has designed, consulted and supervised +/- 500 kV HVDC system, more than 28'000 km Transmission Lines up to 765 kV and Hot Line OPGW and more than 60'000 MVA Substations from 33 kV up to 500 kV and more than 100 master plan of distribution systems in major province and cities, street light planning & distribution network losses reduction studies and more than 400 km subway (metro) & railways.

In this brochure the PDN Department capabilities, proficiencies, structure and the selected references are introduced.



Transmission
Lines

Sub-Stations

Power
Distribution
Networks

Civil
Engineering
& Urbanism

Railways &
Subways



3. Power Distribution Networks Department



Power Distribution Department, Monenco Iran Co.

Distribution Networks Department is in charge of offering consultancy, engineering and supervision services in all field of power distribution industry including comprehensive and master plans of electrification, resilience assessment and enhancement, losses reduction, network system studies, reliability and power quality improvement, protection coordination and street lighting planning base on international standards and latest versions of software such as CYMDIST, CYMTCC, DigSILENT, CALCULUX, DIALux, ETAP and GIS base applications.

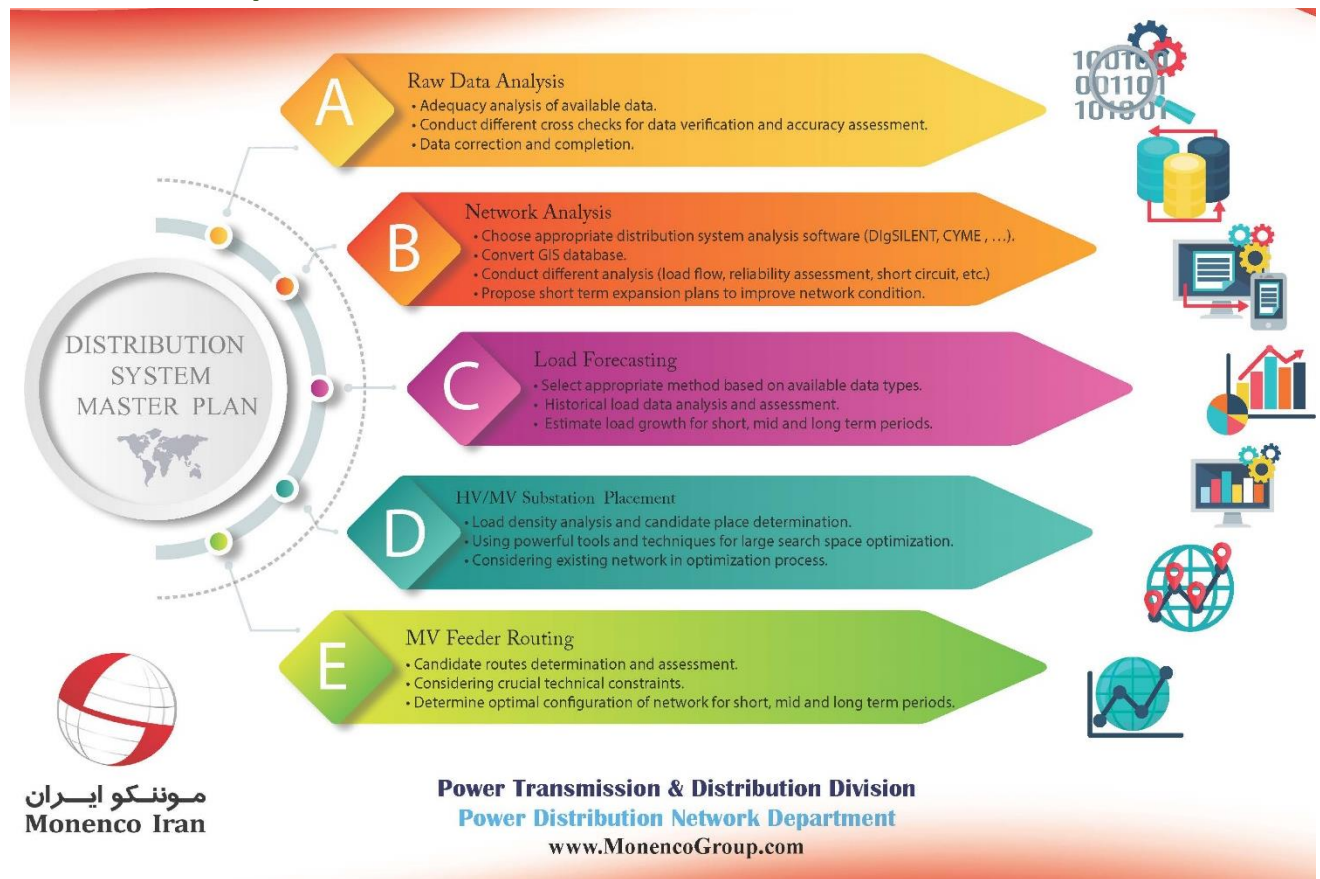
PDN Department Manager: Sara Namdar
namdar.sara@monencogroup.com

Sara Namdar has worked at MCE Company since November 2008, expert in power distribution network analyses, master plan of power distribution network (MPPD), Load flow analysis, Reliability assessment, Load forecasting, Load modeling, LV load balancing and protective devices coordination. She can review existing power system design and recommend necessary improvements to approach optimum distribution network. An estimate of total investment and development costs related to network reinforcements and modernization is the final task in distribution network analyses she does. She has over 17-year experience in power



distribution analyses projects and has the certification of two valid distribution network analyses software, CYMDIST and DigSILENT.

4. Fields of Expertise

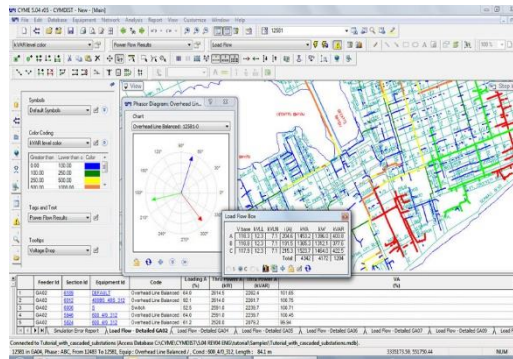
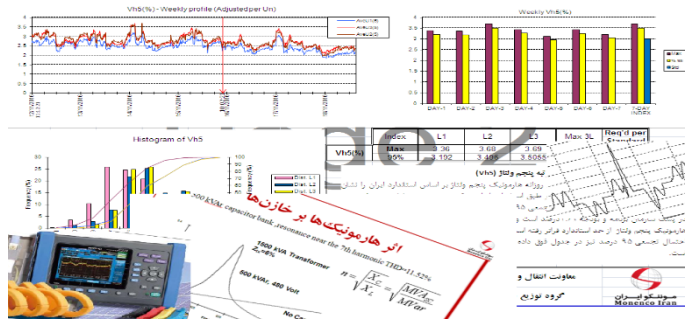


Sample Projects:

Consultancy Services for Preparation of Master Plan of Distribution Network (MPDN) in:

- » Kish Island, Mahtab Kish Water and Power Development Company, Iran
- » ALIABAD & AGHALA, Golestan Electricity Distribution Company, Iran
- » BEHSHAHR & FEREDOONKENAR, Mazandaran Electricity Distribution Company, Iran
- » SIRJAN & BAM, South Kerman Electricity Distribution Company, Iran
- » TEHRAN, Great Tehran Electricity Distribution Company, Iran
- » TABRIZ, Tabriz Power Distribution Network, Iran
- » KURDISTAN Province, Kurdistan Power Distribution Network, Iran
- » Revision of Master Plan of TEHRAN's 20 kV Distribution Network in Short Time, Iran
- » TEHRAN's 20 kV Power Distribution Network, Iran
- » YAZD Province, Yazd Power Distribution Network, Iran





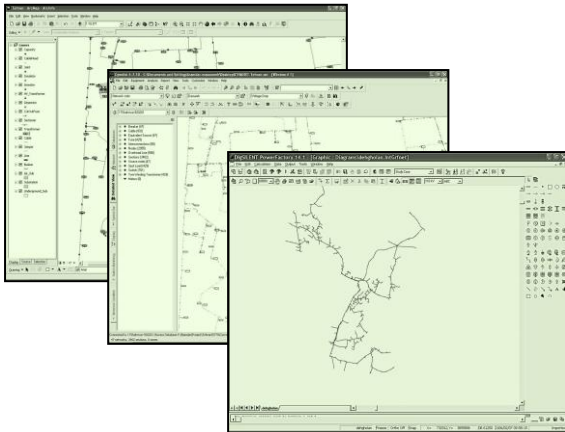
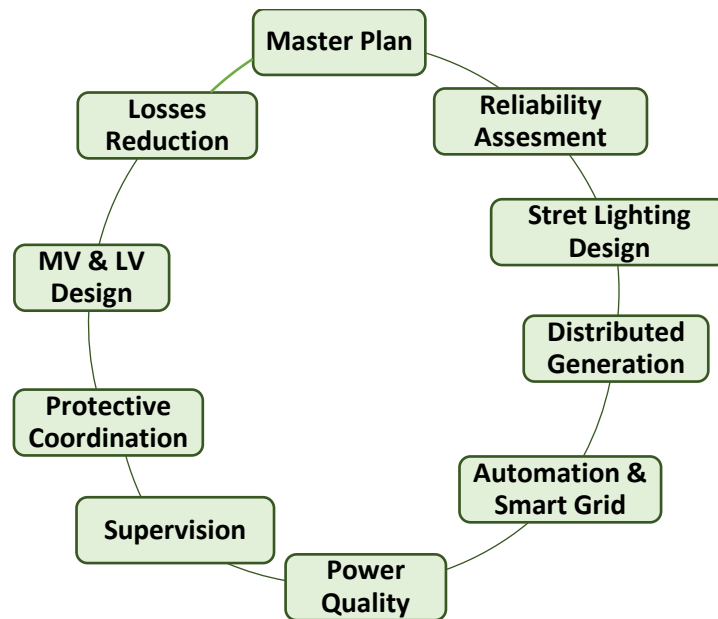


Supervision Projects:

Consultancy & Mechanization Services for Technical & Economical Analysis, Design of Power Distribution Projects and Supervision of the Implementation of Power Distribution Projects in:

- » TEHRAN, Great Tehran Electricity Distribution Company, Iran
- » GOLESTAN Province, Golestan Electricity Distribution Company, Iran
- » Isfahan Electrical Distribution Company
- » Kermanshah Province, Kermanshah Electricity Distribution Company
- » West Azarbayejan Electricity Distribution Company
- » Fars Province, Fars Electricity Distribution Company
- » KERMAN Province, South Kerman Electricity Distribution Company, Iran
- » ARDABIL Province, Ardabil Electricity Distribution Company, Iran
- » Boushehr Province, Boushehr Electricity Distribution Company, Iran
- » ALBORZ Province, Alborz Electricity Distribution Company, Iran





Sample Consultancy Projects:

- » Replacement of Existing Distribution Network by Underground Distribution Network, NARAYANGANJ PBS2, Bangladesh
- » Power Distribution Network Designing for Iran Alloy Steel Company, Iran
- » Power Supply, Transmission and Distribution Studies of MASHHAD International Airport, Iran
- » Consultancy Services for Construction of Power Network at Caspian Manufacture, Gilan, Iran
- » Consultancy Services for Construction of 20kv OHL for Ardestan Kavir Cardboard Company, Iran
- » Lattice Tower Design for MV&LV Overhead Power Lines, Boushehr, Iran
- » Power Distribution Network Study of Bandar Abbas Refinery, Hormozgan, Iran
- » Street Light Planning of Tehran, Iran
- » Reorganize and Development of Transmission and Distribution Network of Industrial ARVAND Free Zone, Abadan & Khorramshahr, Iran
- » Comprehensive Study of Power Supply for Persian Gulf & Mining Industrial Special Zone, Iran
- » Comprehensive Study of Power Supply for IMAM KHOMEINI International Airport, Tehran, Iran
- » Installation 120km of 20KV Lines for Tabas Power Plant Electrification, Iran
- » Electrification for Agricultural Wells of Eastern AZARBAIJAN and ARDEBIL Provinces, Iran
- » Losses Reduction Plan of BONAB City, Iran



5. Selected Projects

Replacement of Existing Distribution Network by Underground Distribution Network in Bangladesh

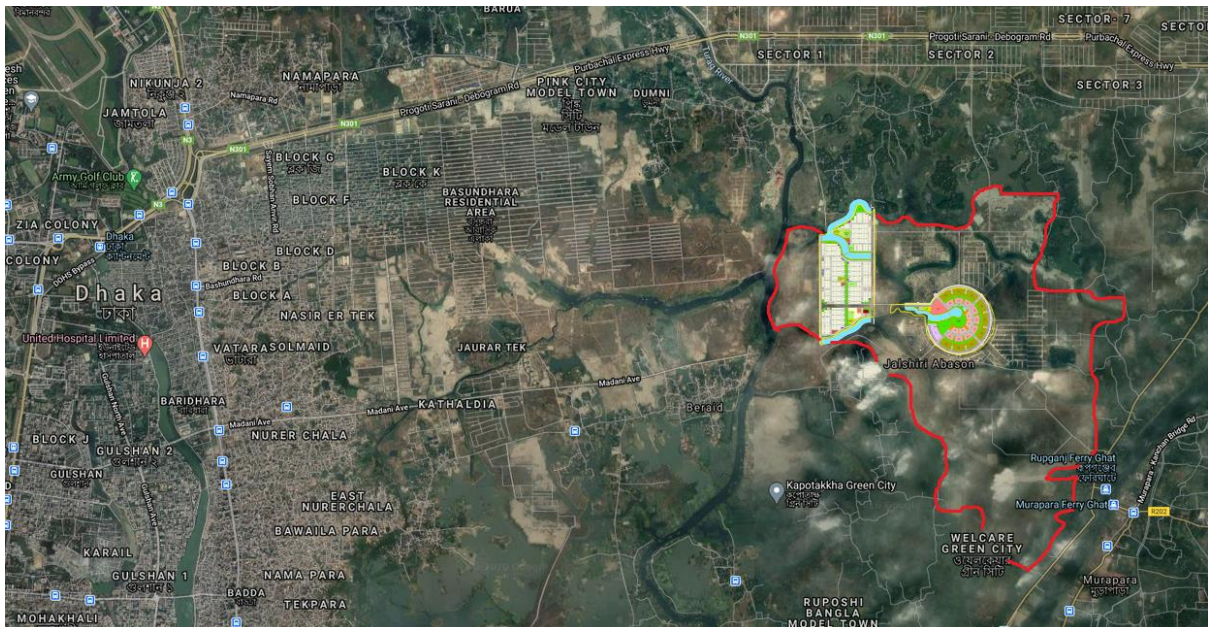
Start date: 2020 Finish date: 2022 Location: Bangladesh

Client: Narayanganj, Pally Bidyut Samity 2 (PBS-2) - BREB

Scope of work:

1. Inventory of existing distribution system, preparation of fitting assembly unit, material lists line sketch, single line diagram etc. As per BREB standard and specification.
2. Feasibility study of proposed underground distribution network of Jalshiri area under Narayanganj PBS-2
3. Design and drawing of proposed underground distribution network with fittings, material specification, catalog number, voltage drop study, technical loss study & charging current calculation etc.
4. Preparation of master plan, work plan, BOQ, cost estimation, bid document, etc. For the existing distribution network removal and proposed underground distribution network with proper documents
5. GIS survey works & Database Preparation
6. Prepare Frameworks, ESMF and O & M Manual.
7. Transfer of Technology.

Description: As a part of the “Replacement of Existing Distribution Network by Underground Distribution Network” Project under NARAYANGANJ PBS-2 BREB intends to hire an international consulting firm for detailed survey and feasibility study of sub-transmission and distribution network within Kanchan, Araihasar, Gopaldi Pourashava & Jalshiri in Narayanganj District under Narayanganj Palli Bidyut Samity-2 and preparation of design & drawings, BOQ, cost estimate and bidding document to establish an underground distribution network replacing the existing overhead sub-transmission and distribution network in the area.



Master Plan of TEHRAN's 20 kV Power Distribution Network

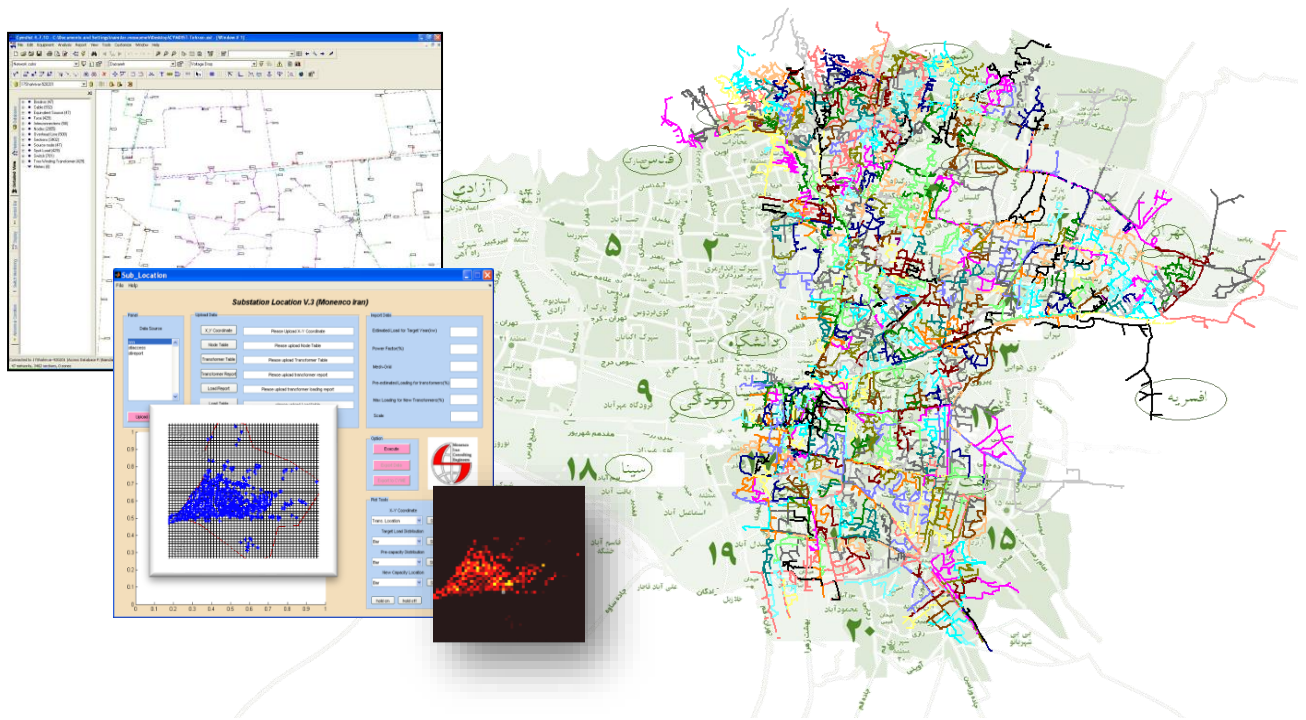
Start date: 2018 Finish date: 2020 Location: Tehran, Iran

Client: Great Tehran Electricity Distribution Company

Scope of work:

1. Data Gathering and Verifying,
2. Preparation of Design Philosophy,
3. Network Modeling in Software CYMDIST,
4. Initial Network Studies Like Load Flow, Short Circuit, Reliability,
5. Load Forecasting,
6. Substation & Feeder Development Studies in the Long, Medium and Short time.

Description: Tehran Distribution Network with over 4 million customers in 22 regions of Tehran is the biggest Distribution Network in Iran. Also, Tehran as the capital of Iran has a very important position in terms of economic and situation. Therefore, quality and quantity of the electricity being delivered to the customers is a very important issue for this company. In this project, a long-term development plan including substations and medium voltage feeders with respect to network load, design, safety and reliability will be compiled for Great Tehran Electricity Distribution Company in northeast & southeast deputies. The main purpose of this project is to have guidelines for development of power grid structure. By specifying the location of installation, technical specifications and development plan of substations and feeders, the network performance will be optimized and electrical and economic indicators will be improved. Also, the inefficient technical structures in each section of the distribution network will be enhanced.



Technical, Economic Analysis and Design for Power Distribution Projects & Supervisory on Implementation in Golestan Province

Start date: 2017 **Finish date:** 2018 **Location:** Golestan Province, Iran

Client: Golestan Province Electrical Distribution Company

Scope of work:

1. Technical & Economical Analysis
2. Design of power distribution projects comprising: MV & LV Networks (Overhead and Underground Lines), Distribution Transformers and Posts, Street Lighting, Replacement Utilities, Provide Right of Way.
3. Technical & Financial Supervision on Power Distribution Projects Comprising: New Electrification, Street Lighting, Repair and Maintenance, Equipment Quality Control, Reconstruction Network, Equipment Procurement, Construction, Rehabilitation.

Description: One of the most important issues in operations and management of the projects is implementation for development, modifications, services, repair and maintenance as well as updating and automation & mechanization of distribution networks in line with modern standards and in a safe situation. In this project, Monenco Iran is in charge of preparing designs on operational plans & supervision on operational plans for distribution networks in Golestan Province Electrical Distribution Company comprising 14 Regions based on modern technologies with 24 Power Distribution Designers and 30 Power Distribution Supervisors.



Power Supply, Transmission and Distribution Studies of MASHHAD International Airport

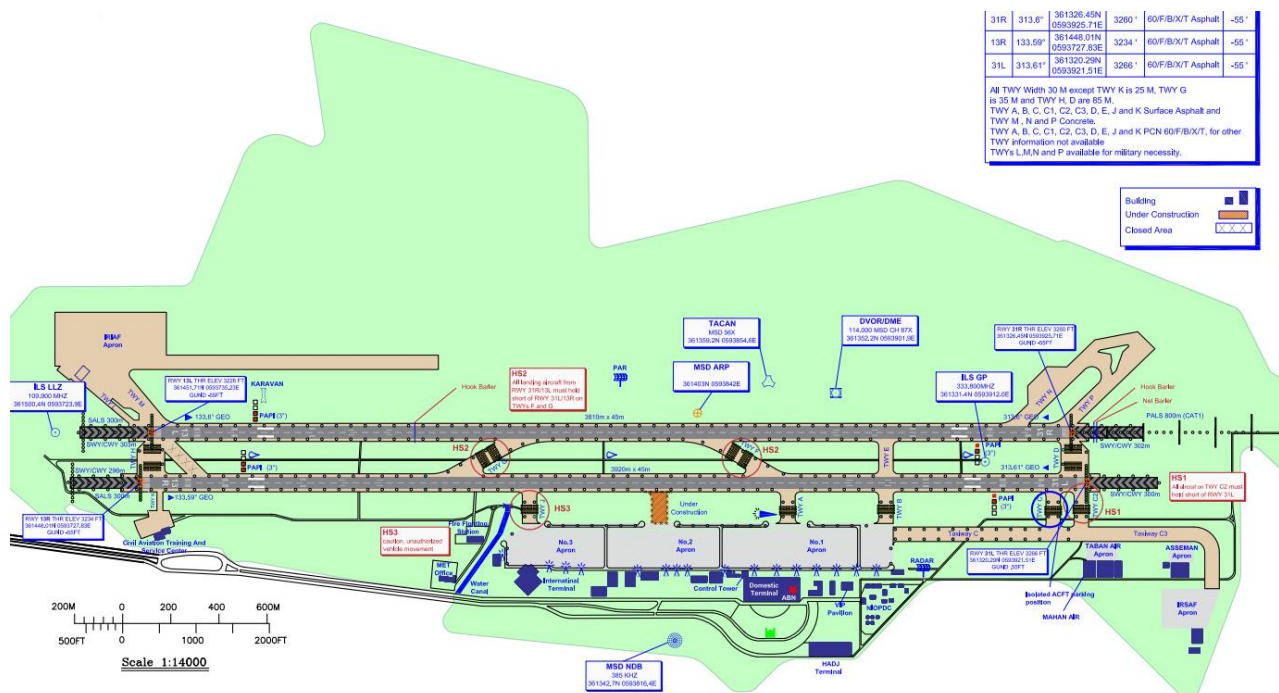
Start date: 2018 **Finish date:** 2019 **Location:** Mashhad, Razavi Khorasan Province, Iran

Client: Iran Airports and Air Navigation Company

Scope of work: The main services will be accomplished in this project are as below:

- Identification, data gathering and preliminary design,
- Power network analysis, determination of power supply and distribution,
- Feasibility study for renewable energies with economic solutions,
- Preparation of tender documents,
- Tendering and contract awarding.

Description: Nowadays, the growth of transportation especially air mode is increasing. Because of the role that Mashhad airport plays in network connections in economic and strategic way, Monenco Iran has been selected as the consultant for Power Supply, Transmission and Distribution Studies of Mashhad International Airport.



Street Light Designing of 21 Regions of Tehran

Start date: 2016 **Finish date:** 2018 **Location:** Tehran, Iran

Client: Great Tehran Electrical Distribution Company

Scope of work: Engineering services for designing of street lighting, which includes engineering services regarding basic design and detail design, control & revise owner design, data sheet design and cost estimating. CalcuLuX & DIALux software was used in this project.

Description: Tehran Distribution Network Company is intended to increase the quality of lighting systems in Tehran. Therefore, due to high capability of Monenco Iran in such projects also the sensitivity of design, quality and efficiency of lighting systems, this project in under the action by Monenco Iran.

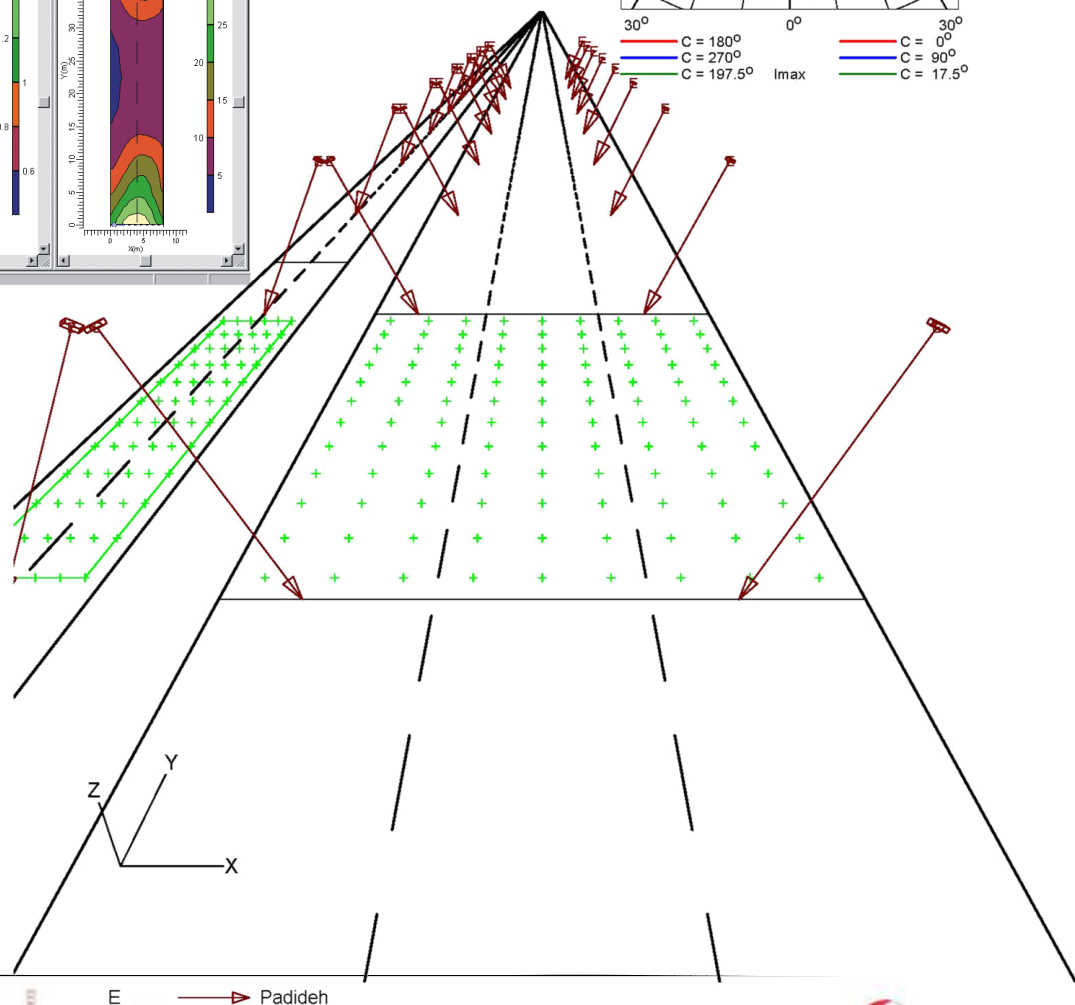
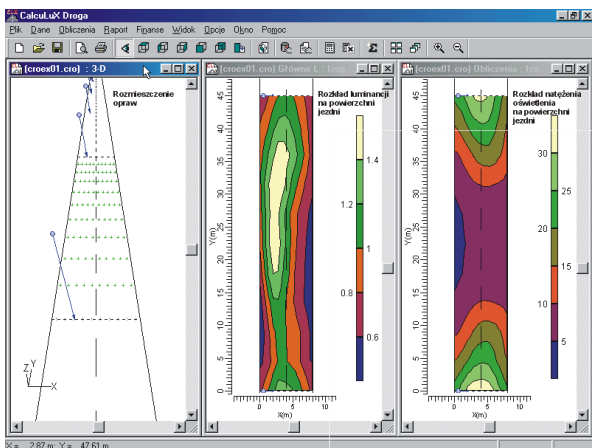
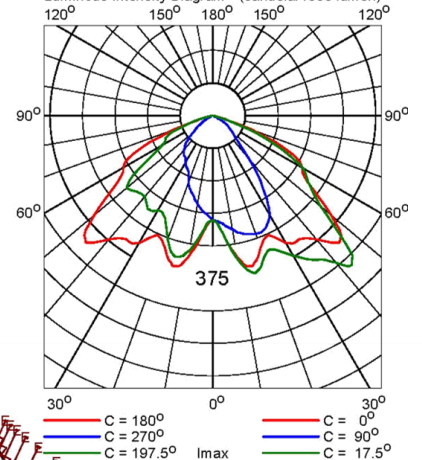
5.1 Project Luminaires

Padideh 1xOsram NAV-T 400 4Y (Lamp Posit/2000K)

Light output ratios
 DLOR : 0.77
 ULOR : 0.00
 TLOR : 0.77
 Lamp flux : 48000 lm
 Luminaire wattage : 430.0 W
 Measurement code : 1147

Note: Luminaire data not from database.

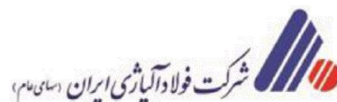
Luminous Intensity Diagram (candela/1000 lumen)



6. Clients

We offer our services to a wide range of clients as mentioned below:

- » BREB NARAYANGANJ PBS-2, Bangladesh
- » Iran Alloy Steel Company
- » Mahtab Kish Water and Power Development Company
- » Great Tehran Electrical Distribution Company
- » Isfahan Electrical Distribution Company
- » Alborz Electrical Distribution Company
- » MAZANDARAN Electricity Distribution Company
- » South Kerman Electricity Distribution Company
- » Golestan Electricity Distribution Company
- » Kermanshah Electricity Distribution Company
- » West Azarbayejan Electricity Distribution Company
- » Fars Electricity Distribution Company
- » Boushehr Electrical Distribution Company
- » Tabriz Electrical Distribution Company
- » Kurdistan Electrical Distribution Company
- » Ardabil Province Electricity Distribution Co. (APED.Co)
- » Ardestan Kavir Cardboard Manufacturing Company
- » Bandar Abbas Refinery Company
- » ARVAND Free Zone
- » NAK Telecom Company
- » Persian Gulf & Mining Industrial Special Zone Co. (P.G.M.I.S.E.Z)
- » Imam Khomeini International Airport Development Plan Executor (IKIA Co)
- » Iran Power Development Co. (I.P.D.C)
- » Caspian Tamin Pharmaceutical Company
- » AZARBAIJAN Regional Electric Company



7. Certificates of Appreciation

Mazandaran Electric Power Distribution Co.

TO WHOM IT MAY CONCERN
CERTIFICATE OF COMPLETION & APPRECIATION

Assignment title: Consultancy and Engineering Services for Preparation of Master Plan of Distribution Network (MPDN) in MAZANDARAN Electric Power Distribution Company

Date of Start: 2018/01/16 Date of Completion: 2019/10/17

Scope of Services:

- 1. Data Gathering and Verifying.
- 2. Preparation of Design Philosophy.
- 3. Network Modeling in DIGNET I NT Software from AutoCAD.
- 4. Initial Network Studies including load flow, short circuit and stability.
- 5. Load Forecasting.
- 6. Substation & Feeder Development Studies in the Long, Medium and Short term.
- 7. Distribution Transformers Location in the Short Term.

Total amount in IRR: 3,450,000,000
Total amount in USD: \$2,143

This is to certify that Mazencog Iran has completed the above mentioned scope of work on scheduled time and submitted all determined deliverables according to the requirements of the contract with our full satisfaction.

Years Experience
Equipment Capacity
Workshops for Engineering

امیر حسن پور
مدیر عامل

www.mazencog.com

new mazandaran @ yahoo.com, Mazandaran Power Co. Iran
Phone: 00982133379259

شماره: _____
تاریخ: _____
پست: _____

شرکت مهندسی مشاور مونکو ایران
Mazencog Iran

Dear Mr. Shiran
(Managing Director of Monenco Iran)

Subject: Certificate of Completion

Respectfully, we hereby admire remarkable efforts of Monenco Company in "Engineering Studies and Services as well as Technical and Economic Assessment for Entire System Developing in Eastern Districts of Mazencog Province".

This duty is fully satisfied with good performance of your company in above named project with following scope:

- Preparation of Planning and Drawing
- Technical & Economic Analysis of:
- MV & LV Networks (Overhead and Underground Lines)
- Pole Mounted and Ground Mounted Distribution Substation
- Street Lighting
- Line Clearance Management and Installation Replacement/Displacement
- SCADA/OMS

Your sincerely
A.P. Rowshan
Engineering & Planning Deputy

www.mazencog.com

شماره: ۱۲۹/۲/۱۳۹۷
تاریخ: ۱۳۹۷/۰۹/۰۹
پست: _____

شرکت مونکو ایران
معاونت محترم انتقال و دیسپاچینگ
جناب آقای مهندس الهیجی

با سلام،
با توجه به اتمام کارهای محوله در پروژه، با موضوع گسترش سیستم توزیع انرژی در منطقه غربی، از همکاری و پشتیبانی بی دریغ شما، کمال تشکر را داریم. امید است در آینده نیز بتوانیم با همکاری و پشتیبانی شما، در پروژههای دیگر نیز فعالیت کنیم. خواهشمند است گزارش کارهای انجام شده را در اختیار ما قرار دهید تا بتوانیم از تجربیات ارزشمند شما استفاده کنیم. در صورت نیاز به هرگونه توضیح یا هماهنگی، با ما در ارتباط باشید. با تشکر و احترام،
محمدباقر جباری
مدیر عامل

تلفن: ۰۳۰۳۰۳۰۳۰
www.mazencog.com

شماره: _____
تاریخ: _____
پست: _____

شرکت مهندسی مشاور مونکو ایران
Mazencog Iran

جناب آقای مهندس علی محمدی

با سلام و احترام، بدینوسیله بدین جهت که شما در پروژههای مختلف مونکو ایران، از جمله فازهای مختلف پروژه انتقال و دیسپاچینگ، با دقت و سرعت بسیار همکاری کرده‌اید، این گواهی تقدیر را به شما تقدیم می‌نمایم. امید است با استمرار همکاری و پشتیبانی شما، بتوانیم با موفقیت بیشتری در اجرای پروژههای مشترک ما موفق شویم. با تشکر و احترام،
محمدباقر جباری
مدیر عامل

شماره: _____
تاریخ: _____
پست: _____

شرکت مهندسی مشاور مونکو ایران
Mazencog Iran

جناب آقای مهندس علی محمدی

با سلام و احترام، بدینوسیله بدین جهت که شما در پروژههای مختلف مونکو ایران، از جمله فازهای مختلف پروژه انتقال و دیسپاچینگ، با دقت و سرعت بسیار همکاری کرده‌اید، این گواهی تقدیر را به شما تقدیم می‌نمایم. امید است با استمرار همکاری و پشتیبانی شما، بتوانیم با موفقیت بیشتری در اجرای پروژههای مشترک ما موفق شویم. با تشکر و احترام،
محمدباقر جباری
مدیر عامل

شماره: ۱۳۹۷/۰۸/۰۹
تاریخ: ۱۳۹۷/۰۸/۰۹
پست: _____

شرکت توزیع نیروی برق استان اذربایجان
Mazencog Iran

جناب آقای مهندس علی محمدی

با سلام و احترام، بدینوسیله بدین جهت که شما در پروژههای مختلف مونکو ایران، از جمله فازهای مختلف پروژه انتقال و دیسپاچینگ، با دقت و سرعت بسیار همکاری کرده‌اید، این گواهی تقدیر را به شما تقدیم می‌نمایم. امید است با استمرار همکاری و پشتیبانی شما، بتوانیم با موفقیت بیشتری در اجرای پروژههای مشترک ما موفق شویم. با تشکر و احترام،
محمدباقر جباری
مدیر عامل

شماره: _____
تاریخ: ۱۳۹۷/۰۹/۰۹
پست: _____

شرکت مهندسی مشاور مونکو ایران
Mazencog Iran

جناب آقای مهندس گلجی
معاون محترم انتقال و دیسپاچینگ
شرکت مهندسی مشاور مونکو ایران

با سلام
احترافاً، با عنایت به انجام مطالعات و طراحی شبکه برق منطقه بند فیروزکوه، تأسیس و تجهیز آبرسانی آن شامل خط انتقال ۲۰ کیلوولتی و پست کمپکت و همچنین انجام خدمات مهندسی نظارت نظریه و نظارت کارگاهی بر اجرای پروژه مذکور توسط آن معاونت محترم بدینوسیله مراتب رضایت عمادی این طرح از تجربه و تخصص شما و تحویل موثر پروژه فوق که با همکاری آن مشاور محترم صورت گرفته اعلام می‌نماید. با تشکر و احترام،
محمد باقر جباری
مدیر عامل

شماره: _____
تاریخ: ۱۳۹۷/۰۹/۰۹
پست: _____

شرکت مهندسی مشاور مونکو ایران
Mazencog Iran

جناب آقای مهندس گلجی
معاون محترم انتقال و دیسپاچینگ
شرکت مهندسی مشاور مونکو ایران

با سلام و احترام، بدینوسیله بدین جهت که شما در پروژههای مختلف مونکو ایران، از جمله فازهای مختلف پروژه انتقال و دیسپاچینگ، با دقت و سرعت بسیار همکاری کرده‌اید، این گواهی تقدیر را به شما تقدیم می‌نمایم. امید است با استمرار همکاری و پشتیبانی شما، بتوانیم با موفقیت بیشتری در اجرای پروژههای مشترک ما موفق شویم. با تشکر و احترام،
محمدباقر جباری
مدیر عامل

شماره: _____
تاریخ: ۱۳۹۷/۰۹/۰۹
پست: _____

شرکت مهندسی مشاور مونکو ایران
Mazencog Iran

جناب آقای مهندس گلجی
معاون محترم انتقال و دیسپاچینگ
شرکت مهندسی مشاور مونکو ایران

با سلام و احترام، بدینوسیله بدین جهت که شما در پروژههای مختلف مونکو ایران، از جمله فازهای مختلف پروژه انتقال و دیسپاچینگ، با دقت و سرعت بسیار همکاری کرده‌اید، این گواهی تقدیر را به شما تقدیم می‌نمایم. امید است با استمرار همکاری و پشتیبانی شما، بتوانیم با موفقیت بیشتری در اجرای پروژههای مشترک ما موفق شویم. با تشکر و احترام،
محمدباقر جباری
مدیر عامل

