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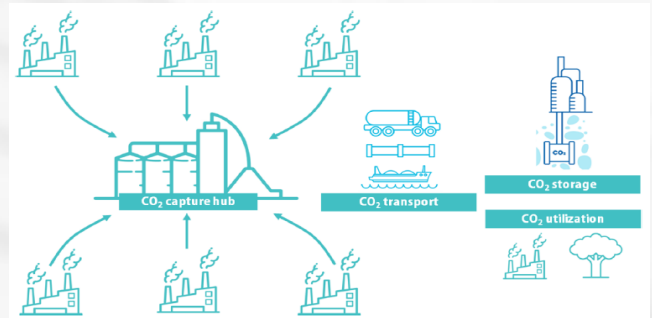
Carbon Capture Hubs



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Carbon Capture Hubs offer a new approach to industrial decarbonization by allowing multiple industrial facilities to share carbon capture infrastructure rather than developing separate systems for each plant. This model is particularly relevant for small and medium-sized emitters, where the capital and operating costs of individual carbon capture projects can make CO₂ reduction economically challenging.

In a carbon capture hub, emissions from several nearby industrial facilities can be integrated through a common carbon-management network. Depending on the hub configuration, facilities may share CO₂ collection, transportation and storage infrastructure, while selected capture facilities or other key equipment can also be centralized. This creates an integrated system in which participating facilities can benefit from economies of scale and better utilization of infrastructure. The main advantage of this approach is the potential to reduce the investment burden for individual emitters while improving the overall utilization of capture infrastructure. It can also create new business models in which a host facility provides carbon capture as a service to surrounding industries.

In addition, integrating several emitters can increase the scale of CO₂ collection and facilitate the development of shared transportation and storage networks. However, Carbon Capture Hubs also present challenges. Their feasibility depends strongly on the geographical concentration of industrial emitters, CO₂ transportation requirements, availability of suitable storage, energy integration, carbon prices, regulatory frameworks and the willingness of participating companies to establish long-term agreements. Coordinating multiple facilities can also increase the complexity of project development and operation. As industrial decarbonization moves toward more integrated infrastructure, Carbon Capture Hubs can provide an alternative to plant-by-plant CCS deployment. By transforming carbon capture from an individual investment into a shared infrastructure and service model, this approach could enable a wider range of industrial facilities to participate in large-scale carbon management while creating opportunities for new commercial models and integrated decarbonization projects.



Development of a GIS Database for 79000 km of Ethiopia's MV Distribution Network

Location: Ethiopia

Description: This nationwide activity was carried out to establish a comprehensive, standardized, and reliable overview of the existing power distribution network. The extensive scale of the field data collection, combined with the diverse geographical and climatic conditions across different regions of Ethiopia, has made this activity notable international experiences in the application of Geographic Information System (GIS) for power distribution network studies.

In this project, a comprehensive GIS database covering approximately 79000 km of existing Medium-Voltage (MV) distribution networks is developed in Ethiopia that represents one of the major achievements of international project in the field of power distribution network studies and planning.

In this research project, the condition of the existing network infrastructure and equipment was evaluated. Furthermore, various options for power supply and network development, construction and reinforcement of substations and feeders, as well as short-, medium-, and long-term network development programs were evaluated. This assessments were conducted based on existing research and by taking urban and industrial development trends into account, as well as Ethiopia's national objectives for expanding access to electricity.

In this project electricity demand forecasting, network modeling using DIgSILENT PowerFactory, technical performance assessment, and identification of network constraints and areas requiring development and reinforcement were considered as key components.



Certificate of Appreciation for Excellence in Power Infrastructure Projects

Description: The successful delivery of a broad range of engineering consultancy services for electricity distribution projects has been recognized by Fars Electricity Distribution Company, which issued a letter of appreciation in recognition of the valuable contributions of Monenco's Infrastructure Division and Distribution Networks Group.

The scope of services delivered by Monenco included the design and supervision of capital projects for electricity distribution networks and facilities, GIS updating, supervision of photovoltaic system construction, building design and supervision, and technical review and supervision of studies for the interconnection of distributed generation resources.

The Client's recognition of high engineering standards, commitment to safety requirements, adherence to project schedules, and effective contribution to improving services and ensuring a reliable electricity supply to customers reflects the trust placed in company's technical expertise and professional capabilities.

This achievement is a reflection of the teamwork, commitment, agility, quality focus, and results-driven approach of our professionals across the organization. Their expertise and dedication continue to strengthen the company's capabilities and create lasting value for our clients.





Commissioning of the 42 MW Khatounabad Power Plant

Location: Iran

Client: National Iranian Copper Industries Company (NICICO)

Description: The 42 MW Khatounabad Power Plant was officially inaugurated and placed into operation in a ceremony attended via video conference by the President of Iran and the Minister of Industry, Mine and Trade. The project is expected to support the reliability of power supply to the Khatounabad Copper Smelter, leading to peak-load management, and help stable production in the country's mining industries.

In this project, National Iranian Copper Industries Company (NICICO) was the project main client and Babak Copper Industries Complex served as the project executor. Moreover, MAPNA Development 1 (MD1) collaborated with Monenco Iran Consulting Engineers. As part of the project, Monenco Iran was responsible for basic and detailed engineering design, HAZID and HAZOP safety studies, Balance of Plant (BOP) engineering, and integrated 3D modeling of the power plant.





Successful Synchronization of the 183 MW Fourth Unit of Khorramabad Gas Power Plant

Location: Iran

Client: Saba Power & Energy Industries Company

Description: The 183 MW fourth unit of the Khorramabad Gas Power Plant was successfully synchronized with Iran's national power grid in August 2026.

The project was carried out for Saba Power & Energy Industries Company, with MAPNA Power Plants Construction & Development Company (MAPNA Development 2) serving as the project executor.





Certificate of Appreciation for Engineering Services to Bakhtar Regional Electricity Company

Description: Monenco Iran's services under the project "Engineering Services for Maintenance, Optimization, and Troubleshooting of the Bakhtar Regional Electricity Network in 2025–2026 have been recognized through a letter of appreciation issued by Bakhtar Regional Electricity Company.

The recognition highlights the quality of supervisory services, compliance with safety requirements and procedures, responsible execution of assigned duties, and the contribution of the provided services to improving network reliability and ensuring continuous and stable power supply.





Synchronization of the Third Steam Unit of Ferdowsi Combined-Cycle Power Plant

Location: Iran

Client: MAPNA Tous Power Generation Company

Description: The 160 MW third steam unit of the Ferdowsi Combined-Cycle Power Plant was successfully synchronized with Iran's national power grid. The steam section of the project comprises three 160 MW units, with a total nominal capacity of 480 MW. In this project, Monenco Iran was responsible for the engineering design of BOP and auxiliary systems, civil engineering activities, and cooling system design.

It is worth noting that this project contributes to a noticeable increase in efficiency from 32% to approximately 50%, leading to enhance sustainability and energy security, as well as meeting the growing demand for sustainable energy.





Consultancy & Site Supervision Services for Extension of Persian Gulf Fajr Energy 400/132/20 kV Substation

Location: Mahshahr Port, Khuzestan Province, Iran

Description: The Extension of Persian Gulf Fajr Energy Company (PGFEC) 400/132/20 kV Substation in Mahshahr Port, Khuzestan Province, has been successfully completed and energized in July 2026. The project was undertaken in response to the increasing demand for electricity in the Mahshahr Petrochemical Special Economic Zone, with the development of the 400 kV section and extension of the existing 132 kV GIS substation identified as an essential requirement for the region's power infrastructure. As part of this project, Monenco Iran provided consultancy, basic engineering design, construction management, and site supervision services.

The scope included the extension of the substation with two 400 kV line feeders, two 400 kV transformer feeders, two 132 kV GIS incoming feeders, two 132 kV GIS outgoing feeders, and one 132 kV coupling feeder. Through the joint efforts of High Voltage Substation and Civil & Urbanism departments of Infrastructure division, construction and energization activities were successfully completed, demonstrating the company's capability in delivering large-scale and complex power infrastructure projects under demanding conditions.





Predictive Maintenance System Performance Recognized at Qom Combined-Cycle Power Plant

Description: The successful performance of Monenco Iran's Predictive Maintenance System at the Qom Combined-Cycle Power Plant has been recognized by Peyvand Gostar Pars Electricity and Energy Company through a letter of appreciation.

The system enables real-time monitoring of turbine and generator parameters and the detection of deviations from healthy operating conditions. Its performance demonstrates the practical application of engineering expertise, artificial intelligence, and data analytics to enhance equipment reliability, reduce the risk of unplanned outages, and support targeted asset protection.





Participation of National and International Stakeholders

Description: The workshop was attended by representatives of major Ethiopian and international institutions, including the World Bank, Ethiopian Electric Power (EEP), Ministry of Planning and Development, Ministry of Urban and Infrastructure, Ministry of Industry, Ministry of Water and Energy, Ministry of Transport and Logistics, Addis Ababa University, Agence Française de Développement (AFD), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), and the Embassy of Denmark, together with other development partners, financing institutions, and international organizations.

The participation of policy-makers, power sector stakeholders, development partners, academia, diplomatic missions, and financing institutions provided a valuable platform for exchanging views on implementation priorities, financing and investment mechanisms, and the transformation of the Master Plan recommendations into practical development projects. The national importance of the event was also reflected in the extensive coverage by Ethiopian television, radio, print, and digital media. Major media organizations, including Ethiopian Broadcasting Corporation (EBC), Ethiopian Television (ETV), EBS TV, Fana Media Corporation, Ethiopian News Agency (ENA), Ethiopian Press Agency (EPA), The Ethiopian Herald, Capital Ethiopia, and several national radio and digital media outlets, covered the workshop and its outcomes.

The successful organization of the Final Validation Workshop and the positive engagement of government officials, technical experts, development partners, and the media demonstrated the significance of the Master Plan for Ethiopia's future electricity distribution development.

Master Plan recommendations into practical development projects.





Successful Validation Workshop for Ethiopia Power Distribution System Expansion and Improvement Master Plan

Description: The Final Validation Workshop of the Ethiopia Power Distribution System Expansion and Improvement Master Plan was successfully held on 27–28 July 2026 at the Skylight Hotel in Addis Ababa. The workshop brought together senior representatives and experts from Ethiopian government institutions, the power sector, development organizations, international financial institutions, academia, and other key stakeholders.

The workshop provided an important opportunity to present and validate the results of the comprehensive study carried out by Monenco Iran Consulting Engineers, supporting the development of a long-term roadmap for the expansion, rehabilitation, modernization, and digital transformation of Ethiopia's electricity distribution network toward 2049.

The Master Plan provides an integrated framework for addressing key challenges and future requirements of the distribution sector, including improving network reliability, reducing technical losses, expanding access to electricity, responding to growing demand, supporting urban and industrial development, and prioritizing required investments. Furthermore, the study addresses the gradual development of smart grid capabilities, including digital infrastructure, monitoring and control systems, advanced data management, and distribution network automation, providing a roadmap toward smarter, more efficient, and data-driven operation of the Ethiopian Electric Utility (EEU).





Engineering Unit Operating License Issued by the Ministry of Industry, Mine and Trade

Description: Monenco Iran Consulting Engineers has obtained an Operating License for its Technical and Engineering Unit from Iran's Ministry of Industry, Mine and Trade for the first time. This license, valid through 2029, was issued following the completion of the required legal procedures, submission of technical documentation, and verification of professional requirements. This achievement represents an official recognition of Monenco Iran's technical, engineering, and organizational capabilities within the framework of national regulations. It is also expected to support the further development of specialized activities, strengthen engagement with executive authorities, and facilitate a more effective presence in strategic projects across the country. The achievement provides an additional foundation for market development, value creation, stakeholder confidence, and the continued strengthening of Monenco Iran's position in the engineering industry in Iran and the region.

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پروانه فنی مهندسی

باتوجه به تخصص، سوابق تجربی و پروژه های انجام شده به موجب این پروانه:

شرکت موننکو ایران (سهامی خاص) ثبت شده به شماره ۱۷۰۸۷ مورخ ۱۳۵۲/۰۳/۱۶ با شناسه ملی ۱۰۱۰۶۰۴۴۸۳ در اداره ثبت شرکتها و موسسات غیر تجاری واقع در: استان تهران، شهرستان تهران، شهر تهران، خیابان ولیعصر، پلاک ۱۲ از میدان ونک، خیابان عطار، پلاک ۱۲ کدپستی: ۱۹۹۴۶۴۳۵۱۱

در زمینه های تخصصی:

ردیف	زمینه فعالیت	کد فعالیت
۱	خدمات فنی و مهندسی در زمینه مواد و فرآیندهای صنایع نفت، گاز و پتروشیمی	۷۴۲۱۴۱۳۳۷۹
۲	خدمات فنی و مهندسی در زمینه ماشین سازی در صنایع نیروگاهی و تولید انرژی	۷۴۲۱۵۱۳۳۳۳
۳	خدمات فنی و مهندسی در زمینه نصب و بازبایی آب، فاضلاب و پساب	۷۴۲۱۵۱۳۳۵۹

مجاز به ارائه فعالیتهای مهندسی در بخش صنعت و معدن می باشد.

محمود سیجانی
مدیر کل صنعت، معدن و تجارت استان تهران

مدت اعتبار این پروانه از تاریخ صدور سه سال می باشد.

آدرس مکاتباتی دارنده پروانه: استان تهران، شهرستان تهران، شهر تهران، خیابان ولیعصر، پلاک ۱۲ از میدان ونک، خیابان عطار، پلاک ۱۲، شماره تلفن: ۸۱۹۶۶۰۴۸۱، فاکس: ۸۸۷۷۱۲۰۶، تلفن همراه مدیر عامل: ۰۹۲۰۱۷۶۵۹۱۶، کدپستی: ۱۹۹۴۶۴۳۵۱۱



Client Recognition of Engineering Performance in Bardsir Steel Power Supply Project

Description: The progress of the strategic Bardsir Steel Complex Power Supply Project has been positively recognized following a field visit by the honorable CEO and senior management of Gohar Zamin Steel Reduction (a subsidiary of Gohar Zamin Mining & Industrial Company). This project includes the development of 33/400 kV and 132/230/400 kV substations and associated transmission lines for supplying power to the Bardsir Steel Complex.



Satisfaction was expressed with the project's progress and the successful, on-schedule commissioning of the 33/400 kV substation, which enabled the timely supply of electricity to the steel reduction plant. During the visit, a comprehensive report was presented by Monenco Iran representatives on the progress of engineering activities, equipment procurement, construction works, and measures undertaken to address challenges and accelerate project execution.



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