Goldenpak co.ltd.

Namvaran Pazhouhesh va Tose-a (PJSC)

Research, Design and Engineering

Oil, Gas, Petrochemical

“Your process technology partner”

✦ Spent Caustic Treatment Package

Location: Bandar Abbas
Capacity: 50,000 liters per day
Licensor: Research Institute of Petroleum Industry (RIPI)
Client: Nardis Energy Project Company

Process design, engineering, procurement of equipment and fabrication of skid mounted unit, installed in Persian Gulf Star Oil Refining Company.

✦ Qeshm Condensate Refinery

Location: Qeshm
Capacity: 60,000 BPD
Client: Iran Qeshm Adish Oil Company (IQAOC)

Process selection/optimization and techno-economical feasibility study for the condensate refinery with a capacity of 60,000 BPD for Iran Qeshm Adish Oil company.

✦ Gasoline Pool Optimization

Location: Persian Gulf Star Oil Refinery- Bandar Abbas
Capacity: 230,000 BPD
Client: ***Tehran Jonoob and Bina J.V.***

Conducting a comprehensive linear programming study for production of motor gasoline taking into consideration the quality and commercial value of Butane, Isopentane, Isomerate, C7+, Reformate, Heavy Naphtha and MTBE as blending agents producing 230,000 BPD regular and premium gasoline.

This study was performed for Tehran Jonoob and Bina, the main contractor of the refinery.

✦ Zahedin Oil Refinery (Topping Plant)

Location: Qom
Capacity: 2000 barrel per day
Client: Zahedin Company

Technical assistance during commissioning and start-up of the refinery including:

- ***Modification of the instrumentation and control system for safe operation***
- ***Process modification and addition of new equipment to meet the product specification***
- ***Process simulation to program feed and product blending scheme to meet export requirement***
- ***Training of operators***

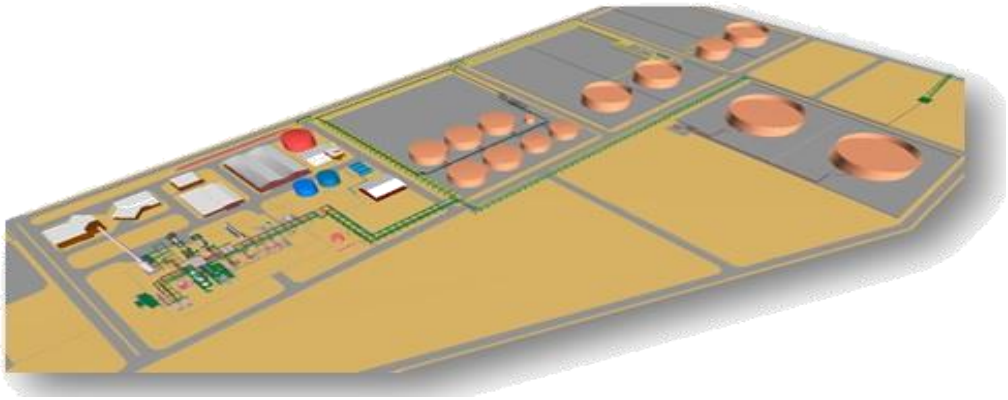
Zahedin Oil Refinery (Topping Plant)

✦ Qeshm Topping Plant

Location: Qeshm Island
Capacity: 33,500 BPD
Client: Nik Sanat Parsian

Process Management Contractor during detail design engineering for Nik Sanat Parsian company who intends to establish a Topping Plant for production bitumen from heavy asphaltenic crude oil in Qeshm Island.

The Knowhow (in the form of process design package) were developed by Research Institute of Petroleum Industry (RIPI)



✦ Humpuss Oil Refinery

Capacity: 70,000 Barrels per day
Owner: PT Humpuss Aromatik
Client: Rahbaran Javan Arman
Basic Designer: UOP

Evaluation of the existing refinery in Indonesia to receive gas condensate from South Pars Gas as new feed.

The study includes determination of the extent of modification in respect of equipment and material to process the new feed.

The study also includes investment appraisal for the added value obtained.

✦ Paraffin & Petroleum Jelly Production Plant

Location: Bandar Abbas
Capacity: 50,000 tons per year
Client: ***Rose Polymer Company***

Process license selection and conceptual design of utilities and offsite facilities for 50,000 tons per year Paraffin and Petroleum Jelly from refinery paraffinic feed. This study performed for Rose Polymer company.

✦ Naphtha Hydrotreating and Catalytic Reforming

Location: Esfahan
Capacity: 14,000 BBL/D
Client: Esfahan Petrochemical Company

Techno commercial study for installation of naphtha hydrotreating and catalytic reforming to produce platformate for Esfahan Petrochemical Company.

Naphtha will be supplied from Iraq and also from South Pars gas condensate by distillation

✦ Oily Sludge Treatment

Location: Kharg Island
Capacity: 96 barrel per hour

Process design and development of mobile treating unit for separation of oil, water and soil of the contaminate crude oil stored in Lagoons in Kharg Island.

This work was performed in collaboration with Mehregan Chemical Technology Development company for Iranian Oil Terminal company.

✦ Bitumen Production Plant

Location: Bandar Abbas
Capacity: 300,000 ton per year
Client: Amayesh Sina International "Sahand Persian Gulf Refining Industries" (Kasra Bitumen Refining)

Feasibility study, basic design, detailed design, procurement services and construction supervision.

✦ Bitumen and Middle Distillate Production Plant

Location: Qeshm Island
Capacity: 33,000 Barrel per day
Client: Sahar Oil Refinery Company

Basic design for production of Bitumen and Middle distillates from Soroosh/Nowrouz heavy crude oil.

✦ Paraffin Wax Production Unit

Location: Yazd
Capacity: 2,500 tons per year
Client: Pars Parafin Amir Kabir (PPA)

Conceptual design, pre-basic design and cost estimation

✦ Revamping of Vacuum Distillation Unit in Durato Najaf Refinery

Location: Najaf-Iraq
Capacity: 70 tons/day
Client: MATSA Engineering , Procurement, Construction

Existing vacuum distillation tower and its furnace is revamped for processing of fuel oil and production of gasoil and bitumen.

✦ Anbar Oil Production Unit Fire Fighting System Design

Location: Masjed Soleyman
Capacity of the production unit: 12,000 BPD
Client: Masjed Soleyman Oil & Gas Company (MSOGC)

Basic design, detailed engineering and preparation of PC tender document for firefighting system of the existing production unit.

✦ *Process Review and Modification in Aquila Mini Refinery in Erbil-Iraq*

Location: Erbil-Iraq
Capacity: 600 ton/day
Client: Aquila Company

Process review and modification of Naphtha treating unit in Aquila refinery in Erbil-Iraq by process concept study for naphtha treating and reaching required specifications.

✦ Conceptual Design and Process Adaptation for HFO Treatment Plant *Location: Turkey*

Capacity: 90 m3/h
Client: Alborz Turbine Mapna

The conceptual design and process adaptation of existing Heavy Fuel Oil (HFO) treatment plant to improve the quality of fuel oil to be suitable for gas turbine generators of Mapna Power Plants.

✦ Debottlenecking of DMD Process Unit

Location: Kharg Island
Capacity: Naphtha Hydrotreating 4200 BPD
Client: Kharg Petrochemical *Company*

DMD Process Unit in Kharg petrochemical Company has been studied and solutions for solving the problems and COS removal are proposed. Also, for naphtha, Hydrotreating process is recommended and preliminary design and cost estimation is performed.

✦ Conceptual & Basic Design of Back Pressure Turbine for Lavan Oil Refinery

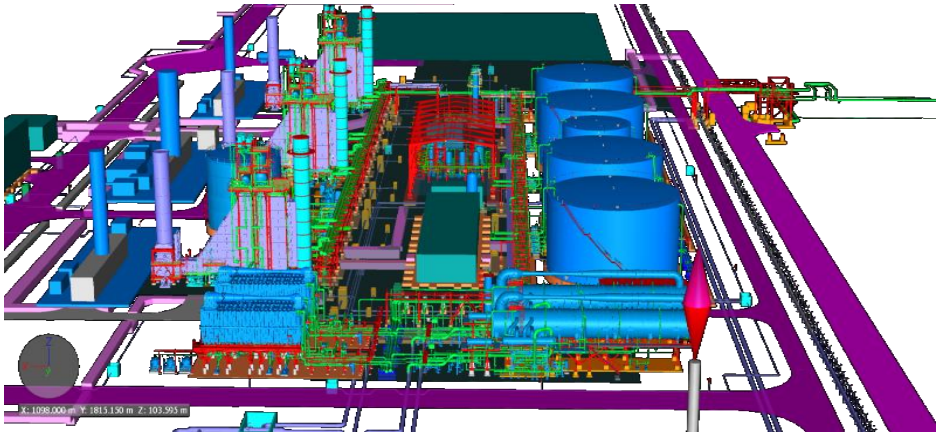
Location: Lavan Island
Capacity: 200 tons per hour HP, MP, NMP & LP steam
Client: Lavan Oil Refining Company

Conceptual and basic design and preparation of EPC tender package for the replacing existing let down station by back pressure steam turbines for electric power generation and process steam requirement of the refinery.

✦ Pasargad Qeshm Utility Production plant

Location: Qeshm Island
Capacity: Power 70MW
Steam 230 ton/hr.
Desalinated water 650 m^3 /hr.
Potable water 600 m^3 /hr.
Client: Qeshm Movalled Company

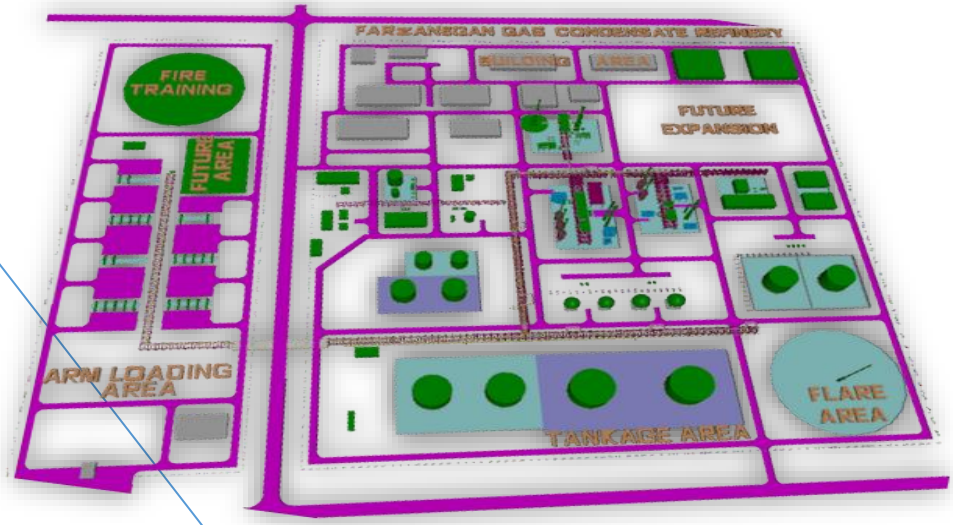
Provide conceptual design, basic and detail design, procurement services and filed engineering and site supervision.



✦ EPCC Project of Farzanegan Gas Condensate Refinery Project

Location: Assaluyeh-Bushehr
Capacity: 40,000 BBL/Day
Client: Farzanegan Energy Pars

Sour Gas Condensate (HC Feed) and Desalinated Water (utility supply) are transferred through dedicated pipelines (as a part of the Project) from POGC (Pars Oil and Gas Company) condensate storage and desalination facilities in Assaluyeh via specified export pumps directly to battery limit of the refinery HC Feed is then processed in fractionation section to produce sour full range naphtha and heavy hydrocarbon cut. Sour full range naphtha is then further processed in naphtha hydro-treating to meet required sulfur and nitrogen specification as intermediate product. Treated naphtha could then be further processed to recover LPG (Butane Cut), Pentane (i-Pentane, n-Pentane), 400 and 402 Solvents.



✦ Pars Gas Condensate Refining

Location: Shiraz
Capacity: 120,000 BPD
Client: Shiraz Oil Refining Company

Feasibility study of Shiraz Oil Refinery expansion project, Including Revamp of existing refinery units and construction of 120,000 BPD gas condensate refinery adjacent to the refinery. Different process concepts were reviewed and best integrated configuration were proposed.

Several scenarios as to the location of the condensate, refining and product distribution to potential customer were analyzed. Finally the most economical configuration proposed.

✦ Freon 134a Gas Pilot Plant

Location: Arak
Capacity: 100 TPA
Client: Paysang

Process review and technical assistance to Management contractor of Petrochemical Research & Technology Company (Pooyesh) in construction of 100 TPA Freon 134a gas pilot plant in Arak.

✦ Gas Pipelines & LPG Storage

Location: Bid boland gas treatment II
Capacity: 300 MMSCFD Sweet gas
1700 MMSCFD Sour gas
1650 MMSCFD Lean gas
50,000 m^3 Propane
22,500 m^3 Butane
Client: Tehran Jonoob

Design basis review, material selection, value engineering, 3D model review and P&ID and cause & effect review for natural gas pipelines, LPG pipelines, LPG storage and loading terminal with the above capacities for Tehran Jonoob.

✦ Gas Supply for Gas Lift of Doroud Oil Field

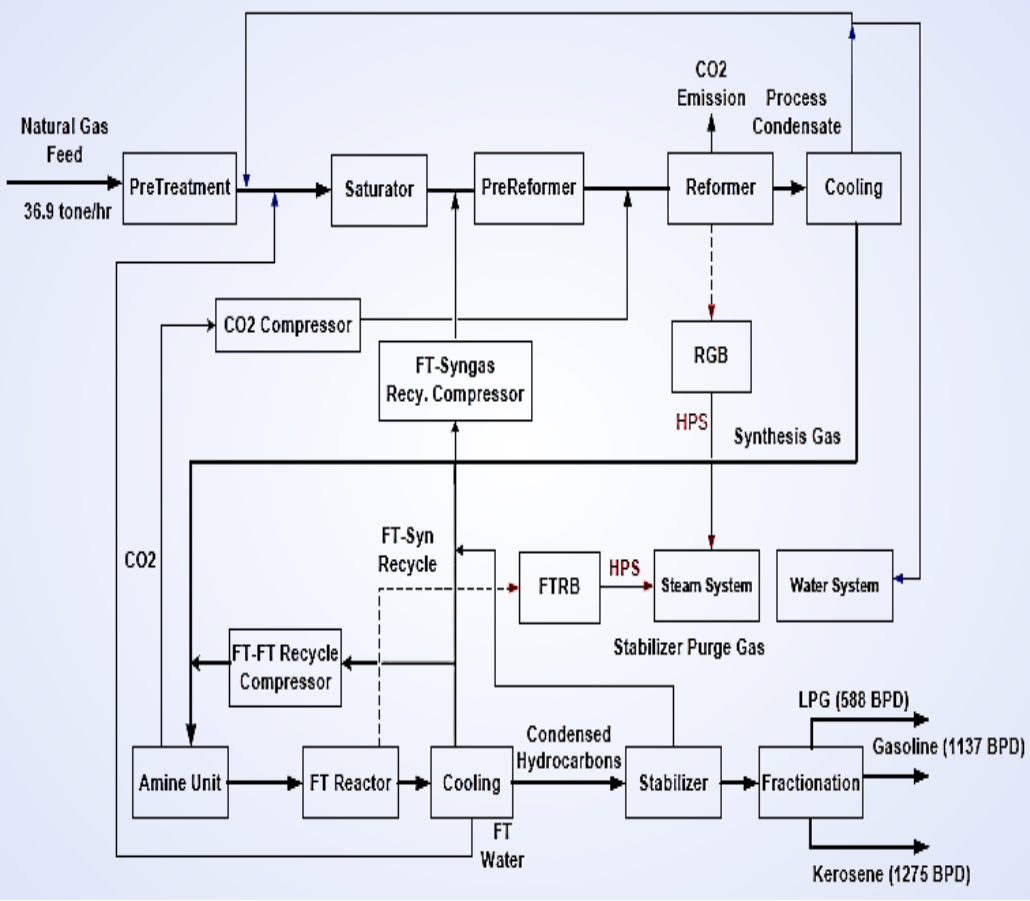
Location: Persian Gulf
Capacity: 130 MMSCFD of the associated gas
Client: IOOC / Radmechanic

Process simulation and preparation of basic design package and detail engineering for supplying high pressure gas from existing gas compressor station to the gas lift network of Doroud oil wells.

✦ Gas to Liquid Prototype Plant (based on Arvandan Feed Gas)

Capacity: 3000 BPD
Client: Research Institute of Petroleum Industry

Development of process design package (PDP) including; Process optimization, heat and material balance development, data sheet generation, hydraulic study and material selection for 3000 BPD gas to liquid plant utilizing FT reaction followed by separation section.



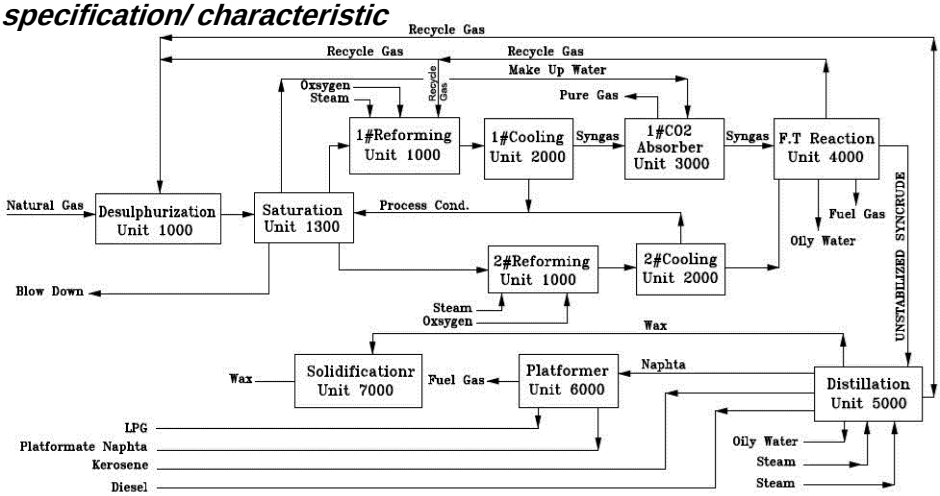
✦ Gas to Liquid Plant

Capacity: 10,000 BBL/D
Client: Farayand Pars Jahd

Review of the basic design document prepared by SARV company for process integration and consistency.

Evaluation of proposals from Syngas Licensor.

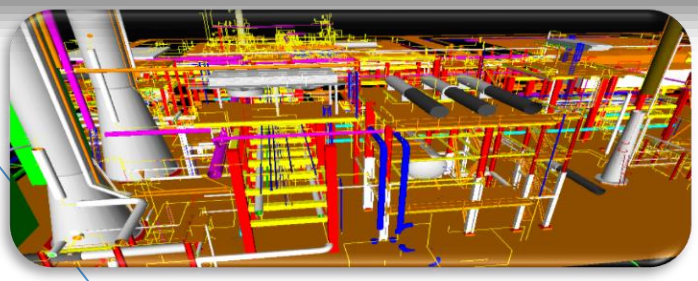
Analyzing the pilot plant product (assay) and finalizing syncrude specification/ characteristic



✦ LPG Recovery and Merox Units

Location: Persian Gulf Star Oil– Bandar Abbas
Capacity: 2x13000 BPD
Client: Petromashal Foroozan

Process design review and detailed process and safety engineering for 2x13000 BPD LPG recovery and Merox units as technical assistance to Petro Mashal Forouzan company.



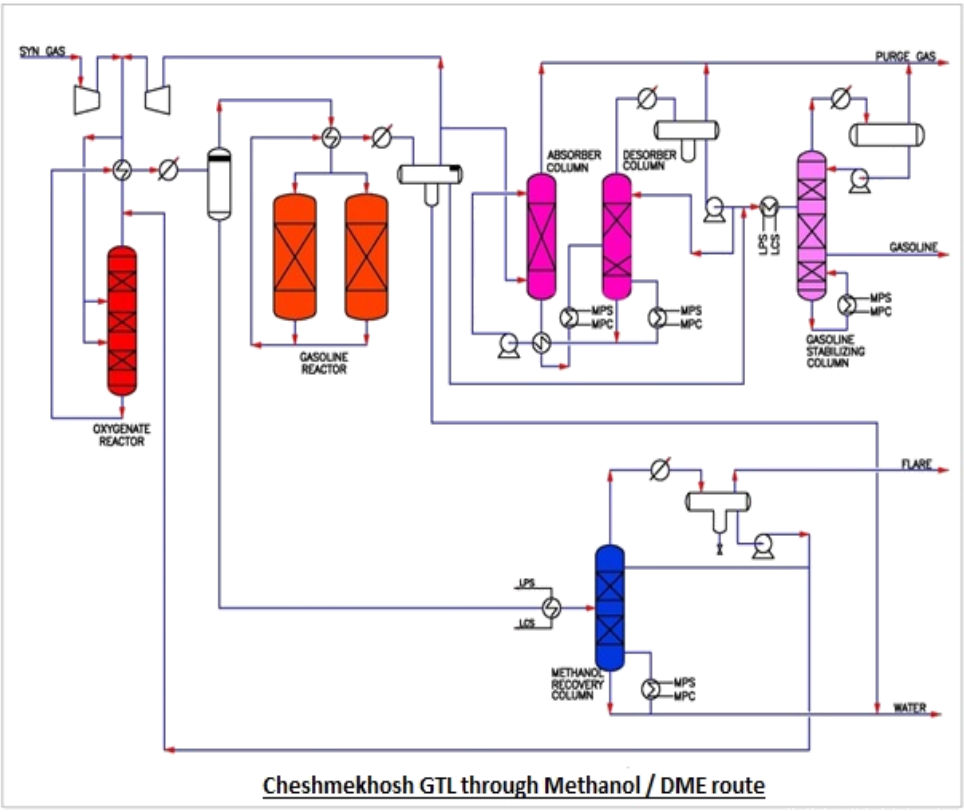
✦ Gas to Liquid Plant

Location: Cheshmeh Kosh
Capacity: 1000 BBL/D
Client: Pars Saman

Process simulation and preparation of process design package for converting Cheshmeh Khosh associated gas into gasoline or DME.

The GTL plant includes syngas, oxygenate and gasoline process units supported by required utility and offsite facilities.

The work was performed in collaboration with TIPS RAS, a Russian GTL technologist.



Cheshmekhosh GTL through Methanol / DME route

COURTESY OF TIP-RAS

✦ Gas Sweetening Process Technology Development

Client: Iran University of Science and Technology (IUST)

Development of gas sweetening process technology including process modeling, simulation software validation and heat and material balance for two solvents namely DEA and MDEA. The work performed in collaboration with IUST.

IUST will elaborate on laboratory testing and study to analyze the characteristic and effectiveness of the solvents.

The feed gas composition is selected to cover general Iranian field gas data.

✦ Hasheminejad Gas Refinery - Phase III

Location: Khorasan-Sarakhs
Capacity: ***Gas sweetening: 300MMSCFD***
New condensate stabilization unit : 17m³/h
Two new gas turbine generator: 7.5 MW (each)
Client: Tehran Berkley Co.
Owner: Iranian Gas Engineering & Development Co. (IGEDC)

Basic design and preparation of tender document for 3 phase development of Hasheminejad Gas Refinery including the following units:

- ***Gas treating unit (GTU) No.6***
- ***New condensate stabilization unit***
- ***Two new gas turbine generator***

✦ MC Services for Construction of Pilot Plant for Adsorption Process

Client: National Iranian Gas Company (NIGC R&T Management)
Capacity: 417 Sm^3/h

Management and supervision of the works being carried out by Research Institute of Petroleum Industries (RIPI) of Iran for construction of pilot plant and development of adsorption process for:

- ***Water adsorption from natural gas***
- ***Mercaptane removal from natural gas***

The work to be performed by RIPI includes research, study and design supplemented by laboratory and pilot plant testing of various natural gases.

✦ Consultant Services to *SPG Polymers GmbH*

Location: Chahbahar Free Zone
Capacity: 2x79,627 Nm^3 /h Oxygen
Client: SPG Polymers GmbH

Review and endorsement of bidder's proposal documents for selection of EP contractor for ASU and compressed air plant project in Mokran petrochemical complex.

✦ Adipic Acid

Location: Bandar Imam
Capacity: 30,000 tons/year
Client: IBACO

Process review and techno-economical evaluation of the 30,000 tons/year Adipic Acid process design provided by Khimteknologiya Ltd for IBACO company.

✦ Separation of Benzene from Crude Hexane Fraction

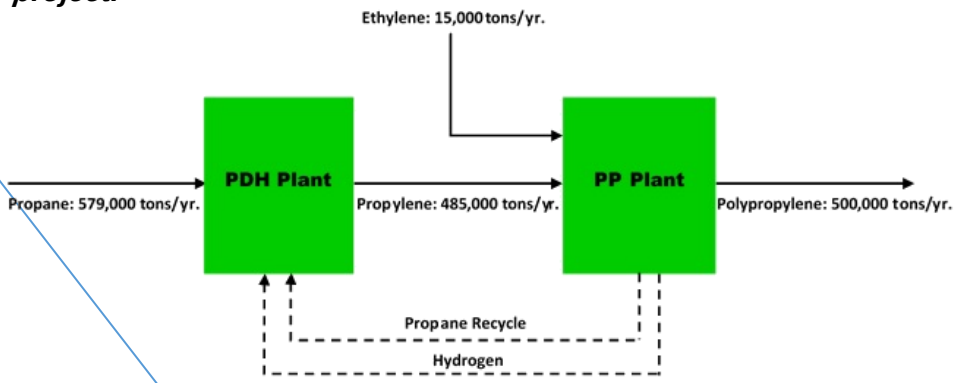
Location: Kermanshah
Capacity: 350 b/d
Client: Kermanshah Oil Refining Company (KORC)
Licensor: Namvaran P&T

Pilot plant test studies and techno-economical feasibility study for construction of a 350 b/d extractive distillation unit to produce polymer grade hexane.

✦ Feasibility study of PDH/PP Petrochemical Complex

Location: PSEEZ/ Kangan
Capacity: 500,000 ton per year PolyPropylene
Client: Azaran Industrial Structures Company

Preparation of Feasibility Study for execution of PDH/PP Plant including Market Study, Techno/Economic Study in Bankable format to be accepted for finance, Technical/Economic data regarding to this plan according to NPC Investment Website has been provided by NPT for Azaran co. to get required License & Permission for this project.



✦ Feasibility Study for the Wax and Paraffin Production

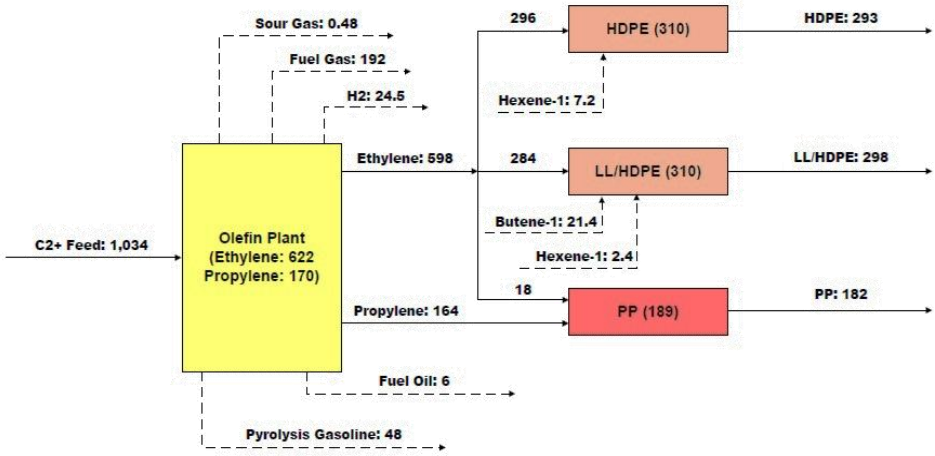
Location: Esfahan
Capacity: Raw paraffin 13500 ton/year
Vaseline 4500 ton/year
Solid paraffin 10000 ton/year
Liquid paraffin 8000 ton/year
Client: Petro Nafis Arman Energy Group Company

Provide feasibility study, conceptual design, market study, economical study and technical review of licensor document

✦ Feasibility Study for Dehloran Petrochemical Complex

Location: **Dehloran, Ilam**
Feed Capacity: 45,000 Barrels per day C2+
Product Capacity: HDPE 293,000 tons per year
LL/HDPE: 298,000 tons per year
PP: 182,000 tons per year
Pyrolysis Gasoline: 48,000 tons per year
Fuel Oil: 6,000 tons per year
Client: **Dehloran Petrochemical Company (DPC)**

Determination of the optimal capacity of feed from the associated gases and performing technical and feasibility studies of the mentioned units.



✦ Feasibility Study for 15000 t/y, MDEA Plan

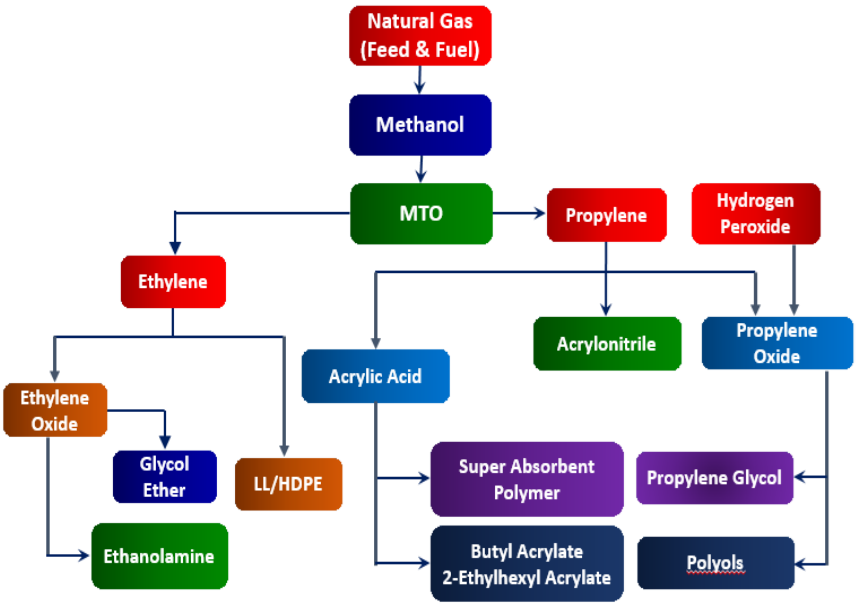
Location: Mahshahr
Capacity: MDEA, 15,000 KTA
Client: Nariman Sam Zal Company

Technical review, economic evaluation and market study for execution of MDEA production unit from ethylene oxide based on Himtech Technology

✦ Feasibility Study for GTX Plant in Esfahan

Location: Esfahan
Capacity: Methanol, 1,850 KTA
MTO: 730 KTA
Client: Kosar Sanat Parsian Company

Screening of different scenarios for execution of GTX plant, in terms of market potentials and economic evaluations, and completed feasibility study for selected scenario.



✦ Screening Studies, Preparation of Preliminary Feasibility Study & Consulting Services

Location: Parsian or Mahshahr
Capacity: 100-150 KTPY
Client: Petrodana Palayesh Kish

Selection of the best process and production plant by using the methanol as the feed to the plant for investment and construction is the main objective of this project.

✦ Preparation of Feasibility Study of Gas to Olefin (GTO) Plant in Parsian Zone with Natural Gas as Feed

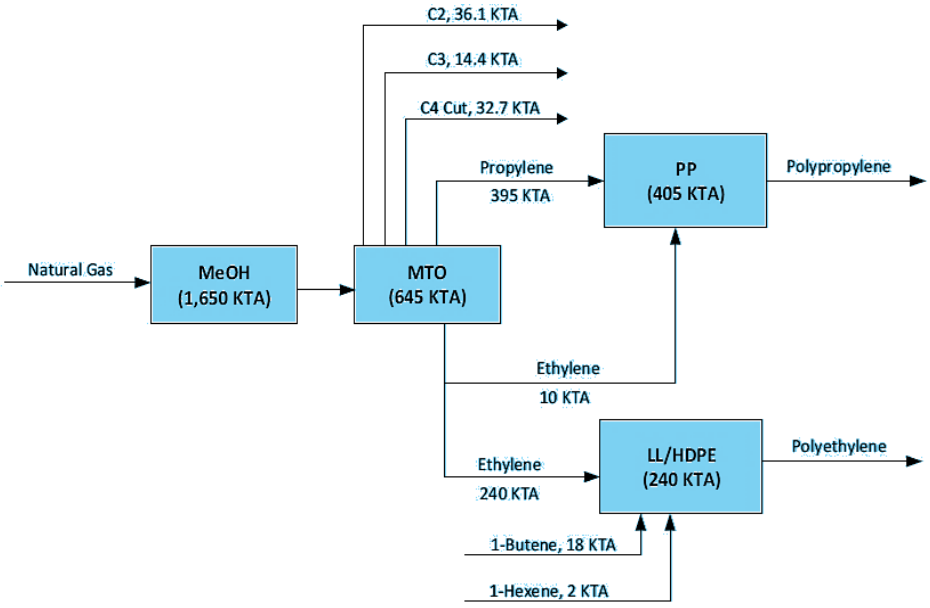
Location: Parsian Energy Intensive Industrial Special Economic Zone
Capacity: Polypropylene 405,000 TPY and LL/HDPE 240,000 TPY
Client: Lorch company

Technical and economical feasibility studies for GTO plant to produce PP and LL/HDPE from natural gas as feed to the complex.

✦ Feasibility Study for 3rd GTX Plant in Parsian

Location: Parsian energy-Intensive Special Economic Zone
Capacity: Polypropylene: 405 KTA
Polyethylene: 240 KTA
Client: Mapna Group

Technical review, economic evaluation and market study for execution of GTX plan. In this concept natural gas will be converted to methanol and methanol will be converted to propylene and ethylene via MTO process and finally two valuable polymer products of polypropylene and polyethylene will be produced.



✦ Feasibility Study for Mokran Petrochemical Utilities and Offsite

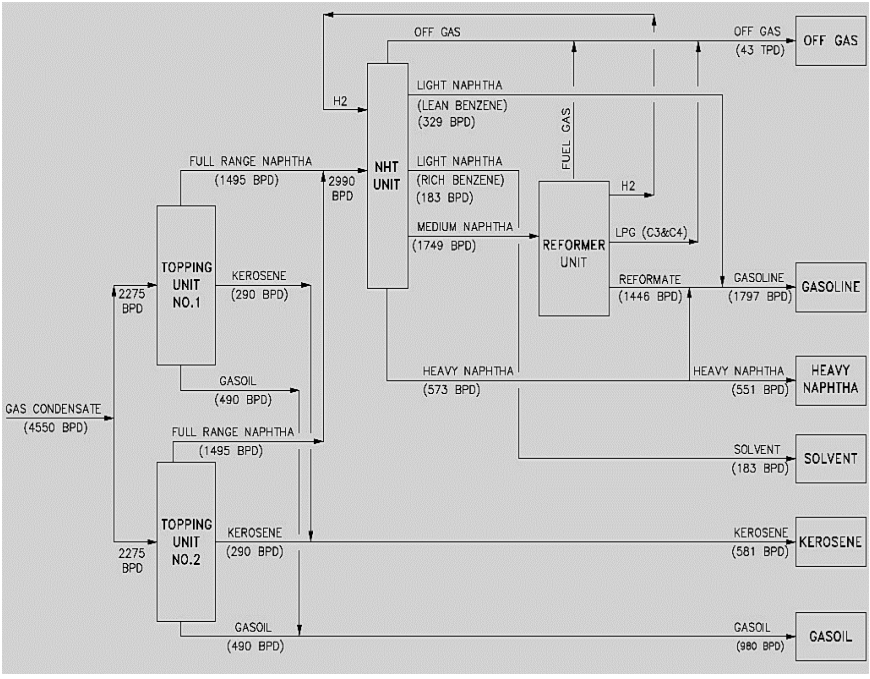
Location: Chahbahar Free Zone
Client: Mokran Abniroo Company

Techno economical feasibility study for utilities and offsite for phase 1 including air separation and compressed air plant, combined steam and power generation plant, sea water intake and outfall, water desalination plant, condensate polishing and demineralized water plant, waste water treatment and incineration plant, utility center buildings, interconnecting lines between the processing units and the central utility site.

✦ *Feasibility Study for Gasoline Production in Khangiran*

Location: Khangiran
Capacity: 4550 bbl/D increased capacity
Client: Shahid Hasheminejad Khangiran gas Processing Co (SGPC)

Technical and economical feasibility study for gasoline production from sour gas condensate of Hasheminejad gas refinery.



✦ Feasibility studies for the production of benzene, toluene, xylene from pyrolysis gasoline

Location: Chabahar Free Zone
Capacity: 100,000 tons per year
Client: Sadra Chemistry Khuzestan

Update the feasibility report of Sina methanol unit including market studies, technical studies, financial and economic evaluation

✦ Feasibility studies of two desulfurization units of furnace oil

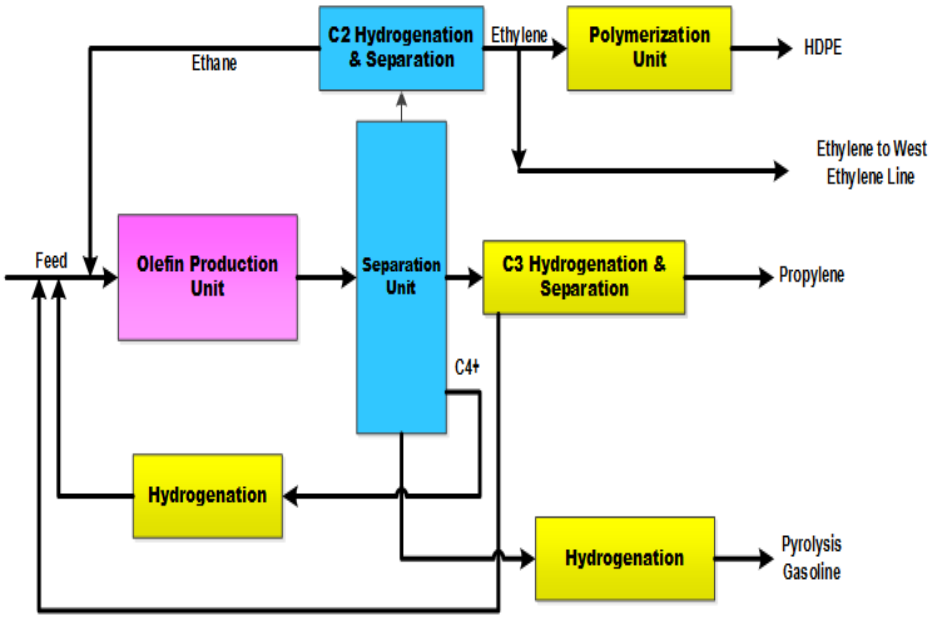
Location: Assaluyeh
Capacity: 5,000 tons per day
Client: Farasakou Assaluyeh

Feasibility study including market studies and product prices, Process selection for hydrogen refining of furnace oil, Development general refining model based on access to license and technology, Estimating project investment costs, Economic evaluation of the project

✦ Dehloran Petrochemical Complex

Location: Dehloran-Ilam
Feed capacity: 35,000 BPD
Product Capacity: Ethylene: 82 KTPY
Propylene: 62 KTPY
HDPE: 300 KTPY
Pyrolysis gasoline: 48 KTPY
Client: Dehloran Petrochemical Company

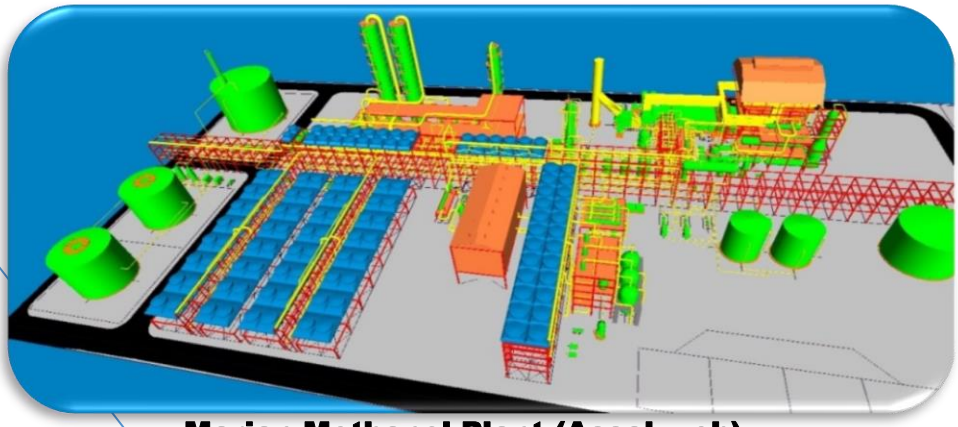
Determine the optimal capacity of feed from the associated gases and perform technical and feasibility studies.



✦ Marjan Methanol Plan

Location: Assaluyeh
Capacity: 5000 t/d
Client: Kayson

Preparation of material take-off and quantifying installation and construction works based on Haldor Topsoe basic design for EPC bid package.



Marjan Methanol Plant (Assaluyeh)

✦ Dehloran Sepehr Petrochemical Complex (Olefin and Polyolefin)

Location: Dehloran, Ilam
Feed: 35,000 barrel C2+ per day from NGL 3100
Product: Ethylene, Propylene, HDPE, C_5+ and fuel oil
Client: Dehloran Sepehr Petrochemical Company (DSPC)

Process simulation and economic study of alternative process configurations and products to maximize internal rate of return for the complex.

✦ Basic Design of Mokran Petrochemical Utilities and Offsite

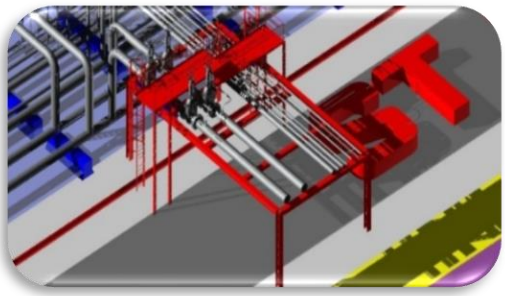
Location: Chahbahar Free Zone
Capacity: 22 million tons per year petrochemical products
Client: Mokran Abniroo Company

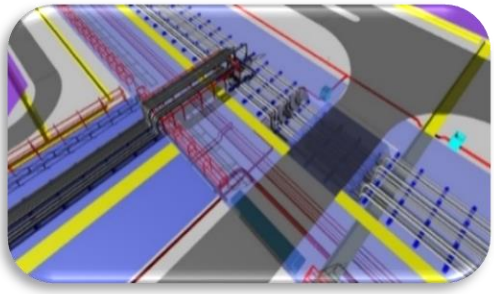
Conceptual design and Basic design for Mokran petrochemical complex units including air separation and compressed air plant, combined steam and power generation plant, sea water intake and outfall, water desalination plant, condensate polishing and demineralized water plant, waste water treatment and incineration plant, utility center buildings, interconnecting lines between the processing units and central utility site.

✦ 3D Model for Mokran Petrochemical Utilities and Offsite

Location: Chahbahar Free Zone
Client: Mokran Abniroo Company

Providing 3D model for Interconnecting of utilities and offsite to Mokran Petrochemical Units.





✦ Front End Engienering design for utilities and offsite of Mokran PetrochemicaL Complex

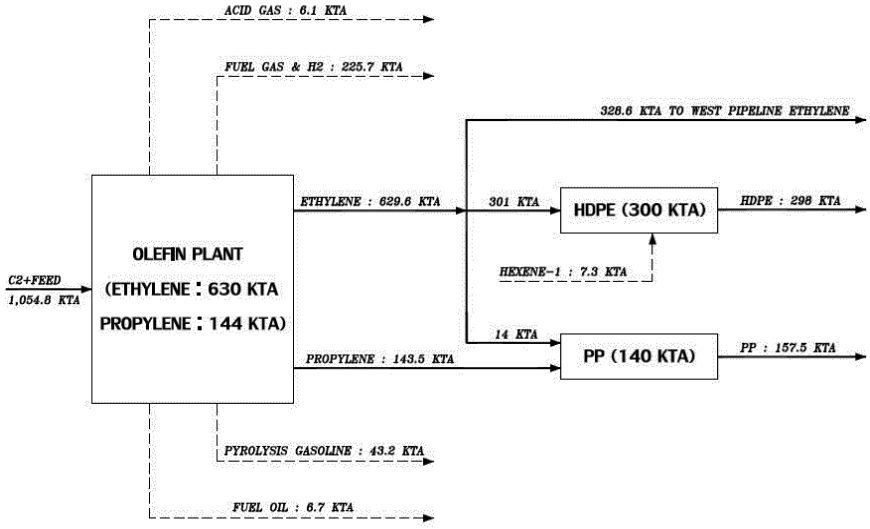
Location: Chabahar free zone
Capacity: 560,000 cubic meters per day
Client: Mokran Ab Niroo Company

Providing conceptual and basic engineering and design and FEED engineering services.

✦ Dehloran Petrochemical Company

Location: Dehloran
Capacity: 630,000 TPY Ethylene and 143,500 TPY of Propylene
Client: Dehloran Petrochemical Company

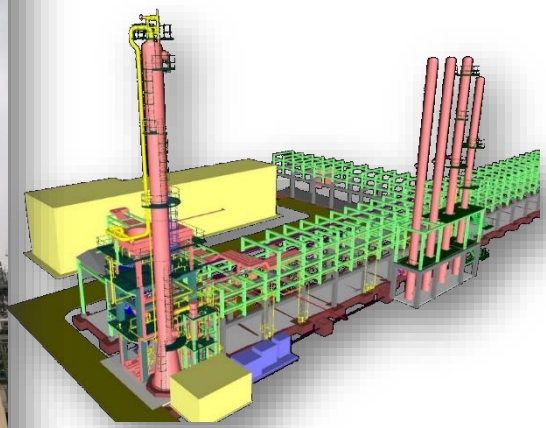
Engineering and consultancy services and site supervision for construction of water intake facilities and other process, utility and offsite units of Dehloran Petrochemical complex.



✦ Dehexanization Unit in Tabriz Petrochemical Company

Location: Tabriz
Capacity: 14.5 ton/hr.
Client: Tabriz Petrochemical Company

Basic and detail design, procurement services and engineering services during construction, erection, pre-commissioning and commissioning of new dehaxanization unit in PGH plant of Tabriz Petrochemical company.



✦ Spent Chemical Treatment Plants

Location: South Pars Gas
Capacity: 100,000 ton per year
Client: Doran Energy Industries

Process design review, equipment and piping layout and material take offs for MEG-Reclaiming units for phase 4,5,12,17 and 18 of South Pars gas fields each with capacity of 100,000 ton per year provided by Canadian Chemical Reclaiming company for Doran Energy Industries.

✦ Siraf 5000 t/d Methanol

Location: Siraf – Persian Gulf
Capacity: 5000 t/d
Client: Siraf Energy Company

Conceptual design for process and utility integration and preparation of basic design package for utility and offsite facilities of 5000 t/d combined auto thermal methanol plant with main process identical to Marjan Methanol plant (Assaluyeh)

✦ Genave – Dashtestan Ethylene & MEG

Location: Genave-Dashtestan
Capacity: 500,000 ton per year MEG
Licensor: Technip for Ethylene Plant, Shell for MEG.
Client: Genave-Dashtestan Petrochemical Company

Techno-economical study for production of Ethylene and MEG utilizing Ethane gas from the Kharg NGL plant under construction.

The process technology will be similar to the existing Ethylene and MEG plants already in operation in Assaluyeh Region.

✦ Separation of Benzene from Crude Hexane Fraction

Location: Kermanshah
Capacity: 350 b/d
Client: Kermanshah Oil Refining Company (KORC)
Licensor: Namvaran P&T

Pilot plant test studies and techno-economical feasibility study for construction of a 350 b/d extractive distillation unit to produce polymer grade hexane.

✦ Technology Development of Hexane Purification

Location: Tehran-Polymer Technology Incubator
Capacity: 30,000 tons per year

Research, laboratory test, design and construction of pilot plant scale-up studies to develop an economically feasible process for separation of Aromatic mixtures from N-Hexane via extractive distillation method utilizing N-Methyl Pyrrolidone solvent.

This work was performed in collaboration with Nokhbegan Technology Development Institute.


قوه قضائیه
سازمان ثبت اسناد و املاک کشور
گواهی نامه ثبت اختراع
الف/۸۹ ۰۱٤٦۰۲

✦ Consultancy Services for Greenfield GTPO Complex

Location: Chahbahar Free Zone
Capacity: Methanol 5000 ton per day
Client: Sina Chemical Industries Development Company

Providing consultancy services for the first phase of the GTPO complex includes a methanol plant, ASU and relevant utility units.

✦ Conceptual Design and Cost Estimation for Light Naphtha Production in Arak Petrochemical

Location: Arak Petrochemical Complex
Capacity: 1,500 tons per day of light naphtha product
Client: Shazand Petrochemical

Conceptual design and cost estimate for construction of light naphtha production unit with capacity of 1,500 tons per day of light naphtha product in Arak Petrochemical Complex.

✦ Review of Process Design Package (PDP) of Methanol Plant

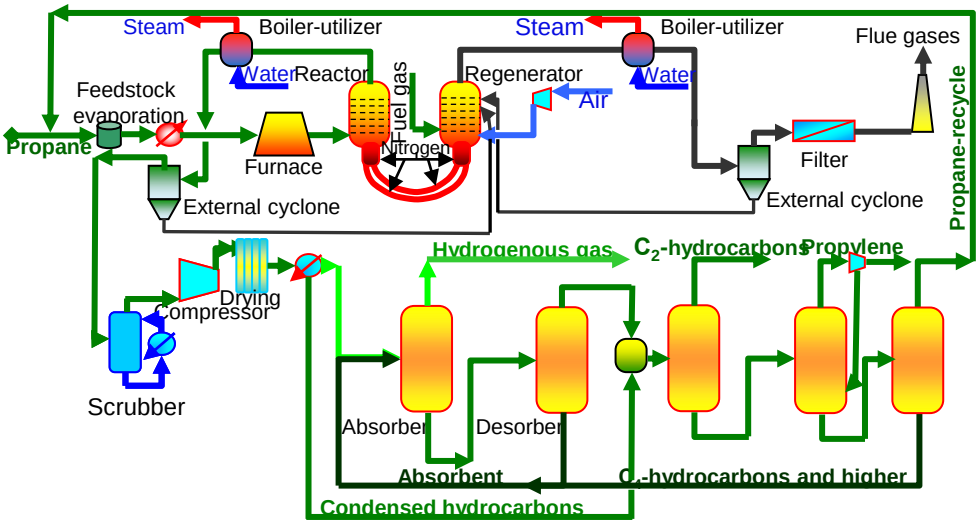
Location: Zanjan
Capacity: 450,000 TPY
Licensor: NPC Research and Technology
Client: Petrohidaj Company

Review of Process Design Package for Methanol Plant prepared by NPC-RT and provision of process consultancy services for Petrohidaj Company.

✦ Review of Propane Dehydrogenation Plant (PDH) Basic Engineering Package and Development of Extended Basic Design

Location: Bandar Imam
Capacity: 150,000 TPY
Licensor: Yarsintez
Client: Petrofanavari Polymer Karafarin (Cyrus Petrochemical Development Co. Pvt.)

Management and supervision of the works being carried out by Yarsintez Company for Propane Dehydration Plant with the capacity of 150,000 TPY and development of the basic design to the extent being sufficient for EPC execution of the project in Bandar Imam, Iran. The works includes basic design of the utilities and offsite.



✦ Updating of the design package of Mokran utilities & offsite

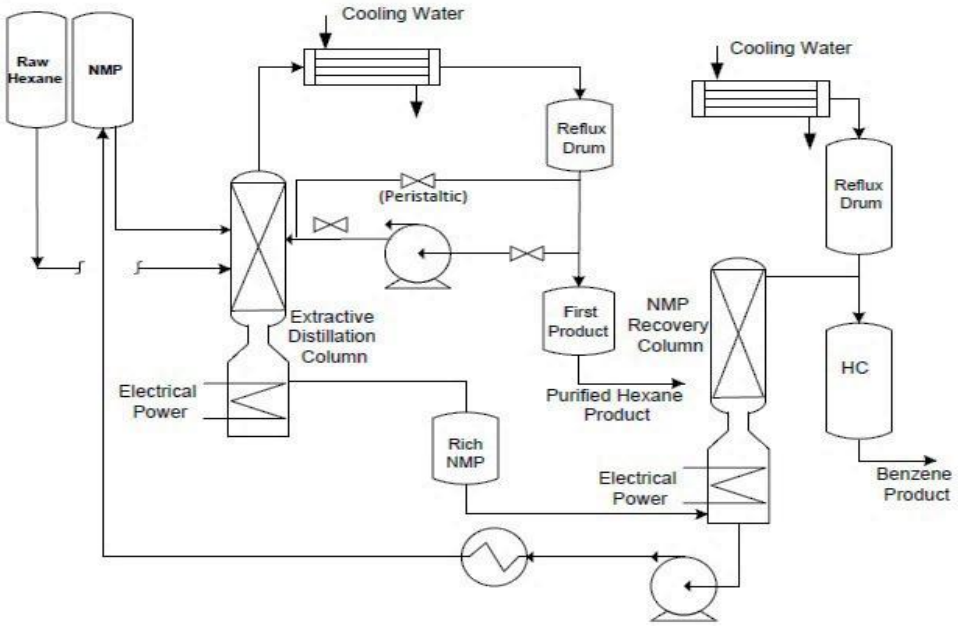
Location: Chahbahar Free Zone
Capacity: Power: 780 MW
Ro-water: 9400 m3/h
Sea water intake: 30,000 m3/h
oxygen: 465,000 NM3/h
Instrument Air: 24,300 NM3/h
Plant Air: 18,700 NM3/h
Nitrogen: 100,000 NM3/h
Potable/plant water: 405 m3/h
Client: Mokran Abniroo Company

Providing consulting services and updating the design package of utility and offsite of Makran Abniroo company

✦ Production of Polymer Grade Hexane

Location: Arak-Shazand
Capacity: 4500 Ton/year
Client: Shazand Petrochemical *Company*
Licensor: Namvaran P&T

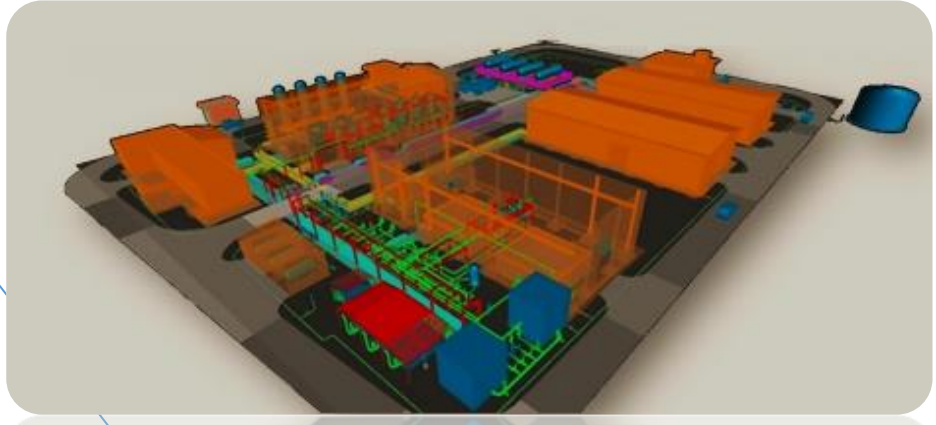
Perform technical evaluation and validation of polymer grade Hexane production including the steps of separating crude hexane from naphtha fraction and extractive distillation by NPT owned process.



✦ Production of Drag Reducing Agent

Location: Aras Free Zone
Capacity: 3,000,000 Liters per year
Client: Aras Sepehr Afza Company (ASACO)

Preparation of process design package, basic design, detail engineering, supply of equipment and materials, construction and erection of Drag Reducing Agent by polymerization of Alpha olefin to develop ultra high molecular weight poly alpha olefin for crude oil and product pipeline drag reduction.



✦ Consultant Services for Mokran Petrochemical Utilities and Offsite Bid Packages

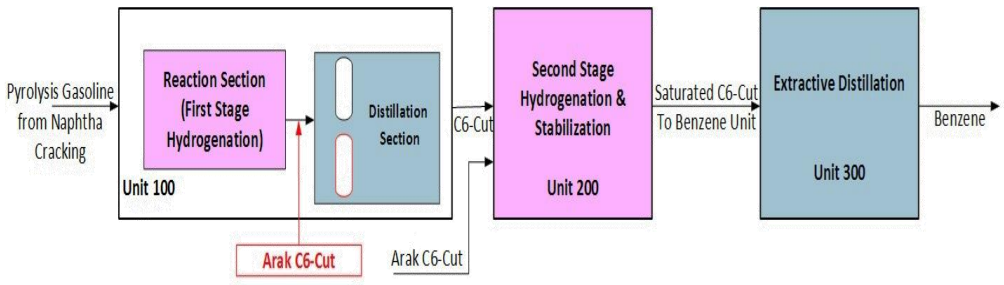
Location: Chahbahar Free Zone
Capacity: 15 million TPY
Client: Mokran Abniroo Company

Provide consultant services during the bidding stage of utilities & offsite packages to respond to bidder's questions/clarifications on tender documents, as well as basic engineering review and revise documents at the request of the employer if a change in the type and number of process plants or project phasing requires so.

✦ Debottlenecking of Hydrogenation Unit for Treatment of APG

Location: Tabriz Petrochemical Co.
Capacity: C6 Cut: 14.5 ton/hr
Client: Tabriz Petrochemical Company

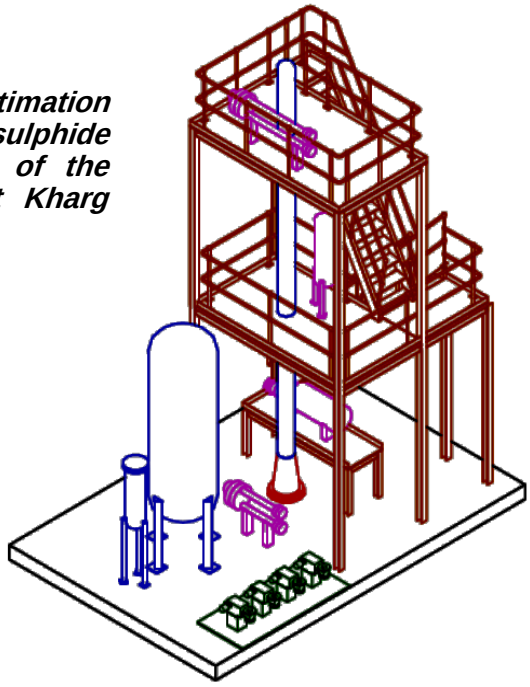
Simulation & Process Design Package (PDP) Preparation including: PFD, HMB, Eq. List & Preliminary Cost Estimation for solving the problem of Actual/Potential gum being in the Arak Pyrolysis Gasoline (APG) feed to Benzene production unit.



✦ Removal of Disulphide Compounds from Gasoline

Location: Kharg Island
Capacity: 5 TPD
Client: Kharg Petrochemical Company

Preliminary design and cost estimation for the removal of disulphide compounds from disulfide oil of the DMD unit using distillation at Kharg Petrochemical Complex.



✦ Gas to Poly Olefin (GTPO)

Location: Parsian Industrial Zone, Persian Gulf Coast-Iran
Capacity: 4.3 million standard cubic meter per day
Client: Investment by NPT and Dana Energy Joint Venture

Conceptual process design, cost estimation, market potential study, techno- economical feasibility study and finance arrangement through National Development Fund.

✦ Technical Assistances for EPCF of Propane Dehydrogenation/ Polypropylene (PDH/PP) Plant

Location: PSEEZ/ Kangan
Capacity: 500,000 ton per year PolyPropylene
Client: Azaran Industrial Structures Company

Utility Conceptual Design, Tender Document Preparation, Negotiation with licensors, design and technical assistances for Land Preparation, Geotechnical/EIA Report , etc.

✦ Providing Consulting and Engineering Services for 480,000 TPY of PDH/PP plant

Location: Assaluyeh
Capacity: 480,000 ton/year Polypropylene
Client: Razavi Oil & Gas company

Conceptual design for utility systems and preparation of EPCCF tender for the project, technical support for preparation of EIA and geotechnical soil reports also are included in the scope of engineering services.

✦ Farzanegan Gas Condensate Refinery Project Consulting Services, Precision Design and Procurement Engineering

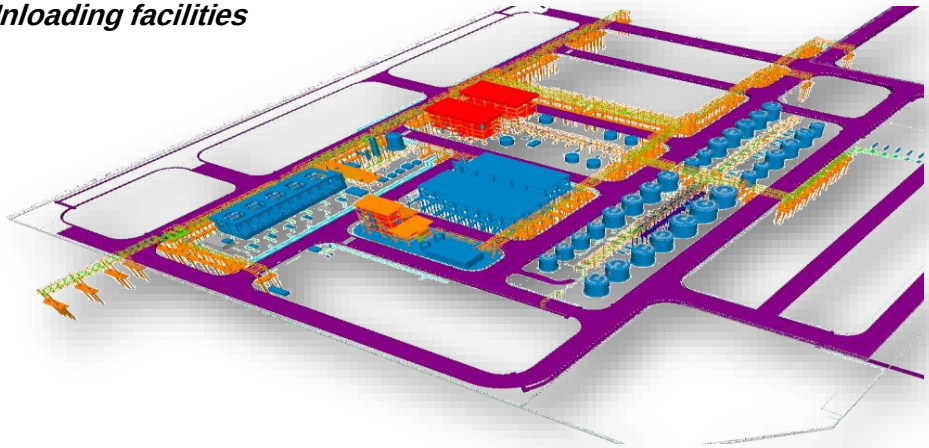
Location: Assaluyeh
Capacity: 40,000 barrels per day
Client: Farzanegan Energy Pars

Feasibility study, conceptual design, basic design and detail engineering for Sour Gas Condensate (HC Feed) and Desalinated Water (utility supply) are transferred through dedicated pipelines (as a part of the Project) from POGC (Pars Oil and Gas Company) condensate storage and desalination facilities in Assaluyeh via specified export pumps directly to battery limit of the refinery.HC Feed is then processed in fractionation section to produce sour full range naphtha and heavy hydrocarbon cut. Sour full range naphtha is then further processed in naphtha hydro-treating to meet required sulfur and nitrogen specification as intermediate product. Treated naphtha could then be further processed to recover LPG (Butane Cut), Pentane (i-Pentane, n-Pentane), 400 and 402 Solvents.

✦ Detailed engineering and procurement engineering of process units (ethoxylates and glycerin purification)

Location: Mahshahr
Capacity: **Ethoxylate 40 KTA**
Glycerin 16 KTA
Client: Petronad Asia Petrochemical

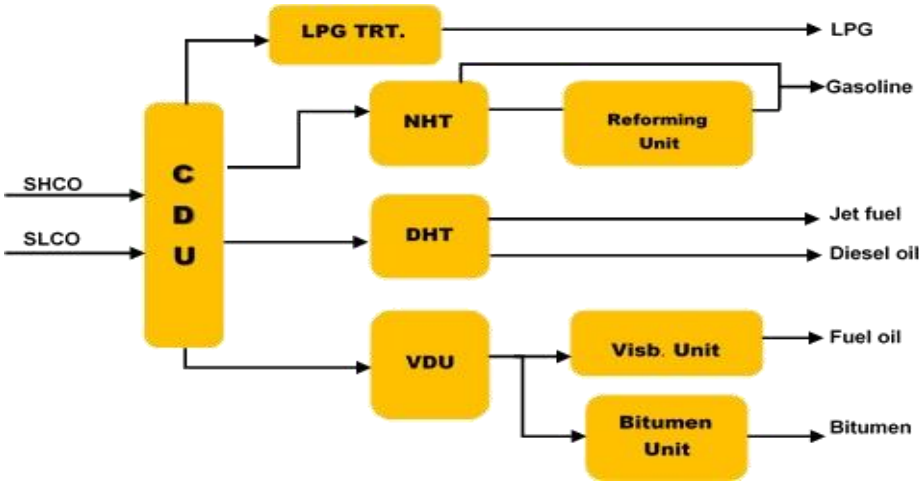
Detail engineering and procurement services, field engineering during construction, also assistant for pre-commissioning, commissioning, Start up and performance test(s) for Ethoxylation PLANT 40 KTA, Glycerin Distillation PLANT 16 KTA, Utility plant, Interconnection, Industrial Buildings, Effluent and Waste Water Treatment, Loading and Unloading facilities



✦ Technical and Management Services to Alfruqlus Refining Company

Location: Syria
Capacity: 70,000 BPD
Client: **Alfruqlus Refining Company**

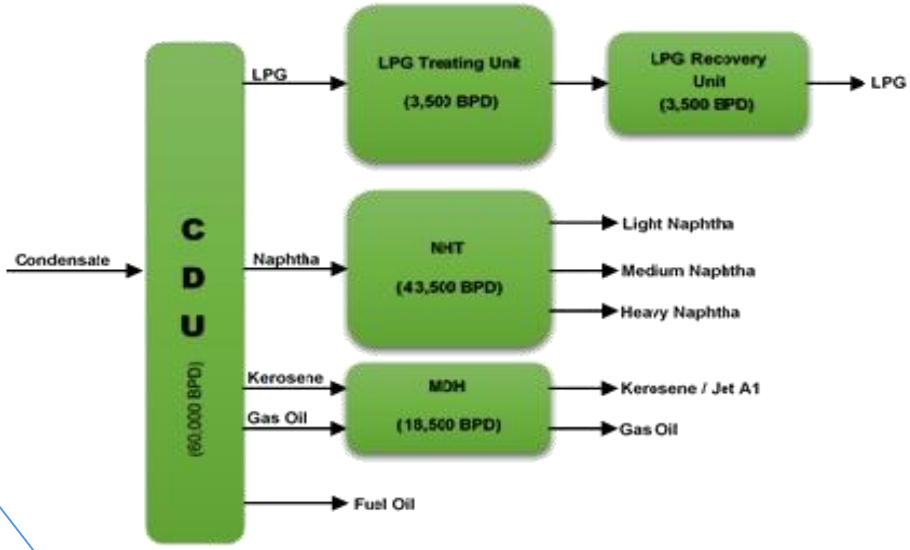
Expedite, technical coordination, technical review and advices in connection with pre-feed engineering package which is developed and prepared by Chagalesh Company.



✦ Siraf Condensate Refinery

Location: Coast of Persian Gulf (Tombak)
Capacity: 60 ,000 BPD
Client: Javid Energy Parto

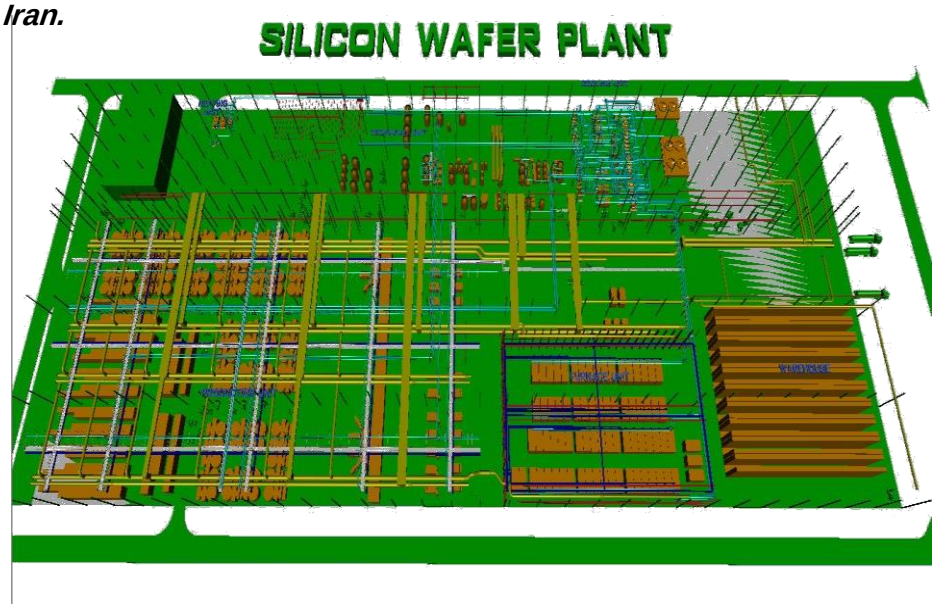
provide consultancy and technical services to the client. NPT has reviewed specific documents of basic design package and has provided his recommendations/viewpoints to facilitate decision making in client's team.



✦ Silicon Wafer Production Plant

Location: Khomein
Capacity: Silicon wafer for 500 MW solar panel
ASU with 2,300 Nm^3/h
Client: Mana Energy Pak Company

Silicon wafer production plant is dismantalled and relocated from Freiberg- Germany to Khomein-Iran. NPT will provide detail engineering and design for erection and construction of new plant in Iran.



✦ Construction of Second-and Air Separation Unit of Silicon Wafer Project

Location: Khomein-Iran
Capacity: 2300 Nm3/h
Client: Pouya Basbar Rad company

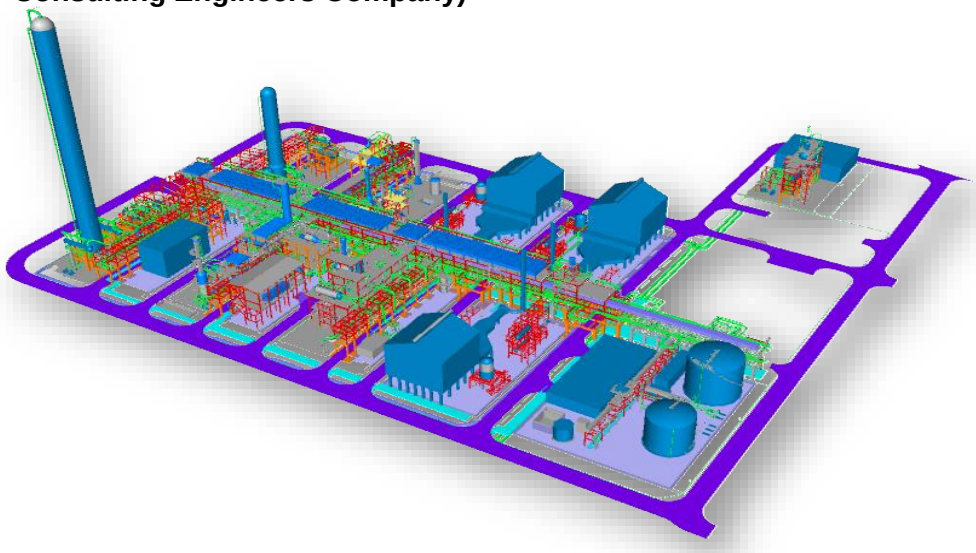
Detailed design and Preparation of construction plans.

Namvaran P&T has entered into contract with private, semi-private and governmental organization in rendering technical assistance in the capacity of process design development, detail engineering, procurement services and site supervision for the following projects:

- **Detail engineering & purchasing process, utility & offsite units of Mehr Petrochemical Complex**

  Location: Assaluyeh
  Capacity: 450,000 KTPA of PDH
  Client: Namvaran

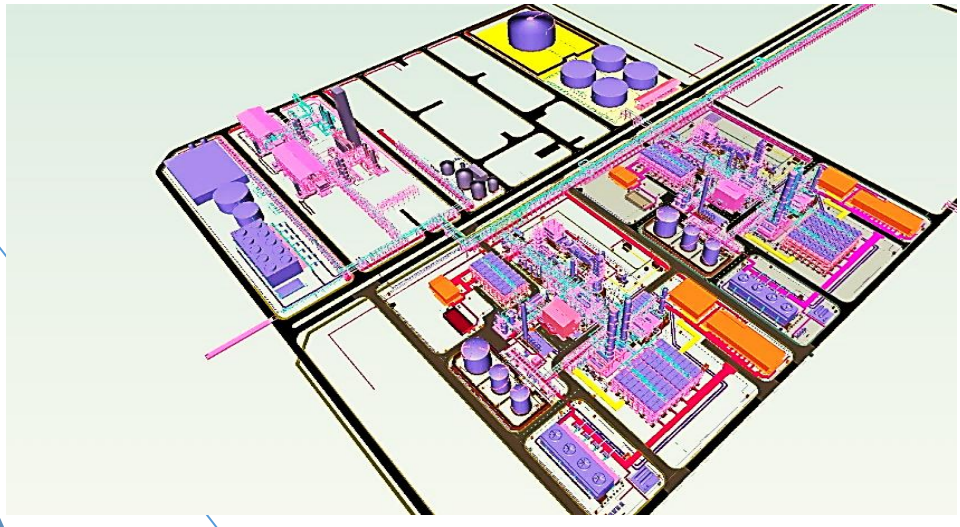
  Detail Engineering, Procurement Services for PDH Unit of Mehr Petrochemical Complex (as subcontractor of Namvaran Consulting Engineers Company)



- **Engineering consulting services, detailed design and procurement services for two methanol units and integrated utility**

  Location: Chabahar Free Zone
  Capacity: Methanol 1 and 2 each with a capacity of 5,000 tons per day
  Client: Kimia Sanat Mabna

  Detailed engineering services and procurement engineering of two methanol units and basic and detailed design services of utility and offsite units.



- **Basic, Detailed design & engineering procurement Services of Process, utility, offsite and interconnecting units of Persian Gulf Mehr Refinery**

Location: *Bandar Abbas*
Capacity: **120,000 BPSD Gas Condensate**
Client: **Persian Gulf Mehr Oil Company**

Provide basic, detailed design and engineering procurement Services of Process such as Sour Water Stripper and Amine, utility, offsite and interconnecting units of Persian Gulf Mehr Refinery.