

**NARGAN**  
**IN ASSALUYEH**



OVER FIVE DECADES EXPERIENCE  
 IN OIL, GAS & PETROCHEMICAL INDUSTRIES



## We Have Engineered and Managed: (IN ASSALUYEH)

### Petrochemical

#### Complexes

7,020,000 TPA of Olefins Plants  
1,400,000 TPA of Polyolefins (PE & PP) Plants  
400,000 TPA of Polymers  
1,537,000 TPA of other Petrochemical Products

### Ethane Recovery and

#### Fractionation Plants

77 MMSCMD of Gas Separation Facilities:

1,621,000 TPA of Ethane (C2)  
980,000 TPA of Propane (C3)  
566,000 TPA of Butane (C4)  
& 95,000 TPA of C5+

### South Pars Gas Field

#### Development Projects

281 MMSCMD of Treated Gas  
4,000,000 TPA of Ethane (C2)  
4,400,000 TPA of LPG (C3 & C4)  
440,000 BPSD of Condensate  
2,350 TPA of Sulphur



**NARGAN**






21 Years Achievements (2000-2021):

OVER  
**35**  
PROJECTS

THE  
**BIGGEST**

OLEFIN,  
ETHANE RECOVERY  
and  
GAS TREATMENT PLANTS





**MORE THAN  
12,000,000  
ENGINEERING  
MAN-HOURS**

**OVER  
€ 5.0  
BILLION  
CONTRACTS VALUE**





## NARGAN in ASSALUYEH

NARGAN is an engineering, procurement, construction, and project management company with over five decades of experience in the design and development of industrial projects, particularly in the oil, gas and petrochemical fields. NARGAN Company was established in 1973 under the name of BORNAA Consulting Engineers.

NARGAN provides comprehensive services for the development of industrial projects, from the initial concept of feasibility studies to the provision of license and know-how, basic design, front-end and detail engineering, followed by procurement, supply services, field engineering, construction supervision and project management.

NARGAN's scope of work in petrochemical industry covers a wide range, from Ethylene, polymer production and artificial rubbers, to Ethanolamine, Phthalic Anhydride, and chemical fertilisers. NARGAN has extensive experience in engineering and execution of Ethane recovery and fractionation plants in Iran. NARGAN has also been active in the design, procurement and construction of many Iranian oil refineries. Design and construction management of the biggest gas treatment facility in Iran, called KANGAN with the capacity of 125 MMNCMD is another of NARGAN's achievements in the past five decades.

As a privately owned company, with over 800 qualified technical and support personnel, specialized in the engineering, procurement and construction management/ supervision of advanced oil, gas and petrochemical projects, NARGAN has earned a reputation for high quality work, encompassing safe and on time delivery of more than 300 completed projects. NARGAN has made major contributions to the development of energy industries in Iran at various capacities of consultant and/or EPC Contractor during this period.





Pars Special Economic/Energy Zone (PSEEZ) in Assaluyeh, which is located in the south of Iran and on the coast of Persian Gulf, is the second center of Iran's oil, gas and petrochemical industries after Petrochemical Special Economic Zone (PSEZ) in Mahshahr. With the latitude of 46,000 hectares, and with the purpose of supporting the expansion of South Pars Gas Filed, PSEEZ was constructed and commissioned as the world's largest gas field. South Pars (Pars 1), Kangan Pars (Pars 2) and North Pars (Pars 3), each with 14,000, 16,000 and 16,000 hectares, are the subsidiaries of PSEEZ.

From the beginning of this century until now, 17 giant petrochemical complexes together with 16 gas treatment facilities of South Pars (including Phases 1-10, 15-16, 17-18, 20 and 21) have either been commissioned or is being constructed in South Pars area (Assaluyeh Pars 1), in addition to other downstream petrochemical units. Besides Pars zone 1, commissioning and start up of 8 onshore gas treatment facilities of South Pars (including Phases 11, 12, 13, 14, 19, 22-24) next to 3 giant Liquefied Natural Gas Plants, are being constructed in Pars Kangan zone (Assaluyeh Pars 2).

NARGAN Company as one of the pioneers of energy industries has always had an active and efficient part in various projects that have been performed in PSEEZ. Over 30 projects have already been engineered, constructed and managed by NARGAN in this zone, in the past two decades, some of which are the largest in Iran, in this zone and even in some cases in the world.

Engineering design, procurement and material supply and construction management of the largest industrial projects of this zone such as

- 1,321,000 TPA Ethylene and 305,000 TPA Propylene plant (10<sup>th</sup> Olefin Complex), as one of the largest olefin production complexes of the world;
- 77 MMSCMD C2+ recovery plant (9<sup>th</sup> Olefin Complex), together with 1,612,000 TPA of Ethane (C2) and 1,641,000 TPA of Propane (C3) and heavier products (C4 & C5), which is the largest C2+ recovery plant in Iran;
- and South Pars Phase 12, onshore gas treatment facilities (EPC 3) with the capacity of 81 MMSCMD treated gas, 120,000 BPSD condensate and 750 TPD sulphur, as the largest industrial project in Iran,

are among the most valuable achievements and experiences of NARGAN.

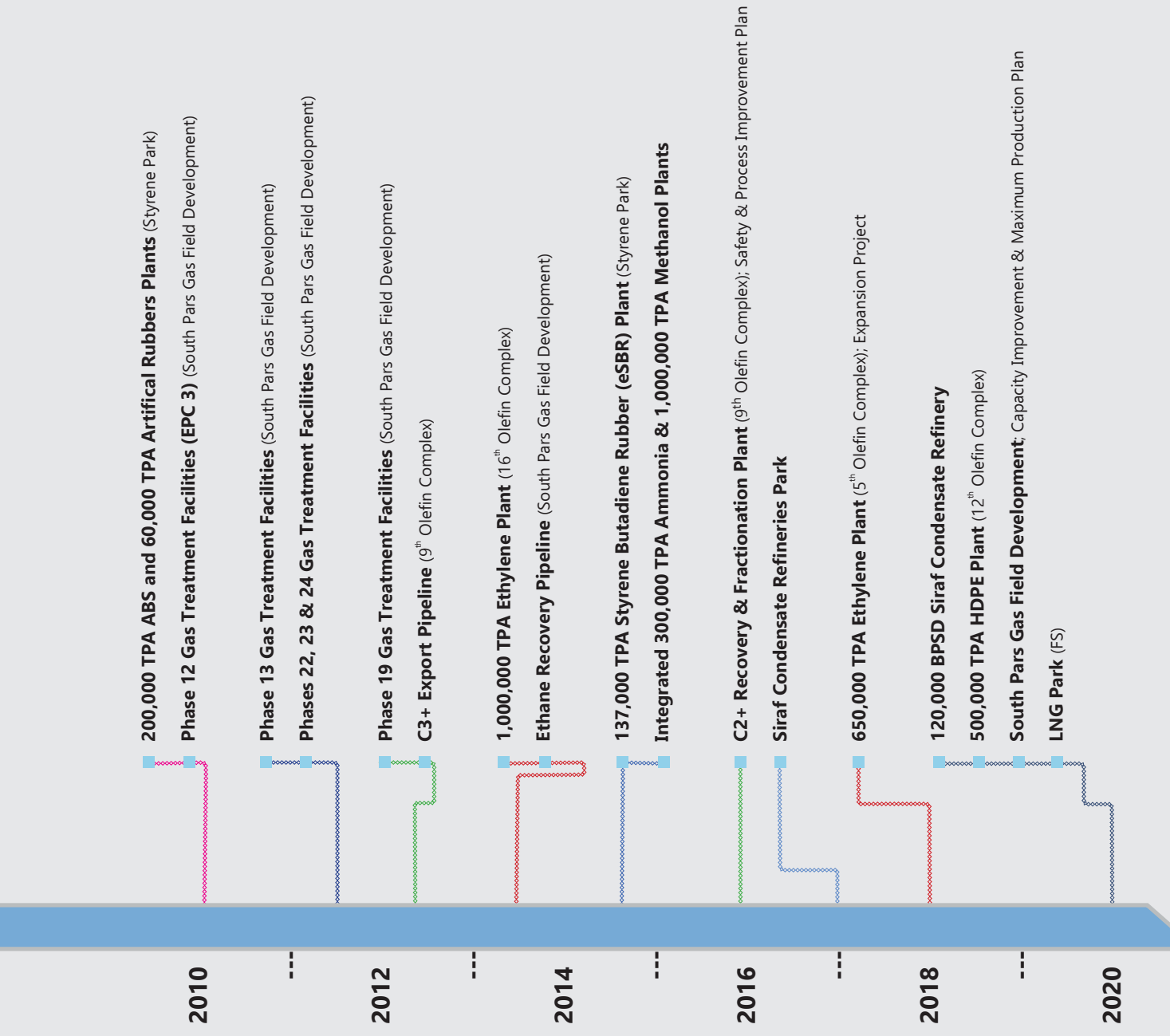
The total capacity (100%) of Ethylene production (i.e. 7,020,000 TPA by operation plants) and more than 50% capacity of polyolefins (PE & PP) production (i.e. 1,400,000 TPA) in Assaluyeh is engineered and performed by NARGAN Company. NARGAN has been active in the development of the South Pars Gas Field Development (the biggest gas field in the world) with the natural gas treating capacity of up to 281 MMSCMD and production of other related products.

Today, NARGAN Company is well known in the region as an important player in undertaking big EP / EPC projects, with more than 300 completed projects and with the work capacity of 2,000,000 man-hours per year. By continuous improvement of its methods and expanding its capabilities, NARGAN is aiming to mark its most powerful presence in the oil, gas and petrochemical market during its sixth decade of existence.



## MAJOR PROJECTS CALENDAR:







## PETROCHEMICAL PLANTS









## OLEFINS:

### 1,321,000 TPA Ethylene & 305,000 TPA Propylene Plant (10<sup>th</sup> Olefin Complex)

*One of the Largest Cracking Plant in the World*

#### OWNER / CLIENT:

Jam Petrochemical Company

#### SCOPE OF WORK:

- Technology & Know-How
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Management & Construction Supervision

#### PRODUCTS:

1,321,000 TPA Ethylene, 305,000 TPA Propylene,  
220,000 TPA Raw Pyrolysis Gasoline, 245,000 TPA C4+,  
130,000 TPA Raffinate & 24,000 TPA Cracked Fuel Oil (CFO)

#### PARTNER:

Technip (France)

#### TECHNOLOGY PROVIDERS:

Technip Benelux (Netherlands) & Technip (France)

#### CONTRACT AWARD DATE / PROJECT STATUS:

June 2001 / Completed (in operation)

*NARGAN has utilised Technip's know-how and technical support in olefins projects.*



*This Plant delivers one of the largest output of Ethylene and Propylene (1,626,000 TPA) to-date in the world and is the only large capacity steam-cracker using both gas and liquid as feedstock to produce Ethylene and Propylene.*





**100% capacity of Ethylene production (i.e. 7,020,000 TPA) and more than 50% capacity of the polyolefins production (i.e. 1,400,000 TPA) in Assaluyeh is engineered and performed by **NARGAN** Company.**



## **10<sup>th</sup> OLEFIN COMPLEX**









## 1,000,000 TPA Ethylene Plant (9<sup>th</sup> Olefin Complex)

### OWNER / CLIENT:

Arya Sasol Ploymer Company

### SCOPE OF WORK:

- Technology & Know-How
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Management & Construction Supervision

### PRODUCTS:

1,050,000 TPA Ethylene & 94,000 TPA C3+ Cuts

### PARTNER:

Technip (France)

### TECHNOLOGY PROVIDERS:

Technip Benelux (Netherlands) & Technip (France)

### CONTRACT AWARD DATE / PROJECT STATUS:

September 2002 / Completed (in operation)

## 2 × 1,000,000 TPA Ethylene Plant (11<sup>th</sup> Olefin Complex)

### OWNER / CLIENT:

Kavian Petrochemical Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services
- Site Supervision

### PRODUCTS:

Phase 1: 1,000,000 TPA Ethylene & 90,000 TPA C3+ Cuts  
Phase 2: 1,000,000 TPA Ethylene & 90,000 TPA C3+ Cuts

### CONTRACT AWARD DATE / PROJECT STATUS:

June 2006 / Completed (in operation)



## 500,000 TPA Ethylene Plant (5<sup>th</sup> Olefin Complex)

### OWNER / CLIENT:

Morvarid Petrochemical Company

### SCOPE OF WORK:

- Technology & Know-How
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Management & Construction Supervision

### PRODUCTS:

500,000 TPA Ethylene & 44,000 TPA C3+ Cuts

### PARTNER:

Technip (France)

### TECHNOLOGY PROVIDERS:

Technip Benelux (Netherlands) & Technip (France)

### CONTRACT AWARD DATE / PROJECT STATUS:

September 2002 / Completed (in operation)

*In another project carried out in 2018 (by NARGAN Company), the capacity of this plant has increased by 30%, to 650,000 TPA Ethylene production.*

## 1,000,000 TPA Ethylene Plant (16<sup>th</sup> Olefin Complex)

### OWNER / CLIENT:

Bushehr Petrochemical Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services
- Construction Supervision
- Technical Assistance Services

### PRODUCTS:

1,000,000 TPA Ethylene & 88,000 TPA C3+ Cuts

### CONTRACT AWARD DATE / PROJECT STATUS:

April 2012 / Completed



## POLYOLEFINS:

### 300,000 TPA LDPE Plant (9<sup>th</sup> Olefin Complex)

OWNER / CLIENT:

Arya Sasol Polymer Company

SCOPE OF WORK:

- Licence & Technology
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Works & Pre-Commissioning Services
- Commissioning, Start-up & Performance Tests

PARTNER:

Technip France

TECHNOLOGY PROVIDER:

Sabtec  
(Formerly Stamicarbon-DSM; Netherlands)

CONTRACT AWARD DATE / PROJECT STATUS:

September 2000 / Completed (in operation)

### 300,000 TPA Swing LLDPE/HDPE Plant (10<sup>th</sup> Olefin Complex)

OWNER / CLIENT:

Jam Petrochemical Company

SCOPE OF WORK:

- Licence & Technology
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Management & Construction Supervision

PARTNER:

Tecnimont (Italy)

TECHNOLOGY PROVIDER:

Lyondellbasell  
(Formerly Basell Polyolefins; Germany)

CONTRACT AWARD DATE / PROJECT STATUS:

February 2001 / Completed (in operation)



## 500,000 TPA HDPE Plant (12<sup>th</sup> Olefin Complex)

OWNER / CLIENT:

Kian Petrochemical Company

SCOPE OF WORK:

- Licence & Technology
- Basic Engineering Design
- Front End Engineering Design (FEED)

TECHNOLOGY PROVIDER:

Lyondellbasell  
(Formerly Basell Polyolefins; Germany)

CONTRACT AWARD DATE / PROJECT STATUS:

June 2020 / In Progress

## 300,000 TPA Polypropylene (PP) Plant (10<sup>th</sup> Olefin Complex)

OWNER / CLIENT:

Jam Polypropylene Company  
(Initially owned by: Jam Petrochemical Company)

SCOPE OF WORK:

- Licence & Technology
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Management & Construction Supervision

PARTNER:

Tecnimont (Italy)

TECHNOLOGY PROVIDER:

Lyondellbasell  
(Formerly Basell Polyolefins; Germany)

CONTRACT AWARD DATE / PROJECT STATUS:

December 2000 / Completed (in operation)





## OTHER PETROCHEMICAL PLANTS:

### 100,000 TPA Butene-1 Plant (10<sup>th</sup> Olefin Complex)

OWNER / CLIENT:

Jam Petrochemical Company

SCOPE OF WORK:

- Licence & Technology
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Works & Pre-Commissioning Services
- Commissioning, Start-up & Performance Tests

TECHNOLOGY PROVIDER:

Axens, IFP Group Technologies (France)

CONTRACT AWARD DATE / PROJECT STATUS:

April 2008 / Completed (in operation)

*A rare occasion where basic engineering work, on the basis of Licensor's know-how package, is carried out by an Iranian Company, **NARGAN**.*

## Integrated 300,000 TPA Ammonia & 1,000,000 TPA Methanol Plant

OWNER / CLIENT:

Lavan Investment Development Company (LIDCO )

SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply

PRODUCTS:

300,000 TPA Ammonia & 1,000,000 TPA Methanol

TECHNOLOGY PROVIDER:

Haldor Topsøe (Denmark)

CONTRACT AWARD DATE / PROJECT STATUS:

September 2014 (Reactive: 2018) / In Progress

## 200,000 TPA Acrylonitrile Butadiene Styrene (ABS) and 60,000 TPA Artificial Rubbers Plants (Styrene Park)

OWNER / CLIENT:

Jam Petrochemical Company

SCOPE OF WORK:

- Licence & Technology
- Engineering Design & Procurement Engineering Services
- Technical Assistance Services

PRODUCTS:

200,000 TPA ABS & 60,000 TPA Artificial Rubbers (SBS/SB/LCBR)

PARTNER:

Tecnimont (Italy)

TECHNOLOGY PROVIDER:

Versalis ENI  
(Formerly Polimeri Europa; Italy)

CONTRACT AWARD DATE / PROJECT STATUS:

April 2009 / Completed

## 137,000 TPA emulsion Styrene Butadiene Rubber (eSBR) Plant (Styrene Park)

OWNER / CLIENT:

Sadaf Assaluyeh Chemical Company

SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services
- Technical Assistance Services
- Construction Supervision

PARTNER:

Tecnimont (Italy)

TECHNOLOGY PROVIDER:

Versalis ENI  
(Formerly Polimeri Europa; Italy)

CONTRACT AWARD DATE / PROJECT STATUS:

July 2013 / In Progress





# **GAS SEPARATION**









## 77 MMSCMD Ethane Recovery & Fractionation Plant (9<sup>th</sup> Olefin Complex)

*The Largest C2+ Recovery & Fractionation Plant in Iran*

### OWNER / CLIENT:

Pars Petrochemical Company

### SCOPE OF WORK:

- Technology & Know-How
- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Management & Construction Supervision

### PRODUCTS:

77 MMSCMD (2,700 MMSCFD) of Gas Separation Facilities; including:

1,612,000 TPA Ethane (C2), 980,000 TPA Propane (C3),  
566,000 TPA Butane (C4) & 95,000 TPA C5+

### PARTNER / TECHNOLOGY PROVIDER:

Linde (Germany)

### CONTRACT AWARD DATE / PROJECT STATUS:

September 2000 / Completed (in operation)

*NARGAN has utilised Linde's know-how and technical support in C2+ recovery & fractionation projects.*



*NARGAN has extensive experience in engineering and execution of Ethane & Propane recovery plants in Iran.*







## **SOUTH PARS GAS FIELD DEVELOPMENT**

(ONSHORE GAS PROCESSING FACILITIES)









## Phase 12 Gas Treatment Facilities (EPC 3)

*The Largest Industrial Project in Iran*

### OWNER / CLIENT:

Owner: Pars Oil & Gas Company (POGC)  
Client: Petropars Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services
- Equipment & Material Supply
- Construction Works & Pre-Commissioning Services
- Commissioning, Start-Up & Performance Test

### PRODUCTS:

81 MMSCMD Treated Gas,  
120,000 BPSD Condensate  
& 750 TPD Sulphur

### PARTNERS:

Tecnimont (Italy);  
Gamma and Dorriz (Iran, for construction works)

### CONTRACT AWARD DATE / PROJECT STATUS:

January 2010 / Completed (in operation)









## Phase 13 Gas Treatment Facilities

### OWNER / CLIENT:

Owner: Pars Oil & Gas Company (POGC)  
Client: Petrotadbir pars Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services

### PRODUCTS:

50 MMSCMD Treated Gas,  
1,000,000 TPA Ethane (C2),  
1,100,000 TPA LPG (Propane & Butane),  
80,000 BPSD Condensate  
& 400 TPD Sulphur

### PARTNER:

Sazeh (Iran)

### CONTRACT AWARD DATE / PROJECT STATUS:

September 2010 / Completed (in operation)





Gas Processing Facilities (Phases 15 & 16; SPGFD)

## Phases 15 & 16 Gas Treatment Facilities

### OWNER / CLIENT:

Owner: Pars Oil & Gas Company (POGC)  
Client: Aryanaft shahab Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services

### PRODUCTS:

50 MMSCMD Treated Gas,  
1,000,000 TPA Ethane (C2),  
1,050,000 TPA LPG (Propane & Butane),  
80,000 BPSD Condensate  
& 400 TPD Sulphur

### PARTNER:

Sazeh (Iran)

### CONTRACT AWARD DATE / PROJECT STATUS:

February 2007 / Completed (in operation)





## Phase 19 Gas Treatment Facilities

### OWNER / CLIENT:

Owner: Pars Oil & Gas Company (POGC)  
Client: Petropars Iran Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services

### PRODUCTS:

50 MMSCMD Treated Gas,  
1,000,000 TPA Ethane (C2),  
1,100,000 TPA LPG (Propane & Butane),  
77,000 BPSD Condensate  
& 400 TPD Sulphur

### PARTNERS:

Kinetics Technology (KT; Italy) for Gas Sweetening Process  
& Sazeh (Iran)

### CONTRACT AWARD DATE / PROJECT STATUS:

November 2010 / Completed (in operation)





Gas Processing Facilities (Phase 19; SPGFD)

## Phases 22, 23 & 24 Gas Treatment Facilities

### OWNER / CLIENT:

Owner: Pars Oil & Gas Company (POGC)  
Client: Petrosina arya Company

### SCOPE OF WORK:

- Engineering Design & Procurement Engineering Services

### PRODUCTS:

50 MMSCMD Treated Gas,  
1,000,000 TPA Ethane (C2),  
1,100,000 TPA LPG (Propane & Butane),  
77,000 BPSD Condensate  
& 400 TPD Sulphur

### PARTNERS:

Sazeh (Iran)

### CONTRACT AWARD DATE / PROJECT STATUS:

September 2010 / Completed (in operation)











# **We Have the SOLUTION ...**



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