

IRAN MONTHLY Petroleum

Iran Petroleum
Issue No. 86
August
2019

Gasoline
Traded at
IRENEX

NIOC Track Record
Focus on Joint Oil and
Gas Fields Development



Leaf through Iran Petroleum online and read the latest news about Iran's petroleum industry.

www.iranpetroleum.ir



Resist Today, Pin Hope on Future

Kasra Nouri
Director General of Public Relations

Throughout the history the Iranians have been faced with numerous enemies: Alexander the Great who set Persepolis on fire, Genghis who ruined Persia and then, the 1953 CIA-backed coup against a democratic government, and recently the US hostile attitude toward Iran and imposing tough sanctions on Iran.

However, what has kept Iran and the Iranians firm may be summarized here: today's resistance and hope in future. The secret to the survival of Iran throughout millennia may be also summarized in this key phrase.

Even today, the Iranian nation and national bodies stick to the same ideals. They are standing firm against US-led pressure in the hope of building a better future.

Iran's petroleum industry has in recent years shown that although it has been at the receiving end of sanctions and threats, it will not quit resistance and making efforts, nor will it lose its hope in future.

The Iranian petroleum industry staff are accustomed to turning threats into opportunities, as they have proved during years of tough sanctions that they would benefit from the capabilities of Iranian manpower and the cooperation of independent nations and companies that did not submit to US pressure to make planning for development and renovation.

During a brief period of sanctions relief, the Iranian petroleum sector managed to reach a position much higher than the pre-sanctions era.

Even today, a review of the Iranian petroleum industry news is indicative of the relentless efforts heralding a brighter future, highlighted in a speech by Minister of Petroleum Bijan Zangeneh. Zangeneh said Iran would bring its oil production rate back to higher than expected as soon as sanctions are defeated. That means nothing but to exercise resistance today and place hope in the future.

Ministry of
Petroleum
Islamic
Republic of Iran

Managing Editor:
Kasra Nouri
Director General of
Public Relations

Editor in chief:
Parastoo Youchi

Executive Editor:
Hamid-Reza Shakeri-Rad

Graphic Designer:
Saman Goodarzi

Photo Section, PR Office,
MOP:
Hassan Hosseini

Reporter:
Negar Sadeqi
Javad Asghari

Translator:
Kianoush Amiri

Coordinator:
Abbas Lotfi

Tel/Fax: (+98 21)
61626113

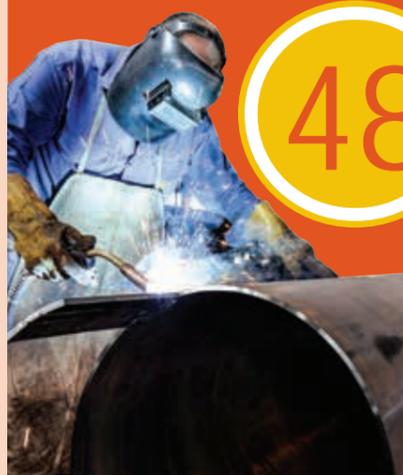
www.iranpetroleum.ir
iranpetroleum.pr@gmail.com

26

KEPCO Invests in 3 Key Projects

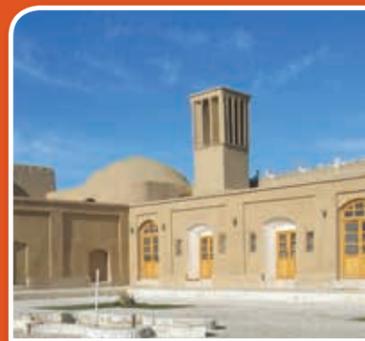


Self-Sufficiency in Oil Storage and Pipe Building



48

Gonabad, Gem in Desert



58

Iran, Regional Petchem Hub



30

Petropars to Develop SP11 If China Pulls Out



10

Minister Zangeneh: Iran Outdoing Co- Owners of Joint Fields



4

COVER

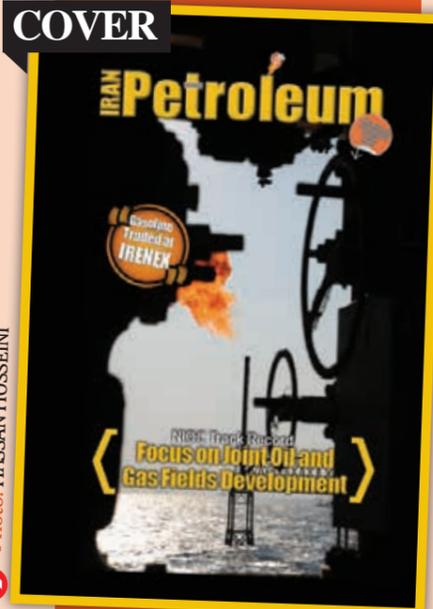


Photo: HASSAN HOSSEINI



Minister Zangeneh: Iran Outdoing Co-Owners of Joint Fields

Iran's petroleum minister, Bijan Zangeneh, said in a televised interview that Iran had been outperforming its neighbors in terms of recovery from oil and gas fields it shares with them.



“We share fields with Iraq, Saudi Arabia, Qatar, the United Arab Emirates and Turkmenistan. The largest of these joint fields are located in South Pars and West Karoun,” he said.

Zangeneh said Iran was not ahead of co-owners in recovery from joint fields until several years ago, “but today we are ahead in daily gas production from South Pars and oil recovery from West Karoun fields.”

Iran shares the giant South Pars gas field with Qatar.

The minister also touched on the agreements signed for the development of fields located in western Iran, saying: “We’ve already been active in the Azar field and we have signed agreements with the Russians for developing several fields.”

Zangeneh said Iran also shared fields, including Forouzan, with Saudi Arabia. He added: “The bulk of this field lies in the territory of Saudi Arabia, but Iran is also recovering [from this field]. Renovation plans are under way in this field.”

The minister said: “We have not made any recovery from Farzad A and Farzad B, because we have been waiting for the Indians decision. But we hope the situation of these fields will be finalized this year.” The minister touched on the offshore South Pars gas field, saying: “Of the 27 phases of this field, the operation of refinery of the onshore sector and the offshore sector of 25 phases is over, and the operation of offshore sector will be over for all 27 phases early next [calendar] year to bring gas production from this joint field to about 800 mcm/d.”

Gasoline Output at 115ml/d Zangeneh said effective

measures had been taken with regard to improving gasoline quantity and quality in Iran.

He said Iran was producing Euro-4 gasoline, which was not available in the country in 2012. Zangeneh said Iran brought its Euro-grade gasoline production to 76 ml/d in 2018 to be distributed in megacities.

The minister said: “Our gasoline production totals 115 ml/d.” He added that Iran’s gasoline production reached 111 ml/d in the first summer month and 112 ml/d in the second summer month this year. Zangeneh said Iran was producing more than 11 ml/d in excess. “We are storing this excess production and we have also started gasoline exports,” he said. He also said Iran was producing 125 ml/d of gasoil.

Zangeneh said: “I’ve been told that in terms of gasoline production and in refining capacity, we are the first among OPEC member states, but unfortunately in oil production we come third among OPEC members.”

He added: “We were once the second OPEC producer.”

Trump’s ‘Crime’

Zangeneh expressed regret that US sanctions were hindering the purchase of some widely needed equipment for improving environmental conditions.

He said: “In Assaluyeh, we need some modern equipment to improve the environment, but this equipment was hit by US sanctions and that is one of crimes committed by [US President Donald] Trump.”

He added: “For instance, we should have expansionary turbines in order to separate ethane in desulfurization and heavy gas molecule separation

units causing pollution or flares where gas is burnt, we cannot purchase equipment due to the problems caused by the Americans, but this delay is a sin and crime blamed on them.”

Petchem Gross Output Set to Rise

Zangeneh said Iran’s petrochemical output was valued at \$1 billion in 1997, but thanks to what the then reformist administration did mainly in the South Pars gas field, it increased.

“For the first time we launched gas-based and condensate-based petrochemical facilities and then the construction of numerous petrochemical plants began. Some were launched at that time and some others became operational later,” he said. Zangeneh said: “In 2013, we had reached \$20 billion in terms of petrochemical production value. When we ran short of feedstock we produced less.”

“During these years, new petrochemical plants have been built, while the previous petrochemical projects have been completed,” he said.

Zangeneh said 12 petrochemical plants came online by March 2018, while a year later three other petrochemical projects became operational. Zangeneh said the gross output of petrochemical plants would cross 100 million tonnes in 2021, up from 56 million tons recorded in 2013. In terms of value, he added, Iran’s petrochemical production would double to \$36 billion.

“In other words, we will see a 50% increase in the value, which would be the second petrochemical jump,” he said. Zangeneh said: “We reached \$18 billion in our first jump

and our second jump will bring us to \$36 billion. The third jump will bring our production to 150 million tonnes, which would mainly include olefin or plastic production. That is a major development under way in the petrochemical industry.”

\$6bn Petchem Feedstock Annually

Zangeneh said the petrochemical value chain will be completed in Iran when downstream petrochemical projects are operated. “We are in good conditions from this standpoint. We are holding Iran Plastin September. Future demand and products for investment would be put on display there.”

Zangeneh said petrochemical plants spent about \$6 billion on feedstock every year.

“We have no other industry whose downstream sector would spend \$6 billion on feedstock to be converted into other products because when there is sufficient capacity they would not buy more feedstock due to lack of market.”

The minister gave a positive assessment of downstream petrochemical production in Iran, saying: “In the meetings I had with upstream petrochemical producers, they showed interest in domestic supply because of competitive price. But some of our products are not consumed domestically too much. For instance, 2 to 2.2 million tonnes a year urea fertilizer is used on farmlands and there is still enough of it.”

He added: “That is while we are producing more than 6 million tonnes of urea fertilizer or metanol, and domestic consumption is very low. Domestic production of propylene is also low and its production is set to rise in third jump.”



For the first time we launched gas-based and condensate-based petrochemical facilities and then the construction of numerous petrochemical plants began.

NIOC Track Record

Focus on Joint Oil and Gas Fields Development

Studying Iran's oil track record has been a reflection of the persistence of the motto of foresight and hope by the administration of President Hassan Rouhani. The focus on the development of jointly-owned oil and gas fields as a key foreign policy shows that oil production in West Karoun's oil fields which Iran shares with neighboring Iraq has exceeded 350,000 b/d, while the giant offshore South Pars gas field has been racing ahead at an acceptable pace.

Iran sits atop the world's largest combined oil and gas reserves. The country has grown into a major supplier of energy in the world. Since several years ago, National Iranian Oil Company (NIOC) has been recognized as the second largest oil company in the world. NIOC is now Iran's powerful arm in exploration, drilling, extraction and production of hydrocarbon resources. From this perspective, efforts have been under way for the realization of major policies in Iran's petroleum industry amid widespread activities by NIOC as an influential company in the Organization of the Petroleum Exporting Countries (OPEC) and the standard-bearer of regional and global cooperation in the Middle East. To that effect, bringing SP13, SP14 and SP22-24 to full capacity, increasing crude oil production capacity in West Karoun, laying out the Goureh-Jask Pipeline and building a crude oil export terminal in Jask Port are among strategies envisioned by Minister of Petroleum Bijan Zangeneh for NIOC in the current calendar year. Once these strategies have materialized, the bulk of objectives set in the country's political and economic development outlook would come true.

South Pars, Oil Development Frontline

South Pars is an indicator of

determination and willpower in Iran's petroleum industry. The field, which Iran shares with Qatar, holds by itself half of Iran's total gas deposits. The field is so vital for Iran that NIOC has adopted major plans for its development. Ever since the Rouhani's first administration took office, the roadmap designed for the field concentrated on the completion of incomplete phases. This strategy came to fruition, and by March 2015, SP12 – as the largest phase of South – was officially inaugurated by President Hassan Rouhani. SP12 is equal three standard phases. SP15 and SP16 became operational in the same year. Finally, when Rouhani's first administration was bowing out, SP17, SP18, SP19, SP20 and SP21 (equal six standard phases) came to production stage. For the first time in 12 years, Iran and Qatar became equal in recovery from South Pars. During the first year of President Rouhani's second administration, SP14 also became operational while SP13, SP22, SP23 and SP24 were inaugurated last March.

According to the timetable set for South Pars, this supergiant field would see its gas production reach 800 mcm/d with a condensate output of more than 1 mb/d. That is part of Iran's oil and gas recovery

enhancement plan under the country's economic resilience initiative.

3rd Platform at SP14

As part of South Pars development plan, two offshore platforms became operational in SP14 last calendar year, bringing the number of operating top drives to 6. A third platform has been recently installed in this phase. Now, the SP14 development is nearly over. By starting up platform 14B, 20,000 b/d of condensate, 100 tonnes a day of sulfur, as well as 250,000 tonnes a year of LPG and 250,000 tonnes a year of ethane would be processed. Therefore, the gas production capacity in the offshore sector of SP14 would reach 42 mcm/d (1.5 bcf/d). In the meantime, in light of effective progress in the condensate production from the refineries of SP2 and SP3, this project would come online by next March. This project alone would allow for the sweetening of 80,000 b/d of condensate at the refineries of SP2 and SP3, which would be a big step toward reaching self-sufficiency in the petroleum industry.

Gas Output to Hit 1bcm/d

Development of South Pars would represent a major stride in Iran's gas production. Completion of SP14 would bring Iran's gas production to more

than 1 bcm/d. The average gas production during the first 10 months of last calendar year stood at 841 mcm/d, which is expected to reach 880 mcm/d next year and 950 mcm/d the following year. Gas production is expected to cross 1 bcm/d in the near future.

West Karoun Development

Development of oil fields located in West Karoun is also a key project for Iran. The fields located in that area are shared with Iraq. They have significantly raised Iran's crude oil production capacity and would consolidate Iran's position in international energy markets. Last year, efforts got under way for increasing oil production capacity to 350,000 b/d in West Karoun. This trend is continuing this year. That is while 40,000 to 50,000 b/d of oil from the South Azadegan oil field is being processed by mobile facilities. This method of oil production can become operational in other joint fields, too. Another priority for NIOC development projects in parallel with increased production, transmission and export of oil in West Karoun is the development of Phase 1 of South Azadegan, South Yaran, Phase 2 of Yadavaran and North Azadegan, pipeline and facilities at the Goureh-Jask pipeline and the Jask terminal with an approximate investment of \$15 billion, which covers the integrated project for the development of West Karoun oil fields.



Goureh-Jask Pipeline

One of the most important projects under way by NIOC with regard to petroleum industry development is the national strategic project for the transfer of crude oil from Goureh to Jask and oil installations at Jask Port. This highly significant project tops the NIOC agenda for the transfer of 1 mb/d of light and heavy crude oil via a 1,000-km-long pipeline, five pumping stations, two pigging stations, 11 power supply posts, and 180-km-long power transmission lines. This project includes an oil terminal, 20 storage tanks with a total capacity of 10 million barrels, as well as three single-point moorings and an export terminal. With the start of operations for building access roads in the six projects envisioned in the Goureh-Jask crude oil pipeline project, as well as related installations and terminal, a big step was taken in favor of petroleum industry development in West Karoun, which would help finalize the project in the following year. In the meantime, maximum use of domestic potential and capacities in this strategic national plan has led to the domestic manufacturing of nearly 60% of line pipes needed in the country. In this project, for the first time, billets, slabs and sheets were manufactured from iron ore in the required sizes and based on standards. That would allow the petroleum industry to build gas sweet and sour gas pipes with thickness between 12 and 20 millimeters. The initiative undertaken by NIOC, has saved the country \$200 million, while laying the foundation for putting an end to dependence on the import of hundreds of tonnes of such product a year.

Oil Storage Capacity Enhanced

As Western governments imposed a new round of tough sanctions on Iran, NIOC braced for crude oil storage as a strategy to thwart the sanctions. For this purpose, the agreement for the construction of a 10-million-barrel crude oil storage facility was finalized last year. The oil storage facility construction in Jask Port is part of the Goureh-Jask oil pipeline project which is being seriously pursued by the government for the development of southeastern Iran. Furthermore, another objective set in this project is diversity in oil export, and downstream units' feedstock supply points. Known as a project supporting crude oil export from Kharg Island, this project is a strategic initiative aimed to ensure sustained crude oil production

and complete and upgrade the petroleum industry value chain. In the meantime, with the completion of storage facilities and measurement stations for gas condensate in Bushehr Province, it has become possible to stock condensate produced by some of South Pars refineries with a nominal capacity of 640,000 mcm (equivalent of 4 million barrels), supplying pumping stations in order to feed Bandar Abbas and Pars gas condensate refineries at the rate of 360,000 b/d and 120,000 b/d, respectively and delivering condensate to SPMs up to 600,000 b/d.

West Karoun Pumping Stations Nearly Online

The projects for building the West Karoun and Omidiyeh pumping stations are among successful projects of NIOC that came online last calendar year. This

national project was aimed at the delivery of 254,000 b/d of light crude oil and 280,000 b/d of heavy crude oil from West Karoun to Omidiyeh, transfer of 280,000 b/d of heavy crude oil from Omidiyeh to Goureh installations and Bahregan oil terminal, delivery of 220,000 b/d of heavy crude oil and 150,000 b/d of light crude oil from West Karoun pumping station to the Bahregan oil terminal. The area under the coverage of this project starts from 30 km southwestern of Ahvaz with the implementation of the West Karoun pumping station and extends eastward following the implementation of a light and heavy crude oil pipeline.

West Karoun Power Plant

The first phase of the West Karoun power plant is about to come on-stream, as part of development activities in the West Karoun area. The significance of this project is that in addition to sustained power generation, continued oil production will be guaranteed in West Karoun.

Gas Gathering

With the implementation of the flare gas gathering project in the petroleum industry megaprojects, which has been under way for years, the environment will be protected, while hydrocarbon consumption will be saved. NIOC has undertaken effective measures in this regard. After the startup of the second phase of a gas gathering project in

Khuzestan Province, the gas processing plant in Hengam Island was put on the agenda to allow for the processing of 80 mcf/d of gas. Until recently, flare gas equivalent of 14,000 b/d of oil was burnt in Hengam. As part of NIOC plans assigned to National Iranian South Oil Company (NISOC), 90% of associated petroleum gas in NISOC-run areas should be gathered. To that end, 23 small-sized plants fully equipped with domestically manufactured items are considered as an effective step in job creation

local residents. The significant physical progress in other projects like NGL 3100, NGL 3200 and NGL Kharg, Hengam refinery and Bid Boland-2 indicates that pollution caused by gas flares in Khuzestan Province is close to vanishing. Following the signature of an MOU for flare gas recovery and consumption in a South Pars refinery between NIOC, France's Sofregaz and Sanat Saze Samin Iran, arrangements have been made for gathering associated gas in South Pars. Preventing national wealth from being wasted away with the recovery of 450,000 mcm/d of flare gas and preventing the annual emission of 500,000 tonnes a year of carbon dioxide are among the major achievements of this project. Furthermore, in case this project turns out to be successful, the experience will be used in gas gathering in Ahvaz and equipping other South Pars gas refineries with this technology. According to arrangements made with Pars Oil and Gas Company (POGC) and South Pars Gas Complex (SPGC), more than 50% of flaring in new refineries will be cut in the first half of the current calendar year, which would be a breakthrough. In the meantime, all flares are expected to be turned off by the end of the 12th administration.

If we have reached the output peak in South Pars, we will also see an annual decline in output. Therefore, we have to find ways to keep production stable. This initiative was shown by Petroleum Ministry in signing the SP11 deal



Petropars to Develop SP11 If China Pulls Out

→ He told "Iran Petroleum" that Iran's Petropars would develop SP11 in case CNPCI quits the project. The full text of the interview is as follows:

Negar Sadeqi & Roya Khaleqi

» **What stage are the remaining phases of South Pars in now? What phases will become fully operational this year?**

In response to this question, I have to recall that last March, of a total four production chains in SP13 and SP22-24, two chains comprising four platforms and two offshore gas pipeline strings with capacity of 2bcf (56mcm) became operational. Mr. [Bijan] Zangeneh announced at the inauguration of these phases that two more chains of these phases would come on-stream in the current calendar year. We are making efforts to complete the other two chains of these phases with a capacity of 2 bcf prior to winter and put them into operation.

» **When will SP14 be completed?**

At the moment, platform B of this phase is in the phase of startup and the gas produced in this platform is expected to be transferred on schedule and at the rate of 50 mcf/d (14.1 mcm/d) to SP12 as the closest refinery to the location of this platform by October. Drilling operation for the installation of Platform D of SP14, as the last platform of this phase, is currently under way. We are making every effort to finish the installation of this platform by October. By the end of the current calendar year, a total of four phases of SP14 with a capacity of 2 bcf/d would have become operational.

» **Will the SP14 refinery be completed by next March?**

We are making efforts for the utility of this refinery to come online this year. For the gas trains of this phase, we plan to bring into operation the first sweetening train of this phase and then other trains with a 3-month interval will become operational late this calendar year or early next calendar year. Therefore, SP14 will be complete by late next calendar year.

» **Which stage are talks with CNPCI in now for SP11 development?**

Negotiations with this company are under way according to the provisions of the agreement. National Iranian Oil Company (NIOC) and CNPCI are trying to abide by the terms of the contract. God willing, we will let you know about the decision made on this phase. Since the talks are not finalized yet I cannot provide you more details.

» **Is Petropars technically and financially able to handle this \$4.8 billion project in case CNPCI does not get involved in the project?**

Yes! Petropars was present in the SP11 development project from the very beginning and is aware of all processes. Petropars is the right choice for SP11 and is ready to start developing this phase as soon as possible. If any other company steps in for developing this phase, it will take time and a new agreement will be



CEO of Pars Oil and Gas Company (POGC) Mohammad Meshkinfam has said negotiations are under way with China's CNPCI for a final decision on the development of Phase 11 of the giant offshore South Pars gas field.

needed with the new company. Petropars has been through this procedure and is now ready for operation. Regarding the ability to financing the project, I have to say that in the first step, full financing is not needed and we can start with a small sum. For instance, there is now sufficient budget for drilling and Petropars can start drilling. The only thing to settle would be the contractual issues with Petropars.

» **You mentioned that Petropars would be able to start SP11 development in the shortest possible time. So why wasn't the project awarded to Petropars before signing the deal with France's Total and China's CNPCI?**

The response to your question is very simple. SP11 is prone to production falloff due to its geographical location which allows both Iran and Qatar to recover gas. We had predicted this block to face pressure falloff within a year and a half (less than one year ago). Therefore, we had planned to install a compressor platform for these two blocks. Petropars has no experience of building compressors and we decided to benefit from Total's international experience and technical savvy for building and installing the compressor platform. That would have allowed us to develop a model for other South Pars phases in addition to using the compressors in this block. We wanted to

kill two birds with one stone. I reiterate that gas production from the jointly owned South Pars gas field is on the decline and we have to think about preserving output in other blocks. So far, recovery from the blocks has been under way traditionally, creating too much expectation. Currently, South Pars accounts for 80% of Iran's gas production. But we need to note that this 80% will not be permanent. If we have reached the output peak in South Pars, we will also see an annual decline in output. Therefore, we have to find ways to keep production stable. This initiative was shown by Petroleum Ministry in signing the SP11 deal.

Last but not least, the platforms currently installed in South Pars weigh 2,500 tonnes while compressor platforms weigh 20,000 tonnes, i.e. eight times heavier. Currently, the infrastructure needed for these platforms does not exist in ISOCO, SADRA, IOEC and SAFF yards. These companies have not yet built platforms of this size; therefore, we intended to use Total's technical knowhow in building this platform. In the agreement we had insisted on the domestic manufacturing of the compressor platform. The agreement had been drafted so that Total would do the job in Iran along with transferring technical knowhow to the country. Total had also presented its own plan for strengthening the infrastructure in IOEC and SADRA yards. Along with building a compressor platform for SP11, we intended to upgrade



Petropars was present in the SP11 development project from the very beginning and is aware of all processes. Petropars is the right choice for SP11 and is ready to start developing this phase as soon as possible.

the IOEC and SADRA installations and create conditions for the domestic manufacturing of compressors in other South Pars phases. But due to certain developments it did not materialize.

» **What has happened since 2017 to make you believe that Petropars can handle this project?**

Petropars is not supposed to build any compressor platform. The company will develop SP11 like other projects it has already handled, and will carry gas onshore. Pressure falloff and compressor platform issues will be handled later on.

» **What are your plans for compressor platform?**

We have a fundamental project under way now, which was presented by a French company before the sanctions were re-imposed. We expect this plan to make basic design in partnership with a domestic company or a foreign company in order to implement a model for all South Pars phases.

» **Did the French company do basic design in parallel with Total?**

Yes!

» **What has to be done then?**

A variety of options are envisaged. For instance, a compressor is installed exclusively on each platform. We have 38 wellhead platforms which would impose heavy costs. Another option which we (POGC) proposed to consultants and which has been endorsed was that the compressors be installed where pipes branch out and meet. We predict to have three offshore compressors. In other words, each hub will be linked with 10 to 12 platforms.

» **How much do you estimate this project to cost?**

We estimate at about \$20 billion.

» **Are domestic companies able to handle this project?**

The technology for building compressor platforms

does to exist in Iran, even not in the Middle East. Based on studies conducted prior to signature of the SP11 deal with Total, only three such platforms had been built across the world, one of which by Total. That is why we chose Total for the project.

» **What did Total do for the SP11 project since the deal was signed in 2017 until it pulled out in 2018?**

Fundamental studies and pressure booster studies were carried out. A tender bid was held for choosing contractor for the jackets, drilling and pipes. The successful bidder was chosen. Everything was ready to be assigned to contractors, but we were hit by sanctions. Total spent \$100 million totally.

» **Has pressure fall-off happened in South Pars? How much is that?**

It has started, but it stands low. The figure is expected to be significant in four to five years. Our annual pressure fall-off will equal one phase (28 mcm).

» **To what extent has the compressor platform avoided pressure fall-off?**

Let me provide you with an example. The wellhead pressure is conventionally 120 Bar for the transfer of 1bcf of gas onshore. If this 120 Bar is cut to 100 Bar, we can no longer carry 1 bcf of gas onshore. If this figure is cut to 90 Bar, we can carry 700 mcf onshore. As long as the wellhead pressure falls off, production will decline too. That is why we need a compressor platform. By installing these platforms, production fall will be contained. Now without such platforms we have to witness pressure fall off and decline in production.

» **Do we have any compressors to stop production fall-off?**

There are currently a number of compressors for light and sweet gas. But there is not compressor for offshore gas which has such problems as sourness and humidity. If companies like [power utility] MAPNA and Oil Turbocompressor (OTC) can make a compressor to meet our needs, that would be of great help. Of course, space limits

constitute another problem in offshore activity. Therefore, both the volume and weight need to be taken into consideration in building compressors to be installable in the envisaged platform.

» **Is POGC able to preserve the production?**

Yes, it is. Some activities like acid job of South Pars wells has started. We finished acid job for 10 to 11 wells and started production from SDP5 and perforated the K1 layer. Therefore, the pressure fall-off is delayed for two years. We are making efforts to avoid a pressure fall-off, as long as we have not mastered the technology for compressor platform.

» **Will there any gas supply problem in the future as the annual pressure fall-off at South Pars continue?**

The point is that South Pars is not the only gas field. There are also North Pars, Golshan, Ferdowsi, Kish and other gas fields. The Ministry of Petroleum will not neglect its obligations. The South Pars development was our priority because of its shared status. Naturally after finishing with the South Pars development, we will follow up on the development of other gas fields.

» **How much is the value of products of each South Pars phase?**

With gas price at 10 cents per cubic meter and condensate price at \$50 a barrel, it will add up to \$5 million a day. In other words, the value of production from 26 South Pars phases currently operational, stands at \$130 million.

» **What happened to talks with the Indians for the development of Farzad B gas field?**

We've had correspondence with them, but they are yet to announce their final view. In parallel with correspondence with the Indians, talks have been under way with Petropars.

» **Do you mean that the Indians are no longer in this project?**

Doors are open and the Indians can think about it.

» **What about the South Pars oil layer development?**

For the development of the oil layer, a consortium of domestic and foreign companies referred to us. Negotiations with them are under way seriously, and you will soon learn about the happy outcome.

» **At what stage are talks for the development of Balal field?**

The contract for the development of this field is ready to be signed. As soon as NIOC expresses its readiness, the contract will be signed. This contract for this field is expected to be signed by domestic companies.

» **What is Qatar's recovery rate from this joint field now?**

It is recovering about 600 mcm/d, while Iran's recovery rate is about 630 mcm/d.

» **How has South Pars empowered Iranian contractors?**

The fact is that South Pars has been instrumental in upgrading domestic industry, project management mechanism, development of contracting system and developing engineering service companies and this role is still continuing. It is a great honor for us to see Iranian contractors show off in South Pars, the contractors who were trained in South Pars and matured. These companies are like assets for the country. God willing, their activities will expand day by day to implement bigger projects inside and outside the country.

» **How do you compare South Pars in 2013 and now?**

Gas recovery from South Pars has reached 630 mcm/d now, while it was 285 mcm/d in 2013. In 2013, there were 11 platforms in the phase of production, but now there are 32 platforms. 20 refinery trains were operational in 2013, now there are 50 of them, i.e. 30 trains have been added in six years. Comparative data in the offshore pipe-laying and well drilling is eye-catching.



Gas recovery from South Pars has reached 630 mcm/d now, while it was 285 mcm/d in 2013. In 2013, there were 11 platforms in the phase of production, but now there are 32 platforms. 20 refinery trains were operational in 2013, now there are 50 of them, i.e. 30 trains have been added in six years.



The point is that South Pars is not the only gas field. There are also North Pars, Golshan, Ferdowsi, Kish and other gas fields. The Ministry of Petroleum will not neglect its obligations

Gasoline Traded at IRENEX

The investment made by Iran's Petroleum Ministry during the past seven years in upgrading refineries has lifted Iran's gasoline production to 110 ml/d, putting an end to Iran's dependence on gasoline imports. The quantitative and qualitative increase in Iranian oil products has attracted foreign buyers to bid for the gasoline sold on the floor of the Iran Energy Exchange (IRENEX). Therefore, some of products sold on IRENEX floor have been destined to regional states. Iran's private sector hopes to be able to export more gasoline in future trading. The gasoline trading on the international ring of IRENEX has won a prosperous market and launched a trend for the successful export of gasoline to regional markets.

Selling gasoline at about 43 cents per liter in August led to the official export of gasoline for the first time in Iran. Due to the low price of gasoline in Iran, this product was being smuggled to neighboring countries. There have been conflicting figures about the smuggling of gasoline from Iran. The Petroleum Ministry believes that in case gasoline is sold at its realistic price, smuggling will be also blocked. Gasoline and other sources of fuel in Iran have always been traded at subsidized prices. That is while in most neighboring states, they are sold at international and even higher prices. The difference in the price of fuel in Iran and other countries has made smuggling a lucrative job in Iran. The available statistical data on smuggling in the past couple of years bears proof to such fact. This invalid trading is taking shape at a time heavy fluctuations in foreign exchange rate bears proof to this fact. The profitability of fuel smuggling is undoubtedly a consequence of the depreciation of the dollar in the market, and fuel price stability in the country. Each liter of octane-91 regular

gasoline is sold at 8 cents a liter in free market, while octane-95 premium gasoline is traded 10 cents per liter. While octane-95 premium gasoline sells at 43 cents Persian Gulf FOB, neighboring countries are selling gasoline at prices higher than FOB rates due to taxation and transportation costs.

Supply and Demand Management

Over recent months, fuel smuggling in Iran has been assessed at 10 to 30%, but experts say smuggling methods have become more limited owing to new supply and demand management. Fuel smuggling is considered as lucrative, but it is high-risk. The discovery of a significant number of pipelines used for fuel smuggling in southern Iran or the seizure of oil tankers carrying smuggled fuel near the Strait of Hormuz in recent months, show widespread willingness for this business.

Now with the trading of gasoline in IRENEX, the desirable capacities of such business have been legalized and transparent. The desirability of purchase would push more customers



to get gasoline on IRENEX, the export of this product will increase. However, many believe that modification of gasoline prices by the government and parliament would be a more important step in countering gasoline smuggling. A review of IRENEX trade shows that the first batch of octane-91 gasoline, weighing 9,000 tonnes, was offered at the asking price of \$581 per ton or 34 cents per liter. Finally, 3,000 tonnes was sold. After this successful trading, two other batches with octane 95 and weighing 3,000 tonnes and 5,000 tonnes were sold at \$630 per tonne or 47 cents per liter. The head of Energy Committee of Iran Chamber of Commerce has said that of 15 neighboring countries, nine are buyers of Iran's gasoline amid tough sanctions on the country. Once sanctions have been lifted, all these 15 countries would become buyer of Iran's gasoline.

Gasoline Output Doubled in 5 Years

Owing to big investment in Iran's oil refining industry, the mass production of Euro-4 and Euro-5 gasoline and the lucrative

sales of gasoline to international customers has encouraged investors of other sectors to brace for activity in this industry. Another advantage of this approach is the transparency of prices. That is why international media said the trading of 3,000 tonnes of gasoline on IRENEX and exports to Afghanistan had made Iran a gasoline exporter. The fact is that Iran's neighboring countries have long been buying gasoline through unofficial channels. "Iran's petroleum minister Bijan Zangeneh, addressing the inaugural, said the country was producing 76 ml/d of Euro-4 and Euro-5 gasoline. He had said that Iran's doubling of gasoline production over five years following the commissioning of phases 1 to 3 of the Bandar Abbas condensate refinery constituted a historic jump. Zangeneh said Iranian oil refineries could process 1.7 mb/d of oil, while the commissioning of the third phase of the Bandar Abbas condensate refinery had brought this capacity to 2.1 ml/d. The minister said: "In 2012, the country's gasoline production capacity stood at 52 ml/d, while in February 2019 the figure

reached 101 ml/d, and it is set to surpass 105 ml/d by next March." "Unlike the previous decade when Iran's gasoline imports would be sanctioned, we are no longer importing gasoline. We are even exporter of gasoline and the Americans could not express a single word," added Zangeneh.

Oil Refining Capacity Hits 2.4mb/d

Ali-Reza Sadeq-Abadi, CEO of National Iranian Oil Refining and Distribution Company (NIORDC), recently said that Iran's crude oil and gas condensate refining capacity had reached 2.15 ml/d. He added that the figure was increasing and would reach 2.4 ml/d by March 2020.

He said that according to plans, Iran was processing 850,000 b/d of crude oil and gas condensate and converting it to high value added oil products. The important point is that supply of this amount of crude and gas condensate on global markets could have been blocked by the US's unilateral sanctions. Such upgrade in Iran's refining industry has led to bigger welcome for gasoline sales on IRENEX. Therefore,

Iran is being recognized as a gasoline exporter.

Gasoline Sanctions Thwarted

The end users of gasoline are retailers. It indicates that US sanctions could not significantly affect the market. The difference between such trading and crude oil sales by one or two refineries is that the refineries are directly affected by sanctions, but retailers are spared any harm from sanctions. Moreover, when gasoline has been produced, the origin of crude oil may not be easily traced. But at refineries, it would be easily guessed where the feedstock has come from. Thus, buyers of gasoline and other fuels are faced with much fewer risks than buyers of Iran's oil, and that constitutes a big advantage for the trading of fuel in IRENEX. Some economists believe that by selling gasoline at IRENEX it would be possible to fully use the export capacity of this fuel. With gasoline at 43 cents per liter, Iran would earn about \$6.5 million per day or \$2.37 billion per year. Evidence shows that Iran's neighbors like Turkey, Pakistan and Afghanistan would prefer to purchase gasoline and refined petroleum products from Iran on a barter basis.

Sustainable Production to Counter Sanctions

Iran's gasoline could be exported to eight countries in the region because they lack hydrocarbon resources in which Iran is rich. Currently, as required by the Economic Council, gasoline trading at IRENEX would be possible only for legal persons presenting valid documents. Iran's gasoline production currently standing at 108 ml/d would make the country an exporter. As long as this trend continues, the existing sanctions could be easily defeated.

Zangeneh said: Unlike the previous decade when Iran's gasoline imports would be sanctioned, we are no longer importing gasoline. We are even exporter of gasoline and the Americans could not express a single word.

Zangeneh said: "In 2012, the country's gasoline production capacity stood at 52 ml/d, while in February 2019 the figure reached 101 ml/d, and it is set to surpass 105 ml/d by next March."

ICOFC Annual Output at 69bcm

The Iranian Central Oil Fields Company (ICOFC) has recorded a 69bcm gas output in a year, its CEO Ramin Hatami said. "Over the past one year, ICOFC has produced 68.985 bcm of gas," he said. Hatami said that ICOFC was responsible for production from 51 gas fields, 28 oil fields and one oil/gas field.

He added: "So far, 13 gas fields and 13 oil fields have been developed and are operational." Hatami said a number of projects were implemented last calendar year in order to guarantee sustainable energy supply. He named them as enhanced production from the Saadatabad oil field, starting up a

gas gathering center in Khangiran, power supply to the Danan field, selling flare gas in the Naftshahr and Sumar fields, signing three agreements for enhanced oil recovery and 4D seismic testing in the Tang-e Bijar, Delavaran, Babaghir and Bankoul oil fields. Hatami highlighted the strategic

role of ICOFC in oil and gas supply in Iran, saying: "Onshore gas production by ICOFC subsidiaries including East Oil and Gas Production Company will lead to sustainable gas supply in six northern and eastern provinces. There are also 6 joint oil fields in western Iran and we will try

our best to make optimal use of them." Hatami said: "Alongside production as the main mission assigned to the company, we will have a special look at protecting the environment and public-interest activities within the framework of social responsibility."

NIOC, PEDCO Sign MOU

National Iranian Oil Company (NIOC) and Petroiran Development Company (PEDEC) have signed a memorandum of understanding for technical cooperation. The MOU themed development of business environment at the national and international levels, was signed by Abdollah Mousavi, CEO of NIDC, and Sepehr Sepehri, CEO of PEDCO. During the signing ceremony, Mousavi said NIDC was responsible for 70% of Iran's drilling industry. "NIDC is determined to use the remaining 30% capacity in the best possible manner according to a principled plan," he added. Mousavi said: "Signing MOUs and agreements with private companies will let NIDC use untapped capacities under conditions of sanctions, while holding a strategic view of the petroleum industry." "NIDC's current priority is to make plans for using the untapped 30% capacity of this company.

230 Manufacturers Cooperating with NIDC

The CEO of National Iranian Drilling Company (NIDC) has said that the company is cooperating with 230 Iranian manufacturers of petroleum industry equipment. Abdollah Mousavi highlighted NIDC's role in oil and gas production from hydrocarbon reservoirs, describing the firm as a national asset. "Working in the strategic drilling industry is technically sophisticated and the studious staff of this company have been working under tough geographical and climate conditions including hot and cold weather, in offshore and onshore fields to meet petroleum industry needs and be effective in national economy," he said. Mousavi said NIDC owned 72 offshore and onshore drilling rigs, which made the company a drilling hub in the region. He said NIDC was determined to realize plans drawn up by National Iranian Oil Company (NIOC) by benefiting from domestic capabilities and relying on the experience of Iranian experts, regardless of restrictions.

JCPOA Must Facilitate Iran Oil Sales

Iran's deputy foreign affairs minister Abbas Araqchi has said Iran expects the 2015 nuclear deal with six world powers to facilitate its oil exports. "It is up to Europe to meet Iran's demand for selling its oil. They have to provide us with formulas for that purpose, in which case we can continue to comply with the JCPOA," he said, using the acronym for Iran's nuclear deal. "We have told the Europeans that either they have to buy oil or they should provide us with credit if they can't, and buy our oil in advance," said Araqchi, who was one of senior nuclear negotiators during the 2015 deal. Araqchi also said that Iran was in talks with the European signatories to the nuclear agreement. "We have no talks with the Americans. No country will accept to talk under pressure," he said. Araqchi said the US had to return to the JCPOA for the talks to go ahead within the framework of the P5+1 group of world powers.

5-PSEEZ Ready to Win Toehold in World Markets

Pirouz Mousavi, CEO of Pars Special Economic Energy Zone (PSEEZ), has said this zone was endowed with numerous potentialities to step into global markets and generate hard currency for Iran under conditions of sanctions. He said that gas recovery from the giant offshore South Pars gas field had reached 660 mcm/d, supplying 70% of Iran's gas needs. Mousavi said: "The existence of giant gas and petrochemical industries, as well as key export ports has transformed this zone into the brilliant gem of Islamic Iran's economy. "In the near future, our focus will be further on investment in downstream petrochemical industry with one main objective being generation of value-added and preventing sales of raw materials," he said.

Zangeneh: We Forcefully Protect Oil Data

Iran's Minister of Petroleum Bijan Zangeneh has said security and intelligence organs are tasked with countering spies avoiding infiltration and protect the staff. He said: "I will forcefully protect oil data." Zangeneh was reacting to allegations of infiltration of suspected spies into the Ministry of Petroleum. "The responsibility of dealing with spies, blocking infiltrators, and safeguarding staff fully rests with security and intelligence organs

and executive bodies have no counterespionage task. If there is any negligence anywhere, they (intelligence organs) should be held accountable," he said. Zangeneh said: "I have mentioned time and again that the petroleum industry is on the frontline of attacks and it must be safeguarded because the US is trying its best to damage the Iranian petroleum industry and such possibilities exist." The minister said few people had access to oil data, adding:



"The petroleum industry and military forces are currently on the frontline of this war on the economic and operational sector." Asked how long it would take Iran to maximize its oil

production in case sanctions are lifted, Zangeneh said: "It will not even last three days." Zangeneh also said that Iran "will continue" its oil exports despite growing trend of oil and gas production in the US. The minister also said that Iran's petrochemical sector would witness its second big jump by 2021. "The petrochemical industry is mature because it supplies downstream products and has a chain. The petrochemical sector has seen a big jump in recent years," he added. Zangeneh said Iran's petrochemical output had nearly doubled from 2013 and would cross 100 million tonnes. "We are making arrangements for a third jump in the petrochemical sector," he added. The minister said that Iran Plast, scheduled in September, would put on exhibit Iran's

petrochemical achievements. He said: "Iran's downstream petrochemical industry is buying \$6 billion of feedstock a year. There is no other industry to supply such amount of feedstock to its downstream sector. This feedstock is converted into final products." Zangeneh said the petrochemical downstream capacity is much higher than thought, adding there must be a market for sales. "This market is partly for exports and partly for domestic purposes. Since the domestic market needs economic growth, generation of wealth must trigger higher demand," he added.

North Yaran Output Rises

The official in charge of North Yaran field development in Petroleum Engineering and Development Company (PEDEC) has announced the installation of an electrical submersible pump (ESP) in Well No. 4 of this jointly owned field.

Mohammad-Ali Ajdari said: "By installing and operating this pump, 1,000 b/d was added to this field's output." He said that following the completion of wellhead installations, the downhole pump installed in Well No. 4 became fully operational.

Ajdari said that the pump had been installed at the depth of 2,300 meters in the liner hanger, adding that the pump had been placed in stable conditions. He said the outer diameter of this pump is 4 inches and the pump itself is about 17 meters long. He added that the pump would serve as a suitable criterion for enhanced and improved oil recovery methods in the Sarvak reservoir of West Karoun fields.

Touraj Dehqani, CEO of PEDEC, had already given a positive assessment of the performance of the pump.

The North Yaran oil field started production at the rate of 30,000 b/d in November 2016, but it experienced a drop after some time. It was when ESP pumps were considered to be installed there to lift its output.

The first ESP was installed in 2018, but it did not function properly. The second ESP seems to be working as planned.

Waste Management System at Petchem Plants

The HSE director of National Petrochemical Company (NPC) has said waste management system has been installed in all petrochemical companies. "This system has been installed in a bid to move towards reducing waste, boosting recovery and managing wastes," Davoud Emadi said. Noting that environmental protection was a key factor in the petrochemical industry, he said: "Fortunately, petrochemical plants and projects have taken significant measures over recent years." He said the petrochemical industry's move towards green and low-carbon industry was a key strategy in all its activities. He added: "Implementing greenhouse gas emission reduction projects is under way in petrochemical companies. The Kermanshah, Razi, Maroun and Shiraz petrochemical plants have had significant achievements in this regard." Emadi said the Hemmat petrochemical project was under way in Assaluyeh in order to gather greenhouse gases and convert them into high-value products. He said a waste management system had been installed in all petrochemical companies, adding that the system was aimed at moving towards lower waste production, higher recovery and principled waste management. Emadi said Bandar Imam Petrochemical Plant had

1.4mn Barrels Saved at Karoun Co.

Using mobile oil treater (MOT) over recent years has saved something like 1.4 million barrels of crude oil in the areas run by Karoun Oil and Gas Production Company (KOGPC), the company's chief said. Gholam-Reza Mofidi, CEO of KOGPC, said it was a measure undertaken by this company for maximum efficient recovery, honoring social responsibility and safeguarding the environment. He said that new flares made in Iran were helpful in the optimal consumption of associated petroleum gas. He added that 90% of gas fed into flares was gathered while the remaining 10% was to be supplied to petrochemical plants. For that purpose, he said, about \$1 billion would be spent on gathering associated gas within three years. Mofidi also touched on the development of 28 reservoirs owned by National Iranian South Oil Company (NISOC), saying: "Four packages from NISOC would become operational at KOGPC and 4% of credit allocated to these projects would be spent on social responsibility projects." Referring to other activities of this company in the social responsibility sector, he referred to the allocation of IRR 60 billion for urban water supply projects, construction of 21 schools and mosques. He said that KOGPC had spent IRR 1,240 billion on purchasing Iranian-made commodities, 92% of which had been spent in Khuzestan Province.

Zarif: We Want to Sell Oil and Be Paid

Iran's foreign affairs minister, Mohammad Javad Zarif, has reaffirmed the Islamic Republic's position on selling oil and getting its money. Zarif told Tages-Anzeiger newspaper in an interview: "Europe supports the JCPOA only in words, but we want to be able to sell our oil and receive money in return." The Joint Comprehensive Plan of Action (JCPOA) is the official term referring to the 2015 nuclear deal between Tehran and six world powers. He said that Iran would overturn its recent instances of non-compliance with the JCPOA only in the case Europeans respect their obligations. Asked about his talks with French President Emmanuel Macron, Zarif said the JCPOA required Iran to convince the world about the peaceful nature of its nuclear program while obligating the international community, particularly the signatories of the deal, to guarantee normalization of Iran's economic ties with the entire world. Zarif said Iran had remained compliant with the JCPOA terms even after the US unilaterally withdrew from the deal last year. The Iranian minister said that some mechanisms in the JCPOA made clear that if one party does not honor its obligations what the opposite party can do. "We have used these mechanisms. However, as soon as the Europeans begin honoring their obligations, we will overturn the steps we have taken," he said.

Rouhani: We Export Gasoline and Gasoil

Iranian President Hassan Rouhani has said the country has become an exporter of gasoline and gasoil. "Last year we could not export gasoil, but today we are exporting gasoil and gasoline. We are exporting gas to various countries," he said. Citing economic, cultural and social indicators, Rouhani said that the situation in Iran had improved this year from last year. "People are feeling calmer and economic stability has grown. Inflation data,

increased non-oil exports, and stock market growth prove that our conditions have improved this year compared with last year," he added.

Rouhani said despite tough sanctions imposed on Iran following the US's withdrawal from the 2015 nuclear deal, 11 dams, 30 wastewater treatment stations and 6 water treatment stations had become operational in Iran, while several thousand megawatts had been added



to Iran's power generation. "Today, oil, gas and petroleum product exports to neighboring countries have hit all-time highs," he said. Rouhani also said international waterways had to remain safe for everyone. "The Americans say they would guarantee the Strait of Hormuz security in case they want to pass oil through. But we say international waterways should remain safe for all," he said. He added: "Iran guarantees security in the region, the Strait of Hormuz and the Persian Gulf. In case you revise your attitude and stop your aggressive

approach, the region is ready to guarantee security." Rouhani said the US government had chosen a wrong approach vis-à-vis Iran, which would harm itself, European and Asian nations as well as US allies. "Assume that we export 1,000 barrels of oil less than before. How will it benefit you? You will only become more hated among regional and Muslim nations. You will block the way towards future. You'll gain nothing," he said. Rouhani said the US withdrawal from JCPOA in 2018 was in violation of international law and amounted to "economic terrorism".

Iran Gasoline Desirable for Neighbors

Iran's Petroleum Ministry in the administration of President Hassan Rouhani has invested largely in projects to enhance refined petroleum products output. Thanks to such investment, Iran has seen its oil refining capacity grow. The country became self-sufficient in gasoline production last December.

Farzin Savadkoohi

Iran's average gasoline consumption currently stands at 85 ml/d to 90 ml/d. Nasser Ashouri, secretary of the Union of Iranian Oil Refining Industrialists, said since last December Iran has stopped importing gasoline. He added that even Iran's neighbors had welcomed purchasing

gasoline from Iran due to the high quality of the product.

The high consumption of gasoline and petroleum products in recent years had led Iran to heavily depend on gasoline imports. In the previous round of US sanctions, in addition to oil and gas condensate, gasoline imports by Iran was also subject to sanctions. Iran's current gasoline production capacity stands at 110 ml/d, 90 ml/d of which has a sulfur content of less than 10 ppm. As Iran ceased to import gasoline in the last calendar year, the Trump administration has not sanctioned this sector in its new round of sanctions. Ali-Reza Sadeq-Abadi, CEO of National Iranian Oil Refining and Distribution Company (NIORDC), has given a positive assessment of Iran's strategic gasoline and gasoil stocks.

Ashouri told "Iran Petroleum": "Currently the private sector in the Iranian refining industry has made big achievements

with regard to the quantitative and qualitative supply of primary and secondary refined petroleum products at refineries." The Union was set up in 2013 by the Tehran, Tabriz, Isfahan, Bandar Abbas, Shiraz and Lavan private oil refineries. New members include Kermanshah oil refinery and Bandar Abbas Gas Condensate refinery. Union members supply about 80% of domestically-produced oil products, including liquefied petroleum gas, gasoline, kerosene, gasoil, fuel oil, bitumen, sulfur, aviation fuel, jet fuel and other products.

Iran Gasoline Supply to Neighbors

Ashouri highlighted the Iranian refineries' positive performance, saying: "The refined petroleum products supplied on the market have seen a big jump in terms of quantity and quality." He added: "By improving quality of gasoline produced at Iranian refineries it would be possible to export this product, and Iran's neighbors are currently welcoming gasoline purchase from Iran." Touching on Iran's oil refining potential, Ashouri said: "Iran's refining industry has in recent years moved to improve the quality of its

products and upgraded its oil refining capacity. All this had taken place when Iran was under sanctions and no foreign advisor had been hired." He said that Iranian engineers and technicians were able to run the most sophisticated equipment and machinery for the refining industry, adding that Iran had gained a high status among regional countries. Ashouri referred to the commissioning of the Bandar Abbas condensate refinery and other refining complexes, saying: "By launching three phases of the Persian Gulf Star refinery and the increasing production at this refinery, our country's capacity exceeds our domestic needs. That is a strong point for us to export Iran's refined products." The Bandar Abbas condensate refinery has raised its treatment capacity from 360,000 b/d to 400,000 b/d. NIORDC officials say the figure would reach 450,000 b/d in coming months. Sadeq-Abadi recently said it would come up to 480,000 b/d by next March. The Persian Gulf star refinery supplies products equal to the output of an oil refinery processing 1.3 mb/d of crude oil. Therefore, Iran is supplying the highest levels of high-quality products among regional states.

Gasoline Exports

Ashouri said production of Euro-4 and Euro-5 fuel was on the rise, adding: "Currently,

Iran can rival other countries in terms of gasoline production, for instance, it can be argued that we may no longer need to import premium gasoline."

Noting that up to 20% of Iran's average annual gasoline production may be exported, he said Iran has learnt in recent years how to circumvent sanctions and what tools it would wield to neutralize the sanctions.

Ashouri said US President Donald Trump is well aware that Iran could be no longer slapped with gasoline embargo.

Private Sector Keen to Raise Production of Refined Products

Ashouri said Iran's refineries need to regularly assess their output in order to find a room in target markets for their surplus output. He added: "This approach tops the agenda of the private sector now. By modifying the production of every product, we can control the market."

Ashouri said US sanctions on Iran would not be forever, adding: "Given the capacity of domestic industry and private sector in Iran, there is capacity for exporting refined petroleum products. Once sanctions are removed, Iran would be able to increase exports rate." He said: "Of course I have to reiterate that we will not sit idly for US sanctions decisions and we will go ahead with our own plans. US sanctions are pursuing a different approach and they have realized that they could not create any obstacle and problem for us in the refining industry."

Balal Up for Investment



Balal oil field is one of Iranian hydrocarbon fields ready to attract foreign investment. Development of the field started in 1999.

The field became operational in 2002 and started producing 20,000 b/d of oil.

The oil produced at Balal is of high quality and is even better than North Sea Brent.

Over recent decades, Balal field has had a significant share in Iran's oil production. But with the discovery of gas layers in this field, which are geologically connected to the giant South Pars gas field, development of its gas layer has been considered a priority of Iran's petroleum industry in the offshore sector.

Due to its gas layers, Balal oil field is able to recover gas in addition to oil. Balal is located in Hormuzgan Province and more specifically in the Lavan area.

Balal is also located near Qatar's waters. Its two known reservoirs are Arab and Khatya.

Recently, by establishing a system for optimal injection of water into the Balal oil field, about 12,000 b/d of water is fed into this field for maximum efficient recovery.

Development of Khatya oil layer in Balal field is one of the main projects by the Iranian Offshore Oil Company (IOOC). Balal is currently producing oil. France's Total developed this field in 2001 and 2002, but it failed to extract oil from the Khatya layer.

The oil extracted from this field is delivered to Lavan Island through a 100-km-long pipeline. After being blended with oil from the Salman oil field and processing, it will be ready for export.

Meanwhile, the contract for the development of the Balal field in 1999 had been signed under

a buyback deal between National Iranian Oil Company (NIOC) and Elf.

The gas layers of Balal field are able to produce 500 mcf/d of gas. Initial estimates are indicative of 6 tcf of gas in place in this field.

The main reservoirs of the Balal field, which is located east of the South Pars gas field, are Kangan and Dalan.

IOOC officials say the H2S content of the gas produced from the field is lower than 100 ppm.

Iran hopes to revive its mature oil and gas fields and renew its oil infrastructure using Western expertise in order to regain its status as the world's fourth largest oil producer, just behind Saudi Arabia, the United States and Russia.

NIOC's objective is to lift output by 50% over five years and reach an output of 5 mb/d of oil and 1.4 bcm/d of gas.

Before the US reinstated its sanctions on Iran, South Korean companies have singled out Balal field as their favorite for development.

French, Indian, Dutch, Norwegian, Australian, Singaporean and Chinese companies are among a host of foreign firms bidding for the development of Iranian oil and gas fields, particularly offshore ones which need cutting edge technologies.

These talks are going on at a slow pace due to renewed US sanctions. However, foreign companies have expressed hope to cooperate with IOOC in investment and development, as well as technical services.

The technical divisions of IOOC have assessed bottlenecks to investment and prepared technical and investment packages.

Soroush, NIOC Top Investment Priority

Soroush oil field is known to be the largest offshore oil field in Iran. It started production in 2001 after development by Shell. Now it needs enhanced recovery technology as its production has fallen. With a 10% increase in its recovery rate, the field would see its recoverable oil output increase by about 1 billion barrels, which would be valued at \$60 billion at current market prices.

National Iranian Oil Company (NIOC) named Soroush with 14 billion barrels of oil in place as one of choices for investment under the terms of the newly developed "Iran Petroleum Contract" (IPC).

Iran hopes to use major oil companies' investment and technology across the globe in order to lift output from its mature fields which are mainly aged above 50.

Soroush field was discovered in 1962. After a first well was drilled in this field, it started production at the rate of 14,000 b/d from its Kajdomi layer. The field was severely damaged during the Iraqi war on Iran (1980-1988) and its production was subsequently halted.

Renovation and development of the field started in early 2000. The field started production anew in early 2002. However, like most Iranian oil fields, Soroush's output went on a downward trend in 2005.

Although known as the largest oil field run by the Iranian Offshore Oil Company (IOOC), Soroush is among the oldest. Developing this ageing field would require modern technologies.

The Soroush field's crude oil is a category of crude oils produced in Iran and the world. The oil from Soroush along with the oil extracted from the adjacent Norouz field is transferred to the Persian Gulf floating terminal before being sold to customers. One of the main properties of the Soroush platform is that it simultaneously produces and exports its oil and gas. It is also among

few platforms where associated petroleum gas non-flaring is under way. Before the 1979 Islamic Revolution, the Americans and the Italians intended to develop Soroush field for oil recovery.

During a conference held in Tehran a couple of years ago to introduce Iranian fields which need foreign investment and technology, Soroush had been introduced as the largest IOOC-run oil field.

IOOC recently signed an MOU with Sahand University of Technology for enhanced recovery from the Soroush field. The Netherlands' Panterra was also hired as foreign partner to the project.

NIOC officials say this field would have a 5% recovery rate under normal conditions, which is lower than in other fields. Therefore, by carrying out enhanced recovery projects using the state-of-the-art technologies, the Soroush recovery rate will increase by 10-15%, which would mean between 1 and 1.5 billion barrels of extra oil.

Under this 10-year plan, universities will be committed to cooperate with foreign research institutes and consultants on research work with a view to enhanced recovery.

Miscible and immiscible gas injection, as well as chemical injection are envisaged to enhance recovery from Soroush field.

Officials say a roadmap is being drawn up for enhanced recovery from Soroush.

Iran hopes to use the experience of other fields with heavy crude oil and high viscosity in Soroush field.



KEPCO Invests in 3 Key Projects

■ Ramin Khodafarin, director of research and technology at Khazar Exploration and Production Company (KEPCO), has announced the signature of the company's first research agreement within the framework of Iran's 6th Five-year Economic Development Plan.

Khodafarin said: "Within the framework of the 6th Five-year Plan, new projects were envisaged in offshore engineering and exploration. These projects have been instructed for implementation after winning approval at the Research Council and the Board of Directors of National Iranian Oil Company." Khodafarin said NIOC-approved research projects included modeling of sedimentary pools, demarcation of deltas and expanding the reservoir rock in the southern part of the Caspian Sea based on existing offshore well data, and identifying geological hazards and possible hydrocarbon zones through geophysical methods and geological and reservoir data in the Caspian Sea.

Project Developer Selection

Khodafarin touched on the latest status of the projects, saying: "These three projects are currently in the final stage of selecting developer."

Outlining the projects, he said: "The objectives envisaged for the sedimentary pool modeling in the southern part of the Caspian Sea involves determining the category of sediments by using new methods, determining the properties of reservoir rock, determining

the 3D distribution and expansion of sandstones and reservoir potential within the framework of underground maps, presenting a construction model for the sedimentary pool, and formulating the sedimentary model of the sedimentary pool (drafting paleogeographic maps). The period envisaged for accomplishing the projects is about 18 months." Regarding the mechanism of formation of mud domes, he said mud domes and other petroleum seeps will undergo geological studies in Golestan Province. Furthermore, a comprehensive databank of mud domes and petroleum seeps will be drawn up while active mud domes in the region will be identified. In the meantime, samples will be taken from mud domes based on the time intervals of their activity. As far as possible, the mud domes of neighboring countries will be also identified and the causes of formation of mud domes and their impacts on the region's tectonic activity will be studied. This project is envisaged to be implemented in a 24-month period.

Projects under 5-Year Plan

The main idea behind the implementation of geological hazard identification project is to identify drilling and production hazards

in the Caspian Sea's deep waters. These hazards include identification and studying the mechanism of 3D formation and extraction of high-pressure sand under seabed in the Caspian Sea, studying the possibility of formation of hydrated gas in the Caspian Sea, 3D identification and extraction of hydrated gas zones and other drilling hazards including mud domes, fault lines and studying their mechanism of formation and date of formation, as well as their mutual impacts with geological properties of the southern Caspian Sea. This project is envisioned for about 18 months.

Khodafarin said NIOC Directorate of Research had defined the projects under the five-year development plan by reconsidering its routine approach.

He added that the process of endorsement and notification of the

projects lasted about nine months. He said, of a total of 10 projects sent to the Research Council of NIOC, three were endorsed for implementation.

He said the three projects would become operational in the first step with a budget of about IRR 70 billion.

Khodafarin said: "Given the negotiations held with the NIOC Directorate of Research, it was decided that the two projects of modeling the Caspian Sea sedimentary pool and identifying geological hazards start this calendar year and the remaining projects would start in the following calendar year."

Referring to the results obtained from KEPCO research projects in the previous years, he expressed hope that the results of projects would become effectively positive under the 6th Five-year Plan.

Khodafarin said until the late 2000s KEPCO research projects were mainly conducted by student.

He added that NIOC Directorate of Research and Technology had moved towards research projects in offshore engineering.

Research Infrastructure

Khodafarin said: "Our most important activity in the first



five-year period was to establish research infrastructure at KEPCO, particularly for studying deep waters. Years on, we can say now that we have been through the correct path and we are currently in an acceptable position in Caspian Sea research.”

He said that the only allocation for research projects comes from KEPCO’s general budget, adding: “Over recent years, significant measures have been taken in the research sector, which has had a good yield.”

Khodafarin said that over the Five-year development plan, about 12 projects were envisaged in the environment and engineering sectors. “Despite financial restrictions, we finalized nine projects in collaboration with seven universities and research institutes.”

He said deepwater operations were the expertise of KEPCO, adding: “NIOC has century-old experience in operations in southern oil-rich areas, but it is inexperienced in the Caspian Sea deep waters and there has been no serious background before the victory of the Islamic Revolution.”

“We referred to universities affiliated with the Ministry of Science, Research and Technology. The Sahand University

of Technology has made the largest contribution to KEPCO’s research and we have had very effective cooperation,” he said.

Khodafarin added: “Moreover, Sharif University of Technology and Isfahan University of Technology were with us. Furthermore, I should say that we have started

implementing several other studies.”

Latest Research Projects

Khodafarin went on to explain about several important studies in the Fifth Five-year economic development plan, saying: “The project for combating oil pollution in the Caspian Sea was one of the important projects handled by KEPCO Research Division and the Oceanography Research Center. The implementation of this project yielded results that facilitated the modeling of oil pollution spread and studying possible mechanisms of leaks and combating leaks.”

He said that the project also helped simulate oil slicks, adding that the project lasted three years “and we are currently in the stage of installing software in the KEPCO base in Behshahr.”

He said continued online simulation would depend on national determination, adding that other bodies like the “Department of the Environment” and “Ports and Maritime Organization” (PMO) should step in, so that the project would come to fruition.

Khodafarin said other studies conducted by KEPCO included studying tarball formation in the Caspian Sea coasts through fingerprinting crude oil in neighboring countries.

He said: “From 2009 to 2012, tarballs emerged in the northwestern coasts of the Caspian

Sea (something between 15 and 30 tonnes). It posed environmental risk whose roots had to be found out. We realized that there was no oil databank for the Caspian Sea. Therefore, we decided to establish a databank through chemical fingerprinting in cooperation with the Environment Division of Research Institute of Petroleum Industry (RIPI). By completing the databank, we would be able to originate any oil pollution. We applied both quantitative and qualitative methods to gather data on tarballs. This databank was set up for oil samples. By adding more samples we can analyze any pollution.”

Asked about the origin of oil pollution, he said further studies showed that the pollution was not related to the Sardar-e-Jangal oil field.

Deepwater Roadmap

Khodafarin also referred to the deep water roadmap research project, saying: “We started this project in cooperation with the Maritime Engineering Department of Sharif University of Technology. We have decided to set up a roadmap for deepwater operations. The Maritime Engineering Department has turned it into a maritime industry roadmap, part of which is related to deepwater roadmap.”

He also said that other important measures included designing and developing software for platform stability in cooperation with the Sahand University of Technology with a view to ending dependence on foreign nations and saving the country hard currency.



Iran, Regional Petchem Hub

Efforts are picking up speed for the initiation of negotiations to change circumstances under sanctions. But Iran's petrochemical sector is still in a good position despite all hardships. As a nascent industry, the petrochemical sector has been the driving force in production, employment and hard currency generation even under sanctions.

Iran, as the petrochemical hub of the region, can make a stronger presence in the international arena besides supplying domestic needs. Whereas Iran's petrochemical industry is making up the largest non-oil export figure in national economy, it is known as one of the drivers of national economy, economic diplomacy and national security guarantee. The petrochemical sector is among sectors that are not lagging behind schedule under the 2021 vision plan. Some projects are under construction, while more plants are set to become operational. The petrochemical industry may be viewed as a symbol of resilient economy. Having modified its errors in recent time, it has sought to reach its genuine status.

US Propaganda Campaign

Iran's petrochemical industry has not witnessed any significant changes ever since the United States pulled out of the 2015 Iran nuclear deal with six world powers and subsequently imposed tough sanctions on Iran. The petrochemical sector has managed to push ahead with its previous production and exports, and have its traditional markets.

In practice, Iran's petrochemical industry has shown that the US's sanctions on Iran's

petrochemical sector had nothing but propaganda. In reaction to the US sanctions on Iran's petrochemical industry, Bijan Zangeneh, petroleum minister, said: "Outwardly this issue is merely for propaganda to show that Iran is under pressure. It is clear that these sanctions have not impacted Iran's petrochemical industry." Behzad Mohammadi, CEO of National Petrochemical Company (NPC) said petrochemical exports were different from crude oil sales. He added that there are at least 350 variations of petrochemicals with hundreds of potential buyers across the globe and various methods of selling. He said in May that NPC had set up a working group to explore ways of countering sanctions and possible challenges. He also provided some data on the petrochemical industry and the planned inauguration projects, which all indicated the good status of this industry.

Petchem Market Immune to Sanctions

According to NPC plans, 55 petrochemical plants are currently active across the country with two hubs operating in the Special Economic Zone and the Pars Special Economic Energy Zone. They produce 55 million tonnes of products totally, including 300 grades of polymer products, 44 grades of chemical products and 350 grades of non-polymer and non-chemical products. There is capacity for selling 31

million tonnes of petrochemicals.

Based on the latest announcement by Mohammadi at the Iran Oil Show, Iran is gaining \$17.1 billion from selling petrochemical products. This amount of revenue is indicative of the dynamism of this industry which has created more than 108,000 direct jobs through its projects. Over recent years, dozens of petrochemical projects have become operational and based on a roadmap drawn up for the petrochemical industry, a total of 18 projects would come on-stream by March 2021. The three projects: Kaveh Methanol, Bushehr Methanol and Ilam Olefin would come online this year, while 15 others are set for next year. The startup of these 18 petrochemical projects by March 2021 would raise volume of marketed products to 51 million tonnes, up 70% from now.

6th Five-Year Plan Projects

Some of these projects are enshrined in the 6th Five-Year Economic Development Plan. They include Siraf Energy 15th Methanol, Kurdistan Petrochemical Plant (inaugurated in 2017), Fateh Kimia GTPP, the 16th ammonia and urea project in Phase 3 of Pardis (inaugurated in 2018), Kaveh 10th methanol, Marjan 7th methanol (inaugurated in 2018), Masjed Soleiman 9th ammonia and urea, Ibn Sina Petrochemical Plant's Maleic anhydride/butandiol/PBT, Golestan's 12th ammonia and urea, Cyrus acrylates, Bid-Boland 2, and Arg acrylonitrile. In the meantime, Estahban's ethylene vinyl acetate, Salman Farsi PDH, West Ethylene Pipeline, Shahid Rasouli Pentaerythritol, 2nd phase of Kermanshah ammonia and urea, Modaberan Shimi maleic anhydride, Dehdasht high-density polyethylene, centralized storage tanks in Phase 2 of Assaluyeh, and Kharg's 2nd methanol are about to become ready for operation.

A number of other projects are

on the agenda within the framework of the 6th Five-Year Plan. They include Parisan 3rd GTX, Sahand Hirsia Polymer PDH/PP, Energy Dana's GTPO, Fanavaran Petro Olefin GTPO, Rah Poyan Asr Khavar Mianeh GTPP, Rumak Energy Saramad acrylate chain, Hamoun Petrochemical PVC, NPC GTPP, Dena Boyer Ahmad Petrochemical Plant's GTPO, Hemmat petrochemical contaminating gas gathering, Arta Energy methanol and formaldehyde, Petro Saman Zagros GTX, Kangan downstream petrorefinery and olefin, Ardebil Petrochemical Plant's GTPP, Entekhab Investment Development Group's PDH/PP, Fajr Kerman's GTX, Fajr Kerman GTX, Kerman Petrochemical Plant GTPP, Razavi Oil and Gas Development PDH/PP, Farid Gostaresh International Investment LAB, Jam Petrochemical PDH/PP, Alvand Petrochemical Polypropylene, Azaran Industrial Structures PDH/PP, NGL 3100, Navid Saba Jam Oil and Gas Development, Sia Chemical Industry Expansion GTTP, Mahan Shimi Zagros GTPO, Chabahar 1st GTPO, Amir Abad GTX, Chabahar 2nd GTPO, Gilan GTPO, Chabahar 3rd GTPO, Khorasan Rejal GTPO, Chabahar ammonia/urea, Seraj Gostaran Rejal GTPO, Kaveh Methane Qeshm GTX, Tadbir Energy Eram GTP, Qeshm Oil, Gas and Petrochemical GTX, Petro Sanat Pishtaz ETBE, Qeshm International Petrochemical Industry GTPP, Naar Kangan GTL, Petro Mofid Development GTPP, Pardis Azarbaijan GTPP, and Parsian 2nd GTX. Most of these projects would come on-stream in coming years. The Petroleum Ministry has also other petrochemical projects under way within the framework of resilient economy. The Gachsaran and Damavand petrochemical plants, ethane recovery at SP12, Persian Gulf Bid-Boland refinery, Sabalan, Masjed Soleiman, Dena Kimia Pars Khavar Mianeh, Kaveh Methanol, Marjan Methanol, Bushehr, Phase 1 of Mahshahr plant, Ilam and Lordegan are among these important projects.

Iran's petrochemical industry has not witnessed any significant changes ever since the United States pulled out of the 2015 Iran nuclear deal with six world powers and subsequently imposed tough sanctions on Iran.

Based on the latest announcement by Mohammadi at the Iran Oil Show, Iran is gaining \$17.1 billion from selling petrochemical products.



US-China Trade War; Energy Miscalculations

Amid growing trade tensions between the United States and China, US President Donald Trump has threatened to impose 10% tariffs on \$300 billion of Chinese goods being imported as of September 2019. This trade war is not merely limited to exchange of commodities; rather it is engaging other sectors including energy. In other words, energy constitutes a major element in US-China trade war, and it will be definitely affected. That is while the Trump administration has embarked on a deeper study of the US-China trade war, indicating that Washington is faced with numerous challenges at least in the energy sector.

Shuaib Bahman

Trade tensions between the US and China, having intensified concerns about the decline in global economic growth rate and its negative impact on energy demand, has pushed oil prices down in international markets. On the other hand, these tensions have added to the ambiguities on the prospect of oil consumption and purchase.

In light of weak perspective for global economic growth, the International Energy Agency (IEA) has forecast demand for oil to grow 1 mb/d in 2019. For the following year, the IEA has forecast the growth in demand at 1.3 mb/d.

The IEA report also underscores lower demand for crude oil in India, Saudi Arabia, South Korea and a number of European nations, mainly under the impact of US-China trade war.

The trade tensions between Washington and Beijing have affected their energy ties, as well as international markets and oil demand. China is currently the largest importer of oil in the world and the third largest buyer of the

US oil. However, amid the US-China trade war, China's oil purchase from the US has declined. Most probably, Beijing will in the near future make serious decisions about a significant cut or halt to its oil purchase from Washington.

Even if crude oil is not subject to retaliatory tariffs, Chinese refineries would prefer not to buy US oil, and they will be unwilling to sign long-term

agreement with US oil producers. In the past one year, Chinese refineries have not bought much oil from the US, due to Beijing-Washington disagreements and ambiguities about import tariffs.

While the Trump administration is making efforts to boost its energy exports to global markets, China has placed LNG in the list of highly-tariffed commodities to open a new front in their trade war.

US Miscalculations

The imposition of US energy tariffs is likely to harm the Trump administration's policy with the aim of increasing its presence in the global energy market. Should the US fail to keep China as one of its customers, it will be faced with two options:

The first option will be to cut oil output: This policy is in conflict with the Trump administration's approach. President Trump has time and again thrown its weight behind higher oil production, offering even facilities in this regard.

The second option is to find new buyers for US oil: European nations closely allied to the US would come first. However,

US oil sales to these countries would mean a disturbance in the current order of global energy markets because even if some European nations decide to import their needed oil from the US, they will elicit the discontent of their traditional suppliers. That would harm the interests of many traditional producers of oil like Russia or Saudi Arabia and open a new front against the US.

Therefore, it would not be easy for the US to find replacements to China. The Trump administration must take into consideration the fact that any Chinese decision to stop buying US oil would affect the policy of becoming energy superpower and set up new lines against Washington in the energy sector. If China decides to replace its US oil imports, it will have to lean towards countries like Iran, which is not desirable to the Trump administration.

Before the US imposed its latest sanctions on Iran, China was the biggest buyer of Iran's crude oil. Although despite the US campaign to zero Iran's oil exports, China continues to buy oil from Iran, any energy tensions between Beijing and Washington would persuade the Chinese government to increase its oil sales from Iran. Another important point is that continued trade war between the US and China

would reduce the global trade growth rate and reduce oil prices more than ever. A decline in oil price could not be justified for the Trump administration that is planning to invest energy revenue in different sectors of the US economy. Meanwhile, any oil price fall will practically render shale oil recovery non-profitable. Consequently, a decline in oil

prices could by no means help the Trump administration realize its long-term economic objectives. Oil price decline will also harm investment in the US oil industry in the long-term.



Equinor Strengthens Alliance With YPF Offshore Argentina

Equinor and Argentina's YPF have agreed to jointly explore the CAN 100 offshore block in the North Argentinian basin. The preliminary agreement sets out terms and conditions for YPF's transfer of 50% of its share in the block. "We have a strong relationship with Equinor based on mutual trust built on the development of exploration and unconventional projects," said YPF CEO Daniel González. "This new agreement...allows us to learn from their undisputed experience in offshore projects worldwide." CAN 100, covering 15,000 sq km (5,791 sq mi), is the largest block in the North Argentinian basin. The first four-year exploratory period started in May, when YPF acquired a 100% interest.

CNOOC Set to Co-Fund Deepwater Guinea-Bissau Well

FAR has approved Svenska Petroleum Exploration GB's request for a farm-out to CNOOC offshore Guinea-Bissau. Svenska plans to transfer 55.55% of its share of the Sinapa and Esperanca petroleum licenses to CNOOC and retain operatorship with a 23.03% interest. FAR holds the remaining 21.42% in each of the concessions. Under the arrangement, the Chinese major will fund 55.55% of all expenditures incurred under the joint venture participation and joint operating agreements.

North Sea Recovery Lifts UK Employment

Employment in the UK offshore oil and gas sector is rising again, according to Oil & Gas UK's 2019 Workforce Report. The association expects companies across the sector to employ around 269,000 jobs this year, 10,000 more than in 2018. And due to increased production in the basin, and more efficient working practices, the overall figure of barrels-per-worker has risen

by 5% since last year, the report found. The current figure is also 57% percent higher than that of 2014. Among the reports other findings are that digitalization, internationalization and the transition to a net-zero emissions future will require significant re-skilling for existing personnel and the addition of up to 10,000 new roles in these areas - some of which do not at present exist.

Neptune Acquiring Interests Offshore Indonesia

Neptune Energy has agreed to acquire interests from Eni in the Kutei basin production sharing contracts (PSC) offshore Indonesia. Neptune will acquire a 20% working interest in the East Sepinggan PSC and a 30% working interest in the East Ganai PSC. The East Sepinggan PSC includes the fasttracked Merakes development and the recent Merakes East discovery. Merakes is being developed as a subsea tieback to the Eni-operated Jangkrik FPU in the Maura Bakau PSC, in which Neptune has a 33.3% working interest.

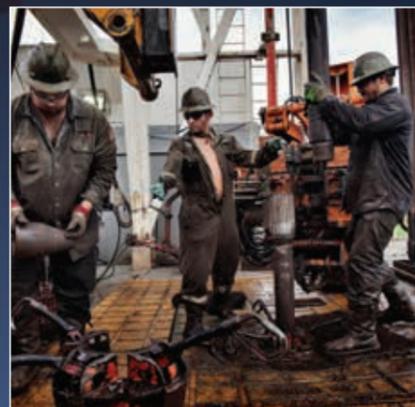
Australia Offers 64 Areas in Latest Bid Round

The Australian government has launched the 2019 offshore petroleum acreage release. Available for bid are 64 areas across the Bonaparte, Browse, Northern Carnarvon, Otway, and Gippsland basins. It is the largest release since 2000. More than 120,000 sq km (46,332 sq mi) of acreage is on offer for one round of work program bidding. Bidding closes on March 5, 2020. All areas in this year's acreage release are based on industry nominations and were subject to a comprehensive public consultation process.

VIEW



VIEW



VIEW



Rosneft Becomes Top Venezuelan Oil Trader

Russian state oil major Rosneft has become the main trader of Venezuelan crude, shipping oil to buyers in China and India and helping Caracas offset the loss of traditional dealers who are avoiding it for fear of breaching U.S. sanctions. Trading sources and Refinitiv Eikon data showed Rosneft became the biggest buyer of Venezuelan crude in July and the first half of August.

It took 40% of state oil company PDVSA's exports in July and 66% so far in August, according to the firm's export programs and the Refinitiv Eikon data, double the purchases before sanctions.

Three industry sources said Rosneft, which produces around five percent of the world's oil, is now taking care of shipping and marketing operations for the bulk of Venezuelan oil exports, ensuring that PDVSA can continue to supply buyers.

Rosneft used to resell volumes it bought from PDVSA to trading firms and was less involved in marketing.

Now it has started supplying



1

some PDVSA clients - Chinese and Indian refineries - while trading houses such as Swiss-based Trafigura and Vitol have walked away because they fear they could breach secondary U.S. sanctions, according to six trade sources. Oil accounts for more than 95 percent of Venezuela's export revenue and Washington has warned trading houses and

other buyers about possible sanctions if they prop up Caracas. The United States and some Western governments have recognized Venezuelan opposition leader Juan Guaido as the country's rightful head of state and are seeking to oust the current socialist President Nicolas Maduro.

NEWS



Micro Seismic Event' at Fracking Site Near Blackpool

British shale gas company Cuadrilla Resources said a tremor measuring 2.1 ML on the Richter scale was recorded at the company's shale gas exploration site. "We can confirm that a micro seismic event measuring 2.1 ML (local magnitude) on the Richter scale occurred at Preston New Road. This lasted for around 1 second and resulted in ground motion less than 1.5 mm/s. Hydraulic fracturing was not taking place at the time", a company spokeswoman said. British media had reported earlier that the tremor was "the largest (to be) detected" at UK's only active fracking site. The company said that the event was "well below anything" that can cause harm to individuals or their property.

3

NEWS



Brazil's Bolsonaro Wants to Privatize Petrobras

The economic team of Brazilian President Jair Bolsonaro wants to privatize state-controlled oil company Petroleo Brasileiro SA before the end of his term in 2022, Brazilian newspaper Valor Economico reported on its website, citing anonymous sources.

The report also cites a speech by Economy Minister Paulo Guedes at an event hosted by Valor. "There are big guys thinking they won't be privatized, but we will get there," Guedes is reported as saying.

Guedes also said the government plans to announce next year a new round of companies to be privatized, according to the newspaper.

4

Asian Refiner Profits Hammered

Asian refining margins have tumbled more than 50% since mid-July on anticipation of plummeting demand for high sulfur fuel oil (HSFO) ahead of a shift to cleaner marine fuels next year. "Refining margins have been weighed down by bearish HSFO cracks over the past two weeks, with rampant sell-off and de-stocking of HSFO ahead of IMO 2020," said Serena Huang, senior market analyst at oil analytics firm Vortexa. Margins for HSFO, an industrial fuel primarily used in ship engines and power generators, have collapsed this month as the global shipping industry prepares for new International Maritime Organization (IMO) rules that start from January 2020. The new regulations limit the sulfur content of fuels burned in ships to 0.5%, from 3.5% currently. The slump in the overall Singapore refining margins marks a sharp reversal from the near two-year highs that were scaled in mid-July amid tightening fuel supplies brought on by widespread seasonal



2

refinery maintenance. But now output of gasoline, diesel and other fuels is surging as the maintenance turnaround season wraps up and new refineries in China, India and Malaysia crank up, hurting the processing margins, analysts said. "Sluggish demand, alongside rampant refining capacity additions, have fuelled rampant exports

by (Chinese) refiners, and in turn dragged down prices and margins," said Peter Lee, senior oil & gas analyst at Fitch Solutions. On the demand side, a protracted trade war between the world's two largest economies, the United States and China, is denting global economic growth and the outlook for the consumption of transport fuels.

NEWS



Head of Pakistan LNG Replaced

Pakistan LNG (PLL) has replaced its top manager with immediate effect, appointing Shahid Yousaf as managing director and chief executive, the state-owned operator said without giving a reason for the change. Former Chief Executive Adnan Gilani, a U.S.-educated former Wall Street executive who had been the main public face of Pakistan's push into the liquefied natural gas sector, "will no longer be associated with PLL and we wish him the best," it said in an emailed statement. "Mr. Yousaf brings a vast and rich experience of LNG/Gas sector to lead and grow the operations of the company," it said. The group gave no explanation for the abrupt change in leadership but denied reports in the Pakistani press that the move was connected with an anti-corruption investigation.

5

NEWS



China July Crude Oil Imports From Malaysia near Record

China's crude oil imports from Malaysia stood near record levels in July, customs data showed, with traders and a tanker-tracking analyst citing oil either transshipped from Venezuela or blended with Venezuelan crude for the unusual growth. Crude imports from Malaysia rose to 1.35 million tonnes last month, more than double from a year earlier, data from China's General Administration of Customs showed.

That was just below the previous record set in May of 1.38 million tonnes; triple the average monthly volume in the first four months of 2019. Imports for the first seven months of 2019 totaled 5.64 million tonnes, versus 5.17 million tonnes a year earlier.

6

Colombia Pipeline Ready to Transport More Crude

Pipeline company Oleoducto de Colombia is ready to move increased crude output from the center of Colombia to the Caribbean if the use of fracking is approved in the Andean country, the company's chief executive said. Both the government and investors interested in possible projects that would use hydraulic fracturing, which breaks up rock formations with pressurized liquid, are waiting for an administrative tribunal to rule on whether the technique will be allowed. Its possible use has sparked vitriolic debate among lawmakers, activists, officials and regular citizens about whether it could cause pollution or other environmental harm. The government has said that fracking could nearly triple the country's reserves to some 1.95 million barrels, equivalent to 6.2 years. "The evacuation and transport systems of the pipeline are ready to receive an incremental production



via fracking," Oleoducto de Colombia's Natalia De la Calle said. The company, majority-owned by state-run oil company Ecopetrol, moves a third of the country's oil output. The 483 km (300 mile) long pipeline can transport up to 236,000 barrels per day (bpd) and runs through the

Magdalena Medio region, home to geological formations estimated to contain between 2 billion and 7 billion barrels of crude. "If we're talking about investments, the sector is ready to make those investments, it's willing," De la Calle said, without providing concrete figures.

NEWS

South Sudan Makes Minor Oil Discovery

South Sudan has made a small oil discovery in Northern Upper Nile State, its first project since independence in 2011 when exploration was interrupted by war and instability, the oil minister said. The new field in the Adar area of the state contains 5.3 million barrels of recoverable oil and will be linked to the nearby Paloch oilfields, which are operated

by Dar Petroleum Operating Company, the minister Awow Daniel Chuang

said.

"Production is likely to begin towards the end of the year," Chuang told a news conference. "As of now, we are very excited ... within some few weeks, exploration will be taken as a priority. We are going to move all over South Sudan."

The country gets almost all its revenue from oil and has boosted output, now at 180,000 barrels per day, as it struggles to rebuild its shattered economy after a five-year civil war.

In 2012 a dispute with Sudan over pipeline fees caused

South Sudan to close its oil industry for over a year. The shutdown crippled the economy, leaving soldiers and civil servants unpaid. Months later the country was plunged into civil war. Much of the landlocked East African nation's oil infrastructure was damaged in the conflict, during which about 400,000 people were killed and more than a third of the 12 million population uprooted. The government is keen to reach pre-war oil production levels of 350,000 to 400,000 bpd by mid-2020.

Alberta Smaller Oil Producers Eye Output Boost

Small and mid-sized Alberta oil producers are looking to increase drilling as early as this autumn after the Canadian province exempted a dozen of them from government-mandated oil production cuts, boosting the struggling industry. Alberta's previous New Democratic Party government imposed production limits in January to drain an oil glut that built up due to congested pipelines. The new United Conservative Party government extended curtailments through 2020, citing a delay to Enbridge Inc's Line 3 replacement that could swell inventories again unless the limits remained in place. It also doubled an exemption threshold in the curtailment policy to 20,000 bpd, eliminating constraints on 13 companies whose output falls below that level. Alberta's 16 biggest producers will be the only ones receiving curtailment orders starting in October. "We were diverting capital into share buybacks and into



Saskatchewan," Tamarack Valley Energy Ltd Chief Executive Brian Schmidt told Reuters in an interview. "Now we'll put capital back to work in Alberta." Tamarack will adjust 2020 capital spending plans because of the changes and could lift its Alberta production by another 2,000-3,000 bpd, Schmidt said.

The Calgary-based company currently produces 11,000 bpd in Alberta, just under half its total output. Other producers that benefit include Whitecap Resources Inc, Athabasca Oil Corp, Pengrowth Energy Corp, Baytex Energy Corp and Obsidian Energy Ltd, AltaCorp Capital Research said in a note.

NEWS

West Naphtha Shipments to Exceed Asia Demand

Shipments of naphtha from the West, including Europe and the Mediterranean, to Asia in September are forecast to exceed Asian demand amid maintenance at naphtha crackers and as petrochemical producers use alternative feedstock.

Asia is expected to receive some 1.3 million tonnes of naphtha from the West next month, four industry sources said.

That amount will exceed the demand from regional steam crackers. Naphtha is

the primary feedstock used by petrochemical manufacturers to make the chemical precursors for plastics and polyester fabrics.

"This is still too much supply for September ... Asia needs probably 1 million tonnes," said a Singapore-based industry source who tracks the eastbound cargoes. Naphtha supply has outpaced demand this year because of scheduled cracker maintenance, cracker outages in Japan and South Korea and the prolonged use of cheaper alternative feedstock liquefied petroleum gas.

That has pressured the profit margin, known as the crack spread, for naphtha versus Brent crude oil to an average of \$35.50 a tonne for this year, set for the lowest yearly average since Reuters data started in April 2008. NAF-SIN-CRK

This month, Taiwan's Formosa Petrochemical Corp, Asia's top naphtha importer, and Chandra Asri, which operates Indonesia's only steam cracker, are down for maintenance until late September, reducing regional naphtha demand by at least 300,000 tonnes next month.

Global Oil and Asian Product Market, August

■ Crude oil global prices in August 2019, was mainly driven by concerns about demand growth following an escalation in the US-China trade war (imposing a 10% tariff on \$300 billion worth of Chinese goods by US from 1 September 2019) and growing storm clouds over the world economy. Based on the American Petroleum Institute data, larger-than-expected US crude inventory draw (11.1 million barrels), and concerns that Tropical Storm Dorian might disrupt refined products supplies in the Caribbean region in late August impacted oil prices positively.

Elaheh Vahidi & Leila Sadr

China first imposed a 10% tariff on imports of US LNG in September 2018, in retaliation for tariffs the US imposed on imports of Chinese goods. In June 2019, in retaliation for increased US tariffs, China raised its tariff on imports of LNG from the US to 25%. While pressuring the markets, the latest round of tariff hikes announced by the US and China this month, is expected to include crude oil in the latest list of Chinese 10% retaliatory tariffs on US goods which would likely to see flows return to levels seen over the winter of 2018-2019, namely to zero. There is still strong backwardation in structure of Dubai market which shows persisting strength. In fact, tight supply pushed Dubai crude forward structure in to backwardation. The Brent/Dubai EFS spread moved back to around \$3 per barrel, while narrowed EFS in July compared to June

dampened the competitiveness of Dubai-linked crudes compared to Atlantic Basin grades.

According to the latest forecasts, at least two banks and the US' official oil demand cut their oil price expectations for the coming 18 months, citing the escalation of the trade row and growing pessimism over demand. The US Energy Information Administration (EIA) on Tuesday cut its Brent spot price forecast to \$64/b for the second half of 2019 and \$65/b for 2020, from \$67/b previously. It also trimmed its 2019 oil demand growth forecast by 70,000 b/d to 1 million b/d. In 2019, oil demand is anticipated to grow by 1.10 mb/d year-on-year (y-o-y), a downward revision of about 0.04 mb/d from the previous month's projection, mainly due to weaker-than-expected oil demand data from OECD Americas, Asia and the Middle East in 1H19. Total oil demand for the year is now anticipated to reach 99.92 mb/d. For 2020, world oil demand is expected to grow by

1.14 mb/d, in line with last month's projection, with total world consumption anticipated to average 101.05 mb/d. This forecast is subject to downside risks stemming from uncertainties with regard to global economic development. The OECD region is estimated to be in positive territory in 2020 as OECD Americas is projected to show growth, while OECD Europe and OECD Asia Pacific are projected to decline. However, non-OECD countries are forecast to continue to account for most of the growth at 1.05 mb/d. China and other Asian countries are anticipated to lead demand growth both in the non-OECD region.

OPEC delivered a downbeat oil market outlook for the rest of 2019 on 16 August 2019, as economic growth slows and highlights challenges in 2020 as rivals pump more, building a case to keep up an OPEC-led pact to curb supply. In a monthly report, the Organization of the Petroleum Exporting Countries revised down its forecast for global oil demand growth in 2019 by 40,000 barrels per day (bpd) to 1.10 million bpd and indicated the market will be in slight surplus in 2020.

Call on OPEC in 2019 was revised up by 0.1 mb/d compared to the previous report to stand at 30.7 mb/d, which is 0.9 mb/d lower than the 2018 level. According to secondary sources, OPEC crude production averaged 30.5 mb/d in 1Q19, about 0.3 mb/d higher than call on OPEC in the same period, while in 2Q19, OPEC crude production averaged 29.9 mb/d, around 0.8 mb/d lower than call on OPEC.

Asian Gasoline crack spread is in its highest level in two years affected by tightness in this market and refinery outages in India and the

Philippines, which led to limited supplies amid an uptick of 42% in gasoline deliveries to the US during the month. As a result of positive performance of gasoline, reduction in outputs due to refinery outages, as well as firm regional demand, naphtha crack spreads rose.

The naphtha market remains in a state of oversupply, with spot cracks in Singapore continuing their downward trend since early April. The forward market is a bit more optimistic, albeit vs. very weak spot levels, with Argus citing expectations that West-of-Suez arb arrivals should be a touch lower m-o-m in September. Gasoil/diesel cracks versus Dubai crude oil faced the largest drop-off during last week of August and as a result of this weakness in Singapore gasoil market, the East-West arbitrage came back in to more feasible territory and so there are more Indian volumes in the heading west. There is a positive performance in jet/kero crack as a result of the peak travel season and rising jet fuel demand. Despite ongoing monsoon season, lower gasoil supply supported gasoil prices. Fuel oil crack spread versus Dubai crude oil decreased strongly and in fact this collapse was as a result of lower bunker demand following US-China trade war and economy weaknesses. Besides, decline in fuel oil demand has largely come from switching to cleaner fuels for power generation in Egypt, Pakistan, South Korea, and Japan.

A supply reaction from simple refiners on a sour crude diet may have provided some support, as margins for this setup have fallen considerably since the start of the month and forward margins, based on Reuter's data, point to further weakness ahead.

Iran's Influential Role in Propylene Production

■ *Mohammad Hassan Peyvandi, a former senior manager at National Petrochemical Company (NPC), has said the petrochemical industry and GDP of oil exporting nations are mutually effective.*



Peyvandi highlighted the huge investment Iran has made in order to increase methanol production capacity.

He said: "Since methanol production results in propylene production, we should no longer worry about increasing the methanol production capacity; rather we should know that Iran would be instrumental in global propylene production." Peyvandi referred to certain political conditions prevailing in the world, particularly in the Middle East, and categorized challenges faced with by the petrochemical industry. He said: "The issue of shale gas in North America and its impact on LNG and ethane exports to Europe and Asia is important. The next issue is charcoal production in China and its impact on synthetic gas production from charcoal and access to technologies converting methanol to propylene and ethylene." Peyvandi added: "This is exactly what South Africa did during the Apartheid, and during full sanctions year, it transformed charcoal to synthetic gas and then GTL. In Europe, investment and production are affected by crude oil prices because Europe has always been an oil and gas importer and has largely invested in downstream industries." He said another challenge to the Middle East petrochemical industry was the change in the LNG market direction. Peyvandi added: "This direction is not under way from the Middle East or Far East to America, but from America to the Middle East for Far East." He said another challenge in the Middle East was the emergence of Daesh militants. "These negative developments have reduced investment. Meantime, International Energy Agency (IEA)

reports indicate that hydrocarbons will be playing the major role in global energy supply up to 2040 and natural gas will be more influential than renewable energies by that time." Peyvandi said hydrocarbons, particularly natural gas, was instrumental in electric power and fuel supply, adding that Iran could be a major market player.

US LNG Market Share

Peyvandi touched on the shale gas role in the natural gas pricing in international markets since 2013, saying: "With the entry of shale gas, natural gas production increased in the US. In 2013, the US had no share in the LNG market, but in light of the growing shale gas production, the US will have a 10% share of Middle East market by 2020." He said: "The Americans knew that they would need to build a terminal for ethane and they did so and then they found marketplaces. These terminals are currently ready and in the phase of production."

Peyvandi said the first ethane ship docked in Europe's ports in March 2018, creating big potential for the US and contributing to polyethylene price cut. He said that Saudi Arabia's SABIC and India's Reliance were now among the major ethane target markets. Peyvandi referred to changes in long-term planning in this sector, saying: "Even for the transfer of this product and navigation of vessels, major changes were made in the Panama Canal." "The Panama Canal is not wide and therefore it could not handle the navigation of a large number ethane and LNG carrying vessels due to customs red tape and particularly logs and dykes. Therefore they had to control the volume

of water. Huge investment has then been made in this sector in order to accelerate the navigation of vessels and provide better services in line with shale gas production to markets in Japan, China and Southeast Asia." Peyvandi said: "Enlarging the Panama Canal would allow very large vessels to navigate. Currently 80% of LNG carriers cross through this canal, which is much higher than the previous 9%. After new changes, the time needed for vessels to travel from the US to East has declined to 15 days."

Good Conditions for Petchem Development

Peyvandi referred to Iran's investment in methanol production due to access to gas resources, saying: "It has to be taken into account that the six main substances in the petrochemical market are ethylene, methanol, benzene, propylene, chlorine and paraxylene." He added: "Methanol and propylene production has grown significantly since 2014. We should also keep in mind that polypropylene is produced from methanol using MTP and MTO technologies." Peyvandi said: "Through its big investment in methanol, Iran can be influential in global propylene production." He said Iran's methanol production capacity would cross 20 million tonnes by 2024, adding: "Currently, more than 6 million tonnes of ethylene and less than one million tonnes of propylene is being produced in the country. Therefore, more investment has to be made in methanol-to-propylene production in Iran." Peyvandi recounted a memory from his trip to China, saying big methanol storage facilities had been built

there. "When I asked the manager of that section why they had made big storage facilities, he said they always look at the market conditions," he said. Peyvandi said: "Many say the petrochemical industry has gone astray in recent years, but we were first after producing primary products like olefins and aromatics and then we sought to produce glycol, methanol, styrene and polystyrene. We have to have such substances first before developing downstream industries. Without such materials, how substances that need propylene would be produced?"

FOCUS



Polypropylene Production Prioritized

Peyvandi, who has recently authored a book on the petrochemical industry to share his experience, said: "I reiterate that we have to move towards polypropylene production. It can set the roadmap for Iran's petrochemical industry, but it's not complicated. It's an issue which requires high-level decision-making." He said: "In Iran we have the advantage of natural gas and we must be able to move towards MTO and MTB production and polypropylene derivatives." Peyvandi said the petrochemical industry was still dependent on GDP growth in various countries, adding: "Under such circumstances we enjoy good advantages. For instance, olefin feedstock is getting heavier and everyone does not have access to low-cost feedstock. We are the only one to have access and this advantage could be effective for us." "The diversity of market products is attractive us, but we have to look for new technologies and markets and attract more investment in the upstream and downstream sectors," he said. Peyvandi said Iran had always made efforts for the transfer of technology into the petrochemical industry. He added: "For example, we made efforts with a view to buying from international companies and we even sought to acquire Basel, but the Americans blocked our initiative because that would have armed us with technologies." Peyvandi said: "I want to say that we took significant measures, but they did not come to fruition."

Petchem Catalysts 50% Domestically Produced

Development of the petrochemical industry in Iran through investment in the downstream sector and supply of necessary catalysts has practically defeated the US sanctions against Iran's petrochemicals production and exports.

Negar Sadeqi

Petrochemical Research and Technology Company (PRTC), as a subsidiary of Iran's National Petrochemical Company (NPC), has taken effective steps for providing technical knowhow, catalysts and developing necessary processes for this industry. Ali Pajooan, CEO of PRTC, said: "More than 50% of catalysts have been domestically manufactured. They were all among widely consumed catalysts."

He told "Iran Petroleum" that measures had been taken by PRTC to neutralize sanctions targeting



the country's petrochemical industry. "The petrochemical industry in Iran was thinking of supplying catalysts and technical knowhow from long time ago and if most of these measures had not been taken before, and sanctions had been imposed earlier, restrictions in the catalyst sector could have paralyzed the entire petrochemical industry," Pajooan said. He said: "We started a lot of work in 2002 and we have been working on and off. As far as technical savvy is concerned, it would not be possible to do something in a short period of time and reach results." He added: "In any case, acquiring technical knowhow would need time, and fortunately it has already started and such capabilities have been developed. Catalysts may account for only 2% of total production process, but is the chokepoint of industrial plants, without which no production will occur. Furthermore, catalysts may not be replaced." Pajooan said: "Thanks to measures taken earlier we see that sanctions are not affecting production, and in practice

we are producing any type of catalyst which is utilized." He said that this trend could be seen in production and sales figures, "but when it comes to regional competition, the issue of sanctions is prominent, and we should find a solution for it."

14 Agreements Signed on Catalysts

Pajooan said Iran was spending \$400 to \$450 million a year on catalysts, adding that more than half of catalysts are domestically produced, which are all widely needed. Regarding agreements on catalysts and processes, he said: "Since last year, as sanctions became serious we have naturally shifted part of our activities towards sectors where sanctions could not affect the activities of PRTC. Over this period, we have signed 14 agreements on catalysts, chemicals and processes." Catalysts are of high significance for the petrochemical sector in Iran, he said, adding: "We have now reached an acceptable point and even monopoly in the supply of strategic catalysts and chemicals. In parallel, the issue of license for

production of petrochemicals is being pursued seriously." Pajooan said: "Another important issue under way by PRTC is to upgrade technical savvy until it is commercialized. In research and technology, we do not insist on acquiring technical savvy from scratch. In such agreements, in addition to the commercialization of acquired technical knowhow, we have worked on the commercialization of the technical knowhow of other companies."

Methanol Catalyst Commercialized

Pajooan touched on the commercialization of some catalysts, saying: "We have managed to fully commercialize the methanol catalyst and grant its license to a company which is currently building one of the largest catalyst plants which has the highest catalyst production volume in the country and the region." He said that another agreement signed by PRTC has been to supply petrochemical catalyst. Signing this agreement is important "as we know that we would need this catalyst before the end of the current calendar year." He added: "But the foreign licensor has not provided the catalyst to them. We have tried our best to produce this catalyst with the highest possible quality. This catalyst has won confirmation from two major European companies and that is why consumers are trusting in its quality."

New Generation of Catalysts

Pajooan said: "In petrochemical processes, equipment changes in licenses are not widespread and in many cases, the high quality of products of big international companies stems from changes in catalysts." He added: "This issue takes up added significance in the production of polymers. Therefore, we need to be always able to supply more favorable catalysts of higher quality." "In other words, changes happen quickly in the generation of catalysts. When we say we have built a catalyst it does not mean that there would be no more research in that sector; rather, it means the



Industrial-Scale Polyethylene Catalysts

Pajooan said: "We have long been following up on polyethylene catalysts which are used in HDPE and LLDPE plants. We have produced

both of catalysts whose consumption and quality are important on various scales, and conducted various tests on them.

We hope that these catalysts would be produced in full on industrial scale and be consumed permanently at petrochemical plants."

He said that a domestic company would launch an LL catalyst unit, designed

with PRTC technology, up to the end of the current calendar year. He added that the unit was 95% complete and would supply Iran's entire needs.

"This catalyst is one of the most complicated catalysts and we hope that it would reach industrial production prior to the end of the year," Pajooan said. He said: "We used to import polypropylene catalyst,

but now are making every effort to start polypropylene catalyst production before the end of the current calendar year and supply it on the market."

Pajooan said: "We have also other agreements about catalysts whose production would take time. However, I suppose their production would become operational in coming years."



Pajooohan said: on catalysts and processes, he said: "Since last year, as sanctions became serious we have naturally shifted part of our activities towards sectors where sanctions could not affect the activities of PRTC. Over this period

start of work in practice. Then we have to upgrade that catalyst in harmony with foreign companies. Otherwise, Iranian and foreign plants would prefer to purchase enhanced catalysts from other companies." Pajooohan said: "Therefore, we are trying to comply with quality and economical price obligations in widely consumed catalysts in order to be able to compete with foreign prototypes. In certain sectors we are one of the largest producers and consumers in the world, and the market gives us necessary room to maneuver." He added: "But at the same time we have to think of producing a new generation of catalysts. Despite our communications with big companies active in methanol catalysts production, sanctions have blocked our presence in foreign markets. However, our cooperation with various foreign companies is still continuing. It can be argued that sanctions have led us to find solutions to be independent."

Processing Catalysts Commercialized

Pajooohan said: "Many strategic catalysts like processing catalyst are in the process of commercialization. They are produced by the private sector. In most important catalysts, the process of commercialization has already been done or is under way." He added: "Most widely used catalysts have been made domestically and in light of catalyst consumption on the long run, it would be possible to win a toehold in international markets." In some cases, Pajooohan said, catalyst production capacity is above catalyst consumption capacity. He referred to the production capacity of 1,500 tonnes of methanol catalyst, one-third of which is destined for export.

High Competition in Catalyst Quality

Pajooohan touched on high competition in the quality of catalysts, saying: "For instance, the global price of ethylene and polyethylene varies between 25% and 30%, but in catalysts, this difference reaches 100% to 200%, which is significant." He said: "Given the high value of catalyst production, there would be serious rivalry in the quality of these products in the world. Fortunately, when it comes to the domestic production of some catalysts, in addition to appropriate and competitive quality we have special privileges." He said: "For instance, copper and zinc are raw materials for the methanol catalyst and Iran is an exporter of these substances. Therefore, we have good conditions to reach proper prices for these raw materials. That could be a good privilege for us."

Talks with Regional Countries

Asked if Iran had any plans for marketing its catalysts, Pajooohan said: "Catalysts have big margins. In some high-performance catalysts, the difference in the price of raw materials and final products is between 300% and 500%. Some foreign companies producing methanol catalysts are likely to give us their methanol license, but they will never give the license of their new generation of catalysts to other companies due to the high value of production and their role in the design of methanol production units."

He said: "In fact catalysts are special and strategic commodities which are largely consumed in our region and there is a high competition over them in the market. Although

many factors like price, quality and circumstances are involved in the export of catalysts, we have embarked on talks with regional states including Russia in order to introduce the methanol and polyethylene catalyst. Therefore, we hope that in coming years there would be capacity for catalyst exports. In the near future, it would be possible to export some of these products."

Knowhow in Processing

Pajooohan said one of major tasks upon PRTC was to provide technical knowhow for production. "Currently we are seriously active in the seven sectors of producing methanol, olefin, high-density polyethylene, polypropylene, ammonia, methanol-to-propylene and methanol-to-olefin," he said, adding that agreements had been signed to that effect. "Recently we have been seeking to sign agreements with several companies for licensing. One of the most important issues in this regard is HDPE and polypropylene for which we can present license and engineering documents," he said. Pajooohan said: "We claim to be able to develop knowhow in HD, PP and MTP and we have even prepared our engineering documents. However, investment capacity for this sector is limited. For instance, we would need at least \$450 million in order to reach stage of propylene production, but Iranian investors do not have such capacity. In fact, limited investment is our main concern in this model of commercial contracts. In other words, a major chokepoint for non-commercialization of our products is this issue." "However, we have undertaken follow-up measures and we hope

to sign an agreement on HD with a company in coming months. Some companies with investment potential have been identified, but we have to go ahead with more sensitivity in this sector," said Pajooohan.

No Need for Foreign Consultants

Pajooohan referred to hiring foreign consultants, saying: "We had foreign consultant for licensing HD, PP and MTP, but once sanctions were imposed they quitted. We continued the work and we mastered this technology and we are currently drawing up engineering documents for a 470,000-tonne plant to convert methanol to propylene. The important point is that financing the processing projects by the investor is difficult and building such units would require much capital." He said: "The fact is that 90% of the contribution of foreign consultants is the assurance given to investors and persuading a company that has already built plants in the world. Therefore, if we were not under sanctions investors would be willing to have foreign consultants alongside them. But we have to take into account the fact that big companies would never sell their latest knowhow to us and they believe that we should always be one step behind them." He said: "Should we fail to develop technical knowhow they will be always producing products of higher quality and lower price forever and they will have their own margins and we should be always after them. Such conditions are not merely for Iran and all countries have similar conditions. Therefore, for qualitative and economic competitions we have to own knowhow."



Pajooohan said: "Many strategic catalysts like processing catalyst are in the process of commercialization. They are produced by the private sector. In most important catalysts, the process of commercialization has already been done or is under way

FOCUS

Domestic Product Preference

Pajooohan also touched on sanctions, saying: "The sanctions have largely led companies to use domestically produced commodities. If domestic companies just once consume such products, which are similar to foreign ones, they will no longer use foreign products." He added: "All our efforts are aimed at leading them towards first-time experience for companies and winning reputation. Branding in this sector is very difficult and time-consuming. Therefore, it would be achieved over years. However, wherever this first-time consumption occurs purchase will go on." Pajooohan said the best way and tool of branding would be consumption in manufacturing units and seeing positive feedbacks. "Meanwhile, there are not many customers in this sector. For instance, if a catalyst is used in a plant we would feel comfortable for its market because the number of complexes is limited and there is good connection between them and the results obtained from unit may be shared with other units. That means the domino-style use of domestically manufactured products. The main part of the job would be to break the first dam," he said.



Self-Sufficiency in Oil Storage and Pipe Building

Iran's petroleum industry has, more than 40 years, been struggling to preserve its oil and gas production rate while being under US sanctions. Therefore, it has been making efforts to win the trust of more and more manufacturers in a bid to boost the share of self-sufficiency in the petroleum industry equipment. A case in point is the commissioning of a major part of \$2 billion projects to Iranian companies for the transfer of crude oil from Persian Gulf coasts to Gulf of Oman coasts. This project involves building 1,000 kilometers of pipeline, five pumping stations, measuring and mechanical equipment, storage tanks and an export jetty.

Javad Asghari

In the past decades, petroleum industry officials have been mainly concerned with domestic manufacturing and reliance on domestic capabilities. Iran's Petroleum Ministry has so far arranged many activities in this regard, including the formation of self-sufficiency circles, establishment of committees to support domestic manufacturing, setting up research groups, selecting 10 items that could be produced domestically and taking action for their manufacturing. One of the most important necessities of the petroleum industry over recent decades has been the expansion of domestic manufacturing of strategic petroleum industry equipment and reduced dependence on foreign companies. All administrations have been concerned with this issue; however, this cause of concern grew into an article of faith in the policymaking and planning of the 12th administration, and major steps have been taken to that end. In various sectors of the petroleum industry, including oil pipeline and telecommunications that handle massive crude oil and petroleum product transfer, the focus has been on domestic manufacturing capabilities. This initiative dates from the post-war years in the 1990s.

Lower Traffic at Hormuz

Access to high seas and oceans, proximity to the Indian Subcontinent as the Chinese and Indian markets, being the focal point of the North-South Corridor that connects Central Asia, Russia and Afghanistan

to high seas and the Indian Ocean, unique geopolitical and strategic position, endowment with sufficient capacity for investment and implementing economic and development projects, and proximity to the Persian Gulf as the big source of oil and gas production are among unique features that have persuaded Iran to build its second oil export terminal. Kharg Island is currently the only oil export terminal in southern Iran. Therefore, there has always been growing need for an alternative oil export terminal. That is why Jask was chosen to become Iran's energy capital, which would mean the Strait of Hormuz would witness lower traffic in oil and gas transit. Under Petroleum Ministry planning, Iran's second largest oil terminal with a 2-million-barrel capacity would be built in Jask Port. According to these plans, 1 mb/d of oil would be transferred by the existing pipeline between Khuzestan Province and eastern Iran and another 1 mb/d by the Neka-Jask pipeline for oil swap. The Jask terminal will have capacity to store 20 million barrels of crude oil. In the offshore sector of this terminal, three single-point moorings will be installed to transfer oil to tankers and export oil. With the launch of commercial ports and oil export terminals in Jask, the routes for commercial vessels and tankers will become shorter and more economical. Vessels carrying Iran's oil will have to navigate 2,400 miles less than now, while international vessels will navigate 600 miles less for receiving maritime services.

Oil Storage Tanks Made in Iran

Recently, Iranian companies have been assigned the construction storage tanks with capacity of storing 10 million

barrels crude oil. This national megaproject will create 5,000 direct and 10,000 indirect jobs.

The agreement for the construction of crude oil storage tanks and related installations in Jask Port was signed between Petroleum Engineering and Development Company (PEDEC), on behalf of National Iranian Oil Company (NIOC), Petro Omid Asia and Omid Investment Management Group under a BOT deal. This 200-million-euro deal will be implemented over a three-year period. The operation period is set at 15 years.

NIOC has acquired about 5,000 ha of land located 65 km

west of Jask near Mount Mobarak to build oil, gas, refining and petrochemical projects. This piece of land will be earmarked for building a crude oil export terminal and crude oil storage tanks.

The storage tanks will have capacity to hold 10 million barrels of heavy and light crude oil. Each tank will have a 500,000 b/d capacity.

The storage site will receive oil from Gowreh-Jask to be fed into offshore pipelines and SPMs.

The storage site, which will be built on about 600 ha of land, may be developed to handle the storage of up to 30 million barrels of crude oil.

Goureh-Jask Pipeline

The construction of the Goureh-Jask pipeline will allow the transfer of 1 mb/d of light and heavy crude oil from oil fields located in southwestern Iran to the country's southeastern coasts. Ahvaz

Pipe Mill and Khuzestan Oxin Steel will provide the necessary pipes in full compliance with standards. NIOC has signed an MOU with Mobarakeh Steel Mill,

Oxin Sanat and Ahvaz Pipe for the manufacturing of required pipes. The objective behind this memorandum has been to create a full chain of slabs, billets, sheets and finally rolling. The construction of the Goureh-Jask pipeline in Iran has saved the country more than € 200 million, not to mention business prosperity for domestic manufacturers. Touraj Dehqani, CEO of PEDEC, has said that the Goureh-Jask pipeline would be complete by March 2021 to allow for exporting the first cargo of crude oil from Iran by that time. This project is worth \$2 billion, \$500mn to \$600mn of which will be spent on pipe building. Earlier, API sour service pipes were purchased from European, Chinese or South Korean companies. But now for the first time these pipes are supplied domestically by several Iranian steel and pipe manufacturing firms.

By completing the Goureh-Jask pipeline, the offshore route will give way to an onshore route. Then, vessels will be given an alternative route for crude oil transfer.

Sour Steel Sheets

Iran's petroleum industry is throwing its full weight behind the domestic manufacturing of equipment in this project.

Amin Ebrahimi, CEO of Khuzestan Oxin Steel, said this plant had capacity to produce 1.05 million tonnes of wide sheets.

He said the plant had managed to master technology for sour sheets owing to support from NIOC and the support of upstream and downstream entities. He added that Khuzestan Oxin Steel was the only Iranian firm with the ability to manufacture

sour sheets.

Ever since Khuzestan Oxin Steel was established, 115,000 tonnes of API sheets have been manufactured. However, this year they have so far managed to supply about 60,000 tonnes.

15,000tn of Sheet for Goureh-Jask

The technology for sour sheets is available in only 10 countries. However, Iranian companies have manufactured about 15,000 tonnes for the Goureh-Jask project. Ebrahimi said the first phase of rolling sour sheets started last December, which led to the manufacturing of 420 tonnes of sheets. He said last June, 760 tonnes had been produced on a pilot basis. He added that 15,000 tonnes was now being put to corrosion test. Ebrahimi expressed hope that the output would reach 30,000 tonnes in the future. Manufacturing sour sheets is of great value for Iran as it can identify Iran as an industrial manufacturer. The Goureh-Jask project would need 366,000 tonnes of sour sheets.

Ahvaz Pipe Mill Contribution

Iran used to buy steel sheets for oil pipes from Germany. But due to sanctions, it had to turn to China. However, now Iran owns the technology required for the manufacturing of these sheets.

Ali Khanifar, director of production at Ahvaz Pipe Mill, said the company was committed to providing 550km of the Goureh-Jask crude oil pipeline. He said so far 57km had been built and placed in depot. Two years ago, Ahvaz Pipe Mill agreed to supply part of sour sheets needed in the Goureh-Jask project, he said.

Khanifar added: "Earlier, about 20,000 tonnes of steel sheets had been purchased from abroad, but as sanctions were imposed, PEDEC held meetings with Ahvaz Pipe Mill and Mobarakeh Steel Group so that the manufacturing of these sheets would be nationalized."



Negar Sadeqi

Oil Pumps Made in Iran

Competition with Europe Pump Manufacturers

→ Mehdi Farajpour, chairman of IIP Group, tells "Iran Petroleum" that Iran is now a regional hub for pump manufacturing. He said IIP Group is able to rival European companies. Here is the full text of the interview Farajpour gave to "Iran Petroleum":

When did IIP Group join the petroleum industry?

Our company was established one year prior to the 1979 Islamic Revolution. From the very beginning, we were faced with the challenge of foreign companies refusing to provide us with technical savvy for building pumps. Therefore, without any assistance from foreign companies, we started our work through reverse engineering of a number of pumps. We officially stepped into the petroleum industry in 1996. We had contacted a number of foreign companies to help us technologically in making these pumps, but due to the strategic nature of the pumps, they were not ready to provide us with the technical knowhow needed for pump manufacturing. That is why we set up the pump designing unit and started designing pumps from scratch. We initially made fire extinguishing pumps which had to comply with NFPA20 standard. One requirement for this standard is to have BB1 pumps. We had no foreign prototype and we got one BB1 pump and we managed to build one through reverse engineering. Twenty-three years after, 300 models of pumps are made by IIP Group, which are fully Iranian

How long did it take to design and manufacture pumps?

Designing and manufacturing the pumps initially lasted more than a year and a half, but 23 years after

we have the most competent pump engineering team in the region, and depending on the type of pump we can design and manufacture it within two months. We can design any type of centrifugal pump demanded by customers.

Are you currently involved in any projects?

We have recently won the bid for the manufacturing of 50 main pumps for the Goureh-Jask crude oil pipeline. The tender bids have been launched and we are in the phase of signing agreement for the manufacturing of pumps. The project is worth about €47 million. Foreign companies would have built the same pumps for € 60-70 million. Over the past six years, we have built more than 1,400 pumps for various oil projects, most of which have been installed in South Pars projects. We have also built more than 200 pumps for the Bandar Abbas gas condensate refinery. Among projects we have under way, I can refer to the oil pumps manufactured to prevent oil production fall-off. Of course, we have not yet stepped into manufacturing pumps for production from oil wells and we have mainly been involved in the refining, gas industry and oil pipeline sectors and we are currently designing these pumps. The Petroleum Ministry has extensive plans in this regard, and I think that domestic manufacturers can become active in this sector. We will be delivering the remaining pumps ordered for SP14. We have also received orders to build some pumps for Phase 4 of the Bandar Abbas condensate refinery,



Iran Industrial Pumps Company (IIP Group) started out in 1977 by manufacturing industrial pumps. In 1996, it started making oil, gas and petrochemical pumps. Owing to support provided by the Petroleum Ministry to domestic manufacturers, IIP Group has so far made 300 models of fully Iranian-manufactured pumps.

enhanced recovery project at the Abadan refinery and one of the eight Siraf condensate refineries. We also plan to make LPG, butane and propane pumps. Separately, we are developing knowhow to manufacture compressors.

Your company manufactures 300 models of pumps while leading companies mass producing such pumps never reach such figures. Is it necessary for your company to have such diversity in its pump manufacturing?

Iran has long been faced with international sanctions and the unlawful and unilateral sanctions imposed by the US since last year have made it more difficult for the Iranian petroleum industry. I remember well that during some periods of sanctions no pump was imported into Iran and that had directly affected oil projects, particularly in Assaluyeh. Had Iranian companies not moved to manufacture such pumps under Petroleum Ministry support, we would not have been witnessing the inauguration of South Pars projects in the administration of Mr. [Hassan] Rouhani and increased gas production from this field. We can now design every oil pump. Besides designing oil pump, we made mechanical seals. In the past, mechanical seals were monopolized by two British and German companies, but today they are built in Iran at high quality.

Do you import any parts and necessary materials for pumps?

No, we import no parts for our pumps.

Have sanctions affected your activities?

The sanctions have created many restrictions for us, but they also represent an opportunity to us. During the first round of sanctions in 2011-2012, LPG pumps were manufactured exclusively by Japanese firms, but due to the sanctions the Japanese companies refused to deliver those to Iran and SP17 and SP18 were directly affected. That is why we decided to manufacture the pumps in Iran. It was hard work as we had no foreign consultant. However, we managed to break Japan's monopoly in manufacturing these pumps. We are currently the fourth country in the world to manufacture LPG

pumps.

What are Iran's rivals in manufacturing these pumps?

Our rivals in LPG pumps are Japan, Germany, France and the United States. China has also recently claimed to be able to manufacture such pumps, but I've not seen any such thing. Given our huge gas reserves, we have to manufacture these pumps at home, but it has not occurred so far. Those who encouraged us to build such pumps were Mr. [Mohammad Reza] Nematzadeh, the former minister of industry and mine, and Mr. [Bijan] Zangeneh, petroleum minister.

How has the Ministry of Petroleum supported domestic manufacturers?

If we claim we have become one of the largest manufacturers of oil pumps in the world, and the regional hub of such pumps it is owing to support provided by the petroleum minister and senior oil managers. They trusted us and empowered us to build oil pumps without any support from foreign companies and consultants. The most significant support the Petroleum Ministry provided to us under Mr. Zangeneh was the trust placed in domestic manufacturers. Iran's petroleum minister has recently instructed all subsidiaries not to purchase foreign oil pumps in case similar ones are made at home. I think that the instruction is the most important support provided to domestic manufacturers. We are now ready to implement oil production enhancement and preservation projects, as well as oil refinery reconstruction projects.

In some cases, the first mistake may be also the last one. Any delay in the delivery of pumps may also affect the entire project. What do you think of that?

You are absolutely right. The Petroleum Ministry assumed the risk for assigning projects to domestic manufacturers and trusted them. It is high-risk, particularly for such sensitive sector as building pumps. Domestic manufacturers also responded to this trust. Based on Mr. Zangeneh's background, I think if deemed necessary he will again make risks and assign jobs to domestic companies.

Do your pumps comply with international standards?

We comply with API610 in our pumps, which is the toughest standard in the world. Even now under sanctions, we are building all our pumps in compliance with API610 under the supervision of international inspection companies.

Bid-Boland, First Mideast Gas Refinery

Khuzestan has always witnessed important oil and gas achievements. Iran's petroleum industry was born there in 1908. As gas shot to prominence in the energy sector, gas refineries were needed to process the gas for use by mankind.

The first oil refinery in the Middle East region was built in Abadan, Khuzestan Province. Now, the Middle East's first gas refinery – Bid-Boland – was also built in Khuzestan in 1971. Gas was used on a limited basis before the discovery of oil in Iran. After oil was extracted in Masjed Soleiman, gas had to be flared on the spot. The Anglo-Persian Oil Company (APOC) – later on renamed Anglo-Iranian Oil Company (AIOC) and National Iranian Oil Company (NIOC) – was always looking for a solution to avoid flaring natural

gas. However, due to a variety of reasons including long distance between producers and consumers, the need for huge investment and shortage of domestic market, associated petroleum gas was wasted away. Over six decades, more than 130 bcm of gas with a thermal value of 130 million tonnes of crude oil was burnt and thus wasted away. With the turn of time, petroleum industry plants were built one after another. In parallel, natural gas was used more and more to fuel compressors and power generators and supply fuel to residential compounds. Therefore, alongside the main activities

of crude oil production, transfer and refining in southern Iran, limited activities got under way for the processing of natural gas.

Bid-Boland Startup

The Bid-Boland gas refinery is located 18 kilometers north of Aghajari, 32 kilometers west of Behbahan and 35 kilometers east of Miankouh in Khuzestan Province. The facility was initially designed to process sour associated gas in the Aghajari area to be exported. The first building, which incorporated five gas treatment units with a capacity of 240 mmscf/d for reach unit, was built over a three-year period until becoming operational in late 1971. The refinery was designed by Pritchard, and its main building was erected by Press and Costain under the supervision of Iran IMEG. With the discovery of the

Maroun and Ahvaz oil centers and the delivery of sweet gas for injection into the national trunkline via the Bid-Boland gas compressor station, exports rate has increased and no more units were added.

Omidieh, Where Bid-Boland Is Located

The Bid-Boland refinery is located in the city of Omidieh. In general, Omidieh is known as an industrialized city, but in fact it is a city hosting a large number of companies. Omidieh sprawls on 2,309 square kilometers. It is 125 kilometers far from Ahvaz, the provincial capital city. Omidieh which is limited to Mahshahr and Hendijan to southwest, Ramhormoz and Ahvaz to north and west, and to Aghajari and Behbahan to east and southeast, becomes so hot during many months in the year. Omidieh, along with Behbahan and Hendijan, links other cities of Khuzestan Province to the provinces of Bushehr and Kohgiluyeh Boyer Ahmad. Omidieh is the last place developed in the past because until two millennia ago, it was nothing but lagoons and lakes. In the vicinity of

Omidieh, there are some monuments dating from 1,500 years. A natural fire temple, generally known as the burnt mountain, is indicative of urbanization in ancient times. What we know as Omidieh today was founded in 1900 when efforts got under way for oil exploration during the Qajar dynasty. It was initially referred to as C-branch. After APOC started building residential compounds for its own staff, it was gradually known as Omidieh.

Verbal History

The Bid-Boland gas refinery has a long history in Iran's gas industry. However, one of the most important periods in its history dates back to the years of imposed war (1980-1988). During the imposed war, the facility was bombed time and again as everyone was aware of the strategic significance of gas processing for the country. Mahmoud Sarrafpour, who was among managers of the Bid-Boland gas refinery during the imposed war, said: "No later had I joined this refinery than eight of my colleagues were killed during an air raid by Baathist forces and a gas

processing unit was totally destroyed. The refinery was out of service. It was the sole facility to supply sweet gas across the country."

Sarrafpour added: "Therefore, we had to start reconstruction operations as soon as possible. That came against the backdrop of shortages of facilities. We spent seven months on the reconstruction and startup of the refinery. But the refinery was bombed anew. After each time of reconstruction, the enemy tried to target the refinery based on data obtained via its agents." This wartime manager gives some statistical data that show the strategic significance of the Bid-Boland gas refinery. "During the imposed war, the Bid-Boland refinery was struck four times. The attacks were large-scale, causing heavy damage. Reparation and replacement of refining equipment was done more than 1,500 times. The attacks continued up to 1988. Our team did reconstruction every time needed so that the enemy would not reach its objective of a total halt to the flow of gas and disturbance in everyday affairs."



I ranked the first in the 73-kg category in the junior competitions. One year later, I won a gold medal in the 81-kg category in the Iranian youth competitions.

MISOGPC Judoka: We Eye World, Olympic Title

→ Recently, during Asia Youth Judo Championship, held in China Taipei, MISOGPC judoka Amin Kamyabi finished runner-up, bagging a silver medal. The full text of the interview "Iran Petroleum" has conducted with Kamyabi is as follows:

How old are you and how come you braced for judo?

I was born in December 1999 in the city of Chenaran. I am a member of national youth judo team in the 81-kg category. I have been a member of MISOGPC judo team for years now. I was fond of martial arts and my family supported me and I finally became a judoka. I love this sport. I have to say that my family entirely loves martial arts and we have even a national team judoka in our family.

When did you start judo? Who were your coaches?

I started in 2011 and I joined the national youth and junior teams four years ago. My coaches were Hassan Rajabi, Amin Qolipour and my cousin Javad Mahjoub.

So the family member in the national judoka team is Javad Mahjoub.

He is a judo champion in Iran, Asia and the world. He was instrumental in encouraging me to become judoka. He was my role model.

How long have you been a MISOGPC judo member?

Since last year I have been a member of the MISOGPC judo team. I feel happy to belong to a club that has introduced many champions to the national team and recorded various championship titles in the Iranian clubs pro league.

What are the most important titles that you have won so far in the championship competitions?

I ranked the first in the 73-kg category in the junior competitions. One year later, I won a gold medal in the 81-kg category in the Iranian youth competitions.

Would you please tell us of your first Asian experience and the matches held in Lebanon? You apparently won a title there.

Yes, in my first experience I managed to win a medal. In the matches in Lebanon, 196 judokas from 22 Asian nations came together. I ran for title in the 73-kg category and I finally won a bronze medal.

You finished runner-up in the Asian youth judo championship. Would you please tell us about that?

I've been running for Asian title for the second



Over recent years, Masjed Soleiman Oil & Gas Production Co. (MISOGPC), a subsidiary of National Iranian South Oil Company (NISOC), has taken effective measures in sports. MISOGPC has won various titles in different sport disciplines. Competing in the pro league matches of Iranian football clubs, championship in Iran's gold super league, having significant performance in the weightlifting matches, and winning championship title in the judo super league of Iranian judo clubs are among major titles MISOGPC has brought about for the Iranian Ministry of Petroleum.

year in a row. However, the level of matches was higher than previous years. This year I ran in the 81-kg category and I experienced tough conditions in these matches. I was on a tough slimming diet in order to reach the weight required for the matches and I finally ran in the 81-kg category. In the first round, I had to sit back, but in the second round, I was faced with a rival from India. I managed to down him within a minute. In the third round, I was faced with an Australian judoka and in the golden time I defeated him to reach the semi-final stage. Afterwards, I went to compete with a Kazakh, Thanks to God, I defeated him in less than a minute to find my way into the finale. Unfortunately in the finale, I failed and I was content with the silver medal. I hope to compensate for this defeat in the future games with a gold medal.

What do you think of the level of Asian youth matches?

The competitions were really good. There were judokas from 23 countries and they were all highly motivated.

Would you please tell us about your future plans? Are you waiting for any important matches?

In the long-term, there is plan for Olympic matches, but in the short run, my main plan is to run in the world youth championship matches, scheduled for September. I also hope to run in the Asian adults championship matches in order to win my country honor.

Judo has been in a state of stagnation in Iran for years. Why? What is

your solution?

You're right. During the last few years we have not been as powerful as we were in Asia and the world, and we have contented ourselves with single medals. I think this issue should be substantially dealt with. We need to hire competent foreign trainers and invest in judo by providing academic training to the youth. Otherwise, we will not even be able to flex muscles in Asia.

What was the key to your success in judo?

The endeavors and efforts by a champion are key to his titles. Through self-confidence, being fond of judo, trusting in God and making efforts I managed to win titles, which I hope would continue.

Anything for conclusion?

I wish success for all Iranian athletes in every discipline. I hope to be able to succeed in global championships and I hope officials would support judo.



Amin Kamyabi

In the long-term, there is plan for Olympic matches, but in the short run, my main plan is to run in the world youth championship matches, scheduled for September

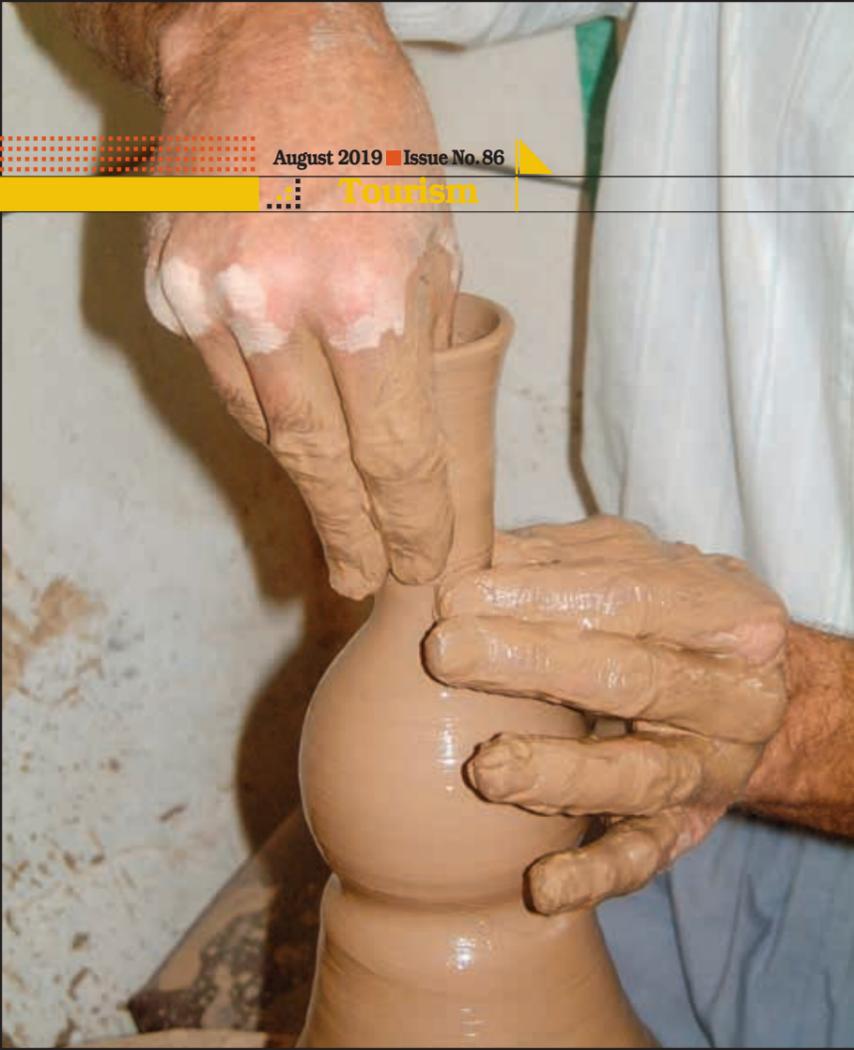
Gonabad, Gem in Desert

Gonabad is a city located in Khorasan Razavi Province. Evidence shows mankind lived there in ancient time. Gonabad was eyed by Achaemenid rulers due to its strategic position. Gonabad is located in a semi-arid region, but drilling qanats and access to water tables have helped the city prosperity and agriculture. The main product of this city is saffron which is exported to many countries across the globe.

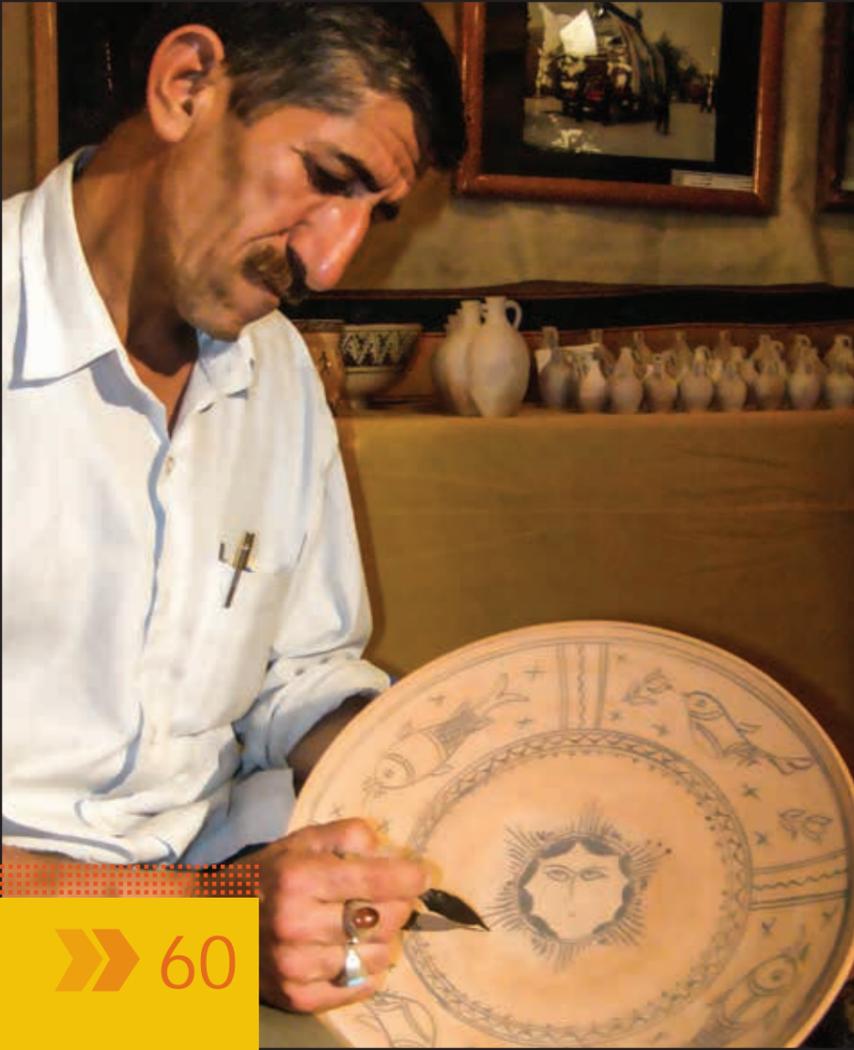


Shariat Domicile

The Shariat domicile in Gonabad dates from the Qajar dynasty. Its architecture conforms with desert. There is water pool, wind catcher, dome-shaped ceilings and archway in this building. The walls are decorated by gypsum.



Pottery
 Pottery is seen mainly in the village of Mand. Pottery in Gonabad is five millennia old. However, the pottery developed in Mand emerged in the 11th century. The raw materials used in pottery are clay and porcelain. The main feature of Mand's pottery is decorative elements taken from nature.



← Riyab Village

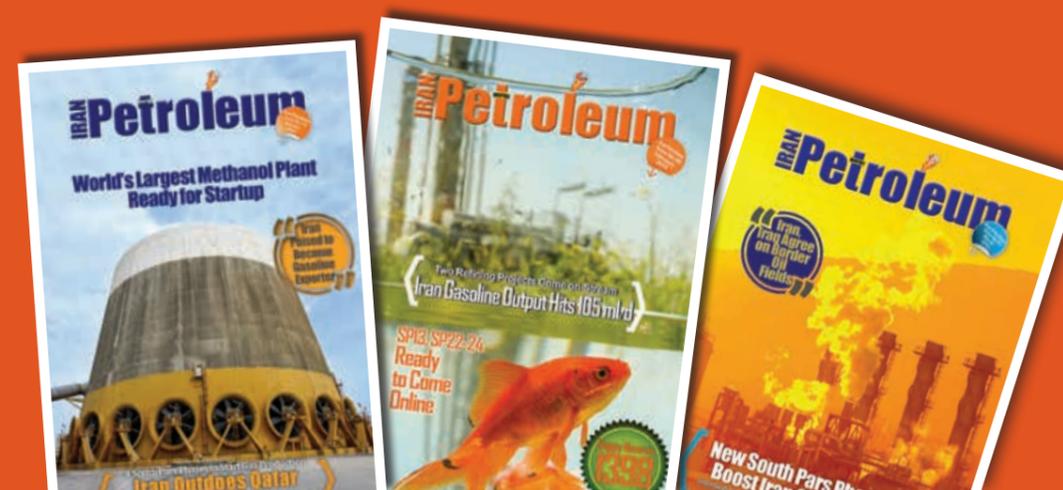
Riyab village is located five kilometers southwest of the city of Gonabad. The old part of this city houses historical places with a very beautiful architecture. Over recent years some studies have been carried out on the old district of the city. Frequently visited by tourists, this part of the city is currently inhabited. The tourist attractions in Riyab include the domicile of Abu Mansur Riyabi, who was a minister during the Saljukid dynasty.



Gonabad,
Riyab Village

Iran Petroleum

If you have any comments regarding the articles in this magazine, please feel free to contact us through e-mail. Your views are appreciated



Petroleum Ministry - Public Relations

Thank you for reading
Iran Petroleum

iranpetroleum.pr@gmail.com

Gonabad,
Shariat Domicile

