



## Iran's impressive return: more to follow?

Iran has delivered on its plans to boost production in the immediate term. Output has already reached 3.7m b/d in October this year, surpassing pre-sanctions levels of 3.6m b/d, and exports have more than doubled to 2.2m b/d compared with a year ago. Iran has also regained its market share in Europe. In Asia, where the bulk of Iran's ~1m b/d exports headed during sanctions, relations are getting even stronger and exports have surged to above 1.7m b/d. But while Iran's return has been impressive, the country has not been able to access the capital and technology it desperately needs to boost production beyond the short-term. Favourable terms under the International Petroleum Contract (IPC), and Iran's ability to assure a stable political landscape will both be necessary for further capacity growth.

Iran's recovery has been more impressive than the market had anticipated. By the end of October 2016, crude production had reached 3.7m b/d, a near 1m b/d increase year on year (y-o-y) and surpassing the pre-sanction production levels of 3.6m b/d. Within a year, the 2012 embargo on Iranian crude had reduced output by 1m b/d. The absence of technology and finance left many of the mature fields in Iran with typically high decline rates (6-12%) in dire conditions. Limited onshore storage meant that Iran had to rely on its VLC fleet to store oil. Iran's recovery was poised for a modest 500k b/d in 2016, only to reach 3.8m b/d by 2018. But the Iranians had been preparing for a post-sanctions recovery since mid-2013 including new production drilling, optimisation of onshore oil field surface facilities and well workovers. China's CNPC and Sinopec featured heavily in upstream projects and Iran's National Iranian Oil Company (NIOC) had carried out a major refurbishment and de-bottlenecking programme on its surface facilities in 2012-14.

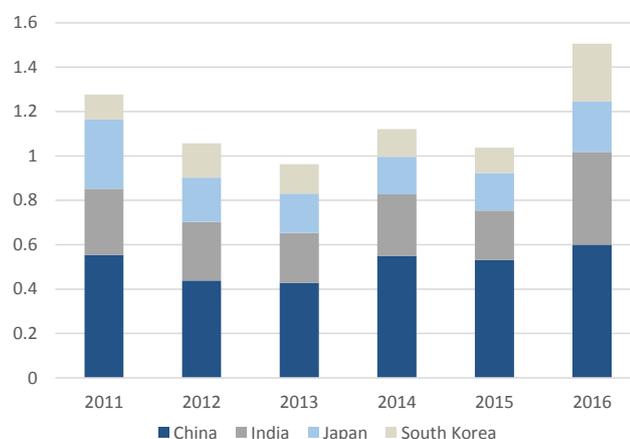
The immediate post-sanctions increase came from releasing both onshore and floating storage that amounted to over 40 million barrels by the end of 2015. Greenfield projects in the West Karun region added around 250k b/d, including South Azadegan, which was already in early production before sanctions were lifted, and Azar also contributed with an increase from 27k b/d to 67k b/d. But the main output growth came from mature fields operated by NIOC which had shouldered most of the cuts during sanctions, having accounted for 75% of Iran's pre-sanction capacity. Production was ramped up from large onshore fields such as Marun, Gachsaran and Ahwaz – typically a 'swing field' and Iran's largest with an 800k b/d capacity.

Iranian exports during sanctions were concentrated to the likes of China, India, Japan and South Korea who bypassed the US dollar by trading in local currency, trading oil for goods and allowed for the build-up of significant arrears (see Vol. 1 No. 3 – Shifting trade flows: Middle East strategies for market share in Asia). Iran found a lifeline in China and drifted away from its traditional partner in Europe – Germany – with an estimated \$30bn worth of trade annually. The Bank of Kunlun was created specifically to ease Chinese oil payments to Iran, where up to 40% would be used to make cash payments elsewhere in Asia and the remainder used to finance projects in Iran and buy Chinese goods.

## Regaining market share

New production has headed to Europe - where Iran had lost its market share - as well as to Asia. Total Iranian exports excluding condensates reached a five-year high of 2.2m b/d in October this year - a near doubling of the roughly 1m b/d it exported during sanctions. While it can now market its oil worldwide, Asian exports continued to increase steadily this year, reaching in excess of 1.7m b/d in October.

### Iran crude exports to Asia (m b/d)



\*2016 is the average of the first three quarters

Source: MEES

NIOC has dismissed claims of offering large discounts, but attempts to increase market share in Asia are evident in its crude pricing for specific grades. Iranian Heavy – similar to Basra Light and Arab Medium with an API of 30-31° - went from a \$0.60/b premium in September 2015 against Basra Light to trading at a \$-0.15/b discount in November 2016. Over the same period, the discount against Arab Medium increased from \$-0.05/b to \$-0.25/b. Iranian exports to Asia's four main customers reached 1.8m b/d in August, the highest figure on record. Japan's intake of Iranian Heavy grade more than doubled from 49k b/d to 106k b/d taking total exports to Japan from 210k b/d in Q1 2016 to 268k b/d in Q3. Japanese trading houses such as Sumitomo, Marubeni, Itochu and Kanematsu, which had halted oil purchases totalling 50k b/d during sanctions, are already set to resume imports by year-end.

India has also significantly increased its intake of Iranian crude. In October 2016, they took 2 million barrels for storage as part of their programme to build strategic petroleum reserves and are expecting to take a further 4 million in November. Further, the return of India's Reliance Industries Ltd, which operates the world's largest refinery complex at Jamnagar, took imports of Iranian crude up to 789k b/d in October, overtaking Saudi Arabia.

## Europe opens its doors

Despite difficulty re-establishing links with major European banks, Iran has made headway in recapturing its European market share. Exports of crude and condensates reached 700k b/d in September compared to the average 600k b/d it exported pre-sanctions. As in Asia, Iran has been trading with some European companies in Euros to reduce its dependence on the US Dollar, a deal which also benefits European firms happy to forgo the fee and inconvenience of acquiring US dollars for the transaction. France's Total was the first major to resume trade with an initial agreement to buy up to 200k b/d billed in Euros, followed by Royal Dutch Shell which had to repay a €1.77bn debt to NIOC.

Major refiners in Europe - already geared for Iranian crude - welcomed its return. Greece's Hellenic was amongst the first to secure long-term contracts with the NIOC accounting for 25% of the country's crude imports. Cepsa of Spain also followed by booking Iranian crude for its refineries, and as recently as September, BP received its first cargo of Iranian crude. NIOC has also declared that it is negotiating long-term contracts with BP and Shell. Exports to France, Greece, the Netherlands, Spain and Turkey had reached 450k b/d in June. As well as renewing trade with some of its traditional partners, NIOC has also found new customers, having commissioned 140k b/d to Hungary in October and engaging in discussions for exports of both crude and products to Bosnia and Herzegovina.

Going forward, however, Iran will face challenges to its renewed market share. The start-up of the giant Kashagan field in the Caspian will also create competition for exports to Europe at a time when Russian supplies are expected to reach a post-soviet record of 11.2m b/d. As well as the GCC, neighbouring Iraq is also looking to boost output quickly, having tendered 12 fields under more favourable contractual terms. But the introduction of Iran's new heavy grade from the West Karun region (different to the existing 'Iranian Heavy' with a lower API of 24°) in December has already won interest from sophisticated European and Asian refiners and will make it a rival to Iraq's Basra Heavy.

## Foreign firms needed for additional growth

Iran's surging output this year has surprised on the upside, but it seems that the country has reached its capacity at least over the short term.

The North Yaran field as well as the first phases of North Azadegan and Yadavaran had already started up prior to the Rouhani announcement in November, having increased capacity by 220k b/d. The West Karun fields will likely be Iran's main additions over the medium-term. Yadavaran will produce up to 115k b/d and could reach 185k b/d following the launch of phase two.

North Azadegan, originally slated for 2015 launch with an estimated 50k b/d will instead produce 75k b/d and could reach 150k b/d once phase two is completed in 2019. North Yaran - developed by Persia Oil and Gas Industry Development Company - will also produce 30k b/d and combined with south Yaran is expected to reach a combined 90k b/d by 2018. The company has also signed the Heads of Agreement (HoA) to develop Kupal and Marun.

While the country has ambitious plans to increase output to 5m b/d over the medium term, it can only achieve this with the help of foreign investment and technology. As part of their Sixth National Development Plan, Iran will need to attract \$200bn into the oil, gas and petrochemicals industries over the next five years. But the country suffers from bureaucratic delays, red tape and an unfriendly business environment. In the absence of capital and technology, the country will at best sustain current production levels of around 4m b/d.

Over the long term, additions will come from developing and expanding new fields as well as from mature heavy oil fields using Enhanced Oil Recovery (EOR) techniques. In August, the Iranian cabinet approved an amended draft of the new model for oil and gas contracts replacing the 'buy-back' with the new IPC. Iran is inviting international companies to submit prequalification documents in order to bid for a number of upstream projects including 29 oil fields. The delay has meant that many of the deals are now only expected to be signed in 2017, with production from these fields unlikely to commence until 2020.

## Greenfield projects to be tendered under the new IPC

Field	Capacity addition (k b/d)
South Azadegan phase 1	270
South Pars oil layer	65
Changuleh	50
Darquain - phase 3	60
Golshan	70
Ferdowsi	25
Jufair	17
Sepher	5
Susangerd	30
Sohrab	5
Band-e-Karkheh	15
Arvand	10

Source: NIOC

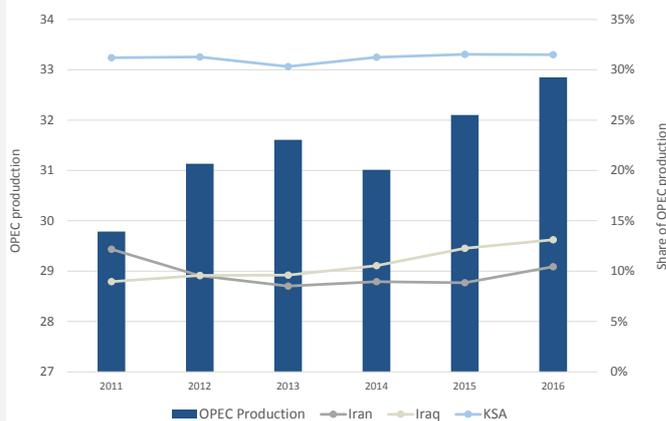
Until now there has been no official deal signed for any of Iran's greenfield or brownfield oil projects under the new IPC. But Total and CNPC agreed a draft \$6bn deal with Iran's Petropars for the development of phase 11 of the major South Pars gas field, representing the first joint venture since the lifting of sanctions. Total's share of the JV is 50.1% and CNPC holds 30%, paving the way for other firms to enter the market. Total is also a frontrunner for South Azadegan, which under two phases could reach a capacity of 600k b/d having signed an MoU for the field in March 2016. Earlier in the year, Russia's Lukoil and Indonesia's Pertamina signed MoU's for the study of the Mansuri

and Ab-Teymour fields and Schlumberger have also signed and MoU for the study of three fields not under the IPC. Italy's ENI has expressed interest in developing Darquain phase three and as recently as November, Norway's DNO signed an MoU on developing the Changleh field.

## OPEC market share strategy holds

OPEC took a decision in November 2014 to target market share. Iraqi output spearheaded OPEC supply growth in 2015, growing 670k b/d (y-o-y) year and together with Saudi Arabia added more than 1.1m b/d to global supplies. Iran had sent clear signals over its own ambition to increase production beyond those achieved pre-sanctions and requested that OPEC allow room for Iranian barrels. In a market where persisting supply and demand imbalance has resulted in record stock-build, Iran's emergence in 2016 presented a fresh layer of supply pressure and pushed prospects for an oil price recovery further back. OPEC's share in the global market has already reached 35%, the highest figure in 40 years.

OPECs top producers as a share of total OPEC production (m b/d)



Source: OPEC secondary sources

But on 30th November, OPEC reached an agreement to cut production by 1.2m b/d, with some non-OPEC producers also agreeing to cut an additional 600k b/d from 2017. The outcome is perhaps a success for OPEC as a whole, the absence of which could have seen prices tumbling further. Production will be monitored closely over the next six months, and if this agreement is upheld then the market rebalancing would accelerate and stocks will be drawn down. Based on this agreement, Iran is to freeze its output at 3.8m b/d. On one hand, this represents a cut of a little over 100k b/d from Iran's directly communicated figure of 3.9m b/d production in October, whereas based on OPEC secondary sources, this presents an opportunity to increase output by a further 90k b/d. Either way, Iran output seems to have plateaued with no real significant oil growth prospects at least in the short run. Therefore, the freeze should not be viewed as a hurdle to Iran's ability to increase production further.

## Challenges remain despite strong comeback

Iran's objective to increase output to above 5m b/d within the medium term will not be easily achieved, and targets cannot be met without attracting foreign capital and technology, especially from western foreign companies. The IPC was to herald new IOC investment in the country's oil sector, but the delays in approving the new contract has hindered progress. Whilst several MoU's were signed this year, several challenges remain.

First, the improvement of the new IPC compared with the unpopular 'buy-back' will do little to attract IOCs if they are not competitive with what is available globally. While the terms of the new IPC need to be finalised, in order to reel in investments, it will fail to do so without assuring IOCs of the terms and without easing the negotiation process. IOCs have already shown some interest, and the Iranian ministry seems to be making an effort to adjust its new contract based on feedback from investors.

Second, IOCs are still wary of entering the market over fears of violating regulations and risking heavy fines. Iran has made some progress with international shipping and insurance companies; but US residual sanctions are still in place, limiting access to international banking services. Many firms had reservations prior to the elections and are now seeking clarity over the formation of the new US administration before committing. Separately, Iran also runs the risk of having sanctions re-imposed under the 'snap-back' provisions in the event of non-compliance. On December 1, the US senate voted to extend non-nuclear related sanctions on Iran for more than 10 years. Iran has already threatened to cease its commitment to the deal last year if Obama does not allow for the expiration of the existing sanctions by year-end.

Third, the Iranian elections in 2017 provide no guarantee on the re-election of the moderate president Rouhani, who has been in favour of energy sector reform, engagement with international firms and opening of the Iranian economy. Hardliners have typically argued that sanctions have forced the Islamic republic to rely on developing local skills in the energy sector, and would push to limit the contribution of foreign firms.

Nevertheless, Iran remains capable of surprising further in the medium term, as it has done this year. Heightened uncertainty in global oil markets is pushing some international oil companies to increasingly target upstream opportunities with massive low-cost reserve bases – exactly the type that exist in Iran. But the risks are high and rather than attracting a large number of companies, Iran can prove to be the land of opportunity to those companies which are patient and have the skills to manage these risks and navigate through the challenges.

© Arab Petroleum Investments Corporation

Comments or feedback to [energy.research@apicorp-arabia.com](mailto:energy.research@apicorp-arabia.com)