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BULLETIN

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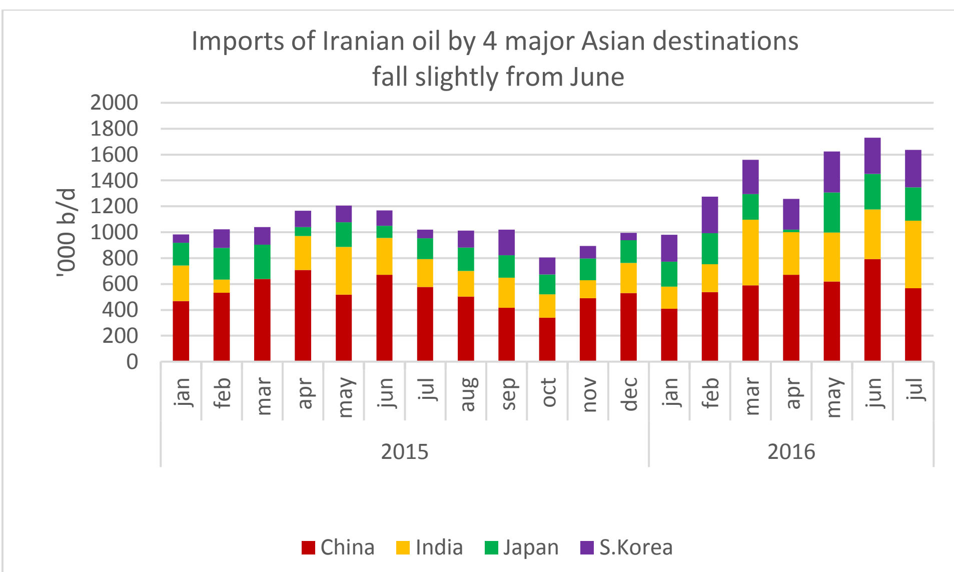
MORE SIGNS OF IRAN'S PRODUCTION PLATEAU

With Japan's METI reporting the country's import volume from Iran in July, a clearer picture of NIOC's sales volume to its four main Asian destinations comes together. The picture tends to show that exports to these Asian customers plateaued in the May-July period, with China being a key variable.

The issue of whether or not Iran's production has also plateaued may be a factor in whether key OPEC and non-OPEC producers are now satisfied with their market shares and thus try to reach some understanding with each other late next month in Algiers. One telltale sign between now and then will be the extent to which NIOC and SOMO accept price leadership from Saudi Aramco when OSPs are put out for October.

If Iran is realistic, its push for upstream investment will be a non-factor in any discussions in Algiers. Iranian officials this week began laying out a schedule for the first round of bidding on new oil projects. This process will take much longer than the officials now expect and will not be a factor in supply/demand balances for a number of years.



Other NIOC Destinations

Less accurate current data for NIOC sales to other destinations in Asia and Europe are available. Rough estimates from shipping data suggest that NIOC's new customers, plus old standbys like Turkey, Syria and the UAE (condensate), may have taken about one-third as much oil as these main Asian customers did in July. That would account for something over 2 million b/d of exports *in toto.*

End-March Production Goal

Iranian Oil Minister Bijan Zanganeh has been saying for months that he is eyeing crude production reaching 4 million b/d by the end of the current Iranian year (end-March 2017). That would be a 150,000 b/d increase over what he has pinned as recent production--3.85 million b/d. Most non-Iranian industry observers estimated August production at closer to 3.6 million b/d. A *Reuters* survey today saw Iran's August volume flat with July's. Iran last reported to OPEC that its July production was 3.62 million b/d. A one-month *production* increase of 230,000 b/d would be extraordinary. A key variable in the *export rate* is refinery throughput. For June, Iran reported to JODI that input to refineries was 1.605 million b/d--185,000 b/d less than in January.

Who Is Mansour Moazami?

Mansour Moazami, Deputy Minister of Industry, Mining and Trade, was widely quoted yesterday saying that Iran aimed to produce 4 million b/d by year-end, which is the same number Zanganeh has been using for some time. This was seen to contradict some indications from Zanganeh late last week that he wanted to cooperate with other producers in OPEC. "Iran will cooperate with OPEC on improving prices and the state of the crude market, but we expect our right to restore our lost market share in the market to be considered," Zanganeh said on August 26.

In his current position, Moazami is not in the loop as far as any delicate balance that Zanganeh is trying to project. Moazami is a former ambassador to Brazil and Bolivia who went on to manage a number of state petrochemical companies. He was in charge of human resources at the Oil Ministry when Zanganeh took over in August 2013. Zanganeh briefly put him in charge of international affairs, then had him in charge of a planning portfolio. Earlier this year, he was named as an advisor to Zanganeh without any portfolio before he found his new perch at the Ministry of Industry.

Adding 150,000 b/d by End-March

If Iran is claiming 3.85 million b/d of production now, an increase to 4 million b/d would not raise eyebrows. An increase of 150,000 b/d of new production over the next seven months is plausible, largely from the West Karun fields. But an increase of 400,000 b/d--from 3.6 to 4.0 million b/d--is both implausible and also inconsistent with whatever method Iranian officials are using to account for barrels.

Decline Rates

The question is whether some 150,000 b/d of new production can offset natural declines in older fields during the next six or more months. Iranian officials are obviously concerned about decline rates, but it is difficult for outsiders to assess.

Past Estimates of Decline Rates

In a March 2005 analysis, the EIA estimated that Iran's existing oil fields had a decline rate of 8-13% per year (300,000-500,000 b/d). After President Ahmadinejad took office in August 2005, his new oil team began to purge the Oil Ministry and NIOC of the team Zanganeh had assembled during his first tenure as minister. In 2006, his successor, Kazem Vaziri-Hameneh, said that Iran was losing 500,000 b/d each year to natural declines. PFC Energy issued a report in October 2006 in which it asserted that Iran could become a net importer of crude oil by 2016 or even earlier if the giant Azadegan and Yadavaran oilfields were not developed in time to stem a steeper than expected decline in production. "Without a fundamental and nearly immediate shift in policies, Iran's net crude exports could fall to zero in as little as nine years," the PFC report stated. These assessments were made at the time of the "peak oil" craze, when many analysts obsessed over decline rates in the productivity of individual wells. Producers drilled more wells.

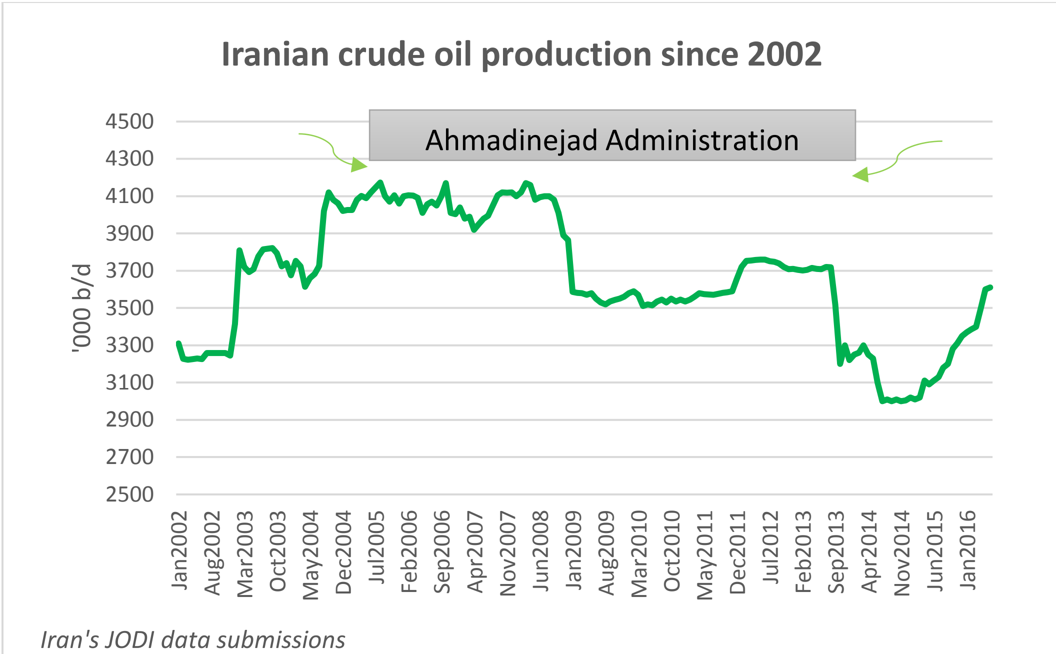
Iran ended up curtailing run-away demand growth with higher prices. Lower production levels under sanctions would have reduced decline rates as well. But declines still have to be reckoned with.

Zanganeh's Buyback Accomplishment

Between 2002 and 2005, Iran increased its production by about 1 million b/d. Some 600,000 b/d of that increase came from new production from fields developed under buyback contracts during Zanganeh's first tenure as minister. Other increases came from long-stalled efforts to recover from the ravages of the Iran-Iraq War.

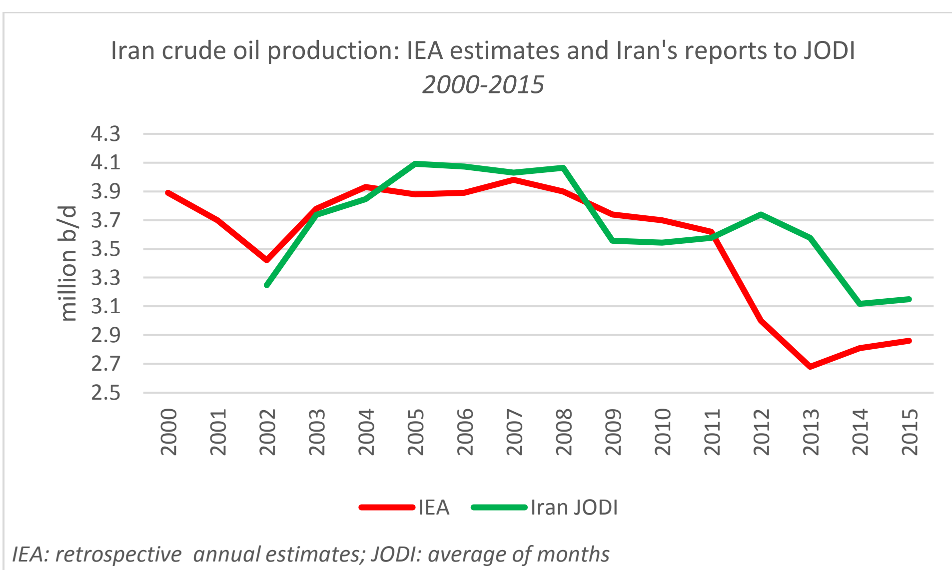
Step-by-Step Goals

Zanganeh's current goal is to again attract a first tranche of foreign investment so as to reach 4.2 million b/d capacity by the end of next year. That is what he calls Iran's right, based on its claimed production in 2005. The goal of the second tranche of foreign investment is 4.8 million b/d of capacity in five years. Under these desired scenarios, production would go up by about 200,000 b/d per year on average through 2021, although much of it would be not be realized until the latter end of the time frame.



IEA Estimates of Past Performance

The IEA's estimates of Iran's annual production have generally been below what Iran claims it was in reports to JODI. The notable exception was after Iran joined a concerted effort by OPEC in late 2008 to overcome the drastic loss of world demand after the onset of the Great Recession. At that time, Iran claimed to be more compliant with OPEC measures than others thought it actually was. In addition, once oil sanctions were imposed in mid-2012, the Ahmadinejad administration wanted to claim that they were ineffective. Only when Zanganeh again became minister in late 2013 did Iran officially acknowledge the effect of the sanctions on its production levels.



History is Both Relevant and Irrelevant

The history of Iran's production levels is relevant to Zanganeh's claims that the rest of OPEC should "consider" Iran's "right to restore our lost market share" rather than look at Iran as some kind of spoiler. He puts Iran's right at 4.2 million b/d. But, aside from claims of a right, Iran's historic production levels are irrelevant to what volumes it may be able to achieve in the future.

First Investment Tranche

Besides some new production from West Karun fields, future volumes will depend largely on how successful Iran will be in attracting new investment. This week, NIOC Managing Director Ali Kardor said that Iran will hold a first round of bidding on oil and gas projects this fall. He hopes to make awards by the end of this year and says he expects the first three projects will bring in $10 billion of new investment. Over the next five years, Iran says it will need $70 billion in new investment.

Kardor said NIOC will send letters to companies next week, apparently to invite them to submit prequalification information. The first tender, which is likely to be for the South Azadegan oil field in southwestern Iran, will take place October 14-21, Kardor said.

Prequalification

NIOC probably has a pretty good idea about which companies it would like to attract, but the prequalification process might not be as smooth as Kardor envisages it. Given the politics of Iran, NIOC may come under pressure to prequalify bidders who are manifestly incompetent to fulfill any contract.

Iran's Special Terms

Bidders who are clearly competent may not meekly accept the terms that NIOC has in mind. One issue will be dispute resolution. Iran reportedly wants any disputes to be solely adjudicated by its own courts. Even if Iran's judiciary had a better reputation than it does, that condition will be hard to swallow.

In addition, there are reportedly conditions related to technology transfers and partnering with Iranian entities. Zanganeh last year described ambitious local content/technology transfer terms requiring the IOCs to transfer equipment and oilfield service technology, patents, and marketing rights to Iranian entities. It is hard to imagine that an IOC subcontractor would agree to surrender a regional market in the wider Gulf to an Iranian entity as the price for obtaining a subcontract. The partnering requirement is an additional complication given that some potential partners identified by NIOC remain sanctioned.

Economic Terms

When other countries, like Iraq, began a tendering process, the IOCs did not accept the basic economic terms initially presented to them. They proposed alternative terms and different variations on sliding scale factors. Extended discussions between the companies and the host government ensued. Most of the companies, after all, have people with great experience in how different fiscal systems and contract formulae work.

Limited E&P Budgets and High Political Risk

In Iraq's case, the IOCs had substantial budgets for new ventures and the general outlook for crude oil prices was somewhere between bright and fevered. Besides current budget constraints, a number of IOCs have taken the position that political risk in Iran is high at this time. The May 2017 presidential election could see wholesale change in the political climate. Nobody knows what might happen after Supreme Leader Khamenei dies. Iran won't necessarily reform its banking system by the June 2017 deadline set by FATF. Significant U.S. sanctions remain. Tensions between Iran and its neighbors are high.

Demining South Azadegan

If the first big oilfield which NIOC wants to tender is South Azadegan, the IOCs will also look at issues which arose for Royal Dutch in Majnoon, in particular the problem of unexploded ordnance left over from the Iran-Iraq War. The two fields are adjacent--what Iran calls "joint fields"--and lay in areas of intense military activity for eight years.

Reservoir Studies

Kardor this week also told the press that NIOC had signed seven initial non-disclosure agreements with six named companies: Austria's OMV, France's Total, Germany's Wintershall, Indonesia's Pertamina, and Russia's Lukoil and Zarubezhneft. Press reports suggest that NIOC plans to provide these companies with field data. Depending on the scope and reliability of any such data, it could form the basis for competent companies to evaluate or simulate reservoir characteristics.

Enhanced Oil Recovery

Those types of studies are not unusual, but they take a long time to conduct. For existing fields subject to high rates of natural declines, those studies provide the initial basis for formulating enhanced oil recovery strategies. NIOC has been very clear that it needs EOR. In general, EOR strategies can include water, natural gas, or other types of injection, or, in some cases, steam flooding. These strategies may depend on the availability of inputs. In Iran, gas reinjection has been the normal practice. Data on the amount of gas currently being reinjected varies, but it has often been estimated that Iran might need to double or triple the amount of gas now being reinjected in order to sustain production from older, existing fields. A number of years ago, the Oil Ministry said that Iran was using 17% of the gas it produced for reinjection. Thus, the availability of additional gas will be a significant issue.

Slow or Slower

In short, it is unrealistic to believe that Iran can possibly add 400,000-600,000 b/d of production by the end of next year. Any additional slugs between now and the end of next March will have to offset natural declines. Thereafter, the pace of major investment is likely to be as slow or slower than it has been when other formerly off-limits provinces have been opened up for the IOCs.