

Iran's clenched fist crushes energy hopes

Even before Iran's presidential election, its oil and gas industries were struggling to meet the nation's energy needs and export aspirations. Following what some see as a thinly-veiled military coup, the outlook looks even bleaker – not just for the Iranian people, but for the global energy economy.

| by Alex Forbes

In the short term, Iran's election crisis has had little discernible impact on production of oil and gas, or indeed on the price of oil. A week after the election, Société Générale described the political turmoil as 'a non-event in the oil market'. Head

with barely a wobble. However, in the medium to long term, the new political reality looks likely to exacerbate trends that became manifest during president Ahmadinejad's first term. Since he came to power in mid-2005, what news

'we will extend a hand if you are willing to unclench your fist' he raised hopes of an historic rapprochement between the United States and Iran. There were many who believed that the combination of a new president in the White House and the possibility of a new president in Iran in 2009 might deliver an opportunity to transcend decades of enmity. Some pointed to the example of Libya, which underwent an astonishing political rehabilitation in the first half of this decade that was quickly followed by a boom in energy investment by foreign companies.

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of oil research Mike Wittner commented: 'We note that there have been no reported threats to disrupt crude production or exports. All anecdotal reports from ship brokers, Iran's oil customers, etcetera, confirm that operations are normal.' Even the Iranian stock market absorbed the news of the unfolding political crisis

there has been about new oil and gas developments has concerned mainly delays, the abandoning of agreements, and fruitless negotiations.

Crisis of legitimacy |

When president Barack Obama proclaimed during his January inauguration speech

But it was not to be. The political turmoil that has engulfed Iran since the disputed presidential elections of 12 June has not only crushed such hopes. It has put the possibility of a political rapprochement even further out of reach, at least for now. Not only is Mahmoud Ahmadinejad still



Photo: Contrasto / Hollandse Hoogte

president – with all that this implies, given the damage inflicted on Iran’s economy and its energy industries since he took office in 2005 – but the government he leads now faces a crisis of legitimacy.

Whatever the truth about the election, the events that followed it are hardly indicative of a healthy democracy: at least dozens of deaths, thousands of arrests, ill-founded accusations of foreign plotting to foment a ‘velvet revolution’. Such have been the excesses as the government has desperately sought to quell protests over the allegedly rigged election. Large cracks have appeared in Iran’s politico-religious establishment. Even the Supreme Leader, Ayatollah Ali Khamenei – who retains the final say on most key policy issues – has been drawn into backing Ahmadinejad in ways that have tarnished the authority of both the

man and his office. All this has made it much harder for western leaders to engage in negotiations with Iran. Its fist is clenched tighter than ever.

Development slow-down |

Of course Iran’s post-revolution politico-clerical establishment has never been as monolithic as many assumed. The cracks now appearing have formed along fault lines already apparent to those who have followed Iranian politics closely in recent years. Not only are there divisions between the reformists and the conservatives, but also within the conservative camp and between the politicians of Tehran and the clerics of Qom. While the protests may have subsided, it remains to be seen how effectively the new administration will be able to govern a country where millions do not accept the authority of the “elected” leader.

So what are the implications of this new political reality for Iran’s economy and its oil and gas industries? One inevitable conclusion is that it will become even more difficult than before the election for Iran’s oil and gas industries to attract much-needed foreign investment, expertise and technology, particularly from western companies. Moreover, with Ahmadinejad still at the helm, the oil and gas industries will almost certainly continue to be hindered by cronyism, mismanagement and a lack of much-needed reforms. So the slowdown in oil and gas development that became apparent from early on in Ahmadinejad’s first term looks set to continue, and probably worsen.

The reasons for this slow-down are not hard to find. They include: the unpopularity of Iran’s system of buyback contracts with many potential foreign investors;

the nation's byzantine bureaucracy which acts as a brake on approval and implementation of work programmes; and a complacency born of an era of high oil prices and the consequent high influx of export revenues. The lack of growth in oil and gas production is worrying not just for the people of Iran, who are heavily dependent on oil export revenues, but also for energy consumers outside Iran.

Europe, in particular, has been looking longingly at Iran's gas reserves because they could provide comforting supply diversity that would reduce the continent's growing dependence on Russia. Concerns about supply security have recently led to some remarkable policy initiatives in the European Union aimed at ensuring future gas availability. But none of these involves importing gas from conveniently-located and abundantly-endowed Iran. Firstly, geopolitical factors make it difficult for

a net importer of gas. According to OPEC statistics, exports of 4.25 bcm (billion cubic metres) to Turkey were more than offset by imports of 6.90 bcm from Turkmenistan. What is more, Iran has recently agreed a significant expansion of its imports from Turkmenistan – for which a new pipeline is to be constructed – while plans to export more gas, by pipeline and LNG, remain mired in difficulties.

Decline rates |

If we first look at oil, Iran's hopes to increase production capacity to over 5 million barrels per day by 2010 look very ambitious given the obstacles in the path of new developments. Iran's oil production climbed to over 5 mbd during the 1960s and 1970s. Output plummeted in the years following the 1979 revolution, at one point falling below 1.5 mbd. It has since been climbing steadily to over 4 mbd.

projects will take several years to bear fruit. Meanwhile, Iran's oil fields have natural production decline rates of 8-11%. Add to these decline rates the projected growth in consumption of oil products within Iran and it is not hard to see why some commentators have speculated that Iran may be unable to export any oil within a decade or so without massive new investment in field development. For an economy so heavily dependent on oil exports for its revenue, such an outcome would be catastrophic.

Freezing weather |

With regard to gas, Iran faces an entirely different situation. First of all it should be noted that although Iran remains a net importer of natural gas, this is not to say that Iran does not produce a lot of gas. On the contrary, it is the world's 4th-largest producer, after Russia, the US and Canada (well ahead of, for example, Qatar, in 8th place). According to OPEC statistics, in 2008 Iran's gross gas production was 180 bcm, of which 116 bcm was put on the market, 27.4 bcm re-injected to enhance oil production, and 16.8 bcm flared (burned off during oil production).

Iran is actually the world's third largest consumer of natural gas, after the US and Russia

Europe to contemplate importing Iranian gas while US and UN sanctions are in place. Secondly, Iran would struggle to make sufficient gas available without new momentum being imparted to its oil and gas development.

The importance of Iran to the global energy economy cannot be overstated. It is the world's second-largest holder of proved oil reserves after Saudi Arabia, and the second-largest holder of proved gas reserves after Russia. In terms of total proved hydrocarbon reserves, it lies second after Russia, just ahead of Saudi Arabia. Yet, while Iran is a major producer and exporter of oil – the fourth producer in the world with production of around 4.0 million barrels per day (mbd) and exports of around 2.3 mbd – its potential to become a major exporter of natural gas has yet to be realized. Indeed, in 2008 Iran remained

The International Monetary Fund puts Iranian oil production at 4.0 mbd in 2008 and projects it will fall to 3.9 mbd in 2010. This is despite the recent inauguration by petroleum minister Gholamhossein Nozari of what is claimed to be the Middle East's largest gas re-injection enhanced oil recovery (EOR) project at the Aghajari oil field. Natural gas piped 510 km from the offshore South Pars field is expected to boost the field's production by 130,000 b/d, from 140,000 b/d to 270,000 b/d.

A number of other projects are under way to boost oil production, several involving agreements with Chinese companies. In 2007, the National Iranian Oil Company (NIOC) awarded Sinopec a contract to develop the Yadavaran oil field and in January this year it awarded a \$1.7 billion contract to CNPC for development of part of the Azadegan oil field. But these

This surely puts Iran in a good position to become a major exporter? Well, actually, no. Unlike Qatar, which has a population of about 1 million, Iran is a country of more than 70 million, with a fast-growing population and consequently a high proportion of young people. Like many other countries in the Middle East and North Africa, it has been encouraging consumption of gas to reduce oil consumption and maximise the amount of oil that is available for export. More than half of Iran's primary energy consumption is natural gas and the proportion continues to rise, boosted by expensive subsidies that encourage profligate and wasteful consumption. Iran is actually the world's third largest consumer of natural gas, after the US and Russia!

And that is only part of the consumption story. A large proportion of its gross gas production is re-injected into oil fields to

Iran – second-largest holder of world oil and gas reserves

	Oil		Natural Gas		Oil + Gas
	bn barrels	bn tonnes	Tcm	bn toe*	bn toe*
1 Russia	79,0	10,8	43,3	39,0	49,7
2 Iran	137,6	18,8	29,6	26,6	45,4
3 Saudi Arabia	264,1	36,0	7,6	6,8	42,8
4 Qatar	27,3	3,7	25,5	22,9	26,6
5 UAE	97,8	13,3	6,4	5,8	19,1
6 Iraq	115,0	15,7	3,2	2,9	18,5
7 Venezuela	99,4	13,6	4,8	4,4	17,9
8 Kuwait	101,5	13,8	1,8	1,6	15,4
9 US	30,5	4,2	6,7	6,1	10,2
10 Nigeria	36,2	4,9	5,2	4,7	9,6

* billion tonnes of oil equivalent

Source: BP Statistical Review of World Energy, 2009

enhance crude recovery and the volumes needed for enhanced oil recovery (EOR) are set to grow rapidly if Iran is to maintain oil production capacity. Another large proportion is wastefully flared. Iran also has ambitions to build a large petrochemicals industry which will consume vast amounts of gas as feedstock.

In short, despite being the second-largest holder of gas reserves and the fourth-largest producer, Iran has been struggling to produce all the gas it needs – as events in the winter of 2007/8 proved. In early 2008 Iran faced a conjunction of circumstances that led to a gas supply crisis of unprecedented severity. During an exceptionally cold winter, Turkmenistan suspended gas exports to Iran – just as demand was peaking because of freezing weather. Iran reduced the volumes gas being reinjected into oil fields and interrupted exports to Turkey. But these measures were not enough to avert shortages that, according to local media, led to protests in the northern cities of Gorgan and Qaemshahr – and a number of deaths.

Happy gift |

One result was an intensification of the ongoing debate within Iran as to whether the nation should have a strategy of ramping up exports when it appears unable to meet the needs of its own people. A similar debate is under way in several other gas-rich nations in the Middle East and North Africa.

Iran is unlikely to face such a severe winter gas shortage again for some while, thanks to the inauguration earlier this year of phases 9 and 10 of the giant South Pars gas field. Both phases are dedicated to supplying the domestic market and when they have ramped up to full capacity they will supply an additional 18 bcm/year, an increase of 16% on 2008's marketed production. This additional gas will boost not just the supply to the domestic market but also the hopes of those within Iran who believe that the nation should follow a policy of becoming a major exporter (see article on page %\$#%\$#). But what Ahmadinejad described during the inauguration as a 'happy gift' to the Iranian people should be seen in context. Phases 9 and 10 are coming on stream now, years late, having

been started before the president came to power. It will not be long before demand growth absorbs the new supply and there are few projects in the pipeline to meet growth beyond that.

Meanwhile, there is every chance that politics could again intervene to make life yet more difficult for the Iranian people. Despite the bluster of its president, sanctions imposed by the United States and the United Nations – and the political message these have sent to potential western investors – have contributed significantly to its oil and gas development slow-down. Given recent statements by Iranian politicians about the nation's determination to continue with uranium enrichment, it looks likely that Iran may face yet another round of UN Security Council sanctions. This year will be a moment of bifurcation for Iran as it faces what have been described as 'bigger carrots and bigger sticks'. Just as likely as a political breakthrough is that Iran could find itself embroiled in some kind of military conflict, perhaps with the US, or more likely with Israel. The consequences of such a conflict could be momentous for the world's energy market. ■