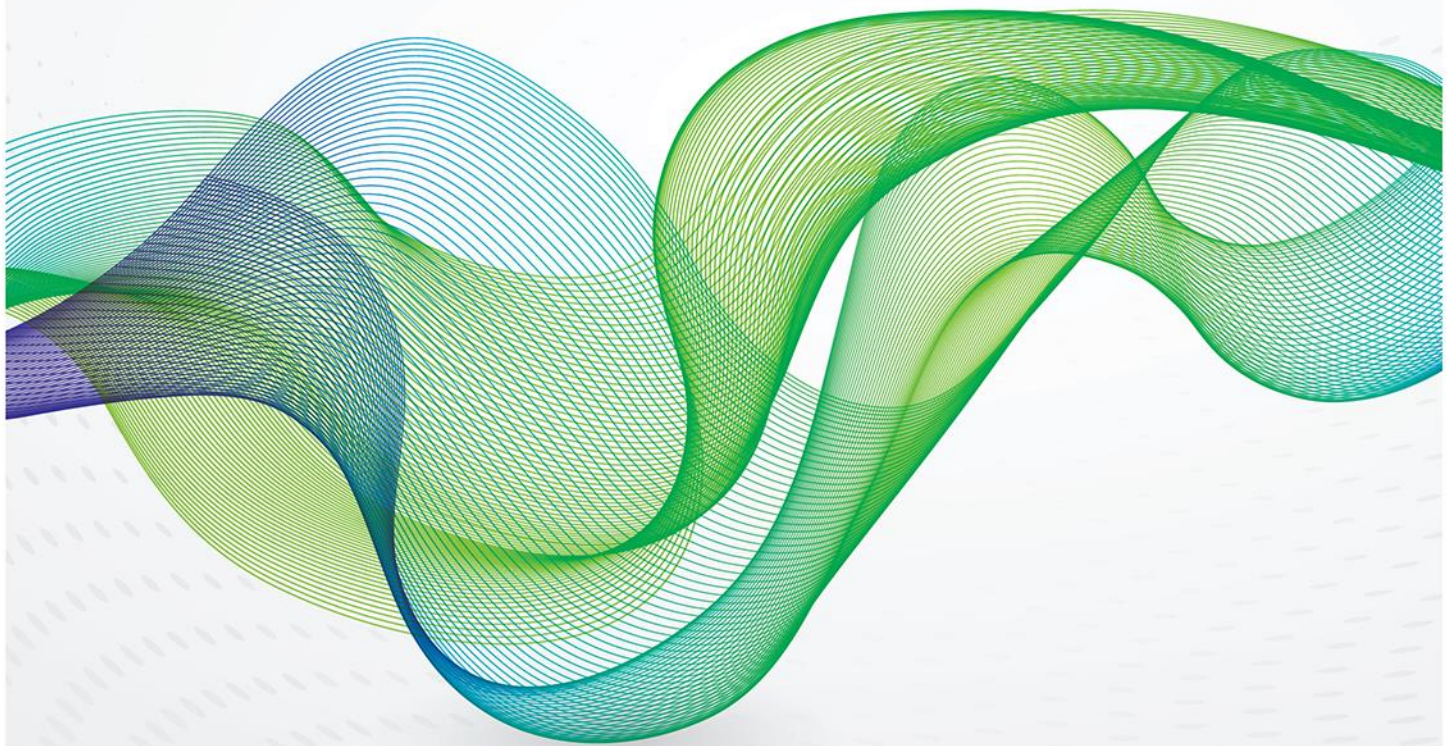




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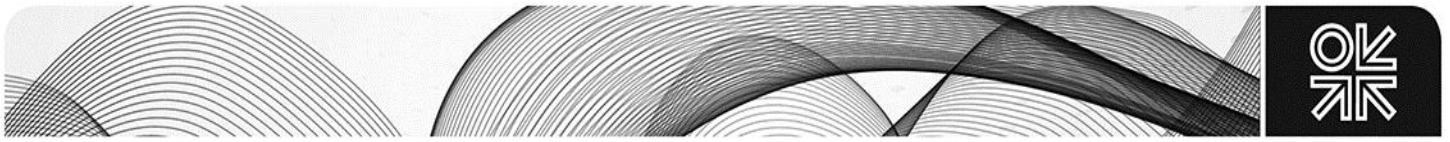
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The US Exit from the JCPOA: What Consequences for Iranian Energy?



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David Ramin Jalilvand



On 8 May, the USA announced its immediate and full withdrawal from the Iran nuclear deal – formally known as the Joint Comprehensive Plan of Action (JCPOA). This came with the reimposition of all nuclear-related US sanctions and possibly several new sanctions. In the words of President Donald Trump, the new US approach will lead to the ‘highest level of economic sanction.’¹

It is common knowledge that before implementation of the JCPOA in January 2016, Iran’s energy industry had been suffering tremendously from international sanctions. Amongst other issues, the sanctions caused a sharp decline in oil exports and forced all European companies out of the country.

The resulting question is: what consequences will there be for Iranian energy this time? The brief answer is that the short-term effects will be lower than in 2012 and will mainly consist of a decline in oil exports in the range of perhaps 15 to 20 per cent compared with 2017 levels (which were around 2.5 million b/d). At least for some time, the loss in oil exports will be offset by larger oil revenue as a result of higher oil prices. In the long run, however, the country’s oil and natural gas sector is probably going to be confronted with a formidable challenge.

The following discusses the current state of affairs with regard to US sanctions against Iran before reflecting upon their impact on Iranian oil exports and investments into the country’s oil and natural gas industry. Finally, an attempt is made to assess the long-term implications for Iran’s oil and gas industry of the US withdrawal from the JCPOA.

US nuclear sanctions reimposed: the status quo

Following Trump’s announcement that the USA was leaving the JCPOA, all waivers for nuclear-related US sanctions were cancelled with immediate effect. These measures target Iranian energy, finance, shipping, and foreign trade, amongst others. However, similar to the approach adopted by the Obama administration, wind down periods of either 90 or 180 days have been stipulated before the sanctions come in effect again, depending on the set of sanctions.

As part of the US sanctions effort, Washington will also reimpose secondary sanctions. These target the economic exchanges of third countries with Iran. Secondary sanctions threaten to punish potential violators of US sanctions even if these are non-US entities outside the USA, provided they have some form of commercial links to the USA. Considering that most energy companies, and basically all international banks and insurers, depend on some form of access to the US financial system, US secondary sanctions carry significant weight.

Notably, though, the USA did not trigger the so-called ‘snapback mechanism’ at the United Nations. This would eventually have resulted in bringing back UN sanctions against Iran.² For Europeans and others, such a move would have made matters substantially more complicated. They would have been forced to choose between either following international law and UN sanctions against Iran or violating multilateral norms in an attempt to save – what would have been left of – the JCPOA outside the UN.

In the case of Iranian energy, US sanctions will come into effect again on 4 November. According to the US Treasury Department’s Office of Foreign Assets Control (OFAC), buyers of Iranian oil are required to ‘significantly’ cut imports by then. Otherwise, they would not be granted OFAC licences (required in order to continue purchasing reduced volumes of Iranian oil without being subject to US penalties).³

The nature of additional sanctions on Iran remains unclear, by and large. Most notably, Iran’s Central Bank Governor, Valiollah Seif, was added to the sanctions list. The Central Bank of Iran receives payments from importers of Iranian oil.

¹ The White House: Remarks by President Trump on the Joint Comprehensive Plan of Action, Washington DC, 8 May 2018.

² The UN did not impose energy sanctions on Iran. In any event, such a move would have had severe political implications.

³ There has not, as yet, been any further specification of what ‘significantly’ is exactly supposed to entail. See U.S. Department of the Treasury: Frequently Asked Questions Regarding the Re-Imposition of Sanctions Pursuant to the May 8, 2018 National Security Presidential Memorandum Relating to the Joint Comprehensive Plan of Action (JCPOA), Washington DC, 8 May 2018.

In all this, it has to be mentioned that the USA has not yet revealed a strategy as to how it will seek to enforce secondary sanctions. During the Obama presidency, Washington's sanctions policy was accompanied by a comprehensive diplomatic effort, which resulted in numerous countries contributing to the US sanctions.

Making the case for the JCPOA in August 2015, then-President Barack Obama explained the underlying idea:

'U.S. sanctions against Iran had been in place for decades, but had failed to pressure Iran to the negotiating table. What made our new approach more effective was our ability to draw upon new U.N. Security Council resolutions, combining strong enforcement with voluntary agreements from nations like China and India, Japan and South Korea to reduce their purchases of Iranian oil, as well as the imposition by our European allies of a total oil embargo.'⁴

Today, neither the White House nor the State and Treasury Departments seem to be in possession of a detailed strategy (yet). Sanctions experts from the former Obama administration have themselves commented on the current lack of a systematic approach. The consequence is a weakened US position when it comes to sanctions enforcement today.⁵

Oil exports: a slight decline, offset by increases in revenue?

Iran's oil exports are among the most important targets of the US sanctions. Unlike the position in 2012, however, the decline in Iranian oil exports will very likely be lower this time.

Between 2011 and 2013, Iranian exports of crude and condensate shrunk from 2.5 to 1.1 mb/d. At the time, Tehran's oil sales fell because of both an EU oil embargo and voluntary cuts made by China, India, Japan, and South Korea.

Since JCPOA implementation in January 2016, Iran's oil exports have recovered to pre-sanctions levels. In 2017, crude and condensate exports amounted to an average 2.5 mb/d (see Table 1). In April 2018, a new post-JCPOA export peak of 2.9 mb/d was reached. However, rather than being a new normal, this climax was the result of Tehran emptying stockpiles in the knowledge of Trump's approaching decision and the potential reimposition of US sanctions.⁶

Table 1: Iran's Crude and Condensate Exports in 2017

	China	India	Japan	S Korea	Taiwan	Turkey	Italy	France	Spain	Greece	Germany	Other EU	TOTAL	(EU total)
kb/d	622	471	170	361	26	244	198	114	84	74	16	138	2,518	624
% of total	24.7	18.7	6.8	14.3	1.0	9.7	7.9	4.5	3.3	2.9	0.6	5.5	100	24.8

Source: MEES.⁷

At any rate, most of the countries importing Iranian oil today do not seem to be willing to join the USA in sanctioning Iran. The EU in particular has explicitly pronounced its rejection of the US withdrawal from the nuclear deal.

To save the JCPOA, the EU has outlined several areas in which economic relations between Europe and Iran are to be continued and even expanded – these areas include oil trade.⁸ Moreover, with 'the

⁴ The White House: Remarks by the President on the Iran Nuclear Deal, Washington DC, 5 August 2015.

⁵ See, for example, the statements by Amos Hochstein or Richard Nephew. CNBC: 'Trump's Iran nuclear deal exit may spark a sanctions battle with Europe that Uncle Sam already lost once', 9 May 2018.

⁶ Bloomberg: 'Iran's Oil Exporters Have Record Month Before Possible Sanctions', 1 May 2018.

⁷ MEES: 'Iranian Oil Exports Hit Pre-Sanctions Levels As European Share Grows', 9 February 2018.

unanimous backing of EU Heads of State or Government' on 17 May, the EU announced it would act on four points, to:

- 1) activate the EU Blocking Statute,
- 2) mandate the European Investment Bank to finance Europe–Iran trade,
- 3) co-operate further with Iran, amongst others, on energy,
- 4) establish financial relations with the Central Bank of Iran.⁹

On the occasion of his trip to Tehran on 18 May, EU Climate Action and Energy Commissioner Miguel Arias Cañete expressed the EU's desire to 'strengthen energy relations with Iran'.¹⁰

The message is clear: for as long as Iran is fulfilling its commitments under the JCPOA, Europe will not embargo Iranian energy.

It remains equally questionable if the other customers of Iranian oil are ready to follow the US sanctions effort. China, the single largest importer of Iranian oil (see Table 1), put forward a joint statement with Russia declaring the 'unwavering support for the comprehensive and effective implementation' of the JCPOA.¹¹ Asked about whether Beijing was still going to import Iranian oil, Foreign Ministry Spokesperson Lu Kang stressed that 'China will continue with such trade and economic ties with Iran'.¹²

In India, Foreign Minister Sushma Swaraj stated that 'India follows only U.N. sanctions, and not unilateral sanctions by any country'.¹³ A senior official from the country's largest oil company noted that the decision of the USA would have 'no impact' on oil imports from Iran for as long as Europe did not join the USA in sanctioning Iran.¹⁴ India is paying Tehran for its oil in euros through European banks.

As for Turkey, not only did Economy Minister Nihat Zeybekci announce that his country would 'continue to trade with Iran' but even considered the US JCPOA withdrawal to be an 'opportunity'.¹⁵

All this leaves Japan and South Korea, both close US allies, as the only likely candidates to potentially reduce imports of Iranian oil. In Tokyo, the government of President Shinzo Abe is seeking to promote Japanese interests by fostering a close and also personal relationship with US President Trump.¹⁶ Relations between the USA and Japan are currently facing challenges over trade, while Japan is at the same time cautiously watching developments over North Korea. In this context, it does not appear probable that Japan is willing to risk its ties with the US president over Iran. Japan's imports of Iranian oil have remained below pre-sanctions levels anyway, despite both the JCPOA and the provision of special Japanese government-backed insurance for oil trade with Iran. While they averaged 313,000 b/d in 2011, imports only amounted to 170,000 b/d in 2017 (see Table 1).

South Korea, very much like Japan, is likely to seek to avoid tensions with the USA – amid the difficult geopolitical situation over North Korea. Seoul's imports of Iranian oil, mostly condensate, had already declined markedly prior to Trump's decision on 8 May – albeit for commercial reasons. The opening of

⁸ European External Action Service: Remarks by HR/VP Mogherini at the press conference following ministerial meetings of the EU/E3 and EU/E3 and Iran, 15 May 2018.

⁹ European Commission: 'European Commission acts to protect the interests of EU companies investing in Iran as part of the EU's continued commitment to the Joint Comprehensive Plan of Action', 18 May 2018.

¹⁰ European Commission: 'Commissioner Miguel Arias Cañete in Iran to strengthen energy co-operation', 18 May 2018.

¹¹ Ministry of Foreign Affairs of the Russian Federation: 'Joint Statement on the Joint Comprehensive Plan of Action (JCPOA) by the Russian Federation and the People's Republic of China', 5 May 2018.

¹² Ministry of Foreign Affairs of the People's Republic of China: Foreign Ministry Spokesperson Lu Kang's Regular Press Conference, 17 May 2018.

¹³ Reuters: 'India says it only follows U.N. sanctions, not U.S. sanctions on Iran', 28 May 2018.

¹⁴ The Economic Times: 'India's oil import from Iran will not be immediately impacted by US sanctions', 9 May 2018.

¹⁵ Bourse and Bazaar: 'Turkey Says US Iran Deal Pullout "Opportunity" for Ankara', 11 May 2018.

¹⁶ Abe had already met with Trump when the latter was president-elect. Later, he was the first foreign leader to meet Trump after he became president.

a condensate refinery at Bandar Abbas led to Tehran charging higher prices. This resulted in a 39 per cent year-on-year decline in Iranian oil exports to South Korea, to a level of 325,000 b/d in March.¹⁷

Against this backdrop, it could be assumed that the reactions of both Japan and South Korea to the reimposition of US sanctions might be along the lines of their response in 2012, when both countries reduced their purchases of Iranian oil by some 50 per cent over time. Today, a 50 per cent cut by Seoul and Tokyo would be equal to combined volumes in the range of around 250,000 b/d.

In addition to this, some individual traders, refiners, insurers, and shippers might refrain from trading Iranian oil, fearing US secondary sanctions. However, others might take their place – or at least increase the proportion of their trade done with Iran – especially if Tehran were to offer discounts, as it has done on various occasions in the past.

In this context, the level of exposure to the USA will likely constitute the greatest problem. For instance, Indian refiner Reliance announced it would stop importing Iranian oil by the end of the sanctions' wind down period, citing commercial and financial links to the USA.¹⁸ For those without their own business interests in the USA (including many European refiners) banking-related issues will likely constitute the greatest challenge: they will have to find ways to make financial transactions with Iran.

In light of this, while the figures are highly speculative, some further 5 to 10 per cent of Iranian oil exports might be taken off the markets. This would amount to between 125,000 and 250,000 b/d – in addition to the cuts by Japan and South Korea. Developments in recent weeks suggest the risk is on the upside in this context.

All in all, these numbers add up to a reduction of Iranian oil exports in the range of around 375,000 and 500,000 b/d by the end of the 180 days wind down period on 4 November, corresponding to between 15 and 20 per cent of Iran's 2017 oil exports. This is, without doubt, a significant figure. Still, these volumes are substantially below the 1.4 mb/d, or 59 per cent, decline caused by sanctions in 2012, though the risks of further losses are on the upside.

Moreover, at least in the short term, it does appear that the economic harm of lower oil exports for Iran's government budget is somewhat mitigated by the fact that oil prices have recently increased markedly. In the case of Brent, prices have risen from a lower \$60-range in February to almost \$80 per barrel in May – an increase of more than 25 per cent. On 17 May, Brent spot prices temporarily even surpassed \$80 per barrel, a level last seen before the collapse of oil prices in 2014. In the eyes of many analysts, geopolitical tensions have been a central factor in pushing oil prices up. In addition to the crisis in Venezuela, and the decline in stocks and low spare capacity, tensions over the JCPOA have played no small part in this context.

In Tehran, the government budget for the current Iranian year (running from March 2018 to March 2019) is based on oil prices of \$55 per barrel. In April, Petroleum Minister Bijan Zanganeh noted that prices in the range of \$60 are 'good'.¹⁹ This is consistent with previous statements by Iranian energy officials. Therefore, it seems that in the short term, any loss of market share for Iran will be partially offset by a rise in oil export revenue as a result of higher global oil prices. Obviously, the question is for how long oil prices will remain in the range of \$70–80 per barrel. At any rate, the recent rise in oil prices gives Tehran more time and room to adjust to any losses in oil exports.

However, while the short-term consequences of the US exit from the JCPOA will be comparably smaller than those felt in 2012, the long-term consequences will be more difficult to handle for Tehran: namely how to break the deadlock regarding the lack of international investments.

¹⁷ Reuters: 'South Korea's March Iranian crude oil imports down 39.3 percent year-on-year', 15 April 2018.

¹⁸ Reuters: 'India's Reliance to halt oil imports from Iran – sources', 30 May 2018.

¹⁹ Reuters: 'Iran's oil minister says \$60 is a good price for crude oil', 11 April 2018.

International investment in Iranian energy: change will be modest – as change had been modest after implementation of the JCPOA

Hopes had been high in Tehran that the conclusion and implementation of the JCPOA would reconnect Iran with the global energy industry. After years of sanctions, large requirements for modern technology and international investments had built up. Iranian officials estimated the country's investment needs at \$200 billion. To promote the return of international companies, the Iranian government introduced a new fiscal framework, the Iran Petroleum Contract (IPC).

By and large, though, Iran failed to capitalize on the JCPOA in term of energy investments. While numerous memoranda of understanding have been signed, just two international contracts were actually concluded; these had a combined total volume of (only) \$5.2 billion.²⁰

In response to the US withdrawal from the JCPOA, French major Total announced that it might give up its engagement in Iran unless it could be granted a waiver from the USA. However, Total expressed its pessimism regarding this question when CEO Patrick Poyanne asked reporters:

'You heard [US Secretary of State] Mr Pompeo just as I did. Do you really think he's going to hand out waivers?'.²¹

Meanwhile, on 30 May, Iran's Petroleum Minister Bijan Zanganeh gave Total a 60 days-deadline to secure such a waiver. Otherwise, Total's share in the project would be transferred to consortium partner CNPC of China.²² Total is the 50.1 per cent majority shareholder in the \$4.5 billion consortium engaged in developing the eleventh phase of the South Pars natural gas field.

Independent of the question of Total's engagement in Iran, the US withdrawal will massively complicate, if not prevent, any further investments by European companies. Trump's decision has dramatically worsened the risk calculus for investments in Iran. This comes at a time when uncertainty over long-term developments in global energy is already high, resulting in lower investment spending by IOCs, regardless of Iran's case.

Even if individual companies decided to take the risks, finance and insurance-related challenges would remain. Most banks and insurance companies capable of financing multi-billion dollar/euro projects rely on the US financial system in one way or another. To them, US sanctions do matter, and they have already hesitated to provide finance for projects in Iran, even before the US JCPOA withdrawal. As for the EU, it is doubtful if the new mandate of the European Investment Bank and the – possibly increasing – provision of euro-denominated credit lines by EU member state banks will allow for major long-term investments into the Iranian energy sector. This at least is the case unless these schemes are massively expanded, and there is currently no indication of this happening.

Thus, the US withdrawal from the JCPOA will likely halt European and international investments – if not in their entirety, then at least to a very large extent.

Nevertheless, the consequences from this might be more modest than possibly expected. This is mainly due to the fact that Iran had been unable to substantially change its position (namely to attract larger volumes of international investment) following the implementation of the JCPOA anyway. In the case of Total, where a contract was finally concluded, expenses in Iran have thus far only amounted to less than \$40 million – which is not much in the context of a \$4.5 billion project. In a sense, the US withdrawal from the JCPOA will therefore likely result in maintaining the broader status quo: Iran will continue to struggle to attract international investment. This will have severe consequences in the longer term: the country is facing a formidable upstream challenge, both in oil and natural gas.

²⁰ Jalilvand, David Ramin: 'Progress, challenges, uncertainty: ambivalent times for Iran's energy sector', Oxford Energy Insight 34, OIES, April 2018.

²¹ Reuters: 'Total chief says holds little hope for Iran waiver', 24 May 2018.

²² Shana: 'Total Has 60 Days to Negotiate Sanctions Waiver with US' Zanganeh', 30 May 2018.

A looming upstream challenge: the major effect of the US withdrawal from the JCPOA

In the case of oil, Iran's energy industry has suffered tremendously from – almost chronic – underinvestment throughout the past decades. This was the result of rather unattractive fiscal terms for foreign companies, international sanctions, and commercial and political mismanagement.

In terms of oil production, Iranian output after the 1979 revolution has always remained below the ceiling of 4 mb/d. In comparison, before the revolution, oil production had peaked at more than 6 mb/d in 1974 and remained consistently above 5 mb/d until the revolution.

As a result of underinvestment, many of Iran's oil fields are mature and require substantial investments in technologies for enhanced oil recovery (EOR). After the JCPOA, only one such investment was secured: a \$700 million contract concluded with Russian Zarubezhneft in March. Generally, Tehran's intention is to boost oil production, with the stated target of 4.7 mb/d by 2022.²³

As a result of the US withdrawal from the JCPOA, however, the focus of Iran's oil production strategy will (have to) change. Instead of expanding output, Tehran will be forced to focus on maintaining oil production.

Lacking access to modern EOR technologies, Iran is injecting large volumes of natural gas (and water) into its many maturing oil fields. In the Iranian year 2015/16 (1394), these amounted to 32 bcm.²⁴ As depletion rates are rising, re-injection needs are likely to grow. As such, the challenge to maintain oil production is directly linked to Iran's second upstream challenge: the need to keep natural gas production growing without (substantial) international co-operation.

During the sanctions years, Iran did manage to expand natural gas output. Between 2006 and 2016 production almost doubled, rising from 112 to 202 bcm per year.²⁵ This was realized by relying on local companies mainly. The role of Chinese companies, which remained in Iran despite sanctions, was secondary. Dissatisfaction with CNPC's performance even led to the cancellation of the company's South Pars operations by Iran's government in 2013.

Despite massive increases in natural gas production, Iran was still unable to meet its ambitious natural gas targets. For instance, Iran's Fifth Five Year Development Plan (2011–15) intended to raise the country's natural gas output to 450 bcm by 2015.

In Iran, natural gas is not only central to maintaining production at maturing oil fields via re-injection, it is also of great importance for households, which depend on the energy carrier for heating and power. Last but not least, natural gas is also the backbone of many domestic economic activities; these are either very energy-intensive (steel and cement production, for example) or require the energy carrier as feedstock (the petrochemical industry). In addition, there are also ambitious export plans, but these have had to take a back seat – apart from pipeline trade with Turkey and Iraq (with contracted but not yet realized volumes of 10 and 12.8 bcm respectively).

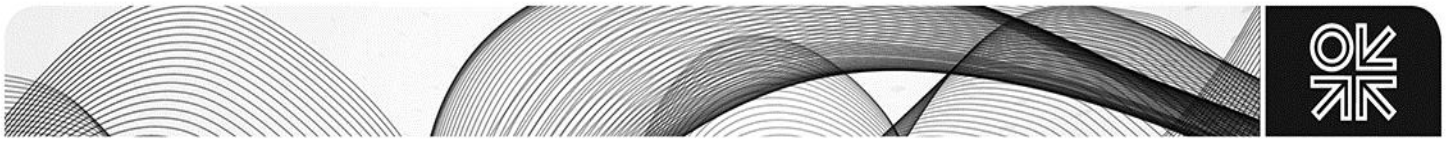
To meet the various domestic demands, it will be essential for Iran to keep its natural gas production growing. The country's already substantial economic problems might be dramatically exacerbated if there is not enough gas for re-injection and industrial activity. Already, industrial consumers are regularly taken off the grid during peak consumption in the winter months. To illustrate the urgency of the matter: in 2014, before the conclusion of the JCPOA, a senior Iranian energy expert warned that Iran was at risk of actually becoming a natural gas importer in light of the country's huge demand needs.²⁶

²³ Reuters: 'Iran plans to increase oil production capacity by 700,000 BPD within 4 years', 8 February 2018.

²⁴ Ministry of Energy of the Islamic Republic of Iran: Balance Sheet of Energy of the Year 1394 [in Farsi], Tehran, 2017.

²⁵ BP: BP Statistical Review of World Energy June 2017, London, 2017.

²⁶ Mehr News: 'Iran domestic energy consumption equivalent to EU industries', 1 March 2014.



For Iran's upstream capabilities, therefore, the US withdrawal from the JCPOA is bad news. Problems lie ahead for the production of both oil and natural gas. In the mid to long term, the country is facing a difficult upstream challenge.

On the whole, it does not appear that the reimposition of US sanctions will lead to an outcome similar to that seen in the years following 2012. At that time, the EU and the USA jointly co-ordinated and enforced sanctions in partnership with other countries. Today, in contrast, the USA is largely on its own when it comes to sanctioning Iran. Moreover, Washington has not yet revealed a strategy as to how it intends to enforce secondary sanctions. Considering the central position of the USA in global finance, any unilateral move it may make to sanction Iran does have consequences for (energy) businesses from third countries – regardless of whether their governments participate in sanctioning Iran or not. But without third countries on board, the effectiveness of US sanctions is weaker and the decline in Iranian oil exports will be substantially lower this time. However, through the global financial system, Washington is in a position to massively hamper international investments in Iran. Thus, the longer-term prospects for Iranian oil and natural gas production are indeed worsening dramatically in light of the US exit from the JCPOA.