

# Between Dependence and Diversification

## Making Sense of Iran's Energy

by David Ramin Jalilvand

The implementation of the Iran nuclear deal, the Joint Comprehensive Plan of Action (JCPOA), formally began in January 2016. In this deal, the nuclear-related sanctions against Iran were eased in exchange for a reduction of the Iranian nuclear program and more international inspections of nuclear facilities. Although a number of contentious issues remain,<sup>1</sup> on the whole the JCPOA has opened the door for Iran to re-connect with the global economy.

<sup>1</sup> These include a potential snapback of sanctions (should Iran be perceived as violating the JCPOA), the enforcement of US secondary sanctions against Iran (targeting non-US individuals), and potentially new sanctions by the US or even a more fundamental re-orientation of US-Iran policy under the Trump administration. Inside Iran, political infighting, corruption and inefficiencies of all sorts constitute further obstacles to a normalization of international economic relations. See International Crisis Group (2017): Implementing the Iran Nuclear Deal: A Status Report, Brussels & Washington, DC. Available at <https://www.crisisgroup.org/middle-east-north-africa/gulf-and-arabian-peninsula/iran/173-implementing-iran-nuclear-deal-status-report> (23.02.2017).

### Executive Summary

Parallel to the conclusion and implementation of the nuclear deal, Iran's energy sector has become a subject of interest around the world. An estimated \$100 billion in foreign investment are needed for the modernization of the Iranian energy industry. Following the relief of sanctions granted as part of the nuclear deal, the government of President Hassan Rouhani is now trying to gain cooperation with international companies. In order to make better sense of Tehran's energy policy and to more accurately assess the overall situation in the Iranian energy sector, this paper argues that attention needs to also be given to Iran's long-term developments. Unlike the past, Iran is now increasingly utilizing its oil and natural gas production domestically. This has important implications for the country's political economy. While the government continues to rely on oil revenue in great measure, the importance of oil exports to the Iranian economy is declining. In foreign trade, for example, Iran no longer requires income from oil exports to finance its import needs. Understanding the implications of the increasing domestic utilization of oil and natural gas is central for any assessment of Iran's political economy.

As in other sectors, the government of President Hassan Rouhani is trying to seize this opportunity for the Iranian energy sector. Since implementation of the JCPOA, Iran has re-established its pre-sanctions position, as reflected by oil production and export levels. In doing so, Tehran gave priority to regaining market shares over other considerations, e.g. countering the oil price decline by lower production, or cooperating with the Organization of Petroleum Exporting Countries (OPEC). At the same time, Tehran is eager to finalize contracts with international companies in order to have investments and technology come to the country. In order to achieve this goal, however, President Rouhani and Petroleum Minister Bijan Zangeneh have to first establish an overall arrangement in the internal market. Even while trying to create a transparent and truly competitive investment-friendly context, vested interests of influential companies and entrepreneurs located in the gray area between state-owned and private businesses must also be addressed. And in order to gain the cooperation of the conservative elements of the Islamic Republic's political establishment, the Rouhani administration is willing to let their businesses have a share in Iran's new oil contract scheme, the Iran Petroleum Contract (IPC). Internationally, Iran is hedging its bets by reaching out not only to companies from Europe, but also to the Asian and Russian markets.<sup>2</sup>

By and large, much of the current analysis surrounding developments in Iranian energy

is focused on the short-term, examining the immediate developments surrounding the adoption and implementation of the JCPOA. But in order to fully grasp the relevance of the energy sector to both politics and the economy in Iran, long-term assessments are crucial. This perspective is particularly important since the role of the energy sector in the Iranian political economy has changed during the past decades. While the industry continues to be of great importance for the country, the actual significance of both energy and revenue from energy exports has changed.

Against this backdrop, this policy brief seeks to discuss long-term developments with regards to the role of the energy sector in Iran's political economy. It argues that, in the long run, the importance of crude oil exports is declining as the energy sector has been increasingly integrated into the political economy. It is no longer only revenue from oil exports that is linking the energy sector to the rest of the country. Hence, attention ought to be given to energy related domestic developments.

### **The energy industry and the political economy: an integration process**

For more than a hundred years, the energy industry has been of central relevance to both political and economic developments in the country. As Iran holds the world's largest combined reserves of oil and natural gas,

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<sup>2</sup> For a discussion of the status quo in Iran's energy sector one year after the implementation of the JCPOA, see Jalilvand, David Ramin (2017): *Iranian Energy: A comeback with hurdles*, Oxford.

the energy industry is of obvious great importance. In many of the country’s decisive moments, oil has played a prominent role: the integration into the world economy; the quasi-colonial dependence on Great Britain in the first half of the twentieth century; the 1953 coup d’état; the financing of the Shah’s reform plans; and as a result of shrinking oil revenues, the economic crisis of the late 1970s which paved the way for the 1979 revolution. More recently, the European Union and the United States sought to change Iran’s nuclear policy by imposing sanctions on Iranian oil and natural gas, alongside other measures.

At its onset in 1901 and the following decades, the energy industry was an enclave with only a few links to the rest of the country. The industry was controlled by the British-run Anglo-Iranian Oil Company: Iran’s only substantive contribution was the provision of unskilled labor, while operation of the industry (skilled labor) and profits were largely in the hands of the British.

Later, after the 1953 coup d’état, Shah Mohammad Reza Pahlavi increasingly established control over the industry. But skilled labor continued to mainly come from abroad, while the bulk of the industry’s production was exported. During this time, the main link between the energy sector and the rest of Iran’s political economy was the government’s domestic utilization of revenues from oil exports. State-society relations were re-defined as the Iranian government increasingly distributed revenues from oil exports among the people. As a result, rather than financing the state through taxation, large

segments of the Iranian people became financially dependent on subsidies by the state. In turn, the government, being financially independent from its people, was less accountable.

After the 1979 revolution, the Islamic Republic continued the Shah’s program towards industrialization and diversification; however, these efforts were further enhanced by an ideologically-motivated ambition to achieve independence from the outside world, especially Western countries.

This resulted in what can be characterized as an integration of the energy sector into the political economy. On the supply side, Iranians took charge of running the energy industry. The provision of skilled as well as unskilled labor is Iranian, while all political and economic decisions are made domestically. Iranian companies are currently engaged across the entire production chain – arguably, however, at the expense of efficiency and quality in comparison to global standards.

On the demand side, Iran is increasingly using the output of its energy industry domestically. Economic and population growth, as well as over-consumption due to massive subsidies, have triggered increasing energy demand in Iran. Between 1974 and 2015, combined oil and natural gas demand grew by more than tenfold.<sup>3</sup>

Overall, this has led to a re-orientation of the energy sector’s position in the political economy. In the 1970s, more than 90% of Iran’s

<sup>3</sup> Unless stated otherwise, all data are from BP (2016): *Statistical Review of World Energy – data workbook*, London.

combined oil and natural gas production was exported, with less than 10% consumed at home. Today, the picture is fundamentally different. Iran is currently exporting only about a quarter of its combined oil and natural gas output, with 74% consumed domestically.<sup>4</sup>

These developments also have drawbacks. Current production is below what could have been achieved via full-fledged co-operation with international companies. Similarly, a substantial portion of domestic consumption continues to increase, accounted for by households and over-consumption, and is economically unproductive. As a result, Iran's energy efficiency ranks among the worst worldwide, both on the supply and demand sides.

For better or worse, the role of the energy industry in Iran's political economy has changed over the past decades, as the energy sector has evolved from a foreign-run enclave with minimal links to the rest of the country to an integrated sector of Iran's economy.

## Economic and political implications

The integration of the energy sector into the political economy produced important economic and political consequences. In certain respects, developments have arguably also amounted to a structural transformation.

Iran's economy is undergoing a process of diversification. Over the past few decades, the economy has grown: by 2014 Iran's real GDP had increased 2.7 times, in comparison to 1988 when the Iran–Iraq war ended.<sup>5</sup> At the same time, the share of oil rents in the Iranian GDP declined markedly.<sup>6</sup> In other words, there is ever increasing economic activity in Iran that is not related to the export of crude oil. While the extent of this increase is debated, it is agreed that the overall dependence of the Iranian economy on oil exports is shrinking.

In effect, Iran has embarked on a process of industrialization. The country began to expand the domestic use of energy in the 1970s. The processing of oil and natural gas at home has allowed the country to begin industrialization, especially in energy-intense branches such as the automobile, cement, petrochemical, and steel industries.<sup>7</sup>

Iran's reduced dependence on oil exports is also reflected in its foreign trade. Its non-oil trade balance, covering all imports and exports except for crude oil and natural gas, had a positive balance for the first time in the last Iranian year 1394 (2015-16). It has narrowed during the previous years from a deficit of more than \$30 billion in the Iranian year 1387 (2008-09).<sup>8</sup> To a large extent, Iran's non-oil exports – exports other than crude oil and natural gas – are based on the

<sup>4</sup> Data for the year 2015.

<sup>5</sup> World Bank (2016): *Iran, Islamic Rep.*, Washington, DC.

<sup>6</sup> Oil rents, somewhat simplified, are the income from oil exports minus production costs. According to Iran's Central Bank, the oil rent share in the Iranian GDP has shrunk from above 45% in the mid-1970s to below 10% in the Iranian year 1389 (2010-11). While the numbers are possibly too optimistic, the overall trend nevertheless speaks to the fact. See Central Bank of Iran (2014): *Tūlid-e melli beh qeymathā-yī sābet-e sāl-e 1376 (National product at constant prices of the year 1376)*, Tehran.

<sup>7</sup> In total, the industry share in the Iranian GDP grew from 7% in 1978-79 to some 21% in 2010-11. See *ibid.*

<sup>8</sup> Donya-e Eqtesad (10 April 2016): *Rāz-e možbat šodan-e tarāz-e teğāri (The secret of the trade balance becoming positive)*, Tehran.

domestic processing of oil and natural gas. For example, electricity and petrochemicals feature high on Iran's export list. While still linked to oil, domestic utilization nevertheless constitutes an important step away from mere crude oil exports. In this vein, due to domestic economic activity and a positive non-oil trade balance, Iran today no longer requires income from crude oil exports in order to finance its import needs from a macro-economic point of view.

There is one major area, however, where change is slow: politics. Iran's government budget continues to rely significantly on oil income, accounting for some 29% of the government budget in the current Iranian year 1395 (2016-17).<sup>9</sup> This is significantly less than other oil exporting countries. But the reliance of almost one third of total government income on revenues from oil exports is still substantial, leaving the country vulnerable to oil price volatility and potential political interference (e.g. sanctions).

The persistence of oil-based state finance can be explained by the fact that two trends unfolded in parallel. On the one hand, Iran's oil export stagnated while domestic energy consumption continued to expand. On the other hand, global oil prices have – at times – increased substantially during the past decades. Thus, successive administrations have been able to enjoy access to (growing) oil revenue, despite the fact that the energy sector at large was integrating into the country's economy.

Moreover, state actors continue to assume a predominant role in the Iranian economy. Providing both financial and physical means, the integration of the energy sector is central to domestic economic activity. In this context, the state acts as the gatekeeper in allocating resources among the various domestic players, with state-linked but not institutionally controlled entities enjoying privileged access to finance and projects. This is happening at not only the expense of private companies but also at the expense of the state itself, as conflicts of interest with regards to public and non-public concerns persist.

### **Between dependence and diversification: the way forward**

Iranian energy can overall be expected to move forward along the trend lines of the past few decades. In essence, this suggests Iran will continue increasing the domestic use of energy, especially natural gas but also oil.

There are two reasons the domestic use of energy will have priority. First, due to its large population of around 80 million, Iran's oil revenue is comparably low on a per capita basis. At around \$2 per day, oil income alone cannot advance the current standard of living.<sup>10</sup> Unlike some other oil-exporting countries, Iran cannot live off oil exports – especially in times of low oil prices. Therefore, Iran will need to create sufficient employment opportunities, which is only possible via economic growth. Thus it is likely that

<sup>9</sup> International Monetary Fund (2015): *Islamic Republic of Iran 2015 Article IV Consultation*, Washington, DC.

<sup>10</sup> Jalilvand, David Ramin (2017): *Transformation des Rentierstaats Iran: Zur Rolle des Energiesektors in der politischen Ökonomie*, Wiesbaden.

the domestic processing of oil and especially natural gas will continue to expand.

Second, Iran has experienced the drawbacks of being vulnerable to international pressure during the sanction years. After the European Union and the United States adopted harsh sanctions against Iranian energy and finance in 2010, oil production and exports crumbled: Iran experienced two consecutive years of negative growth in 2012 and 2013 as a result – although domestic political mismanagement was also a factor. In response to sanctions, Iran has embarked on a path towards what it describes as a ‘resistance economy’<sup>11</sup>, introducing policies aimed at economic autarky. Reducing the dependency on oil exports is an important aspect in this ambition.

The notion of the ‘resistance economy’ is particularly advocated by Supreme Leader Ayatollah Khamenei and the more conservative circles within the system of the Islamic Republic. The government of President Hassan Rouhani, while keen to deepen ties with the international community, is called upon to secure Iran’s economic self-reliance and safeguard the ownership of domestic enterprises even as foreign investments start to appear.

In the energy sector, the Rouhani government is seeking international co-operation, motivated by a *mélange* of motifs. First, the return of international companies to Iranian oil and natural gas fields is viewed as a

testimony to the success of the nuclear deal. Economic merits aside, the participation of Western energy companies in Iran would literally prove the end of Iran’s isolation.

Second, international co-operation in the energy sector is also expected to contribute to deepening political relations. As energy projects are typically large in scale and politically sensitive, they require political backing at the highest levels. Thus, symbolic gestures matter. During talks with Total, the French oil giant, in Paris in early 2016, Presidents Hollande and Rouhani ceremonially posed for photos. The presence of the two top political leaders suggested that the engagement was about more than just commerce: This was the opening of a new chapter in the countries’ bilateral relations.

Finally, co-operation with international partners will benefit and impact Iran’s energy sector directly. While Iranian companies have made some progress in recent years, the country is still lacking access to the latest technologies. As well, investment needs in the energy sector are tremendous, amounting to around \$100 billion, according to some officials.<sup>12</sup> Iran has initiated a reform of its oil contracts, aiming not only at investments but also at technology transfers.<sup>13</sup>

As the Rouhani administration attempts to (re-)integrate Iran into the global energy market, it is important to note this does not mark a deviation from the overall trend of energy use inside Iran. For reasons stated

<sup>11</sup> Khajehpour, Bijan (24.02.2014): *Decoding Iran’s ‘resistance economy’*, in: Al Monitor. Available at <http://www.al-monitor.com/pulse/originals/2014/02/decoding-resistance-economy-iran.html> (28.02.2017).

<sup>12</sup> Financial Times (01.07.2015): *Iran eyes \$100bn of western investment in oil industry*, in: Financial Times. Available at <https://www.ft.com/content/168a45dc-1f0a-11e5-aa5a-398b2169cf79> (23.02.2017).

<sup>13</sup> Energy Pioneers (2016): *Iranian Petroleum Contract*, Energy Pioneers Ltd, London.

above, Iran can be expected to continue to increase its domestic use of energy. It is important to bear in mind that Iran's energy deposits are vast: the country's combined oil and natural gas reserves are the largest worldwide. In principle, this should allow Iran both large-scale energy use at home and a prominent role on the global market. Especially by improving efficiency through cooperation with international partners, Iran could bolster its status without cutting back domestically.

The energy sector will undoubtedly remain a cornerstone in Iran's political economy. However, the actual way in which the energy sector matters to Iran is changing. Oil revenue, while remaining important, is less and less the defining aspect. Rather, the energy sector is increasingly assuming other roles; in particular, providing energy and feedstock for domestic economic activity. As such, regardless of a comeback to international energy, the energy sector is expanding its ties with the domestic economy on both the supply and demand sides.<sup>14</sup> In summary, as Iran has begun diversifying its economy, the energy sector continues to play a prominent role – albeit increasingly in different ways.

## Key indicators to follow

Looking ahead, as the energy sector and its position in the Iranian political economy evolve, several indicators are worthy to be followed. Though obviously not comprehensive,

these allow for an assessment of the state of affairs with regards to the energy sector and Iran's political economy.

- *Oil revenue share in government budget and GDP:* The extent to which public finance relies on revenue from oil exports reflects how much Iran's government continues to be dependent on international oil markets – at least in the short-term. Oil price fluctuations, as well as the possibility of new/renewed sanctions, constitute potential risks. However, this does not imply that there are no revenue alternatives. The government could – in principle – increase taxation, privatize public businesses, resort to lending, or cut expenses. Moving beyond the government budget, the share of oil rents in the GDP shows both the extent to which crude oil exports are defining the Iranian economy, as well as the state of economic activity beyond the production and export of crude oil.
- *Non-oil exports and non-oil trade balance:* As Iran increased the domestic consumption of energy and expanded domestic wealth creation, the country's non-oil exports have also risen. This reflects the increase of domestic wealth creation, i.e. economic growth, beyond the immediate consumption needs of the Iranian economy. Thus, Iran's non-oil trade balance is a further important indicator. With a positive non-oil trade balance, the Iranian economy would principally not require revenue from oil exports to finance its import needs.

<sup>14</sup> For a comprehensive discussion of the developments discussed in this policy brief, see Jalilvand, David Ramin (2017): *Transformation des Rentierstaats Iran: Zur Rolle des Energiesektors in der politischen Ökonomie*, Wiesbaden.

- *The trend of the real GDP (i.e. inflation adjusted) per capita and energy consumption per capita:* The comparison of these two indicators reflects the evolution of energy over-consumption. If real GDP per capita increases at a faster rate than per capita energy consumption, energy efficiency has improved.
- *Energy deals:* Iran has seen numerous international energy companies coming to Tehran since the conclusion of the JCPOA in July 2015. With much fanfare, dozens of memoranda of understanding (MoU) have been inked. Nevertheless, no final contracts have been concluded to date. Rather than MoUs, the signing of binding contracts is the benchmark for Iran’s ambition to attract international investment and technology.
- *The domestic politics of energy:* President Rouhani’s government is eager to re-integrate Iran into global energy. To do so, however, Rouhani requires the consent of the more conservative elements of the Islamic Republic, as they wield significant political and economic power. The future of Iran’s energy sector hinges on the ability of the president to find a modus vivendi with the conservatives which acknowledges their political and economic interests.
- *JCPOA implementation and international politics:* The position of the energy sector in Iran’s political economy is essentially defined via international politics. The re-integration of Iran into global energy markets requires the ongoing implementation of the JCPOA, as well as the absence of acts against its spirit by both Washington and Tehran. A collapse of the JCPOA would certainly end the international comeback of Iranian energy. At the same time, this could also constitute a push towards further integration of the energy sector into the domestic economy.



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