

## A Study of the Role of Iran as a Main Asian Superpower Provider of Oil to the World

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**ABSTRACT:** The history of Iran’s hydrocarbon industry is one of ups and downs. It has engendered a palpable sense among Iranian leaders of the need for self-reliance and increased “resistance” of the Iranian economy against international pressures. As a result, Iranian energy policy has become predicated upon survival and preparing for the worst. The mixed economic performance of the Iranian economy has resulted from several domestic and external factors. The main external factors have been oil and economic sanctions. In recent years, oil prices and international sanctions have exerted opposite influences on the Iranian economy, with high oil revenues partially offsetting the impact of the economic sanctions. The major domestic forces can be divided into deeply rooted economic and commercial institutions that have changed slowly over the past three decades, and economic policies that have undergone noticeable and sometimes inconsistent changes in recent years. Iran has the largest economy in purchasing power parity terms in the Middle East and Central Asia (MCD) region [1], with a sizeable and diversified non-oil sector. Iran’s economy is closely linked to intraregional trade and capital flows. On the one hand, Iran has benefited from rapid growth in the MCD region by increasing its regional non-oil exports. On the other, Iran’s robust growth in recent years has had some positive impact on smaller Gulf Cooperation Council countries serving as transit points for Iranian imports and trade financing.

**KEYWORDS:** Iran, Energy, Policy, Economy, Hydrocarbon Industry

### 1. INTRODUCTION

In developing countries with substantial oil and gas resources, the petroleum sector is the key to generating wealth and creating a sustainable economy and positive long-term human development. Producer governments and citizens are concerned with dependence on volatile



oil revenues, and current high oil prices have both raised the stakes and increased public expectations. The difficulties of managing oil revenues efficiently and fairly, the requirements of economic liberalization and pressure from evolving international standards have all contributed to an increasing focus on the governance of the petroleum sector and how it performs its role in the economy. Iran is a country where oil revenues have had several impacts on domestic politics, economy, welfare, healthcare and her foreign policy at international, regional, and bilateral levels. Iran holds the world's fourth-largest proved crude oil reserves and the world's second-largest natural gas reserves. Despite the country's abundant reserves, Iran's oil production has substantially declined over the past few years, and natural gas production growth has slowed. International sanctions have profoundly affected

Iran's energy sector. Sanctions have prompted a number of cancellations or delays of upstream projects, resulting in declining oil production capacity. Iran holds some of the world's largest deposits of proved oil and natural gas reserves, ranking as the world's fourth-and second-largest reserve holder of oil and natural gas, respectively. Iran also ranks among the world's top 10 oil producers and top 5 natural gas producers. Iran produced 3.2 million barrels per day (bbl/d) of petroleum and other liquids in 2013 and more than 5.6 trillion cubic feet (Tcf) of dry natural gas in 2012 [2]. The Strait of Hormuz, on the southeastern coast of Iran, is an important route for oil exports from Iran and other Persian Gulf countries. At its narrowest point, the Strait of Hormuz is 21 miles wide, yet an estimated 17 million bbl/d of crude oil and oil products flowed through it in 2013 (roughly one-third of all seaborne traded oil and almost 20% of total oil produced globally) [3]. Liquefied natural gas (LNG) volumes also flow through the Strait of Hormuz. Approximately 3.9 Tcf of LNG was transported via the Strait of Hormuz in 2013, almost all of which was from

Qatar, accounting for about one-third of global LNG trade. Although Iran's economy is relatively diversified compared with the economies of other oil producers of the region, the oil and gas sector remains key to the country's economic prospects. However, the sector is in desperate straits. Its future depends not only on whether, and how quickly, sanctions are removed, but also on the terms that Iran is prepared to offer to IOCs. A lower oil-price environment, if this is sustained, will also limit Iran's attractiveness to investors even if sanctions are revoked. To put this in context, this paper provides background on the history of the development of Iran's oil industry, and the problems that faced it in attracting investment even before the sanctions.



## **2. OIL AND NATURAL GAS SECTORS MANAGEMENT**

The energy sector is overseen by the Supreme Energy Council, which was established in July 2001 and is chaired by the president of Iran. The council is composed of the Ministers of Petroleum, Economy, Trade, Agriculture, and Mines and Industry, among others. Under the supervision of the Ministry of Petroleum, state-owned companies dominate the activities in the oil and natural gas upstream and downstream sectors, along with Iran's petrochemical industry. The three key state-owned enterprises are the National Iranian Oil Company (NIOC), the National Iranian Gas Company (NIGC), and the National Petrochemical Company (NPC).

The state-owned NIOC, under the supervision of the Ministry of Petroleum, is responsible for all upstream oil and natural gas projects, encompassing both production and export infrastructure in the oil sector. The National Iranian South Oil Company (NISOC), a subsidiary of NIOC, accounts for 80% of oil production covering the provinces of Khuzestan, Bushehr, Fars, and Kohkiluyeh and Boyer Ahmad. Nominally [4], NIOC also controls the refining and domestic distribution networks, by way of its subsidiary, the National Iranian Oil Refining and Distribution Company (NIORDC).

## **3. DOMESTIC CONSUMPTION**

Iran is the second-largest oil-consuming country in the Middle East, second to Saudi Arabia. Iranian domestic oil consumption is mainly diesel, gasoline, and fuel oil. Total oil consumption averaged approximately 1.75 million bbl/d in 2013, almost 3% higher than the year before [5]. In the past, Iran had limited domestic oil refining capacity and was heavily dependent on imports of refined products, especially gasoline, to meet domestic demand. In response to international sanctions and the resulting difficulty in purchasing refined products, Iran expanded its domestic refining capacity. As of September 2013, Iran's total crude oil distillation capacity was nearly 2.0 million bbl/d, about 140,000 bbl/d more than the previous year, according to FGE. Most of that increase came from expansion projects that were recently completed at the Arak and Lavan refineries. Iran also extracts petroleum products at natural gas processing plants (naphtha and liquefied petroleum gas). A small amount of crude oil, approximately 4,000 bbl/d, is directly burned for power generation. Almost all of Iran's product consumption was locally produced. In 2013, FGE estimates that Iran imported almost 17,000



bbl/d of petroleum products, of which roughly 85% was gasoline. Over the past several years, Iran's gasoline import dependence has decreased significantly as a result of increased domestic refining capacity and subsidy cuts. Iran plans to increase gasoline production capacity at the Isfahan and Bandar Abbas refineries by the end of 2014. Despite refinery expansions, FGE expects Iran's gasoline imports to increase over the medium and long term because of increased gasoline demand and the government's plan to reduce gasoline production at petrochemical plants. However, gasoline demand is expected to decrease in the short term because of higher prices as a result of subsidy cuts. [6]

A further problem for the sector has been the rise in domestic oil consumption. Serious efforts were begun in 2007 to slow this expansion in the rate of consumption. Initially, rationing of petrol and diesel was introduced via smart cards, coupled with a 25% increase in price that was partially offset by direct cash payments to low-income groups. Then some three months later, motorists were allowed to buy more than the ration if they were willing to pay even higher prices.

The real reform came at the end of 2010, when the state provided direct payments to families to compensate for the removal of subsidies more generally. The program proved to be effective initially, and oil consumption for transportation fell markedly. The National Iranian Oil Products

Distribution Company stated in July of that year that rationing had resulted in savings on gasoline consumption amounting to some \$11 billion [7]. As early as mid-2008, however, concerns were being raised about the effectiveness of the program, specifically with regard to the very large numbers of exemptions to the scheme. Furthermore, the plan to scrap 1.2 million old, fuel-inefficient cars by 2010 was abandoned. Meanwhile, Iran also began to change its domestic energy mix from oil to gas, leading to a considerable expansion of gas infrastructure and consumption [8].

Iran consumed 9.6 quadrillion British thermal units (Btu) of energy in 2012 [9]. Natural gas and oil accounted for almost all (98%) of Iran's total primary energy consumption in 2012, with marginal contributions from coal, hydropower, nuclear, and non-hydro renewables. Iran's primary energy consumption has grown by more than 50% over the past 10 years. In order to curtail wasteful energy use and to limit domestic demand growth, Iran has embarked on an energy subsidy reform to raise the prices of domestic petroleum, natural gas, and electricity. The first phase of the reform was enacted in late 2010, and phase two was initiated in early 2014.



#### **4. ENERGY POLICY OF IRAN**

Iran is facing serious challenges in the area of energy policy. To define the problems and possibilities that these challenges represent one must first turn to Iran's energy consumption patterns as well as the energy policy of the Iranian government. The increase in energy usage in Iran is clearly out of proportion with the rate of the country's economic productivity. Some of the negative structural characteristics of this consumption pattern are an above average energy intensity, an increase in energy consumption in the traffic sector, a high growth rate in the use of electric energy and an inordinate amount of stress on the environment [4].

#### **5. RE-INTEGRATION INTO THE GLOBAL MARKETS AFTER SANCTIONS RELIEF: DISCUSSION**

In a landmark agreement reached in January 2016, the International Atomic Energy Agency judged that Iran was compliant with its internationally agreed upon nuclear obligations. The nuclear deal that the Obama Administration helped to negotiate remains controversial and contested in the U.S. In fact, U.S. commitments under it could well be overturned by the next President. In the meantime, it is worth noting that the deal will have a major impact on Iran, which is still at odds with the U.S. on a wide range of national security matters.

As part of the accord, the U.S. and the European Union (EU) will terminate all nuclear-related economic sanctions, including an embargo on buying Iranian crude oil and an end to restrictions on Iranian trade, shipping, and insurance. Approximately 300 Iranian individuals and companies will be removed from the EU sanctions list and, most critically, Iran will regain access to the international financial system and currency markets. As a result, Iran will be able to export as much crude oil to the world as it is capable of exporting.

These developments have the potential to restore Iran's long-lost economic vitality and have an enormous impact on global oil production and prices. Consequently, they also present new challenges for American policy.

Under the deal, Iran has pledged that it will not produce material to create a nuclear weapon for at least a decade and has agreed to the imposition of new provisions for the inspection of Iranian facilities, including military sites.



Undoubtedly, the deal will go down as one of the most important diplomatic achievements for U.S. President Barack Obama during his presidency; ensuring peace in the volatile Middle East – which provides energy security for America – has been one of his top priorities.

The landmark agreement will enable Iran to reclaim its frozen assets of about US\$120 billion and attract foreign direct investments, which will result in recovery of trade, tourism, oil production and exports. It will also, importantly, boost private investment leading to higher GDP growth.

Many European countries, which are mostly dependent on gas supplies from Russia to meet their needs, will soon be able to look to Iran as an alternate source of energy once sanctions are lifted. Indeed, some European firms are already looking at Iran to invest in its oil and gas fields.

At the regional level, Iran will likely leave no stone unturned in its drive to re-establish its role in the region. But oil-dominant countries such as Saudi Arabia, the U.A.E., Qatar, Kuwait and Bahrain will want to restrain and counter Iran's success.

The Jewish lobby in the U.S. is also against the accord and the U.S. Congress voted in May to tie any final agreement to a subsequent Congressional review, which could delay progress. However, President Obama has said that he would exercise his veto power if Congress votes against the deal in the House.

There are other hurdles such as the timing and mechanisms for lifting sanctions; how to prevent Iran from continuing its nuclear activities; the creation of an inspection regime to ensure compliance of the agreement; and when an international embargo on selling conventional arms to Iran might be lifted. These measures are expected to take time to resolve, leaving the country without access to the latest oil and gas technology needed to increase production.

According to experts, Iran needs at least US\$200 billion invested in its oil and gas industry, including US\$70 billion for its petrochemicals, to upgrade the technology and also repair its oil fields which were badly damaged during the eight-year war with Iraq in the 1980s. No new wells have been drilled in Iran since 2007 [10]. The European Union's ban on imports of Iranian crude helped Russia increase exports of Urals crude, which is similar to Iran's main export blend, by more than 400,000 b/d last year to former customers of Iran in Europe, according to Moody's. Imports by EU members of Iranian crude averaged about 600,000 b/d before sanctions. In Greece, formerly the largest EU importer of Iranian crude at 120,000 b/d, Hellenic Petroleum, the country's largest refiner, last month said it had agreed to buy oil from National Iranian Oil Co., Moody's said. Iran also will try to regain market share from other buyers of Russian oil, including refiners in Spain and Italy, and to increase exports to Asia, especially



China. “Iran cannot depend on China alone,” Moody’s said, citing rivalry between the Islamic republic and Saudi Arabia, an important supplier with which China will want to retain strong ties. Without technology and expertise from international oil and gas companies, Moody’s further said, Iran probably can’t raise production by much more than 500,000 b/d. While Total and Statoil have expressed interest in Iranian opportunities, other major producers, including Royal Dutch Shell, have warned discussion about potential projects in Iran is premature. US companies remain subject to unilateral sanctions against the Islamic republic of Iran.

Despite oil prices being at their lowest level (as of March 2016) since the 2008–2009 global recessions, Iran has the prospects of mounting an economic comeback. With the sanctions lifted, Iran could boost its GDP growth by approximately 5 percent in 2016–2017.

Without the sanctions, the many attractive and productive elements of Iran’s economic culture can operate and produce at their full capacity.

Iran boasts a young and well-educated workforce, living in largely urban populations. The motor vehicle industry is the largest in the Middle East and Peugeot Citroen is planning on returning to Iran. Some of the Global 100 companies are once again eyeing Iran.

Iran’s economy is far more diverse than that of Saudi Arabia or any of the other energy producers in the region. According to Iran’s first Vice-President Eshaq Jahangiri, sanctions had added 15 percent to the cost of trading with Iran, and lifting them will save the country some \$15 billion a year in lower trade costs.

Lifting the sanctions will make more than \$30 billion in assets held overseas immediately available to Iran. Official Iranian reports have set the total amount of frozen assets overseas at \$100 billion.

## **6. CONCLUSIONS**

Iran’s oil and gas sector remains critical to the country’s economic prospects. Its future depends not only on whether, and how quickly, sanctions are removed, but also on the terms that Iran is prepared to offer to the international oil companies (IOCs). Latterly, the low oil-price environment may mean that the sector’s appeal to investors is diminished, even if sanctions are revoked. Iran has struggled to attract investors. In the 1990s attempts to secure international investment were ineffective because of the unfavorable terms on offer to IOCs and the operational problems that arose as the sector became increasingly politicized and less



well organized. The current administration under President Hassan Rouhani is echoing opinions from that era on the need to increase the involvement of the private sector in the economy, although it is unclear how seriously such statements should be taken. Iran is in severe need of the technology and capital that would be available from IOCs for its oil and gas sector. Yet, while there has been much hype from the Iranian side about the high level of interest, the IOCs are only likely to be interested if the terms are advantageous.

Iran's readmission to the global banking system and payment network such as SWIFT will drive down the cost of imports since Iranian businesses have not had access to letters of credit and have had to pay up front in full for imports. The International Monetary Fund (IMF) estimates that ending such restrictions could add up to a percentage point to annual growth.

In the post-sanction regime, Iran could witness a major recovery in its oil and gas sector. According to the Economist Intelligence Unit (EIU), Iran has 157 billion barrels of oil in proven reserves (the fourth largest in the world). According to the International Energy Agency, about 38 million barrels of oil are in Iran's floating reserves and could immediately enter the market.

Iran is hoping to increase total exports to around 2.5 million barrels a day later this year and has stated that oil and condensate exports have already hit 1.75 million barrels per day.

At current prices (approximately \$40 per barrel in March 2016), the lifting of energy sanctions means Iran could increase its revenue from oil exports by \$10 billion by next year.

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