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Can Rouhani Revitalize Iran's Oil and Gas Industry?

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Soon after his victory in the June 2013 presidential elections, Hassan Rouhani announced that reforming and revitalizing the oil and gas sector would be one of his government's top priorities. He and many of his aides showed no hesitation in criticizing the policies of former president Ahmadinejad toward the oil and gas industry in his two-term tenure.

Like other oil-exporting nations, Iran depends heavily on oil revenues to finance government expenditures and pay for imports. When these revenues decline, the economy suffers. A combination of international sanctions and poor domestic management led to a gradual decline in daily oil output and stagnation in natural gas output in most of the years of Ahmadinejad's presidency. The decline accelerated in 2012 as the United States and the European Union introduced new sanctions against Iran's oil exports and put pressure on countries that were buying hydrocarbon products from Iran. While the Ahmadinejad administration put most of the blame for this decline on sanctions, critics of his government claimed that his own policies caused more damage to the oil and gas sector than did the sanctions.

Political factions inside Iran still disagree regarding the causes of the decline, but there is no dispute about the magnitude of output loss in recent years. According to OPEC statistics (which are based on official data provided by member governments), Iran's oil production fell from 4.3 million barrels per day (mb/d) in September 2011 to 3.3 mb/d in November 2013.[1] Daily exports of crude oil likewise declined, from 2.7 mb/d in 2011 to just under 1 mb/d in the final months of Ahmadinejad's presidency. Rouhani has tried to address both causes of this decline mentioned above: He is seeking to negotiate an agreement with the P5+1 group of world powers[2] to end the international sanctions (which have disproportionately targeted Iran's oil and gas sector), and he is reforming the country's oil and gas industry.

This Brief will address three questions related to this issue:
1) How was Iran's oil and gas sector managed by President Ahmadinejad?
2) How is President Rouhani trying to reform and restructure the sector?
3) What are some of the challenges he might face as he seeks to do so?

Ahmadinejad Declares War on the "Oil Mafia"

During his election campaign in 2005, Mahmoud Ahmadinejad promised to wage war against inequality and corruption. He blamed his opponent, former President Hashemi Rafsanjani (who was running against him in the second round of the 2005 election) for the corruption, and for the emergence of a privileged class of newly rich businessmen who had benefited from their political connections. He was particularly skeptical about the management of the National Iranian Oil Company (NIOC), which manages Iran's oil and gas assets as well as the affiliated downstream industries (petrochemicals, refineries, etc.). He proclaimed that the NIOC was dominated by an "oil mafia" consisting of corrupt NIOC officials and traditional (Bazzari) businessmen, both with close connections to Rafsanjani.[3] In addition to financial irregularities in the operations of the NIOC, Ahmadinejad saw two types of corruption in the activities of this "oil mafia": in the awarding of development and service contracts; and in the oil and gas sales contracts and marketing activities of the NIOC and its affiliated marketing firms.[4]

Immediately after his unexpected presidential victory, Ahmadinejad launched an effort to clean up the oil ministry and get rid of the "oil mafia." Ahmadinejad believed that most of the high-ranking oil industry managers did not have sufficient revolutionary credentials and were unfairly benefiting from their corrupt practices at the expense of the true servants of the Islamic revolution who had served in the eight-year Iran-Iraq war. For him this latter group was embodied in Iran's Islamic Revolution Guards Corps (IRGC).

Ahmadinejad wanted to defeat the "oil mafia" by replacing the top and middle management of NIOC with his own trusted supporters and allies. He soon realized, however, that other centers of power, including the Majlis (Parliament) and the Supreme Leader, were not ready to give him a free hand in the management of the oil industry. The Majlis, which was dominated by supporters of the Supreme Leader and the principlists (conservatives who claim to follow Ayatollah Khomeini's legacy), showed no hesitation in rejecting Ahmadinejad's candidates for oil minister. It rejected his first three nominations on the grounds that they did not have enough knowledge and experience in the oil and gas industry.[5] Finally, in December 2005, five months into his presidency, the Majlis approved his fourth candidate, Kazem Vaziri Hamaneh. Vaziri Hamaneh was an oil industry insider whom Ahmadinejad chose reluctantly and with whom he had disagreements from the start.[6] Vaziri Hamaneh resisted Ahamadinejad's demands to purge the ministry's top management; he also opposed Ahmadinejad's demands that he award oil ministry contracts to domestic contractors that he recommended. Vaziri Hamaneh's resistance on these issues led to his removal after only twenty months.[7]

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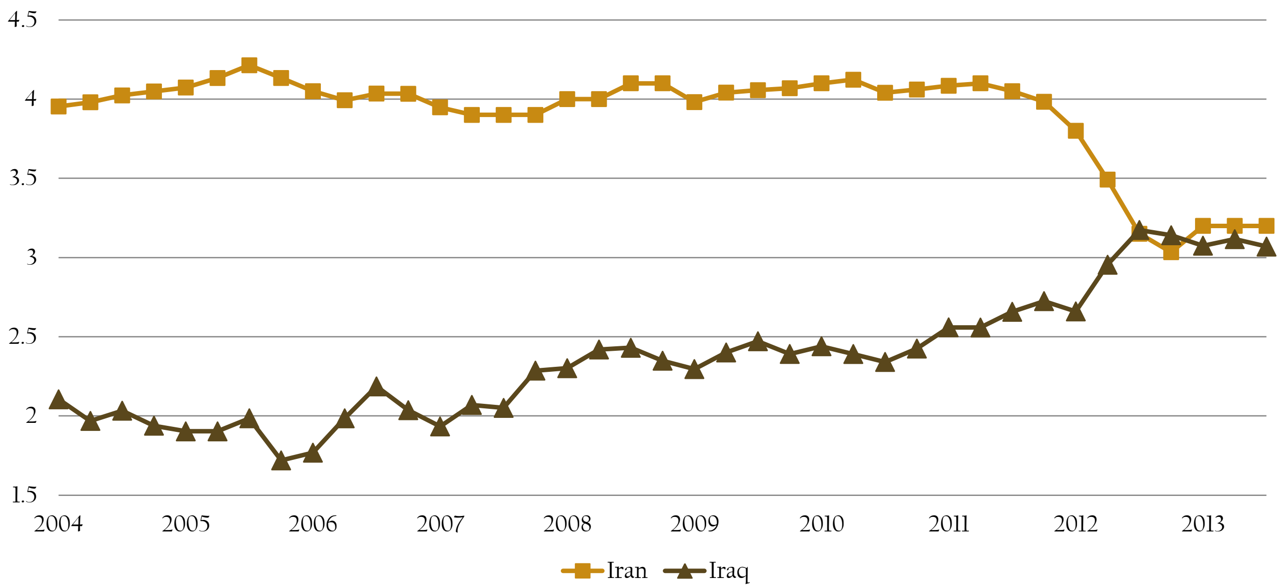
After another round of political wrestling with the Majlis, Ahmadinejad replaced Vaziri Hamaneh with another veteran oil ministry manager, Gholamhosein Nozari. Nozari likewise resisted Ahmadinejad's demand to fire additional oil industry managers, however, and he was removed after two years, at the end of Ahmadinejad's first term in August 2009. Under these two insider ministers (Vaziri Hamaneh and Nozari), the main body of the oil ministry remained relatively intact, and as a result the damage to the ministry's morale and productivity was relatively small. The stable environment under Nozari even allowed the ministry and the NIOC to increase Iran's daily oil production by a small amount between 2007 and 2009 (Figure 1).

During his second term (August 2009–July 2013), Ahmadinejad was able to appoint more cooperative ministers to the oil ministry, who helped him replace many of the top managers. The first oil minister of his second term, Masoud Mirkazemi, was a close ally and a former IRGC officer who had no experience or expertise in the oil industry. As the President's yes man in the oil ministry, Mirkazemi replaced as many as three hundred managers of the NIOC and of affiliated companies in the gas and petrochemical industries.[8]

Figure 1: Crude Oil Production in Iran and Iraq (in million barrels per day)



Source: U.S. Energy Information Administration

The ministry's attempts to increase oil output and expand capacity suffered a setback under Mirkazemi as a result of these politicized purges, however, and this poor performance drew considerable criticism from the Parliament. Ahmadinejad thereupon replaced Mirkazemi with a senior Revolutionary Guards officer, Rostam Ghasemi. The fact that both Mirkazemi and Ghasemi had IRGC backgrounds was no accident: Ahmadinejad brought hundreds of former and active IRGC officers into his government, and he played a crucial role in the expansion of IRGC's economic activities.[9]

Ghasemi's appointment to the oil ministry also coincided with a new round of oil and financial sanctions imposed by the United States and the international community that targeted Iran's exports of crude oil and refined oil and gas products. These harsh sanctions expanded the role of the IRGC and its business subsidiaries in the production and marketing of oil. IRGC-affiliated engineering firms stepped in to maintain production and continue the development projects that international firms had abandoned because of the sanctions.[10] At the same time, the IRGC assisted the NIOC with clandestine sales of oil and smuggling of sanctioned equipment and parts for the oil and gas industry into the country.

The IRGC and the oil ministry relied on informal relationships and on trusted private businessmen with close ties to the Revolutionary Guards and the Basij militia to conduct international transactions on behalf of the state. The secrecy and inevitable lack of transparency in the operations of these oil middlemen created many opportunities for corruption and financial irregularities—and these corrupt dealings and financial abuses were occasionally exposed in the Majlis and in domestic media. These exposés became more frequent in the final year of Ahmadinejad's presidency, by which time he had lost the trust and support of the Supreme Leader, and many of his political rivals saw an opportunity to discredit him.

Overall, the management and performance of Iran's oil industry during Ahmadinejad's tenure underwent several important changes, mostly as a result of his policies and partly in response to the economic sanctions.

- The oil ministry suffered an unprecedented turnover of ministers, as demonstrated in Table 1.[11]
- Ahmadinejad launched a successful purge of hundreds of the top- and mid-level management of the industry during his second term, which had an adverse effect on the sector's productivity and development.
- Ahmadinejad facilitated the IRGC's economic and managerial penetration of the oil and gas industry, which reached a climax with the appointment of Rostam Ghasemi as oil minister in 2012.[12]
- Ahmadinejad reduced the financial resources of the oil ministry when he diverted large sums to make possible the cash subsidies that were introduced in the context of his comprehensive subsidy reform in December 2009.
- Finally, Ahmadinejad accelerated the privatization of state-owned downstream industries (refineries and petrochemical units). This process was corrupt, however, and in many cases was infested by favoritism and nepotism.

Table 1: Iran's Oil Ministers Since the Islamic Revolution

Year	Persian Calendar Equivalent	Name
1978	1357	Ali Akbar Moin Far (1357–58)
1979	1358	Mohammad Jadad Tondgooyan (1358–59)
1981	1360	Mohammad Gharazi (1360–64)
1985	1364	Gholamreza Agha Zadeh (1364–76)
1997	1376	Bijan Namdar Zangeneh (1376–84)
2005	1384	Kazem Vaziri Hamaneh (1384–86)
2007	1386	Gholamhosein Nozari (1386–88)
2009	1388	Masoud Mirkazemi (1388–90)
2011	1390	Rostam Ghasemi (1390–92)
2013	1392	Bijan Namdar Zangeneh (1392–present)

Rouhani's Damage Control Plan

Immediately after winning the presidential election in June 2013, Hassan Rouhani gave top priority to finding a suitable person to head the oil ministry. He selected the veteran oil insider Bijan Namdar Zangeneh, who had served as oil minister during the Khatami presidency (1997–2005). It was Zangeneh and his team whom President Ahmadinejad had accused of being part of the "oil mafia." So his selection by Rouhani demonstrated how much the new president's vision for the oil ministry differed from Ahmadinejad's.

Zangeneh was easily approved by the Majlis, and he wasted no time before criticizing Ahmadinejad's management of the oil industry and promising sweeping change.[13] Many of the top managers of the oil industry whom Ahmadinejad had removed or demoted were appointees or close allies of Zangeneh when he served as President Khatami's oil minister, and Zangeneh made clear that one of his top priorities was to bring back as many of these seasoned managers as possible. Once his term began, Zangeneh kept true to this promise, and he has replaced a large number of managers, with a deliberate focus on removing those who were appointed during Ahmadinejad's presidency.[14] It appears that these changes have already had a positive impact on the ministry's morale, and so far Zangeneh has enjoyed considerable internal support.

Rouhani and Zangeneh together have launched a significant reform program for the oil ministry: Some of these reforms involve implementing new policies, and some are intended to undo the perceived bad policies of the Ahmadinejad years.

Rolling Back the Dominance of the IRGC

President Rouhani has no formal authority over the Revolutionary Guards, but he has used his good relationship with the Supreme Leader to reduce the domestic economic activities of the IRGC. It appears that this initiative has been successful, as the Supreme Leader has instructed the IRGC to step aside in some areas of economic activity. In return, President Rouhani has promised to offer several large-scale construction contracts to the IRGC's engineering arm. The IRGC's willingness to reduce the involvement of its engineering firm (Khatm al-Anbiya) in oil and gas contracts is partly due to its poor performance in fulfilling several of these contracts, as in the case of the South Pars gas field megaproject.[15] There, poor performance was due to a combination of factors: weak management, poor technical skills, and financing difficulties. Faced with Khamenei's directive, the IRGC announced that it was ready to step aside or reduce its economic activities with respect to any oil ministry project that could be transferred to private contractors.

Reviewing the Privatization of NIOC Subsidiaries

While Ahmadinejad justified many of his interventions in the oil and gas sector in the name of fighting corruption and nepotism, Zangeneh has exposed many irregularities and corrupt practices in connection with NIOC's privatized downstream subsidiaries that were involved in refining and distributing oil and gas products. During Ahmadinejad's presidency, oil ministry subsidiaries accounted for nearly 46 percent of all Iranian firms that were privatized through stock share offerings. Zangeneh claimed that many of these firms were sold below fair market value in corrupt dealings.[16]

Zangeneh's efforts to halt the privatization process have been only partly successful. The Persian Gulf Petrochemical Industries Holding Company (PGPI), was one of the largest NIOC subsidiaries that was partly privatized during Ahmadinejad's presidency.[17] Zangeneh tried to halt the sale of the remaining 38 percent of PGPI's shares and maintain this conglomerate under the tight supervision of the National Petrochemical Industries Corporation. The Majlis ignored his request to do so, however, and authorized the sale of another 17 percent of PGPI shares, thereby limiting the oil ministry's share to 20 percent.[18]

Despite this setback, Zangeneh has continued his efforts to halt the privatization of several other oil ministry subsidiaries.[19] These actions however, do not mean that there will be no additional privatization activity in the oil industry. Other government ministries, such as the Ministry of Industry and Mines, are still committed to the privatization of designated oil and gas industry firms. Some semi-government organizations active in domestic economic investments are also likely to lobby the Majlis for more privatization in the oil industry.

Attracting Foreign Investment

Zangeneh and his team believe that the sanctions were not the only reason that Western oil companies terminated their participation in Iran's oil and gas development projects; another disincentive, they believe, was the terms and conditions of Iran's joint venture and service contracts. The most common arrangement used by the NIOC to attract foreign investment over the past three decades was the buyback contract.[20] This type of contract imposed too many restrictions on foreign partners, however, and did not offer them enough profit incentive to justify the political and physical risks of upstream investments (in exploration and extraction).

To attract more foreign investment, Zangeneh created a task force of oil industry experts in September 2013 to design new oil contracts that would be more attractive to private oil companies without compromising the government's sovereignty over the country's oil and gas assets. This task force presented the key features of a proposed new contract to representatives of several international oil companies at a February 2014 gathering in Tehran. The new contracts offer a risk-adjusted reward mechanism that links the foreign partner's share of sales revenues to the project's risk factor. While the government will maintain full ownership over its oil reserves, the foreign partner will have exclusive production rights for fifteen to twenty years once production starts.[21]

Prioritize Near-Completion Projects

In another break from the Ahmadinejad era, Zangeneh has frozen some of the oil ministry's development projects that are in the early stages or have not gone beyond the design and planning stage, to focus on remaining active projects that are more promising and more likely to be completed by domestic firms. This policy is most evident with respect to the development of the offshore South Pars natural gas field.[22] Under Ahmadinejad, the oil ministry partitioned the South Pars region into thirty phases (sub-regions) and signed contracts with several domestic and international oil and gas firms for development of many of these phases. Most of the foreign partners were deterred by international sanctions, however, and by pressure from the United States. Instead of terminating their projects, the oil ministry replaced the foreign partners with Iranian firms—but these firms also faced many financial and technical challenges.

As a result, progress has been slow or nonexistent in most phases, and Zangeneh has suspended operations in all but five phases that have made more progress.[23] Zangeneh has also intensified the ministry's supervision over these projects by organizing biweekly progress review meetings with the contractors in these five phases—and the ministry has also made payments to contractors conditional on these progress reviews.[24] The ministry projects that three of the South Pars phases will become operational by winter 2014; this additional gas production is crucial for Iran's domestic consumption needs, which peak in winter months. Last year the government suspended natural gas delivery to petrochemical units in order to assure adequate gas supply for household consumption in February and March—a policy that brought the petrochemical industry to a halt for several weeks.

Promote Fuel Conservation and Reduce Energy Subsidies

While the oil ministry has always been a strong advocate of reducing the massive price subsidies on domestic prices of refined oil and gas products, Zangeneh has intensified these efforts in recent months. These large subsidies force the oil industry to allocate an ever-growing portion of its output to domestic consumption. Furthermore, the forgone export revenues put a constraint on the oil ministry's budget, both with respect to development projects and for the wages and benefits of its personnel.

Zangeneh and NIOC officials lobbied the Parliament in the winter of 2013 to increase the prices of oil and natural gas; this effort was mainly a response to the rising production costs, which had resulted in an implicit increase in price subsidies over the previous two years. While the rial (the Iranian national currency) has depreciated by more than 75 percent against the dollar and the euro since 2012, as a result of which Iran has experienced record high inflation, the official prices for oil and gas products have remained constant. As a result, the price of gasoline had declined from approximately 40 cents per liter in early 2012 to 13 cents in 2013.

After an intensive debate in the media and the Parliament, these efforts finally resulted in a price adjustment in April 2014. The price of gasoline was increased by 43 percent (from 7,000 rials per liter to 10,000 rials). Even this new price, which amounts to $0.32 per liter, is significantly smaller than the international price of gasoline.

A similar situation has prevailed with regard to the sale price of natural gas to the petrochemical industry. The oil ministry wanted to increase the price of natural gas, which is the main input for petrochemical units. The newly privatized petrochemical firms lobbied the Parliament strongly in an effort to prevent any price increase[25]; these units have enjoyed a sharp increase in their profits in the last two years thanks to a low domestic natural gas price that is almost one-tenth its international price.[26] After a heated debate, the Parliament has finally approved a price increase for next fiscal year, which will raise the price per cubic meter of natural gas from 2.8 cents to 15 cents. This new price is still significantly below the international price of natural gas.

In another bold effort to reduce domestic fuel consumption, Zangeneh has offered to finance a number of public transportation projects in Tehran. These include financial support for the expansion of Tehran's subway system and public bus transport.[27] The oil ministry has argued that since better public transport will reduce the demand for gasoline for passenger cars, more oil will be available for export, and the additional revenues will cover the cost of these initiatives.

Many Challenges Lie Ahead

The policy initiatives described above may help Iran revitalize its oil industry and increase the country's oil and gas production, if they can be effectively implemented. Many potential obstacles, however, stand in the way of such implementation. Internally, the oil ministry faces a productivity and personnel crisis rooted in management weaknesses and an oversized workforce. Zangeneh has brought back dozens of seasoned and experienced ministry experts and managers who had either resigned or been expelled from the ministry during Ahmadinejad's presidency. While this is a positive move, these managers may require considerable retraining and education, and their effectiveness will depend on the productivity and cooperation of thousands of rank-and-file oil ministry employees—many of whom were recruited during the Ahmadinejad era on the basis of political loyalty rather than merit. Zangeneh and his team might find this group underperforming out of political motives.

Another major personnel challenge is the bloated workforce. The number of oil ministry employees increased by 150 percent (from 100,000 to 250,000) during Ahmadinejad's presidency.[28] Many of the newer employees were hired under short-term labor contracts that offer less attractive wages and benefits than better-paid civil servants receive, even though they perform the same tasks. These inequalities have led to strong feelings of resentment among some workers. The dire economic conditions of some employees and retirees came under media attention when a retiree set himself on fire in front of the oil ministry building in Tehran on the same day that President Rouhani met with oil officials in the same building.[29] Addressing these issues will be a major internal challenge for the oil ministry in the near future.

The oil ministry also faces several external challenges that may prove even more difficult to address. For one thing, there are already some indications of a conflict of objectives and some lack of coordination on domestic economic issues within Rouhani's cabinet. Some ministries do not share the oil ministry's desire to reduce fuel subsidies, because higher fuel prices will harm their constituencies. During the February 2014 parliamentary debate about raising the price of natural gas for the petrochemical industry, for example, the Parliament was receiving conflicting signals from the oil ministry and the Ministry of Industry and Mines: The latter was opposed to any price increase.[30] As a result of this intra-cabinet disagreement, the approved increase in the price of natural gas was smaller than what the oil ministry had hoped for.

The oil ministry faces an even greater challenge from multiple centers of power outside of the cabinet. Owing to its strategic significance, the oil and gas sector is subject to more intrusive oversight and interference by the Majlis, the Supreme Leader, and the security organizations (such as the IRGC) than are other government ministries. These interventions should be viewed as reflections of the ongoing competition among elite factions for access to the business and profit opportunities presented by the oil and gas sector.[31] The chairman of the Majlis Energy Commission, Masoud Mir-Kazemi, is one of the most vocal opponents of Zangeneh and his oil policies. Mir-Kazemi, who purged many of the oil ministry's senior managers during his two-year tenure as Ahmadinejad's oil minister, is closely allied with the economic interests of the IRGC.

Most recently, Mirkazemi expressed strong opposition to Zangeneh's proposal to substitute imported gasoline for the domestic gasoline that is currently being produced by petrochemical units.[32] In response to Western sanctions on Iran's gasoline imports, the Ahmadinejad government had ordered petrochemical units to produce gasoline. In a reversal of its earlier position, the oil ministry sided with Iran's Department of the Environment in May of this year and declared that this product, which is commonly referred to by the domestic media as "petrochemical gasoline," contained highly toxic pollutants.[33] This finding served as the basis for the oil ministry's proposal to replace petrochemical gasoline with imported gasoline. The petrochemical units have rejected the oil ministry's conclusion and proposal, however, and they have received significant support from media outlets that are affiliated with the IRGC.[34] Consequently, the gasoline import proposal is likely to face strong political resistance from the Majlis, and it might even provoke an intervention by the Supreme Leader (Khamenei), who has the final word on all government policies.

The oil ministry is also vulnerable to populist pressures for preservation of price subsidies. The government's efforts to reduce the large price subsidies on refined oil products face strong resistance from the political elite and from within the Parliament. While the huge fiscal burden of these subsidies and the gross economic inefficiencies they cause are well known to the public as well as to the political leadership, the government nonetheless moves with extreme caution when it comes to reducing these inefficiencies. The Ahmadinejad government, for example, faced strong parliamentary resistance when it tried to raise the price of gasoline in 2012 and ultimately passed the responsibility for this unpopular step on to the next president.[35] Rouhani wanted to raise the price of gasoline early in his term, but resistance from other centers of power postponed implementation of this reform until April 2014, and the price adjustments made then still left domestic fuel prices sharply lower than international prices.

Populist political pressures can also limit the financial resources—both the oil ministry's fiscal resources (budget) and the extent of loans and financing available from state-owned banks—available for the ministry's maintenance and development activities, required for expanding its production capacity. These types of populist scenarios tormented the oil and gas sector under Ahmadinejad, and there is a risk that that could happen again under Rouhani.[36]

An even more significant risk factor with respect to the ambitious plans of Zangeneh is the uncertain prospects for success of the nuclear negotiations. Much of the oil ministry's ability to boost Iran's output depends on the outcome of these negotiations: If they fail, international oil firms will not enter the Iranian market even though the oil ministry's new investment contracts would offer them more attractive financial incentives. The United States is also likely to put more economic pressure on Iran under this scenario, which would further limit its oil export revenues. In the aftermath of the Ukraine crisis, Russia is negotiating two economic contracts with Iran worth a total of $30 billion[37]; but there is no indication that the oil ministry is interested in abandoning its efforts to attract Western oil firms in favor of contracts with Russian firms. Indeed, while signing these contracts with Russia, the oil ministry has also tried to present Iran as a possible alternative source of natural gas to Europe if the Russian supply is interrupted.[38]

An even more significant potential consequence of the failure of nuclear negotiations is that it could significantly weaken the Rouhani government vis-à-vis its domestic conservative opponents that advocate a more confrontational foreign policy. If the conservatives manage to neutralize Rouhani and reduce his status to that of a powerless president, as they did with Khatami in his second term, they could bring about significant changes in Iran's domestic and foreign policies. Under such a scenario, the IRGC would increase its economic role, particularly in the oil and gas sector, to counter the more intense sanctions and other measures that Western nations might adopt against Iran. In other words, the oil ministry would then revert to how it was under Ahmadinejad.

To this point, Rouhani and his oil minster are fully invested in the success of the nuclear negotiations in the hope of reaching a final agreement by mid-July and averting all the adverse consequences of their possible failure. A less costly but nevertheless undesirable development with respect to the negotiations would be that after failing to reach a final agreement by the July deadline, both sides decide to extend the negotiations. This scenario is a more likely alternative to a final agreement than a complete failure, as both sides have invested too much in these talks to acknowledge complete failure. This outcome would still keep international oil firms away from Iran's oil and gas sector, but Rouhani and Zangeneh would remain in charge of the ministry. They would be forced to manage the sector with domestic resources only, however, and would likely achieve an export level not significantly larger than current levels.

Overall, Rouhani and his seasoned oil minster are expected to improve the management of the oil ministry and boost the morale of its workforce. The industry will also benefit from the reduction of tensions in Iran's relations with the international community under Rouhani. Nevertheless, Zangeneh is likely to face many challenges as he tries to revitalize the oil and gas sector. The resources and factors that Zangeneh can directly control are relatively limited, and the Iranian constitution gives broad regulatory powers to the Parliament with respect to the pricing and distribution of oil and gas products. Under populist pressure and that from special interest groups, the Parliament might easily frustrate the oil ministry's efforts to boost output and rationalize the prices of its products. Other powerful institutions such as the Revolutionary Guards (which have considerable economic and strategic interests in the oil and gas sector), can exert influence on the ministry's policies through their supporters in the Parliament, as well as by appealing to the Supreme Leader. And for now, both the oil ministry's access to badly needed foreign investment and technology and its ability to export beyond current levels will remain vulnerable to the outcome of the current nuclear negotiations.

Endnotes

1 See OPEC Monthly Oil Market Report, December 2013, Table 5.5. The U.S. Energy Information Administration has released much smaller estimates for Iran's oil output and puts the production level as of November 2013 at 2.7 mb/d.

2 United States, Russia, China, United Kingdom, and France, plus Germany.

3 In the spring of 2005, during a presidential election campaign in the central city of Isfahan, Ahmadinejad declared: "I will fight against the oil mafia and dry up its roots." A few years later, in April 2009, in a speech to oil industry managers, he asserted that "[t]he main arms of the oil mafia have been cut off. Only some marginal elements have remained and occasionally try to exert pressure in one corner [of the oil ministry] or the other." See http://www.khabaronline.ir/detail/117642/ [in Persian].*

4 For a detailed review of the NIOC and the institutional environment that it has been operating under since the 1979 revolution, see Daniel Brumberg and Ariel I. Ahram, "The National Iranian Oil Company in Iranian Politics" (James A. Baker III Institute for Public Policy, Rice University, March 2007).

5 The three rejected candidates were Ali Saidlu, Sadegh Mahsuli, and Mohsen Tavassoli. Tavassoli had experience in the petrochemical industry but not in the upstream (exploration and extraction of crude oil) activities.

6 Vaziri Hamaneh had served as the acting director of the oil ministry while Ahmadinejad was waiting for the Majlis to approve one of his candidates for oil minister.

7 "Ahmadinejad fascination with the Ministry of Oil," *Aftab News* [in Persian].*

8 "Status of Oil Industry Disintegrated and Critical," *Kaleme.com* [in Persian].*

9 For more details on the Ahmadinejad-IRGC connection, see Nader Habibi, "The Economic Legacy of Mahmoud Ahmadinejad," *Middle East Brief*, no. 74 (Brandeis University: Crown Center for Middle East Studies, June 2013).*

10 "Iran's Oil Industry in Hands of the Military," *Deutsche Welle*, May 23, 2012 [in Persian].*

11 This instability was not limited to the oil ministry. Many other ministers, as well as vice-presidents serving under him, also ran into disagreements with Ahmadinejad, which led to a record number of resignations and replacements during his two-term presidency.

12 For a detailed account of the increasing penetration of the IRGC into Iran's oil and gas sector, see William Yong, "NIOC and the State: Commercialization, Contestation and Consolidation in the Islamic Republic of Iran" (Oxford Institute for Energy Studies, MEP5, May 2013).*

13 Criticism of the previous government was not limited to its management of the oil ministry. Other ministers and President Rouhani have repeatedly blamed the Ahmadinejad government for bad policies and mismanagement in connection with many of the country's current difficulties.

14 For a list of Zangeneh's appointments in the oil ministry, see "Report of the Oil Ministry in the first 100 days," *Bultan News*, November 24, 2013 [in Persian].*

15 Omidvar, Kaveh, "Army withdrew from the implementation of the South Pars," *BBC*, July 16, 2010 [in Persian].*

16 See http://www.bultannews.com/fa/news/188214 [in Persian].*
17 PGPI owns seventeen petrochemical and distribution firms and produced more than 40 percent of Iran's total petrochemical output in 2013.
18 "Persian Gulf bloc offers a 17% holding in the Year Ahead," *Shana*, March 19, 2014 [in Persian].*
19 "Zangene against giving gas refineries," *Eghtesad Online* January 13, 2014 [in Persian].*
20 Under a buyback arrangement, the foreign firm provides the initial investment and develops the oil field; in return, it receives a predetermined portion of the oil output for a fixed number of years, after which the entire operation is transferred to the host country.
21 See "Incentives in the new oil and gas contracts," *VOA*, Febraury 27, 2014 [in Persian].*
22 South Pars is a joint gas field between Iran and Qatar; Qatar's natural gas extraction from this field is significantly larger than Iran's. Since there is no agreement between the two countries to regulate the amount that each side can extract from this common field, Iran has given top priority to developing this and other oil and gas fields that it shares with its Persian Gulf neighbors.
23 "Zanganeh Issues New Orders for Development of South Pars Gas Field," *Shana*, September 29. 2013.*
24 "Zanganeh: This year, more units are produced from South Pars," *Entekhab*, March 27, 2014 [in Persian].*
25 "Labi vijekhaaraan baraaye gelogiri as vaghei saazi nerkh khoraak petroshimi,*Tnews.ir*, January 2, 2014 [in Persian].*
26 A detailed account of the private petrochemical firms' windfall profits was presented to the Majlis by MP Ahmad Tavakoli, who was a strong opponent of Ahmadinejad and has been a strong supporter of reducing the price subsidy on natural gas feed for privatized petrochemical units. See "Special reports combating corruption in the petrochemical story," *Taraz News*, February 21, 2014.*
27 "Oil Ministry is ready for public transportation fleet renewal," *Shana*, February 25, 2014.*
28 See "Oil Ministry of Ahmadinejad's government recruited 150 thousand in excess of requirements," *ILNA*, February 26, 2014 [in Persian]. Zangeneh himself acknowledged the excess personnel, as well as the low skill level of many of the newer employees, in a news interview in October 2013: "Zangeneh response to the increasing number of oil workers " *Pana News*, October 15, 2013 [in Persian].*
29 "Iranian Man Sets Self on Fire at Oil Ministry" *Al Arabiya*, February 18, 2014.*
30 See "Petrochemical industry against high prices of gas," *Bultan News*, February 4, 2014 [in Persian].*
31 This is a reflection of the ongoing struggle for political control of the oil ministry that Yong ("NIOC and the State", page 12; see note 14) has described in detail. According to Yong, ever since the 1979 Islamic Revolution, the oil ministry has been subject to political battles among competing political elites. The policies of the Ahmadinejad era were manifestations of a shift in elite dominance over the industry from supporters of Rafsanjani and Khatami to supporters of the IRGC, the Basij, and the Supreme Leader, Khamenei. Under Rouhani the ministry is undergoing another transition, which is transferring the management of the oil industry to the reformist supporters of Rafsanjani and their business interests.
32 See "Ahmadinejad's Minister of Oil critical of Zangeneh," *Tnews.ir*, April 20, 2014 [in Persian].*
33 See "Environment Agency documents released petrochemical gas emissions and carcinogenics," *IENA*, May 2, 2014 [in Persian].*
34 See "Media protest the IRGC's being near being carcinogenic petrochemical gasoline," *Gooya News*, May 2, 2014 [in Persian].*
35 See "Economic figures in the parliamentary opposition to Ahmadinejad targeted implementation phase and a sharp rise in fuel prices," *Khabar Online*, January 23, 2013 [in Persian].*
36 For a more detailed account of populist pressures in Iran, see Musa Ghaninejad, "How to overcome oil populism," *Tabnak*, February 21, 2014 [in Persian].*
37 Rick Gladstone, "Russia and Iran Reported in Talks on Energy Deal Worth Billions," *New York Times*, April 28, 2014.*
38 See Andrew Critchlow, "Iran Offers Europe Gas amid Russian Energy Embargo Fears," *The Telegraph*, May 4, 2014.*

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