SHIFTING GEOPOLITICS OF ENERGY
WINNERS & LOSERS

IRAN
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SERIES OF ANALYSES

The world’s energy landscape is changing rapidly. The emergence of new producers and consumers, regional instabilities, plummeting energy prices, the arrival of disruptive technologies and new climate commitments are all shaking up energy diplomacy and market balances. But who is gaining and who is losing from this ever-evolving panorama? And what are the implications for Europe?

This series of analyses will examine the main strengths and weaknesses of the key players in global energy geopolitics. The aim is to assess the causes and consequences of the ongoing shifts in geostrategic power balances, track energy sector transformations and highlight best practices. Over the year, we will analyse 10 countries, including India, Iran, China, Japan, Saudi Arabia, the United States, Brazil, Russia, South Africa and Mexico.

This second analysis focuses on Iran, one of the top five global oil and gas producers, holder of the world’s fourth-largest proved crude oil and second-largest natural gas reserves.
IRAN’S ENERGY COMEBACK

Iran is back in the global energy market in the wake of the much-anticipated nuclear deal. After several years of sanctions that profoundly affected the country’s economy, halved oil export revenues, suspended foreign investments and led to cuts in production and cancellations of many oil and gas projects, Tehran now hopes to reclaim its lost position. Yet Iran’s re-entry into the already oversupplied oil market is exacerbating the biggest oil price crash in a decade and increasing tensions with other OPEC giants, most notably Saudi Arabia, which are determined to preserve their market share. At the same time, the attractiveness of Iran’s energy sector, now open to foreign investments, is creating tough competition between major European and Asian players keen to gain access to the country’s vast resources. How will the rise of Iran reshape the global energy scene? Can Iran’s reliance on volatile oil resources be reconciled with the new global climate agenda set by the Paris Agreement?

RE-ENTRY INTO THE OIL MARKET

The end of economic isolation has cleared the way for Tehran to boost its oil production and exports. Although most observers expect it may take up to a year for Iran’s crude oil exports to return to pre-sanctions levels due to underinvestment in the sector, the government has announced plans to raise production by 500,000 barrels a day. The move will undoubtedly have major implications for the country’s economy, and for the already oversupplied global market.

Despite the collapse in oil prices, Iran’s lagging domestic economy will receive a major boost from increased oil revenues and lower trade costs after two years of recession. According to World Bank estimates\(^1\), per capita welfare could rise by almost 3%. Iranian trade is also expected to expand by about $17bn (about 3.5% of GDP) and shift in focus towards European countries, China, India and Turkey.

\(^1\)http://www.worldbank.org/en/external/default/WDSContentServer/WDSP/IB/2015/07/28/090224b083031bffee/2_0/Rendered/PDF/Economic0impl0ng0sanctions0on0Iran.pdf
Additional supplies from Iran are likely to push already low global oil prices further down. According to the World Bank, an extra million barrels a day from Iran would lower oil prices by 14% in 2016, assuming that other OPEC countries do not respond by cutting their production. While oil importers would benefit from even lower prices, the major exporters would suffer significant losses to their annual revenues: $40bn for Saudi Arabia (5% of GDP) and $5bn for Libya (10% of GDP). The price drop would also hit non-OPEC production, mainly in areas with high operational costs such as the North Sea and deep offshore in the Americas.

It is of course hard to predict if or when other states could alter their production and prices to compete with Iran, especially given the lingering instabilities in the Middle East. Iran’s ability to increase its exports will also depend on the pace of sanctions relief, the state of its infrastructure and demand for Iran’s oil.

REGIONAL RIVALRIES

The nuclear deal is adding pressure to already bitter tensions between Shia Iran and Sunni Saudi Arabia, two powerful OPEC members. Political relations have further deteriorated in the past year, as the two countries have backed different interests in the Syrian civil war as well as in the conflict in Yemen. The two nations are now also at odds over oil politics.

Since 2014, Saudi Arabia has maintained high levels of oil production in order to keep oil prices low and thus preserve its market share at the expense of higher-cost producers such as US shale companies. When, at December’s OPEC meeting in 2015, Iranian officials called on other OPEC members to cut production so oil prices do not fall further when Iran returns to the market, Saudi Arabia ruled out any possible concession. Yet important export revenue losses and the need to stabilise prices have pushed the Kingdom to attempt an unprecedented deal with Russia and two OPEC countries, Venezuela and Qatar, to freeze oil production at January 2016 levels – the first coordinated move to boost prices in years. The plan, though, is conditional on other nations agreeing to participate, but neither Iran nor Iraq seem likely to join for the moment, both keen to rebuild their economies after years of sanctions or war.

These divisions among OPEC countries over production levels have major implications for energy markets around the world, drawing speculation over the future of energy prices and regional power balances. While Saudi Arabia has long been the default leader of OPEC, the US shale boom and Iran’s rise are together challenging Saudi leadership and pushing the Kingdom to seek new alliances outside the cartel. The next OPEC meeting in June 2016 will present a new occasion to end the fractures, develop a more coordinated policy and restore the organisation’s credibility.

ATTRACTIONg FOREIGN INVESTORS

Another important consequence of the nuclear deal is a renewed interest from foreign oil companies to invest in the Islamic Republic, particularly in light of changes to contract rules offered by Tehran.

Foreign investment in Iran’s energy sector declined by billions of dollars following the tightening of sanctions in 2012, limiting access to much-needed technology and expertise. With $170bn in investment needed for the hydrocarbon sector, Tehran has been desperately looking to attract multinationals back to Iran. To that end, the government has decided to change its oil contracts model, offering investors more favourable terms by allowing them to participate in all three stages of an upstream project: exploration, development and production.

Under the previous ‘buy-back’ contract system, investors had a fixed target and were compensated with a pre-determined amount without the possibility to increase output through sophisticated means over the field’s lifecycle. The new Iran Petroleum Contract (IPC) allows for contractual changes depending on the complexity of the projects. It also extends the participation of foreign companies from the original 5-8 years to up to 25 years, which increases incentives to maximise production.

Thanks to the new regulations, Iran is emerging as a highly appealing market for foreign oil companies. Since April 2015, Europe’s energy giants Total SA, ENI, Royal Dutch Shell and British Petroleum (BP) among others have all indicated their interest in resuming operations in Iran, and Chinese National Petroleum and Sinopec are also expected to enter the race. The
World Bank anticipates that FDI will increase to about $3-3.5bn in the next couple of years, doubling the 2015 levels.

NEW GAS PIPELINE & LNG DIPLOMACY

Although Iran owns the world’s largest gas resources after Russia, it accounts for less than 1% of global trade and has been a net gas importer for a decade. The country can barely meet its skyrocketing domestic demand and has long lacked the export infrastructure of competitors such as Russia and Qatar. With the new momentum spurred by the nuclear deal, Tehran now hopes to double its gas production and reach a 10% share of the global gas trade by adopting a new diplomatic approach.

One of Iran’s priorities is to increase gas exports to its Gulf Cooperation Council (GCC) neighbours, notably Turkey, Kuwait, Oman and the United Arab Emirates, which do not have sizable gas reserves and could be supplied by short pipelines. Most of these countries have already developed Liquefied Natural Gas (LNG) facilities, which could allow Iran to re-export its gas to international markets, the European Union in particular. Saudi Arabia could surprisingly be another keen buyer of Iranian gas, as it is trying to shift from crude oil dependence, but has gas reserves that are too expensive to develop at today’s prices. The push for LNG would involve restarting work on Iran’s first LNG terminal, which has been on standby since 2012, while National Iranian Gas Export Co. is also in talks with European companies to build floating LNG facilities.

Despite its ambitious plans, most of the infrastructure projects will require many years to become operational, and the country still needs around $100bn to rebuild its gas industry. For the meantime, Iran will continue to rely on gas imports, mainly from Turkmenistan, which are getting more expensive due to competition from China.

FOSSIL FUEL-DEPENDENT ECONOMY

Its reliance on lucrative oil and gas resources has long discouraged Tehran from developing a more diverse and sustainable economy. Despite the country’s huge solar and wind potential, oil and natural gas continue to
IRAN

ENERGY MIX (2013)

- 56.9% Natural Gas
- 41.2% Oil
- 0.6% Nuclear
- 0.6% Hydro
- 0.2% Biofuels/Waste
- 0.5% Coal

ENERGY INDICATORS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>World Rank</th>
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<tbody>
<tr>
<td>Energy Consumption</td>
<td>228.40 Mtoe</td>
<td>10</td>
</tr>
<tr>
<td>Energy Production</td>
<td>298.93 Mtoe</td>
<td>9</td>
</tr>
<tr>
<td>Net Exports</td>
<td>55.78 Mtoe</td>
<td></td>
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<tr>
<td>Energy Consumption Per Capita</td>
<td>2.95 toe/capita</td>
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<tr>
<td>Renewable Electricity Generation</td>
<td>15 452 GWh</td>
<td>42</td>
</tr>
</tbody>
</table>

Sources: IEA, EIA, UNFCCC, World Bank. March 2016
**STRENGTHS**
- Re-entry into the oil market
- Attracting foreign investors
- New gas pipeline & LNG diplomacy

**WEAKNESSES**
- Regional rivalries
- Fossil fuel-dependent economy
- Costly & inefficient energy subsidies

**ENERGY TARGETS**

**5GW**
Generated from **renewable sources** by 2018

Increase the energy efficiency of end-use sectors by 2% per year until 2025

**GDP, ENERGY DEMAND & CO2 EMISSIONS**

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<tr>
<td>Gross Domestic Product (GDP)</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
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<tr>
<td>(Index: 1990 = 100%)</td>
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<tr>
<td>Energy demand</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
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<tr>
<td>(Index, 1990 = 100%)</td>
<td></td>
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<td></td>
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<tr>
<td>CO2 emissions</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>250</td>
<td>300</td>
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<tr>
<td>(Index: 1990 = 100%)</td>
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dominate, accounting for 98% of energy consumption. Less than 6% of electricity is generated from renewable energy sources, mainly from hydro-power, according to the International Energy Agency. Although hydroelectric power emerged as a renewable alternative in Iran as early as the 1950s thanks to its vast network of rivers, widespread droughts have severely reduced Iran’s capacity in the last years.

An unassailable energy demand and mounting global climate concerns are now pressuring Tehran to curb its GHG emissions and to explore alternative energy sources. In an attempt to diversify its energy mix and preserve its hydrocarbon reserves for export, the government announced in its Fifth Five-Year Economic Development Plan (2010-15) the aim of generating 5000MW from renewables by 2015. Despite financial incentives such as a feed-in tariff, the country missed its pledge vastly, generating only 150MW from renewable power plants in 2015. In its Intended Nationally Determined Contribution (INDC) submitted ahead of the Paris climate talks in 2015, Iran stressed that the ambition of its emissions reduction and low-carbon policies depend on the removal of Western sanctions and on technology and finances that need to come from developed countries. It cannot be denied, however, that the country has over-invested in fossil fuel power plants, hindering low-carbon developments.

In the new Sixth Five-Year Economic Development Plan (2016-21) Iran reiterated its plans to increase renewable energy capacity to 5000MW – 4500MW coming from wind energy and 500MW from solar energy – by 2018. To attract the necessary investment to the sector (estimated at $10bn), Hassan Rouhani’s administration has recently put forward new policies to reduce bureaucracy and provide tax reductions for investors. Iran’s potential has not gone unnoticed; German, Italian, Danish, South Korean and Indian companies have already expressed their willingness to build new renewable power plants and manufacturing facilities in Iran. If the country wants to exploit its potential, however, it will have to properly modernise its infrastructure, allow the integration of renewables into its grid and remedy its lack of technical expertise.
COSTLY & INEFFECTIVE ENERGY SUBSIDIES

Iran’s energy consumption has almost doubled over the last decade, driven by economic and population growth, and unsustainably high energy subsidies. The latter, estimated to cost Iran up to $100bn, or over 25% of its GDP annually, have resulted in an inefficient use of energy, low productivity in energy-intensive industries and a costly burden for public expenditure. The energy intensity index in Iran is one of the highest in the world – twice the global average.

In order to bring the public budget under control and rationalise energy consumption, Iran embarked in 2010 on a major subsidy reform. Under President Mahmoud Ahmadinejad’s shock therapy aimed at phasing out subsidies by 2015, universal price controls were replaced by small cash payments to families and direct support to industries. The drastic reform initially led to positive outcomes, with consumption falling and noticeable improvements in living standards. But although the government asked wealthy Iranians to voluntary refrain from signing up to the programme, 95% of Iranian population kept receiving the payments, which significantly exceeded the revenue retrieved from energy price increases. Then in 2012, inflation jumped to over 40% and the economy slowed, causing the suspension of the programme until 2014.

The second phase of the reform – currently in progress – is being implemented by President Rouhani’s administration, though there is a continuing struggle to target cash payments to the poor. Despite progress in increasing energy prices more gradually than the previous administration and in reducing inflation after two years of price hikes, 2015 still saw a budget shortfall. Moreover, energy consumption patterns haven’t substantially reversed in recent years, according to the International Energy Agency (IEA). Overall, the reform has still not achieved its initial objectives, and so its completion remains a distant goal.
IMPLICATIONS FOR EUROPE

The EU institutions have been working hard to rebuild ties with Iran since it became clear that sanctions would be lifted. Discussions over a potential agreement on trade, investment and political dialogue have already started, and the planned visit of EU foreign policy chief Federica Mogherini to Tehran in April 2016 is likely to be followed by the opening of a permanent EU diplomatic mission later this year.

The energy sector is the biggest prize. The opening of Iran’s economy to foreign capital is creating attractive opportunities for European companies to invest in the country’s vast hydrocarbon sector and to export technology to develop clean energy projects. Before the embargo, Iran used to be Europe’s key energy partner, exporting an average of 400,000 barrels of oil a day, a gap that was later filled by oil from Russia, Saudi Arabia and Iraq. Iran has now restarted shipping crude oil to Europe, hoping to quickly win back European consumers and reclaim its lost position in the market.

The outlook for EU-Iranian natural gas cooperation is more complex. In the short term, the Iranian natural gas industry will most likely need to focus on meeting domestic needs and on regional exports. Extending Iranian exports to Europe would also require major investments in LNG facilities and pipelines for commercial gas flows to get started. But increasing EU imports to between 25-35bn cubic metres of gas a year from Iran by 2030, based on EU assessments, would be of strategic importance for the EU, which has been long seeking to reduce its long-term reliance on imports from Russia.
CONCLUSION

Energy plays a special role in the economic growth and development of Iran as it is its first source of revenue. The country’s reliance on lucrative yet volatile oil and gas resources for most of its income has, however, created disincentives for a more diversified economy and made economic sanctions all the more painful.

The removal of the sanctions promises to reshape Iran’s economy and its position on the global energy scene. Its re-entry into the market will allow the Islamic Republic to reclaim its lost share in the global energy trade and diplomacy. Meanwhile, international investors see Iran as an emerging market that promises massive profits, as it has much of the technical infrastructure already in place and the government now offers more business-friendly conditions. The potential of Iran’s oil, gas and renewable energy has not gone unnoticed by major European and Asian players, and the race to tap into Iran is likely to be tough. Yet the risks for business operations remain high given the political instabilities in the Middle East and the possibility of sanctions being restored if the nuclear deal is not respected.

Iran’s path ahead is not free of potential pitfalls. If the country is to benefit from healthy economic development, it needs to pursue structural reforms to diversify its energy portfolio, remove unsustainable subsidies, increase energy efficiency and savings, modernise and extend its infrastructure and rein in its bureaucracy and systemic corruption.
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GREENER EUROPE

These series of analyses is part of Friends of Europe’s Greener Europe pillar. It focuses on global and EU policies needed to foster sustainable economy that reconciles economic growth with environmental responsibility. The topics it covers range from the global debate on climate change and the creation of an energy union to sustainable mobility, agriculture and rural development. Important features of this pillar are also resource governance and the circular economy.
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