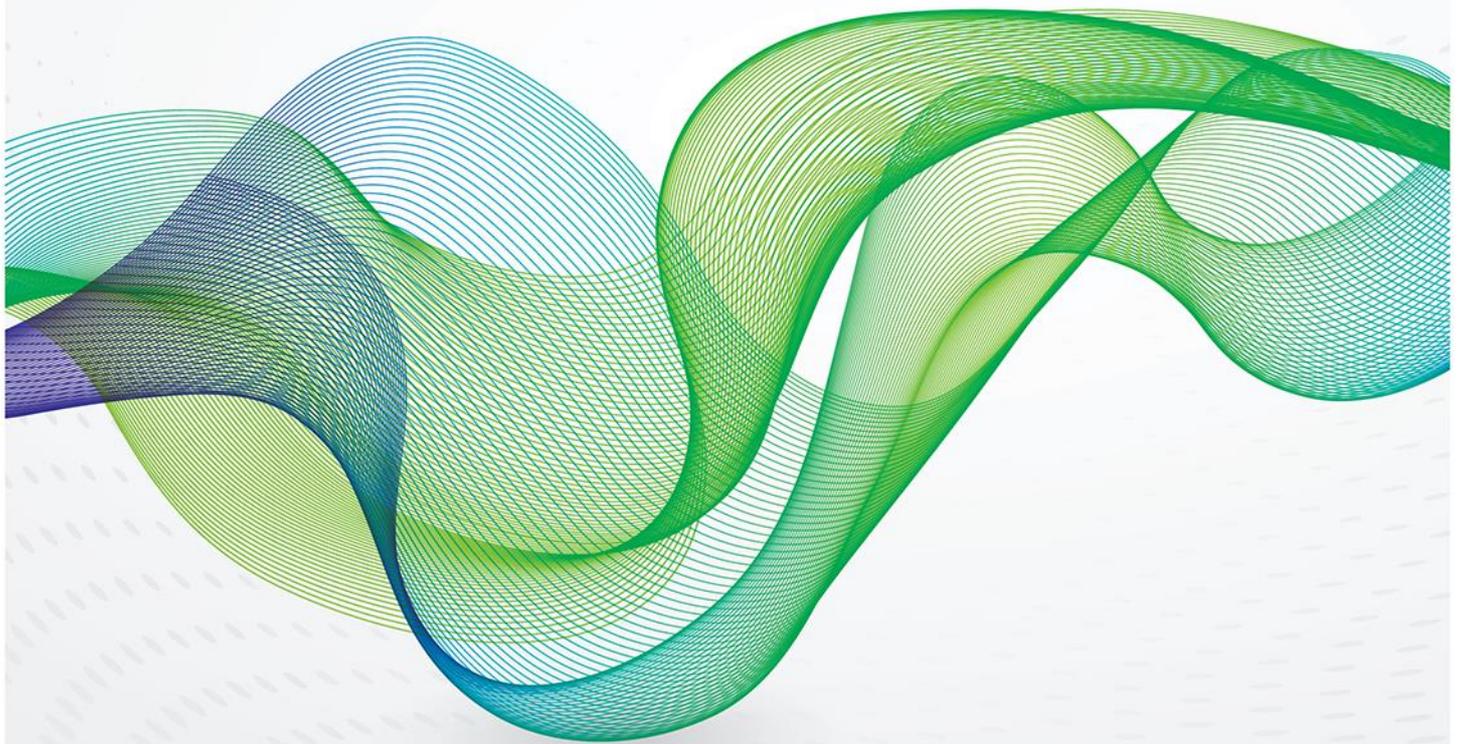




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Saudi Arabia's Vision 2030, Oil Policy and the Evolution of the Energy Sector



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1. Introduction

In late April 2016, the Council of Ministers in Saudi Arabia approved an ambitious new strategy for the kingdom, known as Vision 2030.¹ The vision is based on three main pillars, which are intended to help transform the Saudi economy and society by 2030:

- The central role that Saudi Arabia plays in the Islamic and the Arab world.
- An aim to transform Saudi Arabia into a global investment powerhouse.
- Exploiting Saudi Arabia's key strategic location to turn the country into a global trade hub connecting the three continents of Asia, Europe and Africa.

The vision does not contain specific details about implementation, but is built around three broad themes—a vibrant society, a thriving economy, and an ambitious nation. A key goal of the thriving economy theme is to build a well-diversified economy, which is less dependent on oil revenues. To achieve this, Vision 2030 focuses on a wide range of key issues. It highlights the importance of developing human capital through better education, particularly early childhood education. It aims to support small and medium enterprises (SMEs) and to increase their contribution to the economy. Another key element is maximising the country's investment capabilities, which involves restructuring the Public Investment Fund (PIF) and transferring ownership of the national oil company Saudi Aramco to the PIF, with the aim of creating the largest sovereign wealth fund in the world. It also involves the privatisation of government services such as healthcare and education, with the government increasingly playing the role of regulator rather than provider. Through these and other initiatives, Saudi Arabia aims to achieve some very ambitious goals including:

- Moving the economy from the current position as the 19th largest economy in the world into the top 15.
- Increasing the private sector's contribution from 40% to 65% of GDP.
- Raising the share of non-oil exports in non-oil GDP from 16% to 50%.
- Increasing non-oil government revenue from Saudi Arabian Riyal (SAR) 163 billion to SAR 1 trillion.
- Growing PIF assets, from SAR 600 billion to over SAR 7 trillion.
- Increasing foreign direct investment from 3.8% of GDP to 5.7%.

Vision 2030 recognises that in order to achieve these goals, a major institutional shake-up is needed. The Saudi government therefore has, in parallel, announced a set of programmes, which include the National Transformation programme, the programme for Strengthening Public Sector Governance, the Privatisation programme, the Public Investment Fund Restructuring programme and the Saudi Aramco Strategic Transformation programme. The details of each of these programmes are only slowly emerging, with the National Transformation Programme (NTP) approved in early June, providing more information on the implications for the energy sector (see Table 1).

¹'Vision 2030 Kingdom of Saudi Arabia'. The full report can be downloaded from: <http://vision2030.gov.sa/en>

Table 1: 2020 energy sector targets in the NTP

Performance Indicator	Baseline	2020 Target	Unit
Petroleum production capacity	12.5	12.5	mb/d
Dry gas production capacity	12	17.8	bcf/d
Refining capacity	2.9	3.3	mb/d
Share of pharmaceutical sector in non-oil GDP	0.98	1.97	Percentage (%)
Efficient utliation of fuel in electricity power generation	33	40	Percentage (%)
Number of job opportunities in the mining sector	65	90	Thousand jobs
Decrease in water and electricity subsidies	0	200	SAR Billion
Generation from renewable energy	0	3,450	Megawatts (MW)
Share of renewable energy in total	0	4	Percentage (%)
Job opportunities for citizens in atomic and renewable sectors	500	7,774	Jobs
Local content contribution within the renewable sector	25	35	Percentage (%)

Source: Vision 2030 Kingdom of Saudi Arabia; Energy Aspects

The restructuring process began with a series of royal decrees in early May 2016. For instance, a new Energy, Industry and Natural Resources Ministry² has been established to replace the Ministry of Petroleum and Mineral Resources. The Water and Electricity Ministry was broken up, with the water portfolio added to a new Environment, Water and Agriculture Ministry, while electricity was added to the new energy ministry.

While such broad visions are hardly new (in 2005 Saudi Arabia published the Long-Term Strategy 2025, which encompassed various goals, including reducing the dependency of the economy on oil revenues) and diversification has been at the centre of each successive five-year development plan since the 1970s, there is much optimism that this time the plan will be implemented — at least partially. The huge concentration of economic power in the hands of the Deputy Crown Prince Mohammed bin Salman, his willingness to take risks, the breadth of the reforms announced so far, and an effective communication campaign have given Vision 2030 more credibility than previous initiatives.

Thus, it is no surprise that Vision 2030 has captured the interest of energy markets. For many oil analysts, the replacement of veteran oil minister Ali Al-Naimi by Khalid Al-Falih, the creation of the enlarged Ministry of Energy, Industry and Mineral Resources, the announcement of the Saudi Aramco Strategic Transformation programme, and plans to publicly list a minority stake in Saudi Aramco were taken as clear signs of a drastic shift in energy policy. There is little doubt that one effect of the recent announcements has been to introduce greater uncertainty about the foundations and direction of Saudi oil policy. Some analysts argue that Saudi Arabia may abandon its policy of maintaining spare capacity and could boost output, with the effect of putting a cap on oil prices in the near-term.³ Others have argued that Saudi Arabia has the incentive to expand its oil production capacity, which is bearish in the long-term⁴, especially because this may be taken as a signal that the kingdom is moving beyond oil and rushing to monetise its reserves in a carbon-constrained world.

² Vision 2030 devotes special attention to the mining sector with the aim of increasing its share in GDP and creating 90,000 jobs in the process.

³ See for instance, the Financial Times, 'Saudi raising oil output ahead of Aramco IPO', May 10, 2016.

⁴ For instance, IHS argued that 'In the current period of policy activism, we can expect continued announcements from Riyadh to firm 12.5 mb/d of capacity and it appears to be just a matter of time before announcements to go well beyond that historical number, towards a target of 15 mb/d'. IHS, 'A Bolder Saudi Arabia: The Central Bank Changes the Rules', May 9 2016.



In this comment, we argue that while the recent announcements and organisational changes are substantial, and the overall objectives of Vision 2030 are very ambitious, the impact on oil policy and the energy sector is likely to be more subtle than current expectations. Not least because the last few years have already seen deep transformations in the Saudi energy sector. The kingdom has launched initiatives to generate more value added, through investing in downstream assets and integrating refineries with petrochemicals, increasing the role of gas in the energy mix, deploying renewables into the power sector, improving efficiency in energy use, and more recently increasing domestic energy prices. On the oil policy front, the current policy of leaving it to 'prices' to rebalance the market in the absence of a collective agreement on cutting output remains very much in place.

2. The Oil Sector and Oil revenues will remain central to Saudi Arabia's economy

During an interview with western media outlets, Deputy Crown Prince Mohammed bin Salman alleged that the kingdom is indifferent to whether the price of oil is \$30 or \$70. Not surprisingly, this was interpreted as meaning Saudi Arabia no longer cares about oil prices and its output policy is no longer tied to the objective of maximising oil revenues. An extreme interpretation was that Saudi Arabia might even welcome a low price environment, as that would make it easier to push through the substantial reforms contained in Vision 2030.

Yet, the fact remains that the Saudi economy, including the non-oil private sector, still relies heavily on government spending that is fueled by oil revenues. Furthermore, the political stability of the country is directly linked to the ability of the government to distribute rent to the population, including creating jobs in the public sector. As recently emphasised by Al-Falih, the objective of reducing reliance on oil 'does not mean that the kingdom's opportunities of optimising its benefits from its natural resources, including oil, will receive less attention in the current economic phase than in previous phases. Increasing our oil revenues will help us to build a range of other economic sectors in the kingdom, besides international investments.'⁵

Despite the size of its fiscal buffers, low oil prices have been painful for the kingdom. Saudi Arabia has been drawing down on its foreign reserves, increasing its borrowing, exploring schemes to increase taxes (including VAT), reducing government spending, cutting energy subsidies and scaling back spending on capital projects. These adjustments are already taking their toll on the economy. Growth is slowing down, stock markets have fallen from their high levels, the Saudi Riyal peg has come under pressure, and consumers have been hit by higher energy prices and growing inflation.⁶

One also cannot assume that further reforms, such as entirely removing energy subsidies and fully liberalising prices will not risk strong public opposition. Indeed, the fallout from the recent increase in water charges is a case in point. The water and electricity minister was fired following public complaints over a surge in prices, with Mohammed bin Salman describing the ministry's implementation of the new water tariff as 'unsatisfactory'. It is true that the implicit social contract has proved to be elastic, and sufficiently malleable to accommodate the recent energy price increases. However, it may not prove sufficiently resilient to accommodate any further price increases.⁷ The Saudi government is already rethinking the energy subsidy reform programme, and has plans to introduce compensatory schemes to offset the higher costs for households in low-income brackets to gather support for the reforms.

⁵ Argus Media, 'Interview with Khalid al-Falih', June 2016. <http://www.argusmedia.com/news/article/?id=1250725>

⁶ Recent data show that Saudi Arabia's economy expanded at its slowest rate in three years during the first quarter of 2016, with some analysts pointing to a risk of growth slowing to near zero this year, which would be its worst performance since the global financial crisis of 2009. The non-oil sector has taken a big hit, shrinking by 0.7 percent, its worst performance in at least five years. See Reuters, 'Saudi Q1 economic growth slowest in 3 years, may near zero this yr', 3 July 2016.

⁷ Fattouh, B. Sen, A. and Moerenhout, T. (2016) 'Striking the Right Balance? GCC Energy Price Reforms in a Low Price Environment', *Oxford Energy Comment*, Oxford Institute for Energy Studies.



3. Changing the oil minister does not imply a change in oil policy

The replacement of Ali Al-Naimi as oil minister represents a change of personnel but not of policy. The current output policy is based on a fundamental principle: Saudi Arabia will not act unilaterally to rebalance the market. Since 1986, Saudi Arabia has refused to act unilaterally (in 1998, it cut output in agreement with OPEC and non-OPEC countries, and in 2008, it agreed to cut output collectively with other OPEC members in the face of a financial market shock).⁸ Al-Falih has reiterated this position, arguing that Saudi Arabia 'is not going to withdraw production to make way for others. If other producers are willing to collaborate, Saudi Arabia is willing to collaborate. But Saudi Arabia will not accept the role, by itself, of balancing a structural imbalance'.⁹ In the absence of an agreement on a collective cut with other producers, and in the face of heightened uncertainty regarding the US shale supply response in a rising oil price environment, Saudi Arabia has opted for a market share strategy with the aim of pushing out high-cost producers. Rather than balancing the market Saudi Arabia was one of the main contributors to supply growth, increasing its output by 0.4 mb/d in 2015.

To many, the output freeze deal discussed in Doha in April represented a departure from this policy. The producers' attempt to freeze output mattered, not because of the potential impact on oil market balances, but because it signaled a potential shift in tactic, which, if it had succeeded, could have been the start of more cooperation between producers.¹⁰ The attempt to freeze output has failed so far for a variety of reasons, but the Doha talks showed that the sharp declines in the oil price in early 2016 increased the incentive for both OPEC and non-OPEC producers to cooperate. Saudi Arabia's efforts to reach an agreement on a collective production ceiling at the last OPEC meeting in June to 'encourage the rebalancing'¹¹ also supports the view that OPEC is still a vital organisation for the country. As argued by Robert Mabro, '[OPEC members' ability to] compromise to reach agreement should not be underestimated. It is founded on the belief that all members, including the largest producers, would be worse off without OPEC'.¹²

The events of the last few months show that Saudi Arabia oil policy is flexible and could change depending on a change in other producers' behavior and/or changes in oil market conditions.¹³ As argued by Fattouh and Sen¹⁴, 'attempts to fit Saudi Arabia into one category have failed in the past and would most likely fail in the future, as its output policy is constantly evolving'. In fact, Al Falih's recent remark that Saudi Arabia 'will be expected to balance supply and demand *once market conditions recover*'¹⁵ is quite telling of an output policy that adapts to changes in market conditions and one in which prices will play the major role in rebalancing in face of a structural shock hitting the market.

The failure to reach an agreement in Doha raised concerns that in response to Iran increasing its production following the lifting of sanctions, Saudi Arabia will ramp up production to flood the market. Many analysts started to pick apart each and every statement by the kingdom's officials to support this view. So when Saudi Aramco was preparing to start up the 0.25 mb/d expansion of the Shaybah field in May, some in the market took that as the first sign of production increases. The fact is that this project has been in the pipeline since 2008. Importantly, it does not add to Saudi Arabia's productive capacity. Much like the 0.9 mb/d Manifa field, which came online in 2013-14, this new start-up offsets output declines at older fields. The kingdom regularly brings on fields to relieve pressure and offset

⁸ For more details see Fattouh, B., A. Sen, and R. Poudineh (2015). 'The Dynamics of the Revenue Maximization–Market Share Trade Off: Saudi Arabia's Oil Policy in the 2014–2015 price fall', OIES Paper WPM61, October. Fattouh, B. (2016), 'Adjustment in the Oil Market: Structural, Cyclical or Both?' OIES Comment, April.

⁹ Ambrose Evans-Pritchard, 'No end to oil rout as Saudi Arabia plays tough', The Telegraph, 21 January 2016.

¹⁰ Fattouh, B., J. Henderson, and A. Sen (2016). 'Saudi–Russia Production Accord: The Freeze before the Thaw?', OIES Energy Comment, February.

¹¹ Financial Times, 'Oil falls after Opec fails to agree on a new output ceiling', June 2, 2016.

¹² Mabro, R. (1998). 'The Oil Price Crisis of 1998', Working Paper SP10, Oxford Institute for Energy Studies.

¹³ In a recent interview Al-Falih expressed this position clearly stating that 'market circumstances do change, and the positions of other states change, and they sometimes necessitate that we adopt tactics or short-term positions that are an adaptation to market circumstances, or to the positions of other states'.

¹⁴ Fattouh, B and A. Sen (2015), Saudi Oil Policy: More than Meets the Eye? Oxford Institute for Energy Studies.

¹⁵ David Sheppard (2016), 'Saudi may return to oil balancing role says energy minister', The Financial Times, 22 June.

output losses from mature fields, and to maintain production plateaus for longer, thereby optimising the utilisation of the reserve base. Saudi Aramco has stated this publicly on numerous occasions, even though many remain sceptical as to how Saudi Arabia could have added over 1 mb/d of new fields since 2013 without raising its productive capacity. To ease these concerns, Al-Falih went as far as to state categorically in a press interview that '[t]here is no reason to expect that Saudi Arabia is going to go on a flooding campaign'.¹⁶

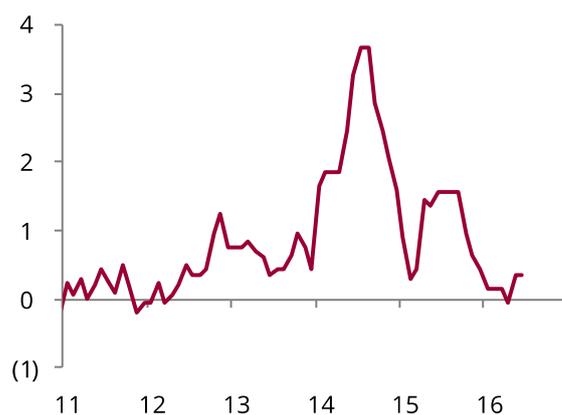
Table 2: Saudi upstream additions, thousand b/d

Project	Type	Capacity	Start date
In production			
Manifa Phase 1	Medium	500	2013
Manifa Phase 1	NGL	65	2013
Manifa Phase 2	Medium	400	2014
Manifa Phase 2	Condensate	65	2014
Under development			
Shaybah expansion	Light	250	2016
Khurais expansion	Light	300	2018
Khurais expansion	NGL	34	2018

Source: Energy Aspects

There is little doubt that the kingdom has become more creative and less rigid in its marketing strategy for instance, selling some spot to Chinese refineries from their storage facilities in Asia and opening new markets in Europe. But this should come as no surprise; after all, it is a buyers' market, and to remain competitive, Saudi Aramco has to adapt to more fierce competition in US, Asian and European markets. But as the graph below shows, there has been no attempt by Saudi Arabia to push crude into the market by pursuing a persistent and aggressive discount policy. When refining margins did improve, Saudi Arabia increased its official selling prices (OSPs). The idea that Saudi Arabia would 'leave money on the table' to push more oil into the market is not supported by the OSP data, which show no clear trend over time.

Figure 1: Saudi Arab Light OSP, \$/barrel



Source: Reuters

¹⁶ Reuters (2016), 'OPEC fails to agree policy but Saudis pledge no shocks', June 2.

The fact remains that after the surge in output in the first half of 2015, Saudi crude output has been remarkably steady at around 10.2 mb/d since August last year. And while production will swing up in the summer months, this will be to meet seasonally higher summer domestic demand. If there is more demand for its crude as a result of unplanned outages and sharp output declines in other parts of the world, Saudi Arabia may struggle to sustain output above 11 mb/d once elevated stockpiles are run down without new investments and/or a resumption in production from the Neutral Zone. Given that Saudi Arabia has ‘calibrated’ its energy sector to maintain crude production at the current levels of above 10 mb/d, the cost of adjustment in both directions has become higher, and the range within which its output is able to fluctuate has become narrower.

Figure 2: Saudi Arabia Oil Output



Source: MEES

4. There are no plans yet to increase productive capacity

Closely linked to the swirling expectations of a big increase in Saudi output has been the belief the kingdom is preparing to increase productive capacity. But even if Saudi Arabia were to decide to expand capacity, this would be expensive, take time and require massive investment in calibrating the whole system, including increasing the capacity of processing plants, building storage facilities and pipelines. To put things in perspective — in 2004, when Saudi Arabia had a productive capacity of 11 mb/d, Al-Naimi said the ministry had developed plans to gradually increase Saudi Arabia’s sustainable production capacity to 12.5 mb/d. The expansion of 1.5 mb/d took six years, and was completed in 2010. Back then, Al-Naimi also said that scenarios to raise the capacity to 15 mb/d had been studied and could be set in motion if global demand required it. But given the large uncertainty engulfing oil markets, Saudi Arabia would exercise the option to wait and not invest in new productive capacity. In fact, the recently approved NTP stated that capacity would stay at 12.5 mb/d through to 2020.¹⁷

In an environment of high uncertainty about global oil demand due to climate change policies, many have argued that Saudi Arabia will be keen to run down its oil reserves rapidly. While this is certainly a concern for a country like Saudi Arabia given its massive reserve base, there is a general belief that barring technological breakthrough, oil will be in demand for decades to come as a transport fuel and as a feedstock for petrochemicals. But even in a carbon-constrained world, Saudi Arabia will be able to compete given the low cost of its oil reserves, its stable economic and political environment and the competence of Aramco to develop these reserves. However, this strategy of increasing production to capture larger market share from a declining pie does not compensate for the loss of revenue from lower oil prices and therefore overall Saudi revenues will most likely fall in a carbon-constrained world.

¹⁷ However as stated by Al-Falih, this does not exclude the possibility of building incremental capacity in the future as ‘global demand continues to grow’. Argus Media, ‘Interview with Khalid al-Falih’, June 2016. <http://www.argusmedia.com/news/article/?id=1250725>

There have also been suggestions that in the 'new global oil order', Saudi Arabia has no incentive to keep its official policy of maintaining spare capacity and this role will increasingly be played by US shale producers. But there may be a strong case for Saudi Arabia to play a more proactive role on the upside. One of the lessons for Saudi Arabia policy makers from the latest cycle is that a high oil price environment will accelerate supply and demand responses, especially as environmental concerns intensify. Therefore, in the long-term, it is in the kingdom's interest to prevent prices from rising to high levels, putting a cap on the oil price. To achieve this, Saudi Arabia would need to maintain healthy spare capacity and develop market tools to help influence the price on the upside. So far, there is no indication that Saudi Arabia has abandoned its policy of maintaining spare capacity¹⁸, which is still considered to be a cornerstone of world oil market stability.

5. The focus on developing natural gas reserves will accelerate

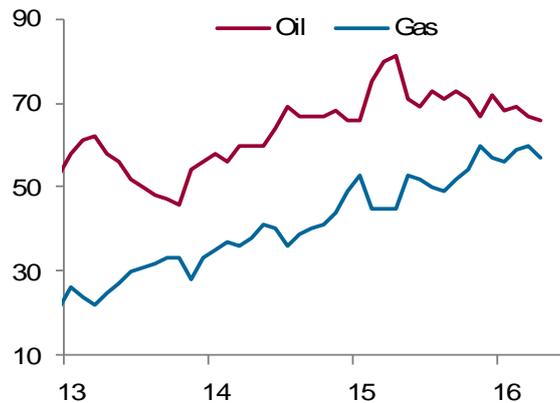
Another area of policy continuity is the goal of using more natural gas domestically rather than liquid fuels. The establishment of the Master Gas System (MGS), which started operating in 1982, represented a major turning point, with gas becoming a primary source in domestic energy consumption and the main fuel for industrialisation.¹⁹ The share of natural gas in total domestic energy consumption has risen from 23% in 1980 to over 41% last year. One of the government's key objectives is to increase the share of natural gas to more than half of total primary energy demand to satisfy increasing demand from new petrochemical plants and to reduce crude burn in the power sector to free up more oil for export. It plans to do so mainly by developing its domestic gas reserves, though it hasn't excluded the possibility of importing gas. According to the NTP, the target for dry gas production capacity is an almost 50% increase to 17.8 bcf/d by 2020.

In 2011, Saudi Aramco started producing from its first offshore gas field, the 1.8 bcf/d non-associated Karan project. It recently commissioned the 1.3 bcf/d offshore Hasbah field that, along with the 1.2 bcf/d Arabiyah offshore field, will feed 2.5 bcf/d of raw gas to the Wasit gas plant. But, the high level of sulphur means that this would produce only 1.7 bcf/d of sales gas. The Wasit and Fadhili gas plants, which are due to be completed by 2019, are essential components of the expansion of the MGS. Along with the 75 mcf/d Midyan project on the Red Sea, and the expansion of two existing fields, these projects will add 5 bcf/d of raw gas output for around 3.2 bcf/d of sales gas. Saudi Aramco has also heavily invested in shale gas in recent years. In fact, a large part of the recent increase in the Saudi rig count is linked to rising gas exploration and development (see Figure 3). Al-Falih raised the possibility of also importing gas in the future. Domestic production will remain the primary focus, but this policy could be supplemented by importing LNG if the economics are attractive. Much of this gas will go into the power sector, where over 13 GW of gas-fired plants are due in the next few years (see Table 3).

¹⁸ In a recent interview, Al-Falih confirmed this arguing that 'we (Saudis) have not abandoned our policy of keeping spare capacity'. Argus Media, 'Interview with Khalid al-Falih', June 2016. <http://www.argusmedia.com/news/article/?id=1250725>

¹⁹ For more details, see Fattouh, B. (2011b). 'The Saudi Gas Sector and Its Role in Industrialization: Developments, Challenges and Options', in *Natural Gas Markets in the Middle East and North Africa*, Fattouh, B. and Stern, J. (eds), Oxford, Oxford University Press.

Figure 3: Saudi oil and gas rig count



Source: Baker Hughes

6. Renewable energy will constitute a very small part of the Saudi energy mix

The Saudi government's commitment to renewables is not new. In April 2010, the government established the King Abdullah City for Atomic and Renewable Energy (KACARE) and was given the responsibility to develop the atomic and renewable energy programme in the kingdom. The original plan was to add 54 GW by 2032 (later pushed back to 2040). But the Saudi track record on nuclear and renewables does not speak volumes for its success and little has been achieved so far. Vision 2030 reiterated Saudi Arabia's commitment to renewables with plans to add 9.5 GW of renewable energy by 2023. However, no effective legal and regulatory frameworks for the deployment of renewable energy have yet been put in place. Even if the kingdom achieves the new ambitious target, it is important to put things in perspective. The country had a meager 25 MW of renewable-energy generation capacity (mostly solar photovoltaic) installed at the end of 2015 and even with the newly announced target, renewables would constitute just 5% of the country's electricity consumption, as demand continues to grow too. For the foreseeable future, the rise in electricity in demand will be met mainly by oil-fired and gas-fired power plants.

Table 3: Saudi power plant additions, GW

Plant	Operator	Fuel	Capacity (GW)	Start-up
Jiddah South	SEC	Oil	2.80	2016
Cogen x 3	Saudi Aramco	Oil/Gas	0.90	2016
Yanbu 3	SWCC	Oil	3.10	2016
Rawec Exp	Rawec	Oil	0.16	2016
Shuqaiq	SEC	Oil	2.64	2017
PP13	SEC	Gas	1.65	2017
PP14	SEC	Gas	1.65	2017
Rabigh 2	SEC IPP	Gas	2.10	2017
Dhuba 1	SEC IPP	Gas/Solar	0.54/0.05	2017
Waad al-Shamal	SEC	Gas/Solar	1.34/0.05	2018
Jazan	Saudi Aramco	Oil	4.00	2018
Dhuba 2	SEC IPP	Oil	1.70	2018
Fadhili	SEC/Saudi Aramco	Gas	1.50	2019
Taiba	SEC IPP	Gas/Solar	3.60/0.18	n/a
Total capacity			27.98	
...of which gas			13.30	

Source: MEES

7. The drive for downstream integration will continue

Turning from the power sector to the downstream, Saudi Arabia has increased its refining capacity significantly in recent years. Many factors can account for this drive.²⁰ The most important motivation is that Saudi Arabia has been forced to import expensive petroleum products as domestic demand has outstripped refining capacity in certain petroleum products such as gasoline and diesel. Investment in refining is also still considered by many policymakers as a key step towards creating added value by converting crude oil into refined products and establishing the link between the upstream sector and petrochemicals. This in turn provides opportunities for diversification and downstream integration into the full value chain, including the development of new industries. Saudi Arabia has been increasingly encouraging their petrochemical industries to diversify the feedstock mix away from ethane towards refined products such as naphtha, butane, and propane. In addition to increasing feedstock availability, the use of refined products provides opportunities to produce more sophisticated petrochemical products that are needed to extend the value chain and generate employment opportunities. Finally, the limited availability of gas for use in the power sector and infrastructure issues have resulted in continued reliance on liquid fuels for power generation, further increasing domestic demand for liquid products.

Saudi Aramco is pressing ahead with the 0.4 mb/d Jazan refinery, which will take total Saudi refining capacity from 2.91 mb/d in 2015 to 3.3 mb/d by the end of 2018, although the 0.4 mb/d Jazan refinery may well be delayed. The refinery was originally scheduled to come online late in 2016, but the schedule was impacted by delays awarding the linked power plant and further delays are possible, particularly as the site is close to the restive Saudi-Yemen border.

Table 4: Saudi refinery projects, thousand b/d

Company	Capacity	Start date
Operating		
Ras Tanura	400	Q4 12
SATORP	400	Q4 13
YASREF	400	Q4 14
Planned		
Jazan	400	2020
Possible		
Yanbu	400	2023

Saudi Aramco has also invested heavily in overseas downstream assets, both in long-standing markets — such as the US, Japan and South Korea — and in growing markets such as China. Given the recent shift in global oil demand dynamics towards non-OECD countries, Saudi Aramco has been expanding its activities in Asian markets. Its strategy is to partner with local downstream-integrated players to secure market outlets in these growing markets. The investment in the Fujian Refinery and Petrochemical Company with Sinopec and ExxonMobil is a typical example. There are currently plans to double the project's capacity from its current level of 0.24 mb/d. There are also plans to construct a new project in Yunnan province with CNPC.

²⁰ For more details, see Bassam Fattouh and Richard Mallinson (2013), *Refining Dynamics in the GCC and Implications for Trade Flows*, Oxford Energy Comment (Oxford: OIES).

8. Local Content Requirements Will Accelerate

While continuing to accelerate the path towards downstream integration, the drive to increase the local procurement of goods and services in the energy sector will intensify. Policymakers see this as a way to encourage service companies to manufacture more equipment in Saudi Arabia, diversify the economy by creating a large Saudi-based oil service industry, and generate employment. Saudi policymakers have been sending clear signals that current levels of local content ‘are unsustainable’ and that ‘continuing to import materials and services at growing levels can’t be Saudi Aramco’s long-term strategy’.²¹ Saudi Aramco launched its In-Kingdom Total Value Added (IKTVA) programme with the aim of doubling the percentage of locally manufactured energy related goods to 70% by 2021. It also plans to raise the export of Saudi made energy goods to 30% over the same period. The NTP has set an objective of increasing the percentage of local content in the total expenditure of public and private sector from 36% to 50% by 2020. This represents a fundamental shift from current policy where local content has not been a formal requirement to one where local content development is required across Saudi Aramco’s domestic and international supply chain.²²

9. Saudi Aramco IPO will face many hurdles

While many of the themes discussed above represent a continuation, and perhaps acceleration, of existing policy objectives (with the exception of higher emphasis on local content policies), one new element of Vision 2030 caused a significant stir — the partial public listing of Saudi Aramco. No exact timeline has been announced, but 2017-2018 has been mentioned as a desired target. The potentially biggest IPO in history is likely to be fraught with challenges.

Saudi Aramco does not own the reserves; it has the monopoly to produce from these reserves. Thus, any valuation will not be based on the value of the reserve base, but most likely on the discounted cash flows into the future, which depends on the profit per barrel and the quantity of oil produced. The profit per barrel in turn will depend on the level of taxes and royalties Saudi Aramco pays back to the government; if the taxes and royalties that are transferred to the finance ministry are high, then the valuation will be low. The fact that the government can increase taxes on Saudi Aramco also introduces ‘sovereign risk’ and hence the comparisons with private companies such as ExxonMobil do not hold, as one cannot apply the same discount rate to Aramco’s cash flows given the higher level of risk.

The IPO is also likely to influence other aspects of reform such as pricing reforms in gas and other products. For instance, in the current environment of low domestic gas prices, it is not clear how to value Aramco’s gas assets, as all gas is sold at a very low price for domestic consumption.

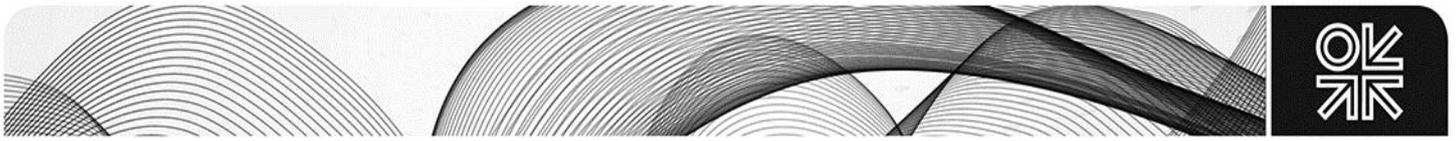
And the hurdles don’t stop here. Given the size of the IPO, a listing in a foreign exchange may be required, as the small size of the Saudi stock exchange can’t absorb such a high value IPO. A listing overseas would expose Aramco to a number of obligations, such as conforming to SEC standards on reserves accounting even if the reserves belong to the government. Listing outside the kingdom would also raise the possibility of ‘frivolous lawsuits’ against the kingdom.²³ Also, if Saudi Aramco loses the status of a ‘national oil company’, it could be subject to anti-trust suits. Any IPO has to ensure that Saudi Aramco is not exposed to such risks.

In many ways, the question is not only about how much cash the IPO of Saudi Aramco generates and the best method to value the company. The IPO also raises a key issue as to whether it will result in a fundamental shift in the management of the oil sector. For instance, any potential transfer of Saudi Aramco’s shares to the Public Investment Fund (PIF) will entail changes in the governance structure, the decision-making process and the main bodies that are responsible for the investment strategy and the future direction of the company. There is also the issue of the role of minority shareholders. For

²¹ ‘In-Kingdom Total Value Add (IKTVA) program launch’, Keynote by Amin H. Nasser, President & CEO, Saudi Aramco, DAMMAM, December 01, 2015

²² Trade Arabia, ‘Big boost to Saudi industries as Aramco to double local market sourcing’, December 1 2015.

²³ The Economist, The Big Float, April 30, 2016.



instance, shareholders do not value spare capacity and would encourage faster development of reserves than what the government prefers. However, Al-Falih has publicly stated that the policy of holding spare capacity would not be abandoned after an IPO and shareholders would 'have to accept it'. The government will continue to retain its sovereignty in making decisions on production and capacity.²⁴ In fact, given the IPO will put less than 5% of the company in the public, the minority shareholder will likely have no influence over such key decisions.

Despite these challenges, the IPO is a central part of Vision 2030 and for the government to step back from it after raising the profile of Vision 2030 would be extremely difficult. Therefore, the IPO will go ahead, but there is uncertainty over the timing and what shape Saudi Aramco will take after the partial listing.

10. Conclusions

The immense challenges in transforming the Saudi economy doesn't mean there won't be change in Saudi Arabia. Structural reforms outlined in Vision 2030 are much needed to shift the economy to a more sustainable path and even if only a small part of Vision 2030 is being implemented, the Saudi economy will look very different in 2030 than it does now. The key question is whether these changes will have a substantial impact on oil policy and the evolution of the energy sector. As discussed above, in spite of expectations of a diminished role, the Saudi energy sector (and particularly the oil and gas sector) remains key to a smooth transition to the vibrant economy envisioned and will continue to play a vital role in the country's future. Furthermore, the overall direction of Saudi oil policy in terms of its production and investment policy, maintaining spare capacity, integrating down the value chain through investing in refining and petrochemicals, increasing the role of gas in the energy mix, introducing efficiency measures and deploying renewables in the power mix to free crude oil for exports are not likely to change in the next few years as has been confirmed by the NTP. In fact, one could argue that the Saudi energy sector would benefit from a more integrated energy policy that takes a holistic view about the energy challenges facing the kingdom. But the Saudi energy sector will not be immune from the changes in other parts of the economy as the recent restructuring of the energy ministry, the recent increase in energy price, the emphasis on local content policies, and plans for a partial public listing of Saudi Aramco have shown. The restructuring and reorganisation of such a vital sector and the acceleration of some policies may bring benefits and achieve efficiency gains, but they will also generate uncertainties and risks, which need to be carefully assessed and managed so policymakers don't end up killing the goose that lays the golden eggs.

²⁴ The Financial Times, 'Saudi Aramco to 'retain sovereignty' post-IPO, June 2, 2016.