

THE IRAQI OIL SURGE IN A NEW ENERGY LANDSCAPE

SAMMY SIX AND LUCIA VAN GEUNS

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LIST OF ABBREVIATIONS

BGC	Basrah Gas Company
CSSF	Common Seawater Supply Facility
EIA	Energy Information Administration
EUR	Estimated Ultimate Recovery
f.o.b.	free on board
GCC	Gulf Cooperation Council
IEA	International Energy Agency
IMF	International Monetary Fund
INES	Integrated National Energy Strategy
IOC	International Oil Company
IPSA	Iraq Pipelines in Saudi Arabia
JV	Joint Venture
LPG	Liquefied Petroleum Gas
LTO	light tight oil
MENA	Middle East and North Africa
mb/d	million barrels per day
OAPEC	Organization of Arab Petroleum Exporting Countries
OECD	Organization for Economic Cooperation and Development
OMR	Oil Market Report
OPEC	Organization of the Petroleum Exporting Countries
PSC	Production Sharing Contract
SPR	Strategic Petroleum Reserve
TSC	Technical Service Contract

1 INTRODUCTION

After decades of wars and sanctions, Iraq has firmly re-established itself among the world's top oil producers.¹ Sound investments in the energy sector have boosted Iraq's oil production to well over 3 million barrels per day in 2013. Further expansion of the hydrocarbon sector should provide the Iraqi government with the means to rebuild public infrastructure and bolster the economy. Baghdad has negotiated production contracts with a host of foreign oil companies, putting Iraq on track toward producing 9 million barrels per day by 2020², close to what Saudi Arabia or Russia currently produce. The International Energy Agency (IEA) foresees only a doubling of current production levels, to about 6 million barrels per day by the end of the decade, due to numerous political, infrastructural and security issues that severely constrain further production growth.

Iraq's oil potential is based on the country's vast proven reserves³ that are relatively untapped and inexpensive to extract, unlike other sources of incremental oil. Because of its favourable geology, Iraq has been forecasted to account for almost half of global supply growth over the current decade.⁴ These volumes of oil have traditionally been associated with matching the ever-growing demand for oil from emerging countries outside the OECD.

Markets, however, are undergoing rapid changes. The combination of high prices and new technologies has enabled the extraction of so-called 'unconventionals', which are previously inaccessible hydrocarbons. In the US, production of light tight oil from shale formations has boomed due to the large-scale application of hydraulic fracturing and horizontal drilling, while in Canada extensive amounts of oil from tar sands are being produced. At the same time, demand growth looks increasingly uncertain, particularly in OECD countries but even in emerging markets.

1 An historic overview of Iraq's production output levels can be found in the Appendix.

2 A total production output of 9 mb/d by 2020 represents the medium growth scenario of the official Integrated National Energy Strategy (INES). Previously, Iraq advocated a high production scenario which envisioned a 13 mb/d production plateau by 2017.

3 According to the EIA, Iraq has 141 billion barrels of proven oil reserves, the fifth largest in the world. In April 2013, Iraq raised its own estimate to 150 billion barrels (Bloomberg, 2013).

4 IEA (2012). World Energy Outlook.

Iraq is returning to a market which is radically different than the one it was forced to leave years ago, and its OPEC partners now also have a different view on Iraq's participation. This paper aims to assess how current developments in energy markets will impact the strategic position of Iraq in the medium term, and how Iraq is responding within the OPEC framework.

2 THE POSITION OF IRAQ IN A CHANGING OIL MARKET FRAMEWORK

A FUNDAMENTALLY UNCERTAIN MEDIUM-TERM OUTLOOK

Looking at upstream developments in North America, where a combination of high prices and new technology has allowed energy companies to unlock significant amounts of 'unconventional' resources, predominantly in the form of light tight oil (LTO) but also oil sands, has led some to imagine a world soon to be awash in oil.⁵ When it comes to the US, the numbers are, without a doubt, impressive. Since 2008, the US has added over 2.5 mb/d of crude oil to reach a total current output of 8 mb/d, effectively and unexpectedly reversing a long-term decline in liquids production.⁶ The shale revolution is so successful that in 2013 the US overtook Russia as the world's largest producer of oil and natural gas.⁷ A recent energy outlook by the EIA envisions the US producing up to 10 mb/d of crude oil by 2020, albeit under a high resource scenario.⁸

Outside of North America, incremental oil supplies are expected to come mainly from Kazakhstan, Brazil and, of course, Iraq, which is single-handedly expected to account for 45 percent of global supply growth over the current decade.⁹ Driven by continuous unconventional production and the Iraqi supply, global oil markets might, according to the IEA, experience a 'supply shock that will be as transformative (...) over the next five years as was the rise of Chinese demand over the last 15'.¹⁰

However, across the energy board fundamental uncertainties remain. Many key OPEC oil producers, for example, are experiencing severe production outages as a consequence of various circumstances. Iraq has been the most illustrative example, seeing its production and export capacity clipped by infrastructural inadequacies, political infighting and a wave of sectarian violence not seen since 2008.¹¹ In Nigeria, oil is being stolen on an industrial scale by all sorts of criminal networks¹², while US-

5 See, in this respect, Maugeri, L. (2012). *Oil: The Next Revolution: the unprecedented upsurge of oil production capacity and what it means for the world*. Harvard Kennedy School: Belfer Center for Science and International Affairs.

6 EIA (2013).

7 Wall Street Journal (2013). 'U.S. Is Overtaking Russia as Largest Oil-and-Gas Producer'.

8 EIA (2013). 'U.S. Crude Oil Production Could Reach 10 Million Barrels' Per Day By 2040'.

9 IEA (2012). World Energy Outlook.

10 IEA (2013). Medium-Term Oil Market Report.

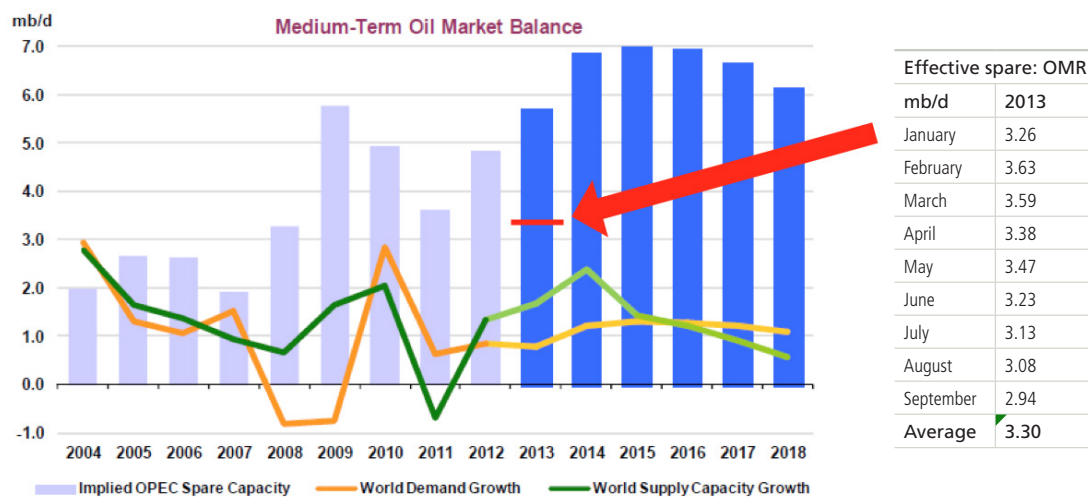
11 Financial Times (2013). 'Iraq's Faltering Oil Resurgence Raised Price Fears'.

12 Financial Times (2013). 'Criminal Networks Blamed For Nigeria Oil Theft'.

and EU-led sanctions have severely curtailed Iranian supplies.¹³ In Libya, protests at crucial energy facilities and a continued overall climate of lawlessness since the ousting of Gaddafi has shut down most of the country's oil production.¹⁴

Together, disruptions in these four countries alone amounted to more than 2 mb/d as of August 2013¹⁵, roughly equal to Saudi Arabia's presumed spare capacity, and are largely responsible for the relatively tight markets.¹⁶ Although OPEC's four GCC members (Saudi Arabia, Kuwait, the UAE and Qatar) have been able to increase their output to record highs¹⁷, which significantly limited the damage, these disruptions are a stark reminder of the fact that the supply and demand balance in oil markets is more fragile than generally assumed. Therefore, overly optimistic statements about oil supplies, based predominantly upon growing US production, which has resulted in *local* oversupplies of certain grades, can deceptively create an impression of global 'oil abundance'.¹⁸

MARKET FUNDAMENTALS TO EASE IN THE MEDIUM TERM, BUT SO FAR LOWER-THAN-EXPECTED GLOBAL SPARE CAPACITY DUE TO PRODUCTION OUTAGES



SOURCE: IEA, GUNVOR (2013)

13 CNN (2013). 'Iran Sanctions: Why Oil Is Where Tehran Feels The Pain'.
 14 Financial Times (2013). 'Strikes and Lawlessness Bring Libya's Oil Industry To Its Knees'.
 15 EIA (2013). Short Term Energy Outlook.
 16 Platts (2013). 'Casting Doubt... Or When It's Useful To Question Your Own Oil Forecasts'.
 17 Centre for Global Energy Studies (2013). 'OPEC Output Set To Keep Prices Above \$100/BBL In 2014'.
 18 The Oxford Institute For Energy Studies (2013). The US Tight Oil Revolution In A Global Perspective.

How long light tight oil output from the US will continue its stark rise is also uncertain, given the high cost of unconventional drilling. The increase in the marginal cost of production to over 100 US dollar per barrel, also labelled as ‘the dark side of the golden age of shale’, has depressed net income margins in the sector and highlights the vulnerable availability of these ‘technological barrels’ of oil.¹⁹ Fracking, in other words, will only remain economically viable as long as prices remain high. Believed to further complicate the robust outlook for sustained US tight oil production is the high rate of depletion suffered by shale wells.²⁰ However, oil companies are becoming more efficient, as ‘advances in hydraulic fracturing and pad drilling are boosting well productivity, cutting drilling times and substantially increasing estimated ultimate recovery (EUR) rates’.²¹ Moreover, an ever-increasing amount of private-equity funding and overseas investment is flowing towards small and midcap companies, enabling them to sustain their high level of drilling activity.²² Uncertainty also abounds from a demand-side perspective. Bullish forecasts of almost linear demand growth from non-OECD countries, specifically China and India, no longer seem to reflect reality.²³ In an update of its 2013 World Economic Outlook, the International Monetary Fund (IMF) stated that ‘Global growth is projected to remain subdued (...) driven to a large extent by appreciably weaker domestic demand and slower growth in several key emerging market economies, as well as by more protracted recession in the euro area’.²⁴ It is true that numerous factors underpin a strong future demand from China – and by extrapolation, other emerging markets – including short-term issues such as the need to fill strategic petroleum reserves (SPR) and supply new-build refineries, as well as long-term factors such as the broad potential for increased motorisation driven by a growing middle class’s desire for vehicle ownership. Nonetheless, a number of countervailing forces are at work that have the potential to significantly slow down or even halt further growth in oil demand in the next few years.²⁵

First, crude oil consumption within the OECD has already flat-lined, mainly due to policy-driven efficiency measures, advances in automotive technology and the increased use of biofuels, and despite its recent hike^{26,27} is believed to be in structural

19 Financial Times (2013). ‘Costs Rise For ‘Technological Barrels’ Of Oil’.

20 Financial Times (2013). ‘Oil Guru Says US Shale Revolution Is ‘Temporary’.

21 Petroleum Intelligence Weekly (2013). ‘US Gas Drillers Deliver Big Efficiency Gains’.

22 Wall Street Journal (2013). ‘U.S. Is Overtaking Russia as Largest Oil-and-Gas Producer’.

23 Petroleum Intelligence Weekly (2013). ‘China’s Demand Growth Drops Down A Gear’.

24 IMF (2013). ‘World Economic Outlook Update: Growing Pains’.

25 The Economist (2013). ‘The Future of Oil: Yesterday’s Fuel’.

26 Financial Times (2013). ‘European Oil Demand On The Rise’.

27 Financial Times (2013). ‘US Oil Prices Rally On Strong Demand Data’.

decline.²⁸ Emerging markets are keen to follow a similar set of measures. China, for example, driven by an ever-strong desire to limit its dependency on imported oil – the country recently overtook the US as the world's leading net oil importer²⁹ – and desperately trying to manage air pollution levels and traffic jams, has recently adopted its own stringent fuel-economy standards.³⁰ Second, liquefied and compressed natural gas is expected to make bigger inroads into the transportation sector, replacing oil products. The future of natural gas looks especially promising in the heavy duty segment of the transport market, as well as in shipping, power generation, petrochemical plants and heating systems.³¹ According to Citigroup, 'Taken together, the improvement in global fleet efficiency and the substitution of natural gas for oil could be enough to put in a plateau for global oil demand by the end of this decade'.³² Third, the practice of heavily subsidised oil in the Middle East, China and India is undergoing reform, which will put a brake on further demand growth.³³

The oil market outlook thus remains ambiguous, due to a variety of uncertainties surrounding future supply and demand. As the IEA put it tellingly in its July 2013 Oil Market Report, 'Whether you are an oil bull or a bear, this market has something to please you – and worry you'.³⁴

The strategic importance of Iraq: medium- vs. long-term outlook

Growing non-OPEC supplies, mainly driven by continued strong US light tight oil production, are expected to largely keep pace with demand growth until 2018³⁵, relatively weakening the strategic importance of Iraq as an 'indispensable' oil producer in the current decade. Although it remains largely unclear how much oil Iraq will add to global markets and under what time schedule, given all kinds of well-known infrastructural and political issues, it is safe to assume that Iraqi crude will continue to act as an important buffer against supply disruptions and high prices.

28 Statoil (2013). 'Energy Perspectives 2013: Long-term Macro and Market Outlook'.

29 Financial Times (2013). 'China Tops US As Leading Net Oil Importer'.

30 Reuters (2013). 'China Imposes Strict Fuel Economy Standards On Auto Industry'.

31 The Economist (2013). 'The Future of Oil: Yesterday's Fuel'.

32 Citi (2013). 'Global Oil Demand Growth – The End Is Nigh'.

33 Financial Times (2013). 'The World Might Be Drifting Into An Oil Price Shock'.

34 IEA (2013). July Oil Market Report.

35 IEA (2013). Medium-Term Oil Market Report.

Beyond the medium term, as US light tight oil production will probably start to decline progressively, Iraq will no doubt drive the bulk of future oil supply, given its plentiful, largely untapped and technically easy – though not inexpensive – to develop reserves. Due to their low-cost production profile, Iraqi supplies are furthermore less vulnerable to a low price environment than unconventional. Although we tend to produce the most expensive barrels of oil first, clearly Iraq would better withstand a potential shale-induced price slide than North America would.

TRADE FLOWS: REVERSING COURSE

Rather than turning the global demand–supply balance on its head, growing US tight oil production has the potential of further redrawing the world’s oil trade flows.³⁶ US refiners are substituting imported barrels of crude oil with an increasing amount of domestic supplies. Alongside a drop in demand, this explains why total US net oil imports are on a steep downward path. Oil-exporting countries such as Angola, Algeria, Nigeria and Libya, which traditionally have supplied the US with light, sweet oil similar in quality to light tight oil, have seen their shipments to that market almost dry up in recent years.³⁷ Persian Gulf producers like Saudi Arabia, on the other hand, have been able to increase their exports to the US market, given the strong demand of local refineries for high-sulphur and viscous crude.³⁸ Saudi Aramco’s Motiva refinery operation, a Joint Venture (JV) with Shell in Port Arthur, Texas, in fact guarantees a secure flow of about 1.2 mb/d of Saudi crude to the US market.³⁹

However, as Canada is increasing its crude exports to the US Gulf Coast, and the US ban on exporting its own crude persists, oil from Saudi Arabia, Iraq, Mexico, Colombia and Venezuela might also be displaced over time.⁴⁰ Indeed, US refiners are increasingly forced to blend domestic light crudes with Canadian heavy oil, creating a medium sour blend similar to and often cheaper than imported barrels from the Middle East and Latin America. Saudi Arabia and Iraq, respectively the US’s second- and fifth-largest suppliers of foreign oil⁴¹, are now both being forced to severely discount their barrels in order to support sales into the increasingly competitive US

36 The Oxford Institute For Energy Studies (2013). *The US Tight Oil Revolution In A Global Perspective*.

37 EIA (2013).

38 Financial Times (2013). ‘US Shale Threatens to Divide OPEC’.

39 Myers Jaffe, A. (2013). ‘OPEC Reacts to US Shale Oil Boom with New Strategy’.

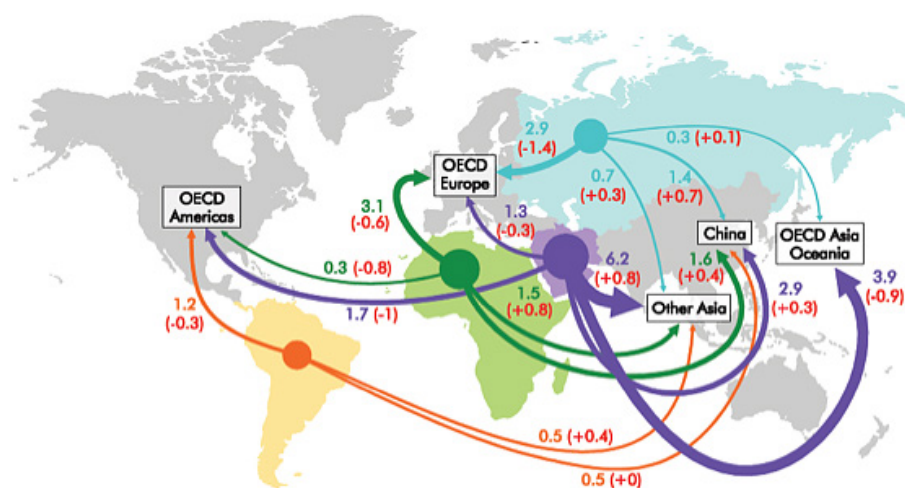
40 Financial Times (2013). ‘Oil Blenders Stir Up Cocktail To Meet US Demand’.

41 EIA (2013).

market.⁴² Iraq communicated in this respect that it is willing to accept those lower prices given the importance of the North American market in its export portfolio.⁴³

In addition to furthering the US's long-standing and politically inspired quest for 'energy independence', falling US imports of crude oil will translate foremost into a battle for market share in exports to Asia for many producing countries and especially those in the Middle East, a development that is already on-going. The Asian market has been quite loose in recent months, though this is counter-intuitive given the fallout of Iranian exports of crude oil to the region. Asian customers now have more supply options available, due to stagnating demand in Europe and especially, the decreasing US need for imports.⁴⁴ In this respect the shale revolution has played out well for Asian buyers of crude, because the shrinking of the US market has forced producers in the Middle East but also Russia, Africa and Latin America to compete more intensely for market share in Asia.⁴⁵ Stabilising oil demand growth in China and an overall bearish market outlook⁴⁶ will further raise the stakes for many Gulf producers that are forecasted to be increasingly dependent on exports to Asia.

CRUDE EXPORTS IN 2018 AND GROWTH OVER 2012 – 2018 FOR KEY TRADE ROUTES



SOURCE: IEA (2013)

42 Petroleum Intelligence Weekly (2013). 'PIW Scorecard: US Gets Discount, Europe Pays Up'.

43 Financial Times (2013). 'Opec Big Hitters Weather US Oil Discount'.

44 Petroleum Intelligence Weekly (2013). 'Asian Refining Proves Tricky For Mideast NOCs'.

45 Platts (2013). 'Lofty Oil Prices Make Life Easy For OPEC But Tough Challenges Lie Ahead'.

46 Wall Street Journal (2013). 'Crude Oil Choppy In Asia'.

The trade position of Iraq: a captive supplier to Asia?

Due to continuous bombing raids targeting the Kirkuk-Ceyhan pipeline and the uncertain outlook for other transport routes from the North, Iraq will remain largely dependent on exporting from its Southern Gulf outlet near Basrah.⁴⁷ Iraq thus faces the potential of turning into a captive supplier to Asia. Over the years, an increasing share of Iraqi oil exports has already been directed to Asian markets, rising from 32 percent in 2008 to 52 percent in 2011⁴⁸, a figure that is expected to reach 80 percent by 2020.⁴⁹ India, China and South Korea are Iraq's main customers, and account for almost half of Iraq's total exports of about 2.4 mb/d. In recent years these countries have significantly increased their imports from Iraq, as well as from Saudi Arabia, as they are forced by the sanctions regime against Iran to look for more secure sources of supply.⁵⁰

Telling for how much market conditions have changed, however, Iraq has had difficulty attracting customers to buy its oil on term contracts.⁵¹ Refiners in Asia, Europe and the US have been wary of further extending their contracts with Iraq, due to the inconsistent quality of Iraq's crude, the availability of cheaper supplies on the spot market and the fact that many oil companies operating in Iraq are allowed to keep or sell a share of the oil they produce. Iraq also faces tremendous competition from Saudi Arabia, the biggest and best embedded Mideast crude supplier to almost all Asian countries.⁵²

Baghdad, however, is well aware of the necessity of developing a strong marketing campaign in order to compete with other established producers. One of the ways in which Iraq has tried to gain market share in Asia, rather aggressively, has been to sell its crude cheaper than any comparable supply.⁵³ In February 2013, for example, Basrah Light bound for the Asian-Pacific market sold as much as 1.10 USD cheaper than Arab Medium, Iraq's main rival grade from Saudi Arabia. In a fierce reaction to defend market share, Saudi Arabia, for its part, cut the price of Arab Medium for two months running. During the first half of 2013 Basrah Light was consistently traded at an average discount of 94 USD-cents to Arab medium.⁵⁴

47 Petroleum Intelligence Weekly (2013). 'Politics Limit Iraq's Export Alternatives'.

48 IEA (2012). World Energy Outlook.

49 Middle East Institute (2013). 'Iraq's Oil Sector Open For Business: The Asia Connection'.

50 Reuters (2013). 'Asia's Iran Oil Imports Drop 22 Pct, Further Cuts Likely'.

51 Reuters (2012). 'Iraq Struggles To Sign Up Oil Buyers For 2013 Term Deals'.

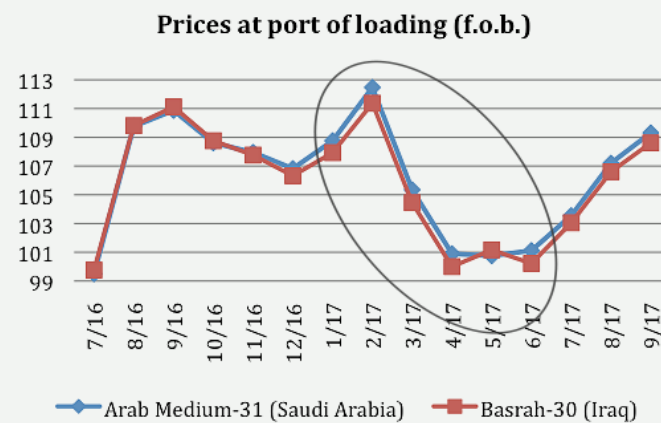
52 Petroleum Intelligence Weekly (2013). 'Saudis Move To Defend Market Share'.

53 Reuters (2013). 'Iraq Undercuts Saudi To Snare Asian Oil Market Share'.

54 Centre for Global Energy Studies (2013). 'Iraq's Basrah Light Versus Saudi Arab Medium'.

Also Iran, forced by strong sanctions and similar measures taken by Iraq⁵⁵, has been offering steep price discounts in the form of favourable credit terms and free delivery of crude to India in order to bump up its exports to Asia, largely to no avail.⁵⁶

ARAB MEDIUM VS. BASRAH LIGHT TO ASIA



SOURCE: PIW, CIEP (2013)

Iraq is also trying to gain a foothold in the Asian market for the longer term by deepening its political and commercial relations with its main customers. Indonesia, for example, received a commitment from the Iraqi government for an ‘unlimited’ quantity of crude oil supply in a partnership that would last for 50 years.⁵⁷ Iraq is even likely to partner with Pertamina to build new refineries in Indonesia⁵⁸, a strategic joint venture which would secure a steady flow of Iraqi crude to the country, similar to Saudi Arabia’s operations in Texas. However, this decision would be remarkable given Iraq’s domestic deficit in refining capacity and subsequent lack of petroleum products.

Iraq has furthermore promoted itself as a good alternative source of supply for many Asian countries looking to diversify their imports away from Iran. India, in particular, has been eager to secure more of Iraq’s oil for this reason. Iraq is also looking for a long-term supply deal with China in order to boost oil exports to the country.⁵⁹

55 Reuters (2013). ‘Iraq Offers Longer Credit To Indian Oil Refiners’.

56 IEA (2013). November Oil Market Report.

57 Iraq Energy (2013). ‘Iraq Willing To Supply An ‘Unlimited’ Quantity of Crude Oil To Indonesia’.

58 Iraq Business News (2013). ‘Iraq May Invest In Indonesian Oil Refineries’.

59 Bloomberg (2013). ‘Iraq Seeks To Boost Crude Exports To China As Oil Output Rises’.

According to Deputy Prime Minister al-Shahristani, all of 2014's expected 500,000 bpd increase in oil exports is earmarked for the growing Chinese market.⁶⁰ In order to accomplish this goal, Iraq is selling its crude to Chinese refineries on much more attractive terms than its Middle Eastern competitors. In November 2013, for example, the Chinese state company Sinochem Corp agreed to run almost half of its new Quanzhou refinery capacity on Iraqi crude, thereby reversing a preliminary agreement it had previously concluded with Kuwait.⁶¹

60 Petroleum Intelligence Weekly (2013). 'PIW Scorecard: US Gets Discount, Europe Pays Up'.

61 Reuters (2013). 'Iraq Pips Kuwait To Oil Supply Deal At China Sinochem Refinery'.

3 OPEC IN A TIGHT SPOT (AGAIN)

In October 1973, the members of the Organization of Arab Petroleum Exporting Countries (OAPEC) declared an embargo on shipments of crude oil heading to amongst others the US, the Netherlands and Portugal, sending shockwaves through the global economy and confirming the view of many that oil-producing nations in the Middle East would indeed use their resource richness as a political weapon. Since its heyday exactly forty years ago, the end of OPEC has been announced several times. This time, some argue, it is the unconventional revolution in the US that will ultimately lead to the demise of the cartel.

OPEC itself has largely downplayed the impact of shale. Saudi Arabia, OPEC's largest producer and *de facto* leader, even welcomed increasing supplies from the US, stating that they have a stabilising effect on the market.⁶² Indeed, as described earlier, US light tight oil has in the first place largely offset various output disruptions in key producing countries, thereby keeping prices steady, which corresponds well with Saudi Arabia's long-term goals. Helped by Brent prices being over 110 US dollars per barrel, OPEC therefore has been able to withstand pressures to cut its production. During its meeting in Vienna in December 2013, the Group once again confirmed its 30 mb/d collective quota.⁶³

It seems unlikely, however, that OPEC will be able to support similar decisions in 2014, as non-OPEC supply is forecasted to reach record highs⁶⁴ and supply disruptions are expected to ease. Energy Intelligence predicts that demand for OPEC crude, which has now fallen slightly below 30 mb/d, will gradually decline further by 1.5 mb/d by 2020, while BP does not expect the call on OPEC to reach 2011 levels for another decade.⁶⁵ Even OPEC itself has now explicitly acknowledged the threat of shale in its latest World Oil Outlook report by stating that demand for its crude will slip by 1.1 million barrels per day by 2018.⁶⁶ After some resistance OPEC has now come to terms with the true nature of the shale oil boom, increasing its 2012 forecast of additional North American oil supply by 2018 from a mere 1.7 mb/d to a more realistic 4.9 mb/d.

62 Reuters (2013). 'Saudi Embraces U.S. Oil Boom Even As Kingdom's Output Steadies'.

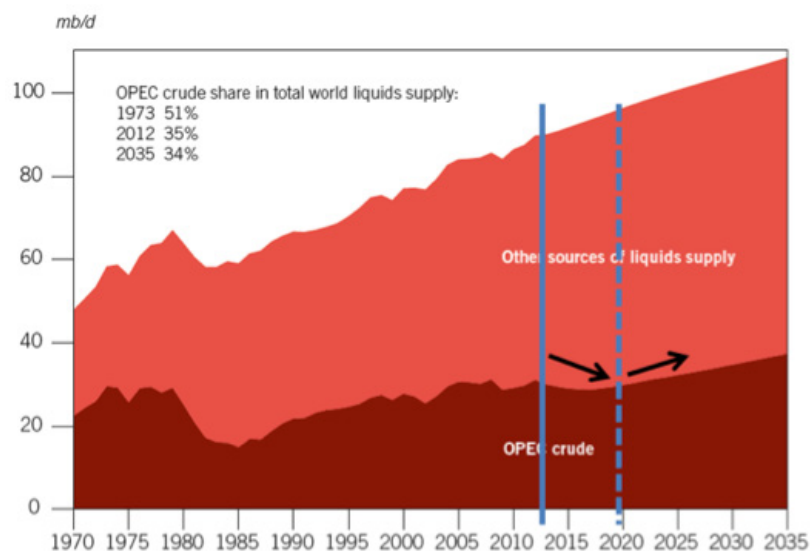
63 Wall Street Journal (2013). 'OPEC Keeps Its Oil Production Ceiling'.

64 IEA (2013). October Oil Market Report.

65 BP (2013). Energy Outlook 2030.

66 OPEC (2013). World Oil Outlook.

OPEC CRUDE AND OTHER SOURCES OF LIQUIDS SUPPLY



SOURCE: OPEC, CIEP (2013)

Although the medium-term outlook can hardly be called rosy for OPEC, beyond 2020 there seems to be increasing room for OPEC as light tight oil output slows and then declines. As OPEC Secretary-General Abdalla El-Badri rightfully noted, 'OPEC will be around after shale oil finishes'.⁶⁷ That is also the view of the IEA, which highlighted in its latest World Energy Outlook that 'light tight oil shakes the next ten years, but leaves the longer term unstirred'.⁶⁸ Nevertheless, the outlook of a more difficult market for OPEC supplies in the coming five to ten years, combined with domestic pressures, can challenge the governments' resolve to collaborate in OPEC.

FISCAL BREAK-EVEN PRICES

That reduced call on OPEC until 2020 will pan out unevenly across the OPEC membership. As touched upon in the previous chapter, North and West African oil producers are bearing the brunt of the American production renaissance, while Gulf exporters have, at least for now, actually been benefiting from the US shale revolution. The GCC club members, exemplified by Saudi Arabia, have boosted exports of their much wanted medium crude to US markets, while also increasing overall production to cover for outages elsewhere. The potential for internal conflict

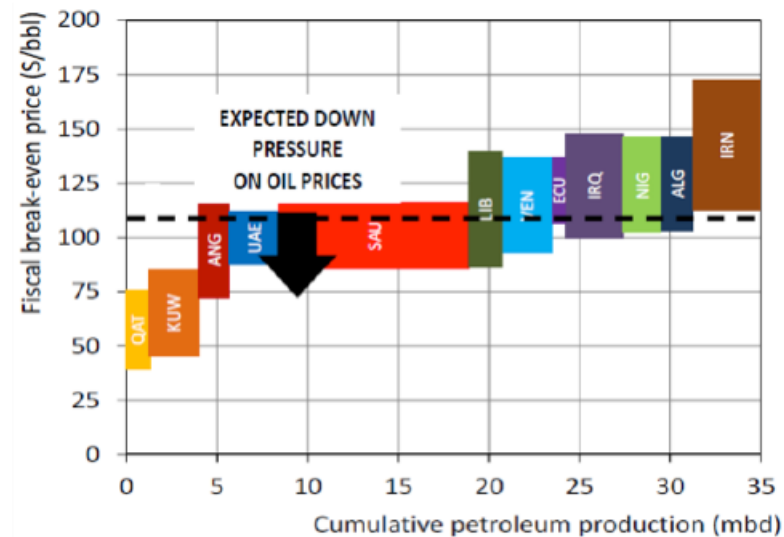
67 The Globe and Mail (2013). 'OPEC's Slipping Grasp on the World's Oil Market'.

68 IEA (2013). World Energy Outlook.

within OPEC is rather obvious: 'The uneven impact of the shale revolution is intensifying an existing financial divide between the haves and the have nots'.⁶⁹

Indeed, economically strong members states like Saudi Arabia will probably better withstand a potential shale-induced price slide⁷⁰ than countries that need oil prices to be firmly over 120 US dollar per barrel to be able to balance their budgets, such as Iran and Venezuela, but also Iraq. These member states, together with Algeria and Angola, already signalled their unease with the current OPEC policy of adhering to a 30 mb/d collective production ceiling.⁷¹ However, the unstable political climate across the Arab world since the 2011 popular revolutions is putting pressure on *all* regimes to increase government expenditure to manage popular discontent. In this sense, one can argue that, although the production costs of OPEC supply are far lower than the ones of unconventional production in North America, the Arab Spring has set in motion a dynamic which makes OPEC countries as dependent on high oil prices as their non-OPEC counterparts.

OPEC MEMBER STATES' FISCAL BREAK-EVEN PRICES



SOURCE: APICORP RESEARCH (2013)

69 Financial Times (2013). 'US Shale Threatens to Divide OPEC'.

70 The IEA, in its 2013 Medium-Term Oil Market Report, predicts an oil price of 93 US dollar per barrel by 2018.

71 Centre for Global Energy Studies (2013). 'Pressure Within OPEC To Reduce Supply'.

HOW TO ACCOMMODATE IRAQ

Apart from having to deal with the uncertainty surrounding future global demand and the impact of shale, OPEC is perhaps even more worried about how to accommodate Iraq within its ranks. Not only do markets seem unable to absorb more Iraqi crude in the medium term without causing a permanently lower oil price, the rise of Iraq as an oil producer will no doubt also redraw the traditional balance of power within OPEC.

Although Iraq is destined to develop as the world's *largest* source of incremental oil supplies by 2020 – production increases vary between 3 and 6 mb/d, dependent on whether one follows conservative IEA or optimistic Iraqi forecasts – it is not the *only* country within OPEC aiming to boost its production capacity. Also Kuwait (+ 1 mb/d), the UAE (+ 0.7 mb/d), and Libya (+ 0.5 mb/d) are aiming to drive up their production of crude in the medium term.⁷² Angola also shows potential, if successful in extracting oil from its large pre-salt reserves.

Iran will probably join that group of countries sooner than anticipated. In November 2013, a first step was taken to end Iran's decades-long isolation when the country reached an interim agreement with the West over its nuclear programme.⁷³ In exchange for putting to a halt and even rolling back some elements of its nuclear programme, Iran was offered \$6 to \$7 billion in sanctions relief, mostly oil revenues previously frozen in foreign banks. The agreement is meant as a foundation for a more comprehensive pact later, which could lead to a re-opening of the country's energy sector to foreign investment. An increase in production to 6 mb/d, which Iran says it could reach within 18 months after sanctions would be lifted⁷⁴, is unlikely, given that it will take the country many years to re-engineer its dilapidated oil infrastructure and design and execute a strategy to explore and develop new fields.⁷⁵ Exports, however, could be partially freed up and could increase fairly rapidly as Iran's Asian customers, again seem able to purchase insurance for tankers carrying Iranian crude oil.⁷⁶

Due to the fact that many member states are experiencing sharp declines in oil output and that high prices have therefore held their ground, OPEC has so far been able to postpone the sensitive debate about Iraq. The country, which has been kept outside the OPEC quota system since the first Gulf War – and recently received yet another free pass for 2014⁷⁷ – thus continues to hold on to its privileged position within

72 Petroleum Economist (2013). 'The Gulf: Making Hay'.

73 New York Times (2013). 'Accord Reached With Iran to Halt Nuclear Program'.

74 Stratfor (2013). 'The Future of OPEC'.

75 Financial Times (2013). 'Opec Will Struggle To Cope With Iran's Return'.

76 The Washington Post (2013). 'Under Deal, Iran's Oil Exports Likely To Rise From Recent Depressed Level'.

77 Al-Monitor (2013). 'OPEC Again Excludes Iraq From Oil Quotas'.

OPEC. Although Iraq is now approaching a 20-year production high, further strong growth in the hydrocarbon sector seems compromised by a variety of infrastructural and institutional obstacles.

Iraq's infrastructural and institutional challenges

Iraq faces a host of challenges across the whole value chain, ranging from a lack of hard infrastructure – insufficient drilling rigs, storage tankers and export capacity, to name but a few – to security issues, corruption and the continued absence of a Hydrocarbon and Revenue Sharing Law that has deepened a rift with the semi-autonomous Kurdish region in the North. As a consequence, the government has been forced to renegotiate the bulk of the contracts with the many oil companies active in Iraq.

The dire state of key oil infrastructure has been a result not only of several wars since 1980 but also of the economic sanctions imposed by the UN following Saddam Hussein's campaign against Kuwait, which deprived Iraq of the ability to export oil and gain access to new technologies.⁷⁸ The Iraqi government estimates that it will have to invest approximately 620 billion US dollars between 2012 and 2030 in order to support its development programme.⁷⁹ The IEA foresees cumulative energy investments of over 530 billion US dollars, with the investment needs highest in the current decade, reaching more than 25 billion US dollars per year on average.⁸⁰

Efforts to rapidly boost production will have to target the whole value chain. To start with the upstream, Iraq needs to drill between 1,500 and 2,700 wells by 2016 – depending on which scenario is envisaged – which will require an influx of dozens of drilling rigs and scores of foreign workers.⁸¹ The customs and import process and the general nature of Iraqi bureaucracy is a major problem in this respect⁸², which the authorities are desperately trying to resolve in order to avoid major delays.⁸³ Moreover, about 10 to 15 mb/d of seawater is needed to maintain oil reservoir pressure and keep up production in the Southern oilfields around

78 Open Oil (2013). 'Impact of Wars and Sanctions on Iraq'.

79 Republic of Iraq Council of Ministers Advisory Commission (2013). Integrated National Energy Strategy.

80 IEA (2012). World Energy Outlook, Iraq Special Report.

81 Energy Global (2013). 'Oilfield Opportunities in Iraq and Kurdistan'.

82 Petroleum Intelligence Weekly (2013).

83 Al Monitor (2013). 'Iraq to Simplify Visa Procedures For Foreign Oil Workers'.

Basrah⁸⁴. Estimated at a cost of over 10 billion US dollars, the Common Seawater Supply Facility (CSSF), as the project that would deal with this issue is called, has already suffered serious setbacks and will probably not come online before 2017.

In the midstream part of the value chain, Iraq has only limited export capacity, restricted to 2 mb/d through port facilities in Basra and 0.7 mb/d through a pipeline across Turkey that connects Northern Iraq with the Mediterranean port city of Ceyhan.⁸⁵ In May 2013, Iraq exported 2.48 mb/d of oil⁸⁶, thus almost reaching its export ceiling. The Integrated National Energy Strategy plans to significantly expand export infrastructure.⁸⁷ Yet, for Iraq, being almost entirely dependent on the Gulf outlet is probably unavoidable in the short- to medium term. Efforts to boost export capacity in the North, for example pipelines through Syria and Jordan, are severely suffering from adverse regional political developments.⁸⁸

Moving further down the value chain, into the downstream, Iraq is unable to meet domestic demand for oil products, forcing the country to import substantial volumes from neighbouring Turkey and Iran.⁸⁹ Iraq became an importer of refined products after the US invasion in 2003, which has saddled the country with enormous costs.⁹⁰ Local refineries, outdated and damaged by the war effort, produce too much heavy fuel oil⁹¹ and too little high quality products such as LPG, gasoline, kerosene and diesel.⁹² Official plans to deal with this pressing issue include the upgrading of existing refineries and construction of new-builds, which 'will increase domestic refinery capacity from 800 kbpd to more than 1,400 kbpd, and will permit Iraq to cover domestic demand in all oil products, at appropriate quality standards, by 2019'.⁹³

Iraq has long neglected capturing and using associated gas that comes from oil production by not investing in gas processing capacity, an ill-fated course of action that has made Iraq one of the top five gas flaring countries.⁹⁴ Not only does this harm Iraq's image as a responsible energy producer and add to global warming,

84 EIA (2013). Iraq Country Overview.

85 Republic of Iraq Council of Ministers Advisory Commission (2013). Integrated National Energy Strategy.

86 State Oil Marketing Company (2013). Iraq Crude Oil Export – May 2013.

87 Republic of Iraq Council of Ministers Advisory Commission (2013). Integrated National Energy Strategy.

88 Petroleum Intelligence Weekly (2013). 'Politics Limit Iraq's Export Alternatives'.

89 Al-Monitor (2013). 'Iraq Looks To Foreign Investment To Boost Oil Capacity'.

90 Iraq Energy (2013). 'Iraq Spent \$30 Billion for Importing Oil Products in Ten Years'.

91 EIA (2013). Iraq Country Overview.

92 Iraq Energy (2013). 'Iraq Refining Industry Revisited'.

93 Republic of Iraq Council of Ministers Advisory Commission (2013). Integrated National Energy Strategy.

94 World Bank (2012). 'World Bank Sees Warning Sign In Gas Flaring Increase'.

it also means that the country loses about 3 billion US dollars of revenues on an annual basis⁹⁵ and locks Iraq into oil-fired power production. The Iraqi government fully realises that something needs to be done in order to stop the waste of this valuable resource. Its energy strategy makes the Ministry of Oil responsible for the development of infrastructure that will handle and distribute gas, an initiative that hopefully will see the end of flaring by 2015.⁹⁶ The formation of the Basrah Gas Company (BGC), a Joint Venture between Iraq's South Gas Company, Shell and Mitsubishi that aims to capture 2 bcf/d of associated gas from oil fields in the South⁹⁷, is in this respect a step in the good direction, although the project has already been delayed as a result of infamous Iraqi bureaucracy and infrastructure bottlenecks.⁹⁸

Iraq's energy sector has so far been characterized by an atmosphere of institutional obscurity, a reality which, at least in the official energy plan, has not received nearly as much attention as, for example, the need for more crude oil export capacity. Key legislation such as a federal hydrocarbon law *and* a revenue sharing law has been awaiting approval by the Iraqi Council of Representatives since 2007, and this has since severely undermined the credibility of Iraq's national energy policy.⁹⁹

This legal and regulatory vacuum explains why in recent years a stalemate between the semi-autonomous Kurdish region in the North and the central government in Baghdad has continued to grip the country. Oil companies, big and small, venture into the Kurdish enclave because they are attracted by an investor-friendly climate and generous contract terms not found in the rest of Iraq. The KRG is awarding Production Sharing Contracts (PSCs), leading to an IOC share of up to twenty percent of profits, a considerable difference with the Technical Service Contracts (TSC's) used in the Arab part of Iraq which only yield one to two percent of profits.¹⁰⁰ The inability of the central government in Baghdad to constrain the KRG, as well as a loophole in the new amendment to the provincial law¹⁰¹, have inspired other Iraqi provinces such as Wasit and Salahaddin to strike deals with IOC's themselves.¹⁰² This clearly highlights the need for a proper legislative framework that can adequately regulate Iraq's oil and gas sector. Without an oil

95 Al Khatteeb, L. & Al Saadoon, O. (2013). 'Energy Potential vs. Reality'. Iraq Energy website.

96 Republic of Iraq Council of Ministers Advisory Commission (2013). Integrated National Energy Strategy.

97 Iraq Business News (2013). 'Iraq Launches World's Largest Flare Reduction Project'.

98 Oil Price (2013). 'Iraq Loses 70% of its Natural Gas due to Flaring'.

99 Al Khatteeb, L. & Al Saadoon, O. (2013). 'Energy Potential vs. Reality'. Iraq Energy website.

100 Mills, R. (2013). 'Northern Iraq's Oil Chessboard: Energy, Politics and Power'. In: Insight Turkey.

101 Al-Monitor (2013). 'Iraqi Provinces Consider More Autonomy in Managing Oil Wealth'.

102 Iraq Oil Report (2013). 'Oil Autonomy Spreading To Iraq's Provinces'.

and gas law and a revenue sharing law¹⁰³ the political bickering will continue to strain Iraq's economic development.¹⁰⁴

At the same time, Iraq has witnessed a wave of sectarian violence, largely as a result of a spill-over of the Syrian civil war.¹⁰⁵ Suicide attacks and bombings are again a sad feature of daily life in many cities in Iraq, and violence has now even spread to the South of the country, where the bulk of Iraq's oil production takes place.¹⁰⁶

As non-OPEC supplies keep surging and production problems within certain OPEC countries are starting to be resolved, which will likely translate into lower prices unless demand suddenly shoots up, the pressure on OPEC to impose a quota on Iraq will only grow stronger. Baghdad has been quite vocal so far concerning its deep opposition towards a re-integration into OPEC's quota system anytime soon, with Iraq's Deputy Prime Minister al-Shahristani explaining that 'Iraq has been (...) deprived of its fair share in the world oil market and our colleagues at OPEC realize that Iraq has to be compensated for the years that it has not been able to export, and I don't expect that we'll ever start such a discussion within OPEC before we reach 4 mb/d'.¹⁰⁷ One senior Iraqi official went even further, proclaiming that if Iraq would be forced to curtail production, there would be 'dark days ahead' for OPEC.¹⁰⁸

Although the position of Iraq will have to be clarified eventually, it is unlikely that Iraq's production gains will lead to a deep and profound rift within OPEC anytime soon. Rather than focusing on a particular absolute production volume, it is the *pace* of Iraqi output growth which will prove determining. Markets are still characterised by a relatively low level of spare capacity, providing some room for Iraq to increase production and further stabilise markets. Exactly how long Iraq will be able to do so remains dependent on the growth pattern of international oil markets.

A MULTI-HEADED OPEC

What is certain, is that the emergence of Iraq has the potential of transforming OPEC into a multi-headed organisation. Iraq is far and away the only country which can truly challenge Saudi Arabia in terms of production volumes and market share and

103 Iraq Business News (2013). 'Oil & Gas Law Key To Resolving Issues'.

104 Iraq Energy (2013). 'Political Conflict Keeps A Muzzle On Iraq's Economic Enthusiasm'.

105 UPI (2013). 'Sectarian Fury Could Threaten Iraq's Push For Record Oil Output'.

106 A map of oil fields in Iraq can be found in the Appendix.

107 Bloomberg (2012). Interview with DPM Al-Shahristani.

108 Reuters (2012). 'Iraq, Saudi on OPEC Collision Course Over Next Oil Curb'.

perhaps one day could hold a similar amount of spare capacity. This would allow Iraq to play a pivotal role in international oil markets while also giving it the possibility of enforcing other OPEC countries' adherence to their assigned production quotas, something which has traditionally been the prerogative of Saudi Arabia.¹⁰⁹ Given the fact that Iraq and Saudi Arabia follow different market strategies, it is then not too far-fetched to assume that some sort of power struggle looms over the organisation.

Saudi Arabia: Given Riyadh's record production levels of over 10 mb/d during a large part of 2013, it could be logical for Saudi Arabia to hold back on output if OPEC were to decide to reign in some production.¹¹⁰ Already the country has taken steps in that direction, lowering its production to 9.6 mb/d as of November 2013, but it also stressed that it will no longer carry the burden of production cuts alone.¹¹¹ If in 2014 OPEC does not curtail production further, the market will most likely experience large inventory increases, which will have a downward effect on prices. Moreover, if Saudi Arabia keeps producing at these high levels, its traditional spare capacity buffer of 1.5 – 2 mb/d could be at risk, given the country's limited appetite for capacity growth.¹¹² It remains unclear whether Saudi Arabia will continue to invest billions of dollars in maintaining this capacity, seeing that the US is expected to increasingly balance the market. In this respect the International Energy Agency even warned of a possible future oil supply crunch, caused by the delay in investments by key Gulf producers who are perhaps overestimating the effect of the shale boom in the US in the longer term.¹¹³

Constricted upstream investments in Saudi Arabia, together with strongly rising domestic demand – consumption of crude oil has been growing at a rate of seven percent per year¹¹⁴ turning Saudi Arabia into the world's sixth largest oil consumer¹¹⁵ – could in time challenge the Kingdom's energy policy. An inability to match domestic demand management with upstream investments could have serious consequences for the global oil market if it translates into a lower export capacity in both crude oil and oil products. A relative fall in crude oil export capacity, however, can be counterbalanced by an increase in oil *product* export capacities. Indeed, Saudi Arabia is rapidly boosting downstream investments, both at home and abroad.¹¹⁶ By 2017,

109 Al Monitor (2012). 'Iraq Seeks to Boost Production, Challenge Saudi Arabia in Global Oil Markets'.

110 Petroleum Intelligence Weekly (2013). 'Non-Opec Surge Puts Onus On Saudis'.

111 Wall Street Journal (2013). 'Saudis Shy Away from Unilateral Oil Output Cut'.

112 Wall Street Journal (2013). 'The Mystery of Saudi's Spare Oil Production Capacity'.

113 Financial Times (2013). 'International Energy Agency Warns of Future Oil Supply Crunch'.

114 Oil Price (2013). 'Record Oil Outputs in Saudi Arabia Fail To Ease Shortage Anxiety'.

115 BP (2013). Statistical Review of World Energy.

116 Bloomberg (2012). 'Saudi Aramco To Invest \$200 Billion in Refining, Exploration'.

the country is expected to add 1.2 mb/d of domestic refining capacity.¹¹⁷ New-build refineries, most of which are export oriented, are designed to process mainly heavy crudes. This would imply that export levels of the higher quality grades will remain relatively unaffected.

In the coming months, however, Riyadh might have to further ease production, but there are obviously clear limits on how far Saudi Arabia is willing to go: 'History suggests Riyadh (...) could try to engineer lower oil prices, at least temporarily, to protect its share within OPEC, OPEC's share of the oil market – and oil's share of the energy mix'.¹¹⁸ Indeed, it is highly unlikely that Saudi Arabia would let its production fall much below 9 mb/d, thereby playing its traditional volume-based game in order to defend market share. The lower prices such a move could generate is a downside which Saudi Arabia can tolerate given its low debt levels, large financial reserves and relatively low fiscal break-even prices of below 100 US dollars per barrel.

Iraq: Assuming that the medium growth scenario would by and large pan out as envisioned, Iraq could see its production increase to around 9 mb/d by the end of this decade, reaching production levels similar to and perhaps even overtaking those of Saudi Arabia. However, most projections do not envision markets being in need of so much incremental oil. Iraq, which needs a high oil price, preferably over 125 US dollar per barrel, in order to rebuild its public infrastructure, will most likely not strive to maximise production.

Whether Iraq can – or even wants to – uphold spare capacity in the future, is questionable. Iraq, at least for now, does not seem eager to pursue such a costly strategy. The renegotiation of most contracts with the majors operating in Iraq – such as Lukoil, Eni, Shell, ExxonMobil and BP – in which lower output targets are being set serves as a good example in this respect, as the government realises that they are the one responsible, under the terms of the technical service contracts, to fund that spare capacity, and not the IOCs.

REGIONAL RIVALRIES AND OPEC LEADERSHIP

The long-time dominance of Saudi Arabia and the other Persian Gulf monarchies in OPEC, often collectively referred to as 'doves' given their preference for stable oil prices, might thus be challenged over time. Iraq might very well build, and ultimately lead, a coalition of price 'hawks' within OPEC with Iran, Venezuela and Nigeria. Iraq,

117 Arab News (2013). 'New Saudi Refineries To Reduce Crude Oil Export Cushion'.

118 Petroleum Intelligence Weekly (2013). 'Doubts Cloud New Peak Oil Demand Theory'.

which recently overtook Iran as the second largest oil producer within OPEC¹¹⁹, has discreetly aligned itself more closely with Tehran in OPEC.¹²⁰ Iraq and Iran insist that their return to the market should be accommodated by the Gulf states, who have been able to pump record volumes of oil above their quotas as a result of sanctions regimes against their respective countries.¹²¹ Baghdad and Tehran each demand a 'free pass' from OPEC until they reach at least 4 mb/d. The Saudis, on their part, are convinced that strong demand growth will fully absorb the potential surge in Iraqi and Iranian output, as well as shale from the US. Most macro-economic forecasts, however, do not share Saudi Arabia's optimism.

Relations between Baghdad and Tehran could also quickly turn sour over Iraq's growing production and aggressive competition towards key Asian customers. With regard to this, Iran's Oil Minister Bijan Zanganeh declared that 'Iraq has replaced Iran's oil with its own. This Iraq move is not friendly at all'.¹²² The bickering within OPEC about production and exports has also enticed Iraq to come up with some strong statements. Adnan Al Janabi, Chairman of the Iraqi Parliament's Oil and Gas Committee, for example, said that 'I don't think we can take orders from anybody [related to] the future of Iraq – especially Saudi Arabia and Iran'.¹²³ Perhaps it would be more likely for Iraq to form some sort of 'intermediary bloc' within OPEC, together with Libya¹²⁴, which exports a different grade of crude to a different market.

Iraq could one day even facilitate warmer relations between Saudi Arabia and Iran, as both countries have a vital stake in keeping Iraq's production at bay. However, it is highly unlikely that Riyadh will reach out to Tehran after decades of mistrust and bilateral competition over primacy in the Gulf. The recent high-level talks between Iran and the West, for example, unsettled Riyadh, as a return of Iran to the world market can only add to the pressure on OPEC to cut production. As the Financial Times put it, 'Iran's revival of its oil export industry could be the straw that breaks the back of the OPEC camel'.¹²⁵

Ultimately, political relations between countries within OPEC are to a large extent a mirror of the broader diplomatic and regional framework in which Iraq traditionally has always acted 'as a barometer through which one could measure instability in the

119 RT (2012). 'Iraq Beats Iran to Become OPEC's Second Largest Producer'.

120 Reuters (2012). 'Iraq and Iran Cuddle Up in OPEC, But For How Long?'.

121 Financial Times (2013). 'Iran Threatens To Trigger Oil Price War'.

122 Reuters (2013). 'Iran To Reassert Authority at OPEC After Nuclear Deal'.

123 Wall Street Journal (2013). 'OPEC Rift Emerging Over Iraq Output, Possible Return of Iran'.

124 Al Monitor (2012). 'Iraq seeks to Boost Production, Challenge Saudi Arabia in Global Oil Markets'.

125 Financial Times (2013). 'Opec Will Struggle To Cope With Iran's Return'.

region.¹²⁶ Although the larger geopolitical dimension falls outside the scope of this paper, it is important to note that Iraq firmly established itself in the eyes of most GCC states as perhaps the main source of regional instability.¹²⁷ This was the result of (1) growing political, economic and religious power of Shiite factions, (2) increased Iranian influence, (3) a deteriorating security situation and (4) its reaction towards the Arab uprisings. So far Saudi Arabia, the *de facto* leader of the GCC, has sought to contain its Northern neighbour's rise as an oil producer and regional diplomatic player by creating an environment of manageable instability in Iraq.¹²⁸ Riyadh has, in trying to weaken the federal government in Baghdad, supported Turkey's push into Iraqi Kurdistan and promoted the establishment of an autonomous Sunni governorate in Western Iraq. It has furthermore used its control over the Iraq Pipelines in Saudi Arabia (IPSA) to prevent Iraq from exporting its oil via an alternative route.¹²⁹

126 The German Marshall Fund of the US (2013). 'Bridging the Gulf with Iraq'.

127 Ibid.

128 Istituto per gli Studi di Politica Internazionale (2013). 'Baghdad's Delight, Riyadh's Sorrow: Why Iraq's Rising Oil Production Is Causing Unease In Saudi Arabia'.

129 Open Oil (2013). IPSA.

4 CONCLUSIONS

Oil markets have undergone fundamental changes in recent years. Rising prices and technological advances have significantly enlarged the supply pool, while economic expansion in Asia seems now to be developing more slowly which in the medium term could mean an easing of oil market fundamentals. Since 2010 that market has been captured by the transformation of the US into perhaps the world's largest oil producer within a period of a few years. This represents a development unimaginable even in the minds of the many politicians who in the past have always rallied for an energy-independent North America.

Yet, many uncertainties remain. On the one hand, conventional supply hopes are almost exclusively pinned on Iraq, a country with enormous oil reserves but one which is also endowed with many infrastructural and institutional challenges. Energy from unconventional resources, on the other hand, is rapidly driving up upstream costs and only shows potential outside North America beyond the medium-term outlook. Moreover, the many production outages in key countries in Africa and the Middle East highlight the continuous fragility of energy markets, even in the age of shale. The exact inclination of oil demand growth in emerging markets, and the magnitude of the OECD countries' decline in demand, are other uncertainties which remain difficult to assess. Based upon this ambivalence concerning supply and demand, we should remain cautious when talking about the beginning of the end of the current commodities 'super cycle'.

What is clear, however, is that over the next few years OPEC will see its position challenged. Non-OPEC supply is expected to keep pace with demand growth until the end of the decade and reduce the call on OPEC by more than a million barrels per day. Beyond 2020, market power is predicted to shift back to OPEC due to the inherent characteristics of the North American resource base. Furthermore, similar volumes of unconventional production outside North America are unlikely in the period up to 2030. In order to reach desired levels of production, Iraq will be vital to OPEC, as production capacity prospects in other member countries, aside from Iran, appear to be limited.

In the meantime, Iraq will have to find ways to squeeze into the market without antagonising other OPEC members too much. So far it has tried to gain market

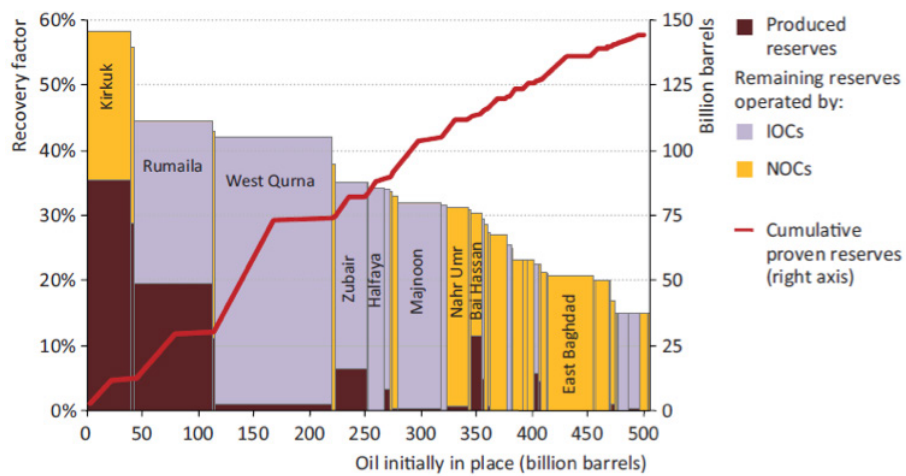
share by (1) discounting its crude compared to rival grades, (2) offering more competitive contract provisions compared to other Gulf exporters and (3) further cementing political and commercial relations with key customers in Asia. More than leading to a deep rift over Iraq's production volumes, the rise of Iraq has the potential to induce a trade war between OPEC members, especially between Saudi Arabia, Iraq and Iran. Asian customers will be the main beneficiaries of this export battle. Europe, to a certain degree, also stands to benefit from a changing oil trade map, as West African barrels of light sweet oil are often sold at a discount due to the reduction in size of the US export market.

In this environment OPEC will continue to struggle with its famous 'dilemma': it needs high oil prices in order to support growing public expenditures, but this in turn will unlock even more unconventional production and lead to further demand destruction. In the coming months and years the search for a proper balance will again fall to Saudi Arabia, as the country is the only player holding a significant spare capacity. However, Riyadh is already feeling the hot breath of its ambitious Northern neighbour. Even though Iraq does not seem willing to invest in upholding its own spare capacity, it can and probably will challenge Saudi Arabia's leadership by upsetting the traditional balance of power within OPEC. The rise of Iraq will thus further challenge OPEC cohesion, a key oil market uncertainty.

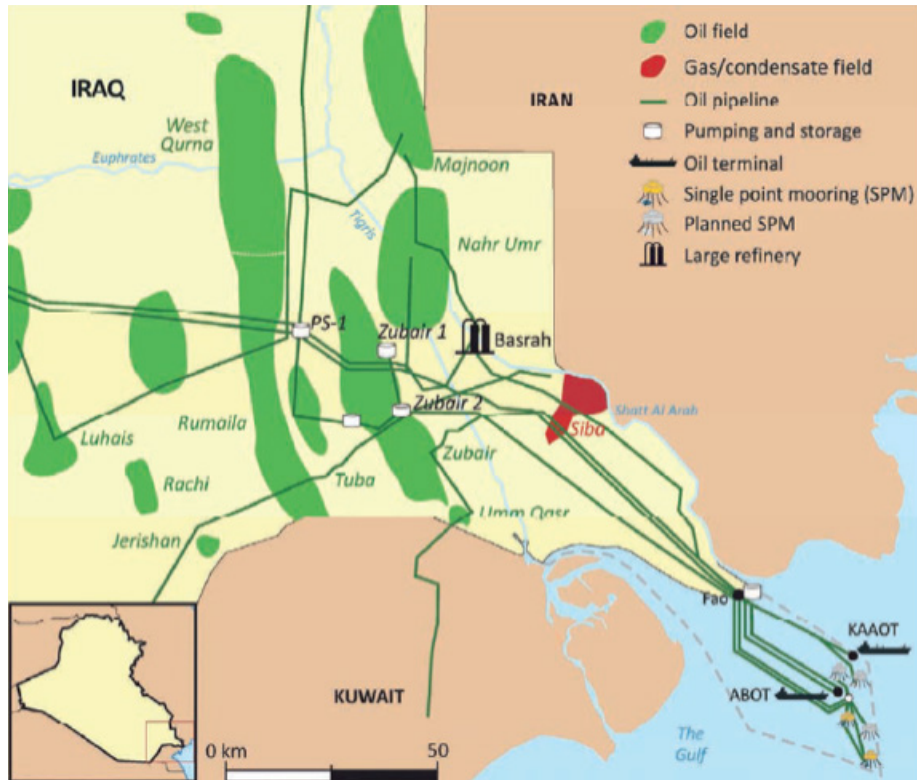
APPENDIX



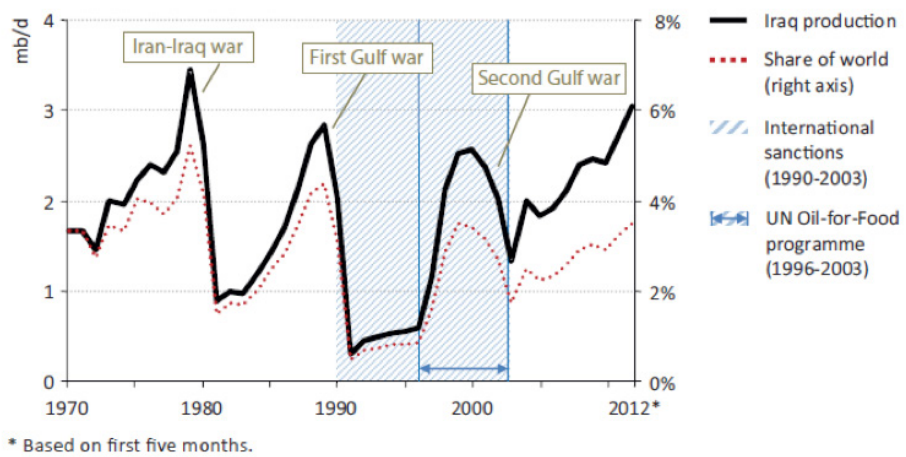
IRAQ'S MAIN HYDROCARBON BASINS AND FIELDS – IEA



IRAQI OIL RESERVES BY FIELD – IEA



SOUTHERN IRAQI OIL AND GAS FIELDS AND INFRASTRUCTURE – IEA



IRAQI OIL PRODUCTION – IEA

		<i>(thousand barrels per day)</i>				
Contract Awards	Companies	Target Capacity	Production Increment	Estimated Target Cut*	Potential Target	Fee Paid (USD)
Rumaila	BP, CNPC	2 850	1 800	855	1 995	2.00
West Qurna 1	ExxonMobil, Shell	2 825	2 065	848	1 978	1.90
West Qurna 2	Lukoil, Statoil	1 800	1 800	540	1 260	1.15
Majnoon	Shell, Petronas, Missan Oil Co	1 800	1 754	540	1 260	1.39
Zubair	ENI, Occidental, Kogas	1 200	1 017	360	840	2.00
Halfaya	CNPC, Total, Petronas	535	535	0	535	1.40
Garraf	Petronas, Japex	230	230	0	230	1.49
Badra	Gazprom, Kogas, Petronas, TPAO	170	163	0	170	5.50
Qairyarah	Sonangol	120	120	0	120	5.00
Najmah	Sonangol	110	110	0	110	6.00
Missan	CNOOC, Turkish Petroleum	450	350	0	450	2.30
Total		12 090	9 944	3 143	8 948	

**Estimate based on preliminary discussions*

IRAQ'S INITIAL CONTRACT AWARDS AND PRODUCTION TARGETS OF LARGEST OIL FIELDS – IEA



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