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Oil in the GCC Countries

Giacomo Luciani

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The price war that may be dated to OPEC's conference on November 27, 2014 continued in 2015 and shows no sign of soon leading to a new equilibrium. Crude oil production continues to exceed global demand; stocks are increasing, and, at the time of writing, prices remain on a downward slope.

GCC Crude Oil Production and Investment Plans

True to the strategy of defending their market share, GCC members have not reduced their crude oil production in the course of the year (Table 1). Saudi Arabia progressively increased its production by close to a million barrels per day in the first half of the year, peaking at 10.56 million barrels per day in June, then declining slightly to 10.28 million in October (the last month for which data are available at the time of writing). Abu Dhabi increased its production by approximately 300,000 barrels per day, from around 2.9 million at the end of 2014 to around 3.2 million in June (the last month for which official data are available from Abu Dhabi). Kuwait has seen little variation, with production hovering between 2.8 and 2.9 million. Oman was able to reach the target of producing 1 million barrels per day in July but slipped in the following months, and Qatar briefly touched 700,000 barrels per day in March but lost ground subsequently. Production in Bahrain remains low, not reaching 60,000 barrels per day.

Table 1 - Crude Oil Production, thousand barrels per day

	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
BAHRAIN	48	50	48	49	48	49	49	52	56	52	50	51	53
KUWAIT	2831	2790	2800	2850	n.a.	2850	2860	2830	2825	2820	2890	2900	2800
OMAN	943	926	937	965	963	982	965	980	998	1006	994	995	971
QATAR	680	681	684	674	676	708	635	642	664	613	643	663	639
SAUDI ARABIA	9690	9610	9630	9680	9636	10294	10308	10333	10564	10361	10265	10226	10276
UAE	2908	2938	3156	3186	3215	3126	3152	3248	3204	n.a.	n.a.	n.a.	n.a.

Source: JODI

Due to changes in domestic use of crude oil, including increasing local refining, exports have not directly followed production (Table 2). Saudi exports increased by 1 million barrels per day between October 2014 and March 2015, passing from 6.9 to 7.9 million barrels, but subsequently declined to 7 million barrels in August and picked up again thereafter (reflecting increased domestic demand for power generation in the summer months). UAE exports gained about 400,000 barrels per day between October 2014 and January 2015 but slightly declined thereafter. Kuwait's exports did not show an appreciable increase. Oman's

exports fluctuated quite significantly on a monthly basis while Qatari exports declined almost 20 percent between the end of 2014 and the third quarter of 2015.

Table 2 - Crude Oil Exports, thousand barrels per day

	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15
BAHRAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
KUWAIT	2006	1896	2006	2034	n.a.	1911	1927	1895	1895	1883	1957	2008	1905
OMAN	783	806	778	81	939	876	794	824	917	801	856	890	823
QATAR	583	592	598	548	565	578	463	466	482	436	473	436	483
SAUDI ARABIA	6897	7296	6934	7474	7350	7898	7737	6935	7365	7276	6998	7111	7364
UAE	2549	2567	2635	2950	2735	2542	2415	2431	2439	n.a.	n.a.	n.a.	n.a.

Source: JODI

In other words, the record for production and exports confirms the declared strategy of the GCC countries, which aims at defending their share of the global oil market and exploiting their production capacity while maintaining a reserve of non-utilized capacity in line with the target level deemed necessary for addressing potential emergencies – but not more.

Production and export increases notably on the part of Saudi Arabia and the UAE in the first half of the year are a manifestation of this policy and aim at recovering market share in view of possible negotiations with other OPEC and non-OPEC producers, in a future, which at the time of writing does not appear to be imminent.

All GCC countries also continued their efforts to invest in maintaining or increasing future production capacity. Saudi Aramco's then CEO Khalid al Faleh announced in March 2015 that the company had discovered eight new oil and gas fields in 2014.[1] The company continued an active drilling program, employing upward of 200 drilling rigs. Speaking at a G20 meeting of energy ministers in Istanbul in October, Oil Minister Ali Naimi insisted that the Kingdom was committed to continue investing massively in further oil and gas exploration and increasing capacity.[2] The minister stressed that the industry is prone to price fluctuations, and investment should continue unabated even when prices are low. In this context, it is important to note Saudi Arabia's project to inject 800,000 tons of CO_2 in its Ghawar field as a form of EOR and for reducing GHG emissions.[3] The project aims at improving the recovery rate by 20 percent, from 50 to 70 percent – a very significant increase.

Abu Dhabi reiterated the target of reaching 3.5 million barrels per day of production by 2017, which would represent a close to 10 percent increase on current levels.[4] No significant impact is expected from the delay in solving the issue of the future corporate structure of ADCO, which holds the concession for Abu Dhabi's onshore fields; in fact much of the expected increase is to come from these fields. The original concession, which expired in

[1] *MEES* March 13, 2015, page 7.
[2] *MEES*, October 9, 2015, page 2.
[3] *MEES*, August 7, 2015 pages 8-9, and November 6, 2015, page 6.
[4] *MEES,* November 13, 2015, page 2.

2014, included four international oil companies, notably BP, Shell, Exxon, and Total. Of these, only Total has agreed to pay the hefty signing bonus ($2.2 billion)[5] and maintained its 10 percent equity participation; two smaller Asian companies came on board in 2015: Japan's Inpex (5 percent) and Korea's GS Energy (3 percent). As the national oil company ADNOC has 60 percent, this leaves another 22 percent of ADCO's equity "open", i.e., effectively in the hands of the Abu Dhabi government or its oil company ADNOC. At the current low level of prices, it is unlikely that other companies will take the plunge and pay the signature bonus. But this does not seem to have impacted the company's investment and production plans.

Kuwait has a target of reaching production of 4 million barrels per day in 2020, an increase of some 35 percent over current levels, and has budgeted spending $40 billion to reach this target.[6] KPC has been negotiating with Shell, BP and Total to sign enhanced technical service agreements (ETSAs) to facilitate expansion of production in some fields. This, however, remains highly problematic because the oil sector in Kuwait is closely scrutinized by the National Assembly and is frequently an object of controversy. Plans to open up the upstream to international investment have been debated inconclusively for the past 20 years at least.

Qatar has invited bids to operate the al Shaheen oil field starting in 2017, when the current agreement with Maersk expires.[7] Qatar Petroleum may hope that shifting from Maersk to a larger major will help to increase production from the field, which has stagnated at around 300,000 barrels per day. Total Qatari production has been declining from the peak of 860,000 barrels per day achieved in 2008, and hopes to reverse the negative trend are not very high, because the reservoirs are complex and would require enhanced oil recovery methods, which may be commercially unattractive in a low price environment.

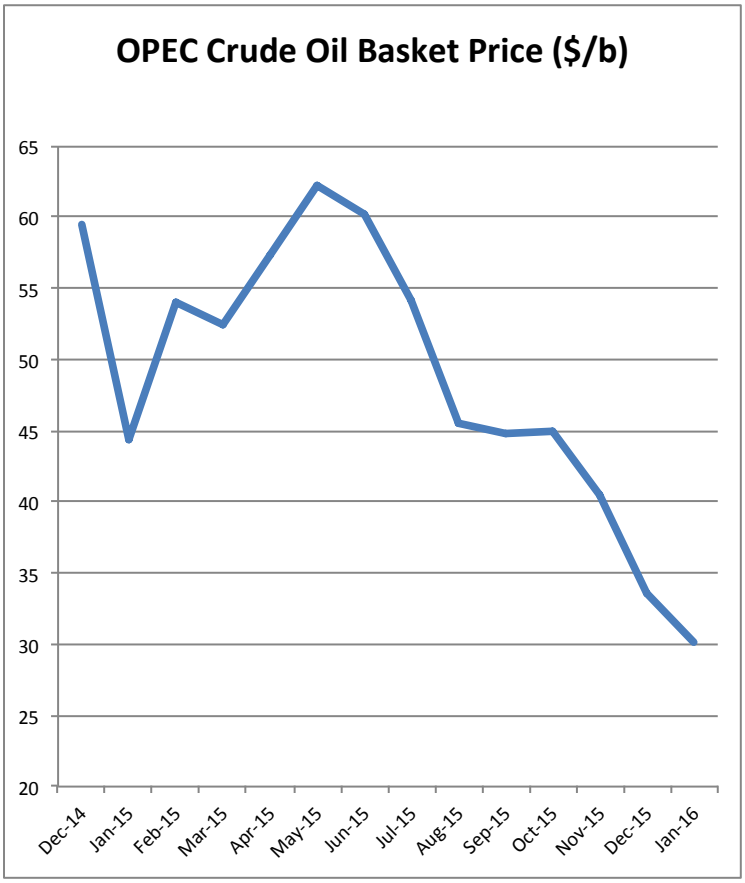
Oman, which is the only member of the GCC that is not also a member of OPEC, succeeded in reaching the target of producing 1 million barrels per day in 2015, a considerable increase since 2007, when Omani production hit a low point of barely above 700,000 barrels per day.[8] Continued production at this high level however requires continuous investment and recourse to expensive enhanced oil recovery methods. The cost of production in Oman averages $12/b or little more, but the cost of oil produced with tertiary recovery methods is above $20/b. Companies operating the Omani fields will therefore be reluctant to maintain a high level of investment if prices remain depressed.

In summary, while the smaller producers (Qatar and Oman) may be struggling to stem the natural decline in their production, and Saudi Arabia appears to have primarily a goal of maintaining the large capacity that it has attained in recent years, significant expansion is targeted by both Abu Dhabi and Kuwait. If Kuwait, in particular, is able to reach its ambitious production target, it will see its market share increased rather than just maintained.

[5] *Financial Times*, "Total Becomes the First Major to Secure Stake in UAE Oilfields," January 29, 2015.
[6] *MEES,* November 27, 2015 page 2.
[7] *MEES,* May 8, 2015, pages 6-7.
[8] *MEES*, September 4, 2015, page 13.

The Price War, OPEC and the Role of the GCC

The price war, which erupted in 2014, continued unabated throughout 2015 and into 2016. Prices appeared to be recovering between January and May (Figure 1), essentially in the hope that the market would stabilize quickly, or producers would agree to a cut in production. However, when it became evident that neither market forces nor negotiations would bring about a significant decline in supply, prices declined again under the burden of supply exceeding demand month after month, and oil accumulating in storage to previously unseen levels.



Price wars are part and parcel of the normal functioning of oligopolistic markets. In the absence of an explicit agreement to limit supply – which is generally illegal or difficult to achieve – oligopolistic markets can maintain stable prices for as long as market shares only change marginally. However, whenever a fundamental change in technology or production capacity intervenes, which threatens to lead to a major reshuffle of market shares, a price war is generally the only way to find out what the shape of a new stable equilibrium might be.

In industries in which the gestation period of investment projects is short, and/or direct costs are an important component of total production costs, price wars affect investment decisions and the latter are quickly reflected in production levels, because companies prefer to leave capacity unutilized rather than producing at a loss. But in some industries, of which

oil is one, the gestation period of investment is very long, and the current level of production reflects decisions that were made years earlier, in a totally different pricing environment. Furthermore, in the oil industry the most important component of production costs is investment (CAPEX), and direct or operating costs (OPEX) are, in most cases, relatively less important. Companies will find that it is convenient for them to continue producing as long as they are able to cover operating costs, even if prices do not allow full recovery of capital costs. Producers will lose money, but still less than they would if they left capacity unutilized – because investment costs are sunk, and cannot be recovered otherwise.

Hence the oil industry always was characterized by a tendency to widely fluctuating prices, which is further increased by insufficient information about investment, production, exports, and stocks at the global level (whereby the so-called "fundamentals" are only very imperfectly known) and by some financial investors' trading strategies, which are often based on various forms of momentum trading. Therefore, oil price wars are likely to be long and bitter.

That said, Saudi authorities have acknowledged that they have been taken by surprise by the extent of the price reaction to their refusal to act as the "swing producer" – i.e., the producer that takes upon itself the task of equilibrating the market. Saudi Arabia did play the role of swing producer back in the early 1980s, when it allowed its production to decline from 10.3 million barrels per day in 1980 and 1981 to 3.5 million in 1985 in the futile attempt to defend the OPEC-sanctioned price of Arabian Light. But the Kingdom abandoned this policy at the end of 1986,[9] initiating a first price war, and has never assumed the role ever since. In 1998-99, a second price war took place: prices went below $10/b and only recovered when some non-OPEC producers (notably Russia, Norway, and Mexico) agreed to cooperate with OPEC in stemming production.[10] Nevertheless, markets have somehow deluded themselves that Saudi Arabia would in the end act as the swing producer even while officially refusing to do so, and would cut production.

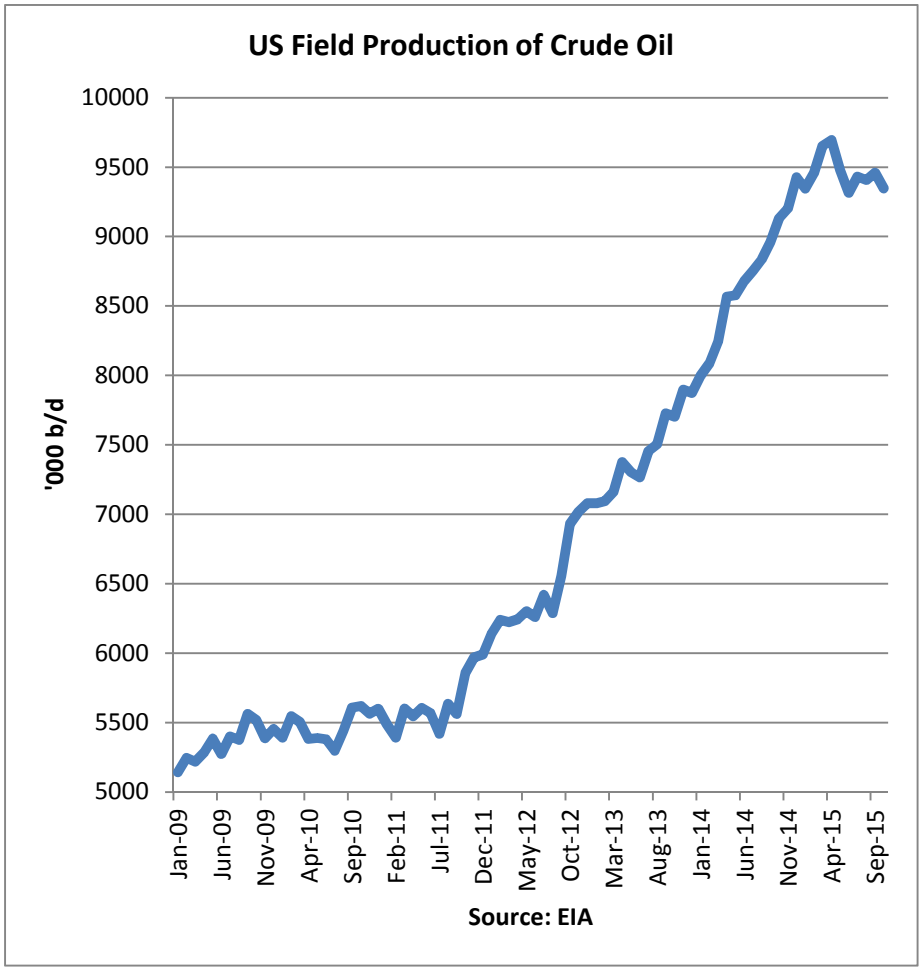
However, developments in the early years of the current decade were such that it would have been suicidal for Saudi Arabia and the two other major GCC producers – Abu Dhabi and Kuwait – to cut production in the absence of a coordinated effort of all major producers, including non-OPEC members. The actual or potential increase in production from fellow OPEC members – Iran, Iraq and Libya – or from non-OPEC producers such as Russia, US, Canada, Brazil and more was such that any attempt on the part of the major GCC producers to defend the high prices still prevailing in the first half of 2014 would have required repeated cuts, and probably only succeeded in delaying the day of reckoning.

The inevitability of an industry shake-up underpinned the Saudi Oil Minister's position as expressed in an interview to the *Middle East Economic Survey* on December 22, 2014, where

[9] Robert Mabro ed., *OPEC and the World Oil Market : the Genesis of the 1986 Price Crisis* (Oxford: OUP/OIES 1986); see also various articles in *Oxford Energy Forum* no.100, May 2015.
[10] See, in particular, Adrian Lajous's "The Mexican, Saudi and Venezuelan Connection – a Memoir" in *Oxford Energy Forum* no.100, May 2015.

he asserted that the Kingdom was ready to see prices go as low as $20/b (or, in fact, lower: he just said that how low they would go was "irrelevant").[11] Still, the prevailing expectation at the beginning of 2015 was that US shale oil production would decrease, because shale oil wells decline rapidly and can maintain production only if continuous drilling takes place.

So, throughout the early months of the year, the market kept looking at the declining rig count in the US and expecting that this would quickly translate into a decrease of shale oil production – but the latter showed unexpected resilience. For sure, the exponential growth in US production was interrupted and eventually reversed (Figure 2) but the decline of some 300,000 barrels per day from the peak of 9.7 million registered in April has been less than impressive, considering that in the previous five years (since January 2009), the increase had been 4.6 million barrels per day.



It is therefore clear that, while convergence towards a new equilibrium is inevitable, the process will take much longer than initially expected, and a period of low prices may last for quite long. Indeed, if we look back at historical experience, we can see that the oil industry has been characterized by price cycles lasting approximately 15 years: in 1970-85, we had a cycle of rapidly increasing, then falling prices; in 1986-2000, we had a period of persistently

[11] *MEES*, December 22, 2014.

depressed prices; in 2000-2014, we had rapidly growing then persistently high prices. The new period inaugurated in 2015, once the panic prices recorded at the beginning of 2016 are corrected, is likely to see depressed prices well into the next decade. A level closer to $100/b may not be seen again until 2030 or thereabouts.

Integrating Downstream

The GCC major producers' unwillingness to play the role of swing producers is reinforced by the intensification of their drive to integrate downstream and add value to their crude oil, exporting refined products, petrochemicals, or other energy-intensive products rather than crude oil.

In Saudi Arabia, the Satorp refinery, a joint venture between Saudi Aramco and Total, started operating in September 2013 and the Yasref refinery, a joint venture between Saudi Aramco and Sinopec, started operating in mid 2014. Each of these has the capacity to refine 400,000 barrels per day of crude oil. Both refineries started operating in full in 2015, leading to a significant increase in the volumes of crude oil refined domestically, which reached 2.5 million barrels per day.[12]

The current maximum Saudi refining capacity is 2.9 million barrels per day, but Saudi Aramco is going ahead with investment for the planned Jazan refinery and Economic City, which will add another 400,000 barrels per day of capacity, for a total of 3.3 million. The Jazan refinery, originally scheduled for completion in 2016, is now expected to come on stream towards the end of 2017.

The drive to integrate downstream has important consequences for Saudi Arabia's position in the global oil market, because obviously the Kingdom will never reduce production to a level that may jeopardize utilization of its refining investment; furthermore, Saudi Aramco's exposure to the crude oil market will decline, while exposure to the products market will increase: but customers of crude oil are refineries, while customers of refined products are distributors and large scale users, two quite different, if interrelated, markets. Saudi Aramco has established its own trading arm for refined products (in contrast, it does not properly "trade" crude oil, simply sells it to refiners and prohibits any trading).

In December 2015, the first production plant in the huge SADARA petrochemical complex – a joint venture between Saudi Aramco and Dow Chemical – began producing linear low-density polyethylene (LLDPE). The complex consists of 26 manufacturing plants, which will become operational progressively in the coming months, and represents a total investment of $20 billion. In parallel, work on the Phase II expansion of Petro Rabigh (a joint venture between Saudi Aramco and Sumitomo Chemical) has continued: completion has been delayed by nine months to September of 2016. To the extent that these petrochemical

[12] *MEES,* November 20, 2015, page 4.

projects will absorb some of the production of refined products, they are contributing to further diversification of Saudi Aramco's and the country's market exposure.

In Abu Dhabi, the oil refining company Takreer completed in 2015 the commissioning of its 417,000 b/d Ruwais expansion refinery, which takes crude and condensate processing capacity at Ruwais to 817,000 b/d, and raises the UAE's total crude and condensate processing capacity to 1.1mn b/d.[13] Actual refinery intake reached 800,000 barrels per day.

In Kuwait, the highly controversial al Zour refinery came a step closer to realization with Kuwait National Petroleum Company (KNPC) signing engineering and procurement contracts worth $13 billion. If all goes well, the refinery, which has been in the books for over a decade and delayed repeatedly because of political controversies, may be commissioned in 2019. Throughout the first half of 2015, JODI data show that Kuwait's refinery throughput ran somewhat above 900,000 barrels per day.

The drive downstream has become a key feature of the oil industry in the GCC countries, which sets them apart from other producers in Africa or Central Asia. Iraq and Iran also have ambitious refining and petrochemical production goals, which will progressively limit their ability and readiness to cut down on crude oil production, thus impacting on the functioning of the global oil market and the relative importance of trading in crude vs. trading in refined products.

Governance Issues

The year 2015 saw important developments with respect to the governance of the oil sector, notably in Saudi Arabia.

The death of King Abdullah at the beginning of the year set in motion a process of reform of Saudi governmental institutions, which directly impacted the oil and gas sector. On April 29, 2015, the new King, Salman bin Abdulaziz, promoted the former President and CEO of Saudi Aramco, Khalid al Faleh, as Minister of Health; Al Faleh was also appointed the Chairman of the Board of Saudi Aramco, substituting for the Minister of Petroleum, Ali Naimi. Control over Saudi Aramco was taken away from the Ministry of Petroleum and Minerals and entrusted to a newly created Supreme Council of the Saudi Arabian Oil Company, under the chairmanship of the newly appointed Deputy Crown Prince, Mohammed bin Salman. Amin Nasser, formerly Aramco's senior VP for exploration and production, was confirmed as president and CEO of the company on September 17.[14]

Besides the implications and speculation concerning the Kingdom's internal political dynamics, these moves were significant inasmuch a clear separation was created between Saudi Aramco and the Ministry of Petroleum and Minerals. Ever since Ali Naimi became Minister after having been the CEO of Aramco, the ties between the company and the

[13] *MEES*, November 20, 2015, page 7.
[14] *MEES,* September 18, 2015, page 16.

Ministry had been very close indeed. In this situation, it was frequently wondered whether the Ministry really was in the position of controlling the company, rather than being effectively controlled by it. While Saudi Aramco is normally considered to be an efficient and competently run company, its monopoly position and limits to transparency prevented proper benchmarking.

In the very early days of 2016, the Deputy Crown Prince, Mohammed bin Salman, announced in an interview to the *Financial Times* that a privatization of Saudi Aramco was under study.[15] This unleashed a flurry of speculation on when and how this move might take place. It has always been expected that some of the equity in the downstream joint ventures, including SADARA, would be floated on the Saudi stock exchange; but it is possible that the floating might not be restricted to the downstream companies, and could include some upstream assets. It should be noted in this respect that if it moved in this direction Saudi Arabia would follow the example of other producing countries – notably Norway, Russia, Brazil, and China – that similarly have floated limited shares of equity on the market to create some greater distance between the government and the companies and enhance the government's effective ability to control. A partial privatization may impose on the companies rules of transparency, which a wholly state-owned company does not have, and would empower the company to resist undue interference on the part of the government. In his interview, the Deputy Crown Prince said about privatization of the company: "I believe it is in the interest of the Saudi market, and it is in the interest of Aramco, and it is for the interest of more transparency, and to counter corruption, if any, that may be circling around Aramco."[16] As the Brazilian case demonstrates, partial privatization is certainly not a full guarantee against corruption, but it may help. A further possibility is that Saudi Aramco might spin off a smaller upstream company to create some diversity and competition in the Kingdom; this might then be partially privatized. It should be noted that Russia effectively has two partially privatized national oil companies (Gazprom and Rosneft) and China has three.

Containing Domestic Oil Consumption and Diversifying Energy Sources

The low oil prices also contributed to precipitating long-overdue decisions about increasing the domestic prices of energy in all GCC member countries. In the past few years, it had become increasingly evident that exponential growth in domestic consumption of oil products as well as electricity was not sustainable and would eventually erode the export capacity of even Saudi Arabia. Furthermore, the low price for natural gas does not allow for commercial exploitation of non-associated gas reserves and has therefore acted as an impediment to the expansion of the petrochemical and other industries based on it. Calls for a revision of the pricing system (most frequently presented as a necessary reduction of "subsidies") have multiplied, but governments were reluctant to go forward on this path, fearing loss of public support.

[15] *Financial Times*, January 6, 2015.
[16] Ibid.

The UAE became the first GCC member to deregulate oil product prices, and, since August 2015, has linked domestic to international prices.[17] Saudi Arabia increased gasoline and diesel prices at the beginning of 2016. It also increased the price of ethane to industry from $0.75 to 1.75/MMBTU, and that of methane from $0.75 to 1.25/MMBTU. Bahrain, Oman, and Qatar also announced hikes in petroleum product prices a few days later, and Kuwait at the time of writing was expected to follow the example of other GCC members.

The newly decreed prices remain relatively low by international standards because no indirect taxes are levied on the consumption of petroleum products, in contrast to what is commonly done in most industrial countries. The main reason for the move is certainly stemming the exponential growth of consumption, rather than significantly contributing to the public budget balance. Convergence towards international wholesale prices is, of course, facilitated because they are today so very low: it remains to be seen if the gap will reopen in case international oil prices stage a significant recovery. It is now a well-accepted conclusion that low energy prices are not an effective redistributive policy, and are in fact regressive rather than progressive (i.e., benefit the rich rather than the poor).

Increased energy prices to the final consumer will also facilitate the diversification of energy sources, which remains a key target of all GCC members. Attention to solar and other renewable sources has greatly increased: in a speech in May 2015, Ali Naimi once again proposed the vision of a Saudi Arabia which in a few decades from now might be exporting "gigawatts of electric power" from the sun.[18] The emphasis on diversification of sources was reiterated in the country's INDC submitted ahead of the COP 21 conference.

The GCC countries may be said to have now reached the conclusion that global diversification away from fossil fuels is inevitable and, indeed, desirable. This obviously also reflects on their attitude towards exploitation of the remaining oil reserves: the attractiveness of delaying the run down of reserves and extending their life time into the distant future to serve the needs of future generations has greatly decreased, and fear that any oil left in the ground may lose its economic value sooner rather than later has increased. In this context, lower oil prices may be seen as a positive development, inasmuch as they discourage the world from turning its back to oil too soon.

[17] *MEES,* July 24, 2015, page 7.
[18] *MEES*, May 22, 2015, page 13.

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Giacomo Luciani teaches at Sciences Po in Paris, where he leads the Master in International Energy at the Paris School of International Affairs; and at the Graduate Institute of International and Development Studies in Geneva, where he directs the Executive Master in Oil and Gas Leadership. In 2010-13 he has been a Princeton Global Scholar at the Woodrow Wilson School of Public and International Affairs and the Department of Near Eastern Studies.

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He has been a member of the European Commission's Advisory Group on the Energy Roadmap 2050, and participated in numerous energy-related research projects funded by the Commission.

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His recent publications include: "Resources Blessed: Diversification and the Gulf Development Model" Gerlach 2012; "Security of Oil Supplies: Issues and Remedies" Claeys and Casteels, 2013; "Business Politics in the Middle East" (co-edited with Steffen Hertog and Marc Valeri) Hurst 2013; "Political Economy of Energy Reform: the Clean Energy-Fossil Fuel Balance in the Gulf" Gerlach 2014.