OPEC bulletin

10/16

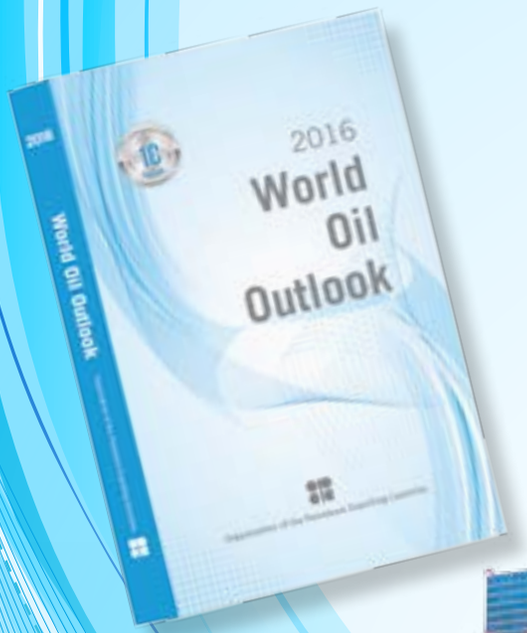
DOUBLE SUCCESS FOR ALGERIA —

OPEC reaches landmark agreement
IEF marks 25 years of oil cooperation

Save the date

Launch of the OPEC 2016 World Oil Outlook

November 8, 2016



Launch	11:00–12:15
OPEC Briefing	12:30–13:30

Middle East Petroleum Club, ADIPEC
Abu Dhabi, United Arab Emirates

The need for decisive, collective action

Last month's OPEC Ministerial Meeting in Algiers resulted in what can only be described as an encouraging, optimistic, and positive sign for the oil markets: an historic agreement on production cuts to foster market stability. The 'Algiers Agreement' most certainly reflects a consensus among Member Countries and signals an important shift in attitudes.

This is the first such OPEC agreement since the Oran, Algeria, decision of 2008 and reflects a broad recognition of the realities of the market today. It also expresses a collective understanding that focused negotiations are still relevant and that concrete actions are greatly needed. Such an understanding — and the engagement among producers that it has prompted — raises the possibility of leaving behind the latest cycle of volatility.

Furthermore, the Algiers Agreement has been roundly welcomed by many stakeholders, particularly since the low price environment of recent years has proven to be quite persistent. It points the way forward.

At the same time, what emerged out of the discussions and negotiations held in the 'pearl of the Mediterranean' last month — which began with the 15th IEF Ministerial Meeting and ended with the 170th OPEC (Extraordinary) Conference — was a very clear sense that such gatherings are absolutely essential for the continued health of the industry. This is something that OPEC has always maintained — and it is something that the IEF has been able to foster successfully every year.

The benefits and outcomes of such events — which are marked by dialogue, and supported by an exchange of outlooks and perspectives — are often difficult to quantify. But it is no exaggeration to say that keeping the lines of communication open with producers (and consumers) is critical in an industry that is complex, capital-intensive, and prone to external shocks. This is precisely why OPEC routinely engages in dialogue meetings with other energy stakeholders — such as the EU, Russia and China, to name but a few.

And it is precisely why OPEC regularly calls for enhanced dialogue with other producers, particularly with increased sharing of market data and energy outlooks, and stronger collaboration. This is, in fact, exactly the kind of work that we carry out regularly at the OPEC Secretariat and through the Organization's participation at industry events.

It is also the kind of work that OPEC seeks to encourage through consultations with its Member Countries — and which it hopes to inspire among other non-OPEC oil-producing countries as well.

In fact, one thing has become increasingly apparent is that such work is required of all energy stakeholders, not just OPEC Member Countries. OPEC cannot be expected to go it alone.

Although its Member Countries hold around 80 per cent of global proven crude reserves, they are only responsible for approximately 40 per cent of world crude production. This means that the lion's share of global output comes from other non-OPEC sources.

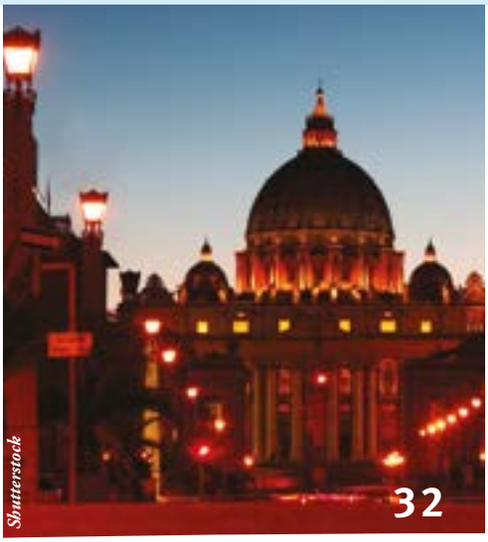
It is encouraging to see that these other non-OPEC sources are now considering how they, too, may act in order to better shoulder some of the responsibility. Through ongoing consultation with OPEC and other producers, they are seeking to also make some kind of contribution, like OPEC, to global efforts to bring back market stability.

At OPEC, we remain deeply optimistic about the possibility that the Algiers Agreement will be complemented by precise, decisive action among all producers — the kind of action that we need in order to see prices supported and short-term volatility avoided.

In the meantime, industry observers should remember that they should not be too quick to judge or criticize the Organization or its Member Countries. Over the years, we have seen how wildly inaccurate their predictions have been. What many of them have failed to recognize is that OPEC's great strength is its global reach and its diversity. Its great value is found in the continuing willingness of its Member Countries to confer, consult and coordinate actions if and when necessary.

As the years have passed and the market has evolved, the importance of OPEC's role has, in fact, only increased — proving all those unfortunate nay-sayers wrong once more.

This time, in the wake of the Algiers Agreement, we have no doubt that the same expression of unity and strength that was clearly on display in Algeria will carry the day in the end — particularly if it is joined by the decisive action of non-OPEC producers. That is the kind of collective, concerted and coordinated action that we need today.



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Cover

This month's cover reflects the successful meetings of the OPEC Conference and the International Energy Forum, that were held in Algiers, Algeria, in September (see features starting on p4).

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OPEC Membership and aims

OPEC is a permanent, intergovernmental Organization, established in Baghdad, on September 10–14, 1960, by IR Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. Its objective — to coordinate and unify petroleum policies among its Member Countries, in order to secure a steady income to the producing countries; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the petroleum industry. Today, the Organization comprises 14 Members: Qatar joined in 1961; Libya (1962); United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); Nigeria (1971); Angola (2007). Ecuador joined OPEC in 1973, suspended its Membership in 1992, and rejoined in 2007. Indonesia joined in 1962, suspended its Membership on December 31, 2008, and reactivated it again on January 1, 2016. Gabon joined in 1975 and left in 1995; it reactivated its Membership on July 1, 2016.

Contributions
The *OPEC Bulletin* welcomes original contributions on the technical, financial and environmental aspects of all stages of the energy industry, research reports and project descriptions with supporting illustrations and photographs.

Editorial policy
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Delegates to the 170th (Extraordinary) Meeting of the OPEC Conference, gather for a group photograph.

Oil and Energy Ministers reach landmark agreement in Algiers

OPEC acts to speed up rebalancing of the market

OPEC's Oil and Energy Ministers and Heads of Delegation have agreed to set in motion a process that will lead to the Organization reducing its overall crude oil production.

The landmark move, announced at the 170th (Extraordinary) Meeting of the OPEC Conference, which convened in Algiers, Algeria, on September 28, 2016, follows concern about continued crude oversupply and high oil inventories and the need to speed up the market's rebalancing.

The Extraordinary Conference, which followed a Consultative Meeting attended by Heads of Delegation from the Organization's 14 Member Countries, decided to opt for an OPEC-14 oil production target ranging between 32.5 and 33.0 million barrels/day, in order to accelerate the ongoing drawdown of the stock overhang and bring the rebalancing forward.

"The Ministers decided to establish a High Level Committee comprising representatives of Member Countries, supported by the OPEC Secretariat, to study and recommend the implementation of the production level of Member Countries," a *communiqué* issued at the end of the one-day Meeting disclosed.

It added: "Furthermore, the Committee shall develop a framework of high-level consultations between OPEC and non-OPEC oil-producing countries, including identifying risks and taking pro-active measures that would ensure a balanced oil market on a sustainable basis, to be considered at the November OPEC Conference."

Mohammad Sanusi Barkindo, OPEC Secretary General.

Giving more details about the initiative at a press briefing after the Meeting, OPEC Conference President, Dr Mohammed Bin Saleh Al-Sada, who is Qatar's Minister of Energy and Industry, explained that the Ministers had to convert their informal consultative talks into an Extraordinary OPEC Conference, in order for them to make binding decisions.

"As we proceeded with our discussions, which were very positive, there was a strong willingness among Member Countries to make decisions — and that could only be done through an official Extraordinary Meeting, which we unanimously agreed upon," he said.

Extensive consultations

The Ministers' extensive talks, which lasted well over five hours, were held at the International Convention Centre in the Algerian capital, at the end of the three-day 15th Ministerial Meeting of the International Energy Forum (IEF).

Concerning the targeted level of production under scrutiny, Al-Sada told newsmen that the Ministers thought there was a need to have a production band — in the small range of 32.5 to 33m b/d — in order to give flexibility to the technical team appointed to "dig deeply into the market situation and determine the most appropriate figure within that range."

Asked if there was a start date fixed for the new production ceiling, the Conference President reiterated that the communications and studies of the High Level Committee would be presented in recommendation form to the 171st Ordinary Meeting of OPEC Conference, scheduled to concvene in Vienna, Austria on November 30, 2016.

Noureddine Boutarfa, Minister of Energy, Algeria.

Eng José Maria Botelho de Vasconcelos, Minister of Petroleum, Angola.

Guillaume Long, Minister of Foreign Affairs and Human Mobility, Ecuador.

Moussa Pambou Makosso, Ambassador of Gabon to Algeria.

I Gusti Nyoman Wiratmaja, Director General of Oil and Gas, Ministry of Energy and Mineral Resources, Indonesia.

Dr Mohammed Bin Saleh Al-Sada (r), Minister of Energy & Industry, President of the Conference, Qatar; with Mohammad Sanusi Barkindo, OPEC Secretary General.

Eng Bijan Namdar Zanganeh, Minister of Petroleum, IR Iran.

Jabbar Ali Hussein Al-luiebi, Minister of Oil, Iraq.

Anas Khaled Al-Saleh, Deputy Prime Minister and Minister of Finance, Acting Minister of Oil, Kuwait.

"The commencement (of the production cut) is also going to be included in that recommendation and I am sure the team will consider a practical commencement date," he affirmed.

Al-Sada stressed that it would not be right to preempt the outcome of the study by the team on how the new production ceiling was going to be presented or broken down among the Members, whether pro-rata or not, but he stressed that it would be equitable sharing.

"We did not at this stage opt to firm up a particular production figure, but gave the team the flexibility to make the right decision," he added.

The Conference *communiqué*, in giving an overview of the Ministers' findings concerning the situation in the global oil market, observed that over the last two years, it had witnessed many challenges, originating mainly from the supply side.

"As a result, prices have more than halved, while volatility has increased. Oil-exporting countries' and oil companies' revenues have dramatically declined, putting strains on their fiscal position and hindering their economic growth," it pointed out.

Deep investments cuts

The *communiqué* added that the oil industry faced deep cuts in investment and massive layoffs, leading to a potential risk that oil supply may not meet demand in the future, with a detrimental effect on security of supply.

"The Conference took into account current market conditions and immediate prospects and concluded that it is not advisable to ignore the potential risk that the present stock overhang may continue to weigh negatively well into the future, with a worsening impact on producers, consumers and the industry."

It said that, based on their observations and analysis, OPEC Member Countries had decided to conduct a serious and constructive dialogue with non-member producing countries, with the objective of stabilizing the oil market and avoid the adverse impacts in the short- and medium-term.

Commitment to stable markets

"The Conference concurs that there is firm and common ground that continuous collaborative efforts among producers, both within and outside OPEC, would help restore the balance and sustainability in the market," stated the *communiqué*.

"At this juncture, it is foremost to reaffirm OPEC's continued commitment to stable markets, for the mutual

Mossa Elkony, Vice President of The Presidency Council of the Government of National Accord, Libya.

Dr Emmanuel Ibe Kachikwu, Minister of State for Petroleum Resources, Nigeria.

Dr Mohammed Bin Saleh Al-Sada, Minister of Energy & Industry, President of the Conference, Qatar.

OPEC staff at work.

interests of producing nations, efficient and secure supplies to the consumers, with a fair return on invested capital for all producers," it added.

The *communiqué* said that the Conference, following its overall assessment of the global oil demand and supply balance presented by the OPEC Secretariat, had noted that world oil demand remained robust, while the prospects of future supplies were being negatively impacted by deep cuts in investments and massive layoffs.

"The Conference, in particular, addressed the challenge of drawing down the excess stock levels in the coming quarters, and noted the drop in United States oil inventories seen in recent weeks," observed the *communiqué*.

The Conference expressed its respect and deep appreciation to the President of Algeria, Abdelaziz Bouteflika, and to the Prime Minister, Abdelmalek Sellal, for hosting the Extraordinary Meeting.

Khalid A Al-Falih, Minister of Energy, Industry & Mineral Resources, Saudi Arabia.

Suhail Mohamed Al Mazrouei, Minister of Energy, United Arab Emirates.

Eng Eulogio Del Pino, People's Minister of Petroleum, Venezuela.

Members of the OPEC Secretariat and the Algerian liaison team servicing the 170th (Extraordinary) Meeting of the OPEC Conference.

Praise for Algeria

It furthermore acknowledged and thanked Noureddine Boutarfa, Algeria's Minister of Energy, for his "untiring efforts and support" for the consultations between all parties involved in the preparation for the meetings.

At the same time, the Conference congratulated Boutarfa, who was attending a Meeting of OPEC Ministers for the first time since his appointment as Algeria's Head of Delegation, and thanked his predecessor in office, Dr Salah Khebri, for his contribution to the work of the Organization.

The Conference warmly welcomed Gabon that was attending a Meeting of OPEC Ministers for the first time since officially rejoining the Organization in July, and Jabbar Ali Hussein Al-luiebi, who was also attending a Meeting of the Conference for the first time since his appointment as Iraq's Minister of Oil.

Above and right: The meeting room where the 170th (Extraordinary) Meeting of the OPEC Conference took place.

Below: High-level breakfast meeting ahead of the talks, with the OPEC Secretary General.

Dr Mohammed Bin Saleh Al-Sada (c), Minister of Energy & Industry, President of the Conference, Qatar; with Eng Mohamed Hamel (r), Algeria's Governor for OPEC and Chairman of the OPEC Board of Governors; and Mohammad Sanusi Barkindo (l), OPEC Secretary General.

Dr Mohammed Bin Saleh Al-Sada (second l), Minister of Energy & Industry, President of the Conference, Qatar; with Noureddine Boutarfa (l), Algerian Energy Minister; Eng Mohamed Hamel (r), Algeria's Governor for OPEC and Chairman of the OPEC Board of Governors; and Mohammad Sanusi Barkindo (second r), OPEC Secretary General.

The OPEC stand at the meetings in Algiers proved to be in a perfect location at the international convention centre, attracting much attention.

Dr Mohammed Bin Saleh Al-Sada (r), Minister of Energy & Industry, President of the Conference, Qatar; Noureddine Boutarfa (c), Algerian Minister of Energy; and Mohammad Sanusi Barkindo (l), OPEC Secretary General; held extensive discussions in Algiers.

Mohammad Sanusi Barkindo, OPEC Secretary General, had to field many questions from the media.

Seen during the press conference are Dr Mohammed Bin Saleh Al-Sada (c), Minister of Energy & Industry, President of the Conference, Qatar; Noureddine Boutarfa (second l), Algerian Minister of Energy; Eng Mohamed Hamel (l), Algeria's Governor for OPEC and Chairman of the OPEC Board of Governors; Mohammad Sanusi Barkindo (second r), OPEC Secretary General; and Hasan Hafidh (r), Head of OPEC's Public Information Department.

Many journalists and camera crews attended the press conference.

Urgent need to speed up oil market rebalancing

— *Conference President*

Dr Mohammed Bin Saleh Al-Sada, Minister of Energy & Industry, President of the OPEC Conference, Qatar.

There is now a greater degree of urgency about ensuring that the international oil market returns to balance as quickly as possible, according to OPEC Conference President, Dr Mohammed Bin Saleh Al-Sada.

In addressing the opening session of what began as a Consultative OPEC Ministerial Meeting, but later became the 170th (Extraordinary) Meeting of the Conference, in Algiers, on September 28, 2016, he told assembled Member Countries that the market had changed since the Organization last met in Vienna in June 2016 "and our expectations about the rebalancing process have shifted."

Al-Sada, who is Qatar's Minister of Energy and Industry, stated: "The last few weeks have seen much talk about how this could be best achieved.

"I believe there is a common understanding that we need to look at market stabilization measures aimed at reducing the length of the downturn and lessening volatility.

Active role

"We just need to find an understanding on what measures we can take at this Meeting to make it a success, and which will then hopefully lead to a future agreement," he affirmed.

He told the Meeting that he knew everyone present had played an active role in the discussions leading up to the Meeting.

"I would like to thank you all. The efforts to build a consensus have been exemplary and I very much hope that the constructive, accommodating and encouraging nature of our recent talks carries on today," he said.

"I cannot emphasize enough how important it is for us, our Member Countries, OPEC as an Organization, and the oil market, to leave this meeting with a plausible and convincing message — one that shows that OPEC fully understands the current market situation and is making

every effort to deliver the 'sustainable market stability' we all desire."

Al-Sada said that, in this regard, he felt it was important to recall that throughout OPEC's history the Organization had faced numerous challenges.

"It has been able to overcome these through cooperation and compromise," he maintained. "Through my talks with you all, I feel there is the same commitment to ensure that we find solutions to come through the current challenges we all face."

Volatility and speculation

Looking back over the previous three months, Al-Sada observed that when the Ministers last met in the Austrian capital on June 2, the OPEC Reference Basket stood at just over $45/barrel.

In the period since it had gone both above and below this level. However, thus far in September it had been below $45/b, and currently stood in the low 40s. In the meantime, volatility and speculation had remained prevalent in the market.

With regard to global economic growth, Al-Sada said the story was somewhat inconsistent and changeable back in June and it remained so today.

"Our global growth estimate for 2016 has fallen from 3.1 per cent in June to 2.9 per cent today, although for 2017, this is expected to increase to 3.1 per cent."

On the supply side, he said, in June it was anticipated that non-OPEC supply would decline by 740,000 b/d in 2016. In the interim, the expected decline had lessened to a contraction of 600,000 b/d.

"Moreover, we also now anticipate non-OPEC supply to grow by 200,000 b/d in 2017, against a decline of 100,000 b/d when the estimate was first announced in July. For demand," continued Al-Sada, "there had been little change. It remained robust. Global demand was currently anticipated to expand by 1.2 million b/d this year, the same level as expected in June.

"We estimate a similar level of demand growth in 2017," he stated.

The OPEC Conference President said that from the perspective of stocks, OECD and non-OECD inventories were still very high. In fact, OECD commercial oil stocks were currently little different to the numbers the Ministers had seen presented in June — at around 340m b above their five-year average.

"What this underscores is that there are many uncertainties and the pace of the market readjustment is taking longer than expected.

"Back in June, the prospects suggested that the market would rebalance by the end of this year or in the first half of 2017. However, there are now serious questions being asked regarding this timeframe, with many agencies and analysts pushing the rebalancing further into the future," he stressed.

At the beginning of his address, Al-Sada thanked the Algerian Government and Noureddine Boutarfa, Algeria's Minister of Energy, for organizing the Meeting and the International Energy Forum's 15th Ministerial, which was held ahead of the Conference.

"The facilities, the organization, the hospitality, have all been world class," he pointed out.

Al-Sada offered a personal welcome to Boutarfa, who was attending a meeting of OPEC Ministers for the first time, stating that "in the short period you have been Minister of Energy, you have certainly hit the ground running. Your prominent role in the shuttle diplomacy that has taken place over the last few weeks has been extremely welcome. You have made an enormous contribution in working to make this meeting a success."

Open and productive

The OPEC Conference President said he had hosted Boutarfa, as well as OPEC Secretary General, Mohammad Sanusi Barkindo, in Doha, Qatar earlier in September.

"The meetings we had were extremely open and productive as we discussed the outlook for the oil market and considered ways that oil producers might respond to the ongoing and future challenges facing the industry," he said.

Al-Sada in addition offered a warm welcome to Gabon, as well as Jabbar Ali Hussein Al-luiebi, Iraq's Minister of Oil, who were also attending a meeting of OPEC Ministers for the first time.

Achieving sustainable oil market stability a must

— Boutarfa

Noureddine Boutarfa, Algerian Minister of Energy.

The importance of achieving sustainable oil market stability cannot be overstated and is a subject that is central to the thinking of all OPEC Member Countries, Algerian Energy Minister, Noureddine Boutarfa, told the Organization's Heads of Delegation in Algiers.

Speaking on behalf of the host country, Algeria, to the Consultative OPEC Ministerial Meeting, which later became the 170th (Extraordinary) Meeting of the Conference on September 28, 2016, he said that while the global oil market was showing signs of rebalancing, the process had taken longer than all had expected.

"And our Member Countries have all suffered significantly since the oil price started falling back in the middle of 2014," he stated.

"We need to ask ourselves the question: can we wait for market forces to eventually rebalance the market and return the stability we all desire, with prices at levels that allow our Member Countries to grow their economies and invest in necessary new capacity?"

Boutarfa said it was important to also stress that the Meeting should not only be viewed as a short-term necessity.

"Yes, the short-term is in all of our minds, but as we all know, this is very much a medium- to long-term business. We need to view this meeting as vital to long-term oil market stability," he maintained.

"I would like to personally thank you for the major efforts that have been made over the last few weeks or so to bring us all together and help build bridges towards a consensus.

Taken great steps

"These intensive talks have been vital to better understand each other, our current circumstances, the challenges we all face, and what options are available to us to help stabilize the market.

"I feel we have taken great steps to shape a fair and common understanding among us all. We have all shown accommodation. We have all shown flexibility. And we have all shown that our Member Countries have a collective interest in maintaining OPEC as an effective, capable and credible Organization."

Eng Mohamed Hamel, Algeria's Governor for OPEC and Chairman of the OPEC Board of Governors.

Boutarfa said he believed it was vital "for all of us here to leave this meeting with a positive and convincing message that we as petroleum and energy ministers are doing everything we can to help return stability to the global oil market."

In addition, he said, the platform of an OPEC consensus would be vital in their ongoing consultations with non-OPEC producers.

"If we can find common ground, then I am sure there is the opportunity to develop lasting and sustainable solutions among all producers," he affirmed.

The Minister said he hoped that at the Meeting "we can take a further step and reach a consensus to pave the way for an agreement. This will be beneficial to our economies, the world economy as a whole, and the global oil market.

"We need to demonstrate to the oil industry and the world at large that we can act together and meet the genuine expectations of our Member Countries. Many of our governments have made recent statements urging OPEC to take a proactive approach, for a positive outcome.

Honour for Algeria

"We, in Algeria, have done everything possible to make this meeting a success. I hope that when we leave this meeting we can show the waiting world that all of us here, our Member Countries, and OPEC can deliver when it matters most," he concluded.

At the beginning of his address, Boutarfa stressed that was an honour for his country to host the OPEC Meeting, which followed the successful outcome of the 15th International Energy Forum (IEF) Ministerial Meeting held in the Algerian capital.

"The dialogue we have all been part of during the IEF meeting, bringing together both producers and consumers, has been extremely welcome as we all look to confront the challenges and opportunities facing the oil market today," he pointed out.

Boutarfa said it gave him great personal pleasure to see all the Heads of Delegation of OPEC Member Countries in the Algerian capital.

"This is the first time all OPEC Ministers have been together in Algeria since the landmark 151st (Extraordinary) Meeting of the OPEC Conference, held in Oran, in December 2008," he noted.

Some 900 participants gather in Algiers for producer-consumer talks

15th IEF Ministerial pledges firm support for concerted cooperation

Abdelmalek Sellal, Algerian Prime Minister, officially opened the meeting.

The 15th Ministerial Meeting of the International Energy Forum (IEF) celebrated 25 years of oil producer-consumer cooperation in Algiers, Algeria, towards the end of September, ending with a firm pledge to continue concerted cooperation in the future.

After three days of intense formal and informal discussions, which ended on September 28, oil and energy ministers, industry leaders, heads of international organizations and other important energy industry stakeholders affirmed their commitment to the producer-consumer dialogue, which tentatively began in Paris in 1991.

The dialogue, now in the form of the Riyadh-based IEF, has made great progress over the last two decades. The latest Ministerial gathering, excellently hosted by OPEC Member Country Algeria, received strong support to further the international standing of the neutral platform the Forum uniquely provides in strengthening energy security and facilitating an orderly global energy transition.

Today, the IEF is supported by 72 member countries, including all 14 OPEC Member States. The Forum's ministerial meetings bring all these oil and gas producers and consumers together to discuss the various challenges facing the global energy markets.

And the fact that the 15th Ministerial Meeting of the Forum was attended by around 900 participants, including well over 400 delegates from 54 countries, goes to show the importance of the global initiative.

"The dialogue we have all been part of during the IEF meeting, bringing together both producers and consumers, has been extremely welcome as we all look to confront the challenges and opportunities facing the oil market today," Algerian Energy Minister, Noureddine Boutarfa, commented after the Ministerial talks.

The Meeting, held at the newly opened International Convention Centre in the Algerian capital — an impressive state-of-the art beach front complex — was officially opened by Algerian Prime Minister, Abdelmalek Sellal. It had as its theme 'Global energy transition: An enhanced role for the dialogue'.

Dr Sun Xiansheng (c), the new head of the International Energy Forum (IEF).

Speakers over the two official working days of the event — September 27–28 — comprised OPEC and non-OPEC oil and energy ministers, oil company executives, high-ranking gas officials, producer and consumer government ministers, as well as the new head of the IEF, Dr Sun Xiansheng, and his counterparts at two of the partner organizations — OPEC and the International Energy Agency (IEA) — Mohammad Sanusi Barkindo and Dr Fatih Birol, respectively.

Topics discussed in four Plenary Sessions comprised: *'Oil markets: outlook and the stability challenge'; 'Natural gas: challenges for the industry, the LNG chain and implications for market structure'; Renewables and energy efficiency: prospects and challenges after COP21'; and Energy governance: global energy dialogue revisited'*. The fifth and final plenary session carried the concluding statement and the closing of the Meeting.

In addition, two energy roundtables were held in parallel on the first day of the Meeting. They looked at two very interesting topics: *'Sustainable energy access: a critical factor for human development'* and *'Enhancing energy security: the role of technology'*.

Over the two days of the Meeting proper, delegates expressed a strong conviction that the IEF had proved to be an excellent platform for cooperation among oil producers and consumers.

However, it was felt that the dialogue should now be extended to address environmental issues, energy security, energy access, subsidy reform and energy efficiency, while more was also required to improve market transparency.

It was generally observed that since the Russian Federation hosted the 14th Ministerial Meeting of the Forum in Moscow in May 2014, changes in energy demand and supply had made market prospects more uncertain and specifically reduced investor confidence.

However, delegates considered that the architecture surrounding global energy governance today reflected a greater variety of stakeholder perspectives and available energy technologies.

They noted that while these had created important new opportunities for energy sector reforms and transition, shifts in energy markets, governance and technology unfortunately came with new uncertainties.

Oil markets: outlook and the stability challenge

In the opening plenary session, delegates noted with concern that since the onset of the fall in international crude prices — in the summer of 2014 — the oil markets

were rebalancing more gradually than experienced in previous cycles.

This, they agreed, was due to policy and economic shifts in both the producing and consuming countries, as well as to new production technologies.

Participants observed the presence of a more competitive and diversely supplied global oil market, combined with moderate demand growth and a record build in oil inventories.

It was pointed out that these factors had significantly reduced investment incentives and worryingly augmented risk to longer-term energy security.

Delegates observed that the challenge to restore market stability remained and they thought that price volatility was likely to stay elevated as markets tested new thresholds.

However, they did consider that, overall, market volatility appeared less pronounced than in previous cycles, due in part to greater transparency and improved understanding of the physical and financial energy market interactions through stakeholder dialogue.

They highlighted the significant decline in the revenues of the oil-exporting countries and the subsequent sharp contraction in upstream investment, as well as the general situation in the oil sector. The industry had seen extended layoffs, which in turn posed structural challenges for both the consuming and producing countries.

Looking at the future, delegates were in firm agreeance that while uncertainty over the oil supply and demand outlook was significant, oil would continue to supply the world's growing energy needs over the medium- to long-term.

They asserted that the quest for oil market stability required enhanced producer-consumer dialogue and energy data transparency.

In this regard, the session's participants stressed their ongoing support for enhanced dialogue to satisfy growing energy demand in a manner that equitably served both producer and consumer policy goals, while being in the interest of the industry as a whole.

Natural gas: challenges for the industry, the LNG chain and implications for market structure

Ministers and participants in the second plenary session looked at recent developments in the global gas market, outlining both the opportunities and the challenges facing the industry going forward.

Dr Fatih Birol (r), CEO of the International Energy Agency (IEA).

They emphasized the important role natural gas played in meeting the world's increasing energy demand and pointed to the window of opportunity that presented itself for the industry in helping to enhance sustainability of energy matrices, including health and wellbeing by improving air quality in the major urban centres.

Delegates observed that with more diverse LNG and pipeline gas supply and demand centres, natural gas may well become a globally traded commodity, but that long-term producer-consumer relations would remain important for gas market security.

In acknowledging that price trends were likely to remain defined by regional market conditions, the session's participants stressed the need for deepening dialogue.

They highlighted the importance of market visibility and stability in ensuring long-term investments in large-scale projects, noting that flexible industry responses would boost gas market resilience and open the industry up to new growth opportunities.

It was observed that gas demand growth had slowed in both European and Asian economies and that a significant challenge remained from competition from other energy sources, as well as infrastructure constraints across borders and to inland demand centres.

To help overcome the challenges, delegates urged the IEF to strengthen its collaboration with international organizations, including the Gas Exporting Countries Forum (GECF), as well as with industry and other stakeholders.

Eng Mohamed Hamel, Algeria's Governor for OPEC and Chairman of the OPEC Board of Governors, who was Head of the Forum's Organizing Committee.

Renewables and energy efficiency: prospects and challenges after COP21

In the third plenary session, ministers, heads of international organizations, captains of industry and invited guests welcomed the consensus achieved in Paris last year at the 21st session of the Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC).

This entailed strengthening the global response to the threat of climate change by holding the increase in the global average temperature to below 2° Celsius above pre-industrial levels, and by increasing the ability to adapt to the adverse impacts of climate change.

Participants assessed the impact the Paris Agreement was likely to have over longer-term energy market outlooks. They stressed that renewable energy and the efficient use of energy were, along with cleaner fossil-fuel technology, important approaches in mitigating and adapting to climate change and that national market characteristics determined policy and investment choices.

Delegates took note of the fact that renewable energy sources had matured, building scale and cost competitiveness that enabled growth rates above those of other energy technologies, but that fossil fuels would continue to make up the lion's share of the energy mix.

They professed that to accelerate the mobilization of investment in the development of renewables, energy efficiency and clean fossil fuel technologies, more dialogue among IEF stakeholders on prospects and challenges was needed.

Energy governance: global dialogue revisited

Addressing the fourth plenary session, delegates reflected on the 25th anniversary of the producer-consumer energy dialogue, noting that since the first meeting in Paris in 1991, the "open and informal dialogue" had

evolved with the decision in 2000 to establish a permanent Secretariat for the Forum.

This was followed in 2002 by the establishment of the Joint Organizations Data Initiative (JODI) with JODI Oil, the launch of the IEF Trilateral Programme of Work with the IEA and OPEC in 2010, the signing of the IEF Charter in 2011, and the launch of the JODI Gas initiative in 2014, all regarded as important milestones.

Mindful of the fact that the global energy transition came with shifts at various levels, session delegates observed that impacts on the economies of interdependent producing and consuming countries differed.

In expressing their shared interest in deepening understanding and building confidence and trust to make energy sector policies more cohesive, as well as establishing a more transparent and predictable market environment, participants saw an increasing need for enhancing the producer-consumer dialogue among all energy sector stakeholders.

They also welcomed the opportunity to involve key regions more actively in the global energy dialogue.

Looking at key IEF initiatives, delegates welcomed efforts to enhance dialogue with African countries through a series of high-level meetings focused on investment in energy access and sustainable energy market development, in cooperation with relevant international and regional organizations.

Abdelmalek Sellal (r), Algerian Prime Minister, with Mohammad Sanusi Barkindo, OPEC Secretary General.

They also applauded the launch of an IEF Energy Efficiency Knowledge Sharing Framework and acknowledged the need to enhance dialogue on the role of new energy technologies in the IEF Knowledge Sharing Framework and the broader producer-consumer dialogue, as well as to assess their role in future energy supply demand balances and trade flows.

In addition, session participants stressed their continued support for improving market transparency through the fruitful dialogue the IEF pursued in the context of the IEA-IEF-OPEC Trilateral Programme of Work.

This included annual symposia and workshops on energy outlooks and interactions between physical and financial energy markets, in collaboration with the IEA and OPEC, and joint efforts to strengthen JODI, which the IEF coordinates in collaboration with APEC, Eurostat, the GECF, the IEA, OLADE, OPEC, and the UNSD, in respect of oil and gas market transparency.

Delegates welcomed the JODI Five-Year Plan endorsed by the Heads of JODI Partners and the progress being made in improving JODI data quality, as well as complete, and timely reporting practices.

They pointed to efforts aimed at deepening understanding and enhancing the comparability of energy outlooks, the interactions between physical and financial markets, as well as new approaches pursued to improve JODI's visibility and outreach.

Ministers and industry representatives invited the IEF to build on the successful model of the Trilateral Programme of Work by reaching out to other regions, international organizations and knowledge networks to enhance the energy dialogue.

High-ranking delegates to the 15th IEF Ministerial, which attracted over 900 participants.

Delegates welcomed IEF efforts to strengthen regional engagement and institutional partnerships to improve global energy governance through neutral dialogue that served producer-consumer interests in stable energy markets, an orderly energy transition and healthy and sustainable economic development.

Sustainable energy access: a critical factor for human development

In the first roundtable, ministers, heads of international organizations, captains of industry and invited guests welcomed the successful adoption of the 2030 Agenda for Sustainable Development by the United Nations in 2015 that aimed, *inter alia,* to ensure access to affordable, reliable, sustainable and modern energy for all by 2030.

Participants, in recognizing the lack of access to energy in many developing countries, in particular in Africa, which they agreed acted as an obstacle to poverty eradication, economic growth and social development, stressed the importance of joint initiatives in several areas to improve energy access and productivity.

They highlighted the important role of the IEF, alongside other organizations, in helping to ensure that energy access remained an integral part of the producer-consumer dialogue and was always high on the ministerial agenda.

Enhancing energy security: the role of technology

In the second roundtable, delegates, mindful of the relative shares of fossil and other energy technologies in the global energy mix in relation to climate change, energy transition and economic development goals, pointed to the need for more dialogue on policy and market conditions to help facilitate the adoption of new energy technologies in the fossil fuel economy, such as carbon capture and storage (CCS) at significantly higher rates than historical data showed.

They especially emphasized the need to improve conditions for investment and innovation to advance deployment of new energy technologies and streamline efforts within and among the energy sectors of producer and consumer country economies.

Meeting of Heads of JODI Partner Organizations

High-ranking officials of the Joint Organizations Data Initiative (JODI) partners met on the sidelines of the first day of the 15th Ministerial Meeting of the IEF in the Algerian capital on September 26, 2016.

The 5th Meeting of the Heads of JODI Partner Organizations called on IEF ministers and JODI stakeholders in government and industry to continue their support for the initiative and ensure that the necessary institutional framework was in place to provide comprehensive, reliable, and timely energy data.

JODI, established in 2003 to address the issue of the lack of data transparency in oil markets, seen as a cause of excessive price fluctuations, provides a reliable, freely accessible and comprehensive database of energy statistics.

The 5th Meeting of the Heads of JODI Partner Organizations was held in Algiers on September 26.

Attending the meeting were the heads and representatives of the Asia Pacific Economic Cooperation (APEC); the Statistical Office of the European Union (Eurostat); the Gas Exporting Countries Forum (GECF); the International Energy Agency (IEA); the International Energy Forum (IEF); and the Organization of the Petroleum Exporting Countries (OPEC).

The African Energy Commission (AFREC) also attended as an observer.

The Meeting, held at the Sheraton Hotel, took stock of the progress made in the data-gathering initiative's operations since the last heads of JODI partners meeting in Moscow in 2014.

According to a press release issued after the talks, the JODI partners discussed how they could best collaborate with different actors and stakeholders at various stages of the JODI data supply chain.

They also reviewed progress made and endorsed the Five-Year JODI Plan to 2020 and agreed to focus future actions based on the plan.

In addition, the JODI partners agreed to continue improving the quality, reliability and timeliness of the initiative's data.

They also discussed progress made to increase JODI visibility and welcomed efforts to extend its geographic reach and improve data transparency of other energy sources, such as coal. In this regard, they welcomed further cooperation with AFREC in the future.

IEF success for Algeria

Hosting the 15th IEF Ministerial Meeting proved to be another major success for the Algerian authorities. Algiers is fast becoming a prime location for such large events.

The capital's international standing is being enhanced by the new Convention Centre, which was inaugurated by Algerian President, Abdelaziz Bouteflika, and Prime Minister Sellal, in early September.

The massive complex, which covers an area of 230,000 square metres, is the largest convention centre in North Africa. It comprises a 6,000-seat lecture hall, a 15,000 square metre exhibition hall, a multifunctional press conference hall, and a dedicated area for heads of state, as well as many auxiliary buildings.

NB: The 16th Ministerial Meeting of the IEF is due to take place in India in 2018 with the support of China and Korea as co-hosts.

Dr Sun Xiansheng: New IEF head

Dr Sun Xiansheng (l), Secretary General of the IEF, with Mohammad Sanusi Barkindo, OPEC Secretary General.

The new Secretary General of the Riyadh-based International Energy Forum (IEF) is Dr Sun Xiansheng, who brings extensive experience in the energy industry to the position.

His counterpart at OPEC, Mohammad Sanusi Barkindo, took the opportunity to wish the new IEF Secretary General every success in his new position during his address to the opening session of the 15th IEF Ministerial in Algiers.

"Your Excellency, I believe we both took up our positions on August 1, 2016, so I am sure we will share many platforms together in the future. I look forward to this," he said.

Prior to taking up his post at the IEF, Dr Sun was President of the China National Petroleum Corporation (CNPC) Economics and Technology Research Institute (ETRI), at which he led a team of over 370 people.

With more than 30 years of experience in the oil and gas industry, Dr Sun has accumulated practical industry experience in oil and gas production, trading and pipeline construction.

He has been deeply involved in the Chinese energy five-year planning process and many other major policies and also served as Chief Editor of ETRI's 'Oil and Gas Industry Development Report' and the first 'China Energy Data and Statistics' reports.

Dr Sun reported to the Chinese leadership on energy policy decision-making, including energy security strategies, '3E' (energy, environment, economy) programme development, low-carbon energy mix optimization, "three steps" of Chinese gas pricing reforms, and international energy cooperation.

In previous roles, he has served as Director of the Legal and Contract Department of CNPC's International Cooperation Bureau; Vice President of the China National Exploration and Development Company; Chairman of JOC and President of the Greater Nile Petroleum Operating Company; and also President of PetroDar, during which the company found and developed the Phalouge oil field, one of the largest oil fields in South Sudan.

As Chairman of the Saining Corporation CNPC, Dr Sun was in charge of CNPC petroleum trading in London.

He also served as Chairman of CNPC subsidiary companies in Azerbaijan and Uzbekistan, and as Chairman and Chief Negotiator of the China Kazakhstan Oil Pipeline Company.

Moreover, as a representative of the Chinese government, Dr Sun participated in the dialogue with OPEC and worked as chief coordinator in setting and revising production-sharing contracts, both for crude oil and unconventional gas for CNPC, and participated in three bidding rounds for CNPC onshore blocks.

Dr Sun holds an LLM and PhD from the Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP), University of Dundee, United Kingdom.

OPEC Secretary General addresses IEF Ministerial opening session

Prolonged low oil prices not good for anyone

— Barkindo

A prolonged period of low crude prices, such as those experienced by the international oil market since the summer of 2014, is not good for anyone, according to OPEC Secretary General, Mohammad Sanusi Barkindo.

"That is clear," he told assembled high-level delegates attending the opening session of the 15th Ministerial Meeting of the International Energy Forum (IEF), held at the Algiers International Convention Centre, Algeria, on September 27, 2016.

"Low oil prices are a concern for producers today and lead to situations that are a concern for consumers tomorrow," he pointed out.

"And high oil prices are a concern for consumers today and lead to situations that are a concern for producers tomorrow," he added.

Barkindo, who was speaking alongside the Secretary General of the IEF, Dr Sun Xiansheng, and the Executive Director of the International Energy Agency (IEA) Dr Fatih Birol, said that against this background of low oil prices, "we need to ask ourselves: is the current environment putting the future at risk?

Market upheaval

The OPEC Secretary General pointed out that since the last IEF Ministerial Meeting in May 2014 the market had undergone much upheaval and witnessed significant volatility.

He noted that between June 2014 and January 2016 the price of the OPEC Reference Basket had fallen by 80 per cent.

"It is the largest percentage fall in the five episodes of sharp price declines we have observed over the past three decades," he stressed. "Although, since the start of this year, prices have mostly seen an upward trend, and the OPEC Reference Basket price now sits above $40 a barrel."

Barkindo explained that the current cycle was supply-driven with most of the supply increases in recent years coming from generally high-cost non-OPEC production.

Between 2008 and 2015, non-OPEC liquids' supply

growth stood at 7.9 million barrels/day, while OPEC liquids' production was at 1.5m b/d during the same period.

He said a similar surge in non-OPEC supply also occurred during the short time-frame from 1977–84 when non-OPEC supply grew by more than 11m b/d.

"The knock-on impacts of these developments have been felt across the industry," he maintained.

For example, he continued, global exploration and production spending fell by around 26 per cent in 2015 and a further 22 per cent drop was anticipated this year.

"Combined, this equates to a loss of more than $300 billion. This will impact not only new projects coming onstream, but new discoveries too," he warned

Barkindo said that with supply outpacing demand, the market had seen a global oil inventory build since mid-2014. The difference to the five-year average in terms of total OECD commercial stocks remained very high at around 240m b at the end of August.

Strategic petroleum reserves

"Moreover, since last year, stocks in the non-OECD region, mainly going to strategic petroleum reserves, rose by around 150m b to nearly 2,250m b, encouraged by lower crude oil prices."

The OPEC Secretary General said there was evidence to suggest that the market was now gradually realigning itself.

In 2016, non-OPEC supply was expected to contract by 600,000 b/d and oil demand growth was set to be 1.2m b/d.

"However, a return to balance is taking time due to the persistently high stocks' overhang," he maintained.

"We also need to appreciate how short-term developments and the current instability can impact the medium- and long-term."

Looking ahead, Barkindo said all energies would be required and there was no doubt that oil would remain a fuel of choice.

OPEC saw oil demand increasing by around 17m b/d between now and 2040 to reach close to 110m b/d.

"This will require significant investments. New barrels are needed to not only increase production, but also to accommodate for decline rates from existing fields. Overall, we see oil-related investment requirements of around $10 trillion over the period to 2040," said Barkindo.

He said that to reverse the declines in investment and output, it was vital to see a rebalanced market with sustainable stability, so that the industry could deliver the necessary investments "for our energy future".

"In this regard, it is vital to keep in mind the link between the marginal cost, the price and investments."

Many challenges

Of course, continued Barkindo, there were also many other ongoing and related challenges for oil markets, such as: the uncertain prospects for the global economy; excessive speculation and the role of financial markets; the impact of geopolitics; advances in technology and their impacts on exploration and production; and environmental and sustainable development concerns.

"I see that many of these issues are on the agenda for subsequent sessions. I look forward to listening to the speakers, and playing an active role in the discussions," he said.

The OPEC Secretary General said that given that the oil industry was highly capital-intensive and with long-lead times for projects, stability was vital.

"That is not to say that we can rid the market of cycles altogether — these have been part of the modern oil industry since the first successful oil drilling by Edwin Drake in Pennsylvania in 1858.

"But we do need to ensure that we all do everything we can to reduce the length of downturns, lessen any volatility, further enhance energy data transparency, through such platforms as JODI, and continually make the industry more resilient and more efficient.

"This means bringing together all industry stakeholders, to help develop cooperative and coordinated approaches to the often complex challenges, as well as the multitude of uncertainties, we all face in achieving market stability in the short-, medium- and long-terms."

Barkindo asserted that market stability and sustainable energy development went hand-in-hand with open dialogue and action-oriented cooperation to evolve inclusive solutions.

"Let me stress that OPEC has been a reliable supplier of oil and a dependable partner in a broad community of stakeholders and will continue to be in the future. We are committed to delivering a sustainable oil and energy future for all," he concluded.

Energy indicators under the microscope ...

JODI — *Reducing uncertainty through data transparency*

The international petroleum market has always been subject to instability and price volatility. One of the causes of this is uncertainty, particularly in determining levels of oil supply and demand, both in the short and long term. One of the ways this form of market destabilization is being increasingly counteracted is through transparency and the provision of precise and timely oil industry data that better reflects the accuracy of the prevailing market fundamentals. The pressing need for reliable statistics was actually observed in the 1990s when several oil-producing nations reached an understanding on the issue. The call for action was endorsed by the 7th Ministerial Meeting of the International Energy Forum (IEF) in Riyadh in 2000.

The following year, six influential global organizations — APEC, Eurostat, the IEA, OLADE, OPEC and the UNSD — launched the Joint Oil Data Exercise, a landmark event that led to the birth of the Joint Oil Data Initiative in 2002. Progress was immediate: within one year over 70 participating countries, representing 90 per cent of global oil supply and demand, were participating in the initiative. From that day, JODI has gone from strength to strength. Today it is known as the Joint Organizations Data Initiative and deals comprehensively with both oil and gas data. And such has been its success it is now considering extending its reach to cover the last of the three carbon-based fossil fuels — coal.

*To learn more about JODI and its success, OPEC intern, **Ayman Almusallam**, interviewed a key figure that has been involved with the initiative for many years — the former Head of OPEC's Data Services Department, **Fuad Al-Zayer** (pictured above), who is now Global Coordinator of Energy Data Transparency at the IEF, which is based in his home country of Saudi Arabia.*

JODI delegates seen at the organization's latest partners' meeting in Algiers in September.

For those who are not so familiar with JODI, what it does and what it sets out to achieve, how would you describe the initiative in a few sentences?

JODI is a global initiative that started in the late 1990s, when energy ministers identified the lack of transparent and reliable oil statistics as a key contributor to oil price volatility and tasked international organizations to work together to mitigate uncertainty by improving market transparency and facilitating well-informed decision-making that instils investor confidence, supports market stability and strengthens energy security. The initiative, coordinated by the IEF since 2005, relies on the combined efforts of the eight JODI partner organizations (APEC, EUROSTAT, the GECF, the IEA, the IEF, OLADE, OPEC, and the UNSD) and more than 100 national administrations and industry stakeholders who gather, verify and transmit the official data that populates JODI's two public databases — JODI-Oil and JODI-Gas — with key monthly supply and demand indicators. We are very pleased that both JODI-Oil and JODI-Gas databases have data representing about 90 per cent of global oil and gas demand and production. JODI is an impressive global response to the need for greater transparency in the energy marketplace.

Data collection and distribution, as well as transparency, play a fundamental role in supporting the oil and gas sector, which is subject to volatility. How would you describe the importance of JODI to the petroleum industry?

JODI represents a concrete outcome of the global energy dialogue. Over the years, it has grown to become a key element in the energy market that is sought after by researchers and analysts across the globe. JODI provides information that is not available anywhere else. For example, Saudi Arabia's oil production is available only through JODI. Also, JODI provides insights on data from non-OECD countries and emerging markets in Asia, Latin America and the Middle East and North Africa (MENA) region. There are more than 900,000 data points available in JODI's database. We have, on average, 10,000 users accessing the JODI website every month, looking for data. This is an increase of more than 100 per cent since 2014. This is a sign that JODI is gaining ever-increasing prominence in the petroleum industry and is playing a key role in supporting decision-making and stability in the oil and gas sector.

JODI has been in existence for almost 15 years now. What are some of the key milestones that the initiative underwent during this period of time?

I have been lucky to be associated with JODI for the last ten years, since I was in OPEC as Head of the Data Services Department. The first milestone was in 2003 when JODI became a permanent initiative and not just a casual exercise. Another milestone took place in 2005 when the JODI-Oil database became

Fuad Al-Zayer seen with Mohammad Sanusi Barkindo, OPEC Secretary General.

Milestones in JODI's history

1990s:
Energy Ministers identify the need to share energy-related data among stakeholders to enhance transparency in the energy marketplace.

2001:
OPEC, APEC, Eurostat, the IEA, OLADE and the UNSD decide to combine efforts and involve their member countries to engage actively, resulting in the establishment of the Joint Oil Data Exercise.

2002:
Ministers at the 8th IEF Meeting in Osaka, Japan, confirm their support for the initiative and mandate the six organizations to attain the necessary cooperation from their member countries. This leads to the formation of a permanent reporting mechanism, formally known as the Joint Oil Data Initiative.

2005:
The IEF Secretariat takes over the coordination role of the initiative.

2008:
The 11th IEF Ministerial Meeting in Jeddah, Saudi Arabia and energy meetings in London give the green light to the extension of the initiative to cover natural gas.

2012:
JODI-Gas is ratified as a permanent initiative as a result of the support of energy ministers at the 13th IEF Ministerial Meeting in Kuwait.

JODI Meeting in Kuwait City, 2012.

2014:
The Qatar-based Gas Exporting Countries Forum (GECF) becomes a JODI partner, while the mass public obtain access to the JODI-Gas database.

2016:
JODI's partner organizations discuss the possibility of extending the Initiative to cover coal statistics.

accessible by the mass public during a ceremony in Saudi Arabia's capital, Riyadh, led by the late King of Saudi Arabia, Abdullah bin Abdulaziz. In 2012, the JODI-Oil database was expanded to include additional data points required in the marketplace. Another proud moment was in 2014 when JODI-Gas was launched by the Heads of JODI Partner Organizations in Moscow, Russia.

We hope that more millstones will come during the ongoing journey of JODI.

Do you think that JODI has achieved its primary goal? Or is there yet more that it needs to accomplish?

JODI has contributed to the original goal set forward by energy ministers to improve global data transparency in the energy market. That is for sure. So, on the one hand, there has been a great awareness on the issue of energy data transparency and JODI is often quoted by energy ministers, G20 leaders and the media. However, users are telling us they need the data to be available faster. So, we are working with our JODI partners to see if we can do that. Also, we still have some missing or incomplete data from key countries. So, we have an active capacity-building programme to train experts from countries and companies on how to submit accurate and complete JODI data and how to address some of the challenges they are facing. So far, we have held 15 training workshops to train about 500 professionals across the world as part of this effort. Also, there are calls to increase JODI visibility. And, we are looking at different options on how to do that, including displaying JODI data on authoritative industry platforms, such as Bloomberg, Reuters Thomson and others. So, as you can see, the JODI journey is never really done.

So what then has been the primary goal achieved by JODI?

The primary goal that was set by ministers was to mitigate uncertainty by improving market transparency and facilitating well-informed decision-making that instils investor confidence, supports market stability and strengthens energy security. I think JODI has helped in addressing these issues very well.

At the 15th Ministerial Meeting of the IEF in Algiers in September 2016, a highly-anticipated meeting was held among JODI partners. What were the major outcomes of that meeting?

The meeting is a key element of JODI's process to allow heads of JODI partner organizations to meet every two years and stay abreast of the progress that JODI has made during the intervening time period and also articulate the way forward. In Algiers, JODI partners discussed how

they can best collaborate with different stakeholders at various stages of the JODI data supply chain. They also endorsed the launch of the Five-Year JODI Action-Plan towards 2020. Furthermore, it was agreed that future actions should be based on the delineated plan. The partners also agreed to continue improving the quality, reliability and timeliness of JODI data, in addition to increasing JODI visibility. And they also welcomed the efforts to extend JODI's geographic reach and improve data transparency of other energy sources, such as coal. In addition, they called on energy ministers and JODI stakeholders in government and industry to continue their support for the Initiative and ensure that the necessary institutional framework is in-place to provide comprehensive, reliable and timely energy data. All these are key points for the progress of JODI in the future.

In an important turn and development, JODI is considering extending its coverage to coal. What are your thoughts on this?

As you know, JODI started with oil. Then, a few years later, we embarked on an initiative to collect monthly data on gas, based on the needs of users. It is inevitable that users will be asking to consider extending the know-how of JODI to other forms of energy. So the partners of JODI started to look at coal data — to see what needs to be done. Luckily, there is a lot of coal data available. So, we are now discussing how to improve data transparency of coal data and take advantage of the ongoing work already being made by some of the JODI partners themselves using the JODI framework.

Do you expect organizations focusing on coal, such as the World Coal Association and the Asian Coal Ash Association, to become partners of JODI?

JODI partners are chosen based on whether they can submit official national data from countries. So, this will be evaluated in due time. However, we also cooperate with the industry on our efforts. This means we will cooperate with the World Coal Association and the Asian Coal Ash Association.

JODI was initiated in the 1990s and born in 2002. After all these years, in the light of the current challenges facing the global energy industry, how do you see the future of the initiative developing?

The global energy industry is evolving and so are the user requirements for accurate and timely energy data to mitigate uncertainty, support well-informed decision-making and support market stability. I have no doubt that JODI will continue to evolve to meet these expectations and to become the source of all global energy data.

Who is Fuad Al-Zayer?

Fuad Al-Zayer is an energy expert, knowledge and data specialist and a dedicated father of three children.

He started his professional career in the Arabian Bechtel Company Limited in 1982, after completing his graduate and post-graduate education in the United States in the fields of electrical engineering and industrial management, respectively.

In 1985, he moved to the global energy giant, Saudi Aramco, and was appointed as Communications Engineer. The ambitious Al-Zayer kept developing professionally until Aramco delegated him in 1992 to its offices in Houston, United States, holding the position of Communications System Specialist.

A year later, Aramco promoted him to become General Supervisor in the Communications Engineering Division, a position he held until 1997, when he moved to Foster Wheeler for one year as a project manager in the sector of refineries.

Al-Zayer returned to Saudi Aramco in 1998 as a Consultant. He then became a Strategic Planning Consultant in 2002.

In 2005, he moved to OPEC in the Austrian capital, Vienna, to Head the Data Services Department, the Organization's statistics arm dedicated to collecting data from various sources and producing the annual flagship publication — the Annual Statistical Bulletin (ASB) — as well as other publications.

Seven years later, on completing his term at OPEC, he returned to his home country's capital, Riyadh, to become the Global Coordinator of Energy Data Transparency at the IEF.

L–r: Claudio Descalzi, Chief Executive Officer, Eni; Emma Marcegaglia, Chairman of the Board, Eni; Mohammad Sanusi Barkindo,OPEC Secretary General.

Alamy

The Ambrosetti Forum was held at the Palazzo Mattei, Eni's headquarters in Rome, Italy.

Ambrosetti Forum takes a look into the future of energy

OPEC Secretary General, Mohammad Sanusi Barkindo, was featured on an impressive panel of international energy experts that considered the future of energy from a variety of standpoints at a forum in Rome on September 20, 2016. The OPEC Bulletin's Scott Laury was there and takes you behind the scenes at this first-ever forum in the Italian capital.

In his first public appearance since taking office as OPEC Secretary General, Mohammad Sanusi Barkindo received a warm welcome at the inaugural European House-Ambrosetti Energy Forum held on September 20, 2016, in Rome, Italy.

It was in fact a homecoming of sorts for Barkindo, who, before joining OPEC in August, had held key positions in Nigeria's oil and gas industry in which he had dealt on several occasions with Italian energy company, Eni, and its current Chief Executive Officer, Claudio Descalzi, on its exploration and production ventures in Nigeria.

The two oil industry veterans were visibly pleased to reunite after many years gone by, this time in different, more senior roles and now in the midst of different times and market circumstances.

Organized by The European House-Ambrosetti and hosted by Eni at their impressive Palazzo Mattei headquarters in Rome, Italy, the Forum's theme was the *Future of Energy: Towards a Sustainable Development*.

Inaugural edition of forum

The proceedings began with opening remarks by Valerio De Molli, Managing Partner of the European House-Ambrosetti, who welcomed delegates to Rome for this inaugural edition of the energy forum.

The forum, he said, was designed to facilitate a high-level discussion and analysis on the most pressing issues facing the energy industry today and in the future. He added that the event was especially relevant in light of the current high volatility seen in the oil market since oil prices collapsed in mid-2014.

The forum would also seek to address challenges related to economic stagnation, energy security, geopolitical tensions, climate change, renewables and energy poverty.

A sluggish world economy

In her welcoming remarks, Emma Marcegaglia, Chairman of the Eni Board, provided an overview of the global economy, which, she explained, was suffering from stagnation, especially in Europe. This has been exacerbated even further by the current slump in the oil and energy markets.

In response to this dim outlook, she encouraged energy stakeholders to seek efficiency and resilience to regain a much-needed competitiveness, which points to the inevitability of seeking sustainable solutions in the future. Gas, she added, would be the ideal clean energy source to help Europe and the world make this transition towards a low-carbon society.

"Strengthening the role of gas in Europe's neighbouring countries, this seems to be the only concrete path in supporting the de-carbonization process and reaching the European goals in terms of security and diversification of the energy supply, and evermore pressing challenges," she stated.

The first session, entitled *'Setting the context: the future of energy'*, was chaired by Maurizio Molinari,

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Panelists during the first session, entitled 'Setting the context: the future of energy'.

Claudio Descalzi, Chief Executive Officer, Eni.

Emma Marcegaglia, Chairman of the Board, Eni.

Editor-in-Chief of the Italian daily newspaper, *La Stampa*.

Confronting energy poverty

Eni's Descalzi opened the session with remarks in which he made a passionate plea and a clarion call to action for the provision of affordable and sustainable energy access to the multitudes of people around the globe who are still deprived of essential energy resources. "Access to energy means promoting new growth," he said. "A lack of development is often linked to a lack of energy."

In this regard, Descalzi made a direct reference to Africa, which, he explained, holds massive energy resources but is not able to access them.

He recommended new business models be developed to help diminish these inequalities and provide a win-win scenario of enhanced development, diversification and environmental protection by reducing CO_2 emissions related to energy production.

"The Western model has not allowed for 1.3 billion Africans to have access to energy and 2.7 billion still use biomass for cooking and heating," he said. "We have to think less about profit and more about value creation, which, in Africa, means investments in infrastructure, creating alternatives to the oil and gas sector."

Diversification is essential

Carlo Calenda, Italian Minister for Economic Development, provided remarks on the role of Italy in the European energy policy. He stressed the importance of Africa as a supplier to Europe in helping it diversify its energy sources in the years to come.

"Diversification is the key word for Europe's energy future, and the routes via which this can be achieved are those that lead to Africa and the Eastern Basin of the Mediterranean," he stated. "For Europe, it becomes crucial to intervene to improve and connect the energy infrastructure networks to safeguard energy security that is mainly based on gas."

Before concluding his remarks, Calenda added that Italy would be releasing its new national energy policy, including an analysis on geopolitical considerations, at the G7 Summit, which is scheduled to take place in May 2017 in Taormina, Italy.

New energy paradigm

Maros Sefcovic, Vice President of the European Commission and the European Commissioner for Energy Union, elaborated on Europe's role at the forefront of the transition to the new energy paradigm through the diversification of its energy mix.

"Europe has been a pioneer in defining a strategy of transition from the old energy model, based solely on fossil resources, to the increasingly extended use of alternative energy sources," he said. "And now, this principle cannot be abdicated while the whole world, including giants such as China, is following the path to transition."

Sefcovic added that to really make a difference in tackling climate change, this transition needed to be accompanied by a modernized global economic system and a concerted effort on behalf of the world's energy stakeholders.

"The concept of energy transition is inextricably linked to the process of modernization of the entire European and global economic system," he emphasized. "Action must be collective and must involve the entire international community."

He said gas will play in increasingly influential role in the new energy mix as a means to reduce emissions of carbon dioxide.

"Gas can represent the most efficient energy resource which can carry Europe towards its energy transition," he affirmed. "For this reason, the relationship with Africa, in terms of new discoveries and possible available gas resources, have become of fundamental importance for Europe, within a system of reciprocal advantages and new development."

Outlook for renewables

Edward Morse, Global Head of Commodities Research at Citigroup, said the world was undergoing a dramatic transformation in the energy markets, with an increasing focus being placed on the development of a more diverse resource base, including wind and solar energy, which are the least expensive to produce.

He also pointed out the need to address challenges related to the storage and supply of these resources.

"The costs for renewable energy production are progressively decreasing, but we have to sensibly improve the technology that will allow us to improve distribution and supply systems of these energy sources, which currently have certain stability issues that we could improve on by investing in new technology," he explained. "Today, markets can benefit from access costs to minor energy, but the drop in oil and gas prices will continue to cause problems for producing countries."

Morse joined the previous speakers in affirming the important role gas will play in the future, adding that the United States was now a net exporter of natural gas and increasing its exports of liquefied natural gas.

Jeffrey Sachs, Director of the Earth Institute at Columbia University in New York, participated in the forum via webcast from New York City.

Prospects for clean energy

In his remarks, he emphasized the dire need to transition to low or no-carbon energy in order to mitigate the effects of climate change and reach the goal of zero-net emissions by 2050 as called for in the Paris climate talks.

Potential clean energy sources, he added, would include renewables (ie wind, solar, geothermal, hydropower and biomass), nuclear energy and carbon capture and sequestration (CCS).

Sachs also called for a phasing out of coal and the conversion of core applications for transport and building to electrification, as well as a discontinuation of high-cost deep sea oil and gas exploration.

He said the development of Africa's electricity sector should be one of the highest priorities and that there were promising areas of clean energy growth throughout the continent, including offshore East Africa (ie Mozambique and Tanzania), the Gulf of Guinea, the Sahel and the Congo Basin.

These projects, however, will require strong political and financial support with massive amounts of investment, most likely to the tune of tens of billions of dollars. China was mentioned as a potential investor in these types of large-scale projects.

"The priority for Africa is the development of the electric power industry. The continent possesses large oil and gas reserves, but in addition can count also on two 'mega-sources' of renewable energy: solar and hydroelectric," he explained.

"In several countries in Central and Northern Africa, there are projects in place which are very important for the development of these renewable sources and which require investments. So I say: gas in Eastern Africa, solar in North Africa and hydroelectric in Central Africa."

He also recognized the importance of developing regional energy and power systems linking Europe and North Africa, and the formulation of long-term economic investment policies to ensure that projects are carried out successfully.

OPEC and Eni — a common history

In his first public appearance since assuming his role as OPEC Secretary General on August 1, 2016, Barkindo began his

Valerio De Molli, Managing Partner of the European House-Ambrosetti.

Carlo Calenda, Italian Minister for Economic Development.

remarks on a personal note by recalling the successful collaboration he had experienced in the past with Eni's Descalzi, who had worked for several years in key roles on Eni's exploration and production projects in Nigeria, as well as in other countries in Africa, the Middle East and Asia.

He affectionately characterized Descalzi as the only "African-Italian" he knew and referred to him as a true friend of Africa.

He then touched on some of the common historical links between OPEC and Eni.

Both organizations were founded in the same general timeframe, in the decade between 1950 and 1960, with similar motives — to act as a counterbalance to the dominant multinational oil companies that came to be known as the 'Seven Sisters'.

"Back then, both Eni and OPEC helped set the context for the future of the international oil market. Their formations were pioneering acts," he stated. "Both have come a long way since, evolving into strong, mature and established organizations."

He then spoke of Eni's long history of successful collaboration with OPEC's Member Countries, adding that this relationship would continue well into the future.

"I believe Eni has been present in all OPEC Member Countries at some point in its history, and remains active in most of them today," he explained. "Looking ahead, I have no doubt that both OPEC and Eni will continue to play an important role in our global energy future."

Meeting demand sustainably

Barkindo went on to provide a thorough forward-looking overview of the global oil market situation and said that two main questions would need to be addressed.

"To put it simply, the basic energy challenge can be summed up in two questions. The first is how can we ensure there is enough supply to meet expected future demand growth? And the second is how can this growth be achieved in a sustainable way, balancing the needs of people in relation to their social welfare, the economy and the environment?"

He stressed that in order to meet rapidly growing demand in the years to come, all forms of energy will be required, and these resources will need to be produced in an increasingly efficient and sustainable manner.

"So while the world will need more energy, it also

needs to use it more efficiently and continually look to develop, evolve and adopt cleaner energy technologies," he affirmed.

Energy for all

Another important theme was OPEC's efforts to address the issue of energy poverty, which has hindered development and progress in many countries around the world.

"When we start up our cars, switch on a light, turn on our mobile phones, we need to recognize that these everyday things are still unknown to billions of people across the world who continue to suffer from energy poverty," he pointed out.

"We should not forget that today around 2.7 billion people still rely on biomass for their basic needs, and 1.3bn have no access to electricity. It is vital this is addressed. There is huge potential for socio-economic development in terms of expanding access to modern energy services."

Dialogue and cooperation

He concluded by emphasizing the importance of dialogue and cooperation among stakeholders as a means to overcome volatility and ensure stability in the oil market, which benefits both consumers and producers alike.

"To conclude, I would like to recall an important and meaningful meeting organized by Eni in the early 1980s," he said. "It was held at the Palazzo Barberini and the meeting was called 'Development through Cooperation'. With the same spirit and engagement, I want to underscore a similar vision and call for 'stability and sustainability through active cooperation."

(For full coverage of the Secretary General's remarks at the event, see feature on page 40).

The second and third sessions covered the themes of climate change and the transition to a low-carbon economy from a diverse set of viewpoints.

Both sessions were moderated by Mario Sechi, Editor of the Italian daily newspaper, *Il Foglio*.

The climate imperative

Session two, entitled *'The climate imperative and the energy transition towards a low carbon economy,'* addressed the rapidly changing energy market, which is being driven by a variety of factors, including an increased level of knowledge related to climate change, an evolution in national energy agendas and resulting legislation, the changing trends in how younger generations view energy and the rapid advances in all areas of energy technology.

Jonathan Gaventa, a Director of E3G, a European think-tank on environmental policy, delivered a presentation entitled 'Transitions, fast and slow' in which he contrasted the slow rate of change in energy systems with the rapid and sometimes disruptive nature of consumer technology innovations.

He also touched on the unpredictability of near-term energy projections and the need to "define the destination" by evaluating policies and projects based on where the world needs to be in the future.

Gaventa cited the so-called Ambition Mechanism for the Paris climate agreement as a good method for helping countries track their progress every five years in order to stay on track and reach the long-term goal of reducing greenhouse gas emissions to net zero by mid-century.

Other ideas put forth included an integrated approach to gas, electricity and demand-side infrastructure as a lower cost means of securing future supply, as well as the need for a deployment strategy for low carbon heat and transport to help provide flexibility in demand.

Towards a low-carbon economy

Carlo Carraro, Vice Chair of the Intergovernmental Panel on Climate Change, Working Group III, and Scientific Director of the Fondazione Eni Enrico Mattei, gave a presentation entitled *'Towards a low-carbon economy'*.

He began by defining the magnitude of the climate change issue, saying the growth in GHG emissions between 2000 and 2010 has been larger than during the previous three decades.

The potential impacts, he added, include food and water shortages, an upsurge in migration, increased poverty and more frequent and severe coastal flooding.

To counter these risks, global GHG emissions would need to be reduced significantly through a transition to a low-carbon economy.

This new economy would entail a more efficient use of energy, a greater use of low-carbon or no-carbon energy, improved carbon sinks, as well as lifestyle and behavioural changes.

He said that global financial support for the climate

Maros Sefcovic, Vice President of the European Commission and the European Commissioner for Energy Union.

Left: Delegates attending the inaugural European House-Ambrosetti Energy Forum at Eni's headquarters in Rome.

Edward Morse, Global Head of Commodities Research at Citigroup.

had reached at least $391 billion in 2014 due to both public and private investment in renewable energy technology, adding that 93 per cent of this goes to mitigation and seven per cent to adaptation.

Future measures

Looking ahead, Carraro spoke about some of the future measures that are to be taken as part of the Paris COP21 agreement.

These include phasing out coal, removing subsidies for fossil fuels, improving energy efficiency, carbon pricing and global R&D/innovation necessary to reach the 2050 targets.

Citing the Hurricane Sandy Economic Assessment as an example, he stated that the costs of implementing these ambitious mitigation efforts are reasonable (net GDP loss of 1–3.5 per cent in 2030 and three to ten per cent in 2100), and amount to far less than having to pay for the damages that would result from taking no action.

Caring for the earth and its people

Gilfredo Marengo, Professor of Theological Anthropology at the Pontifical John Paul II Institute, provided unique insights into the future of energy from the standpoint of the church.

He stressed the importance of proper stewardship of the environment and the obligation to provide basic services, including energy, to all of the world's citizens, especially those living in dire poverty.

Mediterranean gas exploration

Mohamed Shoeib, Chief Executive Officer and Managing Director of the East Gas Company, has more than 36 years of experience in Egypt's oil and gas industry.

He shared his views on the promising future of gas exploration in the deep waters of the Mediterranean Sea, which could potentially produce around 800 million cubic feet of gas per day.

In concluding his remarks, Shoeib added that if these ventures are successful, Egypt would have the potential to become a leading supplier in the region.

The last session entitled *'The world of tomorrow: what's ahead of us?'* focused on the future energy mix and the fast pace of innovation taking place in the field of renewable energy technology. These rapidly changing developments are helping lower the cost of solar and wind energy.

The session also covered the changing habits of young adults, who appear to be more receptive to renewable resources than the generations before them.

Advancing low-carbon technology

Robert Armstrong, Director of the Massachusetts Institute of Technology Energy Initiative (MITEI), pointed out in his presentation entitled *'What's ahead: advancing low-carbon technology globally'* the importance of achieving the right balance between supplying the world with the energy it needs and, at the same time, lowering greenhouse gas emissions through clean energy solutions.

"We have a dual challenge. We need to supply energy and, at the same time, we need to decarbonize the energy industry," he asserted.

Armstrong then gave an overview on MITEI's key projects that are being designed to address climate change,

Jeffrey Sachs, Director of the Earth Institute at Columbia University in New York, participated in the forum via webcast from New York City.

Panelists participate in session two, entitled 'The climate imperative and the energy transition towards a low carbon economy.'

including carbon capture, utilization and storage, electric power solutions, energy bioscience, energy storage, materials for energy and extreme environments, advanced nuclear energy solutions, nuclear fusion and solar energy.

He also outlined MITEI's initiative to assess the feasibility of developing low-carbon energy centres, which would facilitate collaborative research between industry and government on key areas of technology and innovation. These efforts, he said, would be "crucial for achieving a low-carbon energy future."

An entrepreneur's view

Felipe Gomez del Campo, the 23-year-old founder and Chief Executive Officer of US-based FGC Plasma Solutions, provided an energy entrepreneur's perspective on the session's theme with a presentation on his patented fuel injector technology for jet engines and gas turbines.

The innovation uses plasma to address many of problems associated with combustion, resulting in lower emissions, enhanced operability, as well as increased efficiency and safety.

What began as a high school science fair project has now, five years later, been patented and received $135,000 in funding from the US Department of Energy, Boeing and other organizations.

The National Aeronautics and Space Agency (NASA) conducted a proof of concept test on the technology, proving the advanced nature of the technology.

Del Campo was recently honoured by US President Barack Obama at a White House ceremony for emerging global entrepreneurs and was selected by the US State Department to represent the country at the 2016 Global Entrepreneurship Summit.

He also touched on the changing habits of the younger generations, like himself, and discussed their viewpoints as consumers of energy, adding they would tend to be more open to energy alternatives than the generations that came before them.

Stability is the answer

The forum concluded with brief closing remarks from European House-Ambrosetti Managing Partner, Valerio De Molli, who provided an overview of the main points that emerged during the event.

One of these key points was made by the OPEC Secretary General at the end of his remarks with regard to stability and how it is the essential ingredient in the future success of the global energy markets.

"Given the long-term nature of the industry, we need more clarity and predictability concerning the future, not only for oil, but energy in general. In this regard, I would like to leave you with one key word: 'stability'," he declared.

"Stability for investments and output expansion to flourish; stability for economies around the world to grow; stability to provide access to modern energy services for those currently without; and stability for producers that allows them a fair return from the exploitation of their exhaustible natural resources. Stability is the key to a sustainable global energy future for us all."

The future of energy: Towards sustainable development

The following speech, published in its entirety, was delivered by Mohammad Sanusi Barkindo, OPEC Secretary General (pictured right), at The European House-Ambrosetti Energy Forum in Rome, Italy, on September 20, 2016. The session title was 'Setting the context: the future of energy.'

I would like to thank the organizers, The European House — Ambrosetti — one of the leading independent global think tanks, for inviting me to speak at today's event. It is a pleasure to be here, and to share the floor with so many distinguished speakers.

Being here in Rome as OPEC Secretary General, and at an event organized in cooperation with Eni, causes me to recall how both OPEC and Eni were formed. There is some shared history.

Eni was the vision of Enrico Mattei who helped create the company back in the 1950s, and then in later years negotiated important oil contracts in the Middle East, as well as a significant trade agreement with the then Soviet Union. He wanted to form a strong Italian energy corporation, and break the then oil market dominance of a group of multinational oil companies labelled the 'Seven Sisters'.

Premise of cooperation

Around the same time, in 1960, OPEC was formed in Baghdad, Iraq, by five oil-producing developing countries around the premise of cooperation, with a commitment to safeguard their legitimate national interests and to ensure order and stability in the international oil market. The main catalyst for its birth being when the 'Seven Sisters', who effectively controlled the quantity of oil extracted and decided how much was sold, to whom, and at what price, unilaterally reduced the posted prices of the crude they supplied

Back then, both Eni and OPEC helped set the context for the future of the international oil market. Their formations were pioneering acts.

Of course, both have come a long way since, evolving into strong, mature and established organizations. In fact, I believe Eni has been present in all OPEC Member Countries at some point in its history, and remains active in most of them today. Looking ahead, I have no doubt that both OPEC and Eni will continue to play an important role in our global energy future, which brings me to the main theme of today's conference.

I have been asked to help set the context in terms of 'the future of energy'. It is a topic that offers up much scope for speakers and I am sure we will hear a diversity of viewpoints today.

It is a future laden with challenges and uncertainties, but also opportunities. I could easily speak for a lot longer than the time we have allocated! There will no doubt be areas where we may all agree, as well as areas where there will be divergences. This is natural, and I look forward to interesting and lively discussions.

I think one thing we can all agree on is the fact that the world will need more energy in the decades to come. It is easy to appreciate why.

In the period to 2040, the global economy is estimated to more than double. And over the same timeframe, world population is projected to reach around 9 billion, an increase of over 1.7bn from today's level.

And we should not forget that today around 2.7bn people still rely on biomass for their basic needs, and 1.3bn have no access to electricity. It is vital this is addressed. There is huge potential for socio-economic development in terms of expanding access to modern energy services.

We expect global energy demand to increase by almost 50 per cent by 2040. Energy will be required to

power more homes, more services, more businesses, more cars, more planes, more ships … I could go on.

At the same time, however, we need to recognize the threat posed by climate change to our environment. Let me stress here that OPEC welcomes last year's COP21 agreement in Paris. Our Member Countries played a role in drafting the agreement, and they will also play a role in helping implement it.

So while the world will need more energy, it also needs to use it more efficiently and continually look to develop, evolve and adopt cleaner energy technologies.

To put it simply, the basic energy challenge can be summed up in two questions.

The first is how can we ensure there is enough supply to meet expected future demand growth?

And the second is how can this growth be achieved in a sustainable way, balancing the needs of people in relation to their social welfare, the economy and the environment?

All forms of energy required

What is clear is that all forms of energy are required. A diverse mix of sources is the best way forward. However, it is vital we appreciate just what each energy source can provide in the decades ahead.

There is no doubt that renewables, such as solar and wind, will continue to significantly expand their role. OPEC Member Countries recognize and support the development of renewables. Many of our countries have great sources of solar and wind, and significant investments are being made in these fields. Biomass, nuclear and hydropower are also expected to maintain their share in the global energy mix in the years ahead.

Overall, these renewable energies and nuclear are expected to increase their share in the energy mix from 18 per cent in 2015 to 22 per cent by 2040.

All of the three main primary sources of energy — oil, gas and coal — will still supply more than three-quarters of the energy mix by 2040. Oil will be at just over 25 per cent, with coal slightly less, and gas slightly more.

From the perspective of oil and gas, it underscores the fact that they will remain central to supplying the growing global population with the critical energy it needs in the decades ahead.

Of course, you may say to me, well you would say this — you are the OPEC Secretary General. But I am also a realist. I do not see any outlook predicting that renewables will come close to overtaking oil and gas in the decades ahead.

In the industrialized world, we need to remember how important oil and gas have been to our past. They have transformed our economies and our societies. They have provided heat, light and mobility. They have created and sustained economic growth and prosperity. The products derived from these precious natural resources are fundamental to our daily lives.

However, we should not forget that this has not been the story for everyone. When we start up our cars, switch on a light, turn on our mobile phones, we need to recognize that these everyday things are still unknown to billions of people across the world who continue to suffer from energy poverty.

Growing populations

These are people that need their voices heard. They need access to reliable, safe and secure modern energy services at scale.

Of course, the economics of wanting more, coupled with growing populations and rising energy demand, has created challenges that were not foreseen when Thomas Edison was developing the light bulb, or when Henry Ford was mass producing the car.

I am talking here about the environmental challenge. In this regard, we need to recognize that the issue is not oil and gas themselves. The problem is the emissions that come from burning them. It is a challenge we need to face head on. And I believe it is a challenge that can be overcome. Given what I have already said, it would be wrong of us to dismiss oil and gas as part of the past. I am a believer that solutions can be found in technologies that reduce and ultimately eliminate these emissions.

Here, the world has made progress, but much more work and collaboration is required. We need to continually look at the development and use of cleaner technologies, such as carbon capture and storage and many others in the future.

At OPEC, we recognize the importance of continually looking to advance the environmental credentials of oil, both in production and use. We welcome coordinated action with the industry and through various research and development platforms.

Given that I am speaking on behalf of OPEC, I feel I need to also talk specifically about the global oil market. There is no doubt that oil will remain a fuel of choice for the foreseeable future. OPEC sees oil demand increasing by around 17 million barrels a day between now and 2040 to reach close to 110m b/d.

To meet this expansion will require huge investments. We need to consider that new barrels are needed not only to increase production, but to accommodate for decline rates from existing fields. It is estimated that oil-related investment requirements are around $10 trillion in the period to 2040.

In thinking about this, it is vital to remember that the short-, medium- and long-term timeframes are all linked. What happens today can have a major bearing on the future. We need to ask ourselves whether the recent oil price environment is putting this future outlook at risk.

Over the past two years or so the industry has gone through some major readjustments and this had led to a significant drop off in investments. For example, global exploration and production spending fell by around 26 per cent in 2015, and a further 22 per cent drop is anticipated in 2016. Combined this amounts to around $300 billion.

Moreover, according to industry sources, in 2015 explorers discovered only about a tenth as much oil as they have annually on average since 1960. Just 2.7 billion barrels of new supply was discovered in 2015, the smallest amount since 1947.

This is a major concern for an industry that needs regular and predictable investments and output to provide the necessary supply in the medium- and longer-terms. To reverse the declines, oil prices have to go up from recent levels. We remain optimistic that the industry will emerge stronger from these tough times. We need to keep in mind that the story of our industry is one of many cycles, both up and down.

We have had periods when prices were low, and periods when prices were high. We have seen times when supply outstripped demand, and times when supply has struggled to keep up. There have been long periods of stability, as well as periods of instability.

But we need to remain vigilant, continually monitor the market and the global economy, and do everything we can do to make downward cycles shorter and less

extreme. And of course, continue to make the industry ever more efficient in areas such as costs and technologies.

Today, the physical oil market remains in surplus, but it is evident that the rebalancing process is underway.

World economic growth is expected to be 2.9 per cent in 2016 and 3.1 per cent in 2017, although uncertainties such as the impact of the United Kingdom's decision to leave the European Union and the monetary policies of major central banks will need to be watched closely.

Global oil demand growth is expected to increase by around 1.2m b/d in both 2016 and 2017. And non-OPEC oil supply is anticipated to contract by around 600,000 b/d this year, and then increase slightly by 200,000 b/d in 2017.

However, there remains a large stock overhang, and working this off is going to take some time. Since the end of 2013, OECD commercial stocks have seen their five-year average move from a negative level of 85m b to a surplus of around 340m b today. For the same period there has also been a rise in non-OECD inventories, plus an expansion in some non-OECD strategic petroleum reserves.

These stock increases have been mainly driven by increasing non-OPEC liquids production, which grew by 3.8m b/d in 2014 and 2015. OPEC liquids production grew by only 1.2m b/d over the same period.

Stock overhang

The OECD commercial stocks surplus against the five-year average has stabilized this year, but it is important that this starts to reduce. As we have seen in previous cycles, once this overhang starts falling on a regular basis then prices start to rise.

It is essential both OPEC and non-OPEC producers, as well as consumers, look to address the issue of the stock overhang. This is now central to the return of a balanced market.

I am sure this will be discussed during next week's International Energy Forum (IEF) Ministerial Meeting in Algiers, with all OPEC Member Countries and many non-OPEC producers in attendance.

It is vital for all producers to sit around the table and discuss any possible action that may be required to stabilize the market. And this kind of cooperation needs to be done not only in times of instability, but also when the market is stable and balanced. Dialogue is vital at all times.

Of course, I cannot stand here and say dialogue will mean we find agreement on everything. We don't live in a perfect world. But it is important for all stakeholders to find common ground, and look for shared solutions, where and when appropriate.

Over the years, OPEC has pushed many forms of energy cooperation, including dialogues with the EU, Russia, China and India, symposia and workshops with the IEF and the International Energy Agency (IEA), various initiatives with the G20, and meetings with other industry stakeholders.

Looking back to when OPEC and Eni were formed in the middle of last century, very few could have predicted how oil would change our societies for the better. And the backbone of this has been reliable and dependable suppliers, such as OPEC and Eni, which have delivered secure and steady supplies. I have no doubt this will continue in the future.

To conclude, I would like to recall an important and meaningful meeting organized by Eni in the early 1980s. It was held at the Palazzo Barberini and the meeting was called 'Development through Cooperation'. With the same spirit and engagement, I want to underscore a similar vision and call for 'stability and sustainability through active cooperation'.

To best achieve this, given the long-term nature of the industry, we need more clarity and predictability concerning the future — not only for oil, but energy in general. In this regard, I would like to leave you with one key word: 'stability'.

Stability for investments and output expansion to flourish;

Stability for economies around the world to grow;

Stability to provide access to modern energy services for those currently without;

And stability for producers that allows them a fair return from the exploitation of their exhaustible natural resources.

Stability is the key to a sustainable global energy future for us all.

Mohammad Sanusi Barkindo, OPEC Secretary General, speaking to the media at the European House-Ambrosetti Energy Forum in Rome.

Eni and OPEC: A shared history, a common vision

By Scott Laury

In his presentation to the European House-Ambrosetti forum on the future of energy, OPEC Secretary General, Mohammad Sanusi Barkindo, spoke about the common histories shared by OPEC and Eni with both organizations striving to counterbalance the dominant hold the international oil companies had over the oil markets during the 1950s.

"Eni was the vision of Enrico Mattei who helped create the company back in the 1950s, and then in later years, negotiated important oil contracts in the Middle East," Barkindo observed. "He wanted to form a strong Italian energy corporation, and break the then oil market dominance of a group of multinational oil companies labelled the 'Seven Sisters'.

Barkindo then paralleled this development in Italy with that landmark meeting of 1960 in which five oil-producing countries — IR Iran, Iraq, Kuwait, Saudi Arabia and Venezuela — gathered in Baghdad to discuss how they could cooperate in safeguarding their sovereign interests while ensuring stability and order in the international oil market. This was the birth of OPEC.

From vision to reality: Agip

And indeed Mattei's vision, like that of OPEC's Founding Members, eventually became reality.

Italy was the first European producer of oil, but the overall industry was dominated by international oil companies, mainly from Europe and the United States.

In 1926, this changed as Italy created its first state-owned oil company, which was called the Azienda Generale Italiana Petroli, more familiarly known as Agip.

The new company embarked upon its first exploration and extraction operations in Italy and abroad, namely in Africa and the Middle East. Using the latest technologies for exploration, the company went on to discover a large natural gas field in the Po Valley. With World War II approaching, however, the Italian government decided to keep the discovery under wraps to avoid foreign interference.

Eni: the breakthrough

After the war, the Allies demanded the privatization of Agip. The government gave the task to Enrico Mattei, a public administrator and parliamentarian, who went on to intensify oil and gas exploration activities in the Po Valley, leveraging the latest technology, recruiting a new cadre of US-trained engineers and forming key alliances in the government. He and his team doubled the number of wells drilled, bolstered mineral exploration and increased investment in natural gas. These efforts paid off with new discoveries and the first successful extractions.

After this victory, Mattei convinced the government to establish the first large national energy company, which it did in 1953 with the creation of the Ente Nazionale Idrocarburi, referred to more often as Eni.

That same year, the company began to distribute natural gas and fuel to households and companies, driving Italy's economic expansion and elevating it to the modern country it is today.

Mattei saw great growth potential in natural gas and began collaborating with other Italian companies, including Pirelli, Fiat and Italcementi, to create the Autostrada del Sole, the highway linking north and south Italy and the accompanying network of Agip service stations.

In the years that followed, Eni began to expand internationally, seeking cooperation with producing countries to help them develop their oil and gas resources for mutual benefit.

The Mattei Formula

In December 1954, Eni made a landmark agreement with the Egyptian government, in which producers, for the first time ever, were provided direct participation and an equal decision-making role through the establishment of joint ventures. Three years later, Eni signed a similar agreement with the Shah of Persia, Mohammad Reza Pahlavi, and the Iranian national oil company.

This new and unique method of doing business came to be called the 'Mattei Formula' and forever transformed relations between producing countries and the world's oil companies.

In October 1960, Eni entered into an agreement with the Soviet government for the import of Russian crude oil to Italy at very affordable prices.

Eni also collaborated with China during this time and served as a mediator and promoter of dialogue between Russia and China as relations became fragmented.

A dual strategy

In the years that followed, Eni adopted a two-pronged strategy in which it signed joint-venture agreements in Egypt, Iran, Libya and Tunisia for the supply of crude oil, while domestically, it centred its

focus on gas and petrochemicals with the acquisition of Italgas in 1967 and the expansion of the petrochemical industry.

International agreements continued to be made with Libya, Egypt, Nigeria and Tunisia. By 1976, Eni was also starting to exploit two new oil fields discovered in the British North Sea.

Eni also expanded the international transport infrastructure for natural gas with the building of a massive pipeline network stretching thousands of kilometres in Europe and across the Mediterranean to North Africa.

The company's extensive exploration and production activities helped it avoid the fallout from the economic downturn resulting from the second oil crisis in 1979–80.

International expansion

In 1983, the Transmed undersea pipeline linking Algeria to Sicily through Tunisia began operating, and Eni signed a new agreement with Libya for the exploitation of the Bouri reservoir, the largest oil field in the Mediterranean.

The next year, Eni discovered new fields in Egypt, the Gulf of Mexico and Congo while ramping up its presence in Nigeria.

In 1988, high quality domestic oil reserves were tapped in the Val d'Agri area of the Basilicata province, which ended up being the largest onshore oilfield in continental Europe.

In August 1992, Eni was transformed from a state-owned entity into a private company, and by the end of 1995, the company was listed on the Italian and New York Stock Exchanges.

In the late 1990s, Eni changed its natural gas strategy to ensure that it was in line with the new European Union directives for the electricity and natural gas sectors.

In 2000, market liberalization took hold and 70 per cent of Eni's capital was transferred to its private shareholders, leading to the company's restructuring and a renewed emphasis on international operations, the centrepiece of which was the massive Kashagan oil field in the northern Caspian Sea, which was considered one of the most important discoveries in the last 30 years.

In 2003, Eni began a joint venture with Gazprom to construct the 'Blue Stream' gas pipeline, which would transport gas from southern Russia to Ankara in Turkey.

From 2005 to 2009, the company continued to developed projects in key areas of the world, while strengthening its leading position in Europe's gas market.

Move towards sustainability

In parallel to these initiatives, sustainability has become a major priority for Eni in recent years. Its projects around the world have won numerous sustainability awards, and the company has been placed in the Dow Jones Sustainability World Index.

In the Eni Sustainability Report of 2015, CEO Descalzi, eloquently describes the company's commitment to the environment and sustainable development.

"2015 has been an important year. It has witnessed the engagement of the international community and the public opinion in a dialogue and debate, aimed at the quest for a new sustainable development paradigm and a low carbon energy model," he writes.

"Even Pope Francis' encyclical *Laudato si* invites us to 'till and keep the garden of the world', urging each one of us to assume responsibility regarding the future of the planet. This means that also companies must be leaders of this change, adapting their business models to contribute to the common wealth, and creating value in the long term."

Agip and Eni: The evolution of a brand

If you are driving on the motorways of Europe or through the streets of Italy, it won't be long before you spot the black, six-legged dog spitting fire. This is the unmistakable trademark of Eni.

The trademark was created in 1952 as a symbol for the oil Agip produced during that period, which was called SuperCortemaggiore. There was also a version of the design created for Agipgas, the company's natural gas product.

The company was eagerly looking for a distinctive trademark that would be instantly recognizable in Italy and around the world.

After an open competition was held to submit ideas for the trademark's design, a sketch by sculptor Luigi Broggini was chosen. The image was later readapted by the Dutch designer Bob Noorda.

The graphic image of the dog was designed to reflect the traits of strength, energy and optimism in line with the economic boom that was underway in the country. Today, the Eni website makes reference to the trademark's symbolic message of internationalism and co-existence between humans and nature.

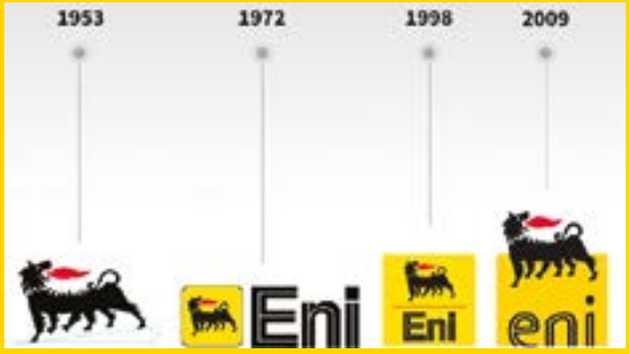
"Naturally, it reminds us of a dog — but also of a Persian lion, walking towards the west with its head turned to the east. It recalls a chimera in the inclination of its body, boasting a tail unlike that of any other dog. But it also resembles a dragon, with spikes along its back and spewing fire from its mouth. Metaphorically, the six-legged dog explores the relationship between man and nature with power, courage and nonconformity."

Italian artists were also known to comment on the unique Eni dog, and some of these references have stood the test of time to become household expressions in Italy.

Renowned Italian filmmaker Ettore Scola is famous for his description of the trademark as "the loyal friend of the man on four wheels", while poet Emilio Tadini called him "that dragon of a dog."

In 2011, a travelling exhibition entitled *'The six-legged dog: Symbol of past and future'* was organized to chronicle the history and evolution of the Eni trademark from 1956 to the present.

The exhibition moved throughout Italy, making stops in Rome, Ravenna, Stresa, Mantua, Venice, Cortemaggiore, Florence, Milan and Turin. It also had a stint at the headquarters of the European Parliament in Brussels.



Source: Eni.


Shutterstock

Behind closed doors: A night at the Vatican

By Scott Laury

On a normal day, the Vatican sees roughly 30,000 people enter its doors to visit the exquisite museum collection.

The world-famous Sistine Chapel, located in the museum complex, receives around 25,000 visitors per day, which is approximately equivalent to five million each year.

Getting a glimpse of these renowned treasures is not easy.

Tourists must wait in lines that stretch out far and wide, and then, once inside, they are forced to compete with masses of fellow visitors vying for a spot to view the various works of art.

There was quite a different scene at the Vatican on the evening of September 19, 2016.

That evening, the organizers of the European House-Ambrosetti Energy Forum invited the event's panelists and their delegations to the Vatican for a private, after-hours tour of the museums and the stunning Sistine Chapel. This was topped off by a sumptuous Italian dinner served in the museum.

OPEC's Secretary General, Mohammad Sanusi Barkindo, attended the event along with his fellow panelists, in addition to several members of OPEC's delegation and representatives from the European House-Ambrosetti.

Vatican museums

During the tour of the museums, the visiting delegation looked on in amazement as they strolled through the galleries featuring timeless masterpieces of Renaissance art, sculpture, tapestries, mosaics, frescoes and antiquities of all kinds.

The Vatican Museums were founded in the early 16th century by Pope Julius II and encompass a total of 54 galleries, making it one of the largest museums in the world.

The Gallery of Maps was one of the many highlights with its stunning ancient topographical maps from cities all over Italy. The maps were painted by friar Ignazio Danti of Perugia and commissioned by Pope Gregory XIII (1572–85). The collection is considered the largest pictorial geographical study in the world.

Another highlight was the magnificent tapestry gallery, which features stunning Flemish tapestries made by Pieter van Aelst's School in Brussels based on drawings by students of Raphael.

These masterpieces were completed during the papacy of Clement VII (1523–34) and first exhibited in the Sistine Chapel in 1531. They were later moved to their current location in 1838.

Sistine Chapel

After making it through the main galleries, guests were treated to a rare privilege in being able to take a private tour of the world-famous Sistine Chapel with its stunning ceiling frescoes painted by Michelangelo.

The chapel was named after Pope Sixtus IV, who restored it between 1477 and 1480 and conducted the first Mass there in August 1483. Though the Chapel is most famous for its ceiling frescoes, Pope Sixtus also commissioned reputed painters such as Botticelli to paint the two long walls of the chapel with one side depicting the life of Moses and the other side the story of Christ.

Today, in addition to being one of the most visited tourist destinations worldwide, it is the site used for the Papal conclave when a new pope needs to be elected.

Michelangelo initiated work on the ceiling in July 1508, and the completed frescoes were unveiled in October 1512.

At the conclusion of the tour, the delegates were escorted through one of the Vatican's splendid sculpture courtyards and into the elegant gallery where a magnificent long table was set for dinner.

An historical interview

Just before arriving at the dinner, however, the Secretary General was asked if he would be willing to conduct a short telephone interview with *La Repubblica,* one of Italy's largest daily newspapers.

The editor explained that the urgency was due to the fact that they wanted to publish a one-page article in the next day's edition of the paper. As this would end up being the only chance for the Secretary General to do the interview, due to his busy schedule, Barkindo kindly agreed to the request.

This was surely history in the making as the first time an OPEC Secretary General had ever conducted a media interview in the ageless and pristine corridors of the Vatican.

Barkindo himself commented lightheartedly in the article on the unique and somewhat surreal nature of this particular interview location and the idea of speaking about the intricacies of oil and gas in the middle of one of the world's most ancient collections of art.

"It seems somewhat embarrassing to talk about such mundane things amid the magnificence of art history," he admitted.

An Italian feast

Before the dinner began, Valerio De Molli, Managing Partner of the European House-Ambrosetti and the evening's host and master of ceremonies, officially welcomed the event delegates to Rome and to the Vatican.

In his short remarks, he wished everyone engaging and informative discussions the next day and a successful event, which, he added, would hopefully be the first of many international energy forums to be organized by European House-Ambrosetti in the future.

He then wished everyone *buon appetito* and a pleasant dinner.

Afterwards, as the delegates exited the museums, they were treated to one last masterpiece as they descended the impressive double spiral staircase designed by Giuseppe Momo in 1932.

Bramante staircase

The staircase is sometimes referred to as the Bramante Staircase, in reference to the original version, which was designed by Donato Bramante and built in 1505. Both the older and newer versions of the staircase are located in the Pio-Clementine Museum of the Vatican.

Several of the delegates remarked at how closely the newer version resembles the circular staircase of the Guggenheim Museum in New York City. The design features a double helix with a gentle, stepped incline that encircles the outer wall of a stairwell. The balustrade encircling the ramp is adorned with intricately designed metalwork.

Back to the present

As delegates exited the hallowed gates of the Vatican and drove through the winding streets of Rome, passing by the Coliseum, the Circus Maximus and the Roman Forum, it was easy to allow their minds to wander back to ancient Rome when citizens would gather at these places to discuss and debate the pressing issues of their times.

The next day, however, it was back to reality and the Ambrosetti Forum to ponder one of the most important issues of our day: the future of energy.

The Sistine Chapel with its stunning ceiling frescoes painted by Michelangelo.

The great Coliseum of Rome.

OPEC Secretary General attends annual IMF/World Bank talks

Mohammad Sanusi Barkindo, OPEC Secretary General, along with a delegation from the Organization's Secretariat in Vienna, attended the Annual Meetings of the Boards of Governors of the International Monetary Fund (IMF) and the World Bank Group (WBG) that took place in Washington DC from October 7–9, 2016.

Barkindo presented a statement to the International Monetary and Financial Committee (IMFC) outlining OPEC's current oil market outlook. This included commentary on global economic growth, oil demand and supply, commercial oil stocks and the demand for OPEC crude.

Mohammad Sanusi Barkindo, OPEC Secretary General.

The OPEC Secretary General also reaffirmed the Organization's longstanding commitment to support oil market stability for the mutual benefit of consuming and producing nations.

The Annual Meetings of the Boards of Governors of the IMF and the WBG bring together central bankers, ministers of finance and development, private sector executives, international organizations, representatives from civil society organizations and academics to discuss issues of global concern, including the world economic outlook, poverty eradication, economic development, and aid effectiveness.

Barkindo also delivered an intervention to the G24 Ministerial meeting that took place on October 6, 2014. This included some background and context to the decision taken at the 170th (Extraordinary) Meeting of the OPEC Conference, held in Algiers, Algeria on September 28.

The OPEC secretary General said that the landmark decision "underlines the Organization's continued commitment to 'sustainable stability' in the oil markets, for the mutual interests of producing nations, for efficient and secure supplies to consumers, and with a fair return on invested capital for all producers."

The Conference decision to opt for an OPEC-14 production target ranging between 32.5 and 33 million barrels/day, he said, "was focused on the need to accelerate the ongoing drawdown of the stock overhang and bring the rebalancing forward."

Barkindo stressed that stability in commodity markets is vital for future global economic growth prospects.

"We believe the agreement made in Algiers will be beneficial to our economies, to consumers, to the global oil market, and the world economy as a whole," he stated.

The G24 coordinates the position of developing countries on monetary and development issues. OPEC is represented by five of its Member Countries in the G24 group: Algeria, Gabon, the Islamic Republic of Iran, Nigeria and Venezuela. Four other OPEC Members have observer status. They comprise Ecuador, Indonesia, Saudi Arabia and the United Arab Emirates.

NB: Reports on both the statement to the IMFC and the intervention to the G24 Ministerial meeting can be found on the following pages.

OPEC committed to bringing about oil market stability

OPEC has reaffirmed its longstanding commitment to support international oil market stability for the mutual benefit of consuming and producing nations.

The pledge was included in a statement made by the Organization's Secretary General, Mohammad Sanusi Barkindo, to the Annual Meetings of the IMF/World Bank.

In updating the IMFC on current oil market conditions and developments, Barkindo said that crude oil prices have recovered from the multi-year lows seen at the start of the year.

The market, he said, has been supported by expectations for a continued re-balancing of market fundamentals, amid some supply outages and draws in crude and gasoline stocks.

"The United States dollar volatility also impacted prices, along with speculative activities in the futures markets," he stated.

Market sentiment

However, Barkindo pointed out that slower-than-forecast end-user demand, uncertainty about the continued pace of Chinese oil consumption, and better-than-expected global crude production have weighed on market sentiment.

"The United Kingdom's vote to leave the European Union has also added to oil market volatility in the weeks after the referendum."

Looking at the figures, Barkindo said that, in September, ICE Brent averaged $47.24/b and Nymex WTI stood at $45.23/b, compared to $43.34/b and $41.12/b, respectively, at the time of the last meeting of the IMFC in April.

Global economic growth, he said, is likely to remain modest in the short-term and is forecast at 2.9 per cent for 2016 and 3.1 per cent for 2017.

"In general, there are several key dynamics across the globe that are significant in the short-term. There has been a considerable negative impact on global growth from the sharp decline in investments in the oil and gas industry due to persistently low oil prices.

"So far, the positive effects of lower oil prices on private consumption have not been sufficient to compensate for this decline in investments. Any stabilization in the crude oil market in the coming months could provide positive support to global economic activity.

Political developments

"Furthermore, interest rates are already low in major economies and the effectiveness of further monetary stimulus seems to have diminished, despite remaining crucial for some economies.

"Any decisions from main central banks on monetary policies, particularly the US Fed, will continue to be influential.

"Moreover, in most key economies, the space for fiscal stimulus seems to be limited given high debt levels. Finally, political developments are becoming increasingly relevant — ranging from elections in several countries to fiscal policy decisions, as well as the implementation and possible impact of Brexit."

"Any stabilization in the crude oil market in the coming months could provide positive support to global economic activity."

US economic growth

The OPEC Secretary General observed that in the advanced economies, US growth is forecast to stand at only 1.5 per cent in the current year after exceptionally low growth in the first half of 2016, which was impacted significantly by declining energy sector investments, along with other factors.

"However, this is seen as being temporary to some extent and next year's forecast stands at 2.1 per cent," he said.

In Japan, said Barkindo, the recently announced fiscal stimulus in combination with the newly added monetary stimulus measures, are expected to lift economic

growth in the coming quarters, reaching 0.7 per cent this year and 0.9 per cent in 2017.

"The rise in the value of the yen, persistent deflation, a tight labour market and lacklustre domestic demand will continue to drag on growth."

He said that, in the Euro-zone, numerous challenges remain. The weak banking sector suffering from a backlog of non-performing loans, capital constraints and low profitability, in combination with political uncertainty — including the consequences of Brexit, ongoing high unemployment and the lessening effect of the ECB's monetary stimulus — will push down growth in the Euro-zone to 1.2 per cent in the coming year, from 1.5 per cent in 2016.

In the emerging economies, continued Barkindo, India and China continue to expand at a considerable rate. Domestic consumption, investment, and governmental support have been key drivers in these two economies and are expected to continue supporting growth in 2017.

India's growth is forecast at 7.5 per cent in 2016 and at a slightly lower rate in the coming year of 7.2 per cent.

China is also forecast to expand at a slightly lower pace of 6.1 per cent in 2017, compared to 6.5 per cent in the current year.

"Demand for road transportation fuels ... has outweighed negative factors, such as fuel substitution and vehicle efficiencies, leading to positive overall oil demand growth in the US in 2016."

Countries in recession

Barkindo observed that both Russia and Brazil are forecast to remain in recession for a second consecutive year in 2016.

In 2017, Russia is expected to recover with growth of 0.7 per cent, while Brazil is forecast to grow by 0.4 per cent, provided the political environment stabilizes allowing economic reforms to be implemented.

Turning to the oil market, the OPEC Secretary General noted that world oil demand growth is estimated at 1.23 million barrels/day in 2016.

In the OECD Americas, despite lower-than-expected oil consumption in Canada and Mexico, US oil demand was solid in the first half of this year.

"Demand for road transportation fuels — which has been undoubtedly supported by lower fuel prices — has outweighed negative factors, such as fuel substitution and vehicle efficiencies, leading to positive overall oil demand growth in the US in 2016."

In OECD Europe, he said, data for the first half of the year depicts robust oil demand growth, as a result of continued improvements in road transportation fuels. Demand is expected to moderate in the second half but remains stable for the whole of 2016.

Barkindo said that in the OECD Asia-Pacific region, Japanese oil demand has been weak so far this year, especially after a sluggish first half, mainly as a result of slowing economic activities and a strong likelihood that a number of nuclear plants will begin operating again in 2016.

Solid oil requirements

Nevertheless, South Korean oil demand was firm in the first half of the year and is anticipated to offset some of the losses in Asia-Pacific oil demand.

He said that in the non-OECD area, solid-to-steady oil requirements were seen in Other Asia and China in the first half of the year, mainly as a result of improving economic activities.

Other Asia is anticipated to lead global demand growth in 2016, with India expected to continue increasing, albeit at a slower pace than in the first half.

The forecast for China in 2016 — with GDP growth lower than in the previous year — expects oil demand growth to slow.

"Transportation and industrial fuels are seen leading the product mix in the second half of the year. A continuation of fuel quality programmes that target lower emissions is also expected, along with ongoing efforts to promote fuel substitution by natural gas."

Barkindo said that in Latin America and the Middle East, oil demand in the first half of the year was sharply lower than initial projections as economic developments weighed on Brazilian demand growth and a high level of substitution towards natural gas dampened oil demand growth in Saudi Arabia.

In 2017, oil demand growth is forecast at 1.15m b/d, slightly lower than this year but some 300,000 b/d higher than the average of the last ten years.

"Various assumptions have been considered in the 2017 projections."

Global economic activities are expected to improve over the current year. Road transportation fuels are

assumed to be the main driver for oil demand growth, as a result of the historically high vehicle sales statistics witnessed in the US, China and India in recent years.

Petrochemical projects in the US and China are expected to lend support to petchem fuels — NGL, LPG and naphtha — in 2017.

Efficiencies will increase

Efficiencies will increase steadily in line with historical norms in various regions, while the potential reduction/removal of subsidies will also have a greater impact on oil consumption.

As a result, said Barkindo, the OECD is anticipated to increase by around 100,000 b/d, with OECD Americas being firmly in the positive, while OECD Europe and Asia Pacific are expected to contract.

In the non-OECD region, growth is projected to be around 1.05m b/d, with Other Asia being the major contributing region.

The OPEC Secretary General said that, on the supply side, the forecast for non-OPEC oil supply is estimated to see a contraction of 600,000 b/d in 2016.

"The main contributors to the forecast decline are the US, China, Columbia and Mexico. However, a recovery in Canadian oil production, following the vast wildfire in Alberta, rising rig counts in the US and the early start-up of the Kashagan field in Kazakhstan have helped reduce the contraction in non-OPEC supply in 2016," he maintained.

For 2017, said Barkindo, non-OPEC oil supply is now projected to increase by 200,000 b/d year-on-year. Kazakhstan, Brazil and Canada are expected to be the main drivers for the expected growth.

"A lower forecast decline in the US next year is due to an expected higher rig count, cost deflation in tight oil production, and increased NGL and offshore output.

Barkindo said the figures for non-OPEC supply in both 2016 and 2017 reflect the impact of the reduction in capex, which has led to the postponing or cancelling of some upstream projects.

"The numbers also reflect a high level of uncertainty due to factors such as oil price developments, companies' financial circumstances, and changes in project which have still not received a final investment decision."

Meanwhile, he said, OPEC NGLs are expected to increase by 200,000 b/d in 2017, broadly in line with the growth estimate for this year.

In August, he added, OPEC crude oil production averaged 33.2m b/d, according to secondary sources, representing an increase of around 33,000 b/d compared to the previous month.

The latest information for July indicates that OECD commercial oil stocks are around 361m b above the five-year average.

Within the regions, OECD North America experienced a build of 17.2m b in July, OECD Asia Pacific stocks increased by 3.1m b and OECD Europe inventories rose by 12.2m b.

OECD days of forward cover had risen further to end the month at 66.6 days.

"This represents a surplus of 7.3 days over the seasonal norm. This high level of days of forward cover mainly reflects the massive build in the absolute level of inventories, due to the increase in global supply, amid moderate growth in OECD demand."

Barkindo said that, according to preliminary data, OECD commercial oil inventories fell slightly in August from the previous month, leaving the surplus with the five-year average at around 339m b. Forward cover also increased to 67.0 days.

"The bulk of the build in non-OECD stocks came from China which registered an increase of around 67m b."

Non-OECD inventories

Non-OECD inventories finished the second quarter of 2016 at 2,249m b, representing an increase of more than 100m b from the same period last year.

"This build was divided between crude and products as both increased by around 50m b each. The bulk of the build in non-OECD stocks came from China which registered an increase of around 67m b."

Barkindo said that, based on OPEC's supply/demand projections, increasing world oil demand amid contracting non-OPEC supply is estimated to result in the demand for OPEC crude in 2016 averaging around 31.7m b/d, some 1.7m b/d higher than in the previous year.

For 2017, world oil demand is forecast to grow at a similar pace to the current year, while non-OPEC supply is foreseen returning to growth.

As a result, demand for OPEC crude is projected to average 32.5m b/d, representing a rise of 800,000 b/d, he stated.

OPEC sees "firm ground" for producer collaboration

OPEC firmly believes there is firm and common ground for continuous collaborative efforts among crude oil producers, both within and outside the Organization.

That was the message delivered by Mohammad Sanusi Barkindo, OPEC Secretary General, to the G24 Ministerial Meeting in Washington DC in October.

He highlighted the Organization's landmark decision taken at the 170th (Extraordinary) Meeting of the OPEC Conference in Algiers, Algeria on September 28, 2016, which came after many rounds of consultative meetings and intensive talks.

Conference decision

Barkindo noted that the Conference decision to opt for an OPEC-14 production target ranging between 32.5 and 33 million barrels/day of crude oil was focused on the need to accelerate the ongoing drawdown of the stock overhang and bring the rebalancing of the international oil market forward.

"These are vital for market stability … (the OPEC agreement) underlines the Organization's continued commitment to a 'sustainable stability' in oil markets, for the mutual interests of producing nations, for efficient and secure supplies to consumers, and with a fair return on invested capital for all producers," he affirmed.

The OPEC Secretary General maintained that providing the G24 meeting with some background and context to the OPEC Algiers decision was important given that the Group coordinates the position of developing countries on monetary and development issues.

"I feel that it is appropriate … this is particularly apt given that some of your deliberations today have focused on the impact of lower oil prices on developing economies and commodity exporters, as well as on consuming nations, and the need for more stable markets and less volatile price swings," he said.

The OPEC Secretary General pointed to the importance of lessening oil market volatility and sustaining stability for the medium- and long-term, given the world's desire for more oil.

"However, the situation that has evolved over the past two years or so is putting the future at risk. We are currently witnessing a dramatic drop off in oil market investments."

For example, said Barkindo, global exploration and production spending fell by around 26 per cent in 2015 and a further 22 per cent drop is anticipated this year.

"Combined, this equates to above $300 billion," he affirmed. "We believe the agreement made in Algiers will be beneficial to our economies, to consumers, to the global oil market, and the world economy as a whole."

The OPEC Secretary General stressed that the OPEC decision was taken following a thorough review and analysis of the global economic outlook, specifically the weaker-than-desired global growth and the economic uncertainties.

"This includes the already mentioned sharp decline in oil investments, which has had a considerable negative impact on the energy sector of many major economies, the role of the main central banks on monetary policies, weakening world trade, and political developments, including upcoming elections in a number of major countries," he observed.

"At OPEC, we fully appreciate the significant role that oil and other commodity markets play in the global economic landscape and the expanding share of global GDP attributed to emerging economies and commodity exporting countries.

OPEC accord to help market

"Stability in commodity markets is vital for future global economic growth prospects," professed Barkindo.

"OPEC's agreement in Algiers will help return stability to the global oil market, and lessen volatility.

"Consultations remain ongoing among the OPEC-14, the High Level Committee initiated by the OPEC Conference is moving forward on the implementation of the Algiers decision, and steps are being taken to further develop a framework for high-level consultations between OPEC and non-OPEC oil-producing countries," he added.

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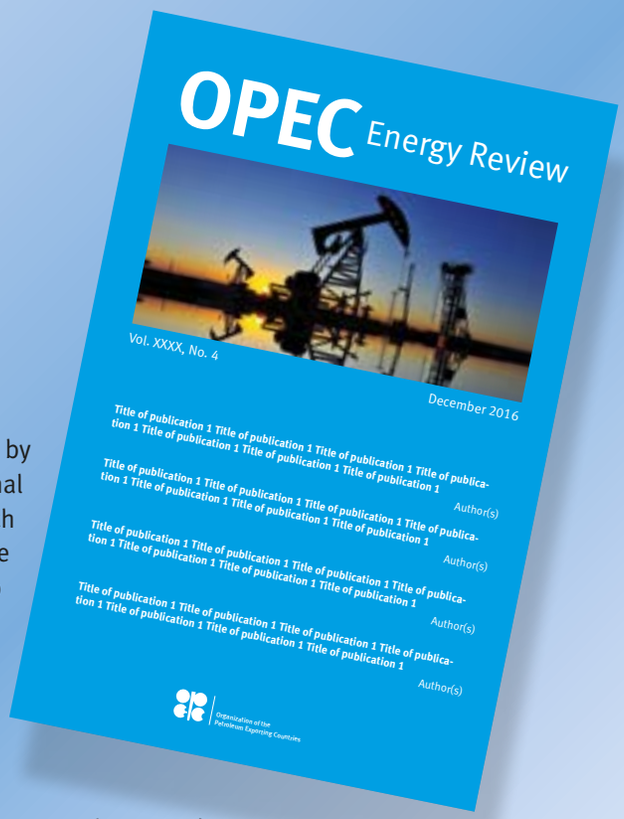

The OPEC Energy Review is a quarterly energy research journal published by the OPEC Secretariat in Vienna. Each issue consists of a selection of original well-researched papers on the global energy industry and related topics, such as sustainable development and the environment. The principal aim of the OPEC Energy Review is to provide an important forum that will contribute to the broadening of awareness of these issues through an exchange of ideas. Its scope is international.

The three main objectives of the publication are to:

1. Offer a top-quality platform for publishing original research on energy issues in general and petroleum related matters in particular.
2. Contribute to the producer-consumer dialogue through informed robust analyses and objectively justified perspectives.
3. Promote the consideration of innovative or academic ideas that may enrich the methodologies and tools used by stakeholders.

Recognizing the diversity of topics related to energy in general and petroleum in particular which might be of interest to the journal's readership, articles will be considered covering relevant economics, policies and laws, supply and demand, modelling, technology and environmental matters.

The OPEC Energy Review welcomes submissions from academics and other energy experts.
Submissions should be made via Scholar One at: https://mc.manuscriptcentral.com/opec (registration required).
A PDF of "Author Guidelines" may be downloaded at Wiley's OPEC Energy Review page at:
http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1753-0237/homepage/ForAuthors.html

All correspondence about subscriptions should be sent to John Wiley & Sons, which publishes and distributes the quarterly journal on behalf of OPEC *(see inside back cover)*.

OPEC's World Oil Outlook to be launched at ADIPEC on November 8

OPEC is set to launch its 2016 World Oil Outlook (WOO) during this year's Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC), to be held in the United Arab Emirates (UAE) capital on November 7–10, 2016.

According to a press release issued by the OPEC Secretariat in Vienna, Austria, the flagship annual OPEC publication will be presented at a briefing to be held at the Middle East Petroleum Club VIP theatre in Abu Dhabi on Tuesday, November 8, 2016, at 11:00 am local time.

First published in 2007, the WOO provides in-depth review and analysis of the global oil industry and offers a thorough assessment of various scenarios in the medium- and long-term development of the oil industry.

It combines the expertise of the OPEC Secretariat, professionals in OPEC Member Countries and the Organization's Economic Commission Board (ECB), as well as input from various other sources.

The publication is regarded as an important reference, providing insights into the upstream and downstream, supply and demand, costs, investments, the potential impact of policies and the role of sustainable development.

It also provides in-depth, expert analysis of many of the various challenges, as well as opportunities, facing the global oil industry.

OPEC refers to the WOO on its website as being "part of the Organization's commitment to market stability."

It states: "The publication is a means to highlight and further the understanding of the many possible future challenges and opportunities that lie ahead for the oil industry. It is also a channel to encourage dialogue, cooperation and transparency between OPEC and other stakeholders within the industry."

In Abu Dhabi, OPEC's Secretary General, Mohammad Sanusi Barkindo, senior members of management from the OPEC Secretariat and the report's main authors will be available after the presentation of the publication to answer questions.

This year marks the WOO's tenth edition, a significant milestone for the publication. It is also the first year that the launch of the WOO will take place in an OPEC Member Country.

ADIPEC 2016, to be held under the Patronage of Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE, will this year have as its theme *Strategies for the new energy landscape*.

ADIPEC has grown to be one of the largest oil and gas events in the world. This year it is expected to attract 2,500 exhibiting companies and over 95,000 attendees.

Its website says of the event: "From a world-class exhibition that provides technologically innovative solutions from more than 2,500 companies across the upstream supply chain, to one of the most expansive technical and strategic conference programmes in the world where over 700 speakers share their expertise, ADIPEC brings together a global audience and provides a vital export opportunity for countries looking to do business with the world's oil and gas companies. Furthermore, ADIPEC is now a proven platform for bilateral trade and a proven investment platform."

"It has become the world's new meeting point for the global energy industry. ADIPEC draws ever-increasing numbers of exhibiting companies, international country pavilions, visitors and conference speakers from around the world ensuring your time is filled by meaningful and real discussions, knowledge-sharing and networking with over 95,000 people."

Media and analysts requiring a copy of the WOO prior to the scheduled OPEC briefing may request a 48-hour embargoed copy, which will be made available on Sunday, November 6, 2016.

An interactive version of the WOO will also be made available on OPEC's website following the publication's launch.

For media and analysts wishing to find out more details on the 2016 WOO launch in Abu Dhabi, please contact the ADIPEC organizers at ADIPEC@wallis-mc.com.

Hedging in the oil markets: Securing your financial flows

Hedging has long been a feature in trading activity on the various global energy exchanges, but what is hedging and why do traders do it? ***Harry Tchilinguirian*** *(pictured left), Global Head of Commodity Markets Strategy and Commodity Derivatives at BNP Paribas Corporate and Institutional Banking, recently answered questions on the subject put to him by the OPEC Bulletin's* ***Maureen MacNeill*** *for this month's Insight feature.*

Can you give me a brief overview on what the objectives for producers are involving hedging — why do they hedge?

There are many reasons to hedge. In essence, whether it is for consumers, or producers, hedging is really there to secure your future cash flow. Once you do that and have better control of either your cost or revenue base, then you are in a position to actually start planning. So there are a lot of strategic aspects to hedging, reducing the variability of your cash flow and these are day-to-day reasons why people hedge. Of course, you could hedge for other reasons that, for example, are event-driven, or perhaps M&A (mergers and acquisitions) activity to secure the economics of a deal. So hedging is important in that respect, in effect controlling your cost base, future cash flow, that is what it is basically all about because then you can actually plan better.

Has hedging activity changed much in the oil market over the years?

I do not think it has changed, in essence. Banks still play a very important role when it comes to hedging. You are looking at people trying to secure price one to two years out, generally speaking. And banks of course have the balance sheets and the ability to offload risk from corporate entities, warehouse that risk and eventually distribute it back into the market in a way that does not disturb prices.

Are banks being crowded out of commodities to some degree? How important are the banks to this situation?

Capital requirements for capital market activities have been increasing. Obviously regulation has increased since the great financial crisis of 2008–09, and so, in essence, you are looking at a situation where when the bank has to conduct business in which risk is associated it needs to provision more capital. So the cost of doing business is certainly rising. The question becomes whether or not any investment bank decides to remain in a business such as commodities and whether or not it decides the capital allocated for commodities may be actually used in another business line like fixed income, FX (foreign exchange) rates, equities, things like that. For the most part right now, banks are still extremely active

Harry Tchilinguirian.

"... hedging is really there to secure your future cash flow. Once you do that and have better control of either your cost or revenue base, then you are in a position to actually start planning."

when it comes to hedging and I think the banks' comparative advantage in comparison to other players in the market, like oil companies and physical traders, is that they offer derivatives solutions at the front end of the futures curve, while banks can actually hedge basic projects that take five to seven years. They have the balance sheets to do that. The lending component of banks along with their derivatives capability puts them in this unique position to help enable investment.

So in fact some of those bigger projects maybe would not happen at all if it were not for the banks?

Well certainly, in terms of lending and of course securing future cash flow from these projects, banks are very important in that aspect. So having them around, I think is a good thing.

Please provide a little background about why hedging has evolved as it has.

If you go back a couple of hundred years, people back then were hedging agricultural products. Hedging arises simply as a desire to reduce risk and so when you think about agricultural products 200 years ago, seasonality, the weather — it meant you were facing a lot of uncertainty, so you tried to reduce that uncertainty in order for you to plan your business better. So the history of hedging really relates, in essence, to reducing uncertainty, reducing price exposure so you can lay out a business plan. And of course where there is a demand to reduce uncertainty, there is a counter party where people are willing to take that uncertainty off you — assume that risk and eventually spread that risk back into the market in a way that is not going to affect the price too much. It depends on how you execute a hedge — some people are good at it, some are not. But in the end, the bottom line is that it is there to reduce your risk, offload it from your corporate client, warehouse it and eventually distribute it back into the market in a way that does not disturb the market.

And hedging in commodities came along later than in agriculture?

Markets in agriculture are as old as any, of course, when you think about oil for example, when you think about derivative products, like the IP Brent contract; to launch the Brent contract, I think it was launched in the 1980s, it failed and then was launched again, and it eventually gained traction and became an important part of hedging and of derivative activity.

Yes, hedging in agricultural markets has preceded perhaps hedging in other commodity markets, but it is fairly widespread and where you could actually standardize a product in terms of specifications in a contract, well it just becomes easier to set up an exchange for it. When you have a unique grade or quality for a product, it needs to basically respond to certain characteristics in terms of the ability to track the physical price, and the ability to remove that price risk. So in the end, whether it is agricultural products or today's energy products hedging has a long history and, eventually, has spread to many commodities.

Do you think the new commodity regulations are going to have an impact on hedging as we know it?

The issue is really going to be the cost of doing business and whether or not position limits impair the ability to do business, whether capital requirements impair the ability to do business. So far, a number of banks are still present, but you see other participants that are now entering the derivatives solutions market or the hedging market or you could have physical players, physical trading houses or even oil companies interact with corporate clients that traditionally used to interact with banks for their hedging needs.

This tends to happen more at the front end of the curve rather than in further data tenders. But banks are still present. Nonetheless, we have seen new entrants, I suppose taking away market share. These include oil companies and physical trading houses that offer the same services as the banks do.

Private equity would be smaller investors — do you think they are going to play a bigger role?

Private equity is really all about the financing of oil companies, whether you actually make capital available to oil companies and it is certainly interesting that private equity has come as an alternate means of finance to the oil companies. Traditionally banks have offered finance, oil companies could go to capital markets and issue debt, but private equity has also become a source of capital for oil companies to develop with. And when you think about the reasons behind that, basically the owners of the capital are looking for a return that beats what they can find in the treasury markets.

So when you look at oil markets and say some of these oil companies, even though prices of oil are low today, they have the ability to produce a lot of oil and the expectation is that the price of oil today is not going to remain low, but is going to rise perhaps eventually to $80 or $100/barrel. If you put yourself in a five-year horizon perspective, then your return on capital may be a lot better invested in oil than it would be in a world where interest rates seem to be remaining low for a long time and in some cases have actually turned negative.

"If you put yourself in a five-year horizon perspective, then your return on capital may be a lot better invested in oil than it would be in a world where interest rates seem to be remaining low for a long time and in some cases have actually turned negative."

Summer Fellows hone skills, gain extensive knowledge of OPEC

Mounia Berkani from Algeria and Zulkha Arfat from Indonesia say they are going home with more than the new-found knowledge they gained while researching their respective topics at OPEC this summer during their work in the Organization's Summer Fellowship Programme (SFP).

Two of six participants in the 2016 Fellowship Programme, they say they have also gained an intimate knowledge of the Organization and made great friends and connections that they will carry with them into the future.

"It was a huge opportunity for me — to be part of an international organization. I can be with people who are the best in the market, I can be among this family," says Ms Berkani, whose research topic was *'Analysis of Chinese oil demand'*.

"Now I have something in my field — selling crude oil — that I am not used to doing. I have checked things not checked before. I have a larger view now. I gained a lot."

Meeting Ms Berkani and Summer Fellows from other countries has been a tremendous experience for Zulkha, who delivered a presentation on Competitiveness of OPEC Member Countries in Attracting Upstream Investment.

"We got to know each other really well ... I travel a lot, including to Iran. I believe if I go to Tehran, the United Arab Emirates, Saudi Arabia, and Algeria, I will call the people I met."

The research information was the most important take-away for Ms Berkani, but she gained both personally and professionally through the experience.

"You don't know how happy I am! I met Saeed (another Summer Fellow), who is the same as me in crude oil marketing, but in the UAE. We could exchange experiences and learn from each other."

She added that the Summer Fellows generally supported each other in their research and there was good interaction. Those with more knowledge in a particular area shared it with the others, she revealed.

"I had access to OPEC people. If I needed something there were OPEC experts here," adds Zulkha, stating that it is a good moment to learn more about OPEC than what one sees on television and in the newspapers.

"There are very bright analysts here and Vienna is an interesting city. It is a very interesting opportunity."

He added that he does not know the upstream part of the industry so well and the specific theme he studied was something new.

Zulkha said the experience will help him in his work and business development and, in addition, he has gained knowledge of OPEC Member Countries.

Ms Berkani feels close to the OPEC family now. She knows people at the Organization and has talked to them. She hopes to have future involvement with OPEC.

The OPEC Summer Fellowship Programme

The SFP is a well-established human capacity development initiative at the OPEC Secretariat with a tradition of more than ten years.

The Programme is addressed to young professionals from OPEC Member Countries and aims at improving their technical skills and increasing their professional knowledge on energy-related research themes.

The research themes are announced by the Secretariat directly to Member Country OPEC Governors at the beginning of each year, while the selection of candidates takes place based on their evaluation and suitability to the respective research topics.

The Summer Fellows stay at the Secretariat for a period of six to eight weeks in the summer, during which they contribute to ongoing research activities being undertaken in Member Countries or at the Secretariat.

This enables them to enhance their research capabilities through a "hands-on" approach. This arrangement not only fosters human capacity development, but also benefits Member Countries and the Secretariat.

During 2015 and 2016, 20 Summer Fellows from eight Member Countries took part in the Programme and conducted research in all Research Division departments, the Legal Office and the Public Relations and Information Department (PRID).

Mounia Berkani from Algeria.

Zulkha Arfat from Indonesia.

Anwar Al-Beaji from Saudi Arabia.

Dr Saeed Al Neyadi from the United Arab Emirates.

Wisnu Medan Santoso from Indonesia.

Dr Amin Shokri from IR Iran.

Economic growth Algeria's "priority, longstanding goal"

Algerian Prime Minister, Abdelmalek Sellal, has said that economic growth is a priority and the longstanding goal of the Government of the North African OPEC Member Country. In a report on investment in Algeria, submitted to the annual meetings of the International Monetary Fund and World Bank in Washington, he stated: "Our strategy is simple; it focuses on growth as a priority and a permanent goal, and companies as a means to achieve this goal."

The 28-page Algeria Investment Report, according to the *Algerian Press Service (APS),* was aimed at promoting the Algerian market to attract United States businessmen.

Sellal pointed out that "all measures" had been taken by the Government to encourage investment, the creation of business and the improvement of the business environment.

"For over a decade, our oil income has been directed towards the establishment of structural programmes and large basic infrastructure to make up for the economic lag, from which we have suffered during the terrorism era," he affirmed.

"We are preparing for a post-oil economy," he said in response to a question on the new growth model launched by the Government to revive productivity, following the sharp fall in crude oil prices.

According to Sellal, the model was the Government's most ambitious project and aimed at "putting the country on the path leading to development and prosperity and to successfully changing some mentalities and practices" of Algerian society.

In this regard, he continued, the Government's economic policy was based on economic patriotism, which did not exclude resorting to foreign expertise and investment.

The Algerian Premier stated that the country's new investment code enshrined the freedom of investment in Algeria and subjugated the automatic granting of benefits, while reorganizing entities in charge of investment.

"We have also introduced a simplified procedure to supervise the management of industrial land, which is now open to private investment and can be domestically controlled," he revealed.

Sellal highlighted the expertise of US businessmen, stressing that several fields of cooperation could be exploited by the two countries, including petrochemicals, energy, the pharmaceutical industry and agriculture. "We can provide US investors with several opportunities," he professed.

According to the World Bank, Algeria had achieved "respectable economic growth" in 2015–16, in spite of the decline in oil prices which had resulted in a fall in export revenues.

In its report on the Middle East and North Africa (MENA) region, it said: "Despite the sharp fall in oil prices and inclement weather, Algeria has managed to maintain respectable economic growth in 2015 and in the first half of 2016."

This performance, it observed, was achieved "in spite of the loss caused to the economy by the declining oil prices."

The Bank said that during the first half of 2016, "Algeria has kept a relatively strong growth of 3.6 per cent over 12 months, backed by the gradual recovery of hydrocarbons output." Hydrocarbons production recorded growth of 3.2 per cent in the first half of 2016, up by 0.8 per cent over the same period in 2015.

Meanwhile, the Governor of the Bank of Algeria, Mohamed Loukal, said in Washington that the prevailing weakness in global economic growth required the maintenance of flexible monetary policies and for officials to resort to other budgetary policies promoting growth.

Global growth continues weak

"Global growth continues to be weak, with more sluggish growth in the advanced countries," Loukal said in a meeting of the IMF's International Monetary and Financial Committee (IMFC), underlining the medium-term risks that persisted, despite their attenuation in the short term.

The Governor made a statement in the meeting on behalf of seven countries — namely Algeria, Afghanistan, Ghana, IR Iran, Morocco, Pakistan and Tunisia. He maintained that the flexible monetary policies instituted during the recent financial crisis, which helped support growth, still remained necessary in the light of the current economic sluggishness.

Loukal warned against the secondary effects of very low interest rates and negative interest rates on the profitability of the banking industry and insurance, and which, according to him, must be closely monitored.

While broaching the growth prospects for the Middle East, North African Afghanistan and Pakistan (MENAP) region, he said that these nations would continue to face difficult conditions, relating to the drop in crude oil prices for the exporter countries, and to the low level of demand for oil-importing states.

Loukal said he welcomed the IMF's financial support to the countries of the MENAP region and its continued commitment to nations in conflict.

Trade Expo Indonesia 2016 deals expected to net $1 billion

Trade Expo Indonesia (TEI) 2016, the OPEC Member Country's largest export exhibition, has recorded early transactions worth 12.7 trillion rupiahs, or $974.76 million, which could end up being in excess of $1 billion, according to Trade Minister, Enggartiasto Lukita.

He was quoted by the Indonesian news service, *ANTARA,* as saying that TEI 2016 was a turning point in the national export performance.

The Minister noted that the country's exports up until August this year had dropped by 10.61 per cent compared with the same period in 2015.

"President Joko Widodo had asked us to maintain the balance of trade and hoped that the TEI could reverse the decline in national exports," he affirmed.

Lukita said Indonesia's export market was expected to do better in 2017, although he was reluctant to reveal the Trade Ministry's export target.

"Exports in 2017 should be higher; every year they should be higher than the preceding year. We will observe the growth of the world economy, see how far it recovers. Our exports should at least not be lower than the previous years."

Lukita said he believed the country's export performance could stabilize and even improve by exploring new markets — that was countries other than those Indonesia had traditionally exported to.

Encouraged to attract buyers

Small and medium enterprises (SMEs) were also being encouraged to attract buyers by adding value to their export products.

The Minister said such products would ensure that the national export performance was not solely dependent on primary products, such as crude palm oil.

The Trade Ministry, he disclosed, was helping SMEs innovate through the Indonesia Design Development Centre (IDDC), with the Designers Programme Dispatch Service (DDS). "The IDDC is a collaboration between designers and SME entrepreneurs. The products are given unique characteristics for added value. In 2017, we will pay special attention to the IDDC. The Indonesian President has asked me to allocate an adequate budget," Lukita stated.

At TEI 2016, potential buyers came not only from Indonesia's traditional export destinations, but also from countries in Africa, the Middle East and Central Asia.

Looking at a breakdown of transactions, some $826.52m, the majority, came from goods' sales, followed by the service sector with $48.23m.

Indonesian investment in other countries amounted to $100m. In all, 15,567 potential buyers from 125 countries participated in the expo. Of this number, 110 countries had transactions indirectly with domestic businesses.

According to the Central Bureau of Statistics (BPS), Indonesia's export value in August 2016 reached $12.63bn, down by 0.74 per cent compared with the same month last year.

However, non-oil exports were up by 2.76 per cent in August, touching a value of $11.50bn.

Indonesia's Trade Minister, Enggartiasto Lukita.

Visitors at Trade Expo Indonesia in Jakarta, in October 2014.

NIOC's first tender announcement for oil qualification bids

The National Iranian Oil Company (NIOC) has made its first tender announcement for verification of the qualification of foreign bidders, according to Ali Kardor, Deputy Minister of Petroleum and Managing Director of the NIOC.

Addressing an oil and energy congress in Tehran in October, he stated that such contracts were in the executive phase.

Kardor said the tender notice had now been published in Iranian and foreign newspapers and overseas companies volunteering to run the bid would have to provide the NIOC with necessary information in a one-month deadline.

He was quoted by the *SHANA* news service as saying that having received the information, the rough list of competent foreign bidders would be prepared to run new oil contract tenders. It was then that the first tender would be held.

To that end, explained Kardor, a Heads of Agreement (HoA) had been newly signed with a domestic company.

"To be active within the framework of the new oil contracts, Iranian companies should consider partnerships with international companies and they should enter the stage with enough financial power," he affirmed.

Continued Kardor: "As announced earlier, per new oil contracts, Iranian companies will be allowed to be active in small and medium-sized fields as the main leader of field development, while benefiting from the cooperation of international companies.

"As for big fields, whose leadership rests with international companies, foreigners will have to cooperate with Iranian companies," he pointed out.

Noting that international companies had welcomed cooperation with Iranian firms, Kardor said that, for the time being, 11 qualified exploration and production companies had been identified in Iran. They were not active in the field now, but should move in that direction.

He pointed out that 88 plans, 515 projects and 2,000 miniature schemes were on the NIOC agenda and regarding the need for conclusion of two contracts for each miniature project, about 4,000 contracts would be signed.

"Our contracts will be result and field oriented, to the extent that in the future, payments will not be in the form of bill of status, but in proportion with the degree the goals are addressed," clarified Kardor.

The NIOC head said the activation of the private sector in the mid-stream oil industry was the most important mechanism of the NIOC.

He said that, based on the new strategies, the country's NGL and LNG projects would be fully entrusted to the private sector and, to this end, the first contract for NGL privatization had been signed with a private sector concern active in the petrochemical industry.

Kardor said that in the next month, the NGL 3100 would be entrusted to the private sector, while Khark NGL would be privatized on an auction notice.

Concerning the Khark NGL auction, he said investment in the project had partly been done by the NIOC and since it was in the halfway stage, a mechanism for auction to privatize the project was needed.

Hence, in the near future, three key NGL projects would be entrusted to the private sector and effective steps would be taken to prevent flaring associated gases to protect the environment, said Kardor.

He added that the contracts for entrusting the LNG projects to the private sector would be long-term and 20-year in nature and the gas would be sold in the first ten years from the date the contract was in force and based on a fixed formula.

"The NIOC will not mediate in development of the LNG units and even foreign companies can assume a 100 per cent role in the projects," he added.


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Crude oil prices at $50–60/b "logical and acceptable"

Kuwait's Acting Oil Minister, Anas Khaled Al-Saleh, has said that projections that international crude oil prices will range between $50 and $60/barrel in the coming 15 months are "logical and acceptable."

He said that unless there were new developments in the major oil-producing countries, this scenario would be most likely.

Speaking to reporters, Al-Saleh, who is Deputy Prime Minister and Minister of Finance, said the outcome of the 170th OPEC (Extraordinary) Conference in Algeria in September had already had a positive impact on oil prices and sent an upbeat message to oil producers — even non-OPEC countries.

The Minister was speaking after inaugurating the Ahmad Al-Jaber Oil and Gas Exhibition, organized by the Kuwait Oil Company (KOC) in Al-Ahmadi Governorate.

The event was also attended by the Chief Executive Officer of the Kuwait Petroleum Corporation (KPC), Nizar Al-Adsani, as well as his counterpart at KOC, Jamal Jaafar, in addition to other leaders of the oil sector.

Al-Saleh pointed out in his remarks carried by the *Kuwait News Agency (KUNA)* that investments in the oil sector had declined by 25 per cent in 2015, continued to go down in 2016 and were also projected to fall in 2017.

"The cancellation of previously-allocated investments helped to offset excessive supply against demand, thus ratcheting up prices and serving the interests of producers and consumers," he explained.

Speaking on the Oil and Gas Exhibition, Al-Saleh said he had the honour of being invited to open the exhibition named after the late Sheikh Ahmad Al-Jaber, the 10th Emir of Kuwait, who ruled the country between March 1921 and January 1950.

"The first such exhibition was held in 1956 in the early years of oil discoveries, so it has a historical symbolism," he pointed out.

He expressed satisfaction with his tour of the exhibition, saying it provided visitors with valuable information on the history and significance of oil, the main source of income of Kuwait.

For his part, KOC's Jaafar said the output capacity of his company today stood at 3.075 million barrels/day.

"The figure is expected to hit 3.1m b/d by the end of 2016 and 3.15m b/d by March, 2017," he disclosed, adding that the company pursued the implementation of its technical projects to reach the set targets of production.

KOC was also finalizing the Al-Ahmadi Hospital, which he said would be operational in January 2017, as well as the 'Taamir' (construction) project, set to open in July 2017, and the new computer centre, scheduled to open by the end of 2017.

Anas Khaled Al-Saleh, Kuwait's Deputy Prime Minister and Minister of Finance, Acting Minister of Oil.

Also speaking on the Oil and Gas Exhibition, he said it covered an area of 60,000 square metres and had cost up to18.6 million Kuwaiti dinars to stage.

"KOC worked with the Ministry of Education to make this exhibition a scientific platform and a source of knowledge for students and researchers interested in the oil industry," he affirmed.

He added that the exhibition served Kuwait's quest to realize the eighth target of the strategy for 2030 pertaining to the enhancement of the corporates' society-oriented contributions.

Jaafar pointed out that KOC was a basic partner in the country's national development and its noble efforts to meet the aspirations of the people.

In the course of his official duties, OPEC Secretary General, Mohammad Sanusi Barkindo, OPEC Secretary General, visits, receives and holds talks with numerous dignitaries.

September 2

Ahmed Joda visits OPEC Secretary General
Mohammad Sanusi Barkindo, OPEC Secretary General, received Ahmed Joda, a former Nigerian politician, at the OPEC Secretariat. Joda now serves as the Chairman of ABTI-American University of Nigeria, Yola, Nigeria.

September 2

Nigerian business representatives visit OPEC Secretary General
Mohammad Sanusi Barkindo, OPEC Secretary General, received a delegation of Nigerian business representatives based in Austria, at the OPEC Secretariat.

September 14

OPEC Secretary General receives OFID Director General
OPEC Secretary General, Mohammad Sanusi Barkindo, received Suleiman Jasir Al-Herbish, Director General of the OPEC Fund for International Development, at the OPEC Secretariat.

September 15

OPEC Secretary General receives Nigerian Minister
OPEC Secretary General, Mohammad Sanusi Barkindo, received Dr Ogbonnaya Onu, Minister of Science and Technology of Nigeria, at the OPEC Secretariat.

September 15

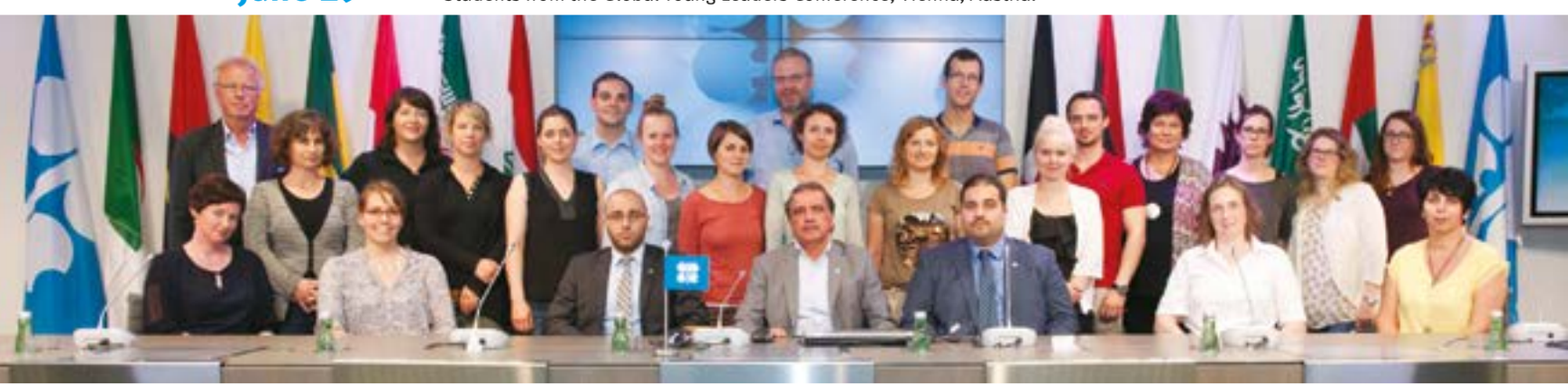
Austrian Foreign Minister receives OPEC Secretary General
OPEC Secretary General, Mohammad Sanusi Barkindo, visited Sebastian Kurz, Austrian Minister of Foreign Affairs, at the Austrian Foreign Ministry in Vienna, Austria.

Students and professional groups wanting to know more about OPEC visit the Secretariat regularly, in order to receive briefings from the Public Relations and Information Department (PRID). PRID also visits schools under the Secretariat's outreach programme to give them presentations on the Organization and the oil industry. Here we feature some snapshots of such visits.

Visits to the Secretariat

June 28 Students from the University of Oregon, USA; and from the USA Red Elephant Foundation, Chennai, India.

June 29 Students from the Global Young Leaders Conference, Vienna, Austria.



July 13 Representatives from the German Armed Forces, Mannheim, Germany.

July 14 Students from the Europäische Akademie Bayern, Munich, Germany.

July 21 Teachers from the Europäische Akademie Bayern, Munich, Germany.

July 26 Representatives from the German Armed Forces, Regensburg, Germany.

August 3 Students from the Global Young Leaders Conference, South America.

August 17 Group visit from the World Federation of United Nations Associations, Geneva, Switzerland.

Global success beyond hydrocarbons ...

Sports Qatar!

Two boys playing football in the central park in Doha

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It is the year 2022. The month is November. The lights are on. Fans are chanting in the futuristic stadium, while supporters the world over are glued to their television screens. The referee checks his watch ... the World Cup is about to kick off!

December 2, 2010, was a landmark day in the history of Qatar. For it was on that winter's afternoon that the Fédération Internationale de Football Association (FIFA) announced OPEC Member Country Qatar as host of the world's greatest and certainly most prestigious sports tournament. It was an announcement that was certainly received with a fair amount of surprise, yet applauded by many as being a unique experience for the more than capable Gulf Emirate. FIFA, in complementing Qatar's remarkable prowess and experience in staging world-scale sporting competitions, said in support of the country's ability to host the world's premier sporting event: "When you are able to organize the Asian Games (in 2006) with more than 30 events for men and women, then that is not in question."

*In fact, Qatar 2022 will be the icing on the cake for a country that has, over the years, invested so much time, money and effort in promoting global sports of all kinds. In addition to the Asian Games and 2022 World Cup, Qatar, which joined OPEC in 1961 and has always been an active and influential Member of the Organization, has hosted numerous significant international sports tournaments, including handball, car racing, tennis, golf, cycling and taekwondo. In this article, OPEC intern, **Ayman Almusallam**, looks at some of the most important sporting events that have taken place in Qatar in the recent past, or will be staged there in the very near future.*

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Aspire Sports Centre in Doha.

2022 World Cup

The World Cup is without doubt the most prominent and highly-anticipated sporting contest in the world today.

The State of Qatar will be hosting the 22nd version of the football tournament competed for by national teams. As per tradition, FIFA World Cups occur every four years. There was only one period when that did not happen — during World War II, between 1942 and 1946.

The structure of the contest sees national teams the world over competing in groups in the qualification stage. Winners and best losers then participate in the cup finals. In the finals, 32 national teams, including the host country which does not have to qualify from the group stage, compete against each other with the aim of lifting the ultimate prize — the quite diminutive, yet invaluable, World Cup trophy.

Throughout the history of the World Cup, which was first staged in Uruguay in 1930, eight different national teams have won the most prestigious title. This is crowned by Brazil, a holder of five titles, while Germany and Italy have four titles apiece. Uruguay and Argentina have two titles each, while France, Spain and England have each won once.

Staging the competition will be a particular honour for Qatar, which will be the first Arab and Muslim country to host the World Cup. It will also be the first time the competition will be held in the Middle East region.

Statistics show that Qatar will also be the smallest nation by area to host a World Cup. The next smallest by area is Switzerland, which is more than three times as large as Qatar. On current population, Qatar will also be the smallest host country by population.

Of special note, the World Cup, bigger even than the Olympic Games, which is also held every four years, has played a key role in promoting diversity and bridging cultural differences. Moreover, stadiums and fan zones function as a parade presenting the various cultures and reflecting the heterogeneity among participating nations.

Qatar's players pose for a team photo before the start of their Asian Cup Group C soccer match against Bahrain at the Stadium Australia in Sydney January 19, 2015.

Reuters

Reuters

Daniel Narcisse (top r) of France shoots over Rafael Capote and Hassan Mabrouk of Qatar (top l) during their final match of the Men's Handball World Championship in Doha, 2015.

2015 World Men's Handball Championship

Another major global event that has taken place in the small Gulf state is the World Men's Handball Championships.

The International Handball Federation (IHF) selected the bid of the OPEC Member Country over France, Poland and Norway to host the 24th edition of the world's most prominent handball contest for men in Malmö, Sweden, in 2011.

Over 15 days in January and February last year, Qatar hosted 24 participating teams, representing four handball confederations, to play 88 matches. They were accommodated in three major venues located in two cities — the capital Doha and Lusail.

The venues used for the contest were Lusail Sports Arena, with a capacity of 15,300 in the town of Lusail, and the Duhail Handball Sports Hall, with a capacity of 5,500 in Doha. Furthermore, the 7,700-major venue, Ali Bin Hamad Al Attiya Arena, was also used.

The competition, which was attended by more than 300,000 guests, was completed on February 1, 2015 with France winning the final match against the host country, Qatar.

Of special note, Qatar seizing the second spot in the competition was its first ever silver medal in handball.

2015 AIBA World Boxing Championships

On October 5–10, 2015, Qatar hosted the boxing world's premier international tournament, the World Boxing Championships. The Ali Bin Hamad Al-Attiya Arena was chosen to host what proved to be a highly-anticipated event.

The participating competitors numbered 260 athletes originating from 73 different nations. Moreover, they presented various weight categories, including light flyweight, middleweight, heavyweight and super heavyweight.

The President of AIBA (the Amateur International Boxing Association), Ching-Kuo Wu, delivered opening remarks on the occasion of the competition's inauguration, commenting: "We are very happy with the decision to choose Doha to host the 18th edition of our competition. This is a top-class venue with top-class athletes and it will make for a fantastic championship."

The medal table was topped by Cuba which attained four gold medals, followed by Russia which won two golds.

Yousuf Ali Al-Kazim, President of the Qatar Boxing Federation, emphasised the importance of hosting such a global event and its role in brightening the horizon of the country. He pointed out that the competition formed "a lasting legacy" for boxing in Qatar.

Reuters

Spain's David Ferrer returns the ball to Tomas Berdych of the Czech Republic during the tennis Qatar Open Men's Singles Final in Doha, January 2015.

2014 FINA World Swimming Championships

The 25-metre 2014 FINA World Swimming Championships took place on December 3–7, 2014, in the Qatari capital, Doha.

To a certain extent, the championship is perceived as one of the largest tournaments ever to be held in the OPEC Member Country. At the 12th edition of the World Swimming Championships, 1,300 athletes from more than 170 nationalities competed.

Initially, Italy's Catania, a city located on the east cost of Sicily, was nominated to host the global event — on December 14, 2010.

However, one year later it was reported that it was not able to arrange the required financial guarantees demanded by the relevant federation, which led to the withdrawal of the federation's support.

Eventually, the Bureau of FINA proclaimed that the capital of Qatar, Doha, was designated to host the global event.

Of special note, the key event witnessed the breaking of 23 international records, seven by men and 15 by women. Furthermore, a new record for mixed relay swimming was set as well.

2016 Qatar Open

Tennis is another sport that has gone from strength to strength in Qatar with the country staging the very popular Qatar Open, which attracts star names to both the men's and women's competitions.

On January 4, 2016, Qatar hosted the 24th edition of the Qatar Open for men. The competition, which lasts for six days, is formally referred to as the Qatar ExxonMobil Open, due to the sponsorship received from the oil major.

This year's tournament was held in the Khalifa International Tennis and Squash Complex, a distinctive compound developed on international foundations featuring all the necessary facilities and situated in the capital, Doha.

Several leading global tennis figures have competed in the contest, including Novak Djokovic, Rafael Nadal, David Ferrer and Jamie Murray. This year, Djokovic won the singles competition, while Feliciano López and Marc López won the doubles.

And at the same tennis arena on February 21–27, 2016, the ladies competed in the Qatar Total Open, which derives its name from the sponsorship provided by the French oil major.

Carla Suárez Navarro of Spain won the singles title while the doubles went to Chan Hao-ching and Chan Yung-jan of Chinese Taipei.

Joseph Ward (l) of Ireland fights Julio La Cruz of Cuba during the men's light heavyweight final at the AIBA World Boxing Championship in Doha, in October 2015.

Reuters

2016 AFC U-23 Championships

The Asian Football Confederation organizes a quadrennial competition among under-23 national teams on the Asian continent. Although the contest is relatively young, Qatar jumped at the chance when it was given the opportunity to host the 2016 contest, held on January 12–30.

And new to this year's tournament, the championship now acts as a qualifier to the football competitions held within the Olympic Games. It was won by Japan, who beat South Korea in the final. These two countries and third-placed Iraq went through to this year's Olympic competition.

The State of Qatar competed during the selection process for host of the event with Uzbekistan and two of OPEC's Founding Members, Saudi Arabia and IR Iran.

The tournament featured 32 matches being played among 16 teams from a single continent in a single city.

Doha assigned four locations to accommodate the matches of the championship. These comprised the Abdullah bin Khalifa Stadium, which has a capacity of 12,000, the Grand Hamad Stadium, which can accommodate up to 18,000 visitors, the Jassim Bin Hamad Stadium, which hosts a maximum of 15,000 guests, and the Suheim Bin Hamad Stadium, which has a capacity of 15,000.

Of special note, Qatar came fourth in the competition.

2016 UCI Road World Championships

The portfolio of sporting events accommodated by the State of Qatar keeps on expanding. This year it also staged the UCI Road World Championships. The very active OPEC Member Country hosted the world championships for cycling managed by Union Cycliste Internationale in its 89th edition.

In the Dutch Valkenburg, during the 2012 edition of the championships, Qatar was chosen as the host country after competing with Norway.

The event took place in Doha on October 9–16, after it was postponed from September due to the hot weather and high humidity of the host country.

Of note, in the history of the competition, Qatar is the first Middle Eastern nation to host these most prominent championships in cycling.

Academy aspires to growing success of Qatar

A key contributor to the success of the sporting industry in Qatar is the Aspire Academy.

Also referred to as the Aspire Academy for Sports Excellence, this spectacular sports centre provides hundreds of young athletes with a chance to become world champions in their chosen disciplines.

In boasting some of the best training and sports science facilities to be found anywhere in the world, Aspire is leading the way in fostering a strong sporting culture by educating communities on the benefits of an active and healthy lifestyle.

The venture is also strengthening the state's position as a centre of sporting excellence.

The academy is committed and dedicated to discovering new talent and to aid them in developing and progressing, while assisting these talents in obtaining a proper minimal education.

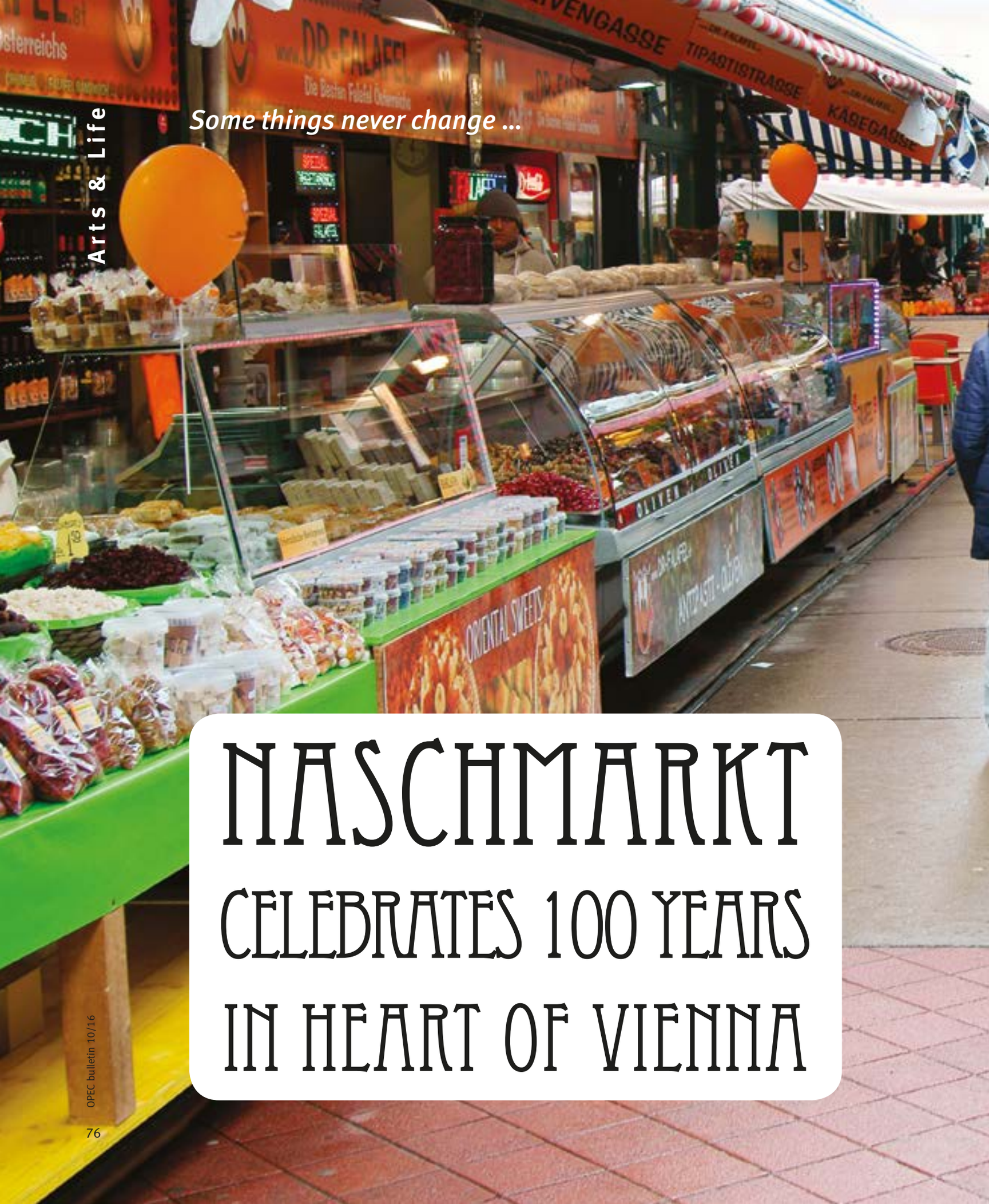
Historically, the academy was inaugurated through an Emiri decree dating back to 2004 with an objective to establish an independent agency, financed by the state and reporting directly to the then Qatari Head of State.

The trend-setting academy has already gained notable intentional recognition for its extensive contribution to the world of sport.

Its motto is: "Aspire today ... inspire tomorrow."

Shutterstock

Lusail stadium in Doha, Qatar.



Some things never change ...

NASCHMARKT CELEBRATES 100 YEARS IN HEART OF VIENNA

The smells, the sounds, the laughter. With one's eyes closed it could be the same scene from 100 years ago. Vienna's famous Naschmarkt celebrates a century of change and tradition, old and new, fancy and low-key. Always a place to meet, with never-ending possibilities, one can eat at one of its many restaurants, buy the day's fresh groceries, or even opt for something more exotic. The OPEC Bulletin's ***Maureen MacNeill*** *reports on this extraordinary marketplace situated in the heart of the Austrian capital.*

Colourful hawkers call to passersby, holding their wares out on spoons or plates and making unavoidable eye contact. A candied kiwi that is so bright it looks neon, tiny stuffed peppers with bright red outsides and soft cheese inside tempt the taste buds, sweets from the Orient torment, fresh fruit beckons on a hot day. Friendly, funny, flirty.

The market's tiny, narrow streets and plazas are packed with observers and consumers, hemmed in by each other. Wonderful and colourful displays abound. The imagination runs riot.

A day in the Naschmarkt is like immersing oneself into another world, where normal time, space and rules are suspended — which is why the world-famous market is as popular today as it was 100 years ago.

Part of life for the Viennese

Although the market draws a lot of tourists, it also remains a part of life for regular Viennese. Boasting a surface area of 2.3 hectares, the Naschmarkt has actually been around since 1774, but spent the last 100 years in its current location.

Christine Schäffer bounces about on a small stage, introducing one act after another during a recent celebration of the market's anniversary. Nearby a book she co-authored is sold. With the title *'Derf's a bisserl mehr sein? 100 Jahre Naschmarkt über'm Wienfluss'* it looks back at the past 100 years of the market's history.

She explains that the book took a long time to prepare — at least half a year. The other author spent many months gathering text and pictures, going to flea markets to try and find information.

Why is the 100th birthday of the Naschmarkt celebrated with so much energy, asks the book? That is simple: it is something special. A special feature points to how famous it is around the world. Everyone knows about the Naschmarkt; as far back as 1840, the Russian Czar came to experience its sights and sounds.

"There has always been a lot of people and there has always been complaints … even then," she laughs. "Very long ago, in the 1800s there were rats and people complained about the prices. There are no rats today, but they still complain about the prices!" Nonetheless, the Naschmarkt is the 'soul of Vienna', she says.

There are five special features to the market, according to the book: The first is that it is the biggest market in Vienna and has been "since forever". The second is that it is world-famous.

The old market women constitute the third point of interest. In the early days, the Naschmarkt was one of the best possibilities for city women to have a job and get out of the house. These independent women became well-known as the *'Marktweiber'* (market ladies) that had big mouths and even bigger hearts, according to the book. These women were so burned into the soul of the Viennese that a representative spirit was named, called Frau

Sopherl. “The Naschmarkt spirit speaks the Viennese heart from the soul.”

The fourth special feature is how much the Vienna mood is reflected in the Naschmarkt. Financial crisis, war hardship, crazy innovation, master urban accomplishments … all issues are on intensive display.

The fifth special feature entails the mixing of different classes of people and cultures, and above all, that this mixing always successfully functions. Even 100 years ago sellers came from Italy, Slovenia, Slovakia, Hungary and Croatia to the ‘stomach of Vienna’ to sell their food.

Already a century ago there were rich and poor, celebration and dissention, the latter of which was mostly settled with Viennese tact. Today, there are sellers from Austria and the rest of the world, from up to down.

Despite varying backgrounds, sellers get along so well that they visit each other’s stands in the morning and eat together before business begins. Customer friendliness and copious smiles are guaranteed.

“Always something going on”

“I love everything about it. There is always something going on, so much life the whole time, always something new,” says Ms Schäffer. “There is a lot of pressure from outside and stand owners always

have to think of something new. For example, humus was first found around here, then in the stores in Vienna. A lot was tried out here first, it was always innovative."

One of the biggest changes in the last 100 years has been improvements to sanitation, says Ms Schäffer. "Earlier, things were just laid on the ground and stands were really close together. The rats could run through."

Although the market today is still the biggest in Vienna, it is nonetheless a bit smaller than when it was at its largest. And it is constantly changing, shifting.

Ms Schäffer says a lot of tourists come and enjoy the experience. Prices are probably a bit higher not because of the tourists, but because of the quality. "It is not a supermarket. They speak to the people." She observes that the last five years have seen huge renovation, though it is always constantly changing.

One regular visitor to the market, Rosie Waites, used to live nearby on Wehrgasse and came often at that time about ten years ago. She did her grocery shopping there which, she says, most locals do not do anymore because prices have risen.

Now she mostly goes to the Naschmarkt to meet people and have a meal. "I like how colourful it is. It is a mix of people and places. It is central and a good place to meet people for coffee or breakfast."

Now more upmarket

Ms Waites claims the place has gone more 'upmarket' with its restaurants and cafes recently and claims that more of the fruit/vegetable vendors seem to be Austrians from local farms, while the Turkish element seems to have declined over time.

"There are loads more tourists because it has become more famous," she adds.

Some stands at the market have a long history, staying in families for four or five generations; many have interesting stories.

Neni, a large restaurant in the middle of the market, was built by a mother and her four sons.

At a pickle and sauerkraut stand, the owner of which is referred to as Leo Gurke (Leo pickle), Sillian Strmiska is talking to customers and explaining the wares. Started in 1960, the stand is one of the oldest in the market. The wares are made according to time-honored recipes from the Austrian countryside and have a very unique appearance and taste. The vegetables are grown in the country just for this stand.

"They are not pasteurized, they are organic. They are only made here (in Austria), says Strmiska. "The sauerkraut can also be eaten raw. It is also good for women who do not want to or cannot cook!" he jokes.

"Too few customers who buy"

Karl Kuczera ran his family's fruit stand from 1974 until 1989 with his wife; they took it over from his mother. "The time has gone fast, that was 43 years ago," says the older gent, comfortably perched on a small wooden stool behind the stand, ready for a little social chat. His two sons and their wives have since taken over the stand.

"At the moment, we have too few customers who buy," states Kuczera. "There are many people here, but few who buy."

He adds that there is tourism all year round and some of the family's customers have been coming to their stand for 20 or 30 years. "We talk to them, give them advice. They trust us."

Earlier, there were many fruit and vegetable stands at the market — now there are only four left. In their place are a lot more restaurants, souvenir stands, etc. "Gastronomy is very popular at the market," he notes.

The Nordsee restaurant was one of the first stands at the market and is also celebrating 100 years at Naschmarkt, announced on the many signs covering its outer walls. Manager, Alexander Pietsch, sits and shares a meal with some friends.

"We have been here on the same place for 100 years," he says, adding that the market was somewhere else before and Nordsee moved together with the market to the current location a century ago.

The company is not family-owned, but has been present in Austria a long time, first appearing in Karmelitermarkt in 1899.

"We are very well-known because we have been here for so long," says Pietsch, adding that much of the fish sold is caught in Austria. Ocean fish and exotic fish are also among the offerings, along with salads, grilled shrimps, salmon fillet, etc. The salmon is very popular, he says, though his favourite dish is baked catfish.

There are many regulars, he states, adding that this happens when a company has so much to offer — good quality, so many years of service and competence. "It even goes over generations," he affirms, adding that he first came to Nordsee as a small boy with his grandmother.

Ambience very relaxed

Head of gastronomy for Vienna's Chamber of Commerce, Peter Dobcak, likes to eat salmon.

"Gastronomy is very important in Vienna," he stresses, adding that the ambience is very relaxed at the Naschmarkt. It is a social meeting place, and he combines it with his profession, sitting with his customers together and sharing a meal and a talk.

"A renovation is taking place (at the Naschmarkt). The structures are up-to-date, but at the same time the atmosphere has not been damaged. It has an exotic touch, colourful customers, multicultural," says Dobcak.

"The customers and guests are young and old, there is no discussion which background you are from. It is a breath of fresh air in the overregulated place we live in," he adds.

All images in this feature courtesy Shutterstock.

OFID in the field ...

Reviving land, liberating communities in Nepal

With the help of the OPEC Fund for International Development (OFID), women in the poorest districts of Nepal are transforming their economies by cultivating barren lands for agricultural production. **Fatma Elzahra Elshhati**, OFID young professional development programme participant, reports.

MRC Nepal

Traditional farming was not enough to support Bishnu Maya Sapkota and her family of eight in the Bara district in Southern Nepal. Every year from October to May, the production of her crops was interrupted by the country's lengthy dry season. During these months, water would retreat from the riverbeds leaving the surrounding land unsuitable for farming.

"In Nepal, traditional agriculture is totally dependent on climate," Bishnu told the OFID *Quarterly* magazine. But like most women farmers, she lacked the technical know-how and means to attempt off-season farming.

Bishnu's situation was transformed after receiving training and financial support from the Pragatisil Mahila Samuha women's group, in association with OFID partner, the Multidimensional Resource Centre Nepal (MRC-Nepal).

Through MRC-Nepal, which targets low-income households dependant on agriculture and agribusiness, Bishnu received training for off-season vegetable farming, savings and credit, and leadership and management.

MRC-Nepal supports farmers, especially women, in gaining knowledge about efficient farming technologies and practices to improve irrigation and mobilize unproductive land.

With the knowledge she has gained, Bishnu was able to plant gourd vegetables, earning an additional $1,100 from the sale of vegetables in one year.

With this extra, sustainable source of income, she plans to scale up land for her farm.

Agents of change

The MRC-Nepal project has increased agricultural production and incomes, creating more job opportunities in the Bara, Parsa, Makwanpur and Chitwan districts of Southern Nepal where urban migration is prevalent.

These increased opportunities have prompted many men to return to the rural areas to work for their wives in the field. As well as providing financial relief for the families, this has endowed these traditionally marginalized women with greater respect in their communities.

This was the case for 45-year-old Goma Kharel from Chitwan. With a family of five to support, she decided to join a women's group in 2014. The group helped Goma to mobilize her land, based on organic farming, and provided her with quality vegetable seeds, including cowpea, okra, and sponge gourd.

"I now have a good social standing within my community and I am seen as a progressive farmer," she commented.

Goma's husband now also works to support her activities, which have doubled her annual earnings.

MRC-Nepal has also provided 50-year-old Bigni Chaudhary with the tools to determine her own future. Only a year ago, Bigni planned to move to the city to support her family of ten.

With only basic tools and knowledge of farming, she was unable to fully utilize her land, which yielded less than four months of food production, earning her less than $200 a year.

When Bigni learned that MRC-Nepal was training female farmers in efficient land management, she enrolled in the Triveni women farmers' group in Parsa. Within four months, she doubled the size of her land and earned enough to meet the basic needs of her family members.

Off season vegetable farming has given hundreds of women the security of a reliable, year-round income.

With her increased income, Bigni is now able to send her children to private schools and provide them with good clothing and housing. What is more, she has become a commercial farmer and has been spreading her knowledge throughout her community.

To date, MRC-Nepal's support has boosted the incomes of 3,670 marginalized women farmers, who, as a result, have been able to reduce dependency on their husbands, pay off debts and provide quality health and education for their children.

As the drivers of rural growth, these women are improving the living conditions of their families and their communities.

Director, Research Division

The Research Division's objective is to conduct a continuous program of research, issuing reports, analyses and data in the field of energy and related matters. It monitors, forecasts and analyses development in energy in general and the oil industry in particular, as well as follows and analyses related economic and financial developments. It contributes to the coordination of OPEC Member Countries (MCs) in international negotiations and promotes cooperation between the various relevant global players to be able to be present and actively participate in the various international fora.

Objective of position:

The Director, Research Division, plans, organizes, coordinates, manages and evaluates the work of the Research Division in accordance with the work programme and budget of the Division. The work covers studies on medium and long-term energy developments, short-term perspective studies and analyses of the petroleum market as well as data, information and IT Development in these fields. He/she provides substantive reports and other documentation with particular focus on supervising, guiding and contributing to the Secretariat's technical reports. As designated by the Secretary General, to represent OPEC in MCs and at relevant international fora and to prepare and deliver substantive reports and statements and to initiate research collaboration with relevant organizations and institutions. Furthermore, he/she contributes to further strengthening the cooperation between MCs in the fields of Research & Development (R&D) and technology. He/she pursues close monitoring and analysis of ongoing multilateral negotiations and dialogues with various governmental bodies and further enhances the producer-consumer and producer-producer dialogues. Finally he/she acts on behalf of the Secretary General (SG) during his absence as and when the SG delegates his authority.

Main responsibilities:

- Defines, in broad terms, a research programme on energy and related matters that is responsive to the needs of the Organization and MCs;
- Directs and coordinates the work of the Departments in the Research Division according to agreed priorities, and paying particular attention to ensuring that:
  - The activities of Petroleum Studies Department (PSD), Data Services Department (DSD), Energy Studies Department (ESD) and Environmental Matters Unit (EMU) are efficiently and appropriately coordinated, and the output is optimal and of high quality;
  - The information needs for PSD, ESD and EMU are clearly communicated to DSD and channeled through Public Relations & Information Department (PRID);
  - The plans and priorities of DSD are fully responsive to these needs;
- Plans the activities of PSD, ESD, DSD and EMU and sets priorities among these to ensure that:
  - All studies requested by the Economic Commission Board (ECB), other standing committees and working groups are completed to high quality standards and on time;
  - Other activities of the Division are appropriately focused on the areas of greatest interest to the MCs;
  - Likely future requests for research and analysis are anticipated and requisite preparatory work is initiated;
- Supervises the Department Heads and Environmental Coordinator reporting to him in assigning staff to studies and research projects, with particular attention to ensuring that:
  - Studies that require staff from more than one Department, or that cut across the specific

responsibilities of each Department and Unit, are efficiently carried out and appropriately coordinated and staffed;
  - All staff are effectively utilized on work of an appropriate level for their skills and experience;
- Coordinates the work of the ECB and standing committees, assisting them in defining a coherent programme of research to support the policy making activities of the Conference, and supervising the execution of this research programme;
- Identifies issues of importance to and their implications for the Organization; brings these issues to the attention of the SG;
- Keeps the SG fully informed of the work of the Division, and draws his attention to specific issues and studies of major importance;
- Works with the SG and Head, PRID to coordinate the participation of the Secretariat staff in outside meetings and seminars, and reviews proposed contributions by research staff to ensure high quality and in accordance with the interests of the MCs;
- Reviews the performance evaluation, staff development, salary, promotion and separation recommendations made by the Department Heads and Environmental Coordinator reporting to him and amends these as appropriate;
- Ensures that the staff in his division receive the supervision and guidance necessary to broaden and deepen their skills and constantly improve their performance;
- Defines the Division's future staff needs and ensures that these are clearly communicated to, and discussed with Head, Finance & Human Resources Department (FHRD);
- Coordinates the preparation of the annual budget for the Research Division;
- Makes plans of missions and training for staff in the Research Division;
- Carries out any other tasks assigned to him/her by the SG.

Required competencies and qualifications:

Education: Advanced University degree preferably in Economics and/or Engineering. PhD preferred.

Work experience: Advanced university degree: Minimum 15 years whereof six years at international level in conducting and/or in planning/supervising research and development work relating to energy, in particular oil, and at least six years in high level managerial position. PhD: 12 years.

Training specializations: Conducting and leading research on economic and technological issues in the fields of oil and energy.

Competencies: Managerial & leadership skills; communication skills; decision making skills; strategic orientation; analytical skills; presentation skills; interpersonal skills; customer service orientation; negotiation skills; initiative; integrity.

Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international.

In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade A reporting to the Secretary General. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.

Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.

In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **December 15, 2016,** quoting the job code: 2.1.01 *(see www.opec.org — Employment).*

Head, Petroleum Studies Department

Within the Research Division, the Petroleum Studies Department provides pertinent and reliable information and analyses in support of decision-making and policy-making in Member Countries; carries out, on a continuous basis, research programmes and studies on short-term petroleum market developments with the aim of issuing reports on a regular (ie daily, weekly, monthly and bi-monthly) as well as ad hoc basis highlighting important issues for their use and consideration; conducts regular forecasts, elaborates and analyses oil market scenarios and prepares and publishes reports on these findings; promotes OPEC views and technical analysis on short-term oil market developments to the industry at large and general public via the OPEC Monthly Oil Market Report (especially the feature article) as well as other reports, presentations and related pod casts and prepares and contributes to reports to be submitted to the ECB, the BOG and the MMSC as well as papers for various OPEC publications.

Objective of position:

The Head of Petroleum Studies Department is to plan, organise, coordinate, manage and evaluate the work of the Petroleum Studies Department in accordance with the work program and programmed budget of the Department so as to optimize its support to the Secretariat in achieving its overall objectives. The work covers short-term studies and analyses, as well as periodic reports on the international oil market, in particular oil supply and demand, stock, refinery products as well as petroleum trade and transport and economic analyses of oil price and related financial issues.

Main responsibilities:

- Plans, organizes, coordinates, manages and evaluates the work in the Petroleum Studies Department covering: world oil market developments in the short-term; short-term forecasting, with particular attention to the impact of world economic and financial market developments; oil supply and demand in the short-term; oil stock movements; oil prices, its volatility and fluctuation; refinery operations and capacity development; trade and transportation; major oil companies' operational performance and other determining factors of the oil market as well as crude oil/product markets assessments; preparation of the periodic reports, in particular the Monthly Oil Market Report and Daily Oil Market Report;
- Develops and maintains adequate forecasting and modelling for oil market research;
- Ensures full responses to requests by the Conference, BOG, ECB and standing committees for studies and special reports relevant to the work program of the Department;
- Arranges presentations at relevant OPEC meetings and international forums representing the Secretariat as required;
- Develops and maintains networks with external experts and institutions in fields relating to the work of the Department;
- Keeps the Director of Research Division fully informed on all aspects of the work of the Department, and draws his attention to important analyses performed by it;
- Evaluates the performance of the staff of the Department and recommends to the Director of Research Division, staff development, salary increase, promotion and separations as appropriate;
- Ensures that the staff of the Department receive the supervision and guidance necessary to broaden and deepen their skills and continuously improve their performance;
- Prepares the annual budget for the Department;
- Carries out any other tasks assigned to him/her by the Director, Research Division.

Required competencies and qualifications:

Education: Advanced university degree in Economics or equivalent subject; PhD preferred.

Work experience: Advanced degree: 12 years in the oil industry with a minimum of four years in a managerial position, preferably at large national, regional, or international institutions; PhD: ten years.

Training specializations: Short-term oil market; oil price forecasting; professional management & leadership.

Competencies: Managerial & leadership skills; communication skills; decision making skills; strategic orientation; analytical skills; presentation skills; interpersonal skills; customer service orientation; negotiation skills; initiative; integrity.

Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade B reporting to the Director of Research Division. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **December 2, 2016,** quoting the job code: 4.1.01 *(see www.opec.org — Employment)*.

Head, Energy Studies Department

Within the Research Division, the Energy Studies Department monitors, analyses and forecasts world energy developments in the medium and long term and reports thereon, in particular; provides in-depth studies and reports on medium to long term energy issues; monitors developments and undertakes specific studies on energy demand and production-related technology and assesses implications for OPEC; identifies and follows up key areas of energy-related emerging technologies and research and development (R&D) and facilitates and supports coordinated planning and implementation of collaborative energy related R&D programmes of OPEC Member Countries; identifies prospects for OPEC participation in major international R&D activities; carries out studies and reports on medium to long term developments in the petroleum industry; provides effective tools for and carries out model based studies for analyses and projections of medium and long term energy supply/demand and downstream simulation; elaborates OPEC Long Term Strategy and monitors, analyses and reports on relevant national or regional policies, such as fiscal, energy, trade and environmental, and assesses their impacts on energy markets.

Objective of position:

The Head of Energy Studies Department is to plan, organise, coordinate, manage and evaluate the work of the Energy Studies Department in accordance with the work programmes and budget of the Department so as to optimize its support to the Secretariat in achieving its overall objectives. The work covers studies and analyses of medium to long-term world energy developments and prospects, in particular, the preparation of OPEC's world oil outlook, studies and analyses concerning world energy supply and demand, upstream to downstream oil industry, technology, alternative energy sources, institutional and fiscal petroleum regimes, as well as energy policies in producing and consuming countries. It also covers studies and analyses of related international issues, in particular in the areas of trade, sustainable development and climate change.

Main responsibilities:

- Plans, organises, coordinates, manages and evaluates the work in the Energy Studies Department covering: world energy developments in the medium to long-term; oil supply and demand in the medium and long-term; upstream to downstream industry developments; impact of energy policies and environmental regulations on world oil markets; energy-related technologies including alternative sources of energy; impacts of technology developments on the petroleum industry; impact assessment of developments in international issues, such as sustainable development, trade and climate change;
- Ensures adequate development, simulation and modelling capabilities of the Department;
- Ensures full responses to requests by the Conference, BOG, ECB and standing committees for studies and special reports relevant to the work program of the Department;
- Arranges presentations at relevant OPEC meetings and international forums representing the Secretariat as required;
- Develops and maintains networks with external experts and institutions in fields relating to the work of the Department;
- Keeps the Director of Research Division fully informed on all aspects of the work of the Department, and draws his attention to important analyses performed by it;
- Evaluates the performance of the staff of the Department, and recommends to the Director of Research Division, staff development, salary increase, promotion and separations as appropriate;
- Ensures that the staff of the Department receive the supervision and guidance necessary to broaden and deepen their skills and continuously improve their performance;
- Prepares the annual budget for the Department.

Required competencies and qualifications:

Education: Advanced University degree in Economics and/or Engineering; PhD preferred.

Work experience: Advanced university degree: 12 years in the oil industry with a minimum of four years in a managerial position, preferably at large national, regional, or international institutions; PhD: ten years.

Training specializations: Energy studies; international energy related matters; professional management & leadership.

Competencies: Managerial & leadership skills; communication skills; decision making skills; strategic orientation; analytical skills; presentation skills; interpersonal skills; customer service orientation; negotiation skills; initiative; integrity.

Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade B reporting to the Director of Research Division. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **December 5, 2016,** quoting the job code: 5.1.01 *(see www.opec.org — Employment)*.

Upstream Oil Industry Analyst

Within the Research Division, the Energy Studies Department monitors, analyses and forecasts world energy developments in the medium and long term and reports thereon, in particular; provides in-depth studies and reports on medium to long term energy issues; monitors developments and undertakes specific studies on energy demand and production-related technology and assesses implications for OPEC; identifies and follows up key areas of energy-related emerging technologies and research and development (R&D) and facilitates and supports coordinated planning and implementation of collaborative energy related R&D programmes of OPEC Member Countries; identifies prospects for OPEC participation in major international R&D activities; carries out studies and reports on medium to long term developments in the petroleum industry; provides effective tools for and carries out model based studies for analyses and projections of medium and long term energy supply/demand and downstream simulation; elaborates OPEC Long Term Strategy and monitors, analyses and reports on relevant national or regional policies, such as fiscal, energy, trade and environmental, and assesses their impacts on energy markets.

Objective of position:

The Upstream Oil Industry Analyst carries out studies and analyses on medium- to long-term conventional oil supply as well as assesses potential medium- to long-term supply capacities of conventional oil in both OPEC and non-OPEC countries and analyses its main determinants (reserves, investment trends, technology advances, etc). He/she monitors and analyses the evolution of upstream related costs and investments to conventional oil supply and their impacts on exploration and production activities worldwide and contributes to the World Oil Outlook.

Main responsibilities:

- Carries out analyses and studies of medium- to long-term conventional oil supply prospects and contributes to the World Oil Outlook;
- Analyses upstream exploration and production costs for conventional oil;
- Studies capacity expansion and investment plans and requirements for conventional oil in OPEC and in non-OPEC regions;
- Studies, analyses and forecasts relevant technological changes and assesses their impact on the medium- to long-term oil recovery rate, production and costs;
- Collects and analyses data and information related to upstream conventional oil, including all activities and development processes in exploration and production;
- Contributes to speeches, articles and presentations to internal meetings and various international forums.

Required competencies and qualifications:

Education: University degree in petroleum engineering, petroleum geology or related sciences; advanced degree preferred.

Work experience: University degree: eight years in the field of oil exploration, production or reservoir engineering in an oil company or petroleum-related government agency; advanced university degree: six years.

Training specializations: Advanced upstream technology; good knowledge of planning and analysis of upstream activities, including modelling and/or project evaluation; basic knowledge of the environmental impact of upstream activities an asset.

Competencies: Communication skills; analytical skills; presentation skills; interpersonal skills; customer service orientation; initiative; integrity.

Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade E reporting to the Head of Energy Studies Department. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.

Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.

In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **December 9, 2016,** quoting the job code: 5.3.01 *(see www.opec.org — Employment)*.

Refinery & Products Analyst

Within the Research Division, the Petroleum Studies Department provides pertinent and reliable information and analyses in support of decision-making and policy-making in Member Countries. It carries out, on a continuous basis, research programmes and studies on short-term petroleum market developments with the aim of issuing reports on a regular (ie daily, weekly, monthly and bi-monthly) as well as ad hoc basis highlighting important issues for their use and consideration. It also conducts regular forecasts, elaborates and analyses oil market scenarios and prepares and publishes reports on these findings. The Department promotes OPEC views and technical analysis on short-term oil market developments to the industry at large and general public via the OPEC Monthly Oil Market Report (especially the feature article) as well as other reports, presentations and related pod casts. It prepares and contributes to reports to be submitted to the Economic Commission Board, the Board of Governors and the Conference as well as papers for various OPEC publications.

Objective of position:

The Refinery and Products Analyst studies and analyses refining operations and the product market as well as short-term developments in the product market. He/she studies capacity expansion in the oil refining industry and other related industries for the supply of petroleum products and prepares periodic reports for meetings of OPEC organs.

Main responsibilities:

- Studies and analyses short-term developments in the supply, demand and stocks of petroleum products; examines and analyses refining margins on the basis of market fundamentals, refinery operation levels costs and the impact on the oil market;
- Analyses the refining industry worldwide and monitors and assesses its short- to medium-term developments in terms of distillation and various conversion capacities, regional configuration schemes and favourable refinery operational modes according to seasonal demand patterns;
- Examines price links between products in the main markets, ie the level of arbitrage trading;
- Examines the effect of stricter product specifications in the medium term in major consuming countries on refined product supply and hence product price trends;
- Monitors and analyses short-term, worldwide developments in the petrochemical and utility sectors;
- Monitors and analyses substitution for petroleum products;
- Monitors and analyses supply of petroleum products from other sources than crude oil such as GTL, NGL and condensate and non-conventional crude;
- Consolidates findings of the above analyses and prepares and issues reports thereon.

Required competencies and qualifications:

Education: University degree in chemical engineering or related engineering with specialization in energy economy; advanced degree preferred.

Work experience: University degree: eight years; advanced university degree: six years.

Training specializations: Refining; analysis of international developments with emphasis on crude and product fundamentals; energy modelling; basic knowledge of product markets.

Competencies: Communication skills; analytical skills; presentation skills; interpersonal skills; customer service orientation; initiative; integrity.

Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade E reporting to the Head of Petroleum Studies Department. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.

Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.

In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **December 9, 2016,** quoting the job code: 4.4.02 *(see www.opec.org — Employment)*.

Forthcoming events

Power week 2016, November 7, 2016, Singapore. Details: Infocus International Group Pte Ltd, 105 Cecil Street, #08-01, The Octagon, 069534 Singapore. Customer Service Hotline: +65 63 25 02 10; fax: +65 62 24 50 90; e-mail: enquiry@infocusinternational.com; website: www.power-week.com.

Operational excellence in oil and gas, November 7–9, 2016, Houston, TX, USA. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 36 89 300; fax: +44 207 36 89 301; e-mail: enquire@iqpc.co.uk; website: www.opexinoilandgas.com.

Abu Dhabi international petroleum exhibition and conference (ADIPEC) 2016, November 7–10, 2016, Abu Dhabi, UAE. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, United Kingdom. Tel: +44 20 36 15 28 73; fax: +44 20 36 15 06 79; e-mail: conferencemarketing@dmgevents.com; website: www.adipec.com.

Deepwater operations, November 8–10, 2016, Galveston, TX, USA. Details: PennWell, 1421 S. Sheridan Road, Tulsa, Oklahoma 74112, USA. Tel: +1 918 83 53 161; fax: +1 918 83 19 497; e-mail: sneighbors@pennwell.com; website: www.deepwateroperations.com.

Iran oil and gas summit, November 14–15, 2016, Tehran, IR Iran. Details: Syllabus Events Ltd; 71–75 Shelton Street, Covent Garden, London WC2H 9JQ, UK. Tel: +971 42 69 88 78; e-mail: sales@sev.ae; website: www.iranoilgas-summit.com.

11th LPG trade summit, November 14–16, 2016, Dubai, UAE. Details: Centre for Management Technology, 80 Marine Parade Road #13-02, Parkway Parade, 449269 Singapore. Tel: +65 63 45 73 22/63 46 91 32; fax: +65 63 45 59 28; e-mail: cynthia@cmtsp.com.sg; website: www.cmtevents.com/aboutevent.aspx?ev=161128.

ERTC 21st annual meeting, November 14–16, 2016, Lisbon, Portugal. Details: Global Technology Forum, Highview House, Tattenham Crescent, Epsom Downs, Surrey KT18 5QJ, UK. Tel: +44 17 37 36 51 00; fax: +44 17 37 36 51 01; e-mail: events@gtforum.com; website: http://ertc.events.gtforum.com.

4th East Africa oil and gas summit and exhibition 2016, November 15–17, 2016, Nairobi, Kenya. Details: Global Event Partners Ltd, London Office, 20–22 Bedford Row, London WC1R 4JS, UK. Tel: +44 203 48 81 191; e-mail: enquiries@gep-events.com; website: http://eaogs.com.

The European autumn gas conference 2016, November 15–17, 2016, Hague, The Netherlands. Details: dmg::events, 25th Floor, Millbank Tower, Millbank, London SW1P 4QP, UK. Contact: Neill Howard, Senior Marketing Manager, Tel: +44 20 37 72 60 80; e-mail: neillhoward@dmgevents.com; website: www.theeagc.com.

4th Myanmar oil and gas summit, November 17–18, 2016, Yangon, Myanmar. Details: Centre for Management Technology, 80 Marine Parade Road #13-02, Parkway Parade, 449269 Singapore. Tel: +65 63 45 73 22/63 46 91 32; fax: +65 63 45 59 28; e-mail: cynthia@cmtsp.com.sg; website: www.cmtevents.com/aboutevent.aspx?ev=161117.

20th annual condensate and naphtha forum, November 20–21, 2016, Dubai, UAE. Details: Details: Conference Connection Administrators Pte Ltd, 105 Cecil Street #07-02, The Octagon, 069534 Singapore. Tel: +65 62 22 02 30; fax: +65 62 22 01 21; e-mail: info@cconnection.org; website: www.condensateforum.com.

Project financing in oil and gas, November 21–22, 2016, London, UK. Details: SMi Group Ltd, Unit 122, Great Guildford Business Square, 30 Great Guildford Street, London SE1 0HS, UK. Tel: +44 207 82 76 000; fax: +44 207 82 76 001; e-mail: client_services@smi-online.co.uk; website: www.smi-online.co.uk/energy/uk/conference/Project-Financing-in-Oil-and-Gas.

Practical Nigerian content, November 22–24, 2016, Abuja, Nigeria. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 97 80 00; fax: +44 207 97 80 099; e-mail: sshelton@thecwcgroup.com; website: www.cwcpnc.com.

An examination of project finance and RBL finance for oil and gas, November 23, 2016, London, UK. Details: SMi Group Ltd, Unit 122, Great Guildford Business Square, 30 Great Guildford Street, London SE1 0HS, UK. Tel: +44 207 82 76 000; fax: +44 207 82 76 001; e-mail: client_services@smi-online.co.uk; website: www.smi-online.co.uk/energy/uk/workshop/an-examination-of-project-finance-and-rbl-finance-for-oil-and-gas.

MSGBC basin summit and exhibition 2016, November 23, 2016, Senegal. Details: The Exchange Ltd, 5th Floor, 86 Hatton Garden, London EC1N 8QQ, UK. Tel: +44 207 06 71 800; fax: +44 207 24 22 673; e-mail: marketing@theenergyexchange.co.uk; website: http://msgbc.theenergyexchange.co.uk.

Mozambique gas summit, November 30–December 2, 2016, Maputo, Mozambique. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 97 80 00; fax: +44 207 97 80 099; e-mail: sshelton@thecwcgroup.com; website: www.mozambique-gas-summit.com.

Kurdistan-Iraq oil and gas, December 5–7, 2016, London, UK. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 97 80 00; fax: +44 207 97 80 099; e-mail: sshelton@thecwcgroup.com; website: www.cwckiog.com.

Petrotech, December 5–7, 2016, New Delhi, India. Details: ITE Group plc, Oil and Gas Division, 105 Salusbury Road, London NW6 6RG, UK. Tel: +44 207 59 65 233; fax: +44 207 59 65 106; e-mail: oilgas@ite-exhibitions.com; website: www.petrotech.in.

5th annual flare management and reduction summit, December 6–7, 2016, Abu Dhabi, UAE. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 36 89 300; fax: +44 207 36 89 301; e-mail: enquire@iqpc.co.uk; website: www.flaremanagementme.com/?utm_medium=portal&mac=OGIQ_Events_Learn_Listing.

5th annual shutdowns and turnarounds, December 6–7, 2016, Abu Dhabi, UAE. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 36 89 300; fax: +44 207 36 89 301; e-mail: enquire@iqpc.co.uk; website: www.shutdownsandturnaroundsme.com.

OGT conference 2016, December 6–7, 2016, Ashgabat, Turkmenistan. Details: The Exchange Ltd, 5th Floor, 86 Hatton Garden, London EC1N 8QQ, UK. Tel: +44 207 06 71 800; fax: +44 207 24 22 673; e-mail: marketing@theenergyexchange.co.uk; website: http://ogt.theenergyexchange.co.uk.

FPSO Paris training course, December 6–9, 2016, Paris, France. Details: IBC Global Conferences, The Bookings Department, Informa UK Ltd, PO Box 406, West Byfleet KT14 6WL, UK. Tel: +44 207 01 75 518; fax: +44 207 01 74 715; e-mail: energycustserv@informa.com; website: https://maritime.knect365.com/fpso-paris.

Doing business in Iran, December 7, 2016, London, UK. Details: SMi Group Ltd, Unit 122, Great Guildford Business Square, 30 Great Guildford Street, London SE1 0HS, UK. Tel: +44 207 82 76 000; fax: +44 207 82 76 001; e-mail: client_services@smi-online.co.uk; website: www.smi-online.co.uk/energy/uk/masterclass/how-to-do-business-in-iran.

Oil product markets could continue to do well over winter

October 2016

Oil product markets in the major consuming regions have performed relatively well over the recent summer driving season, according to the OPEC Secretariat in Vienna, Austria.

It said in its *Monthly Oil Market Report (MOMR)* for October that in the Atlantic Basin, product markets received support from the positive performance at the top of the barrel, with stronger United States gasoline demand hitting record levels amid higher export opportunities from Europe, which, along with some refineries outages, lent further support to refinery margins.

Meanwhile, it said, margins in Asia have seen a slight recovery in recent weeks on the back of firm demand ahead of autumn maintenance.

"Since the start of 2014, the trend in gasoline and gasoil consumption has diverged. Gasoline demand has grown strongly worldwide, increasing by almost 700,000 barrels/day in 2015, allowing the motor fuel to remain the driver of the product market even over the winter season.

"Meanwhile, gasoil has seen weaker global growth of around 350,000 b/d, resulting in a more unbalanced market, as the drop seen in demand growth in the US and China has outweighed the recovery seen in Europe and India, while supply has continued to increase," it observed.

The *MOMR* noted that, during the last months, gasoil demand growth in India recorded a significant rise on the back of a general improvement in economic activities, especially manufacturing.

Year-to-date, gasoil consumption in India has increased by around 125,000 b/d over the same period last year to reach 1.65 million b/d.

"At the same time, the US manufacturing sector showed only slight growth in September, while figures for the third quarter of 2016 showed a continued weakness in industrial production, in particular the mining sector, which is mainly energy-related."

The publication pointed out that despite recent reports indicating a recovery in the transportation sector since the second quarter of this year, particularly for trucks and trains, gasoil demand in the US shows a year-to-date decline of around 250,000 b/d from the same period last year to average 3.8m b/d.

"Europe is the global benchmark for diesel pricing as the region receives large import volumes of diesel from several refinery hubs to meet its demand."

The *MOMR* said that new refineries in the Middle East and Asia, as well as increasing US diesel exports in recent years, have led to a sharp increase in global diesel supplies, much of which is consumed and/or stored in Europe.

"Additional inflows of ULSD are due to increased export capacity in Russia. Increased inflows of middle distillates have led to higher inventories, with OECD Europe commercial middle distillate stocks reaching 274m b at the end of August, some 62m b higher than the last five-year average.

"This distillates' overhang has resulted in a persistent downward trend in the crack spread."

Looking ahead to the coming quarters, the *MOMR* said oil product markets are typically supported by heating fuel in the winter season.

However, it added that according to the preliminary forecast by the US weather service, a colder winter so far seems unlikely.

"In addition, inventories stand near all-time highs worldwide, although in recent weeks, these high levels have been slightly drawn down, due to some refinery and pipeline outages and bad weather conditions lowering global production.

"With the end of the autumn refinery maintenance season, gasoil production will be on the rise and refiners will most likely shift yields to meet middle distillate demand, supporting crude intake over the winter season," the report concluded.

MOMR ... oil market highlights

October 2016

The price of the **OPEC Reference Basket** slipped slightly in September to $42.89/b, down by 21¢. ICE Brent ended up 8¢ at $47.24/b, while NYMEX WTI increased by 43¢ to $45.23/b. Crude oil prices were supported by efforts to address excess global supplies and consecutive draws in US crude stockpiles. The Brent-WTI spread narrowed to $2.01/b.

World economic growth remains unchanged at 2.9 per cent for 2016 and 3.1 per cent for 2017. The OECD growth forecast remains at 1.6 per cent and 1.7 per cent for 2016 and 2017, respectively. Forecasts for China and India are also unchanged at 6.5 per cent and 7.5 per cent for 2016 and 6.1 per cent and 7.2 per cent for 2017. Brazil and Russia are forecast to grow by 0.4 per cent and 0.7 per cent, respectively, in 2017, following contractions of 3.4 per cent and 0.6 per cent this year.

World oil demand in 2016 is seen increasing by 1.24m b/d to average 94.40m b/d, after a marginal upward revision of around 10,000 b/d from the September *MOMR*, mainly to reflect the latest data. Positive revisions were primarily a result of higher-than-expected demand in the Other Asia region, while downward revisions were a result of a lower-than-expected performance from OECD America. In 2017, world oil demand is anticipated to rise by 1.15m b/d, unchanged from the September *MOMR*, to average 95.56m b/d.

Non-OPEC oil supply in 2016 is now expected to contract by 680,000 b/d, following a downward revision of around 70,000 b/d from the September *MOMR* to average 56.30m b/d. This is mainly due to baseline revisions. In 2017, non-OPEC supply was revised up slightly by around 40,000 b/d to show growth of 240,000 b/d to average 56.54m b/d, mainly due to new projects coming onstream in Russia. Output of OPEC NGLs is expected to average 6.43m b/d in 2017, an increase of 150,000 b/d over the current year. OPEC crude production, according to secondary sources, increased by 220,000 b/d in September to average 33.39m b/d.

Product markets in the Atlantic Basin experienced a mixed performance as margins fell in the US, hit by a seasonal slowing in gasoline demand in the US as the driving season ended. In Europe, margins were supported by higher export opportunities along with slowing inflows, which eased the gasoil oversupply in the region. Meanwhile, Asian margins strengthened on the back of stronger regional demand amid the onset of the autumn refinery maintenance season.

Dirty vessel spot freight rates increased on average in September compared to the previous month, supported by enhanced activity. The stronger sentiment was mainly driven by higher freight rates for Suezmax and Aframax, while average VLCC freight rates remained stable. Prompt replacements and increased activity supported freight rates in September. However, high vessel availability continued to weigh on the market amid considerable growth in the global fleet this year. In the clean tanker market, spot freight rates remained under pressure with declines in both East and West of Suez.

OECD total commercial stocks fell in August to stand at 3,094m b, some 322m b above the latest five-year average. Crude and product inventories showed surpluses of 191m b and 131m b, respectively. In days of forward cover, OECD commercial stocks in August stood at 66.7 days, some 6.7 days higher than the seasonal average.

Demand for OPEC crude in 2016 is estimated to stand at 31.8m b/d, an increase of 1.8m b/d over last year. In 2017, demand for OPEC crude is forecast at 32.6m b/d, a rise of 800,000 b/d over the current year.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for October 2016. Published by the Secretariat's Petroleum Studies Department, the publication may be downloaded in PDF format from our Website (www.opec.org), provided OPEC is credited as the source for any usage. The additional graphs and tables on the following pages reflect the latest data on OPEC Reference Basket and crude and oil product prices in general.

Table 1: OPEC Reference Basket spot crude prices

$/b

Crude/Member Country	2015 Sep	Oct	Nov	Dec	2016 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Weeks 36–40/2016 (week ending) Sep 2	Sep 9	Sep 16	Sep 23	Sep 30
Arab Light – Saudi Arabia	45.56	45.37	40.64	33.70	26.35	28.77	34.74	38.22	43.48	46.28	43.14	43.47	42.70	43.66	43.50	42.45	42.21	43.10
Basrah Light – Iraq	43.41	43.50	38.70	32.06	24.73	27.08	33.39	36.62	42.05	44.63	41.37	42.01	41.88	42.54	42.70	41.73	41.50	42.07
Bonny Light – Nigeria	48.01	49.16	44.81	38.16	30.40	32.24	38.53	41.51	46.85	48.48	45.30	46.35	47.77	47.58	48.59	47.63	47.63	47.76
Es Sider – Libya	46.71	47.56	43.30	37.16	29.75	31.46	37.51	40.48	45.83	47.28	44.00	44.85	45.69	45.84	46.51	45.55	45.55	45.68
Girassol – Angola	48.01	48.45	44.74	37.88	29.95	32.28	38.42	41.25	46.58	48.30	45.09	46.06	46.66	47.08	47.71	46.69	46.31	46.38
Iran Heavy – IR Iran	44.62	44.55	38.92	31.73	24.07	27.28	33.23	36.65	41.67	44.68	41.59	42.17	41.39	42.47	42.27	41.28	40.92	41.54
Kuwait Export – Kuwait	43.96	43.61	38.39	31.49	23.92	26.77	32.99	36.33	41.60	44.50	41.37	41.88	41.22	42.17	42.05	41.04	40.74	41.51
Marine – Qatar	45.88	45.89	41.66	34.36	26.95	29.41	35.49	38.97	44.13	46.37	43.53	43.44	43.51	44.12	44.46	43.37	43.00	43.60
Merey – Venezuela	34.13	35.48	31.87	24.42	20.80	21.38	25.83	28.84	34.28	38.22	36.71	36.46	37.38	37.65	37.89	36.98	37.25	37.94
Minas – Indonesia*	42.05	42.13	40.79	33.53	30.80	29.49	34.62	38.52	48.64	51.56	41.84	41.26	40.28	42.29	42.40	39.74	39.14	39.67
Murban – UAE	48.88	49.48	45.99	39.19	31.57	34.15	40.01	42.47	47.12	49.28	46.54	46.25	46.42	46.86	47.21	46.26	46.05	46.65
Oriente – Ecuador	41.03	39.91	36.40	32.18	24.03	24.70	31.45	35.04	41.96	44.03	40.72	40.84	41.22	41.02	41.61	40.49	40.60	42.81
Rabi Light – Gabon*	47.73	48.37	44.41	36.65	29.30	31.79	37.59	40.43	45.43	47.15	44.03	44.90	45.51	45.84	46.51	45.48	45.27	45.25
Saharan Blend – Algeria	48.36	49.51	45.30	38.59	31.28	33.26	39.41	42.33	47.73	48.98	45.30	46.35	47.09	47.30	47.91	46.95	46.95	47.08
OPEC Reference Basket	**44.83**	**45.02**	**40.50**	**33.64**	**26.50**	**28.72**	**34.65**	**37.86**	**43.21**	**45.84**	**42.68**	**43.10**	**42.89**	**43.61**	**43.73**	**42.68**	**42.47**	**43.13**

Table 2: Selected spot crude prices

$/b

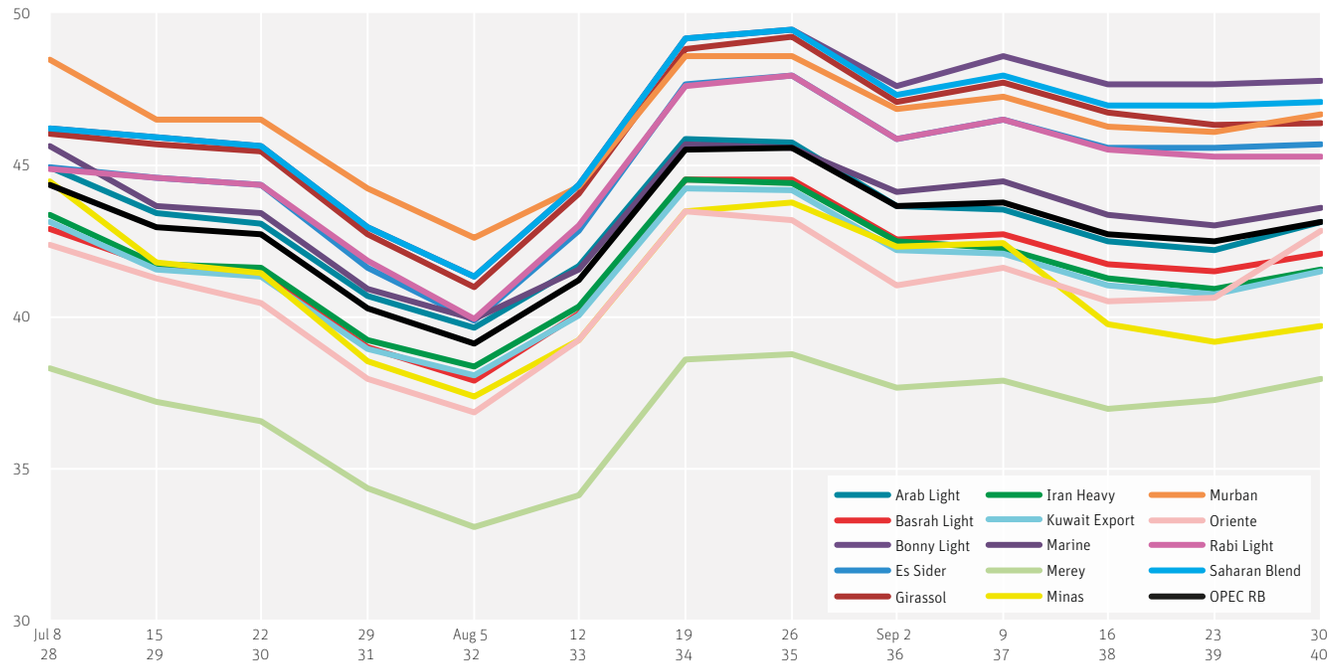
Crude/Member Country	2015 Sep	Oct	Nov	Dec	2016 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Weeks 36–40/2016 (week ending) Sep 2	Sep 9	Sep 16	Sep 23	Sep 30
Arab Heavy – Saudi Arabia	43.37	43.01	37.00	30.15	22.50	26.15	32.76	35.92	40.69	43.68	40.40	41.00	40.34	41.35	41.21	40.25	39.88	40.47
Brega – Libya	47.25	48.21	44.02	37.91	30.60	32.31	38.36	41.42	46.83	48.28	44.95	45.87	46.74	46.89	47.56	46.60	46.60	46.73
Brent – North Sea	47.61	48.56	44.30	38.16	30.75	32.46	38.51	41.48	46.83	48.28	45.00	45.85	46.69	46.84	47.51	46.55	46.55	46.68
Dubai – UAE	45.38	45.84	41.79	34.59	26.81	29.44	35.15	39.00	44.29	46.25	42.64	43.58	43.67	44.30	44.59	43.58	43.15	43.77
Ekofisk – North Sea	48.24	49.23	45.10	38.80	31.45	32.86	38.86	42.15	47.70	48.54	44.99	45.79	47.10	46.41	47.94	47.12	47.09	46.84
Iran Light – IR Iran	46.16	47.05	43.17	35.98	28.34	30.16	36.08	39.09	44.65	46.38	43.54	43.66	44.23	43.70	44.91	43.97	44.10	44.48
Isthmus – Mexico	47.71	46.90	43.29	37.68	30.03	28.68	35.45	38.14	44.76	47.51	45.07	44.22	44.55	44.55	45.01	43.74	44.03	45.98
Oman – Oman	45.65	46.07	42.10	34.61	27.48	30.37	36.46	39.43	44.37	46.61	43.45	44.02	44.01	44.56	44.82	43.92	43.60	44.17
Suez Mix – Egypt	44.53	44.65	40.07	34.07	27.45	29.17	35.15	38.19	43.31	44.90	42.06	42.20	42.78	42.25	43.46	42.52	42.65	43.03
Urals – Russia	47.19	47.49	43.05	36.97	29.15	30.87	36.87	39.89	45.08	46.60	43.76	44.06	44.48	44.68	45.16	44.22	44.35	44.73
WTI – North America	45.48	46.26	42.67	37.23	31.46	30.33	37.77	40.95	46.84	48.74	44.90	44.75	45.16	45.13	45.65	44.34	44.46	46.74

Note: As per the decision of the 109th ECB (held in February 2008), the OPEC Reference Basket (ORB) has been recalculated including the Ecuadorian crude Oriente retroactive as of October 19, 2007. As per the decision of the 108th ECB, the ORB has been recalculated including the Angolan crude Girassol, retroactive January 2007. As of January 2006, monthly averages are based on daily quotations (as approved by the 105th Meeting of the Economic Commission Board). As of June 16, 2005 (ie 3W June), the ORB has been calculated according to the new methodology as agreed by the 136th (Extraordinary) Meeting of the Conference. From January 2009–December 2015, the ORB excludes Minas (Indonesia). As of July 2016, the ORB includes Rabi Light (Gabon).

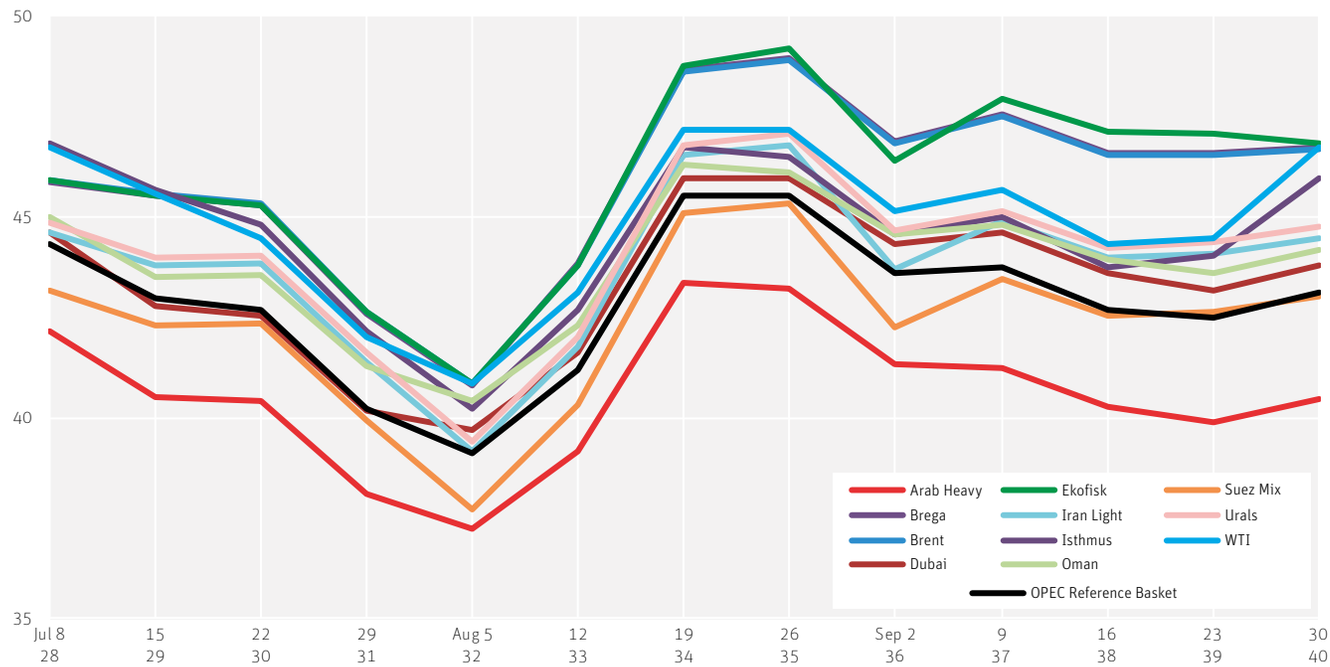
** Indonesia joined in 1962, suspended its Membership on December 31, 2008, and reactivated it again on January 1, 2016. Gabon joined in 1975 and left in 1995; it reactivated its Membership on July 1, 2016.*

Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.
Sources: The netback values for TJL price calculations are taken from RVM; Platt's; as of January 1, 2016, Argus; Secretariat's assessments.

Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2016 $/b



Graph 2: Evolution of selected spot crude prices, 2016 $/b



Note: As per the decision of the 109th ECB (held in February 2008), the OPEC Reference Basket (ORB) has been recalculated including the Ecuadorian crude Oriente retroactive as of October 19, 2007. As per the decision of the 108th ECB, the basket has been recalculated including the Angolan crude Girassol, retroactive January 2007. As of January 2006, monthly averages are based on daily quotations (as approved by the 105th Meeting of the Economic Commission Board). As of June 16, 2005 (ie 3W June), the ORB has been calculated according to the new methodology as agreed by the 136th (Extraordinary) Meeting of the Conference. As of January 2009, the ORB excludes Minas (Indonesia).
Indonesia suspended its OPEC Membership on December 31, 2008, but this was reactivated from January 1, 2016.

Table and Graph 3: North European market — spot barges, fob Rotterdam

$/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2015	September	45.30	70.72	61.41	61.35	33.88	34.41
	October	47.36	66.73	59.23	59.68	33.89	34.43
	November	46.13	65.27	57.06	56.78	30.20	30.68
	December	42.67	58.79	45.68	47.54	22.40	22.59
2016	January	35.13	53.41	38.11	39.21	19.85	15.08
	February	32.32	49.48	40.41	41.48	21.45	17.91
	March	38.53	54.82	47.13	47.43	24.83	21.32
	April	41.69	66.41	49.57	50.30	27.82	23.66
	May	44.28	69.51	56.67	56.15	32.52	29.28
	June	45.89	70.22	59.37	58.80	37.81	32.24
	July	41.73	62.35	53.84	54.48	37.60	32.21
	August	40.52	64.07	54.28	54.91	36.83	32.87
	September	43.57	66.62	55.93	55.92	39.48	34.97

Note: Prices of premium gasoline and diesel from January 1, 2008, are with 10 ppm sulphur content.

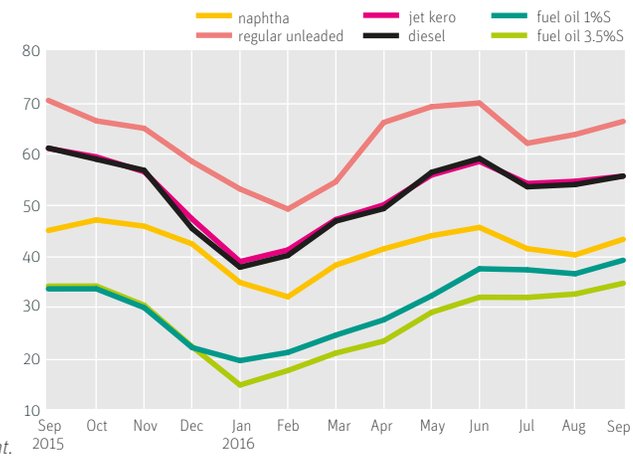


Table and Graph 4: South European market — spot cargoes, fob Italy

$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2015	September	43.00	63.02	63.34	34.49	34.26
	October	45.25	58.98	61.26	36.20	34.97
	November	44.06	58.77	57.28	32.83	30.02
	December	40.29	51.81	46.40	25.88	22.20
2016	January	33.42	47.01	39.48	21.22	18.35
	February	30.99	42.98	41.88	22.53	21.14
	March	37.76	47.68	48.28	24.63	23.44
	April	40.39	58.04	50.56	28.01	26.30
	May	43.51	61.12	57.91	33.72	31.91
	June	45.11	62.71	60.35	36.97	34.59
	July	41.06	54.85	55.04	36.85	34.84
	August	39.93	56.45	55.56	37.35	35.36
	September	43.20	59.69	57.13	40.02	37.45

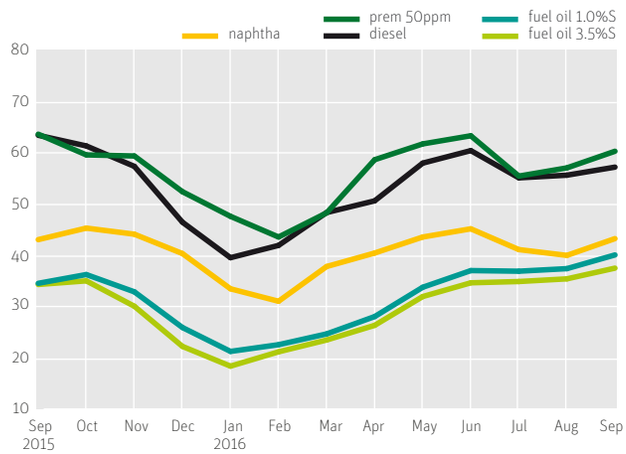


Table and Graph 5: US East Coast market — spot cargoes, New York

$/b, duties and fees included

		regular gasoline unleaded 87	gasoil*	jet kero*	fuel oil 0.3 per cent S	fuel oil 3.0 per cent S
2015	September	61.40	59.78	61.60	43.40	35.77
	October	58.62	58.73	60.94	46.36	35.64
	November	58.51	55.08	59.07	45.01	33.12
	December	53.68	43.89	49.31	35.65	24.09
2016	January	46.88	39.14	40.13	32.01	20.16
	February	42.59	39.48	43.03	32.46	20.20
	March	50.34	43.56	47.68	35.61	24.27
	April	60.09	47.27	49.43	37.10	27.94
	May	65.21	54.64	56.35	44.78	34.16
	June	62.59	58.10	59.83	48.86	37.32
	July	56.77	51.98	55.02	47.21	36.67
	August	58.93	53.13	56.49	48.01	36.17
	September	61.62	54.94	57.81	47.63	38.07

* *FOB barge spot prices.*

Source: Platts. As of January 1, 2016, Argus. Prices are average of available days.

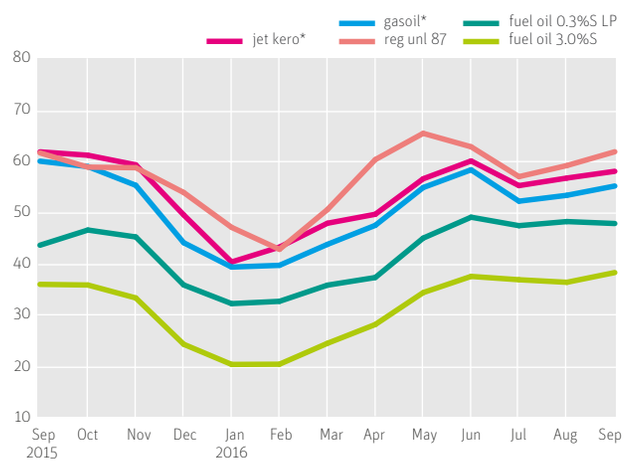


Table and Graph 6: Singapore market – spot cargoes, fob

$/b

		naphtha	premium gasoline unl 95	premium gasoline unl 92	gasoil	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
2015	September	46.81	65.24	61.59	59.48	58.99	37.37	36.58
	October	48.92	63.39	60.55	59.13	59.28	38.32	36.99
	November	48.95	59.10	56.42	57.46	57.46	36.11	34.98
	December	45.69	55.63	52.83	46.86	47.70	28.20	27.15
2016	January	36.78	50.33	47.04	36.16	37.93	26.77	22.77
	February	33.97	44.33	41.29	38.51	40.98	25.92	23.27
	March	39.20	52.68	49.58	45.52	47.40	28.20	27.07
	April	42.52	54.49	51.45	48.08	49.51	31.02	29.17
	May	44.20	59.14	56.00	54.86	55.18	35.80	34.03
	June	45.56	59.05	56.49	58.14	58.27	38.62	36.68
	July	41.74	51.87	49.46	54.27	54.37	38.35	36.47
	August	39.96	54.18	51.52	53.47	53.55	38.67	36.61
	September	42.54	58.00	55.38	54.62	55.07	41.11	38.72

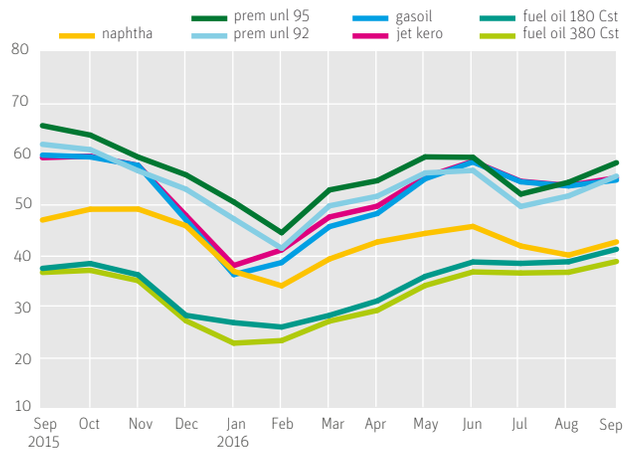
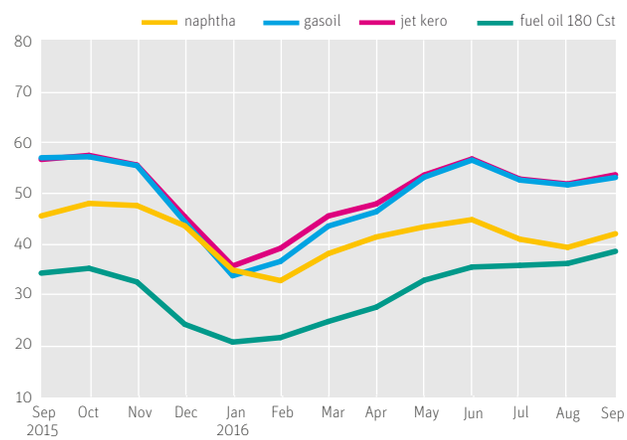


Table and Graph 7: Middle East Gulf market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2015	September	45.55	56.93	56.60	34.36
	October	48.00	57.13	57.40	35.30
	November	47.58	55.40	55.51	32.63
	December	43.62	44.42	45.39	24.35
2016	January	34.96	33.85	35.75	20.87
	February	32.89	36.66	39.22	21.75
	March	38.18	43.56	45.54	24.90
	April	41.43	46.37	47.90	27.69
	May	43.40	53.12	53.54	32.96
	June	44.82	56.47	56.70	35.55
	July	41.00	52.57	52.76	35.87
	August	39.40	51.62	51.80	36.25
	September	42.07	53.08	53.61	38.63



Source: Platts. As of January 1, 2016, Argus. Prices are average of available days.

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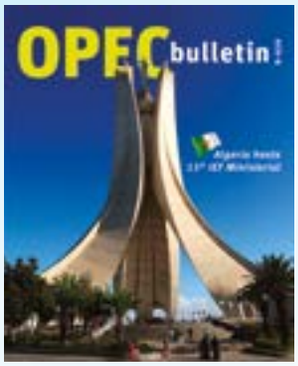

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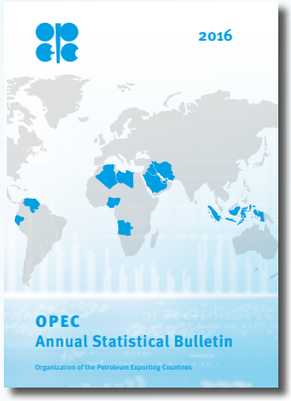

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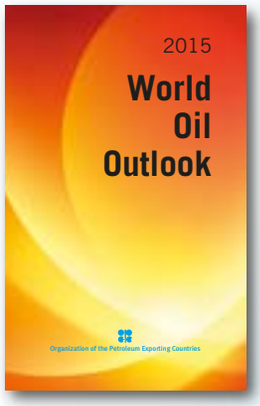

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