OPEC bulletin

5–6/19

Jeddah hosts OPEC and non-OPEC nations:

Cooperation and Culture

OPEC

Monthly Oil Market Report

Download
the OPEC MOMR App free of charge!

- **Essential information on the oil market**
- **100+ interactive articles and tables detailing crude price movements, oil futures, prices and much more**
- **Analysis of the world economy, world oil supply and demand**
- **Compare data interactively and maximize information extraction**

A steady hand on the tiller

In the maritime port of Jeddah, the Kingdom of Saudi Arabia, during the holy month of Ramadan, the Joint Ministerial Monitoring Committee (JMMC) met for the 14th time with proceedings infused by the positive spirit of the month and the bonds of friendship, community and collegiality that have kept the historic 'Declaration of Cooperation' on an even keel.

It was a time to focus on areas of cooperation, collaboration and fraternal respect among all nations, and to emphasize how we can all gain by staying committed to our multitude of mutual interests and shared objectives. This was evident in the deliberations in Jeddah, with participants reaffirming the well-charted course of achieving a balanced market and working towards oil market stability on a sustainable basis with solid fundamentals.

The benefits of this were witnessed in the first part of 2019, with evidence of an improvement in market conditions compared to the turbulent waters and volatility of the fourth quarter of 2018. This has been beneficial not only to producers, but to consumers too.

However, we also recognize the fact that underlying risks remain. This was evident at the end of May and into June, with a high-level of market volatility, due to major challenges and uncertainties related to such issues as ongoing trade negotiations, monetary policy developments, as well as geopolitics.

There is no doubt that the positive developments at the start of 2019 has been helped by participants in the 'Declaration of Cooperation' changing tack in December 2018 with new voluntary production adjustments. The high conformity rates, with April 2019 reaching 168 per cent, a record high up to that month, has had positive ramifications for the oil market, and in turn, global economic growth. Average conformity for the first four months of 2019 is 120 per cent.

The JMMC noted that an "agile and flexible approach has been critical to the success of the 'Declaration' to date and will be key going forward." Since it began at the start of 2017, partners have been able to adapt strategy and trim the sails depending on market conditions.

That is not to say that it has been plain sailing. Balancing competing national priorities means participants have had to find practical and realistic solutions that may not fully fit everyone. That they have chosen to do so, however, makes the success achieved over the past 30 months or so even better.

There is recognition that we are on the same boat, and we all need to pull together. To recall the words of the American poet, Ralph Waldo Emerson: *"No member of a crew is praised for the rugged individuality of his rowing."*

For example, when the market appeared skewed to oversupply, voluntary production adjustments were adopted and implemented, as was the case in December 2016 and December 2018, and equally, when concerns regarding demand outpacing supply surfaced as the market tightened, as was the case in June 2018, partners took appropriate action.

We will continue to carefully monitor oil market developments, particularly, oil inventory projections and the supply and demand balance, in the lead up to the 176th Meeting of the OPEC Conference and the 6th OPEC and non-OPEC Ministerial Meeting. As we have experienced over the past two years or so, maintaining a balanced market and sustainable stability requires all hands on deck. We need to ensure we have an understanding of the coordinates to help navigate an appropriate course for the second half of 2019.

We remain vigilant of any possible gathering storm clouds, and while continuing to take a measured approach, given conflicting data, and the ever evolving market situation, we will also not shy away from taking decisions, as we have already shown.

It was the writer, William Arthur Ward, who once said: *"The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails."*

Be assured that all participants in the 'Declaration' will continue to look to do the right thing and maintain a steady hand on the tiller to help achieve the desired market balance and a sustainable stability, in the interests of producers, consumers, and the global economy.

Contents

OPEC bulletin

Cover
This month's cover shows OPEC and non-OPEC Ministers who attended the 14th Meeting of the JMMC hosted by the Kingdom of Saudi Arabia in Jeddah in May (see JMMC feature starting on page 4).

Vol L, No 5, May/June 2019, ISSN 0474–6279

Publishers
OPEC
Organization of the Petroleum Exporting Countries
Helferstorferstraße 17
1010 Vienna
Austria
Telephone: +43 1 211 12/0
Telefax: +43 1 216 4320
Contact: Editor-in-Chief, OPEC Bulletin
Fax: +43 1 211 12/5081
E-mail: prid@opec.org
Website: www.opec.org

Website: www.opec.org
Visit the OPEC website for the latest news and information about the Organization, and for back issues of the *OPEC Bulletin,* which are available free of charge in PDF format.

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: Libya joined in 1962; United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); Nigeria (1971); Angola (2007); Equatorial Guinea (2017). Ecuador joined OPEC in 1973, suspended its Membership in 1992, and rejoined in 2007. Qatar joined in 1961 and left on December 31, 2018. Indonesia joined in 1962, suspended its Membership on December 31, 2008, reactivated it on January 1, 2016, but suspended its Membership again on December 31, 2016. Gabon joined in 1975 and left in 1995; it reactivated its Membership on July 1, 2016. The Republic of the Congo joined the Organization on June 22, 2018.

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

Editorial policy
The *OPEC Bulletin* is published by the OPEC Secretariat (Public Relations and Information Department). The contents do not necessarily reflect the official views of OPEC or its Member Countries. Names and boundaries on any maps should not be regarded as authoritative. The OPEC Secretariat shall not be held liable for any losses or damages as a result of reliance on and/or use of the information contained in the *OPEC Bulletin*. Editorial material may be freely reproduced (unless copyrighted), crediting the *OPEC Bulletin* as the source. A copy to the Editor would be appreciated.

printed according to the Austrian Ecolabel criteria for printed matter (UZ 24), UW-No 715

Indexed and abstracted in PAIS International

Printed in Austria

L–r: Manuel Salvador Quevedo Fernandez, People's Minister of Petroleum of Venezuela, and President of the OPEC Conference; Mohammad Sanusi Barkindo, OPEC Secretary General; Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources of the Kingdom of Saudi Arabia, Chairman of the JMMC; Alexander Novak, Minister of Energy of The Russian Federation, Co-Chairman of the JMMC; and Pavel Sorokin, Deputy Energy Minister, The Russian Federation.

Jeddah hosts another successful JMMC meeting

Since its foundation, the Joint Ministerial Monitoring Committee (JMMC) has met 14 times, seven times at the OPEC Secretariat headquarters in Vienna and seven times outside of Vienna, when it has been kindly hosted by one of the countries participating in the 'Declaration of Cooperation'. This practice of rotating the location has cemented the bonds of friendship between participating countries and showcased each host nation's unique culture and heritage. The historic city of Jeddah in the Kingdom of Saudi Arabia has now attained the distinction of being the first city outside of Vienna to host

Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources of the Kingdom of Saudi Arabia, Chairman of the JMMC.

Alexander Novak, Minister of Energy of The Russian Federation and Co-Chairman of the JMMC.

the JMMC on more than one occasion. Once again, the JMMC was fortunate to sample that world famous Saudi Arabian hospitality. The OPEC Bulletin *was in the thick of the action and files this exclusive report.*

Track record of productive meetings

Following the 29th meeting of its Joint Technical Committee (JTC) held earlier in the week, the JMMC convened in Jeddah for its 14th meeting on May 19, 2019, to review the April 2019 report on the implementation of the 'Declaration of Cooperation', as submitted by the JTC.

The meeting was chaired by the JMMC Chairman and Minister of Energy, Industry & Mineral Resources of Saudi Arabia, Khalid A Al-Falih, and co-chaired by Alexander Novak, Minister of Energy of The Russian Federation. In attendance were representatives from Algeria, Azerbaijan, Bahrain, Brunei Darussalam, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Oman, The Russian Federation, Saudi Arabia, South Sudan, the United Arab Emirates (UAE) and Venezuela.

The 14th JMMC Meeting continued the stellar record of success and high standards of excellence in analysis which the committee has become renowned for. It also acted as a significant milestone in advance of the forthcoming 176th Meeting of the OPEC Conference and the 6th OPEC and non-OPEC Ministerial Meeting.

In fulfilling its vital monitoring function, the JMMC has ensured that the 'Declaration of Cooperation' process has been transparent, providing an indispensable layer of accountability to proceedings, especially with regard to implementing the voluntary adjustments in production. The meeting in Jeddah demonstrated this once again, providing a forum for knowledge exchange and informed discussion.

World famous Saudi Arabian hospitality

Committee members were keen to pay tribute to their gracious hosts. As Mohammad Sanusi Barkindo, OPEC Secretary General, stated in his opening remarks: "For centuries, the good people of Jeddah and Saudi Arabia have opened their homes and their hearts to visitors from across the globe, and in doing so, this city has earned its reputation as one of the most hospitable and welcoming places on earth."

It was a theme which the President of the OPEC Conference, Manuel Salvador Quevedo Fernandez, Venezuela's People's Minister of Petroleum, also

Manuel Salvador Quevedo Fernandez, People's Minister of Petroleum of Venezuela, and President of the OPEC Conference.

Mohammad Sanusi Barkindo, OPEC Secretary General.

emphasized: "The friendly welcome we have received and the tireless efforts of the team here in Saudi Arabia should be roundly praised and applauded. Allow me to give a special salute to HRH Prince Abdulaziz Bin Salman. I should also like to acknowledge the pivotal leadership role that Saudi Arabia has played in the implementation of the 'Declaration of Cooperation' since its inception in January 2017. It has led the way with its voluntary production adjustments, often going above and beyond its commitments."

This gracious hospitality was symptomatic of the leadership role which Saudi Arabia has played in the 'Declaration'. As Barkindo stated: "On behalf of the OPEC Secretariat, I would like to extend our sincere thanks and deep appreciation to Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources of the Kingdom of Saudi Arabia and Chairman of the JMMC, for the outstanding provision made for our meetings this week.

"I would also like to thank his very able team for their tireless work, in particular Eng Adeeb Al-Aama, Dr Nasser A Al-Dossary, Sami Mehaid, Mohammed Al-Thomairi, Mohammad Al-Khaldi, Tariq Nasser, Dr Samiha Al Khayat, Eissa Elzerma, Fahad Toryf, Abbad Fantani, Abdullah Al Issa, Khaled Al Attiby, Jamil Dandany, Huda Alshwaier, Amal Alsayegh, Eiman Saad and all other representatives from Saudi Arabia who have made these meetings possible.

"Returning to our own work, I would also like to pay tribute to Saudi Arabia for its outstanding leadership role in our collective endeavours. From the inception of our voluntary production adjustments under the 'Declaration' in January 2017, the Kingdom has led by example, demonstrating selflessness, responsibility and willingness to prioritize the common good. We deeply appreciate that this has not been easy and has required your country to make difficult decisions and painful sacrifices. Simply put, the exceptional rate of success that we have enjoyed to date, would not have been possible without this exemplary leadership on your part."

Holy month of Ramadan

The Meeting was imbued with extra significance and solemnity given it occurred during the holy month of Ramadan. As Barkindo stated: "The excellent arrangements for our meetings are even more remarkable given the fact that we are meeting during the holy month of Ramadan, when Muslims from across the world descend on Mecca and Medina to perform blessed Umrah. Of course, this presented a logistical challenge for our hosts, in catering for each and every one of us."

Barkindo continued by saying: "The Hadith tells us that the Messenger of Allah said of the month of Ramadan: "It is the month of patience, and the reward of patience is Heaven. It is the month of charity, and a month in which a believer's sustenance is increased." *[Narrated by Ibn Khuzaymah]*

Alexander Novak (l), Minister of Energy of The Russian Federation and Co-Chairman of the JMMC; with Mohammad Sanusi Barkindo, OPEC Secretary General.

"During Ramadan, all of us have the opportunity to recommit ourselves to the bonds of friendship, community and collegiality that unite us. We are called to demonstrate a spirit of cooperation, collaboration and fraternal respect among all nations. May the spirit of this holy month enthuse our meeting today and all our meetings going forward. Adherence to the spirit of Ramadan necessitates that in our deliberations, we must focus on areas of agreement, common interest and seek convergence of opinion. Occasional divergence in viewpoints is, of course, natural, even among friends. Nevertheless, we stand to gain so much more when we remain focused on our multitude of mutual interests and shared objectives."

Market conditions

Al-Falih used his remarks to provide an overview of developments and trends in the market. He posed the question: "How would I characterize today's market and outlook?" and answered by saying "to be frank, the picture is quite foggy, with the market defined by conflicting signals.

"Starting with the global economy, although multilateral institutions have moderated their forecasts of world growth, the levels are still reasonably healthy with the US leading a steady performance while the Chinese economy started the year fairly strongly. But the growing trade dispute between the same two leading global economic powers is casting a shadow over the global economic outlook. This could also have a contagion effect on other nations, which could show in weakening oil demand."

The Chairman continued by examining the factors which impact supply and demand. "Looking at the oil supply side of the equation, some signals point to tightening supplies, while others highlight the healthy pace of US oil production. Similarly, on the demand side, there are numerous uncertainties. Some institutions are revising oil demand downward, yet other reports suggest that demand in non-OECD countries (led by China, Russian, and India) alone approached a million barrels per day year-on-year."

HRH Prince Abdulaziz Bin Salman Bin Abdulaziz Al-Saud (l), Minister of State for Energy Affairs of the Kingdom of Saudi Arabia; with Mohammad Sanusi Barkindo (r), OPEC Secretary General.

The press conference was met with passionate enthusiam by journalists.

With regard to metrics to be used in measuring oil market stability, the Chairman said: "The net results of supply and demand variations shows in the key metric of inventories, which is the critical factor we watch closely. Here again, the picture is rather murky.

"US inventories continue to rise. OECD stocks are still above the last five years' average — and that is relatively elevated compared with levels seen in normal years because of excess inventories of recent years. Non-OECD inventories are also rising. The bottom line is that none of us wants to see the stocks swell again, so we have to be cautious. It is one of our most critical priorities."

Conflicting data and uncertainties

There is no doubt that several moving parts are at play with regard to current conditions in the market. Al-Falih articulated this eloquently by saying: "So you can see the conflicting data and the uncertainties it points to. Clearly, we must sift through this information and make sense of it, with the aim of arriving at prudent decisions. And that prudence is shaped by our desire to minimize volatility; help to maintain market balance; and promote stability. This would be in everyone's interest — both consumers and producers."

He concluded by returning to this theme: "Putting this all together, while we want to make decisions and not shy away from them, it is critical that we don't make hasty decisions –given the conflicting data, the complexity involved, and the evolving situation."

Following the opening remarks, the meeting continued with presentations by the OPEC Secretariat on production data and with a market update.

A balanced oil market remains the focus

The press release issued after the meeting reasserted the core objective at the core of the successful enterprise that has been the 'Declaration of Cooperation'. It stated that the JMMC had reaffirmed its commitment to achieving a balanced market and working towards oil market stability on a sustainable basis with solid fundamentals.

Looking at the overall situation, with regard to the oil market and the global economy in the first quarter of 2019, the statement said: "The JMMC expressed its satisfaction regarding the critical role which the

At the press conference seated on the panel were (l–r): Hasan Hafidh, Head of OPEC's PR & Information Department; Mohammad Sanusi Barkindo, OPEC Secretary General; Khalid A Al-Falih, Minister of Energy, Industry & Mineral Resources of the Kingdom of Saudi Arabia, Chairman of the JMMC; Alexander Novak, Minister of Energy of The Russian Federation and Co-Chairman of the JMMC; and Mathew Quinn, Editor/Speechwriter, OPEC's PR & Information Department, reading the press release (on the left).

'Declaration of Cooperation' played in the oil market recovery seen in the first quarter of 2019 compared to the fourth quarter of 2018, supported by high conformity to the voluntary production adjustments by participating countries.

"Conformity for the month of April 2019 was 168 per cent, and this record high figure has also had positive ramifications for global economic growth in the first four months of 2019. Average conformity has reached 120 per cent since January 2019."

It outlined how agility has been one of the vital ingredients of the success of the 'Declaration': "The Committee noted that an agile and flexible approach has been critical to the success of the 'Declaration of Cooperation' to date and will be key going forward. Since the 'Declaration' was signed on December 10, 2016, the partners have been able to adapt course depending on market conditions.

When the market appeared skewed to oversupply, voluntary production adjustments were adopted and implemented, as was the case in December 2016 and December 2018, and equally, when concerns regarding demand outpacing supply surfaced as the market tightened, as was the case in June 2018, partners in the 'Declaration' took appropriate action."

A press conference followed, which allowed the press corps to posit questions for the committee's leadership.

All eyes turn to Vienna

Once again the JMMC has navigated the difficult course of analyzing market conditions in advance of preparing its recommendations for the next OPEC Conference and OPEC and non-OPEC Ministerial Meeting.

The inherent complexity of the market, which has intensified in recent weeks, has made the task more challenging. However, the Jeddah meeting marked another significant milestone in the ever evolving journey of the 'Declaration of Cooperation' partnership.

Mohamed Arkab, Minister of Energy, Algeria.

Thamir Abbas Al Ghadhban, Deputy Prime Minister for Energy Affairs and Minister of Oil, Iraq.

Dr Khaled Ali Al-Fadhel, Kuwaiti Minister of Oil, Minister of Electricity & Water, Chairman of the Board of the Kuwait Petroleum Corporation (KPC).

Mustafa Sanalla, Chairman of the National Oil Corporation, Libya.

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

HRH Prince Abdulaziz Bin Salman Bin Abdulaziz Al-Saud, Minister of State for Energy Affairs of the Kingdom of Saudi Arabia.

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

Mrs Maria Araujo de Quevedo (l); and Eng Angel Gonzalez Saltron; from the Venezuelan Delegation.

Parviz Shahbazov, Minister of Industry and Energy, Azerbaijan.

Shaikh Mohamed Khalifa Al-Khalifa, Minister of Oil, Bahrain.

Dato Paduka Dr Awang Haji Mat Suny bin Haji Mohd Hussein, Minister of Energy and Industry, Brunei Darussalam.

Magzum Mirzagaliyev, Vice-Minister of Energy, Kazakhstan.

Dr Mohammed Bin Hamad Al-Rumhy, Minister of Oil and Gas, Sultanate of Oman.

Alexander Novak, Minister of Energy of The Russian Federation and Co-Chairman of the JMMC.

Honorable Ambassador Ezekiel Lol Gatkuoth, Minister of Petroleum, South Sudan.

The JMMC convened in Jeddah for its 14th Meeting on May 19, 2019, to review the April 2019 report on the implementation of the 'Declaration of Cooperation'.

29th Meeting of the Joint Technical Committee (JTC)

Jeddah, Saudi Arabia, May 17, 2019

Delegates to the 29th meeting of the Joint Technical Committee (JTC) which convened in Jeddah on May 17, 2019, take time out for a group photograph.

The 29th meeting of the JTC in session.

JMMC Gala Dinner

One of the regular highlights of the Joint Ministerial Monitoring Committee (JMMC) is the fervently anticipated 'gala dinner' that accompanies each meeting. When the JMMC is 'on the road,' these welcoming and relaxing events offer an opportunity to showcase the host country's culture, cuisine and music.

Mohammad Sanusi Barkindo, OPEC Secretary General (c); was welcomed to the gala dinner by HRH Prince Abdulaziz Bin Salman Bin Abdulaziz Al-Saud (l), Minister of State for Energy Affairs of the Kingdom of Saudi Arabia; and Khalid A Al-Falih (r), Minister of Energy, Industry and Mineral Resources, Saudi Arabia.

Manuel Salvador Quevedo Fernandez (centre l), People's Minister of Petroleum of Venezuela and President of the Conference; and Mohammad Sanusi Barkindo (center r), OPEC Secretary General; perform the Mizmar, the customary wooden stick dance with traditional dancers and other delegates.

The 14th Meeting of the JMMC held in Jeddah, Saudi Arabia was no different. The gala dinner was particularly special, as it was an *Iftar* meal during the holy month of Ramadan.

An exhibition of traditional Saudi Arabian arts and crafts provided visitors with the feel of a traditional Bazaar atmosphere. Musicians and poets movingly provided a sample of some of the nation's performing arts. The customary wooden stick dance had the audience enthralled and a group of children proudly waved the national flags of participating countries.

It was an unforgettable experience which enraptured the senses and left participants with memories that they will cherish for a lifetime.

The *OPEC Bulletin* provides some images from the evening.

Saudi Arabia and OPEC: A unique role played by a market leader

Saudi Arabia has played an important role in OPEC's evolution ever since it was one of the five Founding Members back in September 1960. Its leadership; its fortitude; its courage have all been essential to its almost six decades of existence in OPEC. The OPEC Bulletin *reviews the unique role Saudi Arabia has played in the history of the Organization.*

Shutterstock

Travel has become an essential component of modern statesmanship and for this reason the Joint Ministerial Monitoring Committee (JMMC) has travelled to several participating countries to conduct its business. As Mohammad Sanusi Barkindo, the OPEC Secretary General, said at the 8th Meeting of the JMMC, held in Jeddah on April 20, 2018: "Rotating the location in this manner means that aside from conducting our regular business; the enduring bonds of friendship between all of our great participating countries, OPEC and non-OPEC alike, are further strengthened. This week, we celebrate the enormous contribution Saudi Arabia has made to OPEC throughout the last 58 years."

One year on, and Jeddah has now hosted the JMCC twice, with the Saudi leadership and the Ministry of Energy, Industry and Mineral Resources playing vital roles in the country — one endowed with plentiful natural resources — unleashing its greatest asset: the ambition of its people and the potential of its younger generation.

Inspiring leadership

Under the leadership of King Salman Bin Abdul Aziz Al-Saud, the Custodian of the Two Holy Mosques, supported by Crown Prince Mohammed bin Salman Al Saud, the Kingdom is being transformed through Saudi Vision 2030 *(see page 22)*, into an investment powerhouse and the hub connecting three continents.

This same visionary and innovative spirit has been central to Saudi Arabia's leadership position in OPEC and the 'Declaration of Cooperation' — which has done so much to transform the oil industry, rescuing it from the most severe downturn in the industry's history.

As the Crown Prince described the 'Declaration of Cooperation': "A huge effort was invested in the agreement between OPEC Countries and non-OPEC countries. The agreement is unprecedented in history. We have always learnt from the past that such agreements happen between OPEC Countries only. This is the first time in history to have an agreement between OPEC and non-OPEC countries, which led to a very positive condition in regard to oil returns earned by the state."

OPEC has benefitted immensely from the vision and foresight of the Crown Prince, who played a critical role in ensuring the adoption and successful, ongoing implementation of the 'Declaration of Cooperation.'

The Crown Prince has consistently demonstrated his commitment and support for OPEC and was particularly instrumental in forging close relations with the Russian Federation, a relationship that has helped underpin the 'Declaration of Cooperation.'

Advancing the cause

Present alongside Khalid A Al-Falih, the JMMC Chair and Minister of Energy, Industry and Mineral Resources, was Prince Abdulaziz Bin Salman Bin Abdulaziz Al-Saud, the current Minister of State for Energy Affairs, who has been instrumental in the adoption of several landmark OPEC Declarations.

The Prince was Chairman of the High Level Officials of Drafting the 'Caracas Declaration', Chairman of the High Level Officials of Drafting the 'Riyadh Declaration' and Chairman of the Long-Term Strategy, as well as working tirelessly to promote the 'Declaration of Cooperation.'

Al-Falih, himself, played a pivotal role in the negotiations that led to the adoption of the 'Declaration of Cooperation' in December 2016. His shuttle diplomacy, both then, and since, have been widely recognized as being central to guiding the 'Declaration' forward. Moreover, as President of the OPEC Conference in 2017, he inspired the partners in their first successful year of implementing their commitments.

Having good intentions is one thing; operationalizing them is another. The visionaries behind the 'Declaration of Cooperation' understood the necessity of developing a mechanism to monitor the implementation of, and conformity with the voluntary production adjustments. To achieve this, they devised an innovative concept: the JMMC.

As Chairman of the JMMC in 2018 and 2019, Al-Falih has ensured the committee has become an integral part of the fabric of OPEC. Indeed the 14th Meeting of the JMMC is the second time the Committee has enjoyed the hospitality of Jeddah. The 8th Meeting of the JMMC took place in Jeddah in April 2018: a highly consequential event which garnered the attention of the world's media, leading statesmen and politicians.

In February 2018, the Minister was also presented with the 'International Oil Diplomacy Person of the Year 2017' Award at the Energy Institute's International Petroleum (IP) Week, a fitting tribute to his outstanding performance in 2017.

Pivotal role in OPEC's founding

Saudi Arabia played a pivotal role in founding the Organization and over subsequent years, the Kingdom

Custodian of the Two Holy Mosques, King Salman Bin Abdulaziz Al-Saud, of the Kingdom of Saudi Arabia.

The Kingdom of Saudi Arabia's Crown Prince Mohammed bin Salman bin Abdulaziz Al-Saud.

HRH Prince Abdulaziz Bin Salman Bin Abdulaziz Al-Saud, Minister of State for Energy Affairs of the Kingdom of Saudi Arabia.

would be instrumental in guiding OPEC to further successes.

In April 1959, in Cairo, Egypt, on the sidelines of the First Arab Petroleum Congress, Saudi Arabia's Abdullah al-Tariki met Venezuela's Juan Pablo Pérez Alfonzo, to discuss ways and means to safeguard their countries' legitimate national interests. Tariki and Perez Alfonzo were kindred spirits and sought to broaden discussions to include other major exporters. Together with Dr Fuad Rouhani of Iran, Dr Tala'at al-Shaibani of Iraq, and Ahmed Sayed Omar of Kuwait, these five gentlemen would become the founding fathers of OPEC in Baghdad, in September 1960.

The nascent Organization spent the 1960s developing its collective vision, setting up its objectives and establishing its Secretariat. It adopted a 'Declaratory Statement of Petroleum Policy in Member Countries' in 1968, which emphasized the inalienable right of all countries to exercise permanent sovereignty over their natural resources in the interest of their national development.

Crucial throughout this entire process was Saudi Arabia: which hosted the 5th OPEC Conference in Riyadh in 1963 and the consultative meeting of the five Member Countries in Taif in 1967; as well as Mohammad S Joukhdar, guiding the Organization as Secretary General in 1967.

Able leaders

Following in the footsteps of Tariki, Saudi Arabia has been served by a number of outstanding and extremely able Ministers.

- Ahmed Zaki Yamani, Minister and Head of Delegation to OPEC from 1962 to 1986;
- Hisham M Nazer, of blessed memory, Minister and Head of Delegation to OPEC from 1986 to 1995, who sadly passed away in 2016;
- Ali I Naimi, Minister and Head of Delegation to OPEC from 1995 to 2016.
- And Khalid A Al-Falih, the current Minister of Energy, Industry and Mineral Resources and Head of Delegation to OPEC.

Each Minister has made their own unique contribution to the betterment of OPEC's aims, as well as enriching dialogue between OPEC and other stakeholders in the international energy community.

Saudi Arabia has facilitated the enhancement of OPEC's reputation, dedicating itself to working towards market stability in the interests of producers, consumers and the global economy. Indeed the International Energy Forum has its headquarters in Riyadh and remains the only international energy body under whose umbrella both consumers and producers cooperate on energy issues, exchange information and gain deeper understanding of both parties' perspectives.

The Kingdom has organized successful and landmark meetings, summits, conferences and symposiums, each making an indelible mark in propelling the Organization forward. Under Naimi's leadership, the Third OPEC Summit of Heads of State and Government, was held on November 16, 2007 in Riyadh. This concluded with the 'Riyadh Declaration', which reaffirmed the inalienable and permanent sovereign rights of OPEC Member Countries over their natural resources and had three guiding themes: stable energy markets, sustainable development and the environment.

Constant leadership

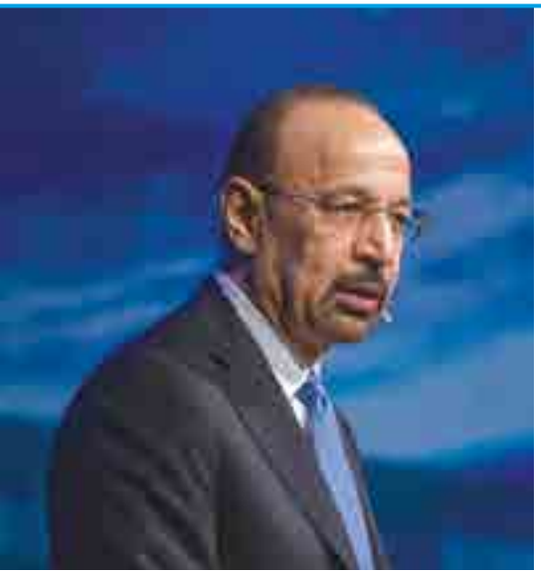
The JMMC encapsulates OPEC and non-OPEC cooperation at its best: ministerial comradery, fruitful knowledge exchange, technical know-how and frank dialogue. Yet perhaps its greatest strength is cementing personal relationships between delegates, which are essential for the smooth functioning of any partnership.

These contacts have evolved into friendships, which were renewed at the 14th Meeting of the JMMC, as Jeddah's position as a hub for fostering international dialogue and cooperation was reaffirmed.

As the Crown Prince has stated: "So we work with our allies in OPEC and also non-OPEC countries to be sure that we have a sustainable supply of oil and there is no shortage and that there is good demand, that it will not create problems for the consumers and their plans and development."

OPEC has encountered enormous change throughout its history and is currently embarked on an exciting new chapter with the 'Declaration of Cooperation' strategic partnership at the helm.

Throughout all the highs and lows, one thing has remained constant: Saudi Arabia has been a champion of market stability and an inspiration through its leadership. Successive Heads of Delegation have reinforced this, meaning that OPEC and Saudi Arabia have truly benefitted from a history of visionary leadership.



Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources, Saudi Arabia and the JMMC Chair.

Ali I Naimi, Minister of Petroleum and Mineral Resources of Saudi Arabia, from 1995–2016.

Hisham M Nazer, Minister and Head of Delegation to OPEC, from 1986–95.

Ahmed Zaki Yamani, Minister and Head of Saudi Arabia's Delegation to OPEC, from 1962–86.

Mohammad S Joukhdar from Saudi Arabia, OPEC Secretary General in 1967.

Abdullah al-Tariki, the first Saudi Oil Minister appointed by King Saud of Saudi Arabia and co-founder of OPEC with Juan Pablo Pérez Alfonso.

Diriyah, old heritage city, located in the north-western outskirts of the Saudi capital, Riyadh.

‘Vision 2030’: moving forward

Home to an estimated 15 per cent of the world’s proven oil reserves and the single largest economy in the Middle East and North Africa region, Saudi Arabia is a key player not only in the region, but also globally. In the last few years, Saudi Arabia has also attracted global attention for the momentum of its socio-economic transformation taking place under the auspices of the ‘Vision 2030’ development blueprint. The OPEC Bulletin *provides an update on how this is proceeding.*

Reuters

Custodian of the Two Holy Mosques, King Salman Bin Abdulaziz Al-Saud, of the Kingdom of Saudi Arabia.

The Kingdom of Saudi Arabia's Crown Prince Mohammed bin Salman bin Abdulaziz.

"My primary goal is to be an exemplary and leading nation in all aspects, and I will work with you in achieving this endeavour …" says the Custodian of the Two Holy Mosques, King Salman Bin Abdulaziz Al-Saud, on the opening page of the 'Vision 2030' website. With his foresight and aspirations for the nation, alongside the drive and ambition of Crown Prince Mohammed bin Salman bin Abdulaziz, the 'Vision 2030' blueprint is unfolding to help deliver the country's long-term goals and expectations and is a reflection of its strengths and capabilities.

The Crown Prince has stated that all success stories start with a vision, and successful visions are based on strong pillars. In this regard, he details three key pillars.

"The first pillar of our vision is our status as the heart of the Arab and Islamic worlds. We recognize that Allah the Almighty has bestowed on our lands a gift more precious than oil. Our Kingdom is the Land of the Two Holy Mosques, the most sacred sites on earth, and the direction of the Kaaba (Qibla) to which more than a billion Muslims turn at prayer.

"The second pillar of our vision is our determination to become a global investment powerhouse. Our nation holds strong investment capabilities, which we will harness to stimulate our economy and diversify our revenues.

"The third pillar is transforming our unique strategic location into a global hub connecting three continents, Asia, Europe and Africa. Our geographic position between key global waterways, makes the Kingdom of Saudi Arabia an epicenter of trade and the gateway to the world."

It is evident the focus is on the long-term, and underscores the leadership's determination to build a thriving country where all citizens can fulfill their dreams, hopes and ambitions. The Crown Prince states that "we will not rest until our nation is a leader in providing opportunities for all through education and training, and high quality services such as employment initiatives, health, housing, and entertainment."

Three primary themes

'Vision 2030' was developed by the Council of Economic and Development Affairs, which is chaired by the Crown Prince. It includes a number of goals and reform strategies for the Kingdom's long-term economic success, and the vision is built around three primary themes: a vibrant society, a thriving economy and an ambitious nation.

In order to achieve a vibrant society, Saudi Arabia will focus on its people and the Islamic faith. This will happen through a series of commitments, including: increasing the number of Umrah visitors from eight million to 30 million annually; establishing the largest Islamic museum in the world; doubling the number of Saudi heritage sites registered with UNESCO; promoting

Reuters

Nadhmi Al-Nasr, CEO of NEOM, speaks during the investment conference in Riyadh, Saudi Arabia, in October 2018.

the growth of cultural and entertainment opportunities within the Kingdom; encouraging healthy lifestyles so that the number of citizens who exercise once a week increases from 13 to 40 per cent; and developing Saudi cities so that three are recognized in the 100 top-ranked cities in the world.

In order to achieve a thriving economy, the Kingdom will diversify its economy and create dynamic job opportunities for its citizens. This will happen through commitments to education, entrepreneurship and innovation, including: diversifying the nation's economy through the ongoing privatization of state-owned assets and unlocking underdeveloped industries such as manufacturing, renewable energy and tourism.

It aims to modernize the curriculum and standards of Saudi educational institutions from childhood to higher learning. By 2030, Saudi Arabia expects to have at least five universities among the top 200 universities in the world. It also aims to refocus on small and medium-sized enterprises (SMEs) by encouraging financial assistance and increasing the contribution of SMEs to GDP from 20 to 35 per cent by 2030.

In order to be an ambitious nation, Saudi Arabia will focus on accountability, transparency and effectiveness in its governing strategy. Sustainable success can only be achieved with solid foundations. In order to realize this potential, the Kingdom will: establish zero tolerance for all levels of corruption; boost transparency by expanding online services and improving governance standards; establish the King Salman Programme for Human Capital Development in order to train more than 500,000 government employees in best practices; and bolster the non-profit sector through increased efficiency and impact.

NEOM

A key recent development relates to Saudi Aramco, the world's largest oil producer, agreed to acquire a 70 per cent majority stake in state-controlled petrochemical giant Saudi Basic Industries Corporation, known as SABIC, from

the Public Investment Fund (PIF) of Saudi Arabia for $69.1 billion at the end of March *(see page 28)*.

As Saudi Arabia continues its efforts to diversify the economy and create more jobs, PIF's divestment of SABIC gives it more liquidity to invest into other programmes, including NEOM, envisaged to be a mega business zone and a tourist destination. Located in Tabuk, in the northwest of the Kingdom, it is one of the flagship projects of the Kingdom's Vision 2030.

In mid-April, NEOM city's CEO Nadhmi Al-Nasr, in a statement carried by the Saudi Press Agency (SPA), said: "In the coming few months the team will start the construction process, which will be followed by important and sensitive stages."

Al-Nasr spoke after the 'DREAM NEOM' competition, which was carried out in collaboration between NEOM and MISK Foundation, a non- profit organization devoted to cultivating learning and leadership in youth. The competition focused on how best to tackle the challenges faced by NEOM with innovative solutions. Three Saudi youth teams won the first awards from the Fellowship and Traineeship in 'DREAM NEOM' competition, where the three teams presented smart solutions to meet the challenges that may face future cities in the fields of renewable energy, sea transportation and special needs services.

Al-Nasr stated that the NEOM and MISK initiative was the first of many to attract Saudis who are capable of being an integral part of the construction process of NEOM.

National Industrial Development and Logistics Programme

Another Vision 2020 programme that has moved forward in 2019 is the National Industrial Development and Logistics Programme (NIDLP), with the Kingdom offering investment opportunities in mining, industry, logistics and energy.

NIDLP, a landmark infrastructure programme, seeks to develop qualitative industries, increase non-oil exports, reduce imports, raise contribution of the target sectors

Visitors watch a 3D presentation during an exhibition on 'Neom', a new business and industrial city, in Riyadh, Saudi Arabia.

Reuters

Pictures of Saudi Arabia's Crown Prince Mohammed bin Salman bin Abdulaziz Al-Saud and Saudi Arabia's Custodian of the Two Holy Mosques, King Salman Bin Abdulaziz Al-Saud are seen during the launching of National Industrial Development and Logistics Programme (NIDLP) in Riyadh, Saudi Arabia, January 2019.

to GDP, create major employment opportunities, improve the Kingdom's trade balances, maximize local content, and attract foreign investments.

It aims to boost the contribution to GDP of these sectors to $320bn by 2030, stimulate investments worth more than $426bn, and increase the volume of non-oil exports to over $260bn. The initiative is dedicated to diversifying the kingdom's economy away from oil reliance and help create private sector jobs for Saudi nationals.

In a launch event in January, attended by the Crown Prince, Khalid A Al-Falih, Saudi Arabia's Minister of Energy, Industry & Mineral Resources, said: "The programme will be an outstanding achievement within the economic diversification process led by your royal highness."

Foreign ownership of Saudi stocks

In mid-March, it was announced that the commencement of the first phase of the Saudi Stock Exchange's (Tadawul) inclusion into the FTSE Russell and S&P Dow Jones Indices (S&P DJI), both leading providers of global equity indexes. The inclusion into the FTSE Russell Emerging Markets (EM) index will occur in five tranches over 12 months from March.

In talking to Reuters following the announcement, Khalid Al-Hussan, the CEO of Tadawul, said he expected equities on the Saudi bourse, Tadawul, to attract $5 billion of passive funds inflows after the FTSE Russell inclusion.

He added that the inclusion of Tadawul into the FTSE Russell and S&P Emerging Market indices is a testament to growing investor confidence in the Saudi market and reflects the successful implementation of far-ranging capital market reforms in line with the Financial Sector Development Programme (FSDP) and Vision 2030 that have further enhanced the accessibility of Tadawul to international investors.

Qiddiya and the Red Sea Project

Two other huge projects, focused on economic, social and cultural diversification, are also moving forward through Vision 2030: Qiddiya and the Red Sea Project.

In December 2018, it was announced that 2019 would see Qiddiya move from the planning and design phase to the construction phase, with a company tweet reading: "We are a step closer to building Saudi Arabia's first entertainment and sports city."

The Qiddiya site is 40 km from the centre of Riyadh and is set to include theme parks, entertainment centres, sports amenities capable of hosting international competitions, training academies, desert and asphalt tracks for motorsport enthusiasts, water- and snow-based recreation, adventure activities alongside nature and safari experiences, and an array of historical, cultural and educational activities and events.

The ambitious project hopes to attract local, regional and international tourists and when completed it is envisaged to be the world's largest entertainment city, surpassing Walt Disney World in Florida.

The Red Sea Project, is a touristic project that includes more than 90 unspoiled islands located between the cities of Umluj and Al-Wajh. It covers a number of the Red Sea's untouched islands and a nature reserve containing regional flora and fauna.

In February, the Red Sea Development Company, which is building the project, announced that it had commenced operations at the Base Camp of The Red Sea Project. It added that the Base Camp, which is situated on the coastal area near the southern end of the 28,000 sq km destination, is the first of numerous enabling works to be carried out in 2019 to provide the essential infrastructure for the project. These works will also include temporary roads, bridges, jetties, utilities, workforce accommodation, and a management village which will support the development of the luxury tourism destination.

"This is an important milestone for The Red Sea Project and takes us another step closer to our goal of creating a truly exquisite tourism destination on the beautiful Red Sea coast," said John Pagano, CEO of the Red Sea Development Company. "The remote nature of the site, which is an important part of its appeal as a destination, creates logistical challenges for the support of large-scale development. The Base Camp is an essential first step in preparing the destination for construction."

The first phase of the development is planned to open in 2022 and will include hotels, unique attractions, residential properties, a marina, leisure, commercial and entertainment amenities and all supporting infrastructure.

Qiddiya, a multi-billion dollar entertainment resort, launching ceremony in Riyadh, Saudi Arabia, in April 2018.

In the same month, the Red Sea Development Company (TRSDC) and the King Abdullah University of Science and Technology (KAUST) also developed "a ground-breaking application of conservation and development planning to enhance biodiversity and conservation-priority species distributions across almost 1,300 sq km of pristine lagoon, pioneering a new relationship between natural resource conservation and the development of a luxury tourism destination."

"We will not compromise the standards that we have set for ourselves as we deliver this incredible project. We believe that this commitment matches the desires of our potential customers in the luxury travel market," said Pagano. "Today's luxury traveller wants to enhance, not exploit, the natural environment. Together we can preserve and enhance this unique treasure for future generations, and share the lessons we learn here with the world."

Steps forward

It is clear that the Kingdom's Vision 230 blueprint is taking big strides, driven by the country's leadership. The response to multiple societal challenges is helping drive the Saudi nation forward, and creating greater opportunities for its population. It is a bold attempt to reshape society, a bold attempt to diversify the economy, and a bold attempt to think new; it is one that is already bearing fruit.

Aramco

Saudi Aramco and SABIC signing ceremony.

Saudi Aramco and SABIC: a 'win-win-win' transaction

At the end of March, Saudi Aramco, the world's largest oil producer, agreed to acquire a 70 per cent majority stake in state-controlled petrochemical giant Saudi Basic Industries Corporation, known as SABIC, from the Public Investment Fund (PIF) of Saudi Arabia for $69.1 billion. It is one of the biggest deals in the global chemical sector and has significant ramifications for the Kingdom of Saudi Arabia. The* OPEC Bulletin *reports.

Saudi Aramco may dwarf even its largest international rivals in the upstream, but its downstream has lagged the likes of its international oil company competitors. However, the purchase of SABIC, and other moves into the downstream, underlines that the company is now ready to change this script.

It is clear that the company's self-declared goal to become the world's largest integrated energy firm stems from a conscious desire to ensure the kingdom's core source of revenue — oil — is not compromized. The company evidently also has plans to significantly evolve its global gas footprint, but the SABIC deal is an unmistakable indicator of its growing refining and petrochemical ambitions.

Mega-deal

The mega-deal, which involves three Saudi Arabian government entities, sees Saudi Aramco purchase the 70 per cent stake in SABIC, currently held by the country's sovereign wealth fund. The remaining 30 per cent will continue to be listed on Saudi Arabia's Tadawul stock exchange.

Yasir Othman Al-Rumayyan, Managing Director, PIF of Saudi Arabia said: "This is a win-win-win transaction and a transformational deal for three of Saudi Arabia's most important economic entities."

As Mohammed bin Salman bin Abdulaziz Al Saud continues his efforts to diversify the Saudi Arabian economy and create more jobs, PIF's divestment of SABIC gives it more liquidity to invest into other programmes, including a mega business zone in the northwest of the country.


SABIC

The headquarters of Saudi Basic Industries Corp (SABIC), seen in Riyadh, Saudi Arabia.

"This is a win-win-win transaction and a transformational deal for three of Saudi Arabia's most important economic entities."

— Yasir Othman Al-Rumayyan


Shutterstock

Saudi Basic Industries Corporation's (SABIC), Chief Executive Officer, Yousef al-Benyan.

Al-Rumayyan added: "It will unlock significant capital for PIF's continued long-term investment strategy, underpinning sectoral and revenue diversification for Saudi Arabia."

The acquisition will be a key pillar for Saudi Aramco and SABIC in the development of the petrochemicals industry in Saudi Arabia, and reinforces aligned objectives to create a preferred global chemicals company.

For Saudi Aramco, analysts say that buying a giant petrochemical company like SABIC also fits with Aramco's own plans to diversify and strengthens the company's position as one of the world's largest integrated energy and chemical companies. Saudi Aramco has been increasing its investments in refining and petrochemicals to secure new markets for its crude as it sees growth in chemicals as central to its downstream expansion strategy.

Amin Nasser, President & CEO, Saudi Aramco said: "This transaction is a major step in accelerating Saudi Aramco's transformative downstream growth strategy of integrated refining and petrochemicals. SABIC is a world-class company with an outstanding workforce and chemicals capabilities. As part of the Saudi Aramco family of companies, together we will create a stronger, more robust business to enhance competitiveness and help meet rising demand for energy and chemicals products needed by our customers around the world."

Abdulaziz Al-Judaimi, Senior Vice President of Downstream, Saudi Aramco, said: "Saudi Aramco's downstream strategy is focused on meeting global customer needs by securing outlets for our crude oil through the expansion and growth of our refining system and deepening its integration with petrochemicals production. We are pursuing partnerships and acquisitions where we create long-term value, and developing groundbreaking crude-oil-to-chemicals technologies. SABIC is a good strategic fit and a solid platform to support our continued investment for future growth in petrochemicals — the fastest growing sector of oil demand."

Yousef Al-Benyan, SABIC Vice Chairman and CEO, said: "SABIC's relationship with Saudi Aramco goes back to our inception in 1976. Solidifying our relationship in this way strategically positions SABIC and Saudi Aramco to accelerate exciting developments in our global chemicals business.

Amin H Nasser, President and Chief Executive Officer of the Saudi Arabian Oil Company (Saudi Aramco).

"I believe the potential rewards of this deal are clear and support our vision to be the preferred world leader in chemicals. SABIC will benefit from the additional scale, technology, investment potential, and growth opportunities Saudi Aramco will bring as a global leader in integrated energy and chemicals production, while remaining focused on meeting the needs of our customers and the creation of value for all our shareholders."

Saudi Aramco is not only the world's largest oil producer, but was the world's most profitable company in 2018, easily surpassing US giants including Apple Inc and Exxon Mobil Corp, according to accounts published by ratings agencies before the firm's debut in the international bond market in early April.

In terms of petrochemicals, before the transaction, Saudi Aramco and SABIC has petrochemicals production capacity of around 17 million and 62m tons/year, respectively.

Oil tanks at Saudi Aramco's Ras Tanura oil refinery and oil terminal in Saudi Arabia.

Further refinery moves

Towards the end of April, Saudi Aramco also announced that it would acquire Royal Dutch Shell's 50 per cent stake in their Saudi refining joint venture Saudi Aramco Shell Refinery Co (SASREF) for $631m, and that it had reached an agreement for its subsidiary, Aramco Overseas Company BV (AOC), to purchase a 17 per cent stake, valued at approximately $1.25 billion, in South Korea's Hyundai Oilbank, a subsidiary of Hyundai Heavy Industries Holdings.

SASREF, based in Jubail Industrial City in Saudi Arabia, has a crude oil refining capacity of 305,000 b/d. The main products are liquefied petroleum gas, naphtha, kerosene, diesel, fuel oil and sulphur.

"Saudi Aramco will take full ownership and integrate the refinery into its growing downstream portfolio. SASREF will continue to be a critical facility in our refining and chemicals business," Abdulaziz Al-Judaimi, Aramco's senior vice president of downstream, said in a statement.

The SASREF purchase, which forms another part of Saudi Aramco's strategy to expand its downstream operations is expected to be completed later this year.

In South Korea, AOC's investment in South Korea's Hyundai Oilbank will support Saudi Aramco's crude oil placement strategy by providing a dedicated outlet for crude oil to South Korea. Al-Judaimi said: "This acquisition demonstrates our investment in the highly complex refining sector in Asia, and continuous commitment to the region's energy security and development."

"As part of the Saudi Aramco family of companies, together we will create a stronger, more robust business to enhance competitiveness and help meet rising demand for energy and chemicals products needed by our customers around the world."

— Amin H Nasser

Bijan Namdar Zanganeh, IR Iran's Minister of Petroleum, opening the 24th Iran Oil Show.

Local companies dominate at 24th Iran Oil Show

The 24th International Oil, Gas, Refinery and Petrochemical Exhibition, held from May 1–4, 2019, at the Tehran International Permanent Fairground focused especially on domestic manufacturing companies, knowledge-based firms and start-ups this year, according to the Manager of the Exhibition, Mohammad Naseri. Moreover, the National Iranian Oil Company (NIOC) and the Ministry of Petroleum are paying much more attention to building domestic talent in IR Iran. Maureen MacNeill reports from Tehran.

Bijan Namdar Zanganeh, IR Iran's Minister of Petroleum, attending to questions from the press.

"We are seeing the development of more and more local companies — oil industry and supply companies. It makes the companies feel satisfied that they have the support of the NIOC and the Ministry to attend and they show more interest to attend," Naseri said in an interview with the *OPEC Bulletin*.

Naseri stated that the industry's needs are largely met by internal suppliers. Prior to sanctions, the focus was on trying to find a balance between Iranian and foreign companies, and joint ventures. "This year, because of sanctions, there are less foreign companies (in attendance). There's been a very big drop. They want to be here, but they can't.

"Despite the fact that there are less foreign companies than last year, the exhibition and oil show is one of the greatest in the region and one of the five biggest exhibitions in the world," he said.

NIOC has been in contact with universities and knowledge-based companies to develop projects, and these groups are developing parts of the oil industry, stated Naseri. Thus this year, he stressed, the organizers decided to invite start-ups to the event.

The big picture is focused on diversification and domestication. "It has just arrived to the oil industry and we are developing all parts of it."

Opening ceremony

A speech by IR Iran's Minister of Petroleum, Bijan Namdar Zanganeh, was the highlight of the opening ceremony. Naseri welcomed the Minister, stating that there are more than 1,000 Iranian companies at the exhibition this year, and about 100 foreign companies from 21 nations were in attendance. He also focused on the attendance of

Mohammad Naseri, Manager of the exhibition.

Ehsan Mousavi, Business Development Director, Oil Industries Engineering and Construction (OIEC).

Mohammad Sanusi Barkindo, OPEC Secretary General, who made a visit to the conference and exhibition for the first time since his tenure.

Zanganeh discussed the unavoidable topic of sanctions, but also focused on the great efforts being made by the country's refining and petrochemical sectors. "This year is the first time our production capacity of olefin plants was completed." He stated that petrochemical projects are predicted to increase production from 27 million tonnes (m t) in 2013 to 50m t in 2021, with earnings going from $19 billion in 2013 to $36bn in 2021.

"The downstream sector production will increase, and we will also offer engineering services, based domestically, due to the strength of our domestic companies."

He also stated that the gas industry has a production capacity of 1,000 million cubic metres/day (m cu m/d), and that gas production in South Pars was up by 60m cu m/d.

This year the Ministry is trying to open a new chapter in knowledge-based companies and start-ups, Zanganeh highlighted, which is why there was a special place for start-ups at the exhibition, "to showcase achievements." The Ministry's business activities in the petrochemical industry will be developed together with universities, he added. Twenty-three contractors worth 34 billion rials are under review. "We also want to create jobs in the industry and support prosperity in the country."

He added the Ministry will continue to support domestic manufacturers. IPCs (Iran Petroleum Contracts, revealed late in 2015) will be mainly sourced domestically because domestic manpower has already been defined. "Up to 95 per cent will be done domestically," he said.

"The government agrees with new technology, to be able to sell our oil. Any investor from the government or the private sector able to provide resources is welcome. The government will not be in charge of financing; forums will be held on domestic manufacturing and start-ups."

Zanganeh said that US attempts to bring Iranian oil exports to zero are not possible. He added that "IR Iran has never used oil as a political ploy, and any who use it as such a tool will have to bear the consequences … we have to all join hands and work together to leave behind these precarious conditions."

Exhibitors

One of the largest professional oil and gas teams at the exhibition is the Oil Industries Engineering and Construction (OIEC), with a stand beside the National Iranian Oil Company (NIOC).

The company began 30 years ago in the downstream and has since expanded into the upstream, states Business Development Director, Ehsan Mousavi. Now it is a general contractor for the oil and gas sector, with services from A to Z and subsidiaries in each sector — oil, gas, petrochemical and refinery.

"With 30 years of experience we have special

Hocine Mohamdi, Sales Director of Pekos Valves of Spain.

The OPEC exhibition stand.

knowledge. We have unique natural gas liquids (NGLs) projects and technology in IR Iran. Operation and maintenance activities are unique, and we have three unique upstream projects."

For example, one of the subsidiaries, known as KPE, is involved in areas such as refinery, pipelines, operational maintenance and storage tanks. It is dealing with 6.5 million barrels (m b) of capacity, gas exporting services, buyback projects, and "should transfer oil outside of IR Iran. "We want to complete the value chain. Find and start projects and export products. We want to be a general international contractor."

Some of the company's projects are with NIOC, while others are with the oil and gas pension fund.

In some projects, OIEC is the owner and in some it is not, and sometimes client and stakeholder are one and the same. "I love my job!" says Mousavi. "I am looking for projects, ideas, solutions, etc. Because of sanctions we focus more internally, but we also look for cooperation with nearby countries. We have lots of projects in Iraq and a good development plan."

He said they still work with some European companies on knowledge transfer. "Some solutions to zero flaring, for example. German companies, Spain, they meet during this exhibition ready to transfer technology to IR Iran. Some confidential agreements have been signed at the exhibition."

In relation to petrochemicals, Russia and China are transferring native technology; unique technology. "We met with them and found them successful. We are looking to find the best of them to continue projects in IR Iran."

International

Hocine Mohamdi, the Sales Director of Pekos Valves of Spain said at his booth that his company did not think twice about returning to IR Iran. His company is part of an official pavilion supported by the Spanish government.

His company produces valves and offers quality knowledge and know-how. It works in other OPEC Member Countries, too.

He says his company has invested a lot of effort into IR Iran, adding that they may have arrived too late to the market already 15 years ago. "By the time we got on a vendor list, got references, got our name somehow known, it took a long time.

"Mainly we see potential here, rather than the reality of business. Fifteen years is not enough time, but the company is nearly there. We do not want to leave now that we have invested the time…it is time to pick the fruits from our efforts."

His company plans to come back next year, said Mohamdi. "What is different from other exhibitions is that it demonstrates local capacities here. The EPCs (engineering, procurement and construction companies) and end-users are both here. It is important for manufacturers to meet them; this exhibition has the power to attract end users and EPCs unlike other exhibitions."

Andrea Zucchini is the President of I-Pars, a consultancy company with its headquarters in Tehran.

Nozzles on dispay at an exhibition stand.

Andrea Zucchini is the President of I-Pars, a consultancy company with its headquarters in Tehran. After working in politics and in Italian firms, he decided to come to IR Iran about five years ago.

The company has good relations with main Italian institutions and has organized several events to promote friendship between Italy and IR Iran. It also collaborates with Confidustria Emilia, which is the major representative association of manufacturing and service companies in Italy.

It was the president of the Confindustria, Marco Gasparri — a great lover of IR Iran — who suggested that Zucchini make the move. Gasparri was also in IR Iran from June 8–10 for industrial, institutional and cooperation meetings. The company offers business scouting, business development and technical support.

According to the company's website, Italy has a long history working with IR Iran, including being one of the first European nations to resume economic contact with the country in late 1998, and returning to be IR Iran's first sales partner inside the EU.

In fact, Zucchini said, some business relations have been going on for over 60 years. Generally speaking, Italians are very curious about IR Iran, so there are also companies entering the market for the first time, he added.

He said Italian companies come to IR Iran generally for four reasons: to search for an agent or distributor of finished products; to search for raw materials or Iranian products; to search for a partner to produce locally or transfer technology; or to search for a partner for a joint venture.

"IR Iran and Italy, especially in the oil and gas sector, have an important and historic relationship. For many Italian companies, the Iranian market is the first in importance, but some of them are afraid to operate because of US sanctions."

In past years there were many Italian companies present at the fair, especially after the Joint Comprehensive Plan of Action (JCPOA) nuclear agreement was signed in 2015. This year there were 14 exhibiting companies and many Italian companies attended the fair as visitors, says Zucchini.

"We were present with an Italian delegation to express our closeness to the Iranian people during this difficult time … Working here is not easy, but we are very determined not to leave our Iranian friends alone.

"There are several European companies that are continuing to operate in IR Iran, but they could do much more. We hope that the "Instex system" will become operational as soon as possible."

IR Iran changes very quickly, said Zucchini, and many things have improved in his five years of living in the country. "This country is much more advanced than one might think. I think if the nation were left to develop without international sanctions, it would be among the first seven countries in the world."

He added that IR Iran is the country with the most business development potential in the world, but he

Gunther Dauner (l), Managing Partner at the Austrian firm, ComFin Software, with the Managing Director, Gerald Neher (r).

On display are news items organized by the Iranian Research Institute of Petroleum Industry, set up for a press conference.

admitted that complexity is very high, which is "why we are here alongside Italian and Iranian companies.

"Iranians and Italians are very similar peoples who like each other very much," he stated.

Austrian firm ComFin Software has no qualms about working in IR Iran. A mix of Iranian and European partners sit around a table at the exhibition and swap jokes and laughs.

"It is my first time here, and I think there is an interesting possibility to profit from each other," said Gunther Dauner, Managing Partner in the firm. The company attended events at the Austrian Chamber of Commerce, which sent ComFin a recommendation and then an invitation to attend the event. ComFin is one of six companies that were housed in the Austrian pavilion this year.

"We are here because we come from the oil and gas (industry) … It is a win-win if they take our systems." The company was founded in Vienna and started developing software applications for its own brokers back in 1997, said Dauner. "This does not exist in IR Iran, this kind of software is unique in IR Iran."

The company started selling to international companies and adapting their product to their clients' needs. They expanded through Europe, the Middle East and America. Their product is off-the-shelf and is used for oil trading, risk management, and to "maximize profit by minimizing risk." The company's product is primarily targeted at the oil and gas industry, but could be used for other commodities as well, he says.

"We offer a very complete package: trading, storage, drilling, all areas of oil and gas.

"We are always looking for new markets and IR Iran is an important target … All our main rivals are US companies, and they are not here."

Their local partner has been working for over 30 years in the Iranian oil and gas industry, experience the company considers invaluable. The headquarters in Vienna hosts 14 people, with a very international team from places such as Italy, Bulgaria, and Kenya, said Dauner.

Managing Director Gerald Neher, sitting nearby, had the idea to buy the company, and last year the two started working together. "He found someone — me — who has new ideas, is more open-minded, has no problem working with other countries," stated Dauner.

"We have negotiated with many oil and gas companies in IR Iran … we are already in the follow-up process. We will fly back soon and I am confident we will have some contracts.

"We have a short plan to negotiate and set up meetings with these companies. Our long-term programme includes having an active role in the Middle East and OPEC countries. We are focusing on OPEC Countries."

It is important to develop friendships and partnerships, and "it was really worth coming here", said Dauner. "We also hope we can participate in next year's oil show. It is a good spot to present products."

The company thinks it will succeed because of its local partners, said Neher, who have the contacts, the

Jafar Towfighi (sixth r), Head of RIPI, the Iranian Research Institute of Petroleum Industry.

language and have been in the business a long time, including Mohammad Taghi Heidari, a direct manager in IR Iran, also at the table.

The two do not know if financial transactions will be difficult, because business is not "at that level" yet. "There are different ways. Via other countries and other companies. We will find a way. First we get clients, and then the next step is to think about the financial issues."

Local know-how

The Iranian Research Institute of Petroleum Industry (RIPI) held a packed public session at the exhibition to inaugurate some important technical achievements, together with managers of different industrial sectors.

RIPI is a research and development centre, the main focus of which is to develop technology with different oil and gas industry sectors, said Jafar Towfighi, Head of RIPI, in an interview with the *OPEC Bulletin*.

One of the achievements on display was in the field of catalyst development. "We have a very powerful department and are going to develop different technologies regarding different catalysts which are used in different sectors of the industry."

One of the catalysts at the ceremony is called RDC and works on desulphurization of heavy components and compositions, he said. "It is very important for enhancing the quality of oil products."

Another achievement featured micro CHB and relates to energy saving, says Towfighi. With this technology, efficiency from energy sources can rise to 90 per cent, he added. "It is very important for air pollution, etc. Besides producing electricity we are able to produce heat and save energy."

A silicon nanoparticle discovery was also highlighted. "Nanoparticles are very complicated, and we have a centre in RIPI which is conducting research on developing and manufacturing different kinds of nanoparticles. In this ceremony, we saw that we have a special kind of nanoparticle which is used in many sectors, for example paint industries, insulation, etc."

The last achievement shown in the ceremony had to do with sensors that can detect many components that are very hazardous to humans, different pollutants in the soil, such as very heavy hydrocarbons, and different nitrogen oxide gasses and molecules, stated Towfighi.

"These pollutants in the oil industry are very important because many people are working in different sectors and the sensing of different pollutants in air, soil and water is very crucial from a safety point of view. We have developed and manufactured about 17 sensors that are able to sense many different components."

Some technologies take longer to develop than others, he said, depending on the complexity. CHB took five years, while silicon nanoparticles took one year, he added. "Research is a time-consuming activity. We need time, and at RIPI we have excellent

A signing took place on the last day of the exhibition between the Petrochemical Research and Technology Company under the Ministry of Petroleum and a local firm called Sabalan. Co-signing the contract is Mohammad Zali (seated r), CEO of Sabalan Petrochemical Co.

researchers and technologists who are very experienced and have a lot of knowledge and are able to work in different sectors of technology."

RIPI was founded about 60 years ago, and has changed over time. At the beginning it was only a laboratory for the oil industry. Over the years it has changed to a research centre and received legitimation from the Ministry of Research Science and Technology. It developed different sectors, including upstream, downstream, energy and environment, covering different parts of the oil and gas industry.

"At present it has more than 400 researchers who are only doing applied research for industry. We have very advanced and sometimes unique laboratories, which enable us to do various research."

Not only is RIPI the top research institution nationwide, Towfighi stated that to his knowledge it is also the most important research institute in the region.

"I do not know any other research institutes in this size and quality. Because of this, we can expand our activities to other countries and export our technological services to other countries. Bring our knowledge to those countries."

He says RIPI plans to expand level of its collaboration with regional countries, such as Iraq and Oman, and "we have some collaboration with foreign research institutes, for example France and South Korea, as well as Chinese company SINOPEC for an environmental project."

RIPI has a direct link with the oil and gas industry, including direct interaction with different sectors and industries. The institute is also part of a network of universities, including, for example, Tehran University. "We use their knowledge and researchers to implement big projects for industry. We are connected to different sectors, including private sector knowledge-based companies who produce and commercialize our technical products after they are developed."

The strategy plan of RIPI includes, along with meeting the present needs of the industry, doing future studies on new technologies which are believed will have a major impact on the future of the oil industry.

"We are working on this, we have a department. We study different coming, future technologies and we are ready to cope with these new technologies."

This includes supporting the industry in dealing with issues related to climate change. For example, RIPI has expertise in the field of flaring and has created many solutions for flare gases.

"We have knowledge to use these flare gases to produce many valuable fuels, to produce electricity."

Local technology

As a sign of local companies' faith in home-grown technology, a signing took place on the last day of the exhibition between the Petrochemical Research and Technology Company under the Ministry of Petroleum — which has created a catalyst for the petrochemical industry to produce methanol — and a local firm called Sabalan.

Mohammad Zali, CEO of Sabalan Petrochemical Co stated: "Before this agreement we imported this catalyst from Europe. Today we produce it in IR Iran. This is the first time we are producing and using this catalyst in our industry."

Hassan Montazer Torbati, Deputy Minister and CEO of National Iranian Gas Company (NIGC).

Iranian oil industry making great strides in self-sufficiency

Iranian companies and subsidiaries in the oil and gas sector have been making great strides in self-sufficiency, and the industry continues to expand and develop. The* OPEC Bulletin *had the opportunity to attend several press conferences during the recent 24th International Oil, Gas, Refinery and Petrochemical Exhibition in Tehran, and to interview many important stakeholders.

Natural gas

Gas production in IR Iran has been rising, and meeting domestic needs continues to be a focus of the Ministry of Petroleum. Deputy Minister and CEO of National Iranian Gas Company (NIGC), Hassan Montazer Torbati stated that the country is producing 900 million cubic metres (m cu m) of natural gas per day this year, with a 1 billion cubic metre (b cu m) capacity.

Torbati stated that all Iranians are now supplied with natural gas, with the exception of Sistan & Baluchestan province in the south-east, which does not yet have full access (half of the capital has access) due to security and other geographical issues.

"More than 99.4 per cent of the urban population (in IR Iran) has access to the gas supply now, and about 79 per cent of the rural population," Torbati added.

"Ten years ago there was no compressed natural

gas (CNG) sector. In the urban area only 60 per cent of people were supplied (with natural gas), and the relevant share in the villages was very low."

In addition to supplying households, it is also used to supply the power plants and petrochemicals industries, Torbati said.

This rush to utilize natural gas for domestic purposes has extended to vehicles, too. Currently, local vehicles use 22m cu m/d of CNG, equivalent to 22 million litres of gasoline.

"South Pars is nearly complete. Our next focus is on other fields like Kish. In the coming years, we expect to produce 1.2bn cu m/d with Kish and other fields." Gas production from the South Pars field is expected to rise by 100m cu m/day this year.

With domestic saturation going well, NICG is looking externally for sales abroad. Currently only four per cent of natural gas produced is exported, Torbati told the *OPEC Bulletin*.

"We plan to have a ten per cent share of the global gas trade in the coming years, including export and swaps … We hold, according to some data, the first- or second-largest reserves (in the world)."

Currently, Turkey and Iraq import Iranian gas, and the country is turning to Europe and Asia for new buyers. Future pipelines are being planned from IR Iran to Azerbaijan and Turkey in the future so that gas can be sent to Europe. "It is a secure market, so we can win Europe too, because we have reliable resources and the prices are economical for Europe."

IR Iran and China have also had a good relationship and "I expect this will continue", said Torbati.

IR Iran was recently struck by severe flooding that threatened parts of the natural gas system and devastated areas of the country. Some pipelines in the Khuzestan province were damaged in the flood, but there was no gas suspension in affected areas, said Torbati. However, due to the flooding, an ad hoc committee will examine what happened and work harder to protect the system in the future, he added. "Some pipelines cut through rivers; we must consider this now because it has become important. There are hazards for us."

As for domestic natural gas pipeline developments, much work has been done. "We have 38,000 kilometres now. We predict we will be able to add 1,000 km of high pressure pipeline to the network. When we are completely connected, we will have 43,000 km."

Ahmad Mohammadi, CEO of the National Iranian South Oil Company (NISOC).

Oil production

Ahmad Mohammadi, CEO of the National Iranian South Oil Company (NISOC) told the *OPEC Bulletin* that the company has 28 reservoirs under its management. It is trying to maintain current production, along with recovering more oil from these reservoirs. NISOC currently produces 3.5m b/d, or about 80 per cent of the country's oil and 20 per cent of its gas, making the company the largest producer in the country. The fields spread over five provinces in the south of IR Iran.

The company is looking closely at the problem of natural annual pressure drop-off in wells. He said plans are in place for new wells to be drilled in order to enhance recovery. Some reserves are maturing, and these are ripe for enhanced oil recovery/improved oil recovery (EOR/IOR), he told the *OPEC Bulletin*. Currently about 60 per cent of the oil reserves in his jurisdiction are under gas injection.

"We are looking for new EOR/IOR methods, and have plans to make this happen. Currently all is going to plan," he said, adding that 600,000 b/d are coming from sustained and EOR recovery, primarily through gas injection.

"Some reserves are under study for this, with both domestic and foreign companies."

Mohammadi said that it will also be a company priority to develop greenfield sites in the upcoming years.

"Karanj oil field is already producing, but it is a

Mohammad Sanusi Barkindo (second l), OPEC Secretary General, touring the exhibition hall with Ehsan Jenabi (l) of the Iranian Ministry of Petroleum.

greenfield and needs a lot of investment. It is currently under gas injection, but if an agreement is finalized, output will increase."

He added that some new bonds have been issued to finance six NISOC projects, mainly offshore. In Karanj, there is a heads of agreement (HOE) signed document that is making progress and arrangements are being made to finalize the deal and start construction.

The company sees a natural fall-off of about ten per cent; the drilling of development wells, special pumps and desalting facilities will help enhance recovery from such fields in the future, according to Mohammadi.

Another main priority is environmental concerns, he stressed. "If installations are damaged, we want to minimize damage to the environment ... Flaring is still underway, but we are trying more and more to reduce it and collect associated petroleum natural gas."

Mohammadi added that the company puts its faith in domestic potential and technology-based companies. "We plan to extend our learning in EOR techniques both through local and foreign sources."

"There are lots of ways to tackle sanctions. Emphasizing local human resources and local talent is key. We do have the potential to be self-sufficient in our technological needs.

"There are still some parts of the industry financed/backed/supported by foreign technology. But we are looking for ways to stand on our own feet, and we will do it, because Iranians are hard-working."

Reza Dehghan, Deputy CEO of the National Iranian Oil Company (NIOC), Vice-President for development and engineering, pointed out that its plans for development will continue. The company's emphasis is on common fields and it has been utilizing the capacities of Iranian entities, including contractors and financial institutions for development, he said.

In its plan, the development of the South Pars gas field will continue, along with the development of West Kharoun oil field and exploration will continue in different areas of IR Iran. There are a number of ad hoc projects in seven provinces in IR Iran — 33 in total. Their executive activities will start by the mid-Iranian calendar year this year, he said. "Our common fields, both brownfields and greenfields are the priority and South Pars. There is mainly water injection in those fields at this time."

NIOC subsidiaries

Jahangir Pourhang, Managing Director Aravandan Oil and Gas Company (AOGC), which is a subsidiary of NIOC, said that nearly all of the fields under AOGC's control are greenfields. Some have been exploited for ten years now and will be subjected to EOR programmes to advance their production rate.

"The main mission of this company is oil production from 13 greenfields, and the current capacity for production is 1.5m b/d, but actual production is at 450,000 b/d."

Equipment on display at the 24th Iran Oil Show.

Touraj Dehghani, CEO, the Petroleum Engineering and Development Company (PEDEC), a major subsidiary of NIOC.

The company is going to add 500,000 b/d by the end of the Iranian year by implementing technology and methods for EOR and IOR. The ultimate goal to 2025 is to increase production to more than 1m b/d from the West Karoun oil fields. Pourhang says that aside from sanctions, the key challenge is using new technologies, new equipment and gaining experience in field and reservoir production management.

New studies and programmes are planned in order to further develop new greenfields, he said, with a main focus on new technologies to enhance production rates.

The Petroleum Engineering and Development Company (PEDEC), a major subsidiary of NIOC, is responsible for projects and the development of major oil and gas fields in West Karoun, says CEO Touraj Dehghani, especially cross border gas and oil fields. In this area, there is more than 70 billion barrels of oil in place.

North and South Azadegan and North and South Yadavaran are producing at different rates and some parts are under development. More than 70,000 b/d is being produced at North Azadegan, while South Azadegan is under production and development.

"Yadavaran is one of our super huge oil fields," said Dehghani. PEDEC is producing there, and looking at the second phase, with some smaller fields under survey.

The company is also responsible for the development of some oil fields in the north-west of IR Iran, including Aban and Paydare Gharb, which are under final negotiations and contracting and are ready to start development.

PEDEC uses both Iranian and foreign contractors. As the company's oil fields are mostly cross-border, "according to our policies, it is urgent to expedite and facilitate the development phase of these projects. Here, we have some concerns and problems," said Dehghani.

Due to international restrictions, the company is relying on internal capacities to develop these projects, he added. The company has increased the share of internal and local contractors and vendors, he said. "In this way we have some achievements and try to further enhance these actions and policies."

Technical concerns, including technical specifications and the composition of oil in these fields, make the oil hard to extract and produce. PEDEC is trying to garner new technologies from local knowledge-based companies for EOR and IOR in order to develop the next phases of these projects and try to raise the recovery rates.

"Considering the technical situation of our oil fields, the natural depreciation recovery factor is less than ten per cent totally. But by applying new technologies we will try to enhance it and reach more than 25 per cent. EOR/IOR issues are under survey for technical and ecological optimization ... Compatibility with reserves is important," he said, adding each project has different technical specifications.

For some oil fields, such as Azadegan, water flooding is proposed. However, a gas lift is currently used for EOR in North Azadegan and South Azadegan, he said.

The company works together with both internal and foreign universities, and has had very positive

Hamid Bouvard, CEO of Iranian Offshore Oil Company (IOOC).

experiences in the last decade with the involvement of knowledge-based companies, universities, and oil field development operators, said Dehghani. "We try to apply these experiences, and enhance these capabilities for targets and solutions."

In terms of health, safety and environment (HSE), the company strives to follow international standards and regulations for safety and environment in the petroleum industry. "We employ all environmental restrictions and standards for projects, especially in this area."

Offshore developments

Hamid Bouvard, CEO of Iranian Offshore Oil Company (IOOC), said at a press conference that "this year is named the production boom by the Supreme Leader of IR Iran, Seyyed Ali Khamenei," adding that the company has received $1.5bn in funding from the Iranian private sector and is holding licensing rounds for project contractors and developers.

The company operates fields holding over 10bn barrels of oil in offshore reserves, including over 200 marine structures, platforms, etc, in the Gulf in over six operating districts. It met all its production goals in the last Iranian calendar year, said Bouvard, stating it had seven million work hours with no accident. "This has been made possible by fully observing HSE measures."

The company reached 82 per cent of its goals in terms of gas and water injection for maximum efficient recovery.

"We have the country's biggest marine fleet in the oil industry, and there is huge potential. Besides the economic role it plays in the country, it represents IR Iran in offshore operations. We show the power of IR Iran in offshore industries and platforms."

Bouvard said the company is active in all areas of the sector, from exploration projects to fuel packaging to export. "Everything to do with offshore production we are capable of, and we have a variety of hydrocarbon products. We have upstream production from A to Z."

Over 100 flotillas are operating for the company, as well as choppers, production and maintenance staff, and there is 3,500 km of seabed pipelines.

In order to meet its goals, the state-run company has outsourced 60 per cent of operational projects to private sector companies. The private sector is "seriously involved in all IOOC activities," said Bouvard.

"In the current year we are primarily concerned with the export of oil and domestic manufacturing of items," he said, adding that 17 companies have been introduced as eligible E&P partners to develop projects and all may cooperate with foreign partners.

Bouvard stated at the press conference that cooperation with foreign companies requires integrated production management, but because of the current challenges "we cannot consider joint offshore fields, except with Oman. The current conditions just do not allow for this type of cooperation."

Bouvard added that IOOC is also responsible for the

Mohammad Sanusi Barkindo, OPEC Secretary General, at the OPEC exhibition stand with Iranian delegates and OPEC staff.

oil layer in South Pars, which the company has been able to develop at one-quarter the price proposed by foreign companies.

Petrochemicals

Deputy Petroleum Minister and CEO of the National Petrochemical Company (NPC), Behzad Mohammadi, told the *OPEC Bulletin* that "we are on the threshold of huge developments in IR Iran's petrochemical industry. There are 53 projects underway in the country and within the next four years all will be operational. Certainly many projects are going to be added to this portfolio."

He stated that petrochemical production capacity is 64m t/yr, and over this and the next calendar year by March 2021 production capacity will reach 94m t/yr.

"This is just production capacity. Our saleable products will jump from 31m t to 52m t; that is a 70 per cent increase. We call this the second leap in IR Iran's petrochemical sector. We are still in the first leap, which began in the 1990s and will continue into the second leap."

NPC is following up on development plans for the sector, he said, supervising, supporting and guiding direction, regarding feedstock supply, provision of infrastructure, including export jettys, storage tanks and interface management of products.

"We are making every effort to make sure these projects become operational as scheduled. Of 31m t of saleable product, 22.5m t are exported and 8.5m t are used domestically. But when these 18 projects become operational, it will increase even more."

The company is looking to complete the production chain value and to gradually obviate the country of imports, and lean towards products that can be used domestically.

Currently, products are sold to over 30 countries, including European and Asian customers, said Mohammadi.

The two main product categories being produced are polymers and chemicals. NPC has 18 polymer groups, which includes 298 grades and 44 chemical products.

"We are firmly pursuing the production of items which besides completing the value chain, and supply the domestic market, have more value added," said Mohammadi, adding that the company is trying to increase its diversification of products and convert from single-product plans to multi-product plans.

"We are planning to diversify the economy from oil centred to other products as well, and petrochemicals is a part of this."

In terms of the plans on the table: "Our ongoing plans for 53 plants have no problems technologically. They are mostly developed by Iranian holdings that are already generated and have their own revenues, which they use for development." Overall, however, investment is coming from a combination from domestic and foreign finances, he said.

OPEC's special visit to the 24th Iran Oil Show

***Mohammad Sanusi Barkindo**, OPEC Secretary General, and a team of experts from the OPEC Secretariat, made a special visit to the 24th International Oil, Gas, Refinery and Petrochemical Exhibition, held from May 1–4, 2019, in Tehran. The* OPEC Bulletin *reports on the Secretary General's interactions, and the two presentations that were given.*

Barkindo began by speaking to assembled participants at the Tehran International Permanent Fairground, where the Oil Show was held.

He opened by paying tribute to the courageous Iranian people who "once again rose to the challenge of unifying in adversity during the disastrous flood that swept across the country a few days ago. I want to express my sincere and deep condolences for the suffering caused by this terrible natural disaster and to those who lost loved ones."

Barkindo also highlighted IR Iran's important role in the history of OPEC, including being present at the signing of a 'Gentleman's Agreement' known as the Maadi Pact in Egypt in April 1959, which led to the development of OPEC the following year in Baghdad. He noted that the first Secretary General of OPEC — Fuad Rouhani — was also from IR Iran, and that the current longest-serving minister at OPEC is from IR Iran — Bijan Namdar Zanganeh.

"Zanganeh has been a supporter and an advocate of OPEC and its work for decades. He has been an essential architect of our current cooperation with non-OPEC countries and continues to play a major role in ensuring its success."

Regional and global importance

He went on to describe IR Iran's importance as a regional energy hub and to the oil industry as a whole, with some of the world's largest reserves of both oil and gas.

The country did not forget its people in all of the successes it has reached over the past 40 years, he said, growing the gas infrastructure so that most Iranians have access to this precious source of heat and energy, as well as bringing clean energy to the transportation sector with the development of a CNG infrastructure and providing 70 per cent of local electricity generation from local gas supplies.

"In taking these massive steps forward, IR Iran has been a leader in combatting two of the scourges of our time — energy poverty and climate change — in a sound manner exemplary to all."

Additionally, the country has been a stellar example of diversification, with the contribution of oil exports to GDP falling to 12 per cent in recent years and the share of oil in total exports falling to 48 per cent, which Barkindo called "a remarkable achievement."

"In general, you are a great example to the industry, the region and the world, showing how many things can be done right, even in the face of extreme adversity."

He admired the ancient culture and spirit of the country, stating IR Iran is "one of the world's oldest continuous major civilizations, with historical and urban settlements dating back to 7000 BC," as well as the rich and deep art, architecture, music and language. The country's ability to maintain its cultural identity over centuries

Mohammad Sanusi Barkindo, OPEC Secretary General.

of intermingling cultures and sometimes hostile forces speaks to the durability and determination of the Iranian people, he states.

"It is for this reason I say that despite the many obstacles and setbacks IR Iran has faced time after time, you have always overcome them through generations — indeed centuries — with fortitude, hard work and national pride. No matter what challenges you face in the future, I am sure that you will prevail, as you have for time eternal."

Challenges for OPEC

Barkindo talked about the twin challenges for OPEC in terms of depoliticizing oil while staying insulated from political interference. The ability to do this has contributed to the Organization's longevity — it celebrates its 60th birthday next year.

"It is with the utmost care that we maintain this delicate balance. We play an important role, and we must continue to strive for global oil market stability for the benefit of all stakeholders — producers, consumers, investors and the economy at large."

Barkindo said that OPEC is one of the oldest commodity organizations in the world, and its survival over six decades in a volatile industry and a world more often characterized by turmoil is a monumental achievement.

The Organization has accomplished many noble goals and objectives within its statutory function to balance the oil market on a sustainable basis. At different times and facing different perilous circumstances, the organization has managed time and again to overcome and succeed, he added.

He went on to describe the six identified price cycles, the cause for them, the details of them, and what OPEC did in these situations to support oil market stability.

He praised Iranian President, Hassan Rouhani, and his "able and astute Minister Zanganeh" for their effective role in facilitating the 'Declaration of Cooperation', which has helped the industry navigate throughout the most recent cycle.

"Each cycle was marked by dramatic events and met by common actions OPEC took to overcome the situation. Each cycle led to hard decisions which were implemented together. And at every turn we have abided by the key principles in our Statute.

"IR Iran not only participated in these trying times, but played a leading role in helping the Organization to overcome these difficulties and prevail. Minister Gholam Reza Aghazadeh's role was pivotal in the 1980s and Zanganeh continues to be a powerful force today."

He brought forward the provocative question of how OPEC should develop in the coming 60 years, and what more can be done, or better, suggesting that in the upcoming 60 years, OPEC must advance itself beyond supply and demand fundamentals, albeit stressing that

Bijan Namdar Zanganeh (r), IR Iran's Minister of Petroleum, with Mohammad Sanusi Barkindo, OPEC Secretary General.

OPEC launched the third phase of its Big Data project, which was started by OPEC and its Member Countries in 2017.

market fundamentals must remain key. Barkindo suggested that the Organization and its Member Countries could start to focus more on its statutory function.

"Aside from working together on stability, our founding fathers dreamt of an organization in which Member Countries would also work on coordinating policies. This may be easier if we expand trade and joint development projects among our Member Countries. Strong trading partners generally find it easier to solve differences and suffer less in hard times.

"Our countries have a lot to offer each other. IR Iran is a fine example of a country with great capacity in research and development, which could benefit other Member Countries." Such cooperation could have a multiplier effect on all Member economies, he said.

Through our 'Declaration of Cooperation', a mechanism has been built that is flexible, transparent and effective, stated Barkindo. "The world has come to count on us to manage market instability for the benefit of both producers and consumers, as well as the larger global economy.

"Never before has there been such a show of solidarity and determination. This can be seen in consistently high conformity figures by participating countries over the entire period. What we have achieved rightly deserves a place in the history books of tomorrow. We have become an example of the power of cooperation for the oil industry."

He then quoted Imam Ali (Ali ibn Abi Talib, also known as Imam Ali, the cousin and son-in-law of Prophet Muhammad [PBUH], Prophet of Islam and the last Prophet), who stated:

"If you want to identify someone's character, examine the friends he sits with.

"We are honoured to have been sitting with you over the past 60 years, and with continued visionary leadership, commitment and hard work, Inshallah, we will be sitting together for the next 60 years and beyond."

Big Data launch

OPEC also launched the third phase of its Big Data project, which was started by OPEC and its Member Countries in 2017, with help from the tremendous efforts of OPEC's Data Services Department.

Hossein Hassani, Head of the Statistics Unit of the Data Services Department, spoke on this riveting topic. He said that the 21st century has witnessed an explosion of energy-related data and that 90 per cent of all the data

in the world has been generated over the last two years. Interest in Big Data has increased over time, particularly since 2011, he added. Data production will be 44 times greater in 2020 than it was in 2009.

"Big data and data analytics are changing the game for nearly every industry, and oil and gas is no different. Digitalization fuels growth in the oil and gas business. Big data and analytics will keep the shale boom rolling. Royal Dutch Shell's use of Big Data allowed them to decrease drilling costs.

"Companies like BP equip their wells with cloud-connected sensors, each 'dumping' roughly 500,000 data points every 15 seconds into a software programme. By reducing high-impact non-productive time, P&P companies can save on average between $500,000 and $1 million/day."

OPEC aims to develop a sophisticated, modern, comprehensive, easy-to-use and multidimensional Big Data programme. Phase 1 (general idea) and Phase 2 (oil data) have already been completed; Phase 3 intends to see natural gas data added and advanced key analytics; Phase 4 will include forecasts and other related variables; Phase 5 is on data of various frequencies; and Phase 6 is on text and web mining.

Hassani stated that OPEC Big Data is another successful close collaboration between the Secretariat and Member Countries, allowing them to enter into a new frontier and to place OPEC ahead of other peer organizations in the area of Big Data.

Abderrezak Benyoucef (r), Head of OPEC's Energy Studies Department, shared a presentation on the Organization's well-known and widely referenced World Oil Outlook (WOO).

World Oil Outlook

Abderrezak Benyoucef, Head of OPEC's Energy Studies Department, shared a presentation on the Organization's well-known and widely referenced *World Oil Outlook (WOO)*.

Benyoucef spent some time talking about the 2018 publication, which offers OPEC's medium- to long-term energy outlook, including detailed projections for oil demand, supply, refining and trade.

He added that the WOO combines the expertise of many dedicated experts at the OPEC Secretariat, professionals from Member Countries, as well as input from various other sources. Moreover, it is a key source of energy information for policymakers, national oil companies and international oil companies, as well as all other energy stakeholders.

He spoke about some of the key assumptions in the *WOO 2018,* including the expected population increase from around 7.6bn in 2017 to 9.2bn by 2040, as well as GDP growth, which is expected to average 3.4 per cent/yr between 2017 and 2040. He noted, however, that growth will not be uniform. It will decelerate over the forecast period and growth in developing countries, at 4.5 per cent/yr on average, will be significantly higher than for the OECD.

He also stated that the *WOO* Reference Case projections reflect an evolutionary development in current trends for technology and energy policies that are already in place in major countries and regions.

Based on these assumptions, overall energy demand is expected to increase by 91m boe/d, or 33 per cent, between 2015 and 2040, to reach a level of 365m boe/d, he said.

Natural gas is projected to expand the most in the long-term, increasing by almost 32m boe/d between 2015 and 2040, while the category 'other renewables' is the fastest growing type of energy. Benyoucef noted, however, that throughout the entire forecast period, oil is anticipated to retain the highest share in the global energy mix.

In terms of the regional breakdown, almost 95 per cent of the increase in energy demand will come from developing countries, including China and India, according to the *WOO*. Energy demand in each of these countries will increase by more than 20m boe/d, representing

more than 50 per cent of the energy demand growth in developing countries.

Oil demand is projected to grow by 14.5m b/d between 2017 and 2040, rising to 111.7m b/d by 2040. Long-term growth is also overwhelmingly driven by developing countries, while OECD demand declines, and Eurasia is quite flat.

In terms of supply, non-OPEC supply in the medium-term is anticipated to outstrip demand growth, driven mainly by an increase in US tight oil. However, Benyoucef noted, growth in US tight oil production decelerates in the early 2020s and peaks around 2027, leading to a peak in overall non-OPEC supply at just under 67m b/d.

All of the expected changes will lead to substantial requirements for expansion in the downstream sector, he added. To provide an adequate supply of refined products in the future, cumulative crude distillation capacity additions are projected to reach almost 18m b/d by 2040, focused primarily in the Asia-Pacific, the Middle East, Africa and Latin America. Of this increment, almost 8m b/d of crude distillation capacity will likely materialize from existing projects during the next five years.

Moreover, projections for secondary capacity additions indicate the need to add some 10m b/d of conversion units, 20m b/d of desulphurization capacity and more than 5m b/d of octane units in the period to 2040.

Required total investment in the oil sector until 2040 totals nearly $11 trillion — of which $8.3tr is in the upstream, $1.5tr in the downstream and $1tr in the midstream, said Benyoucef.

The Secretary General took time after the presentations to visit the exhibition, at which OPEC had a very elegant booth in a prime location close to the NIOC booth. The OPEC delegation was greatly honoured by a special gala dinner, hosted by Zanganeh, in a beautiful, outdoor location.

Holy places

The Secretary General also travelled to the nearby holy city of Qom for a day, accompanied by representatives of IR Iran's Ministry of Petroleum. He attended Friday prayers and made a pilgrimage to the Holy Shrine of Fatimah Masumeh (Peace be upon her) and had an audience with Ayatollah Ahmad Jannati, Head, Assembly of Experts of the Leadership and Secretary, Iranian Guardian Council.

The Secretary General also met with Ayatollah Saeedi, Friday Prayer Leader of Qom and the custodian of the Holy Shrine of Fatimah Masumeh. He visited the Qom museum wherein a large number of antique items, including exquisite handwritten Qurans dating back to various eras, are on display.

Qom, with just over 1.2 million residents, is considered holy by Shi'a Islam and is the largest centre for Shi'a scholarship in the world. About 20 million pilgrims make the trip to Qom each year, while 45,000 clerics reside in the city and there are over 50 seminary schools. Many Grand Ayatollahs have offices in this ancient city.

The city was first permanently settled in 685-6 has seen its share of suffering over the centuries, having been invaded and partially or completely destroyed in a Mongol invasion in 1224 and a plundering by Tamerlane in the late 14th century. By 1503, Qom was already one of the important centres of theology for Shi'a Islam and religious pilgrims were already massing to the site.

Further conflict with Afghan invaders, and internal power struggles impacted the city in the 1700s, but prosperity grew after that time. The city also became home to a 'National Defense Committee' in the early 1900s, to protect against Russian and British colonial powers.

Following Qom, the Secretary General visited Mashhad, along with representatives of the Ministry of Petroleum. There he made a pilgrimage to the Holy Shrine of Imam Reza (Peace be upon him), the eighth Shi'a Imam, and visited the Astan Quds Razavi Museum.

Mashhad is the second-most populated city in IR Iran with over three million inhabitants and was a major Silk Road oasis. It is considered to be the second-largest holy city in the world, attracting over 20 million pilgrims and tourists each year. Many of these come to pay homage to the Holy Shrine of Imam Reza, as has been done since medieval times. Those who complete the pilgrimage to Mashhad, and particularly the shrine, are known as Mashtee.

Imam Reza, for whom the shrine and the city are named, is also known as Ali ibn Mouas ar-Ridha. Shias began to make pilgrammages to his grave and by the end of the 9th century, a dome, buildings and bazaars grew up around it.

Along with being a major religious centre, the city is home to some of IR Iran's most famous literary figures and artists. The holy shrine and museum today hold one of the most extensive collections of cultural and artistic treasuries in the country.

The Central Library of Astan Quds Razavi is one of the oldest libraries in the Middle East at over six centuries old. About six million historical documents are held in the central library and a museum hosts over 70,000 rare

manuscripts. It is also an international centre for Islamic research, due to its manuscripts and rare works of antiquity of Islamic history.

In Tehran, Barkindo visited the Holy Shrine of Imam Khomeini, the founder of the Islamic Republic of Iran, where he laid a wreath.

The Secretary General expressed "how humbling it was to experience some of the most important and venerated religious sites in the world."

MAPNA Group

Before leaving IR Iran, the Secretary General visited the MAPNA Group. It is a group of Iranian companies involved in the development and execution of thermal and renewable power plants, oil and gas, railway transportation and other industrial projects, as well as manufacturing main equipment including gas, wind and steam turbines, electrical generators, turbine blades and vanes, HRSG and conventional boilers, electric and control systems, gas compressor, locomotive and other pertinent equipment.

The Secretary General said in a thank you letter to Zanganeh that it was "a tremendous honour, and personally an eye-opening experience, to visit the MAPNA Group, an organization that you helped set up and one I know that is very close to your heart.

"The dynamism, ingenuity and the sheer scale of what has been developed at MAPNA is a clear sign of the enterprise, expertise and resilience that the people of the Islamic Republic of Iran have in abundance."

Barkindo also wrote a thank you note to the CEO of Investment, MAPNA, Khalil Behbahani, stating how impressed the OPEC team was by the operations and the extent of the development, which "crystalizes the true spirit of the Iranian people."

The visit to MAPNA headquarters was extremely educational, and the Secretary General invited the company to come to the OPEC Secretariat at some point in the future to further engage in an enriching dialogue.

Bijan Namdar Zanganeh (c), IR Iran's Minister of Petroleum, with Mohammad Sanusi Barkindo (third l), OPEC Secretary General, and the OPEC team.

Dundee Energy Forum

OPEC and the energy transition

On a recent visit to Scotland, which was bathed in glorious sunshine for the entire visit, the OPEC Secretary General, ***Mohammad Sanusi Barkindo,*** *was invited to deliver the keynote address to the 3rd Dundee Energy Forum on June 10, 2019, titled 'What is the future of international energy cooperation in the light of new concepts of sovereignty?'. The* OPEC Bulletin *publishes his remarks to the important forum in full.*

It was the famous Scottish comedian Billy Connolly who once said: *"There are two seasons in Scotland: June and Winter." I am very happy to be here in June!*

It is truly a tremendous pleasure to be invited to the University of Dundee, and the Centre for Energy, Petroleum and Mineral Law and Policy (CEPMLP), to deliver this keynote address. I would like to thank Vice-Chancellor and Principal Professor, Andrew Atherton, for his welcoming address; Professor Peter Cameron, the Centre's Director, for the personal invitation; and his staff for making us feel extremely welcome.

With over 18,000 students from 145 countries and 3,000 staff from 72 countries the University of Dundee is a truly global institution. It also sits in a beautiful city, one promoted as 'One city, many discoveries' in honour of Dundee's history of scientific activities and of the ship Discovery, Robert Falcon Scott's Antarctic exploration vessel, which was built here in Dundee.

It highlights the city's outward looking nature, as well as the warmth it offers to visitors. This is also evidently on display here at the University with its links with other international seats of learning, businesses and governments underscoring the value it places on dialogue and cooperation, which will be one of the two key themes of my paper.

In fact, the OPEC Secretariat and our Organization as a whole, has had a strong bond and relationship with the Centre and the University going back several decades.

Back in 2001, the then OPEC Secretary General, Dr Alí Rodríguez Araque delivered the opening address to the Dundee International Oil & Gas Conference. And in 2009, at the 4th OPEC International Seminar, the OPEC Award for Research was given to Paul Stevens, Professor Emeritus at the Centre; and the OPEC Special Award was given posthumously to Professor Thomas Wälde, who had been instrumental in developing a positive and collaborative relationship with OPEC Member Countries and the OPEC Secretariat.

I have also been told that the Centre alone has more than 1,000 alumni from my home country of Nigeria; men and women that have passed through these doors to learn about hydrocarbons law, economics and policy. I hope that many more will follow in their footsteps and return to Nigeria, and indeed all our Member Countries, with what they have learnt to help the country develop and deliver a sustainable energy future.

This will be vital as we head into what is now commonly termed the 'energy transition'; to determine what this means to each and every one of us, how it affects

Mohammad Sanusi Barkindo, OPEC Secretary General.

us, and what is the best and most realistic path. This is the second key theme of my paper today.

I would also like to pay my respects to another alumni from this Centre, my twin brother and friend, and the moderator of this session, Dr Sun Xiansheng, the Secretary General of the International Energy Forum (IEF). His boundless dynamism and positivity have elevated the IEF to new levels of accomplishment, admiration and acclaim in driving forward dialogue between all energy industry stakeholders. It is a pleasure to share a stage with you again.

International cooperation

The values that I have just outlined for the University of Dundee and the IEF, related to international cooperation and dialogue, are 'front and centre' of everything OPEC stands for and the actions we take.

They will also be key for the 'energy transition', bringing both producers and consumers together, in fact, all energy industry stakeholders, to try and evolve this transition in the least disruptive manner.

Given the great importance of energy to our everyday lives it is something we have to get right. We need to think carefully about what an energy transition actually means; and we all need to follow the right path to lead us to a sustainable energy future.

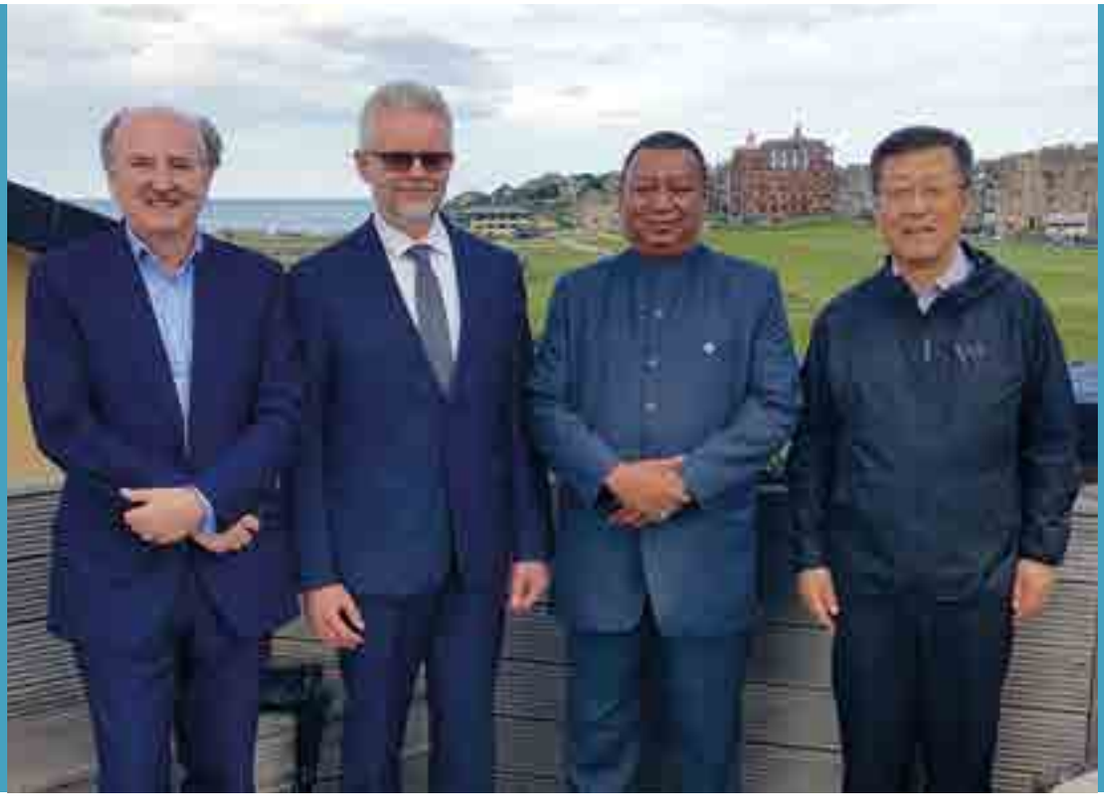
We need to all work together, step-by-step, find issues of commonality and appreciate what is at stake.

One thing we can all agree on is the world will need a great deal more energy in the decades to come. It is easy to appreciate why.

The total size of the global economy in 2040 is expected to be 214 per cent that of 2017. And over the same timeframe, world population is projected to reach around 9.2 billion, an increase of over 1.5bn from today's level.

We should also not forget that energy poverty remains a scourge of our time: even though, in a sign of great progress, the International Energy Agency recently reported that the total number of people with access to electricity fell below one billion in 2017, there is much work still to be done. Moreover, three billion people still lack access to clean fuels for cooking. We need to transition to a more inclusive world in which every person has access to energy — whether young or old, whether poor or rich. We want to see a world where no one is left behind.

In OPEC's *World Oil Outlook (WOO) 2018,* we expect global energy demand to increase by around 33 per cent by 2040. Energy will be required to power more homes,



Key speakers to the 3rd Dundee Energy Forum in June, from l–r: Professor Peter Cameron, Director, Dundee CEPMLP; Dr Urban Rusnák, Secretary General, Energy Charter Secretariat; Mohammad Sanusi Barkindo, OPEC Secretary General; and Dr Sun Xiansheng, IEF Secretary General.

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

I should also reference that almost 95 per cent of the increase in energy demand is forecast to come from developing countries, with China and India continuing to lead the way. At the same time, however, we need to comprehend the threat posed by climate change to our environment.

Let me stress that OPEC remains fully engaged and supportive of the UNFCCC and the Paris Agreement, which remains the only viable global framework to address climate change.

As I mentioned at COP24 in Katowice, Poland, last December, the oil industry must be part of the solution to the climate change challenge. We are all responsible citizens of this planet. We also believe that 'there is no Planet B.'

So while the world will need more energy and many billions still need to be lifted out of energy poverty, it also needs to use energy more efficiently and continually look to develop, evolve and adopt cleaner energy technologies.

Energy trilemma

This major challenge is what the World Energy Council has called the 'Energy trilemma', which involves balancing these three seemingly conflicting yet interwoven objectives. To put it simply, the basic challenge of the 'energy transition' 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?

I feel it is important to point out that when we talk of an energy transition, the word 'transition' can be misleading. The dictionary definition of 'transition' focuses on the process of changing from one thing to another, but the energy transition does not necessarily mean moving from one energy source to another.

The majority and balanced consensus is that all forms of energy are required. A diverse mix of sources is the best way forward. It is also vital we appreciate just what each energy source can provide in the decades ahead.

Renewables are coming of age, with wind and solar expanding fast, but even by 2040 in our WOO they are only estimated to make up around 19 per cent of the global energy mix.

With nuclear expected to be at just over 6 per cent and coal at around 22 per cent by 2040, it means that oil and gas combined are forecast to still supply over 50 per cent of the world's energy needs by 2040, with oil at around 28 per cent and gas at 25 per cent. Some may dispute these percentage shares, suggest that OPEC Member Countries are against renewables, and of course, you may say to me, well you would say this — you are the OPEC Secretary General.

Let me counter these arguments.

Firstly, many OPEC Member Countries have great sources of solar and wind, and we are seeing huge investments being made in the field of renewables. And secondly, we do not see any reputable outlook projecting that renewables will come anywhere close to overtaking oil and gas in the decades ahead.

Given our *Outlook*, as well as many others carrying similar forecasts, it is also important to broach the issues of policies and technologies.

We need to continually look to develop, evolve and adopt cleaner energy technologies, as well as all-inclusive and non-discriminatory energy policies, that enable us to meet expected future energy demand, in a sustainable and ever more efficient manner.

For oil and gas, we need to recognize that the environmental challenge is not oil and gas themselves. It is the emissions that come from burning them. We are believers that solutions can be found in technologies that reduce and ultimately eliminate these emissions. We should not limit ourselves by putting all our eggs in one basket. We need to look for technology solutions everywhere, across all available energies.

The oil industry's capacity for technological innovation must be harnessed within this process. We welcome coordinated action within the industry and through various research and development platforms, such as the Oil & Gas Climate Initiative.

Allow me here to highlight one key detail from our WOO. In the period to 2040, fuel efficiency improvements are expected to result in a far greater reduction in oil demand, than the increasing penetration of alternative fuel vehicles.

On the policy front, it is important to stress that if our industry is concerned about policies that detrimentally impact investments, with talk of stranded assets and declining values; then we have a potentially dangerous scenario where the necessary investments may not be made, one that could increase volatility significantly and lead to a future energy shortfall.

Moreover, if those billions of people in the developing world that suffer from a lack of energy access feel they are being sidelined from energies that have helped fuel the developed world, then this could sow further divisions and expand the divide between the haves and have nots.

This is all brought home by the scale of the oil-related investment requirements that are estimated at around $11 trillion in the period to 2040. We also need to recall that exploration and production spending fell by an enormous 27 per cent in both 2015 and 2016, and only increased by eight per cent in both 2017 and 2018.

The issue of investments is critical in any talk of an energy transition and diversification. For all investments, the focus has to be on a stable environment and a level playing field.

From OPEC's perspective, we fully identify with the fact that the foundation for investment, growth and economic diversification can only come through balance and stability in the market.

'Declaration of Cooperation'

In this regard, OPEC Member Countries remain fully committed to investments across the whole industry value chain, and the issue of returning global investments is a core focus of the 'Declaration of Cooperation'.

It is also important for me to underscore here that the commitment of OPEC and its non-OPEC partners in the 'Declaration' to a balanced market and a sustainable stability remains our key objective. We are responsive and alert to shifting market dynamics, and adaptable to ensure that we remain on track.

We realize that that many underlying risks remain. We are closely monitoring oil market developments and the economic bearishness that has been prevalent in markets in recent weeks, with major challenges and uncertainties related to ongoing trade negotiations, monetary policy developments, as well as geopolitical issues.

This will all be discussed in detail at the upcoming OPEC Ministerial Conference and the OPEC and non-OPEC Ministerial meeting, where our minds will be focused on market balance and stability, in the interests of producers, consumers, and the world at large.

This historic commitment to cooperate and make a difference, for the benefit of all, underscores how OPEC sees the future. We can no longer work in silos; we can no longer operate on divergent paths; we can no longer see our futures in polarized terms.

As the great Scottish born inventor Alexander Graham Bell, a man who invented the first practical telephone that enabled us to all communicate more; once said: *"Great discoveries and improvements invariably involve the cooperation of many minds."*

As an industry we need to highlight the great benefits that oil has brought to billions, and the future positive impact it can have on billions of others. We need to stress that the scale of the climate challenge means that no single energy source is a panacea; nor can the contribution of an entire industry or group of countries be overlooked.

We also need to continue to attract young people to the industry, and emphasize that it is a dynamic, creative and expanding global sector, and that the challenges and the innovation required gives plenty of scope to push the boundaries of where technology, such as Artificial Intelligence, can take us. This further underscores the importance of seats of learning like the one here in Dundee.

And we need to look to work with all stakeholders, including those with divergent opinions, to ensure sustainable growth, development and prosperity for ourselves, for our children and for our children's children."

Delegates to the 4th IEF-OFID Symposium on Energy Poverty gather for a group photograph.

Jeff Radebe, Minister of Energy of South Africa.

4th IEF-OFID Symposium on Energy Poverty

In early May, Cape Town, South Africa, was the venue for the 4th IEF-OFID Symposium on Energy Poverty as stakeholders gathered to look at key issues related to electrification, key indicators for energy poverty, the role of data transparency, energy access financing, policy formulation, as well as synergies and collaborations. With OPEC present at the event, which was themed 'Energy poverty in sub-Saharan Africa: options for closing the gap', the OPEC Bulletin *reports from the two-day meeting.*

With over 100 delegates and 12 international organizations present, the event was opened by Jeff Radebe, Minister of Energy of South Africa. He underlined the importance that South Africa attaches to international engagement and dialogue on the platform that the International Energy Forum (IEF) provides to attract investment, improve energy systems, and ensure affordable access to modern energy services for all.

He stated that the event was extremely relevant and specifically highlighted the challenge posed by the paucity of energy data. He said that "energy poverty can only be effectively addressed by closing the energy data gaps because without energy data, it becomes very difficult for us to plan in the quest for 'Sustainable Energy for All'."

In their opening remarks, the delegation heads of the two organizations jointly hosting the event, Dr Sun Xiansheng, Secretary General of the IEF, and Belkacem Ouzrourou, Director Africa Region of the OPEC Fund for International Development (OFID), highlighted the links that exist between the alleviation of energy poverty and economic development. They also recognised the need for enhanced dialogue on the many opportunities available and what new energy policy and technologies offer for investment and expanding capacity.

On behalf of Mohammad Sanusi Barkindo, OPEC Secretary General, Dr Adedapo Odulaja, Head of the

Dr Adedapo Odulaja, Head of OPEC's Data Services Department.

Mahaman Laouan Gaya, Secretary General, African Petroleum Producers Organization (APPO).

The Jodi stand at the Symposium.

Organization's Data Services Department, stressed that the symposium "has become an important permanent collaboration between the IEF and OFID in their ongoing efforts to help alleviate the issue of energy poverty across the world, and here in Africa."

He added that all energy sources will be required to meet the long-term needs of the increasing global population, and to alleviate energy poverty. He stressed that OPEC remains "dedicated to seeing Africa, and indeed all of the 'energy poor', join the family of nations to enjoy universal energy access. This is indeed their human right."

Sessions

The symposium was set in a context in which a minority of Sub-Saharan Africa has access to electricity, and under 15 per cent have access to clean cooking fuels according to the latest United Nations (UN) figures. With this in mind, the 4th IEF-OFID Symposium was structured into an opening session and five other key sessions:

- **Opening Session:** Leadership for energy poverty alleviation
- **Session 1:** Challenges and opportunities in electrification
- **Session 2:** Ensuring Access to Clean Cooking Solutions and other Caloric Uses
- **Session 3:** Key Indicators for Energy Poverty- the Role of Data Transparency
- **Session 4:** Energy Access Financing and Policy Formulation
- **Session 5:** Synergies and Collaborations

Session moderators and panelists included senior representatives of intergovernmental organisations, as well as government, and private sector companies including Rashid Ali Abdallah, Executive Director of the African Energy Commission (AFREC) and senior experts of the Economic Community for West African States (ECOWAS), the United Nations Industrial Development Organization (UNIDO), the International Renewable Energy Agency (IRENA), and JODI Partner organizations.

Discussions focused on solutions that alternative energy delivery systems, such as liquefied petroleum gas (LPG) and smart grid electrification, can offer for clean cooking, particularly in rural areas, when compared to the cost of national network extensions.

It was noted that the delivery of clean cooking and electricity services is linked to a nexus of development

Dr Sun Xiansheng, Secretary General of the IEF.

in health, education, gender equality, and opportunities for social-economic growth and stability. Moreover, increased public-private energy sector cooperation should extend across borders to enable more diverse and secure energy supply.

It was also stressed that outreach on energy policy and regulation will facilitate both national and regional infrastructure investment. Symposium participants acknowledged that while advances are being made there is a need to improve regional cooperation towards the provision of universal energy access to modern energy services and the complete alleviation of energy poverty.

Discussion outcomes

In the concluding statement, a number of key outcomes were highlighted:

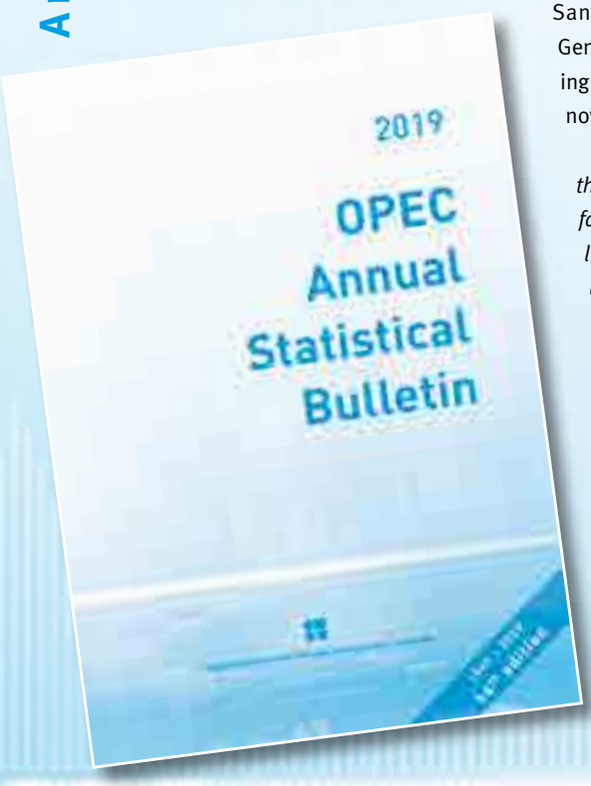
- Efforts to eradicate energy poverty should be technologically neutral.
- The policy space is a critical element, with a good policy and regulatory framework essential towards alleviating energy poverty.
- Recognition of the importance of mini-grids in addressing the gap between rural and urban electrification.
- Acceleration of clean cooking solutions.
- A renewed focus on data transparency for the introduction of effective energy poverty monitoring mechanisms and the advancement in clean innovative energy technologies including but not limited to renewables and electrification.
- A commitment towards attracting investment by finding new finance streams and development of innovative business models in public and private partnerships.
- An understanding amongst participants that the Symposium should shift focus towards evaluating implementation and eradicating energy poverty in practice.
- To enhance International cooperation in addressing energy poverty.

In general, it was noted that addressing the challenges of energy access requires strong political will; well-designed energy strategies; much greater international, inter-African and regional cooperation; the building of strategic and institutional capacities; training national skills in the energy sector; and, devising innovative financing solutions.

All images courtesy IEF.

OPEC launches 2019 Annual Statistical Bulletin

Launched on June 3, 2019, the 54th edition of OPEC's Annual Statistical Bulletin (ASB) is a first in the history of OPEC and the oil industry: it is the earliest publication of its kind in a calendar year. The* OPEC Bulletin *reports on its launch, some of the key data and analysis, and its role in helping drive the Organization's push for data-driven transparency.



asb.opec.org

In the foreword to the ASB, Mohammad Sanusi Barkindo, OPEC Secretary General, began by quoting the opening lines of Charles Dickens' seminal novel, Hard Times.

"Now, what I want is facts. Teach these boys and girls nothing but facts. Facts alone are wanted in life. Plant nothing else, and root out everything else."

He noted that Dickens was satirizing a tendency among some of the dominant philosophies of the 19th century to emphasize facts and rationalism at the expense of human experience, and looking at current times, "we can see that a countervailing strand of thinking dominates public thought."

Indeed, he said, the very opposite tendency to what Dickens satirized is prevalent in our modern age and in 2019, "it can appear that facts themselves are under siege and fact-based policy is in danger of being sidelined."

Barkindo stated that the oil market can often be subjected to similar forces which are not rooted in fact. "Sentiment, speculation and even rumours have been known to drive the market. The situation can be further complicated by computerized or automated trading, with algorithms, Big Data and AI playing important roles."

While OPEC would perhaps not go as far as the sentiment in the Dickens' quote, the Organization passionately believes in evidence-based analysis, policy making grounded in fact and verifiable assumptions guided by transparent data and careful observation.

The Secretary General said that "we are proud that this remains the core purpose of OPEC's ASB."

Indispensable reference tool

The ASB underscores the Organization's drive for data-driven transparency: since its first publication in 1965 it has been known as a globally recognized indispensable reference tool for analysts and academics, policymakers and industry specialists.

The ASB's ever increasing readership and online viewership reflects its status as a highly respected and regularly cited source on conditions in the oil market.

It provides a wide range of data on the oil and gas industry worldwide, serving as an important source of reliable information for research analysts and academics, as well as policymakers and other industry stakeholders.

The publication provides detailed and comprehensive time-series data on different aspects of the global petroleum industry, including production, demand,

Mohammad Sanusi Barkindo (c), OPEC Secretary General, with Members of the OPEC Secretariat team who worked tirelessly on the Annual Statistical Bulletin 2019.

imports and exports, as well as exploration and transportation activities.

The 2019 ASB provides key statistical data on oil and natural gas activities in each of OPEC's 14 Member Countries: Algeria, Angola, Congo, Ecuador, Equatorial Guinea, Gabon, the Islamic Republic of Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates and Venezuela.

Additionally, it contains valuable industry data on various countries with detailed classifications, grouped by geographical region, and covers the world's major economic areas.

Highlights from ASB 2019

Some of the highlights from the 2019 ASB include:

- Total world crude oil production increased sharply in 2018 by 1.213 million barrels/day (m b/d), or 1.6 per cent, as compared to 2017, to reach 75.78m b/d, marking a historical high and the highest annual growth since 2015.
- OPEC crude oil production declined y-o-y by 415,000 b/d, or 1.3 per cent, while crude production by non-OPEC countries grew by 1.628m b/d, or 3.8 per cent.
- In 2018, the top three crude oil producing countries were the United States (10.96mb/d), Russia (10.53mb/d) and Saudi Arabia (10.32mb/d).
- With an average of 98.73m b/d in 2018, world oil demand grew by 1.5 per cent y-o-y, with the largest increases recorded for the Asia and Pacific region (particularly China and India) and North America.
- OECD oil demand grew solidly for the fourth consecutive year in 2018, while oil demand in OPEC Member Countries declined slightly after increasing during 2017.
- Distillates and gasoline accounted for around 55 per cent of 2018 world oil demand and was on an upward trend. Residual fuel oil requirements were about 7.2 per cent of total oil demand in 2018.
- OPEC Member Countries exported an average of 24.67m b/d of crude oil in 2018, a slight increase of about 14,000 b/d, or 0.1 per cent, compared to 2017.
- Following the trend in previous years, the bulk of crude oil from OPEC Member Countries — 15.86m b/d or 64.3 per cent — was exported to the Asia and Pacific region. Considerable volumes of crude oil — about 4.58m b/d — were also exported to Europe in

2018, which represents a decline compared with the 4.65m b/d recorded in 2017. North America imported 2.81m b/d of crude oil from OPEC Member Countries, which was about 406,000 b/d, or 12.6 per cent, less than the 2017 volumes.

- Exports of petroleum products from OPEC Member Countries averaged 4.71m b/d during 2018, up by around 784,000 b/d, or 20 per cent, compared to 2017. Imports of petroleum products by OPEC Member Countries stood at 2.62m b/d in 2018, roughly 593,000 b/d, or 29.3 per cent, higher than in 2017.
- World proven crude oil reserves stood at 1,498 billion barrels (bn b) at the end of 2018, increasing slightly by 0.4 per cent from the level of 1,492 bn b recorded at the end of 2017.
- Proven crude oil reserves in OPEC Member Countries decreased slightly by 0.2 per cent to 1,189 bn b at the end of 2018 for the second consecutive year.
- At the end of 2018, world proven natural gas reserves rose by 0.7 per cent to approximately 203.2 trillion standard cubic metres (cu m).
- Proven natural gas reserves in OPEC Member Countries stood at 72.68 trillion standard cu m at the end of 2018, up 0.6 per cent from the level at the end of 2017.
- World refinery capacity expanded by 876,000 barrels/calendar day (b/cd) to stand at 99.51m b/cd during 2018.
- The Asia and Pacific region, particularly China, as well as the Middle East, contributed the most in terms of refining capacity additions. Refinery capacity in the OECD declined marginally in 2018, as compared to 2017, with capacity expansions in North America being offset by closures in Europe.
- Globally, refinery throughput surged by 1.6 per cent to reach 84.94m b/d in 2018, with the largest gains in the Asia and Pacific region, North America, Europe and the Middle East.
- The OPEC Reference Basket averaged $69.78/b in nominal terms during 2018, up from $52.43/b in 2017, an increase of $17.35/b, or 33.1 per cent. The volatility level was $6.59/b, or 9.4 per cent, relative to the yearly average.

A collaborative achievement

The publication is a collaborative achievement between staff at the OPEC Secretariat and officials in OPEC Member Countries; an outcome of collective hard-work and dedication to the objectives of the Organization.

The OPEC Secretary General personally thanked everyone involved. “The ASB is the outcome of hard and labour-intensive work involving analysts, researchers and statisticians, both at the OPEC Secretariat and our Member Countries.

“I would like to express my appreciation to the staff at the OPEC Secretariat — and all the colleagues and other officials in our Member Countries — for their continuous hard work to make this publication possible.”

To download the PDF version, please visit the OPEC website:
https://asb.opec.org/index.php/pdf-download

Interactive version and Smart App

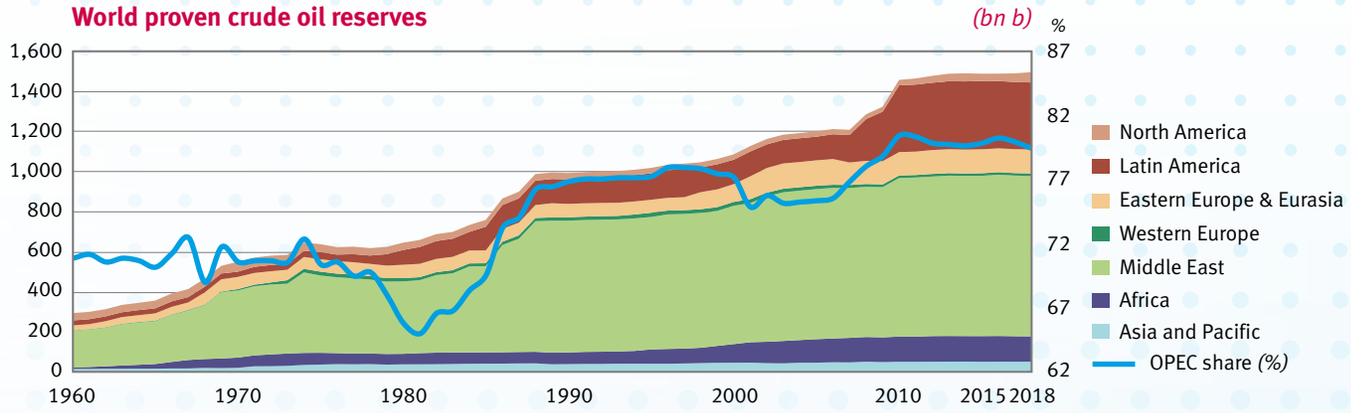
The ASB also has an interactive version, as we well as an ASB Smart App, which enables the download of complete time-series data back to 1960. This can be accessed under: http://asb.opec.org.

The ASB Smart App was developed to provide increased access to the publication’s important energy data, which is now available for download on iOS and Android mobile devices. Using the Smart App’s search function, academics, researchers, journalists, policy-makers and analysts can instantaneously download charts and tables to visualize the latest trends occurring in the energy markets.

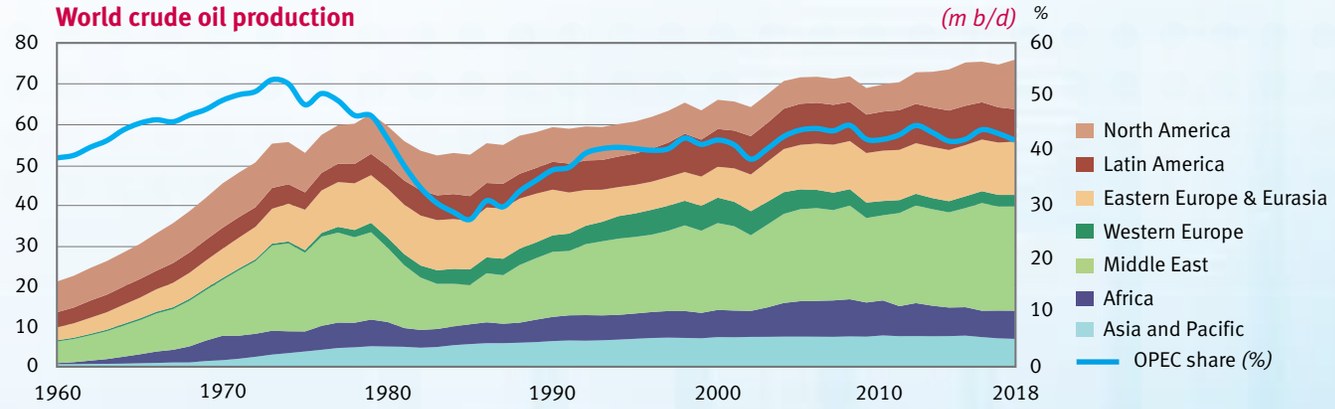
Download now: Smart App for OPEC Annual Statistical Bulletin

iOS **Android**

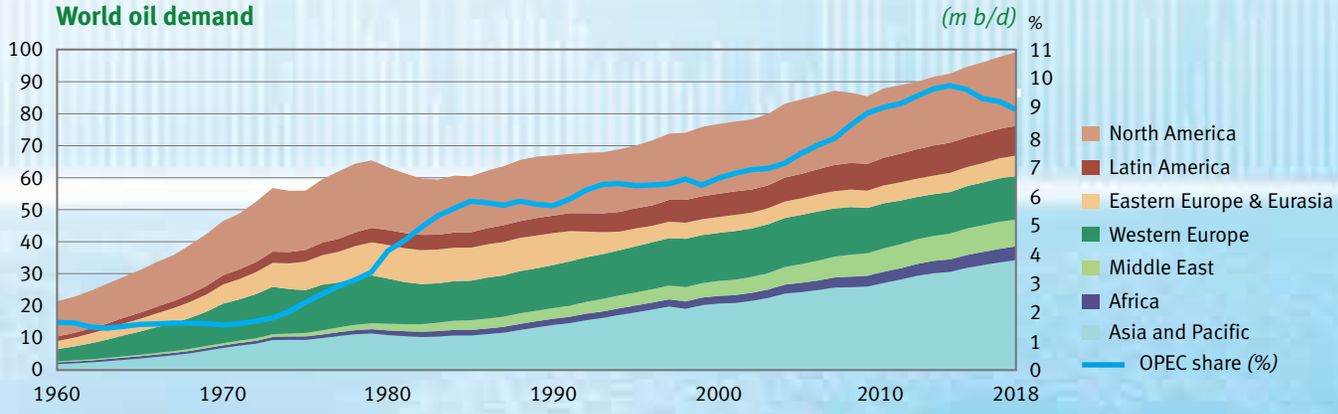
World proven crude oil reserves



World crude oil production



World oil demand



Shutterstock

United Nations Vienna marks 40th anniversary

In 1979, the United Nations Office in Vienna (UNOV) opened its doors at the famous Vienna International Centre (VIC) to commence a new era in the diplomacy of the Republic of Austria. Today, around 19 international organizations, 5,000 employees from more than 125 nations work in the VIC complex to promote the mission of the United Nations (UN) and achieve its objectives.
On May 27, 2019, the UN Office in Vienna celebrated its 40th birthday.
The OPEC Bulletin's ***Ayman Almusallam*** *reports on the historic event.*

Following the end of the devastating Second World War, the Austrian government undertook a number of steps and development plans to bring back the glory of its capital Vienna. Among those was an initiative to convert the historic city of Vienna to an international hub attracting international organizations.

In 1966, the Austrian government and the UN agreed to open a new office in Vienna. A year later, the government and the authorities of the city of Vienna jointly presented the area, which is now known as the VIC, to accommodate the new office.

Designed by the Austrian architect Johann Staber, construction began in 1972 and was completed seven years later.

The UNOV was founded as the third UN Headquarters after New York and Geneva, and is leased for a symbolic rent of one Schilling, Austria's previous currency, for 99 years. The sum is equivalent to seven cents (euro).

The UNOV celebrated its historic anniversary with a high-level event in May, and will also host an open-day for the public in September and organize a mobile exhibition to tour Austria showcasing its work.

Austria is also home to many other international organizations, such as OPEC, OFID, the Organization for Security and Co-operation in Europe (OSCE) and the European Space Policy Institute (ESPI).

Historical celebration: Vienna proud home for 40 years

The UNOV held a ceremony at its headquarters to mark its 40th anniversary, at which the UN Secretary General, António Guterres, the then Austrian Federal Minister for Europe, Integration and Foreign Affairs, Karin Kneissl, and the Mayor of the city of Vienna, Michael Ludwig, were present.

In his remarks at the ceremony, the UN Secretary General lauded the efforts undertaken by the Austrian and Viennese authorities, in general, and the Federal Ministry for Europe, Integration and Foreign Affairs, in particular, as a success story and expressed his deep gratitude to all those who made it possible.

"Today we celebrate the 40th anniversary of the Vienna International Centre. Next year, we mark the 75th anniversary of the United Nations."

— António Guterres

"Then and now, UNO City has remained a symbol of the continuation of what Austrian foreign policy has always been about: building bridges."

— Dr Karin Kneissl

The Secretary General commended the achievements of his colleagues in the UNOV, stating that "the 2030 Agenda for Sustainable Development is our roadmap, and the Vienna headquarters of the United Nations plays a vital role in our efforts."

He noted that "today we celebrate the 40th anniversary of the Vienna International Centre. Next year, we mark the 75th anniversary of the United Nations."

Guterres also attended a reception in Vienna's City Hall to commemorate the landmark occasion, where he said that "it is for me an enormous pleasure, an enormous joy and an enormous honour to be present at this wonderful reception in one of the most beautiful rooms in the world and to be here to pay tribute to Austria and to Vienna, in particular."

"I am very proud that the UN has a headquarters in Vienna … Vienna is one of the capitals of the world. Vienna is a centre from which culture has radiated to all over the world."

He also recognised and thanked the hosts for their gracious hospitality. "It is a privilege for those that work in the UN to be able to work here in Vienna. It is by far, one of the — if not the — most pleasant work stations for UN staff in the world, and we are very grateful to the municipality, to the Government and to the people."

"You have been in the centre of the history of Europe, in the centre of the history of the world. And so nowhere else in the world could the UN be better placed than in Vienna."

As part of the commemoration of the anniversary, Guterres also met with the Federal President of the Republic of Austria, Alexander Van der Bellen.

Building bridges

At the UNOV headquarters ceremony, Kneissl recalled her first visit to the UN Headquarters at the age of 14, on August 23, 1979, when she entered "the most modern and largest building" she had ever seen in Vienna. She added: "Later, I went on to work here and learn Arabic."

Reflecting on her personal journey, the Minister said that "over the years, coming here to the Vienna International Centre has always meant coming home for me. When I became Foreign Minister, one of my first paths led me here."

She also commended the decision of Austria's former Chancellor and Minister of Foreign Affairs, Bruno Kreisky, who decided to accommodate all UN organizations in the contemporary Vienna International Centre, marking the beginning of a new chapter in Austria's international relations.

"Then and now, UNO City has remained a symbol of the continuation of what Austrian foreign policy has always been about: building bridges," Kneissl added.

Shutterstock

UN Organizations in Vienna

The city of Vienna accommodates a number of UN organizations, including:

- International Atomic Energy Agency (IAEA)
- United Nations Industrial Development Organization (UNIDO)
- United Nations Environment Programme (UN Environment)
- Sustainable Energy for All (SEforALL)
- United Nations Office for Outer Space Affairs (UNOOSA)
- International Commission for the Protection of the Danube River (ICPDR)
- International Organization for Migration (IOM)
- United Nations Office on Drugs and Crime (UNODC)

Follow the OPEC Secretariat on Social Media

Facebook

facebook.com/OPECSecretariat

Twitter

twitter.com/opecsecretariat

Sempra LNG and Aramco Services Company sign heads of agreement for Port Arthur LNG

Saudi Aramco and Sempra Energy announced on May 22 that their respective subsidiaries, Sempra LNG and Aramco Services Company, have signed a heads of agreement (HOA).

The HOA anticipates the negotiation and finalization of a definitive 20-year liquefied natural gas (LNG) sale-and-purchase agreement (SPA) for five million tonnes/year (m t/yr) of LNG offtake from Phase 1 of the Port Arthur LNG export-project under development. It also includes the negotiation and finalization of a 25 per cent equity investment in Phase 1 of Port Arthur LNG.

Amin Nasser, Saudi Aramco's CEO and President, said: "The agreement with Sempra LNG is a major step forward in Saudi Aramco's long term strategy to become a leading global LNG player. With global demand for LNG expected to grow by around four per cent/year, and likely to exceed 500 million metric tons a year by 2035, we see significant opportunities in this market and we will continue to pursue strategic partnerships which enable us to meet rising global demand for LNG."

"At Sempra Energy, we are developing one of the largest LNG export infrastructure portfolios in North America, with an eye towards connecting millions of consumers to cleaner, more reliable energy sources," said Jeffrey W Martin, Chairman and CEO of Sempra Energy. "We are pleased to partner with affiliates of Saudi Aramco, the largest oil and gas company in the world, to advance the development of Sempra LNG's natural gas liquefaction facility in Texas and enable the export of American natural gas to global markets."

Amin Nasser, Saudi Aramco's CEO and President.

The proposed Port Arthur LNG Phase 1 project is expected to include two liquefaction trains, up to three LNG storage tanks and associated facilities that should enable the export of approximately 11m t/yr of LNG on a long-term basis. Port Arthur LNG could be one of the largest LNG export projects in North America, with potential expansion capabilities of up to eight liquefaction trains or approximately 45m t/yr of capacity.

Brooge Petroleum, Sahara Energy sign agreement to build 250,000 b/d oil refinery in Fujairah

Brooge Petroleum and Gas Investment Co (BPGIC) and Sahara Energy Resources DMCC Dubai signed a partnership agreement to set up an oil refinery capable of producing bunker fuel with a capacity of up to 250,000 b/d in the Emirate of Fujairah.

BPGIC and Sahara Energy said the facility will be one of the first of its kind in the Middle East and North Africa to comply with the new regulations of the International Maritime Organization (IMO) 2020 by capping sulphur content in shipping fuels. The first phase of the planned refinery is expected to be completed by the first quarter of 2020.

Mohammad Sanusi Barkindo, OPEC Secretary General, attended the signing ceremony in Abu Dhabi and said the deal "evolved through the drive of the UAE's leadership in promoting and supporting such private initiatives and expediting the diversification of their economies." He underlined the "unique role of the private sector as a critical engine for economic vision and strategies."

Commenting on the signing, Nicolaas Paardenkooper, BPGIC CEO, said: "The new facility will contribute to bolstering the growing status of the Emirate of Fujairah in the oil and gas industry and help meet the growing demand for shipping fuel that complies with the new international laws on capping sulphur content in shipping fuels, as most of current shipping fuel contains up to 3.5 per cent sulphur."

Mohammad Sanusi Barkindo (third r), OPEC Secretary General, attended the signing ceremony in Abu Dhabi.

Abu Dhabi celebrates 25 years of partnership with Austria's OMV

It has been 25 years since Abu Dhabi and Austria signed a consortium agreement that laid the foundation for the strong and enduring commercial partnership. Core to this relationship is Mubadala's shareholding in OMV based on the fact that Abu Dhabi acquired 13 per cent of OMV shares from Österreichische Industrieholding AG (ÖIAG) in 1994. Later, Abu Dhabi increased its stake to 24.9 per cent and in 2019 all the shares were transferred to Mubadala Investment Company.

The partnership between Abu Dhabi and Austria developed further in 1997 with initial acquisitions in petrochemical group Borealis a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. Building upon this partnership, OMV's wholly-owned subsidiary PCD Polymere GmbH was transferred into Borealis a year later. As a confirmation of their confidence in Borealis' business, these holdings were subsequently increased and today Mubadala and OMV shareholdings are 64 per cent and 36 per cent, respectively.

In 2018, OMV also became a 20 per cent shareholder in ADNOC's offshore concession Umm Lulu, SARB, Bin Nasher and Al Bateel. Later in the year, OMV and ADNOC signed another concession agreement awarding OMV a five per cent interest in the Ghasha concession with a duration of 40 years. And in 2019, the foundations were laid for OMV to establish a major downstream oil position in Abu Dhabi, with OMV acquiring a 15 per cent stake in ADNOC Refining and a 15 per cent share in a yet-to-be established Trading Joint Venture.

Musabbeh Al Kaabi, CEO, Petroleum and Petrochemicals, Mubadala, said: "We are pleased to have participated in a long-term relationship with OMV, both as a shareholder and as partners in Borealis. OMV's commitment to Abu Dhabi and the company's role in the success we have achieved together is greatly valued. We look forward to extending our successful track record of collaboration and investment together."

Rainer Seele, OMV Chairman of the Executive Board and CEO: "OMV has established a strong integrated position in Abu Dhabi along the value chain, ranging from upstream production to refining and trading through to petrochemicals. This is the first time OMV has expanded its fully integrated business model beyond Europe. Our extensive expertise in upstream-downstream-petrochemical integration is a core component of our sustainable success and our strengthened position in Abu Dhabi will allow us to move closer to the attractive growth markets in Asia-Pacific. Hence our footprint in Abu Dhabi is a key component of OMV's Strategy 2025."

Italy's Eni agrees to extend Algeria gas contract to at least 2027

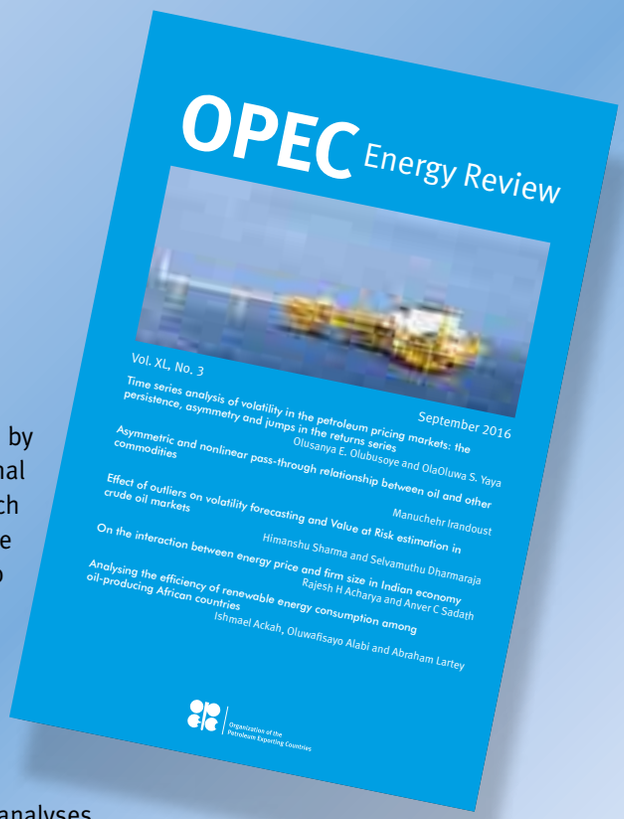
Claudio Descalzi, Eni's CEO.

Italian oil and gas group Eni has strengthened its ties with Algeria's Sonatrach by renewing a contract to import Algerian gas into Italy until 2027. Eni, which has a series of exploration and production assets in Algeria, said the agreement with Sonatrach also included an option to extend the contract deadline by a further two years.

The agreements follow in the steps of a partnership on gas supply and transportation that was established more than 40 years ago, encompassing major pipeline projects and many decades of successful supply to Italy. The deal covers almost 15 per cent of gas imported into Italy.

Eni's CEO, Claudio Descalzi, commented: "I am particularly pleased with the renewal of the gas supply contract and the level of the strategic partnership with Sonatrach which spans from the exploration and production sector, to gas marketing and transportation, to renewables."

CALL FOR PAPERS



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)*.

TRIPOLI

MERMAID OF THE MEDITERRANEAN

Libyan exhibition marks OFID's 43rd Anniversary

By Silvia Mateyka

OFID is always honoured to showcase the works of artists from its member countries — and a Libyan exhibition Tripoli: Mermaid of the Mediterranean was no exception. Opening on the eve of OFID's 43rd anniversary on January 28, the event transported visitors over 2,300 km from Austria to Libya to provide an extraordinary insight into the culture, architecture and people of the country's vibrant capital.

'Mermaid of the Mediterranean' comes from the Arabic reference Arusat-el-bahr Al-metawasat — literally translated as 'Bride of the Mediterranean sea'; a name given to the city because of its turquoise waters and whitewashed buildings.

Tripoli has historically been influenced by many different Mediterranean cultures including the Phoenicians, Greeks, Romans, Ottomans and the Italians. The city's history is a rich one, and in modern times it has become a melting pot bringing in people from all over Libya.

Jointly organized by OFID and the Embassy of the State of Libya, the exhibition was opened by Libya's Head of State and President of the Presidential Council of the Libyan Government of National Accord, Faiez Serrag, and OFID Director-General, Dr Abdulhamid Alkhalifa *(pictured above)*.

In his opening address, Dr Alkhalifa said that OFID was proud to present the "extraordinary history and culture" of its member country Libya. He highlighted how the country — the fourth largest on the African continent — is one of the longest-serving members of OPEC and is an integral and active member of OFID, having helped support economic growth and poverty alleviation in disadvantaged regions for more than four decades.

Libya's Minister of Foreign Affairs, Mohamed Al-Taher Syala, was also in attendance and provided welcoming remarks outlining OFID's long history of providing development support across the globe.

The event was the latest in a long line of exhibitions hosted by OFID to showcase the cultures of its member and partner countries. Past exhibitions have highlighted member countries Algeria, Indonesia, Iran, Iraq, Nigeria, Saudi Arabia and Venezuela, as well as partner countries Kenya and Sudan. The exhibition was open to the public until February 8, 2019.

OPEC Fund for International Development (OFID)

Libya's cultural heritage was portrayed through photographic works, including those from Adam Styp-Rekowski and Sasi Harib (courtesy of Noon Arts Projects), as well as images from two young Libyan photographers, Nader El-Gadi and Nada Harib. It also featured artworks by Najla Shawkat El Fitouri and Yousef Fouad Ftess.

'Mermaid of the Mediterranean' literally translates as 'Bride of the Mediterranean sea'; a name given to the city because of its turquoise waters and whitewashed buildings.

All images courtesy OFID.

Shutterstock

OPEC CITIES IN FOCUS

Muslim pilgrims from all over the world at King Abdulaziz International Airport in Jeddah, Saudi Arabia.

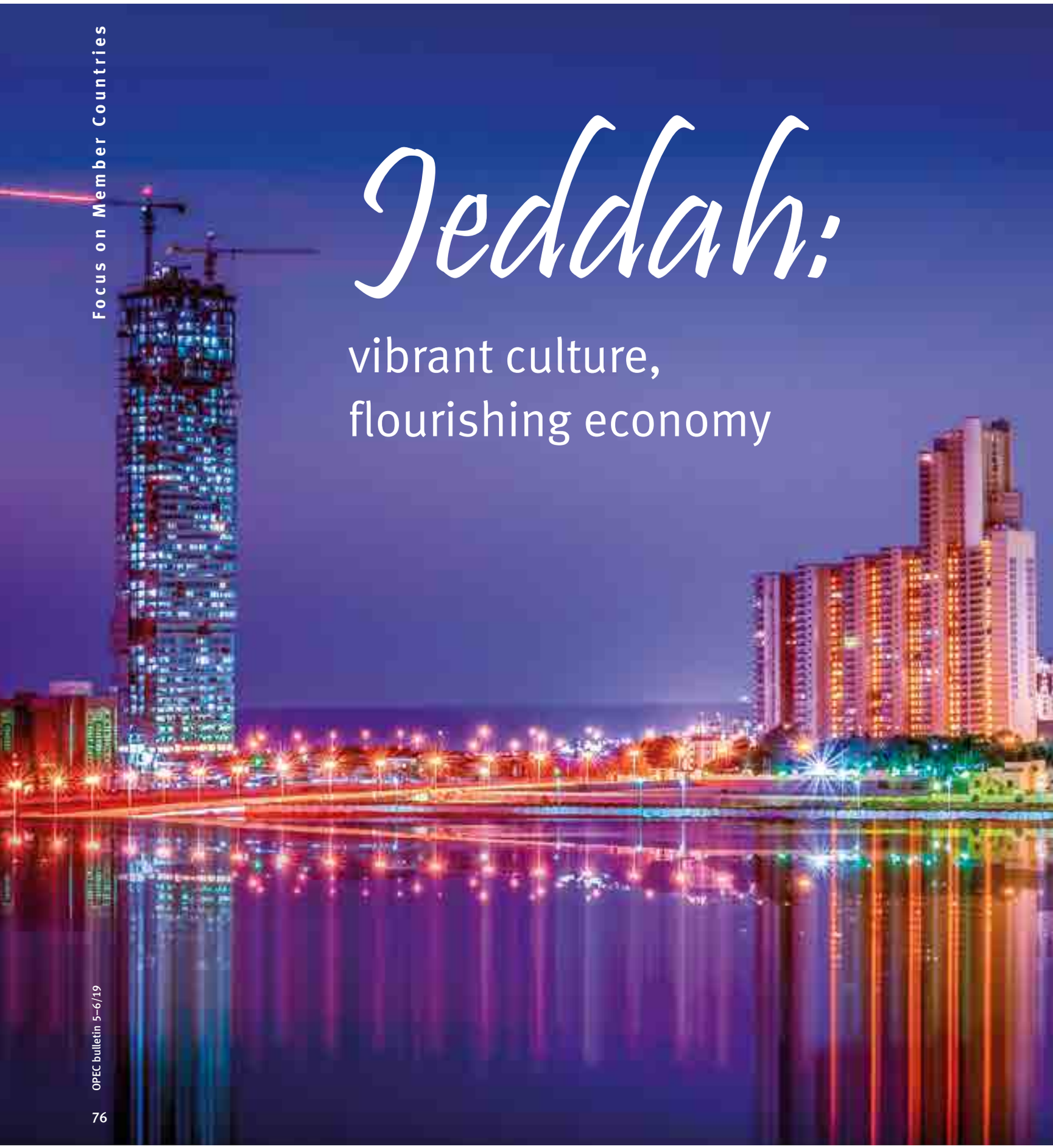
In the April 2017 edition of the *OPEC Bulletin*, we introduced a new series — **OPEC Cities In Focus** — which would endeavour to provide an overview of the major cities in OPEC's Member Countries and highlight their many attributes.

Though each OPEC Member Country has played a prominent role in the oil and gas sector over the years, and has maintained a steadfast commitment to the Organization's broader objectives in regards to market stability, they all have much more to offer than just energy resources. Through this series, we hope to spotlight the history and development of their principal cities.

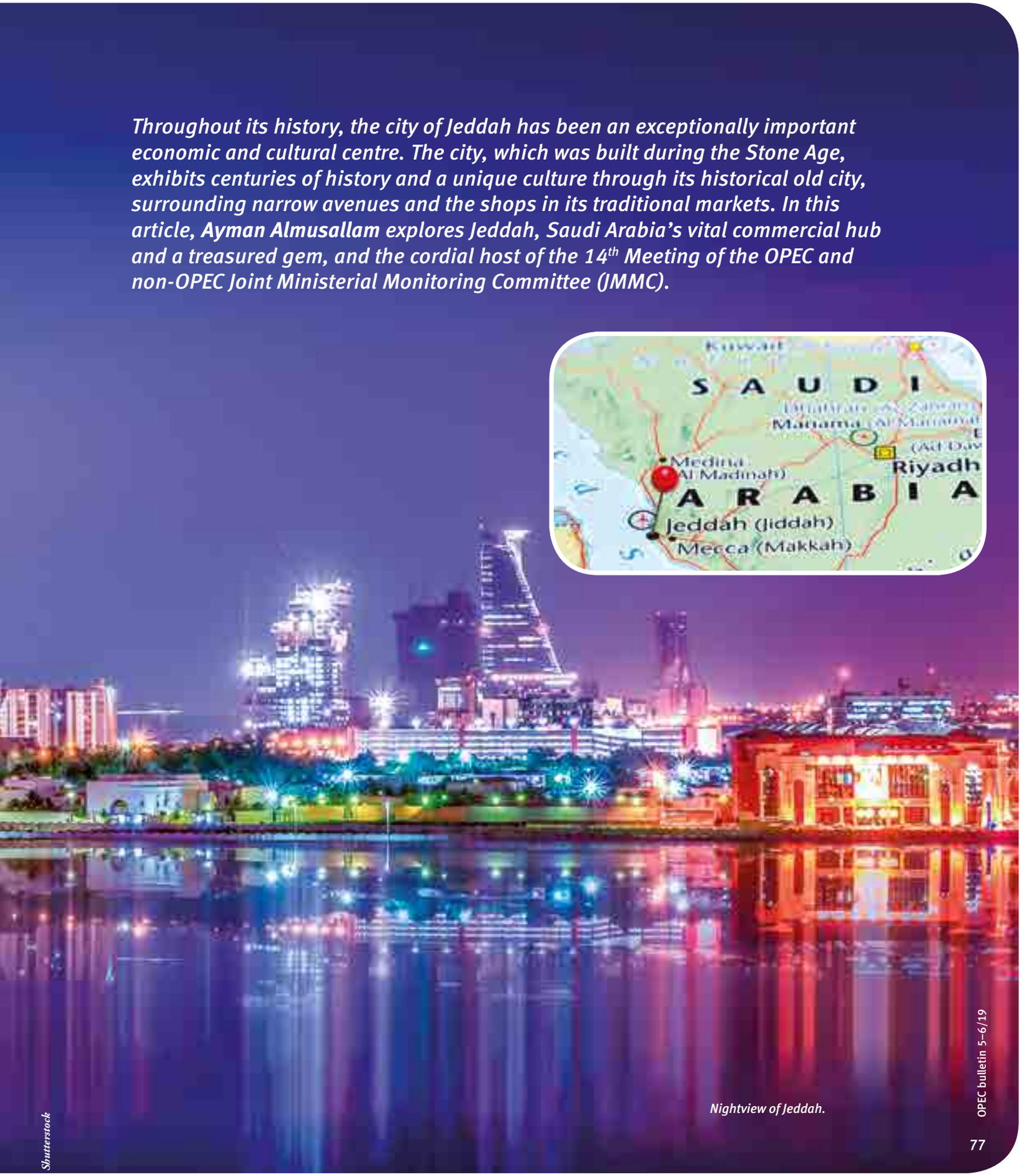
Our motivation is to highlight some of the other features of our Member Countries apart from oil and gas. And our desire is to offer readers a window into the rich urban life in our Member Countries and their cultural diversity.

Jeddah:

vibrant culture, flourishing economy



*Throughout its history, the city of Jeddah has been an exceptionally important economic and cultural centre. The city, which was built during the Stone Age, exhibits centuries of history and a unique culture through its historical old city, surrounding narrow avenues and the shops in its traditional markets. In this article, **Ayman Almusallam** explores Jeddah, Saudi Arabia's vital commercial hub and a treasured gem, and the cordial host of the 14th Meeting of the OPEC and non-OPEC Joint Ministerial Monitoring Committee (JMMC).*



Nightview of Jeddah.

Shutterstock

Alamy

Old buildings in the historic area of Jeddah, famously known as Al-Balad, which is a UNESCO World Heritage site.

The city of Jeddah is one of the oldest inhabited areas in Hejaz (the historical name of the western region of the Kingdom of Saudi Arabia), with a truly remarkable history.

While historians have not been able to identify when Jeddah was established, many artefacts, which date from the Thamudian era, have been found in the city. Overlooking the beautiful Red Sea, Jeddah could have also served as a fishing hamlet in its early days.

Fast forward to the Islamic era, which commenced in the year 610 CE, and the charming Jeddah continued its promising journey of development at a distinctive pace to become a strategic port and important hub for the region.

Jeddah's importance gained further momentum and significance, when it became the gateway for pilgrimage to Mecca and a destination for millions of Muslims every year. Since then, the unparalleled status of Jeddah has attracted countless traders and entrepreneurs, presenting a wide-range of business opportunities for locals.

All those developments helped Jeddah reach an unprecedented, golden age in this prosperous region.

Centuries later, Saudi Arabia gained control of Jeddah for the first time in its history in 1802. However, the city was taken by the Ottomans over a decade later.

In the 1920s, early attempts to put together a unified Arab state started in the area. Jeddah became a strategic territory of the third and current state of Saudi Arabia, which was soon referred to as the Kingdom of Hejaz and Sultanate of Nejd. In 1932, the entire country was renamed the Kingdom of Saudi Arabia.

Being a vital city in the thriving Kingdom of Saudi Arabia, Jeddah has enjoyed stable growth and continuous development in several industries. With a population currently estimated at around four million and spread out over a land area of 1,600 square kilometres, the city of Jeddah has become a shining icon of the Kingdom's prosperity.

Al-Balad

Listed on the prominent list of UNESCO's World Heritage sites, the old city of Jeddah — Al-Balad — is a protected area that displays much of the region's old, unique heritage. For centuries, the old city has played an important

Saudi leadership supports restoration efforts of old Jeddah

As part of the Kingdom's ambitious roadmap, Vision 2030, and under the guidance of the Custodian of the two Holy Mosques and the Monarch of Saudi Arabia, King Salman Bin Abdulaziz Al-Saud, the Saudi leadership has constantly strived to protect the historical identity and rich heritage of the Kingdom.

Being the key architect behind the landmark Vision 2030, Saudi Arabia's Crown Prince, Deputy Prime Minister and Minister of Defence, HRH Prince Mohammed bin Salman bin Abdulaziz, pledged $50 million to fund the rehabilitation process of Jeddah's old city, in general, and its historical buildings, in particular.

The Crown Prince also tasked the Kingdom's Ministry of Culture to form various teams of dedicated, young Saudis to carry out the necessary restoration efforts, while maintaining the identity and architectural style of Jeddah, under the supervision of renowned experts in the field of history and rehabilitation. Some of the houses in the old city are more than 500 years old.

role in the civilizations that have resided in the region. It particularly rose in importance when the Caliph Uthman bin Affan declared it the gate to the Holy City — Mecca — in 647 CE. Old Jeddah comprises four major neighbourhoods: Harat-Al-Sham, Harat Al-Yemen, Harat Mazloum and Harat Al-Bahr.

Built in the 11th century, Jeddah's wall served as a testament to its history and was an inspiration to the development of various architectural styles. This eventually led to the birth of the architectural style *Hejazi*, which consists of a blend of various styles influenced by Islam. The wall was removed in 1947 to accommodate the requirements of expansion. Serving as an outdoor exhibition, Al-Balad has provided local and international tourists with a taste of Jeddah's unparalleled, mesmerising legacy for many decades.

Rich culture, past and present

For many decades, the city of Jeddah's unique cultural diversity and heritage, has attracted millions of visitors. This includes its position as the gateway for pilgrims visiting Mecca and Medina, but also for many others who have been attracted by the richness of its local culture and century old traditions.

The city is also full of first-class events facilities and venues. The Jeddah International Exhibition and Convention Centre is one of the largest venues, attracting many conferences and thousands of delegates each year. This multi-purpose venue caters for all event types from conferences and trade fairs to product launches and exhibitions. For example, the Red Sea International Film Festival, the Jeddah International Trade Fair and the Jeddah International Book Fair.

Mizmar (folkloric dance)

Mainly practised in the western region of the Kingdom of Saudi Arabia, Mizmar is a group dance that largely relies on moving and twirling a thick wooden stick.

The stick is typically produced from bamboo cane. The heavy drums and loud claps also play an important role in setting the rhythm for the dancers.

Mizmar is frequently performed during festive occasions and national celebrations. Historically, the traditional dance was linked to the war and battlefield rituals that existed in the region. Its moves are similar to Egypt's folkloric dance — *Tahtib*.

The dance is listed on UNESCO's Representative List of the Intangible Cultural Heritage of Humanity, which attempts to preserve and promote practices, expressions and knowledge that form an important part of a place's identity and culture.

On the Organization's official website, UNESCO describes the dance as "a cultural expression that acts as a marker of community identity."

Sport

Similar to other cities in the Kingdom of Saudi Arabia, Jeddah enjoys a solid sports base, supported by a large number of enthusiasts, athletes and loyal fans.

"A cultural expression that acts as a marker of community identity"
United Nations Educational, Scientific and Cultural Organization (UNESCO).

Jeddah, the bride of the Red Sea.

Traditional houses in historic Jeddah.

Football is one of the most followed games in the city and has influenced its local culture. It is also home to two of the largest football clubs in the country — Itthad Club and Al-Ahli Saudi Football Club. They both play in the Saudi Professional League, the country's premier division, and enjoy a broad base of support.

Among others, basketball, sailing and diving are some of the sports that are regularly practised in Jeddah.

In efforts to encourage athleticism in the city and surrounding area and promote sport among the youth, the leaders of the Kingdom of Saudi Arabia and the local authorities have undertaken solid steps to develop sport facilities in Jeddah.

The King Abdullah Sport City, the second-largest stadium in the Kingdom, serves as a testament to those efforts.

Known as the 'shining jewel', the mega stadium covers an area of three million square metres and was constructed within 14 months. It was built in compliance with FIFA's international standards. It comprises a main football stadium, an indoor area which can accommodate roughly 2,000 people, an outdoor stadium and several indoor training fields.

Jeddah: Saudi Arabia's glowing gemstone

For years, the beautiful city of Jeddah has served as a testament to the Kingdom's growing prosperity, and its centuries of unique and diverse history. Its cultural backdrop and its solid economy have helped to further propel the rising national economy of the OPEC Founding Member and major crude oil producer and exporter.

With its unique role, Jeddah is expected to remain a valuable cultural and economic jewel for Saudi Arabia for decades to come.

Mizmar dancers and delegates to the 14th Meeting of the JMMC which took place in Jeddah, Saudi Arabia, beween May 17–19, 2019 (see page 4).

An economic hub

Between May 17–19, the city of Jeddah cordially hosted the 14th Meeting of the OPEC-non-OPEC Joint Ministerial Monitoring Committee (JMMC) and the 29th Meeting of the OPEC-non-OPEC Joint Technical Committee (JTC).

Attended by 15 oil-producing countries, the JMMC Meeting convened with an aim to review the conditions and short-term prospects of the oil market and recent macroeconomic developments, as part of its duties in connection with the landmark 'Declaration of Cooperation' *(see page 4 for details.)*

The successful completion of those two high-level meetings symbolizes the ongoing, wider success of the city of Jeddah in holding key meetings and events.

Jeddah's advanced facilities have also allowed it to be a host to many international conferences and important gatherings, such as the meetings of the Kingdom's Council of Ministers, the Council of Economic and Development Affairs and the Council of Political and Security Affairs.

Jeddah also successfully hosted the 8th Meeting of the JMMC and the 15th Meeting of the JTC in April 2018.

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

March 26 Students from The Russian Federation, organized by the Diplomatic Academy Vienna (Diplomatische Akademie Wien).

March 26 Students from the German Armed Forces (Deutsche Bundeswehr), Bischofswiesen, Germany.

March 27 Students from the Radboud University, Nijmegen, Netherlands.

March 29 Students from the California Lutheran University, organized by the Donau-Universität Krems, California, US.

April 1 Students from the Peoples' Friendship University of Russia (RUDN University), Moscow, The Russian Federation.

Head, Data Services Department

The Department collects, retrieves and provides statistical data as support to the research and analytical studies in the other RD Departments and other activities of the Secretariat. The Department also develops up-to-date IT applications and database systems, and provides specialized relevant documents and references. The Department thus has the responsibility to a central, timely provider of reliable up-to-date data, documentation and information pertaining to oil markets in particular and energy markets and related issues in general as well as rendering IT development services.

Objective of position:

To plan, organize, coordinate, manage and evaluate the work of the Department in accordance with the work programme and programmed budget so as to optimize its support to the Secretariat in achieving its overall objectives. The work covers the provision of statistical data as needed by the Member Countries and by researchers for research purposes, the supporting IT programs and the provision of library services.

Main responsibilities:

- Plans, organizes, coordinates, manages and evaluates the work in the Statistics and IT Development Groups and Information Centre covering:
  Statistical data verification and documentation of information pertaining to oil markets; review and clearance of the research results and reports produced by the Department; advancement of the technical equipment on computer and information technology; coordination of the information exchange project between the Secretariat and the Member Countries, Member Countries' institutions and oil companies via internet/intranet; as well as continuous re-designing and security of the OPEC Web page; development of IT applications and database systems, database administration and software installation; provision of library services in accordance with the Medium-Term Programme and Work Programme and Budget of the Research Division.
- Maintains and/or strengthens the cooperation with external institutions such as APERC, Eurostat, IEA, OLADE and the UN Statistics Division, to improve the quality of oil data in the Secretariat. To this end maintains the DSD database on the Joint Oil Data Exercise.
- Ensures full response to requests by the Conference, BOG, ECB and standing committees for data and information relevant to the work 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/her 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 receives 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/haer by the Director of Research Division.

Required competencies and qualifications:

Education:

Advanced University degree in fields related to statistics, computer applications, or informatics. PhD in either field preferred.

Work experience:

Advanced degree: 12 years in field of Statistics and/or Information Management and Analysis in the energy and oil sector, as well as in System Development and use of computers in Statistical Analysis with a minimum of four years in a managerial position, preferably at large national, regional, or international institutions. PhD: Ten years.

Training specializations:

Oil related statistical data; software application development; systems analysis and design; project management; 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 and 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 an application form which can be downloaded from the OPEC website.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **June 30, 2019,** quoting the job code: 3.1.01 *(see www.opec.org — Employment)*.

Economic Analyst

The prime objectives of the Petroleum Studies Department are: to provide pertinent and reliable information and analyses in support of decision-making and policy-making in Member Countries; to carry 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; to conduct regular forecasts, elaborate and analyse oil market scenarios and prepare and publish reports on these findings; to promote 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; to prepare and contribute to reports to be submitted to the ECB, the BOG and the MMSC, as well as papers for various OPEC publications.

Objective of position:

To analyze key indicators and forecast global economic development in the short- to medium- term with emphasis on developing countries and countries in transition; to consolidate findings for inclusion in the *Monthly Oil Market Report,* as well as reports for OPEC Governing Bodies; to prepare occasional and topical reports/studies as requested.

Main responsibilities:

- Analyses leading indicators of world economic development including trade, commodity prices and investments and on this basis monitors and forecasts short- to medium- term developments with particular focus on developing countries and countries in transition.
- Prepares and comments on an economic outlook for developing countries, including OPEC Member Countries, for the *Monthly Oil Market Report* and other reports. Prepares and presents associated materials to meetings of the ECB.
- Contributes to economic studies in support of PSD analyses of oil demand in developing countries; monitors and assesses the impact of oil price, subsidies and taxation policies on the demand for oil.
- Builds up and pursues collaborative networks with Member Countries' and other countries' academic and business institutions to enhance pertinent data gathering and analysis.
- Participates in relevant task forces, external meetings and conferences in particular on subjects relating to analysis on and cooperation with oil consuming developing countries.
- Carries out any other tasks assigned by the relevant superiors as pertain to his/her background, qualifications and position.

Required competencies and qualifications:

Education:

University Degree in Economics; advanced degree preferred.

Work experience:

University degree: eight years; advanced degree: six years.

Training specializations:

Macroeconomics, international trade and/or development economics. Knowledge of applied econometrics and quantitative methods an asset. Knowledge of the oil industry an asset.

Competencies:

Communication skills; analytical skills; presentation skills; interpersonal skills; customer service orientation; initiative and 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 the 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 an application form which can be downloaded from the OPEC website.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **July 1, 2019,** quoting the job code: 4.2.01 *(see www.opec.org — Employment)*.

Forthcoming events

Africa assembly conference, June 24–25, 2019, Paris, France. Details: Oil and Gas Council, Bedford House, 69–79 Fulham High Street, London SW6 3JW, UK. Tel: +44 20 73 84 80 56; website: https://oilandgascouncil.com/event-events/africa-assembly-and-dinner.

11th CWC world LNG and gas series: Asia Pacific summit, June 24–27, 2019, Singapore. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: https://asiapacific.cwclng.com.

Brazil offshore, June 25–28, 2019, Rio de Janeiro, Brazil. Details: Reed Exhibitions, Gateway House, 28 The Quadrant, Richmond, Surrey TW9 1DN, UK. Tel: +44 208 271 2134; fax: +44 208 910 7823; e-mail: rxinfo@reedexpo.co.uk; website: www.brasiloffshore.com.

Argus Kazakhstan and Central Asia oil and gas, June 27–28, 2019, Almaty, Kazakhstan. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; email: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/kazakhstan-and-central-asia-oil-and-gas.

Iraq petroleum, June 27–28, 2019, London, UK. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; www.cwciraqpetroleum.com.

Nigeria oil and gas conference & exhibition, July 1–4, 2019, Abuja, Nigeria. Details: CWC Associates Ltd, Regent House, Oyster Wharf, 16–18 Lombard Road, London SW11 3RF, UK. Tel: +44 207 978 000; fax: +44 207 978 0099; e-mail: sshelton@thecwcgroup.com; website: www.cwcnog.com.

Energy and sustainability 2019, July 3–5, 2019, Coimbra, Portugal. Details: Wessex Institute, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK. Tel: +44 238 029 32 23; fax: +44 238 029 28 53; e-mail: wit@wessex.ac.uk; website: www.wessex.ac.uk/conferences/2019/energy-and-sustainability-2019.

LNG Western Africa conference, July 8–9, 2019, Accra, Ghana. Details: SZ&W Group, 11F Garden Business Building Nio 82, Zhonshan North 1st Road, Shanghai, PR of China. Tel: +86 21 58 30 07 10 80 98; e-mail: info@szwgroup.com: website: www.szwgroup.com/lng-western-africa-conference-2019.

US fuels markets and refining strategy conference, July 10–11, 2019, Houston, TX, USA. Details: Active Communications International, Inc (ACI). Website: www.wplgroup.com/aci/event/fuel-market-refining-strategy-conference-usa.

Mexico oil and gas summit, July 17–18, 2019, Mexico City, Mexico. Details: Mexico Business Events, Paseo de la Reforma 180, Piso 20, Col Juárez, Del Cuauhtémoc, DF 06600, México. Tel: +52 55 52 63 02 00; website: https://mexicobusinessevents.com/oilandgas/2019.

8th Oil and gas africa international trade and exhibition, July 25–27, 2019, Nairobi, Kenya. Details: Expogroup, 1910, 19th Floor, Monarch Office Tower, PO Box 333840, Sheikh Zayed Road, Dubai, UAE. Tel : +971 43 05 07 55; e-mail: feedback@expogr.com; website: https://www.expogr.com/kenyaoil.

Gas Indonesia summit and exhibition, July 31–August 2, 2019, Jakarta, Indonesia. Details: dmg events Asia Pacific Pte Ltd, 19 Cecil Street, #03-01, The Quadrant, 049704 Singapore. Tel: +65 64 22 11 55; e-mail: info@gasindosummit.com; website: www.gasindosummit.com.

Digital refineries summit Nigeria, July 23–25, 2019, Lagos, Nigeria. website: www.oilandgasiq.com/events-digitalrefineriesafrica?utm_medium=portal&mac=IQPCCORP.

The oil and gas conference, August 11–14, 2019, Denver, CO, USA. Details: EnerCom, Inc, 410 17th Street, Suite 250, Denver, CO 80202, Tel: +1 303 296 88 34; fax: +1 303 293 99 04; website: www.enercominc.com.

JBC energy matters — seminar, September 5–6, 2019, Vienna, Austria. JBC Energy GmbH, Wollzeile 6–8, 1010 Vienna, Austria. Tel: +431 513 49 22; e-mail: info@jbcenergy.com; website: www.jbcenergy.com.

Power week Africa, September 9–13, 2019, Johannesburg, South Africa. Details: www.power-week.com/Africa/index.html.

Pacific fuels and convenience summit, September 3–5, 2019, San Diego, CA, USA. Details: California Fuels and Convenience Alliance, 2520 Venture Oaks Way, suite 100, Sacramento, CA 95833, USA. Tel: +1 916 646 59 99; fax: +1 916 646 59 85; website: www.petroshow.com.

SPE offshore Europe conference and exhibition, September 3–6, 2019, Aberdeen, UK. Details: SPE, www.offshore-europe.co.uk.

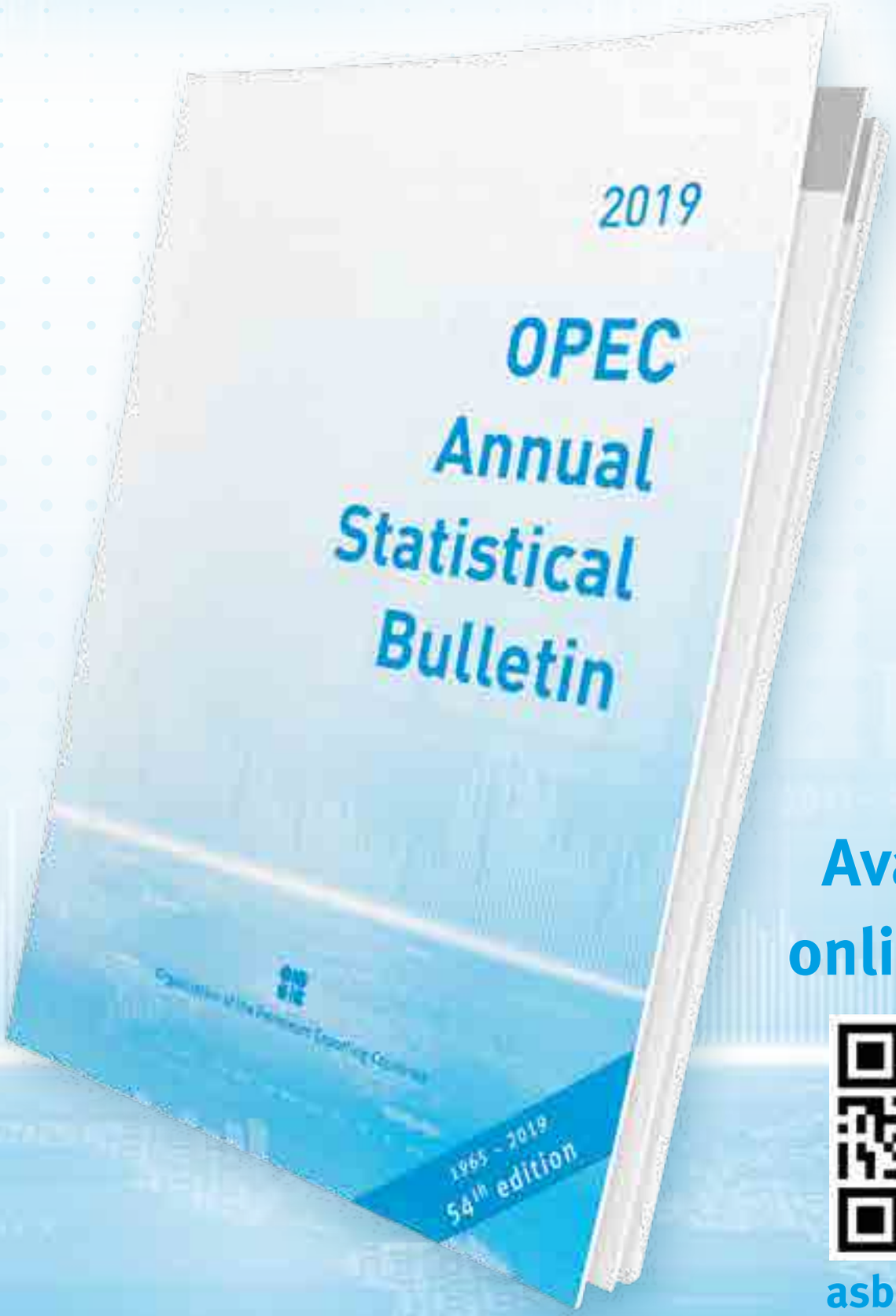
24th World energy congress, September 9–12, 2019, Abu Dhabi, Dubai. Details: World Energy Council, 62–64 Cornhill, London EC3V 3NH, UK. Tel: +44 207 734 59 96; fax: +44 207 734 59 26; website: www.wec24.org/home.

South America energy week, September 10–11, 2019, Buenos Aires, Argentina. Details: Oil and Gas Council, website: www.energycouncil.com/event-events/south-america-assembly-southern-edition.

6th London gas and LNG forum, September 11–12, 2019, London, UK. Details: US Energy Stream, Inc, 13115 Whittington Drive #9205, Houston, TX 77077, USA. Tel: +1 202 717 31 00; e-mail: peggy.livanios@usenergystream.com; website: www.energystreamcmg.com/forums/forums-seminars/6th-london-gas-lng-forum-2019.aspx.

5th annual IOT in oil and gas conference, September 16–17, 2019, Houston, TX, USA. Details: Energy Conference Network, 440 Cobia Dr. Suite 2004, Katy, TX 77494, USA. Tel: +1 855 869 42 60; website: www.iotinoilandgas.com.

Gastech exhibition and conference, September 17–19, 2019, Houston, TX, USA. Details: dmg::events London, Tel: +44 20 36 15 59 18; e-mail: exhibition@gastechevent.com; website: www.gastechevent.com.



Available online now:

asb.opec.org

Visit our website

www.opec.org

Non-OPEC oil supply development

May 2019

In 2018, non-OPEC oil supply experienced a robust growth of 2.91 million barrels/day, amounting to more than three times the increase seen in the previous year, and was led by the year-on-year gains of 2.26m b/d in the US. In addition to the US, other non-OPEC countries, such as Canada, Russia and UK contributed to the gains. Indeed, the recovery in oil supply in 2017 and 2018, following the contraction in 2016, was driven by improving oil market conditions and rising oil prices, with NYMEX WTI increasing by around $14/b, or 27.5 per cent, y-o-y, to average $64.90/b in 2018.

Free cash flow (FCF) in non-OPEC reached to a record high of $310 billion in 2018, a jump by almost 100 per cent y-o-y. There are several reasons to why free cash flows have improved from the low of $35bn seen following the oil price collapse in 2015. Key among these reasons are the higher oil prices, lower cost levels and reduced investments. The non-OPEC's FCF in 2019 is expected to decline 15 per cent, before rising again by 23 per cent to reach $324bn in 2020.

As a result of the higher cash-flow, non-OPEC upstream sanctioning activity appears set to reach an all-time high this year, marking the start of a new cycle of investment. With the improvements in FCF, E&P companies currently have large projects in non-OPEC countries that they plan to sanction over the next two years. It is anticipated that this year, around $26.5bn will be spent on exploration in non-OPEC countries, $184bn on brownfields and $180bn on greenfields, totaling an estimated $390bn. Next year, this figure is expected to rise to around $468bn. The total capex for non-OPEC's tight oil — which consists mainly of the US — will be around $124bn in 2019. Despite having the lion's share of total capex, this indicates a decline of $9bn, or –7 per cent y-o-y, down from the $133bn level observed in 2018.

In addition to geopolitical developments, the performance of non-OPEC supply in 2019 will depend on a number of factors. Supply growth is likely to be slower than last year amid the expected weaker global economic growth at 3.2 per cent. US tight oil production is increasingly faced with costly logistical constraints in terms of out-take capacity from land-locked production sites. Such constraints have also impacted Canada's oil production. Moreover, North American producers will continue facing pressure by shareholders demanding capital discipline and a return on their investments, and this could come at the expense of increased disposable capex.

On a country-basis, 86 per cent of total non-OPEC supply growth in 2019 is expected to come from the US (1.85m b/d), Brazil (300,000 b/d), Russia (190,000 b/d), Australia (60,000 b/d), the UK (50,000 b/d), and Ghana (40,000 b/d), while supply declines will mainly be seen in Mexico, Kazakhstan, Norway, Indonesia, Canada and Vietnam.

Despite pipeline constraints in the Permian Basin, US liquids production is estimated to increase by 1.85m b/d in 2019, of which 91 per cent is attributed to tight crude and unconventional NGLs. This compares to a share of around 96 per cent in 2018. In Canada, the slump in storage capacity, the wide differential between the price of WCS and WTI, as well as pipeline capacity limitations prompted the Alberta government to mandate temporary production adjustments leading to a contraction in growth in 2019.

In Brazil, following the new project production start-ups and ramp-ups at the recently installed FPSOs, oil supply is forecast to grow by 300,000 b/d. A total of 252 oil and gas projects are anticipated to be approved in 2019 in non-OPEC countries, with 14 projects outside of tight oil currently in FID of which 54 per cent will be onshore and 46 per cent offshore, representing the same share as 2018, with Brazil showing the largest growth potential from new field start-ups.

MOMR ... oil market highlights

May 2019

Crude oil price movements — The OPEC Reference Basket (ORB) rose by $4.41/barrel, or 6.6 per cent, in April month-on-month (m-o-m), to average $70.78/b. The ORB extended its gains during the month, reaching a six-month high, as the ongoing bullish market sentiment was fuelled by concerns about additional oil supply disruptions in the wake of new geopolitical risks in key oil producing regions. Crude oil futures prices also reached their highest level since last October on the back of improved market sentiment and robust oil market fundamentals amid oil supply outages. In April, ICE Brent was on average $4.60/b, or 6.9 per cent, higher m-o-m at $71.63/b, while NYMEX WTI rose by $5.70/b, or 9.8 per cent, m-o-m to average $63.87/b. DME Oman crude oil futures also increased m-o-m by $4.25/b, or 6.4 per cent, over the previous month to settle at $71.20/b. The Brent and Dubai backwardation structures firmed with the front of the curves steepening further, while the NYMEX WTI contango structure narrowed. Hedge funds and other money managers added more bullish positions in April for both Brent and WTI.

World economy — The global economic growth estimate remains at 3.6 per cent for 2018 and is forecast to grow by 3.2 per cent in 2019, unchanged from the previous month's assessment. Improving growth trends in some economies point at some stabilization on a global level, but downside risks still prevail. In the OECD economies, US growth is revised up by 0.2 percentage points to 2.6 per cent for 2019, compared to 2.9 per cent for 2018. GDP growth in Japan is revised lower by 0.2 pp from 0.6 per cent to 0.4 per cent for 2019, following growth of 0.8 per cent in 2018. Euro-zone 2018 growth remains unchanged at 1.2 per cent for 2019, down from 1.8 per cent for 2018. In the non-OECD economies, China's 2019 growth forecast is now revised up by 0.1 pp, to stand at 6.2 per cent, after reaching 6.6 per cent in 2018. India's 2019 growth forecast remains at 7.1 per cent, following 7.3 per cent in 2018. Growth in Brazil is revised lower to 1.7 per cent from 1.8 per cent for 2019, after seeing 1.1 per cent in 2018, while Russia's 2019 GDP growth forecast is unchanged at 1.6 per cent, following growth of 2.3 per cent for 2018.

World oil demand — In 2018, oil demand is estimated to have increased by 1.41m b/d, unchanged from last month's assessment, with total oil demand reaching 98.73m b/d. OECD America and Other Asia led oil demand growth in 2018, with a combined increase of around 900,000 b/d. For 2019, world oil demand growth is now forecast to increase by 1.21m b/d, also unchanged from last month's assessment, with total world consumption anticipated to reach 99.94m b/d. Throughout the regions, there are revisions which broadly cancel each other out. Some positive upward revisions are accounted for in OECD Americas and China, due to better economic projections than in the previous month. On the other hand, some downward revisions are seen due to lower than expected oil demand data in Latin America and the Middle East during 1Q19, in addition to some downward adjustments to OECD Europe, Latin America and the Middle East for the entire year.

World oil supply — Non-OPEC oil supply growth in 2018 is revised up by a minor 10,000 b/d from the previous month's assessment, mainly due to an upward revision to Canada's supply in 4Q18, which non-OPEC supply is now estimated to have grown by 2.91m b/d to average 62.37m b/d. In contrast, non-OPEC oil supply growth in 2019 is revised down by 30,000 b/d to average 2.14m b/d, mainly due to lower than expected output in 1Q19 in the US, Brazil and the UK, which is partially offset by upward revisions in China. Total supply for the year is now projected to average 64.52m b/d. The US, Brazil, Russia, Australia and the UK are the main drivers for this year's growth, while Mexico, Kazakhstan, Norway and Indonesia are projected to see the largest declines. OPEC NGLs and non-conventional liquids were revised downward for the years 2016 thru 2018. In addition, growth in OPEC NGLs and non-conventional liquids was revised upward by 83,000 b/d y-o-y in 2018, reaching 4.76m b/d, representing a growth of about at 130,000 b/d, y-o-y. For 2019, OPEC NGLs and non-conventional liquids are forecast to grow by 80,000 b/d to average 4.84m b/d, a slight downward revision of 10,000 b/d. In April 2019, OPEC crude oil production was broadly unchanged from the previous month to average 30.03m b/d, according to secondary sources.

Product markets and refining operations — In April, refining margins globally saw a counter-seasonal positive performance, as the tightness in the gasoline market witnessed in the previous month prevailed, providing stimulus for trade flows amid limited product output. Meanwhile, the peak spring refinery maintenance season is slowly approaching its end. In all main trading hubs, markets of all other key products, with the exception of gasoline, witnessed losses, in line with seasonal trends and given the recently increasing supply-side pressure.

Tanker market — Average dirty tanker spot freight rates continued to decline from the high levels seen at the end of last year. Fixtures were lower on seasonal factors with the start of refinery maintenance being particularly pronounced this year as refiners gear up for the implementation of IMO 2020. In April, dirty tanker freight rates saw a decline compared to the previous month, with VLCCs and Aframax rates falling on average by 30 per cent and 13 per cent, respectively, partially offset by a 13 per cent rise in Suezmax rates supported by West Africa-to-US Gulf Coast activity. Clean tanker spot freight rates continued to have a mixed performance in April, resulting in a one per cent decline in rates on average compared to the previous month.

Stock movements — Preliminary data for March showed that total OECD commercial oil stocks rose by 3.3m b m-o-m to stand at 2,875m b. This was 58.5m b higher than the same time one year ago, and 22.8m b above the latest five-year average. Within the components, crude and products stocks indicated a surplus of 20.3m b and 2.5m b, respectively, above the latest five-year average. In terms of days of forward cover, OECD commercial stocks rose by 0.1 days m-o-m in March to stand at 60.6 days. This was 1.0 day above the same period in 2018 but 1.0 day below the latest five-year average.

Balance of supply and demand — Demand for OPEC crude in 2018 is estimated at 31.6m b/d, 1.6m b/d lower than the 2017 level. In 2019, demand for OPEC crude is forecast at 30.6m b/d, around 1.0m b/d lower than the estimated 2018 level.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for May 2019. 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.

World oil market prospects for the second half of 2019

June 2019

Throughout the first half of this year, ongoing global trade tensions have escalated, threatening to spill over, and geo-political risks remained in many key regions. This has resulted in a slowdown in global economic activities, and weaker growth in global oil demand, both compared to a year earlier. Meanwhile, non-OPEC supply continues to increase at a high pace, while the voluntary production adjustments as per the 'Declaration of Cooperation' (DoC) have again risen to record-high conformity levels.

Since the beginning of the year, offsetting trends in major economies have stabilised global economic growth at the current 2019 forecast of 3.2 per cent, compared to 3.6 per cent estimated for 2018. Despite recent trade-related developments, the 1Q19 growth rate was better than initially expected for major OECD economies and China. Meanwhile, other economies, such as Brazil, Russia and India, have underperformed. On a yearly basis, world business and consumer sentiments have fallen, but yet remained at healthy levels. However, recent escalations in trade disputes are expected to lead to lower economic growth rates, despite the counterbalancing efforts in affected economies. Several emerging and developing economies continue to face challenges, including high debt levels. Moreover, Brexit, fiscal issues in some EU Member Countries, Japan's slowdown, and the fading impact of US fiscal stimulus pose additional risks .

Global oil demand growth is projected to improve seasonally, from the sluggish performance seen in 1H19, with growth in 2H19 forecast at 1.2 million barrels/day y-o-y. The OECD region is forecast to increase by 200,000 b/d y-o-y in 2H19, on the back of growth in OECD Americas, driven by solid light distillate demand. In contrast, OECD Europe is forecast to contract due to slower economic momentum, while OECD Asia Pacific will decline on lower petrochemical feedstock demand. In the non-OECD region, oil demand is projected to increase by 1.0m b/d y-o-y in 2H19 supported mainly by Other Asia, particularly India. Oil demand in China is expected to continue growing despite economic concerns and sharply lower vehicle sales. Growth in transportation fuels, particularly aviation fuels, as well as in petrochemical feedstock should outweigh declines elsewhere in 2H19. However, significant downside risks from escalating trade disputes spilling over to global demand growth remain.

Non-OPEC oil supply in 2H19 is forecast to increase by 1.8m b/d, compared to 1H19 and to increase by 2.1m b/d y-o-y, which is less than growth seen over the same period a year earlier. Indeed, the non-OPEC supply growth slowed slightly in 1H19 due to take-away capacity restrictions in the Permian Basin in the US, mandatory production limitations in Canada, and heavy maintenance operations elsewhere. For 2H19, non-OPEC supply growth is anticipated to show further upside potential, with higher production expected in the US, as well as production ramp-ups in Brazil and possibly the start-up of Norway's Johan Sverdrup field in the North Sea, leading to a growth forecast of 2.14m b/d for 2019.

In summary, the observed slowdown in the global economy in 1H19 will further be challenged in 2H19, mainly by mounting trade disputes, with the impact on oil demand growth remaining uncertain. While growth in non-OPEC supply continues, the extent of additional production in key regions in 2H19 will mainly depend on volumes of start- and ramp-ups. The upcoming OPEC and non-OPEC Ministerial Meetings will carefully consider these developments, in order to ensure continued market stability.

MOMR ... oil market highlights

June 2019

Crude oil price movements — The OPEC Reference Basket (ORB) eased in May, dropping m-o-m by 81¢, or 1.1 per cent, to average $69.97/b. Crude oil futures prices ended May sharply lower, reaching their lowest levels since February, registering high volatility, particularly late in the month, fuelled by uncertainty about world economic and global oil demand outlooks amid intensifying trade tensions between the US and China. Oil prices dropped further after the US announced plans to impose tariffs on imports from Mexico. In May, ICE Brent averaged $1.33, or 1.9 per cent, lower m-o-m at $70.30/b, while NYMEX WTI dropped m-o-m by $3.01, or 4.7 per cent, to average $60.87/b. Year-to-date (y-t-d), ICE Brent was $3.47, or 4.9 per cent, lower at $66.75/b, while NYMEX WTI dropped by $7.11, or 10.9 per cent, to $57.97/b, compared to the same month last year. The Brent and Dubai market structure moved deeper into backwardation in May, while the NYMEX WTI price structure remained in contango. Hedge funds and other money managers decreased their bullish positions in both ICE Brent and NYMEX WTI.

World economy — Following growth of 3.6 per cent in 2018, the global economic growth forecast remains at 3.2 per cent in 2019, unchanged from the previous month's assessment. The most recent escalation in trade disputes, among numerous other challenges to world economic development, may lead to lower growth in the near term. In the OECD economies, US growth remains at 2.6 per cent for 2019, compared to 2.9 per cent for 2018. GDP growth in Japan is revised slightly up by 0.1 pp to 0.5 per cent for 2019, following growth of 0.8 per cent in 2018. Euro-zone growth for 2019 remains unchanged at 1.2 per cent, albeit down from 1.8 per cent for 2018. In the non-OECD economies, China's 2019 growth forecast is unchanged to stand at 6.2 per cent, after reaching 6.6 per cent in 2018. India's 2019 growth forecast is revised downward by 0.3 pp to 6.8 per cent, following 7.3 per cent in 2018. Growth in Brazil for 2019 is revised lower to 1.4 per cent from 1.7 per cent, after seeing 1.1 per cent in 2018, while Russia's 2019 GDP growth forecast is revised down to 1.4 per cent from 1.6 per cent, following growth of 2.3 per cent for 2018.

World oil demand — In 2019, world oil demand is anticipated to rise by 1.14m b/d, lower than last month's assessment by 70,000 b/d. The downward revision was mainly to account for sluggish oil demand data in the OECD region during 1Q19. The majority of oil demand growth is projected to originate from Other Asia, led by India, followed by China and OECD Americas. OECD countries are projected to rise by 140,000 b/d, while non-OECD countries will drive oil demand growth by adding an estimated 1.00m b/d in 2019. In 2018, world oil demand grew by 1.41m b/d, unchanged from last month's assessment. OECD Americas led oil demand growth in the OECD region, on the back of strong gains for light and middle distillates throughout 2018. Other Asia led demand growth in the non-OECD region and globally, after strong product demand growth in India, Indonesia, Singapore and Thailand.

World oil supply — Non-OPEC oil supply in 2019 is expected to grow at a pace of 2.14m b/d, y-o-y, following a robust increase of 2.91m b/d in 2018. The 2019 non-OPEC supply assessment is unchanged from last month, despite some downward revisions for the US, due to lower-than-expected output in 1Q19, and for Norway and Brazil due to lower-than-expected production in 3Q19 and 4Q19. These revisions are offset by upward revisions to China, and the UK. The US is projected to remain the main driver for non-OPEC supply growth in 2019 adding 1.83m b/d y-o-y, followed by Brazil, Russia, China, Australia and the UK. At the same time Mexico, Norway, Kazakhstan, Indonesia and Vietnam are projected to see the largest declines. OPEC NGLs and non-conventional liquids y-o-y are expected to grow by 80,000 b/d to average 4.84m b/d in 2019, following growth of 130,000 b/d in 2018. In May 2019, OPEC crude oil production is estimated to have decreased by 236,000 b/d, m-o-m to average 29.88m b/d, according to secondary sources.

Product markets and refining operations — In May, global product markets saw a mixed performance, affected by a downward correction from the spike in gasoline cracks that had been sustained during previous months. In the US, product markets were supported by the middle of the barrel, as firm jet/kerosene demand, amid supply side pressure caused by excessive rain in the central US regions, affected middle distillate markets. This came despite a downturn in the gasoline complex. In Europe, product markets gained some ground, supported by middle distillate inventory drawdowns, which kept prices sustained, despite a weakening at the top and bottom of the barrels. In Asia, product markets suffered considerable losses, pressured by bearish sentiment triggered by the release of the second batch of export quotas in China. In addition, weaker inter-regional product exports, despite considerable offline capacity on heavy refinery turnarounds within the region, contributed to the downturn.

Tanker market — Average dirty tanker spot freight rates rose marginally in May following five months of steady declines, but remained lower y-o-y. Tonnage lists remained in excess due to limited scrapping and steady deliveries. Ship owners have been looking to 2H19 when increased refinery throughput in order to produce sufficient low- sulphur fuel ahead of implementation of IMO 2020 regulations are expected to boost demand for shipping across both the dirty and clean tanker markets. Meanwhile, the clean segment of the tanker market saw m-o-m declines across all routes except Middle East-to-East, which picked up from the weak performance seen the month before.

Stock movements — Preliminary data for April showed that total OECD commercial oil stocks rose by 25.0m b m-o-m to stand at 2,874m b. This was 54.4m b higher y-o-y and 7.6m b above the latest five-year average. Within the components, crude stocks indicated a slight deficit of 200,000 b, while product stocks showed a surplus of 7.9m b above the latest five-year average. In terms of days of forward cover, OECD commercial stocks m-o-m remained unchanged in April at 60.1 days, which was 1.1 days above the same period in 2018, but 1.4 days below the latest five-year average.

Balance of supply and demand — Demand for OPEC crude in 2018 is estimated at 31.6m b/d, 1.6m b/d lower than the 2017 level. In 2019, demand for OPEC crude is forecast at 30.5m b/d, around 1.1m b/d lower than the estimated 2018 level.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for June 2019. 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	2018 May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019 Jan	Feb	Mar	Apr	May	Weeks 18–22/2019 (week ending) May 3	May 10	May 17	May 24	May 31
Arab Light – Saudi Arabia	74.68	74.26	74.16	73.38	78.16	80.02	66.36	58.24	59.63	64.85	67.40	71.88	70.78	72.38	71.06	72.29	71.16	67.72
Basrah Light – Iraq	72.83	71.90	72.02	71.10	76.18	78.26	64.12	56.12	58.20	63.25	66.05	70.45	69.77	71.09	70.10	71.49	70.00	66.69
Bonny Light – Nigeria	77.73	74.86	75.06	73.29	79.45	82.09	65.90	57.82	60.51	65.19	67.71	72.81	72.24	73.01	72.43	74.49	72.15	69.63
Djeno – Congo*	73.84	70.58	70.91	69.66	76.18	78.52	62.06	54.36	56.77	61.40	63.48	68.55	68.25	68.91	68.44	70.50	68.16	65.64
Es Sider – Libya	75.25	72.27	72.43	70.74	77.10	79.62	63.11	55.66	58.27	63.15	65.38	70.45	70.25	70.87	70.44	72.50	70.16	67.64
Girassol – Angola	76.75	73.54	74.40	73.20	79.48	82.24	65.66	57.52	59.98	65.30	67.16	72.88	72.95	73.61	73.14	75.20	72.86	70.34
Iran Heavy – IR Iran	72.15	71.69	71.44	70.46	75.28	77.04	62.83	54.84	56.29	61.39	64.17	68.52	67.86	69.12	67.89	69.32	68.32	65.18
Kuwait Export – Kuwait	72.55	72.38	72.33	71.82	76.82	78.56	65.15	57.10	58.65	63.93	66.78	71.20	70.07	71.68	70.31	71.58	70.49	66.98
Merey – Venezuela	68.29	69.25	70.37	67.38	69.31	75.25	65.87	49.89	50.90	55.85	57.75	58.95	59.15	60.43	59.26	60.06	59.41	56.79
Murban – UAE	76.71	76.18	76.00	74.91	78.75	81.28	68.05	59.33	60.81	65.64	68.01	71.51	69.70	71.34	69.53	71.39	70.22	66.94
Oriente – Ecuador	70.39	70.05	69.11	69.39	74.12	75.48	59.76	51.26	55.10	60.42	63.66	67.61	65.60	67.83	67.12	67.67	65.10	61.38
Rabi Light – Gabon	75.88	73.11	73.07	71.86	78.04	80.37	63.91	56.21	58.62	63.25	65.33	70.40	70.10	70.76	70.29	72.35	70.01	67.49
Saharan Blend – Algeria	77.25	73.37	73.93	72.64	79.55	81.12	64.96	56.41	59.27	64.30	66.38	71.15	71.20	71.72	71.39	73.45	71.11	68.59
Zafiro – Equatorial Guinea	76.68	73.84	74.05	72.74	79.10	81.82	65.36	57.66	60.09	64.92	67.15	72.65	72.10	73.01	72.30	74.30	71.96	69.44
OPEC Reference Basket	**74.11**	**73.22**	**73.27**	**72.26**	**77.18**	**79.39**	**65.33**	**56.94**	**58.74**	**63.83**	**66.37**	**70.78**	**69.97**	**71.31**	**70.18**	**71.66**	**70.23**	**67.05**

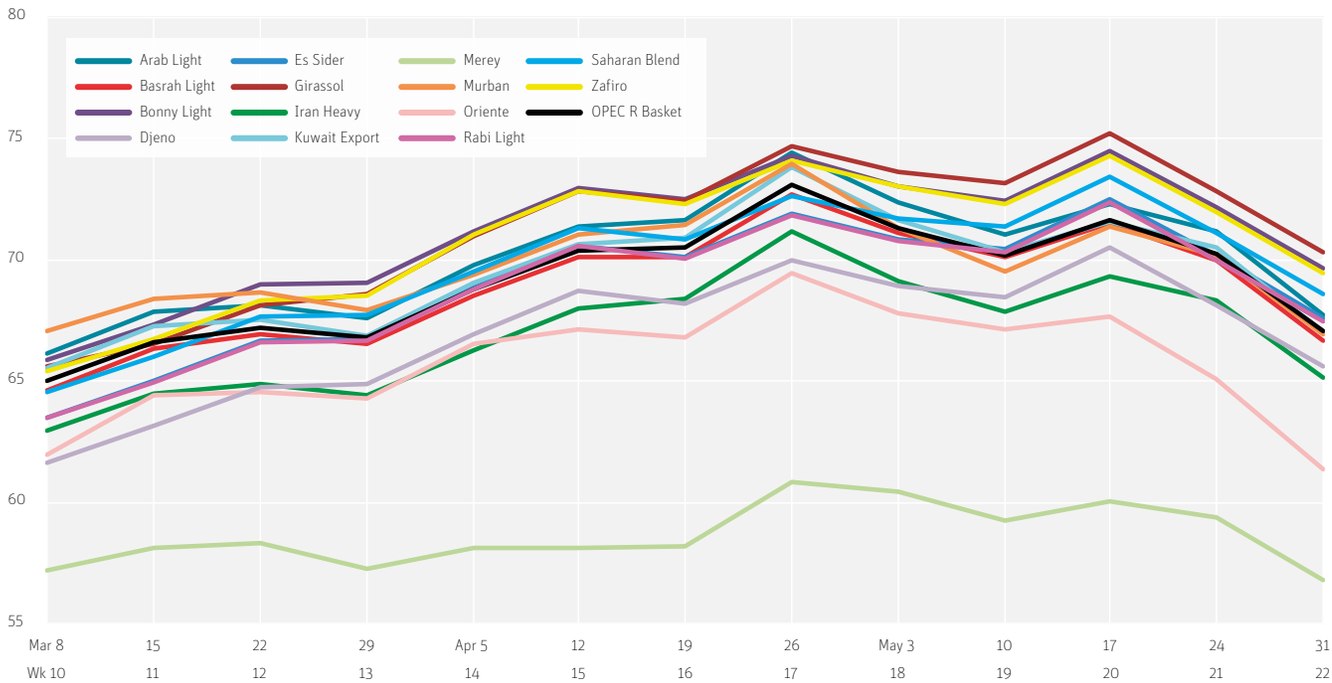
Table 2: Selected spot crude prices

$/b

Crude/country	2018 May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2019 Jan	Feb	Mar	Apr	May	Weeks 18–22/2019 (week ending) May 3	May 10	May 17	May 24	May 31
Arab Heavy – Saudi Arabia	72.24	72.30	72.50	72.35	77.14	78.47	65.40	57.24	58.58	63.57	66.31	70.60	69.59	71.11	69.66	71.09	70.17	66.57
Brega – Libya	76.35	73.47	73.63	71.94	78.00	80.42	63.91	56.16	58.72	63.49	65.63	70.60	70.35	70.99	70.54	72.60	70.26	67.74
Brent Dtd – North Sea	76.85	74.17	74.33	72.64	78.80	81.12	64.66	56.96	59.37	64.00	66.08	71.15	70.85	71.51	71.04	73.10	70.76	68.24
Dubai – UAE	74.20	73.61	73.09	72.47	77.22	79.40	65.79	57.29	59.07	64.42	66.91	70.93	69.64	71.25	69.52	71.04	70.32	66.83
Ekofisk – North Sea	78.28	73.99	74.54	72.84	79.30	82.13	65.04	57.83	60.23	64.93	66.73	72.06	72.09	72.57	71.99	74.25	71.91	69.54
Iran Light – IR Iran	74.60	72.56	72.10	70.34	76.40	78.08	62.79	55.96	58.69	62.53	64.64	70.34	70.19	70.94	70.29	72.53	69.97	67.06
Isthmus – Mexico	73.03	70.92	69.63	67.05	74.44	80.03	65.43	55.58	58.13	63.81	66.53	70.34	69.04	69.63	69.30	70.51	69.62	66.41
Oman – Oman	74.38	73.69	73.20	72.72	78.75	80.23	66.31	57.69	59.39	64.62	67.01	71.17	70.04	71.63	70.29	71.63	70.52	66.80
Suez Mix – Egypt	73.67	71.85	71.50	69.81	76.80	78.46	62.71	55.83	58.56	62.40	64.51	70.21	70.06	70.81	70.16	72.40	69.84	66.93
Minas – Indonesia*	68.26	76.72	73.51	66.90	72.02	73.66	59.17	50.28	51.72	56.94	59.63	67.64	67.52	68.57	67.24	68.55	68.06	65.72
Urals – Russia	75.23	73.55	73.20	71.62	78.50	80.16	64.41	57.18	60.26	64.10	66.21	71.90	71.68	72.51	72.04	74.10	71.54	68.69
WTI – North America	69.89	67.70	71.03	67.99	70.20	70.75	56.75	49.52	51.63	54.98	58.16	63.87	60.73	62.95	61.83	62.09	60.69	57.30

Notes:
Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.
* *The Republic of the Congo joined on June 22, 2018.*
Sources: Argus; Secretariat's assessments.

Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2018–19 $/b



Graph 2: Evolution of selected spot crude prices, 2018–19 $/b

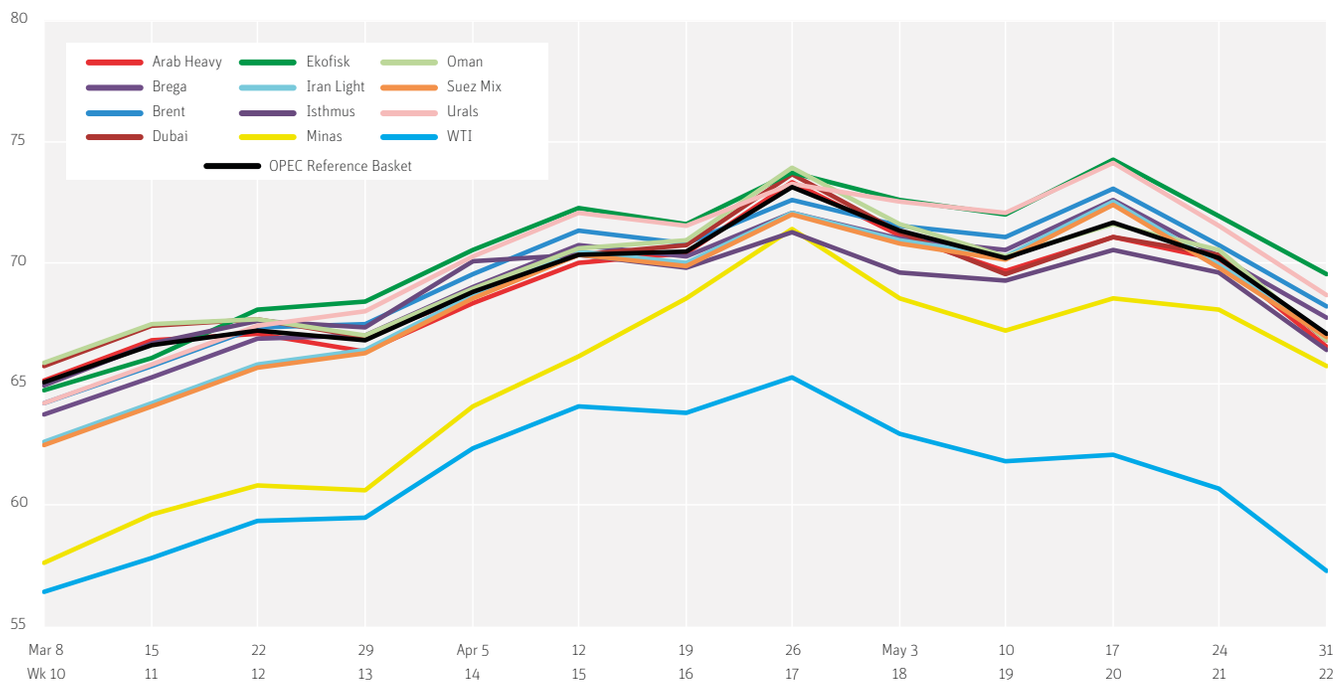


Table and Graph 3: North European market — spot barges, fob Rotterdam

$/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2018	May	73.73	96.58	91.30	93.03	65.69	62.64
	June	69.92	93.71	88.75	89.30	65.94	62.70
	July	71.04	93.79	88.00	88.79	67.51	64.45
	August	70.82	95.01	88.49	87.96	65.73	62.59
	September	74.71	95.03	92.86	92.51	67.75	64.72
	October	73.15	91.20	97.18	97.45	73.08	69.67
	November	55.86	76.78	86.35	85.10	62.61	58.71
	December	50.95	67.58	74.59	74.80	53.08	48.88
2019	January	50.52	68.23	75.24	76.07	54.90	50.38
	February	55.14	74.43	80.75	80.16	61.41	56.66
	March	58.80	81.08	81.82	81.57	62.98	59.73
	April	62.12	92.99	84.47	83.87	64.94	61.99
	May	60.11	90.26	84.87	84.35	61.69	58.79

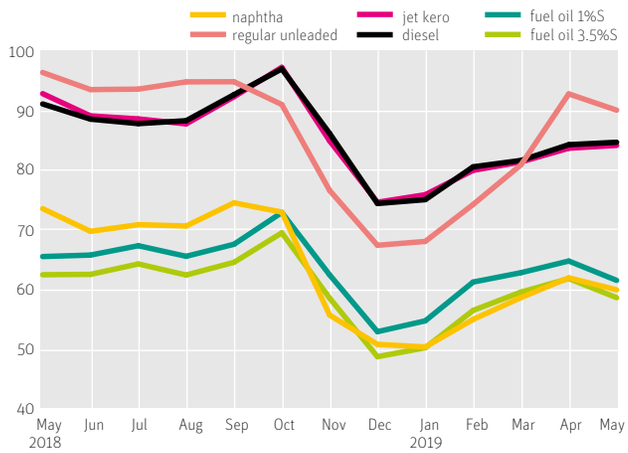


Table and Graph 4: South European market — spot cargoes, fob Italy

$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2018	May	73.32	88.50	92.52	66.57	63.80
	June	69.53	85.99	89.18	67.38	64.27
	July	70.74	86.82	89.12	68.37	65.88
	August	70.61	88.59	89.63	66.43	63.97
	September	74.54	88.22	93.93	68.74	66.11
	October	72.58	83.56	97.91	74.26	70.81
	November	54.99	68.63	86.34	64.22	60.01
	December	49.32	59.95	74.92	54.65	49.67
2019	January	49.09	60.56	76.38	57.80	51.91
	February	53.98	65.62	82.24	64.13	58.69
	March	57.61	73.78	83.12	64.50	61.11
	April	60.84	83.23	81.47	65.71	63.04
	May	59.16	81.30	82.05	65.23	59.72

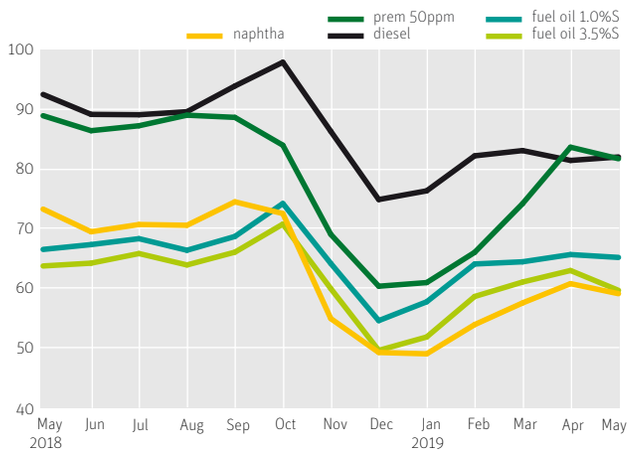
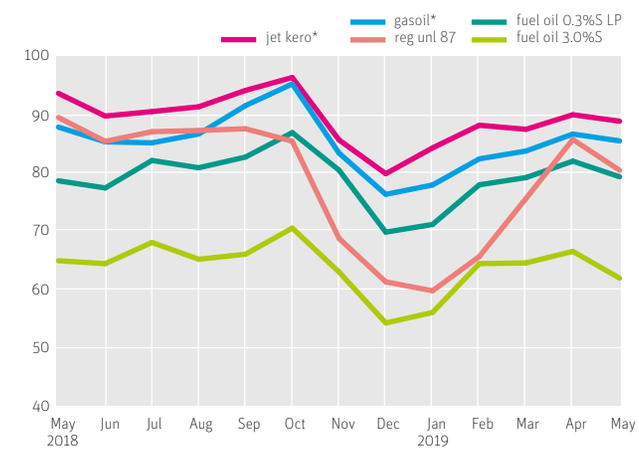


Table and Graph 5: US East Coast market — spot cargoes, New York

$/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
2018	May	89.38	87.73	93.51	78.54	64.86
	June	85.29	85.21	89.62	77.31	64.35
	July	86.95	85.04	90.39	82.02	67.99
	August	87.15	86.55	91.21	80.77	65.11
	September	87.45	91.41	94.01	82.60	65.97
	October	85.32	95.12	96.22	86.79	70.44
	November	68.68	83.28	85.54	80.36	62.93
	December	61.24	76.22	79.75	69.75	54.20
2019	January	59.71	77.82	84.17	71.07	56.00
	February	65.58	82.29	88.05	77.85	64.36
	March	75.53	83.64	87.35	79.09	64.48
	April	85.61	86.54	89.85	81.90	66.46
	May	80.34	85.37	88.74	79.23	61.88



* *FOB barge spot prices.*

Source: 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
2018	May	74.66	87.60	85.29	89.52	89.93	73.38	67.07
	June	70.89	83.53	81.50	86.87	86.91	74.47	68.15
	July	72.25	83.11	81.08	85.55	87.31	76.38	69.98
	August	71.76	84.83	82.44	87.61	87.31	75.76	68.57
	September	75.39	89.53	87.51	92.76	91.75	77.59	70.54
	October	74.90	87.64	85.66	95.97	95.16	83.63	76.59
	November	57.01	68.65	66.92	81.63	82.97	77.24	68.25
	December	52.13	60.02	57.98	69.03	71.17	64.16	56.63
2019	January	51.96	61.07	59.12	70.79	71.75	65.19	58.10
	February	56.54	66.27	64.36	77.78	77.93	69.07	63.79
	March	60.24	74.42	72.83	80.31	79.82	71.61	65.56
	April	63.47	80.72	78.77	82.68	82.61	71.79	65.80
	May	60.14	76.25	74.45	82.19	81.55	69.82	62.71

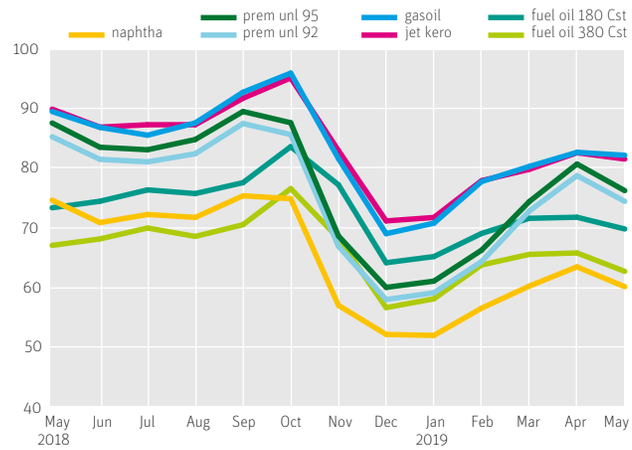
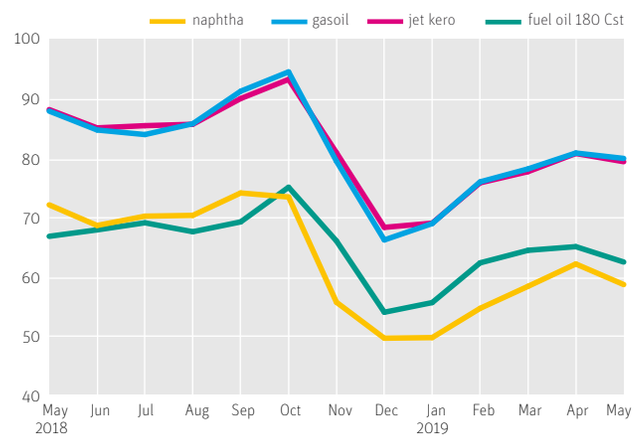


Table and Graph 7: Middle East Gulf market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2018	May	72.17	87.89	88.14	66.89
	June	68.71	84.72	85.07	67.97
	July	70.27	83.95	85.44	69.16
	August	70.40	85.77	85.68	67.66
	September	74.16	91.22	89.99	69.31
	October	73.48	94.46	93.20	75.12
	November	55.84	79.49	80.91	66.12
	December	49.81	66.28	68.39	54.16
2019	January	49.91	69.03	69.10	55.78
	February	54.81	76.02	75.86	62.44
	March	58.50	78.19	77.73	64.54
	April	62.26	80.86	80.78	65.16
	May	58.80	79.95	79.40	62.58

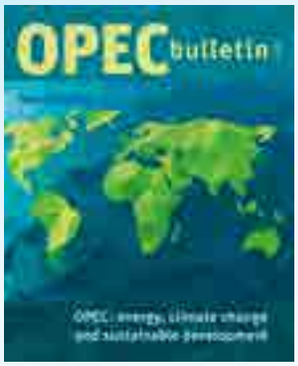
Source: Argus. Prices are average of available days.



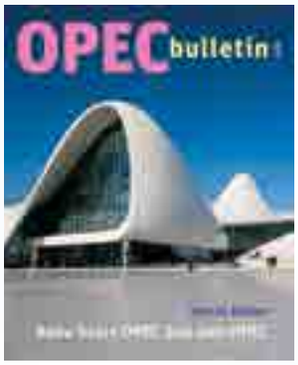
OPEC offers a range of publications that reflect its activities. Copies can be obtained by contacting this Department, which regular readers should also notify in the event of a change of address:

PR & Information Department, OPEC Secretariat
Helferstorferstrasse 17, A-1010 Vienna, Austria
Tel: +43 1 211 12-0; fax: +43 1 211 12/5081; e-mail: prid@opec.org

OPEC Bulletin
(free of charge)



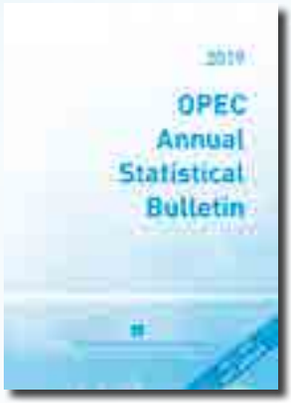
April 2019



March 2019

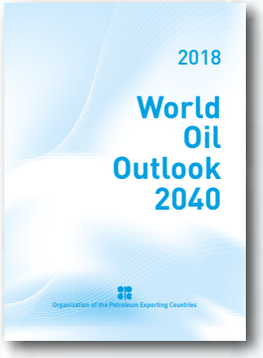
February 2019

Annual Statistical Bulletin 2019



128-page book
Interactive version available at http://asb.opec.org/

World Oil Outlook 2018
(free of charge)

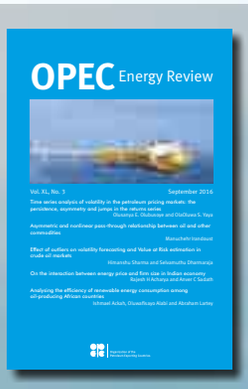


OPEC Monthly Oil Market Report *(free of charge)*

- Crude oil and product prices analysis
- Member Country output figures
- Stocks and supply/demand analysis

Annual Report 2018
(free of charge)

OPEC Energy Review



Contains research papers by international experts on energy, the oil market, economic development and the environment. Available quarterly only from the commercial publisher. Annual subscription rates for 2015:

	Institutional			Personal
	Print	Online	Print & online	Print & online
Europe €	615	615	738	182
UK £	485	485	582	123
Americas $	814	814	977	203
Rest of world $	949	949	1,139	£123

Canadian residents, please add five per cent for GST.

Orders and enquiries:
John Wiley & Sons, 9600 Garsington Road, Oxford OX4 2DQ, UK.
Tel: +44 (0)1865 776868; fax: +44 (0)1865 714591; e-mail: cs-journals@wiley.com;
http://onlinelibrary.wiley.com/

www.opec.org