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OPEC and non-OPEC: *cooperation and continuity*

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A partnership of common interests

Albert Einstein once wrote: "Nothing truly valuable can be achieved except by the unselfish cooperation of many individuals." This powerful truism has been evidently fundamental to the success of the joint endeavours of 24 OPEC and non-OPEC producers over the course of 2017, for at the core of the historic 'Declaration of Cooperation' is an age-old, yet profoundly effective problem-solving mechanism: partnership.

The way a partnership works as a whole determines its success. There may be partnerships formed with great individuals; but if they do not work with common interests and goals in mind, then the partnership is not likely to achieve success. In contrast, the first year of the 'Declaration of Cooperation' reflects the unity and focus required to deliver a successful partnership.

The Declaration has been built on the back of the key elements that have helped evolve all successful partnerships: trust, mutual respect, honesty, transparency, a shared vision, and clear objectives. It has been a collaborative and committed global partnership between oil producing nations to help return balance and sustainable stability to the oil market.

This was evidently brought to the fore at the 173rd Meeting of the OPEC Conference and the 3rd OPEC and non-OPEC Meeting, both held in Vienna on November 30, 2017. The two back-to-back meetings — with around 200 delegates who were joined by over 250 journalists and analysts — saw participants discuss the progress made in the 'Declaration of Cooperation', the global oil market outlook for 2018, and the report and recommendations made by the Joint Ministerial Monitoring Committee (JMMC) from the previous day.

Delegates specifically recognized the importance of the decisions taken at the 172nd OPEC Conference and the 2nd OPEC and non-OPEC Meeting, both held on May 25, 2017, to extend the 'Declaration of Cooperation' for a further period of nine months to the end of March 2018. The market trajectory and sentiment witnessed in the period since has shown that the extension decision was right and timely, despite the initial market response. This has been evidently vindicated by the fact that the rebalancing trend has quickened since May 2017. There has been an acceleration in the reduction of the stock overhang, driven by the unprecedented high conformity levels to the voluntary production adjustments; global economic growth is healthy; and oil demand growth has been on the rise, for both 2017 and 2018.

All industry stakeholders are benefitting from improving market fundamentals, and optimism has replaced the pessimism that has been prevalent in the industry for far too long.

There are clearly many encouraging signs. But it was also noted by many ministers at the meetings that the market rebalancing cannot be taken for granted.

This was noted by Khalid A Al-Falih, President of the OPEC Conference, and Minister of Energy, Industry and Mineral Resources of the Kingdom of Saudi Arabia, in his opening remarks to the 173rd Meeting of the Conference. "History tells us that as we get closer to the goal, commitment can start to waiver. So, to achieve our goals on a sustainable basis, we must stay the course, with each Member Country taking full responsibility for its own contributions and not relying on others. That is the only way to succeed."

The emphasis is on remaining vigilant and steadfast, which was evident in the outcome of the two November 2017 meetings, with the 'Declaration of Cooperation' amended to take effect for the whole year of 2018 from January to December. In addition, there was a pledge for full and timely conformity of OPEC and participating non-OPEC countries in accordance with the voluntary production adjustments.

The decision was a clear vindication that not only is this OPEC and non-OPEC partnership holding together and producing results: it is flourishing. The 'Declaration of Cooperation' has all the elements in place to further evolve into an essential feature of the consensus building required to rebalance and stabilize the global oil market.

It was also further cemented by the participation at the 3rd OPEC and non-OPEC Meeting of an additional six non-OPEC producing countries — Chad, Congo, Egypt, Turkmenistan, Uganda and Uzbekistan — and their public declarations of support. Together, 30 oil producing countries — the largest partnership of its kind — reaffirmed their commitment to restoring stability to the oil market on a sustainable basis, in the interests of producers, consumers and the global economy.

Moreover, there is also a focus on institutionalizing this framework that builds on this unparalleled global platform of stability, going beyond the short-term to look at the broader challenges and opportunities the oil industry will face in the years and decades to come. It is vital to remember that the short-, medium- and long-terms are all interlinked. All are equally important and none can be viewed in isolation.

As the great Henry Ford once said: "Coming together is a beginning; keeping together is progress; working together is success." It is vital to ensure that the 'Declaration of Cooperation', which remains open to other producers, is a partnership that works for everyone, across all timeframes, to help deliver the sustainable market stability we all desire.

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Cover
This month's cover reflects the 173rd Meeting of the OPEC Conference held in Vienna, Austria, November 30, 2017.

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The 173rd Meeting of the OPEC Conference

The 173rd Meeting of the OPEC Conference was held in Vienna on November 30, 2017. Attended by delegations from all 14 of the Organization's Member Countries, as well as two observers, Egypt and Turkmenistan, the meeting was held under the Chairmanship of Conference President, Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources of Saudi Arabia, who also served as Head of the country's Delegation. The **OPEC Bulletin** *provides the following overview of the meeting.*

Khalid A Al-Falih (c), Saudi Arabia's Minister of Energy, Industry and Mineral Resources, and President of the OPEC Conference; Estévâo Pedro (l), Chairman of the OPEC Board of Governors and Angola's Governor for OPEC; and Mohammad Sanusi Barkindo (r), OPEC Secretary General.

With the first snow flurries of the season covering the streets of Vienna, the OPEC Conference held its 173rd Meeting at the OPEC Secretariat. The semi-annual gathering was an opportunity to analyze oil market developments since the Conference last met at the end of May 2017, as well take stock of developments through the prism of the historic 'Declaration of Cooperation' between 24 participating OPEC and non-OPEC producers.

In his opening address, the President of the OPEC Conference, Khalid A Al-Falih, Saudi Arabia's Minister of Energy, Industry and Mineral Resources, noted that when the Conference last met in May, it was apparent that more work needed to be done, which then resulted in the 'Declaration of Cooperation' being extended for a further nine months.

In looking back over the past six months, he stated that "the market trajectory seen since then has shown that the extension decision (in May) was right." To underscore his comment, he pointed to hard data.

He highlighted the large fall in the OECD stock overhang in terms of the moving five-year average; the hefty drop in crude in floating storage; the fact that the drawdown has applied broadly to all regions, as well as to both crude and products; and the market structure flipping into backwardation for both Brent and WTI, for the first time since 2014. The Conference President noted that "all in all, market stability has improved and the sentiment is generally upbeat."

He said that "this gratifying outcome has resulted primarily from a near 100 per cent — or more — conformity to the production targets by the combined OPEC 12" and added that OPEC's credibility has also been enhanced.

The Conference President said that when looking at the mid- to long-term, the future market environment looks encouraging, underpinned by a broad-based global economic recovery that is gathering pace. Correspondingly, he said, "we continue to see further signs of strong oil demand."

While recognizing the very major achievements that have been made to date, he also stressed that it was important "to acknowledge that we have only recently

Algeria

Mustapha Guitouni (c), Minister of Energy, Algeria; Fouzaia Mebarki (l), Algerian Ambassador to Austria; and Eng Mohamed Hamel (r), Senior Advisor to the Minister and Algerian Governor to OPEC.

Angola

Diamantino Azevedo (c), Minister of Petroleum and Mineral Resources, Angola.

Ecuador

Ing Carlos Perez (l), Minister of Hydrocarbons, Ecuador; and Eng José Antonio Cepeda Altamirano (r), Ecuador's OPEC National Representative.

passed the halfway mark on the journey towards achieving the five-year average of OECD stock levels."

"History", he said, also shows us "that as we get closer to the goal, commitment can start to waiver. So, to achieve our goals on a sustainable basis, we must stay the course, with each Member Country taking full responsibility for its own contributions and not relying on others. That is the only way to succeed."

While it is essential to maintain OPEC unity, he said, he also hastened to add that "without the support of our non-OPEC partners, the encouraging situation we see today would not have been achieved. So, we should seek to institutionalize the OPEC and non-OPEC cooperation framework, and further build on the healthy foundation we have laid."

All timeframes interlinked

The Conference President stressed when he assumed the OPEC Presidency at the beginning of 2017 he talked of not only focusing on the short-term challenges, but also looking ahead in terms of OPEC and the industry's future. "While the short-term results and their importance cannot be ignored, we need to remember that the short-, medium- and long-terms are linked in multiple ways."

He said that "we need to continue to foster a secure and stable market in the interests of both producers and consumers. And to protect the long-term interests of consumers, we must invest in capacity.

"To do that, trillions of dollars must be invested in additional oil capacity and infrastructure. These staggering investments will not be forthcoming unless there is sufficient market certainty.

"I am already concerned that on top of about a trillion dollars that have been deferred or cut to date from investments, the focus is on incremental and short-cycle

Equatorial Guinea

Gabriel Obiang Lima (l), Minister of Industry, Mines & Energy, Equatorial Guinea.

Gabon

Pascal Ambouroue, Minister of Petroleum and Hydrocarbons, Gabon.

investments, with large long-cycle investments remaining on hold. In my view, this will not cut it."

He stated that the creation of the right enabling environment for the necessary investments and maintaining market stability is a collective global responsibility. "On our part, we need to further strengthen cooperation between OPEC and non-OPEC producers, as well as advance dialogue with other international energy institutions, especially those representing consumers."

Extending the 'Declaration of Cooperation'

Following the end of the closed session of the 173rd OPEC Conference, and the close of the 3rd OPEC and non-OPEC Ministerial Meeting later in the day, OPEC stated that in line with the decisions taken at its 171st and 172nd Meetings, as well as the 'Declaration of Cooperation', the Conference decided to amend its production adjustments to take effect for the whole year of 2018 from January to December 2018, while assuring full and timely conformity.

The final *communiqué* also added that "in view of the uncertainties associated mainly with supply and, to some extent, demand growth, it is intended that in June 2018, the opportunity for further adjustment actions will be considered based on prevailing market conditions and the progress achieved towards rebalancing of the oil market at that time."

Through this decision, Member Countries confirmed their continued focus on a stable and balanced oil market, in the interests of both producers and consumers, and remain committed to being dependable and reliable suppliers of crude and products to global markets.

IR Iran

Eng Bijan Namdar Zangeneh (c), Minister of Petroleum, IR Iran, with members of his delegation.

Iraq

Jabbar Al-Luiebi (c), Minister of Oil, Iraq, with members of his delegation.

Kuwait

HE Issam A Almarzooq (c), Minister of Oil Kuwait; Haitham Al-Ghais (r), Kuwait's Governor for OPEC; and Sadiq Marafi (l), Kuwait's Ambassador to Austria.

Libya

Mustafa Abdallah Sanalla (c), NOC Chairman, Libya; Dr Ibrahim Albesbas (l), Libya's Ambassador to Austria.

Nigeria

Dr Emmanuel Ibe Kachikwu (r), Minister of State for Petroleum Resources, Nigeria; and Dr Omar Farouk Ibrahim, Nigeria's Governor for OPEC.

Qatar

Dr Mohammed Bin Saleh Al-Sada (c), Minister of Energy & Industry, Qatar, with members of his delegation.

The Conference also thanked all OPEC Member Countries, as well as non-OPEC countries participating in the 'Declaration of Cooperation', "for their commitment, as reflected in the unprecedented conformity levels to the voluntary production adjustments."

Following a successful year as Conference President, the Conference paid a glowing tribute to Al-Falih. The Conference elected Suhail Mohamed Al Mazrouei, the UAE's Minister of Energy as President of the Conference for one year, with effect from January 1, 2018, and Major General Manuel Quevedo, the Minister of Petroleum and Energy of the Bolivarian Republic of Venezuela as Alternate President, for the same period.

The JMMC and the JTC

The Conference also extended its deep appreciation to the Joint Ministerial Monitoring Committee (JMMC), the Joint Technical Committee (JTC) and the OPEC Secretariat for their continuous and valuable engagement in providing the transparency required to achieve the full and timely implementation of the 'Declaration of Cooperation'.

The JTC and the JMMC had met for the tenth and sixth time, respectively, earlier in the week of the OPEC Conference. At the opening of the Sixth JMMC, the Conference President said that he was "glad that we decided early on to set up the correct organizational structure, including the JMMC and the JTC, whose hard work has helped guide our respective countries and oil ministries in their complex decision-making over these past months. We have achieved solid results to date, which would not have been possible without each organization in the structure effectively discharging its responsibilities."

This was further acknowledged by a number of other

Saudi Arabia

HRH Prince Abdul Aziz Bin Salman (l), Minister of State for Energy Affairs, Saudi Arabia; Eng Adeeb Al-Aama (r), Saudi Arabia's Governor for OPEC.

Ministers and delegates, with praise for their contributions and thanks for a job well done.

The Conference also recognized the major contributions of the outgoing Chair of the JMMC for 2017, Issam A Almarzooq, Kuwait's Minister of Oil and Minister of Electricity and Water, for his exemplary leadership that has helped make a success of the 'Declaration of Cooperation'. In 2018, Al-Falih will undertake the role of Chair of the JMMC, alongside the continuing Co-Chair, Alexander Novak, Minister of Energy of the Russian Federation.

Other ministerial acknowledgments

The delegates of the OPEC Conference also offered a warm welcome to a number of Ministers who have assumed their position since the last OPEC Conference in May 2017. Mustapha Guitouni, Minister of Energy of Algeria; Eng Diamantino Pedro Azevedo, Minister of Mineral Resources and Petroleum of Angola; and the recently-appointed Minister of Petroleum and Energy of the Bolivarian Republic of Venezuela, Manuel Quevedo. It also recognized the contributions and achievements of outgoing officials from these countries.

A warm welcome was also offered to Mustafa A Sanalla, Libya's NOC Chairman, who attended as head of the Libyan delegation, as well as two non-OPEC observers, Eng Tarek El Molla, Egypt's Minister of Petroleum and Mineral Resources; and Japarguly Orazov, Vice-Chairman of the Turkmen Oil State Concern.

United Arab Emirates

Suhail Mohamed Al Mazrouei (seated c), Minister of Energy & Industry, UAE; Eng Ahmed Mohamed Alkaabi (seated l), UAE's Governor for OPEC; Salem Hareb Al Mehairi (standing second r), UAE's National Representative; and other delegates.

Venezuela

Manuel Salvador Quevedo Fernandez (c), People's Minister of Petroleum, Venezuela; Eng Angel Gonzalez Saltron (l), Venezuela's Governor for OPEC; and Ronny Romero (r), Venezuela's National Representative.

3rd OPEC and non-OPEC Ministerial Meeting

The 3rd OPEC and non-OPEC Ministerial Meeting of signatories to the 'Declaration of Cooperation' took place in Vienna on the afternoon of November 30, 2017. Attended by delegations from all OPEC Member Countries, the ten participating non-OPEC producing countries, as well as six non-OPEC observers, the meeting was chaired by Khalid A Al-Falih, President of the OPEC Conference, and Minister of Energy, Industry and Mineral Resources of the Kingdom of Saudi Arabia, and Alexander Novak, Minister of Energy of the Russian Federation. The **OPEC Bulletin** *provides the following overview of the meeting.*

L–r: Alexander Novak, Minister of Energy of the Russian Federation; Khalid A Al-Falih, Saudi Arabia's Minister of Energy, Industry and Mineral Resources, and President of the OPEC Conference; and Mohammad Sanusi Barkindo, OPEC Secretary General.

It was clear among delegates attending the 3rd OPEC and non-OPEC Ministerial Meeting that the period since the 2nd Ministerial Meeting at the end of May 2017 had seen optimism return to the global oil market. There was an acknowledgment that the rebalancing had accelerated in recent months, fundamentals were at their strongest in a number of years, a sustainable stability was slowly returning, and the 'Declaration of Cooperation' had proven to be a key factor in the positive market realignment.

There was also much talk of the approaching one-year anniversary of the 'Declaration of Cooperation', with an anniversary dinner held at the impressive Palais Niederösterreich the previous evening. This was referenced in the opening address of the OPEC Conference President, Khalid A Al-Falih, who thanked all participants, both from OPEC and non-OPEC, for their active and productive engagement over the past year.

The Conference President expressed a special appreciation to his co-Chair, Novak, "whose leadership has been instrumental in launching this partnership between OPEC and non-OPEC and achieving the many important successes we have enjoyed to date." He also recognized the collective efforts of the Joint Ministerial Monitoring Committee (JMMC) under the able leadership of Issam A Almarzooq, Minister of Oil and Minister of Electricity and Water of Kuwait, and Novak.

This was reciprocated by Novak in his opening address in which he praised the leadership qualities of Al-Falih, who "has consistently gone above and beyond to help rebalance the market," gave thanks to the great work of Almarzooq on the JMMC, and acknowledged the diligence of "our good friend" the Secretary General "who has given all of himself to our common task."

In addition, both Al-Falih and Novak said they were pleased to see many other non-OPEC producing countries present as observers. Alongside the ten non-OPEC producers that are part of the 'Declaration of Cooperation', the meeting welcomed Chad, Congo, Egypt, Turkmenistan, Uganda and Uzbekistan, as well as the African Petroleum Producers Association.

One year ago

Al-Falih recalled sitting in the same conference room almost one year ago, "piecing together what has become known as the 'Declaration of Cooperation', which has helped the industry recover from one of the worst petroleum market cycles we have experienced in recent history.

Azerbaijan

Parviz Shahbazov, Minister of Industry and Energy, Azerbaijan.

Bahrain

Dr Ahmed Al-Sharyan, General Secretary, National Oil and Gas Authority, Bahrain.

Brunei Darussalam

Pehin Dato Seri Setia (Dr) Awg Haji Mohammad Yasmin Bin Haji Umar, Minister of Energy and Industry at the Prime Minister's Office, Brunei Darussalam.

Kazakhstan

Magzum Mirzagaliyev, Vice-Minister of Energy, Kazakhstan.

Malaysia

Datuk Abdul Rahman Dhalan, Minister in the Prime Minister's Office, Malaysia.

Mexico

Dr Aldo Flores-Quiroga, Deputy Secretary of Energy for Hydrocarbons.

"The 'Declaration of Cooperation' was a landmark achievement in itself, and many thought that it would not materialize — and that if it did, it would not be effective in improving market conditions.

"As you know, the agreement was designed to accelerate market rebalancing, hasten the drawdown of the stock overhang, and enhance market stability. The results of our joint efforts are evident — and the numbers speak for themselves." He stressed that the coming together of OPEC and non-OPEC producers has made the "extraordinary difference."

There is now global recognition, he said, "that without our collaborative action, the market would have continued to exhibit extreme volatility and future uncertainty, with far-reaching negative consequences for producers, consumers, investors, the industry, and the global economy at large."

Moreover, positive economic developments, robust oil demand growth, and the distinct improvement in both fundamentals and overall market sentiment "show that we are heading in the right direction." However, offering a note of caution, he stressed that "we are still not where we want to be in terms of inventories reaching their target levels, and we must remain resolutely focused on this task. That is why we are here today."

He added that to "ensure that our hard-earned improvements are not compromised, we must continue to work in unison."

Novak, in his opening address, also made reference to the past year and the successful implementation of the 'Declaration of Cooperation', which continues to have a strong and positive impact on the market. He added that it is truly a unique endeavour and "the success that we were able to reach jointly would have been impossible without the work of every single minister sitting around the table in this room."

Looking ahead, he said that "in order to reach our goals and fulfil our tasks" related to the market rebalancing, "we must continue to act in a coordinated fashion." He added that "both consumers and producers are waiting for what we announce today. Everyone is interested in the health and sustainable development of global energy markets, and of course, the global economy."

A positive outcome

The 3rd Ministerial Meeting carefully considered the 6th report and the recommendations of the JMMC, which

noted that the overall conformity level for participating non-OPEC and OPEC countries in the 'Declaration of Cooperation' in October was 116 per cent, furthering the unprecedented conformity levels seen throughout 2017. It also considered several scenarios presented by the Joint Technical Committee (JTC) regarding the extension of the 'Declaration of Cooperation', as well as the outcomes from the earlier 173rd Meeting of the OPEC Conference.

It was noted in the amended 'Declaration of Cooperation', published at the conclusion of the meeting, that OPEC maintained its decisions taken earlier in the day, and the 'Declaration of Cooperation' is hereby amended to take effect for the whole year of 2018 from January to December 2018, with a pledge for full and timely conformity of OPEC and participating non-OPEC countries in accordance with voluntary agreed production adjustments.

It also highlighted that "in view of the uncertainties associated mainly with supply and, to some extent, demand growth it is intended that in June 2018, the opportunity of further adjustment actions will be considered based on prevailing market conditions and the progress achieved towards rebalancing of the oil market at that time."

The meeting also decided that the JMMC should continue to monitor conformity levels, as well as market conditions and its immediate prospects, and recommend further actions, if deemed necessary; and furthermore, that the JTC, supported by the OPEC Secretariat, shall continue to provide its monthly technical assistance to the 'Declaration of Cooperation'.

'Declaration of Support'

The meeting also saw observer countries pledge a 'Declaration of Support' to the work being undertaken by the participating countries in the 'Declaration of Cooperation'.

As Al-Falih said in the press conference that followed the conclusion of the meeting: "We had also six countries that came in as observers. They are smaller producers, but they are also committed and have signed a 'Declaration of Support' basically endorsing the action of the 24 countries. So you can say we have 30 in Vienna today, an unprecedented number of producers that are committed to work together over the mid- to long-term to make sure we continue to bring market stability, looking after the interest of consumers and producers."

Oman

Dr Mohammed bin Hamad Al Rumhy, Minister of Oil and Gas, Oman.

South Sudan

Ezekiel Lol Gatkuoth, Minister of Petroleum and Mining, South Sudan.

Sudan

Dr Abdel Rahman Osman Abdel Rahman, Minister of Petroleum and Gas, Sudan.

Uganda

Irene Nafuna Muloni, Minister of Energy and Mineral Development, Uganda.

Chad

Bechir Madet, Petroleum and Energy Minister, Chad.

Congo

Jean-Marc Thystere-Tchicaya, Minister of Hydrocarbons, Congo.

More work to be done

Al-Falih noted at the press conference that it had been a "great day of deliberations and dialogue and constructive discussions." He added that the "decision has been unanimous." This was also acknowledged by Novak who said that "I think we have taken a very positive decision for oil market participants for the goal of rebalancing the market. I think we have reaffirmed our commitment to bring the inventory overhang back down to a five-year-average level, which will help in restoring a healthy supply and demand balance and a healthy market."

However, both noted that more work still needed to be done. Novak stated that while "I can say we are fully satisfied with what we are seeing" in terms of the results of the 'Declaration of Cooperation' to date, "we are still far away from reaching the final goal, and we need to continue our joint work to reach this noble goal of ours."

The OPEC Conference President stated that "our key metric, as it has always been, is to bring inventories down to their normal levels and the target will be clearly defined in terms of numbers by the middle of the year. But it is going to be at least 150 million barrels below the current OECD levels and there will be further studies by the OPEC Secretariat and by the JTC to make sure that we are all comfortable with how we define the normal levels of inventory that we target with precision as we get closer to the target we expect in the second half of 2018."

Al-Falih also noted that "we as a group will be agile, on our toes and respond, depending on how events may unfold." He said that demand is forecast to continue at the very healthy pace we have seen the past couple of years, but this still needs to be watched, and "of course, supply from non-participating countries and regions remains a question mark and we acknowledge the potential variabilities, especially from shale producers in the US."

From OPEC's perspective, he also stated that "to the market there are no surprises." He said that the issue of Libya and Nigeria was discussed at length at the OPEC Ministerial Meeting, with "close, friendly and constructive consultations with the each country, which also have an interest in market stability." He added that "both countries have told us … that their 2018 levels will not exceed what they were able to achieve in 2017."

The Conference President also said that Saudi Arabia has "taken it on ourselves to lead by example and to be

a catalyst for the success of the Declaration … and there is reason every reason to expect me and my country to replicate our level of commitment in 2018."

He also further underscored the positive relationship between Saudi Arabia and Russia, and on a personal level with Novak. "I think we are both satisfied with where we have gotten and it would not have been possible without the contributions of Russia, but certainly it would not have been possible without the personal leadership, commitment and hard work of Alexander Novak."

Novak noted this statement from the Conference President, and added that the growing relationship between the countries is not only in the energy space, "we are looking at many other sectors and making progress there."

Expanding further

In his opening speech to the meeting, Al-Falih said that "we look forward to continue working with our non-OPEC partners to build on this unparalleled global platform, going beyond the short term to look at the broader challenges and opportunities the oil industry will face in the years and decades to come."

He elaborated on this further in the press conference and stated that "the more partners we bring in the better." He added that many agencies and organizations have been very warm and outright supportive of what we are trying to do. In addition, he said: "We want companies to be respectful of what we do … we want global, national companies to see this is beneficial to all."

Uzbekistan

Ulugbek Sayidov, led the Uzbekistan delegation.

African Petroleum Producers Association

Mahaman Laouan Gaya, Executive Secretary, APPA.


6th Meeting
of the Joint Ministerial
Monitoring Committee
29 November 2017
OPEC Secretariat, Vienna


10th Meeting
of the Joint Technical Committee
28 November 2017
OPEC Secretariat, Vienna

Egypt and Turkmenistan attend OPEC Conference as observers

With Egypt and Turkmenistan attending the 173rd Meeting of the OPEC Conference as observers, the **OPEC Bulletin** *picks out some of the key comments from the speeches delivered by their respective heads of delegation at the opening of the meeting.*

For the first time since 2009, OPEC Ministers welcomed observers to a Meeting of the OPEC Conference. In his opening address, Khalid A Al-Falih, Saudi Arabia's Minister of Energy, Industry and Mineral Resources, and President of the OPEC Conference, welcomed the two non-OPEC observers, Egypt and Turkmenistan, with the delegations headed by Eng Tarek El Molla, Egypt's Minister of Petroleum and Mineral Resources, and Japarguly Orazov, Vice-Chairman of the Turkmen Oil State Concern, respectively.

El Molla, in remarks to the Conference, thanked OPEC for the kind invitation to participate in this significant event as an observer, and stated that the "meeting comes at a very important time, since the decisions to be made today will have a significant impact on maintaining the balance of the global oil market."

He stated that although Egypt is not a large oil producer, it shares with OPEC the main principles of maintaining market stability, ensuring security of supply and security of demand, and allowing for "steady revenues to continue our restless efforts for investments to develop the oil industry."

El Molla noted that developments at the end of 2016 and in 2017 have renewed confidence in OPEC's ability to rise to the challenge and rebuild consensus. He said that he strongly agreed with the OPEC Secretary General when he said "that a new chapter is being authored in the history of the industry by OPEC and its non-OPEC partners, who continue to demonstrate the power of cooperation and dialogue to restore stability and growth in the global oil market."

With the market rebalancing at an accelerating pace and stability steadily returning, El Molla said that he was "confident that we all share the commitment to further mutual collaboration in order to maintain a sustainable oil industry with reasonable growth throughout the 21st century." In this regard, he said: "Egypt expresses its solidarity and support and will continue to do so."

Orazov also thanked the Organization for the invitation to Turkmenistan to attend the Conference as an observer, and initially highlighted the current state of affairs in the country's oil industry, including the challenges, as well as the opportunities and prospects for cooperation with international companies.

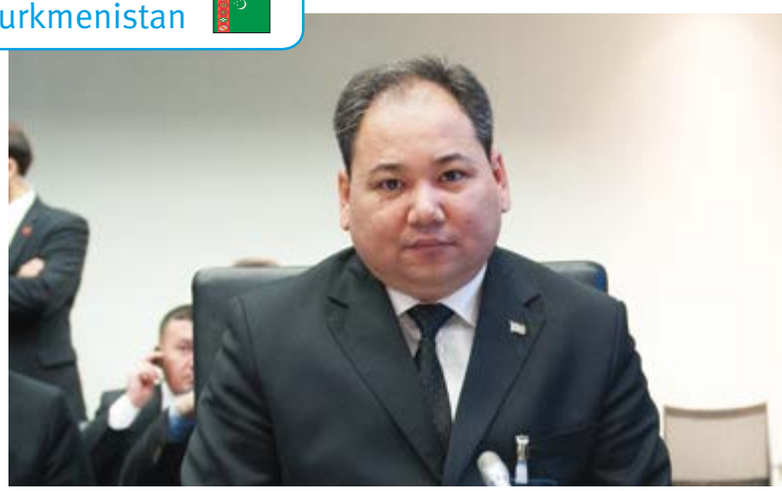
He noted that the oil and gas industry continues to be a "locomotive" of the country's economy, and the policy of the President of Turkmenistan, Gurbanguly Berdimuhamedow, is focused on achieving energy security in the context of integration into the global energy system.

In concluding, he wished all Conference participants a "fruitful and successful" meeting.

Egypt

Eng Tarek El Molla, Egypt's Minister of Petroleum and Mineral Resources.

Turkmenistan



Japarguly Orazov, Vice-Chairman of the Turkmen Oil State Concern.

Khalid A Al-Falih: a successful 2017 Conference Presidency

Undertaking the Conference Presidency on January 1, 2017, Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources of Saudi Arabia, was tasked with helping commence the implementation of the 2016 landmark decisions, specifically focused on the landmark 'Declaration of Cooperation' between 24 OPEC and non-OPEC participating producers from December 10, 2016.

The 'Declaration of Cooperation' also included a new framework, through the Joint Ministerial Monitoring Committee (JMMC) and the Joint Technical Committee (JTC), supported by the OPEC Secretariat, which was yet to be tested. As has been noted throughout 2017, Al-Falih's exceptional leadership have proven to be a key pillar on which the 'Declaration of Cooperation' has been built, with the JMMC and the JTC establishing themselves as the cornerstones of the historic cooperation.

Al-Falih has constantly and consistently focused on the objectives and destination of the 'Declaration of Cooperation', despite the sometimes stormy waters that the process has had to navigate through in 2017.

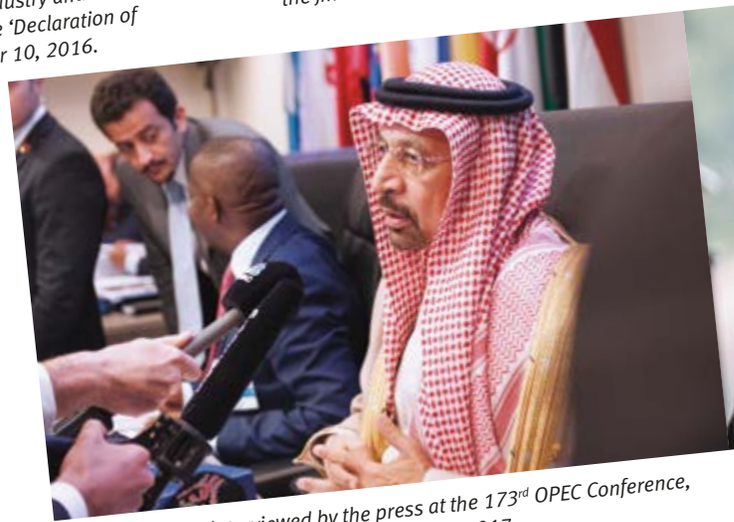
His attendance and engagement at JMMC meetings; his strong advocacy and support of the production adjustments undertaken through the 'Declaration of Cooperation'; the leadership of the Kingdom of Saudi Arabia in terms of the conformity efforts to the production adjustments; his outreach to other industry stakeholders; as well as his consistent and coherent narrative of the importance that every country reaches their individual 100 per cent conformity level, have been key components of the success achieved in 2017.

He also presided over the decisions taken at the 172nd OPEC Conference and the 2nd OPEC and non-OPEC Meeting on May 25, 2017, to extend the 'Declaration of Cooperation' for a further period of nine months, to the end of March 2018. The market trajectory and sentiment witnessed in the period since has shown that the extension decision in May 2017 was right and timely, despite the initial market response. He also oversaw the decisions taken at the 173rd OPEC Conference and the 3rd OPEC and non-OPEC Meeting, to amend production adjustments to take effect for the whole year of 2018, from January to December 2018, on November 30, 2017.

Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources, Saudi Arabia, signing the 'Declaration of Cooperation', Vienna, December 10, 2016.

Al-Falih arrives at the 3rd Meeting of the JMMC in Vienna, May 19, 2017.

Al-Falih speaks at the 4th Meeting of the JMMC in St Petersburg, July 24, 2017.



Al-Falih being interviewed by the press at the 173rd OPEC Conference, Vienna, November 30, 2017.

In an interview in November's Special Edition of the *OPEC Bulletin,* Al-Falih said that there were several events worth highlighting from 2017, and stated that most of them resulted from "joint efforts".

'Declaration of Cooperation'

He noted the importance of the achievement of the 'Declaration of Cooperation' itself, and establishing a special relationship with Russia, in particular with Alexander Novak, Minister of Energy of the Russian Federation, which forms the foundation of the OPEC and non-OPEC cooperation. This was underlined at the press conference following the successful outcome of the 3rd OPEC and non-OPEC Ministerial Meeting, when Al-Falih said of the relationship: "You cannot find light between us; we have been united shoulder-to-shoulder."

In more broad terms, through the JMMC and the JTC, as well as other constructive outreach that has been undertaken, there is now clearly more openness and trust between OPEC and non-OPEC producing nations.

In the *Bulletin* interview, Al-Falih also highlighted other highs from 2017, including restoring confidence in OPEC, and dispelling doubts about its ability to deliver; turning around the market sentiment from highly negative to fairly positive; laying the foundation for OPEC and non-OPEC collaboration in the long-term; and, setting a robust OPEC agenda, focusing the Organization's attention on responding to a changed and evolving situation, besides short-term goals.

In the *communiqué* at the end of 173rd OPEC Conference, the Conference paid a glowing tribute to the outgoing President of the Conference, noting his exemplary leadership and the major contribution he has made to the success of the 'Declaration of Cooperation'.

This was all neatly summed up by Helima Croft, analyst with RBC Capital Markets, at the end of the successful 3rd OPEC and non-OPEC Meeting on November 30. She said: "All in all a successful end to Khalid Al-Falih's exceedingly activist 2017 OPEC Presidency."

At the start of 2018, Suhail Mohamed Al Mazrouei, the UAE's Minister of Energy, assumed the role of President of the Conference for one year.

Almarzooq: a year leading the JMMC

Issam A Almarzooq, Minister of Oil and Minister of Electricity and Water, Kuwait.

When the landmark 'Declaration of Cooperation' came into being it was decided that a new framework was needed to deliver the stated objectives. The initial focus was on the establishment of a Joint Ministerial Monitoring Committee (JMMC), to ensure oversight and a high-level of compliance with the historic decision.

Heading this Committee in 2017 was Issam A Almarzooq, Kuwait Minister of Oil and Minister of Electricity and Water, alongside the Co-Chair, Alexander Novak, Minister of Energy of the Russian Federation. With Alamrzooq's tenure having concluded at the end of 2017, it is an opportune moment to look back at some of the JMMC highlights from the year.

At the first JMMC meeting in Vienna on January 22, 2017, the JMMC decided to establish the Joint Technical Committee (JTC), supported by the OPEC Secretariat, to prepare a monthly report and analysis of the oil market situation. It proved to be a wise decision from the Co-Chairs and the other ministers on the panel, with the OPEC Secretary General, Mohammed Sanusi Barkindo, describing the JTC in September 2017 as "the technical powerhouse of the JMMC."

As Co-Chair of the JMMC, Almarzooq was also tasked with evolving a framework that was yet to be tested, but given the success of the six meetings of the JMMC in 2017, with one also held in his home country of Kuwait, as well as the now expanded role of the JMMC, it was evident that Almarzooq and his Co-Chair Novak were up to the job entrusted to them.

The JMMC, headed by Almarzooq and Novak, has helped build and nurture lasting relationships, which have been the key ingredient behind its success. Almarzooq's contributions this year through the meetings of the JMMC have been instrumental in helping to forge these fruitful relationships, and he has helped to skillfully guide the Committee to the point where it is well positioned for success in 2018. Indeed, he leaves the JMMC an extremely positive legacy as he concludes his tenure.

In his final opening remarks to the JMMC as Chair, on November 29, 2017, Almarzooq reflected back on the first year of implementation of the 'Declaration of Cooperation' and said that "it has established the requisite structure and foundation for the sustainable stability we all seek. It will be essential, going forward, that this platform be solidified, institutionalized and expanded."

He added that it is important not to forget that "our every move is being scrutinized by the international community. It is thus crucial that we maintain a laser focus on our goal of achieving a rebalanced global oil market. This will boost urgently needed industry investment and fuel future economic growth and prosperity around the world."

Almarzooq received a glowing tribute from the OPEC Ministerial Conference at the end of 173rd Meeting of the Conference for his exemplary leadership and the major contributions he has made to the success of the 'Declaration of Cooperation'. His successor as Co-Chair of the JMMC in 2018 will be Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources of Saudi Arabia.

Al-Ghais: a year leading the JTC

The Joint Ministerial Monitoring Committee (JMMC) has this year relied heavily on the expert analysis and data provided by the Joint Technical Committee (JTC), supported by the OPEC Secretariat, which has been tasked to prepare a monthly report of the oil market situation.

The importance of the JTC has been highlighted at the meetings of the JMMC throughout the year, with Issam A Almarzooq, Kuwait's Minister of Oil and Minister of Electricity and Water, and Chair of the Joint Ministerial Monitoring Committee (JMMC), stating at the 6th Meeting of the JMMC, on November 29, 2017, that the JTC had been a "key ingredient in the progress made thus far."

Chairing the JTC in 2017 has been Kuwait's OPEC Governor, Haitham Al-Ghais, who has been ably supported by his Co-Chair, Pavel Sorokin, currently Head of Energy Research and Analysis at the Ministry of Energy of the Russian Federation. The two have formed a very effective team, whose determined efforts enabled the JTC to remain on track with its monthly deliverables to the JMMC.

With Al-Ghais completing his tenure as Chair of the JTC at the end of 2017, it is important to acknowledge his dedicated efforts, his patience and persistence and the long hours he has worked to ensure that the Committee's reports were delivered to the JMMC with the highest quality and in a timely manner.

Moreover, he has had to balance this leadership position on the JTC with his core responsibilities as Manager of the Market Research Department, International Marketing, at the Kuwait Petroleum Corporation.

Al-Ghais has proven to be an effective negotiator; being able to form a consensus among JTC members even when it was necessary for the Committee to confront challenging issues.

The monthly meetings of the JTC were operated efficiently and with a sense of collegiality that have made all participants feel at ease.

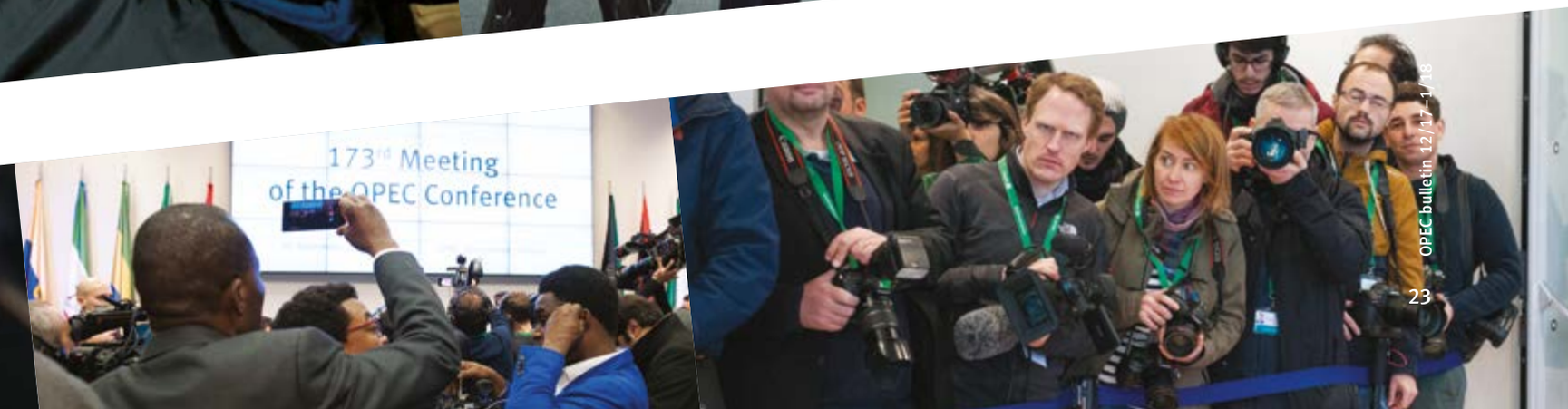
OPEC will continue to benefit from the expertise and experience of Al-Ghais in the new year as he continues to serve the Organization in his capacity as Kuwait's Governor to OPEC.

Haitham Al-Ghais, Kuwait's OPEC Governor, chaired the JTC in 2017.

Haitham Al-Ghais (l), receiving congratulations from Mohammad Sanusi Barkindo, OPEC Secretary General.

Impressions of the Conference


SONY
CHAIRMAN
EQUATORIAL GUINEA


173rd Meeting
of the OPEC Conference

Oil Ministers discuss market, investments, 'Declaration of Cooperation'

The following interviews with high-level officials were conducted by the OPEC Bulletin *team at the 173rd Meeting of the OPEC Conference and the 3rd OPEC and non-OPEC Ministerial Meeting.*

Eng Carlos E Pérez

Minister of Hydrocarbons, Ecuador

Eng Carlos E Pérez, who was appointed just before the previous Meeting of the OPEC Conference on May 25, 2017, underlined the encouraging dynamic associated with the 'Declaration of Cooperation'. He said that the decision to get "non-OPEC countries involved with OPEC Members has been a positive issue. It has really brought the market under control for inventories."

Pérez added that Ecuador is also seeing investments picking up, on the back of more stability in the market. "There are several companies interested in investing in projects in Ecuador. We are finishing up a tender now where we have about $1 billion investment committed and other projects are also coming on."

He also discussed environmentally sensitive issues in Ecuador. He said that "environmentalists have questions, especially with projects in the Amazon Basin, which is a very environmentally sensitive area." He stressed that "we have to be very careful how we produce that," and underscored that "we follow all the different policies and procedures."

Basically, he said, we are handling operations that are very similar to an offshore operation where, we do not dispose of any solids or fluids. He stated that everything is self-contained, with the least damage and a very footprint in the jungle.

He underlined that it is a balancing act. "We need the money, we need the production, but we need to take care of the environment at the same time."

Eng Bijan Namdar Zanganeh

Minister of Petroleum, IR Iran

IR Iran's Minister of Petroleum, Eng Bijan Namdar Zanganeh, said that the evolving relationship between OPEC and non-OPEC producers is "a very, very good and huge development."

He noted that in the past — he had himself gone to Russia many times to convince them to join in cooperation and collaborate with OPEC — Russia had not accepted. He stressed that the new and evolving cooperation was very important for OPEC, adding that he believes "it as a revolution in the history of OPEC and the history of oil production."

He highlighted the experience of the past year as a sign of the success of the 'Declaration of Cooperation'. "The conformity from OPEC and non-OPEC contributors

has been very good; it seems this cooperation is working well and it sends a good signal to us that we are going the right way."

In talking about the IR Iran, Zanganeh noted plans to develop the country's oil fields and invest in new oil and gas fields for sustainable production, to build new oil and gas capacity to help meet the rising demand for energy in the world.

He specifically referenced South Pars, where "we have six phases under construction and most of them will be operating by 2018, another phase is Phase 11, which is under contract with Total, CNPC from China and one Iranian company."

In terms of production by 2020, he stated that "I think a little more than now, because the time we need to increase production is usually around four years."

He concluded on an optimistic note for the market in 2018, "it is my sense that all players believe that 2018 will be a good year" for the oil market, as well as the global economy.

Dr Emmanuel Ibe Kachikwu

Minister of State for Petroleum Resources, Nigeria

Dr Emmanuel Ibe Kachikwu, Nigeria's Minister of State for Petroleum Resources, said he felt optimistic about the market in 2018. "If you look at the depletion of reserves that is going on, if you look at the reduction in the rate of growth of shale and the rest, if you look at the tighter performance in terms of conformity with the 'Declaration of Cooperation', it all leads to the fact that 2018 should be ok," he said.

He added that the "a lot of us are going through difficult times in our economies and we need the volumes, but the reality is, if you get the volumes you lose the price, and at the end of the day you are back to square one. So I think we are all committed to staying the course. We are going to do everything we can to make sure it works."

He also stressed that he liked the monitoring concept related to the Joint Ministerial Monitoring Committee (JMMC) and the Joint Technical Committee (JTC). "The concept brings confidence to the market," he said. "It means that apart from the usual resolutions we have during our general assemblies, we are able to put an enforcement team behind it."

"I think it has worked very well for everybody," he added.

In terms of Nigeria's oil industry, he talked about both the upstream and downstream, investments, as well as providing an update on petroleum policy.

He stressed that it is vital that "we get people back; we will define what the oil policy is, define what gas policy is, and people can have some predictability in terms of the business they are doing, and you begin to see a lot of them come back."

Kachikwu said that from the perspective of "our petroleum policy, which is all embracing, we showed the structures of the industry, we have shown the business models we are going to embrace to deal with environmental issues, that has been passed as far as up to Council."

He said that "gas policy, we are going to try and change our dynamics

from being an oil producing country to being a gas producing country, because that is really what we are." He added that "now we need to move from policies to directives."

In terms of timing, he said the Petroleum Industry Bill (PIB) "is not really in our hands, it is in the hands of the Assembly, but every indication that I have is that by the end of the year we should be looking to have it passed, at least the first rudimentary PIB regulations, that will be essential to stabilize the industry, so that is good."

In relation to the upstream, the Minister spoke about a number of projects, including the Egina field that is being developed by Total, NNPC, CNOOC, SaPetro and Petrobras. He also said "there are about three to four such big projects where FID's have been taken, where it was just a matter of finding the funding and getting going."

The Minister further identified the downstream as an area requiring urgent attention, in which a ministerial directive had been issued to have all refineries up and running by 2019. He said that many teams have been set up to deal with the issue, and there is a lot of financing interest, but stressed that "infrastructure is a major gap in the oil industry in Nigeria, so we need to think outside of the box."

Looking ahead, he also stated that "we have set a 2020 deadline", to end gas flaring, which he added is about ten years before the 2030 deadline that the United Nations has set to exit gas flaring. He noted that "we are about 70 per cent compliant on gas flare exit and we are hoping to take away that other 30 per cent within that 2020 deadline."

Dr Mohammed bin Hamad Al Rumhy

Minister of Oil and Gas, Oman

Oman's Minister of Oil and Gas, Dr Mohammed bin Hamad Al Rumhy, said that "the strength of OPEC is their ability to get others to join in when there is a need. And we in Oman have always supported these initiatives because they are important, and contrary to popular belief, OPEC is looking at consumer interests, as much as producer interests."

He added that "OPEC is bringing all of us together and this is historical because I have been coming here as an observer from time-to-time since 2000, or maybe before that. We have seen a few observers come and go, some decided to stay longer, some took full membership. All in all, I like the idea of OPEC bringing non-OPEC to find a solution."

From the perspective of Oman, the Minister said that "we are producing around 1 million barrels/day of oil and condensate together, but we have adjusted production like everyone else … so production is just short of 970,000 b/d." He added that the "immediate target or objective is to sustain this for years to come; we are an oil-dependent economy and we do not like to see production go down." Despite the challenges, he said, "I think we have enough plans to sustain this production for at least the foreseeable future."

Al Rumhy also highlighted that "gas is another exciting thing for many of us here, and for Oman as well. He said the country is spending more and more on gas, as much as it does on oil, and "we are one of those who export gas and import as well, some from our neighbours. We think the role of gas is growing and we would like to be part of that."

Elsewhere, Al Rumhy noted that the country also has refinery and petrochemical projects being developed. "Some are under construction, some are under planning, but we have ambition to move away from just selling oil and gas."

In terms of cooperation with others, Al Rumhy said that "Oman is open for business from everybody." He noted his Middle East neighbours, and "we have friends

from Japan, Korea, China, United States, European countries. We are uniquely positioned to work with everybody and we like it. That is the Omani way of doing things."

Alexander Novak

Minister of Energy, Russian Federation

At the conclusion of the 3rd OPEC and non-OPEC Ministerial Meeting, Russia's Minister of Energy, Alexander Novak, said that today's message in which 24 countries participated from OPEC and non-OPEC, as well as six observers, is the "single conclusion in regard to rebalancing of the market."

Novak was also asked about his positive rapport with Khalid A Al-Falih, Saudi Arabia's Minister of Energy, Industry and Mineral Resources, as well as the evolving and positive relationship between the Russian Federation and Saudi Arabia. He stated that "one of the key challenges we have, maybe not on the short-term scale, but on the mid-term scale, is the technological advances in the sector which are completely changing the energy landscape.

"They are making the market more competitive, more non-uniform and they will be the key challenge in order to achieve full balancing. But that is exactly the reason we are not just cooperating in the energy space, but we are expanding our cooperation beyond the oil markets, in the technology space, in service companies, we are trying to develop technologies, we are trying to be ahead of the curve with both Saudi Arabia and our other partners in order to be competitive in the new market of tomorrow."

In terms of 2018, Novak said we see "very good trends and very good fundamental support in the market. We are seeing lower volatility, we are seeing investment coming back into the sector, we are seeing good supply and demand rebalancing. At the same time we are seeing good commitment from all parties involved towards achieving our common goal. Keeping all these things in mind, I can say yes I am optimistic about 2018."

He also offered words of praise to the OPEC Secretary General, Mohammad Sanusi Barkindo, and the OPEC Secretariat. He said that without his efforts and the technical personnel in OPEC "I do not think this would have been possible."

Khalid A Al-Falih

Minister of Energy, Industry and Mineral Resources, Saudi Arabia
President of the OPEC Conference 2017

Khalid A Al-Falih, Saudi Arabia's Minister of Energy, Industry and Mineral Resources and President of the

OPEC Conference in 2017, stated that the decisions taken at the 173rd Meeting of the OPEC Conference and the 3rd OPEC and non-OPEC Ministerial Meeting were a signal of the "continuation of a successful process that has been ongoing for over 12 months."

He noted that 2017 had been a "landmark year where we turned a corner from a very gloomy picture that existed in 2015 and 2016." He stated that not only did OPEC deliver on its decisions taken in 2016, but in terms of the landmark side "it was bringing the 11 non-OPEC countries," on board, although he added that "one of them liked it so much it switched to OPEC and so it became ten." Moreover, he said, "today we have seen six other countries come as observers."

Al-Falih said that the success in 2017 was quite remarkable and he was proud to have "played a small part in creating this."

In 2018, he said, we will look to "replicate this in terms of continued drawdown of inventories and bringing confidence to investors and participants, as well as clarity to consumers about oil being an important product that people are investing in to ensure its long-term supply availability."

In terms of the 'Declaration of Cooperation', he said that "if the market is not stewarded properly, which is the job of OPEC and hopefully our new partners from non-OPEC, consumers should be worried, because how do you make sure it is going to be available if investments dry up and supply declines. What we have done is reassuring to markets, it is reassuring to consumers and it is reassuring to our most important stakeholders, our nations and our people."

Suhail Mohamed Al Mazrouei

Minister of Energy, UAE

Suhail Mohamed Al Mazrouei, the UAE's Minister of Energy and the incoming OPEC Conference President for 2018, said he believed after one-year of the 'Declaration of Cooperation' it is easier to "understand each other, understand the concerns." He noted that the participating nations "have learned a lot from each other."

In terms of 2018, Al Mazrouei said he is "optimistic", that "we will help the market to continue the journey of recovery and hopefully we can incentivize more investment in this important sector." He added that he is hopeful that during the course of next year the 'Declaration of Cooperation' can attract other countries to join.

He was also positive when looking beyond the next year, stating that he thinks it is important for this type of cooperation to continue. "We are living in a different world today," he said, "all of our information we share it with different international agencies, we have seen OPEC and the Secretary General working in collaboration with some other agencies on the data and transparency.

"I see that the future of this market and the future of the oil commodity is a concern that everyone is caring about, all of the producing countries, and I see a potential that this platform can continue in one shape or form. What we need to talk about is what, and how we keep together."

From the perspective of his 2018 Conference Presidency, Al Mazrouei said that he thinks "the priorities are going to be to act upon any decision we come up with at this meeting and to ensure we are fulfilling whatever obligation we have as a group," as well as to look to continue the cooperation beyond 2018 and to establish a bigger platform for OPEC.

In talking about the UAE specifically, the Minister said the Supreme Petroleum Council of Abu Dhabi had recently announced significant investments in the next five years in both the upstream and downstream sectors. In total, this amounted to "almost $109 billion of new investments." He said that our national oil

company, the Abu Dhabi National Oil Company (ADNOC) is going to invest, but a lot "of that investment is going to be for the private sector, the IOCs and collaboration with them." He added that "we are committed to invest as the UAE, we are investing in the full value chain and we welcome investors to come and invest in the UAE with us."

He was also asked about the UAE's commitment and leadership role in renewables, alongside oil, and said that "as far as we are concerned, they complement each other." He noted that the country's energy strategy to 2050 calls for "almost 50 per cent of green forms or clean forms of energy, which will include nuclear and renewables. Renewables will be 44 per cent of that 50 per cent, so 44 per cent renewable and six per cent nuclear, which is going to give us a 50 per cent zero emission forms of energy by 2050." He stressed that the rest is expected to be fossil-fueled based.

Irene Nafuna Muloni

Minister of Energy and Mineral Development, Uganda

Irene Nafuna Muloni, Uganda's Minister of Energy and Mineral Development, was attending an OPEC and non-OPEC Ministerial Meeting for the first time. Uganda had accepted an invitation to attend the meeting as an observer, and Muloni said "she was excited to be here to learn what goes on in OPEC as we prepare for the production of oil in my country."

She said that in the country oil production is expected before the end of 2020. "There is a lot I will learn that I can put into practice as we prepare for producing first oil in Uganda, so it is my pleasure to be here," she added. In terms of possibly becoming an OPEC Member in the future, she said that "this gives us an opportunity to learn what actually happens, the kind of arrangements, the kind of decisions and what we need to do to become a Member."

From the perspective of future oil production in Uganda, she said "the country has so far confirmed 6.5 billion barrels of crude in place, and 500bn cubic feet of gas. Out of that we expect to recover about 1.7bn b." The country has already issued nine production licenses to a number of companies, including Total and Tullow Oil.

The country is also preparing to access the international market by developing a crude export pipeline of 1,445 km from the Albertine Graben region of Uganda. The Minister said: "It is going to be the longest hidden pipeline in the world, to the port of Tanga on the Indian coast of Tanzania." She added the pipeline will enable Uganda to carry about 260,000 b/d.

In addition, Muloni said: "We are going to construct a refinery in our country. We are starting with a small refinery of 60,000 b/d so that we can meet our energy needs as a country and in the region."

For investment, she stated that "we are expecting in the next three years all these projects will require an investment of not less than $20bn."

Muloni also talked about the importance of ensuring that all Ugandans benefits from the country's natural resources. "We have a population of about 37 million people, and about 70 per cent of those are youth, so we are looking for developments that are going to create

jobs, that are going to add value on what we produce, that are going to boost the economy with revenues that will then be able to modernize agriculture, build infrastructure and improve social services for our country.

"So, as a country we are looking at going into production before the end of 2020, so that we can get much-needed revenues to plough back into the sectors I have talked about so we can move our people into the middle-income class."

Declaration of Cooperation

Celebrating cooperation

The implementation of the 'Declaration of Cooperation' — which had been paid tribute to in the previous special edition of the OPEC Bulletin *— marked a year of historic consultations, teamwork and collaborative actions. Given the positive outcomes resulting from the year-long implementation process, it was necessary to mark the occasion with a special event. Thus, on the eve of the 173rd Meeting of the OPEC Conference, and the 3rd OPEC and non-OPEC Ministerial Meeting, both held on November 30, representatives of the Organization's 14 Member Countries, the ten participating non-OPEC countries, and other invited guests gathered for a special Gala Dinner in recognition of the hard work done by all signatories. The* OPEC Bulletin *provides a round-up of this Gala evening.*

In the study of history, the marking of important events and the achievement of significant objectives — be they diplomatic, military or commercial — is often done with parades, or special proclamations, or holidays and other public festivities.

Also common is the holding of special gala evenings and dinners — which is precisely the sort of understated affair that OPEC organized for one late autumn evening in November. More than one hundred people gathered on the 29th of the month to honour all the countries, and their representatives and officials, who had played such an important part in the achievement of the landmark 'Declaration of Cooperation'.

With the dim, yellow hue of the streetlights outside, the bright, colourful interiors of the Palais Niederösterreich in central Vienna shone especially brightly that evening. Some delegations arrived walking, while others arrived in private transport. Officials and other volunteers from the OPEC Secretariat greeted every new arrival with a smile and good cheer, leading them upstairs to the main room where the evening's festivities would play out.

Old and new friends

A grand reception preceded the evening, with officials new and old, as well as friends from far and wide, gathering to share smiles, embrace each other after long absences, and catch up on both professional and personal matters. Former Secretary General Abdallah Salem El-Badri joined the current Secretary General, Mohammad Sanusi Barkindo, while current and former officials, including former staff members, circulated.

The room buzzed with excitement and the overall mood was upbeat and friendly. Distracted by the renewed friendships, the smiles and the good cheer, people in the room could have stayed for hours. Only the distant sound of music — and the rapid comings and goings of waiters and waitresses, and the volunteer protocol officers from the OPEC Secretariat — signalled to those in attendance that there was something more to look forward to during the evening.

The evening was a celebration of numerous things. Friendship was given tribute too, most obviously through the closeness and warmth exhibited by all those attending, the finding of seats next to and with old friends, as well as the generous selfless ceding of seats to others who may have arrived too late. All this was punctuated by the chatter and sudden eruptions of laughter from the odd table in the back of the room.

A landmark year

Dedication, diligence, hard work were also all paid tribute to, as were the discipline and organizational skills of those who have served in official positions at the helm

Mohammad Sanusi Barkindo, OPEC Secretary General.

Alexander Novak, Energy Minister of the Russian Federation.

Khalid A Al-Falih, Minister of Energy, Industry and Mineral Resources, Saudi Arabia, President of the OPEC Conference in 2017.

of the various committees that have overseen the implementation stages of the declaration — from the Joint Ministerial Monitoring Committee (JMMC) to the Joint Technical Committee (JTC).

In addition, commitment to the Organization was also celebrated, as was — more importantly — commitment to the realization of common objectives through collaborative work. In fact, this commitment — fortified by strict discipline — can be seen as the very linchpin of the Declaration itself, which relies on voluntary adjustments on the part of the 24 countries participating in the decision.

All such countries were at the Gala Dinner, and their officials and representatives in the audience enjoyed the mood of the evening, recalling the outcomes of their sound decisions nearly a year ago, and once again noting that every month the JTC and the JMMC issue a report on the state of the conformity levels to the decisions — and every month the results are above expectations, with levels regularly above the 100 per cent level.

It is this level of dedication and compromise — which goes far and beyond what was envisioned — that has enabled the restoration of market stability, a reduction of the stock overhang and a stabilization of prices.

The evening offered several high-level speeches as well, which provided the event with a seriousness that underscored the importance of the event. The speeches, which were delivered by the Secretary General himself, as well by Khalid A Al-Falih, the Minister of Energy, Industry and Mineral Resources of Saudi Arabia, and the Energy Minister of the Russian Federation, Alexander Novak were celebratory, and set the stage for the meetings to be held the following day.

They also honoured and paid tribute to various people present at the Gala Dinner, including the Honorable Mayor Michael Häupl who has led the city of Vienna — OPEC's home for more than five decades — during the past few decades.

The Secretary General said that the evening is "a joyful celebration not just of the origins and development of the Declaration itself. It is also a way for us to pay tribute to the 24 producing countries participating in the Declaration," he said, "and honour the many officials, delegates and staff that made it possible."

Turning his attention to Novak, who he later introduced, the Secretary General noted that his role as Alternate Chair of the JMMC "has been steadfast and praise-worthy." Then, recognizing Al-Falih, he spoke of his indefatigability, noting that he "is willing to negotiate late into the night, and engage in extensive consultations across many capitals and continents" — all in the name of ensuring full and timely implementation of the Declaration.

For his part, Minister Al-Falih reminded the audience that the Gala Dinner celebrates the Declaration's ongoing achievements, which include the positive results seen thus far towards the goal of rebalancing the oil market.

Thanking Vienna

Later turning his attention to the Mayor of Vienna, Al-Falih praised his leadership and referred to the "city of

Dr Michael Häupl, Mayor of the City of Vienna.

sophistication, culture and tradition — and OPEC's home." Alongside Barkindo, the two officials then asked the Mayor of Vienna to join them onstage, where they proceeded to pay a formal tribute to the city which has played an important role in the history of OPEC, having played host to 100 Meetings of the Conference. A custom-made sculpture was then presented to the Mayor — with the wood sourced from Lower Austria and the silver sculpture sitting atop designed by Italian artisans, along with a short tribute, before he was given the floor to make his own speech.

Häupl said that it is "a pleasure and honour" to be here this evening, and added that he takes the invitation "as a symbol of your organization's special appreciation for our city."

He noted that Vienna is proud of OPEC's presence in Vienna, as well as the fact that the city hosts the only United Nations seat in the European Union. He said that "Vienna regards itself as an international meeting place, a city open to the world, a forum for international dialogue and mediation, and a city where mutual solidarity and togetherness are part of daily life. With this spirit of dialogue and of 'live and let live', we can thus contribute our part in promoting a prosperous and peaceful international community."

He added that "I want to thank you for putting your trust in us over the years. We are very well aware of this position of trust. Please be assured that we will continue to be a very attentive and equally forthcoming host to your organization in the future."

Warm bonds of friendship

In the end, as one delegate said in passing, the evening not only paid tribute to a historic decision and the landmark 'Declaration of Cooperation' that has achieved so much in a year; it also paid tribute to the very city in which such a historic decision was reached, and which has, at the same time served as home to the Organization that has successfully spear-headed all the efforts during the past year towards the restoration of sustainable market stability.

Such an achievement is one worth celebrating heartily. Though it involves something that many members of the public might take for granted, and even though it may not grab the headlines as much as more noisy achievements do in the world of contemporary affairs, the 'Declaration of Cooperation' and the implementation phase which remains ongoing is something to be taken note of, something to be heralded as unique and historic, and something to be celebrated.

In these respects, the Gala Dinner certainly fulfilled its purpose — while the warm bonds of friendship and camaraderie present there among OPEC Member and non-Member Countries, as well as among those other non-participating countries providing their support through their attendance, served to take the whole affair to another level from which the ongoing institutionalization of long-term collaboration among the world's oil producers may continue to thrive.


Welcome
to the Anniversary dinner
celebrating the Landmark
'Declaration of Cooperation'

OPEC hosts 2nd Technical Meeting of OPEC and non-OPEC producing countries

OPEC hosted the second edition of the OPEC and non-OPEC technical meeting under the umbrella of the 'Declaration of Cooperation' at the OPEC Secretariat on November 27, 2017.

The event included special focus sessions on non-OPEC liquids supply developments, at which seven external experts shared their outlooks for supply prospects in various regions and the production challenges facing each. These included Latin America, Europe, Canada, Russia and Africa.

Twenty-six countries attended the meeting, while 17 countries participated in the 1st Technical Meeting of OPEC and non-OPEC Producing Countries in May 2017.

The technical OPEC and non-OPEC expert meetings are meant to provide the opportunity to exchange views on key factors impacting oil market developments,

including short- and medium-term developments. To date each meeting has also included a special topic of focus with outside experts.

Highlight on countries/regions

In the morning session, it was noted that key non-OPEC producers have markedly different outlooks, with numerous country-specific factors playing a role. Generally speaking, the tone was of significant supply potential in non-OPEC countries in the short- to medium-term — which was the focus of discussions — while longer-term supply showed significantly less potential.

Regarding individual countries, speakers detailed how Canadian oil sands will remain a major source of non-OPEC supply growth, even though breakeven costs remain among the highest in the upstream sector. The large resource base, the lack of geopolitical and geological risk, and guaranteed steady revenue flows keep it as an attractive area for some investors.

In Brazil, it was observed that deepwater and pre-salt production are expected to grow steadily, with a stream of new, large-scale projects coming online, and the sector could benefit overall from relatively low breakeven costs and a more conducive fiscal and political environment.

Expectations in the North Sea are for relatively flat overall production in the medium-term, but long-term challenges remain. It was noted that the UK's production is expected to continue its long-term declining trend, while Norwegian supply is anticipated to get a boost from the start-up of the huge Johan Sverdrup field around 2020. Moreover, as Statoil, in particular, continues to report very significant cost-cutting and efficiency gains in the upstream, it was highlighted that the country's production profile could surprise to the upside.

It was stated that Russia's production costs remain very low, comparatively speaking, although the overall tax take is relatively high. While most speakers expected a relatively flat production profile, one highlighted the potential for some supply upside in the short- to medium-term.

In Kazakhstan, speakers expected production to rise in the medium-term, as output at the giant Kashagan field ramps up. Thereafter, expansion plans at other large fields will serve to offset declines elsewhere, with overall supply levels remaining relatively flat.

While not a focus of the session, presenters expressed the view that US crude and NGLs production, especially from tight oil, will be the single largest contributor to non-OPEC supply growth in the medium-term, though significant variation exists around the expected levels of these increments.

Other producing areas and countries were also discussed, including other Latin American and African countries. Broadly speaking, it was observed that declining production due to a mature base will more than offset start-ups, leading to falling output in both regions.

A discussion also ensued on the quality of new production streams and their impact on the average barrel. Most speakers highlighted how the trend will see a gradual increase in API gravity and reduced sulphur content.

Congratulations on the first anniversary

At the Meeting, OPEC Secretary General Mohammad Sanusi Barkindo congratulated all OPEC and non-OPEC participants to the 'Declaration of Cooperation' on the first year anniversary of the decision. He stated current market conditions, returning confidence and optimism in the industry are all evidence of the positive outcome of these joint efforts.

"Together with our non-OPEC partners, we have co-authored a new chapter in the history of this industry, one that is about cooperation, stability and sustainability … We can be very proud of what we have achieved together."

He added that these meetings are also held in the spirit of the 'Declaration of Cooperation', which states: "Countries participating in the 'Declaration of Cooperation' decided to strengthen their cooperation, including through joint analysis and outlooks, with a view to ensuring a sustainable oil market, for the benefit of producers and consumers and to regularly review at the technical and ministerial levels the status of their cooperation."

He stated that although the accomplishments to date have been significant, there is still a long way to go in balancing the market and all involved must retain their focus.

The meeting was part of the lead up to the 3rd OPEC and non-OPEC Ministerial Meeting, held at the OPEC headquarters on November 30. It also followed on the heels of a complementary workshop on tight oil prospects held on November 22, which examined recent developments and likely prospects for US tight oil.

The technical meetings provide an opportunity to enrich and deepen OPEC and non-OPEC cooperation and to give shape and structure to a framework under which future cooperation and the sharing of perspectives will take place, said the Secretary General in his closing remarks.

ADIPEC 2017:

Forging ties, driving growth

This year's theme is an apt description of how this massive event, now in its 20th edition, has steadily climbed to the top of the international oil and gas event circuit. The OPEC Bulletin's ***Scott Laury*** *was there to chronicle OPEC's participation in this year's installment of the event, which proved to be bigger and better than ever.*

The saying goes "let the numbers speak for themselves", and in the case of this year's Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC), the numbers provide a clear picture regarding the scope of this ever-growing international industry event.

Held from November 13–16, 2017, at the sprawling Abu Dhabi National Exhibition Centre, under the patronage of Sheikh Khalifa Bin Zayed Al Nahyan, President of The United Arab Emirates, ADIPEC reached another set of superlatives this year: 100,000 attendees from 135 countries, 10,000 delegates, 2,200 exhibiting companies, 18 national oil companies (NOCs), 16 international oil companies (IOCs), 25 international country pavilions, 80 chief executive officers (CEOs) speaking across 50 sessions, 119 technical sessions and eight technical industry panel sessions.

Perhaps it was best summed up by Dr Sultan Ahmed Al Jaber, UAE's Minister of State and Abu Dhabi National Oil Company (ADNOC) Group CEO. "ADIPEC has become the premier destination for the oil and gas industry, a place to reconnect, explore new opportunities and debate," he said in *ADIPEC News*.

Ali Khalifa Al Shamsi, CEO of Al Yasat and ADIPEC Chairman, shared the vision set out for this year's event. "ADIPEC's guiding purpose is to be the convening power for the global industry, a platform where the industry's leading CEOs define and refine their strategic direction," he proclaimed, adding, "Although exploration, production and exports of crude oil remain the foundation of the region's NOCs, today's business models increasingly look beyond this, making downstream investments that accumulate benefits through each value-added process."

As far as the event's programming goes, there were four Ministerial Sessions, four Global Business Leader Sessions, as well as sessions on women in energy, and offshore and marine.

For the first time, the event offered a special focus on the downstream sector, looking at the crucial issues of growth and investment.

Opening ceremony

ADIPEC 2017 was officially opened at the lavish Al Maa'Red Hall in an Opening Ceremony attended by dignitaries and high-level industry leaders. The well-attended event featured welcoming remarks from ADNOC's Al Jaber, followed by opening remarks from Suhail Mohamed Al Mazrouei, UAE Minister of Energy, and Mohammad Sanusi Barkindo, OPEC Secretary General.

UAE Minister of State

Al Jaber began his remarks by welcoming attendees to ADIPEC and underlined the evolving nature of this important event. "For the last two decades, ADIPEC has showcased cutting-edge advancements in technology, and introduced the latest findings from our industry's greatest minds. As we look ahead, we will evolve and expand ADIPEC into a platform for true thought leadership," he said.

Dr Sultan Ahmed Al Jaber, UAE's Minister of State and Abu Dhabi National Oil Company (ADNOC) Group CEO.

Suhail Mohamed Al Mazrouei, UAE's Minister of Energy.

He also used the occasion to announce plans for ADNOC to list a minority stake in ADNOC Distribution, the UAE's largest fuel distributor and convenience store operator, on the Abu Dhabi Securities Exchange. This is a historic development, representing the first time ADNOC has ever placed shares of one of its subsidiaries onto the public market.

"The planned IPO will offer both UAE and international investors an unprecedented opportunity to invest alongside ADNOC in one of the region's leading retail brands," he added. "This marks a major milestone in our history and a significant step-change in our transformation. Importantly, it also signals a new chapter in the growth and development of the UAE's capital markets. But, to be clear, ADNOC, at a holding company level, will always remain wholly owned by the Abu Dhabi Government."

He added that this IPO decision was part of the company's 2030 strategy geared towards optimizing the potential of its entire value chain with the aim of increasing profitability in the upstream, while developing a more valuable downstream and an efficient and sustainable gas supply.

He concluded his remarks on a positive and forward-looking note. "At ADNOC, we are embracing the future to create a new type of National Oil Company that meets the needs of today, while adapting to secure tomorrow's success."

UAE Minister of Energy

Al Mazrouei was the next on the agenda to address attending delegates at the Ceremony. He began by commending the ongoing 'Declaration of Cooperation' between OPEC and non-OPEC producers and the benefits it was bringing to the global oil market.

"Last year, the gathering of 24 countries, both OPEC and non-OPEC, of responsible, producing countries came together to help reduce the historic level of storage by 80 million barrels," he stated. "I am very optimistic about the whole of 2018, and I think it is going to be a great recovery year."

He also touched on the importance of efficiency, technology and a long-term perspective, referencing the removal of petrol subsidies as one driving factor in these efforts.

"It was essential for the oil industry to become more efficient through the adoption of new technology and improved business practices, which were being implemented," he said. "Without such planning, it would be difficult for any country to be ready for the future.

OPEC Secretary General

The ceremony's final remarks came from the OPEC Secretary General, who began by thanking the government of the UAE and Al Mazrouei, for the invitation to speak at ADIPEC 2017.

Barkindo also commented on the high-profile nature of the event and this year's high-quality programme. "ADIPEC has evolved into one of the world's top-tier international energy conferences and exhibitions, and is set to break its records in international participation," he said. "I commend you on the wide variety of relevant, timely and innovative topics covered in this year's programme under the theme: '*Forging ties, driving growth*'. For OPEC, this high-caliber event, hosted by our Member Country, the UAE, is a yearly highlight on our events calendar."

Mohammad Sanusi Barkindo, OPEC Secretary General.

Mohammad Sanusi Barkindo (r), OPEC Secretary General, with Eithne Treanor, ADIPEC moderator.

Suhail Mohamed Al Mazrouei (second l), UAE's Minister of Energy; Mohammad Sanusi Barkindo (c), OPEC Secretary General; and Dr Ayed S Al-Qahtani (r), Director of OPEC's Research Division.

He then alluded to the historic joint decisions taken last year that culminated in the 'Declaration of Cooperation', adding that these decisions, despite the voices of many sceptics, were successful in helping restore stability to the global oil market.

"Today, the oil industry, and indeed the global economy, are clearly benefiting from the noble efforts of this unprecedented joint decision of the 24 OPEC and non-OPEC participating producers of the 'Declaration of Cooperation'," he stated. "We are seeing clear indications that the market is rebalancing at an accelerating pace and stability is steadily returning."

He said the courageous acts of these 24 oil producing nations had helped deter any further volatility in the market through an unprecedented level of cooperation.

"I am certain that if we had not mobilized ourselves when we did, building consensus and jointly taking action in responding to the crisis, the industry would be in a different condition than it is today," he maintained. "A new chapter is being authored in the history of the industry by OPEC and its non-OPEC partners, who continue to demonstrate the power of cooperation and dialogue to restore stability and growth in the global oil market."

Secretary General tours exhibition

After the opening ceremony, the Secretary General, accompanied by Al Jaber, Al Mazrouei, along with several heads of NOCs and IOCs, participated in a VIP walking tour of the massive ADIPEC exhibition hall.

The tour made stops at some of the main exhibitors' stands, where they were welcomed, briefed and posed for photographs.

The Secretary General ended his tour at the OPEC stand, where he visited with OPEC officials and staff and conducted interviews with the international media.

C-Suite dialogue session

Later the same day, the Secretary General was also featured in a C-Suite Dialogue session entitled *'The OPEC discussion — stability through cooperation'*. This year's event was the first time ADIPEC has offered these in-depth, exclusive sessions with leading figures in the oil and gas industry.

After delivering opening remarks, the Secretary General participated in an exclusive interview session moderated by Eithne Treanor, an ADIPEC Presenter who also has significant experience covering OPEC Conferences and Seminars.

The session's main themes were on restoring industry stability through the 'Declaration of Cooperation', the producer-consumer dialogue and the long-term outlook for the global oil industry.

In reference to the 'Declaration of Cooperation', the Secretary General expressed his satisfaction with the progress being made.

"South African Freedom Fighter and former President, Nelson Mandela, once said: *'It always seems impossible until it is done.'* And, indeed, step by step, we are making progress towards achieving our common goal," he said. "OPEC and its non-OPEC partners are making headway in restoring balance to the market. With global stocks coming down, a positive economic outlook and robust demand ahead, we are on the right track."

Dr Ayed S Al-Qahtani, Director of OPEC's Research Division, presented the WOO 2017 at ADIPEC.

However, he also stressed the importance of not losing sight of the big picture when planning for the future. "We all know that we cannot look at the oil market simply from a short-term viewpoint, but rather we must step back and take stock of the larger picture," he emphasized.

He then provided an overview of OPEC's medium to long-term forecast for the global oil market by sharing the highlights from the *World Oil Outlook 2017 (WOO)*, which had just been released on November 7, 2017.

One of the imperatives, he added, will be restoring adequate levels of long-cycle investment in the industry. "With the massive upswing in demand forecast for the years ahead, a top priority for the industry will be to urgently restore investment to levels that will secure the energy requirements of future generations," he stated. "Accomplishing this will be no small task as an estimated $10.5 trillion will need to be invested in the industry from now until 2040."

These efforts will require constant dialogue and cooperation across the industry value chain. "All these efforts boil down to one thing — in an increasingly globalized and interdependent global oil industry, stakeholders must work together to achieve their common goals," he stressed. "They face the same daunting challenges and, many times, share the same objectives. Therefore, I take this opportunity to extend an invitation to the world's oil producers to join this train of global stability in the oil industry that took off last year in Algiers. Together, let us endeavour to achieve a global oil market that is once again healthy, growing and sustainable for the benefit of this and future generations."

WOO 2017 presentation at ADIPEC

Dr Ayed S Al-Qahtani, Director of OPEC's Research Division, also presented the findings of the *WOO 2017* as part of the ADIPEC Executive Dialogue series hosted at the Middle East Petroleum Club, an exclusive business platform for senior oil and gas executives.

A full house was on hand to hear about OPEC's latest medium- to long-term forecasting in relation to the global oil and gas industry to the year 2040.

After the presentation, Al-Qahtani and several officials from OPEC's Research Division answered a wide range of questions from the audience. Hard copy versions of the publication were made available for those in attendance.

First published in 2007, OPEC's annual flagship publication features comprehensive coverage and analysis of the medium to long-term outlooks for the global oil and gas industry.

Ministerial sessions

At this year's ADIPEC, there were two Ministerial Sessions, in which ministers of energy were given a platform to share the visions they have for their countries' oil and gas industry and to discuss the issues of the day related to the wider global oil and gas industry.

Al Mazrouei, UAE Minister of Energy, was a prominent participant at both sessions. The first panel, which took place on day one, was entitled 'Creating energy opportunity through foresight, vision, inspiration and innovation' and featured the energy ministers of Oman, Egypt and Pakistan.

Panelists discussed their countries' long-term energy goals to the year 2050 and the plans currently in place to achieve them. The panel recognized that the ongoing success of the Declaration of Cooperation between OPEC and non-OPEC producers was providing much needed stability to the global oil market. The growing importance of liquefied natural gas (LNG) was also emphasized, as receiving terminals were now available around the world. Panelists also pointed out the importance of research and development in maximizing efficiency and the potential to also invest in renewables.

The second panel, held on day two, featured the energy ministers from Bahrain and Lebanon, as well as the UK's Minister for Trade and Export Promotion and Canada's Minister of Economic Development and Trade.

With the theme 'Energy dynamics — exceeding expectations and international frameworks for cooperation,' panelists discussed the importance of creating strong global partnerships between oil producers and consumers, which can provide opportunities for mutually beneficial long-term supply agreements. The importance of boosting solid, long-term investment in the industry was also stressed by all the panelists as a means to ensure a sustainable supply of energy to meet rising demand in the years ahead. Cooperation and dialogue, as well as fiscal and economic reforms were identified as key ingredients to attract investment and ensure the success of joint projects.

OPEC Secretariat officials at ADIPEC 2017 gather for a group photograph.

Global business leaders session

This year, ADIPEC offered four sessions for global business leaders to discuss their companies' strategies for growth, investment and diversification, their leadership philosophies, as well as some lessons learned.

The first power-packed session featured the CEOs of Total, British Petroleum and Petronas. With the theme 'Driving growth — pioneering strategies and breaking boundaries for global success,' the leaders shared valuable insight into how their companies had weathered the storm of the oil price crash of 2014, and what they learned from this disruptive event. They also considered the future energy mix, prospects for US tight oil, environmental issues, efficiency and how technology may shape future energy strategies around the world.

Under the theme 'Forging ties — fostering relationships and creating business models for success,' the second session featured the heads of Lukoil, Mubadala Investment Company, Pemex, Gazprom and OMV. The main themes discussed were the advantages of an integrated oil and gas business portfolio, the rise of LNG supplies and how driving efficiency can boost production while increasing reserves.

The third session, entitled 'C-Suite leadership — building momentum and delivering success,' was attended by the heads of Wintershall, Baker Hughes, McDermott, INPEX/JODCO and Weatherford. The panel pointed out the industry trend of saving on investments and an increased emphasis on efficiency, but noted that continued investment must be restored to avoid a production shortfall in the future. It was also suggested that uncertainty and disruption were the new normal in the industry. The panel added that efficiency, competitiveness, operational excellence and attracting top talent will be the top priorities for the industry in the years ahead.

The fourth and final session focused on finance in the energy industry with the theme 'Igniting and leveraging energy finance, investment, consolidation and diversification.' The panel included the Chief Financial Officers from British Petroleum, the Abu Dhabi Investment Council, Siemens Middle East and UAE, Nova Chemicals and Moelis and Company.

The panel noted that the industry had witnessed the depletion of $280 billion in investments from the IOCs in the last five years, but that the situation had since improved. It was pointed out, however, that the North American downstream sector had actually benefited from the low oil price environment to focus on efficiency through advancements in technology and digitization. The emerging trend towards shareholder value over expanding production was also discussed.

New this year

In addition to the C-Suite dialogues already mentioned, other new programmatic elements introduced this year by ADIPEC included a dedicated focus on the downstream sector and two CEO Energy Finance Lunches.

The downstream portion of the event comprised a strategic and technical conference in which the leading international refiners and petrochemical operators were able to share their knowledge, expertise and lessons learned with attending delegates.

The CEO Energy Finance Lunches offered high-level insight from top global finance leaders into current strategies for the industry to attract new investment opportunities through mergers and acquisitions, joint ventures and IPOs. A consensus from these sessions was that after a period of investment cut-backs in the wake of the 2014 price crash, a renewed level of confidence has emerged to invest in the global oil and gas industry. It was also pointed out that the down-cycle has also had the positive effect of increasing efforts in relation to efficiency and fiscal discipline.

ADIPEC also organized sessions dedicated to women in energy, young talent (Young ADIPEC Forum), security in energy and a designated offshore and marine conference.

Technical conference

In addition to the strategic conference, the technical programme at this year's ADIPEC was the largest ever with 119 sessions, eight panel discussions and more than 3,000 abstracts having been submitted to the technical committee.

Organized by the Society of Petroleum Engineers, the wide-ranging programme spanned all aspects of the industry value chain, from upstream to downstream, including exploration and production, operational excellence, health and safety, talent acquisition and retention, as well as environmental aspects. Additionally, more than 2,200 companies were on hand to exhibit their products and services over the massive 135,000 square metre exhibition hall.

A unique perspective from space

One of the more unique presentations at this year's ADIPEC came on day three when a former US astronaut addressed the Middle East Petroleum Club as part of its VIP Programme sessions.

Colonel Alfred M Worden is globally renowned for his trip to the moon in 1971 as the command module pilot of the National Aeronautics and Space Administration's (NASA) Apollo 15 spacecraft. His mission was the first of the Apollo flights to carry a lunar rover, which provided the crew with increased mobility to explore the moon's unique geology.

During the mission, he orbited the moon while mission commander David Scott and lunar module pilot James Irwin descended to the surface of the moon. On the return trip, Worden undertook a spacewalk at what was then a record distance from earth for such an activity, 315,000 kilometres, retrieving panoramic film cassettes of the moon taken from the rear of a sub-satellite that had been sent into orbit two days earlier.

In the decades since this historic mission, Worden has been active applying his engineering expertise and path-breaking approach to life to other fields in industry, government and academia.

Common challenges

At ADIPEC, he made a compelling connection between space exploration and research, and the day-to-day challenges faced by the global oil and gas industry.

"There are a lot of parallels between the space programme and the oil and gas industry," Worden said. "Young people studying either of the subjects can unlock a whole lot of other potentials for a career, whether it is in engineering, aeronautics or anything else scientific or technically related. Both are goal related — the goal of putting a man on the moon and bringing him back safely was a heavy one, but there is also responsibility within the oil and gas industry. The right sort of leadership is necessary to motivate people to ensure valuable resources are used properly and projected for the future."

This was Worden's first time in the UAE, and here, he was on a different sort of mission — a mission to promote science, technology, engineering and math (STEM) as "the fundamental tools of the trade" for future exploration, both here on earth and in space.

He referenced the current global efforts to explore the planet mars, including the UAE Space Agency's 'Hope' mission, as perfect examples of why this and future generations must be adequately trained up in STEM disciplines to meet future challenges.

"As an international community of explorers, we are going to mars together," he stated. "We are informed, we are inspired, we are empowered and connected. The big question is: Are there enough of us to get the job done? Are we exciting enough young people to become engineers?"

He answers definitively: "Not yet. When you consider the decades of professional rigor and discipline it's going to take to successfully put people from earth on Mars, and that getting to Mars is just one of the countless engineering challenges we face on our own planet today, we need to pick up the pace."

He then shared how the success of his Apollo mission initiated

Colonel Alfred M Worden, former US astronaut, addressing the Middle East Petroleum Club.

a wave of passion and interest in science and math education and careers.

"When the Saturn V lifted off for my mission to the moon in 1971 — the same year the UAE was founded — we were continuing a successful space programme that was regaining momentum post-Apollo 13, and you could feel America's passion for space," he explained. "Millions of people, aerospace professionals and ordinary citizens were excited for our three-man crew to succeed, and that spirit also fuelled extra interest in STEM education and careers in engineering."

Worden plans to continue touring the world in his role as a STEM advocate to help ensure the world has enough bright and ambitious young talent to meet the technology challenges of the future.

Opening a new chapter in OPEC-China relations

The blossoming relationship between OPEC and China is one of the most exciting developments taking place in the global oil industry and 2017 was an extremely successful year in this regard. This culminated in December, with an OPEC delegation, headed by the OPEC Secretary General, visiting Beijing to further enhance the OPEC-China Energy Dialogue. The OPEC Bulletin *reports.*

OPEC and Chinese delegates at the 2nd High-level Meeting of the OPEC-China Energy Dialogue, December 2017.

For OPEC Secretary General, Mohammad Sanusi Barkindo, enhancing relations between OPEC and China has long been a personal priority. This was certainly the case in 2006, when as Acting OPEC Secretary General, he chaired the 1st High-level OPEC-China Roundtable and developed a strong rapport with Xu Dingming, Vice Chairman, Director General of the Energy Bureau, National Development and Reform Commission (NDRC) and head of the Chinese delegation.

Eleven years later, now serving as Secretary General, Barkindo had the opportunity to undertake a mission to China that involved co-chairing the 2nd High-level Meeting of the OPEC-China Energy Dialogue, as well as participating at the International Energy Executive Forum 2018, which was organized by IHS Markit and China National Petroleum Corporation's Economics and Technology Research Institute (CNPC ETRI).

OPEC-China Energy Dialogue renewed

The 2nd High-level Meeting of the OPEC-China Energy Dialogue was held in Beijing on December 12, 2017.

Following his keynote speech, Mohammad Sanusi Barkindo, OPEC Secretary General, participated in a panel discussion at the International Executive Forum in Beijing.

The Meeting was co-chaired by Barkindo and Nur Bekri, Vice Chairman of China's National Development and Reform Commission (NDRC) and Administrator of the National Energy Administration (NEA). Attendees on the Chinese side also included senior executives from the NEA, CNPC and Sinopec.

In his opening remarks, Bekri welcomed the intensification of the dialogue, thanked OPEC for its ongoing efforts towards rebalancing the global oil market and provided an overview of China's energy policy. He underscored the pivotal importance China attaches to its partnership with OPEC, especially when considering China's role as a leading oil consumer. The need for cooperation is also important, he added, given new trends and changes with regard to recent technological breakthroughs affecting the output of shale oil, oil sands and deep water pre-salt and heavy oil. Furthermore, Bekri informed the OPEC delegation about a monumental achievement on the part of China and a significant milestone towards the elimination of energy poverty: 100 per cent of the population now has access to electricity.

Barkindo emphasized the critical and expanded role that China will play in future energy demand and the desire to pool collective expertise. He stressed that it is only through open and transparent dialogue and a spirit of collegiality among all stakeholders that challenges can be overcome and mutually beneficial outcomes reached. The Secretary General also provided an update on the outcomes of the 173rd Meeting of the OPEC Conference and the 3rd OPEC and non-OPEC Ministerial Meeting that took place on November 30, 2017.

The opening remarks by the co-chairmen were complemented by technical presentations by relevant experts from both OPEC and China. The OPEC Research Division provided presentations on the 2017 edition of the World Oil Outlook (WOO), as well as on the Asian energy and oil outlook, with a specific focus on China. Experts from China presented on the country's 13th Five-Year Plan in regard to China's oil and gas industry and related policies, as well as the prospects for oil and gas development.

Concrete outcomes

During the meeting various options were explored about how to implement and operationalize the constructive desire for enhanced relations. Three concrete actions were agreed in order to achieve mutually beneficial outcomes:

It was agreed that meetings at the technical expert level will take place on a regular basis between the High-level Meetings of the OPEC-China Energy Dialogue. These will facilitate an increase in the sharing of data, information and outlooks, which both parties agree are crucial to help overcome challenges in the market. In particular, it was stressed that such exchanges should focus on technological developments and implications.

Experts from OPEC and China will collaborate to write a specific section in OPEC's flagship publication, the WOO, in 2018. The topics will focus on energy and oil developments and perspectives in China. It is intended that this new section will become a regular feature of the WOO and can serve as the basis for joint research and technical collaboration.

China agreed to participate at the 7th International OPEC Seminar, scheduled to take place in Vienna on June 20–21, 2018, by sending high-level participants from relevant government agencies. China also agreed

to encourage Chinese national oil companies to attend and participate at the Seminar as well.

A long-standing history of knowledge exchange

The genesis of the OPEC-China Energy Dialogue began on December 22, 2005, when the first High-level Meeting of the OPEC-China Energy Dialogue took place in Beijing. The Chinese delegation was headed by Minister Ma Kai, the then Chairman of the NDRC, and from OPEC, by Sheikh Ahmad Fahad Al-Ahmad Al-Sabah, who was then President of the OPEC Conference, Secretary General and Kuwait's Minister of Energy.

The 1st High-Level OPEC-China Roundtable took place on April 27–28, 2006, in Vienna, Austria. Mohammed Barkindo (l), (then) Acting for the Secretary General, with the vice chairman, director general of the Energy Bureau, National Development and Reform Commission (NDRC) and head of the Chinese delegation, Xu Dingming.

At this meeting, it was agreed that the purpose of the Energy Dialogue should be to establish a balanced, pragmatic framework for cooperation, and develop an ongoing exchange of views at all levels on energy issues of common interest, particularly with regard to security of supply and demand, in order to enhance market stability.

This was followed in April 2006 by the first round of high-level technical roundtables between OPEC and China, mentioned earlier, which took place at the OPEC Secretariat in Vienna. This event was a milestone of sorts, as it saw the participation of high-level representatives from CNPC, Sinopec and China's Energy Research Institute.

The second roundtable took place on October 24, 2007, again held in Beijing. The event was yet another display of the sincere commitment of both parties to dialogue.

On September 28, 2015, a delegation from the NEA headed by Vice Administrator Zhang Yuqing held a high-level meeting with OPEC in Vienna, where it was agreed to revive the OPEC-China Energy Dialogue. At this meeting, there was a clear enthusiasm on both sides to enhance relations and explore possibilities for knowledge exchange. It also reflected ongoing and substantive efforts by the Chinese Embassy in Austria, with whom OPEC had developed a fruitful and mutually beneficial cooperation.

The 2017 iteration of the dialogue has demonstrated that the appetite of both China and OPEC for enhanced relations is strong. Both parties agreed that the Meeting marked a turning point in relations. Interaction will now take place on a more regular basis. Additionally, with the participation of Chinese representatives at the 2018 OPEC Seminar as well as the 3rd High-level OPEC-China Energy Dialogue scheduled to take place next year, the future looks bright for OPEC-China relations.

The International Energy Executive Forum

The Secretary General's mission to China afforded a pleasant mix of evolving alliances with new partners and being reacquainted with old friends. There were certainly two familiar faces when Barkindo took part in the International Energy Executive Forum on December 13 in Beijing. In a panel discussion, the SG shared the floor with Professor Daniel Yergin, Vice Chairman of IHS Markit, which was chaired by the Secretary General of the International Energy Forum, Dr Sun Xiansheng.

In his remarks, the SG emphasized the mutual benefits of the dynamic and enduring bonds between China and all OPEC Member Countries, updated delegates

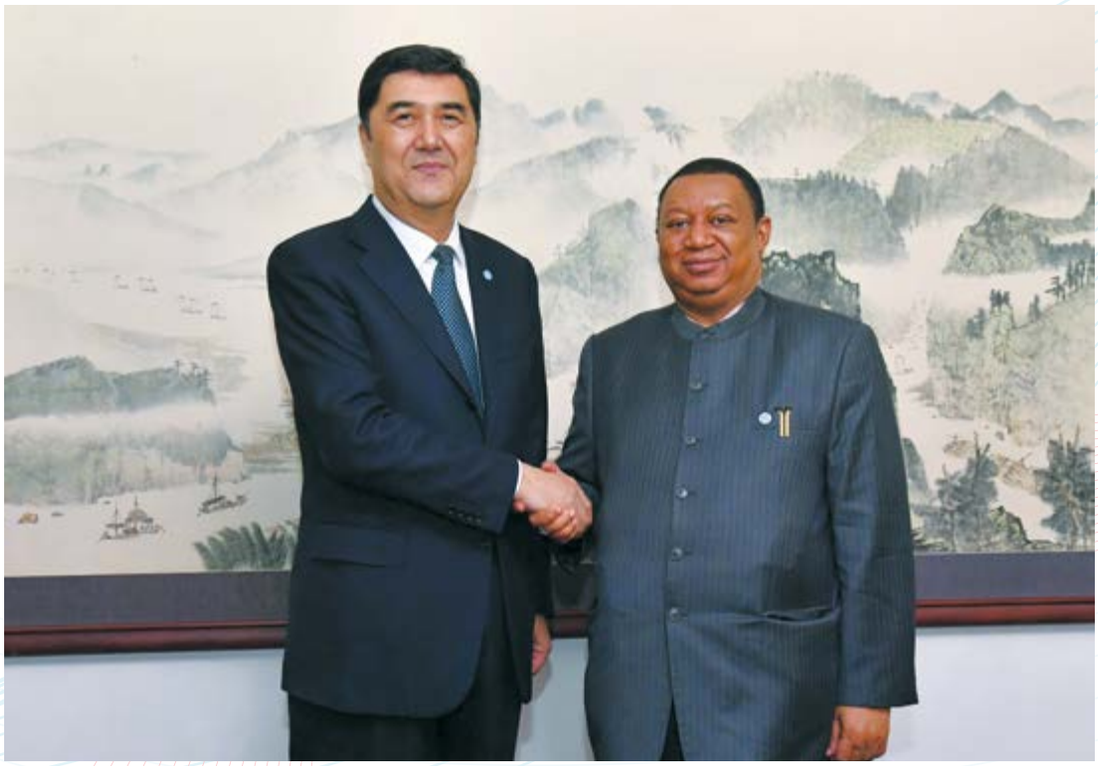
on the outcomes of the recent OPEC and non-OPEC ministerial meetings, and outlined the Declaration of Cooperation's success in contributing to market rebalancing.

Barkindo stated: "I am delighted to say that the consequences of our historic cooperation have exceeded even the most optimistic of predictions. The market rebalancing process is well underway. Therefore, the Declaration of Cooperation and the enhanced relations between its participating countries constitute a fundamental and essential feature of the 'new in the world of energy'."

Yergin and Sun both agreed on the monumental significance of the historic collaboration underpinning the Declaration of Cooperation and were impressed it was yielding extraordinary results. Yergin noted that historians of the oil industry in the future will underscore the importance of September 28, 2016, when the historic 170th (Extraordinary) Meeting of the OPEC Conference took place in Algiers, Algeria. This meeting marked the genesis of the Declaration of Cooperation, which would make an enormous contribution to the ongoing rebalancing of the oil market.

Media interest in the event was intense and the Secretary General was interviewed by Bloomberg Television and journalists from the Chinese publication, 'International Petroleum Economics Monthly'.

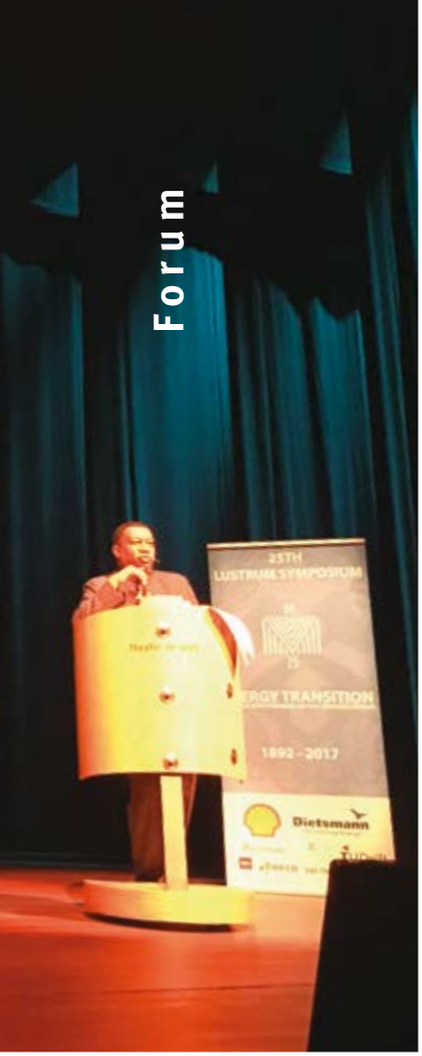
The International Energy Executive Forum concluded an extremely successful and outcome-orientated week for OPEC-China relations. The week began with a delegation from the OPEC Secretariat, led by the Director, Research Division, Dr Ayed S Al-Qahtani, presenting on the 2017 edition of the WOO to the CNPC ETRI and the Energy Research Institute (ERI) of the NDRC, as part of the roll-out programme for OPEC's flagship publication.



Nur Bekri (l), Vice Chairman of China's National Development and Reform Commission (NDRC) and Administrator of the National Energy Administration (NEA), with Mohammad Sanusi Barkindo (r), OPEC Secretary General.

Promising future

There is an old Chinese proverb which says "the going is difficult when doing it alone; the going is made easier when doing it with many others." China and OPEC understand the fundamental importance of international cooperation, mutual respect and a spirit of honesty guiding relations. With both parties reaffirming their steadfast commitment to enhancing relations, the future of this relationship beams with promise.



Mohammad Sanusi Barkindo.

Energy symposium

Energy transition in a global perspective

To celebrate the 25th Lustrum of the 'Mijnbouwkundige Vereeniging', an internationally oriented symposium was held on November 21, 2017, in Delft, the Netherlands. The theme of the symposium was: 'Energy transition, the world with a growing natural resource demand', with a keynote address on this topic delivered by ***Mohammad Sanusi Barkindo****, OPEC Secretary General. The* OPEC Bulletin *reports on the Secretary General's remarks.*

The 25th Lustrum symposium was part of a week-long event by the 'Mijnbouwkundige Vereeniging' to celebrate its 125th birthday, with numerous events for students, alumni and guests. The 'Mijnbouwkundige Vereeniging' is the Delft Mining Association, the study organization of Applied Earth Sciences at The Delft University of Technology.

The roots of this institution date back to the reign of King Willem II who founded the Royal Academy to educate and train engineers, scientists and other civil servants. It has since evolved and grown in stature and prestige to become the Netherlands' largest and oldest technological university.

The OPEC Secretary noted that "many students who have had the privilege to walk these hallowed corridors have graduated and gone on to achieve great things. Many are leaders in their respective fields of expertise, and some have even been awarded the prestigious Nobel Prize for their outstanding scientific achievements."

In his introduction, Barkindo also recalled November 1987, when he had the privilege of accompanying the Honourable Dr Rilwanu Lukman, then Nigeria's Minister of Petroleum Resources for his speaking engagement at this very event. He said that at that time he was Special Assistant to Lukman and Head of Office for the Chairman of the Nigerian National Petroleum Corporation Board, before highlighting that Lukman "went on to serve a very successful term as OPEC Secretary General from 1995 to 2000, a legacy I have now had the honour of inheriting."

World Oil Outlook

The symposium organizers asked speakers to focus on the next possible steps with regards to stringent CO_2-emission quotas linked to a growing global population and the corresponding increased demand for energy. The key question for the industry it added was "how it will, or must, adapt and respond to the challenges of the 21st century." These issues formed the core of the keynote address delivered by the OPEC Secretary General.

The Secretary General said that he could not think of a more timely and relevant theme for our industry and indeed for OPEC, particularly as the Organization released its *2017 World Oil Outlook (WOO),* a comprehensive overview on the medium to long-term forecasts and uncertainties to 2040 for the global oil industry, on November 7. In discussing the WOO, he stated that total primary energy demand is expected to increase by 35 per cent in the period to 2040. He also stressed that it was "important to understand that oil and gas will continue to play a major role in the world's energy mix for

the foreseeable future, contributing an estimated 52 per cent of the global energy mix by 2040."

In terms of oil demand, he added, demand is projected to surpass 100 million barrels/day in 2020 to reach a level of more than 111m b/d by 2040, with "the majority of this rising demand coming from developing countries, increasing by almost 24m b/d, to reach 67m b/d by 2040."

He underlined that "there is no expectation for peak oil demand over the forecasted period, and oil will continue to be relied upon over the long-term to help meet the world's rapidly rising energy requirements.

"This is no small challenge when you consider that an estimated 1.1 billion people around the world still have no access at all to electricity."

From the supply perspective, he said that non-OPEC liquids supply is forecast to increase from 57m b/d in 2016 to 62m b/d in 2022. "This is mainly a result of the recovery and improved outlook for US tight oil production, however, when we look further ahead, we see non-OPEC liquids output dropping to 60.4m b/d by 2040."

With this in mind, Barkindo said, the demand for OPEC crude is anticipated to reach 41.4m b/d by 2040, while the she share of OPEC liquids in the total global liquids supply is forecast to rise to 46 per cent by 2040, up from 40 per cent in 2016.

Investments

The Secretary General also highlighted that the WOO covered an issue that has been elevated to the top of the industry agenda, which "is the urgent need to reinstate robust, long-term investment to the industry."

Mohammad Sanusi Barkindo, OPEC Secretary General.

He stated that effects of the recent downward price cycle on the industry have been severe, with industry budgets depleted and exploration and production spending reduced by an enormous 27 per cent in both 2015 and 2016. "In total," he said, "nearly one trillion dollars in investments were frozen or discontinued, and many thousands of industry staff were cut from payrolls."

Barkindo added that it is clearly imperative that industry investment be urgently restored to levels that will secure the energy requirements of future generations, particularly given that the WOO estimates that $10.5 trillion in industry investment is required from now until 2040.

It is also important to remember, the Secretary General said, that this is not only a question of increasing new production, but producers will also need to

Mohammad Sanusi Barkindo (c), OPEC Secretary General; Peter Kütemann (second l), President and CEO at Dietsmann; Dennis Dolhain (l), former Member of the Delft Lustrum Symposium Organization in 1987; Stef Keiman (second r) former Member of the Delft Lustrum Symposium Organization in 1987; Duco Drenth, former Board Member of the Delft Mining Student Association in 1987. They all met Mohammad Sanusi Barkindo in 1987 for the first time.

L–r: Michael van der Meer, Director of the Science Centre at Delft University of Technology; Nadir Gürer, OPEC Research Division; Mohammad Sanusi Barkindo, OPEC Secretary General; Duco Drenth, Chairman of the TU Delft Mineralogical Geological Museum Foundation. The Museum was founded in 1912.

compensate for natural decline rates, which can be five per cent per year. So, just "to maintain current production levels, the industry might need to add upwards of 4m b/d each year."

On a positive note, he said "we do see investment picking up slightly this year and in 2018, but this is far from the levels we have witnessed in the past. In particular, the industry is in dire need of investment in long-cycle projects, which are crucial to longer term industry growth."

He also emphasized that OPEC Member Countries have continued to invest in their industries throughout this volatile down-cycle. "This has positioned them well to maintain their leading roles as reliable suppliers to growing economies around the world, including right here in Europe."

Market balance and stability

Barkindo also reiterated a point made throughout the past year, the fact that the foundation for investment and growth can only come through balance and stability in the market. "It is always worth recalling that long-term security of supply is intrinsically linked to short-term conditions," he said.

In this regard, he noted that "the historic 'Declaration of Cooperation', now in its eleventh month, has provided an effective framework for the development of lasting market stability. OPEC and its non-OPEC partners continue to forge ahead in restoring balance and stability to the market."

He added: "The data is clear that progress is being made — global stocks are coming down, the world economic outlook is positive and we see robust demand ahead. We are on the path to stability.

"We are not out of the woods just yet, but we are getting there, step by step, thanks to a good measure of patience, perseverance and focus."

The Secretary General said that when the common goal is achieved, all stakeholders across the entire industry stand to benefit, not just the participating producers of the 'Declaration of Cooperation'. Additionally, he stated that "a revived and growing global oil market will, in turn, also boost the global economy, promoting development and prosperity around the world."

Environment and sustainable development

Barkindo also highlighted "another important area in which we are working together with the international community to achieve a common objective. And that is the issue of environment and sustainability."

He recalled the previous week when he was in Bonn, Germany for the high-level segment of the UN Climate Change Conference (COP 23/CMP 13/CMA 1–2). At this Conference, he said, "we deliberated extensively on how the world can meet the rapidly rising energy needs of future generations while still protecting our environment."

The Secretary General stated that OPEC supports the comprehensive implementation of the Paris Agreement. All 14 OPEC Member Countries have signed the Agreement, and eight of them have ratified it, with the rest in the process of ratification.

"We will remain fully engaged in this process", he said, "to help reach a global consensus on how the world community can come together to tackle climate change in a fair and equitable manner."

Looking ahead, he said that it is a fact that the world will require all energy sources now and in the future to ensure adequate supply levels. In terms of oil, he said that "at present, the world's proven crude oil reserves alone stand above 1.2 trillion barrels."

Barkindo stressed that it "is also important to recognize the positive aspects of oil resources and how they have impacted the lives of billions around the world for hundreds of years.

"Without them, we could not have achieved the economic growth, development and prosperity we enjoy today. Indeed, they are the basis upon which our modern civilization is built.

"Our industry should appreciate this and be proud

of this progress. These natural resources are fundamental to our daily lives, and will continue to be well into the future."

He noted that at the same time "we are fully aware that there are environmental issues regarding the emissions that emanate from fossil fuels. However, we also believe that viable solutions can be developed by leveraging cutting-edge technology that has the potential to minimize and even, eventually, eliminate these emissions."

In this regard, he said, "we must support the development of cleaner fossil fuel technologies, such as carbon capture utilization and storage, and other innovative solutions in the future.

"Our Member Countries have already been active in utilizing these technologies, and I expect this will increasingly be the case in the years to come. At OPEC, we will continue to prioritize the advancement of the environmental credentials of oil, both in production and usage."

The Secretary General also made reference to the importance of institutions of higher learning, such as the one in Delft, in this process. "Your groundbreaking research efforts could make a difference in helping us ensure the sustainable development of this growth industry," he said.

In terms of talk of an energy transition, he said that "this does not necessarily mean moving from one energy source to another. As I mentioned previously, all energy sources will be needed in the years ahead to meet rising demand, and each source has an important role to play in the overall energy mix."

The energy transition, in a broader context, he added "means ensuring that energy is made available to all of the world's citizens.

"This entails a 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."

Working together

Barkindo stated that going forward, "we will need the participation of all industry stakeholders — producers, consumers, academia and civil society — to achieve a sustainable stability for our industry.

"We have already witnessed the strength and effectiveness of cooperation as manifested by the landmark 'Declaration of Cooperation'. But, we can do more."

In 1945, against the backdrop of a turbulent time in world history, former US President, Franklin Delano Roosevelt, delivered the following words to the United States Congress: "The point in history at which we stand is full of promise and danger. The world will either move forward toward unity and widely shared prosperity — or it will move apart".

The Secretary General said that 72 years later, "these words of wisdom are not only most relevant today, but in fact prophetic!

"We all aspire to have success, growth, development and prosperity for ourselves, for our children and for our children's children. This is our natural human desire.

"So, let us continue to work together as one team, unified in the spirit of cooperation and dialogue, to achieve a global oil market that is stable, growing and sustainable. This will pave the way to the widely shared prosperity that we all desire."

Mohammad Sanusi Barkindo (r), OPEC Secretary General, with Peter Kütemann (l), President and CEO at Dietsmann.

A dinner was hosted by Dr Heidemaria Guerer (sixth l), the Ambassador of the Republic of Austria to the Netherlands, in honour of Mohammad Sanusi Barkindo (fifth r), OPEC Secretary General, and attended by ambassadors and dignitaries from various institutions in the Netherlands.

All images courtesy of Dietsmann.

The Joint Organizations Data Initiative (JODI) Gas Seminar took place in Santa Cruz de la Sierra, Bolivia.

Bolivia's gas trifecta

At a recent series of events in Santa Cruz de la Sierra, the bustling, dynamic city in the eastern lowlands of the Andean nation of Bolivia, high-level officials and industry representatives from around the world gathered to discuss natural gas, and the prospects and challenges faced by the industry. The* OPEC Bulletin *files this summary report on the three inter-related events that occurred there.

At a recent gathering in the eastern Bolivian city of Santa Cruz de la Sierra (more commonly known simply as Santa Cruz), heads of state, high-level officials and other stakeholders from the world of natural gas gathered for three important events held over a series of days. It was what some might have called the perfect natural gas 'trifecta', with the Joint Organizations Data Initiative (JODI) Gas Seminar taking place first, followed by the 1st Gas Exporting Countries Forum (GECF) International Seminar and the 4th GECF Gas Summit of Heads of State and Government.

The three events were hosted by the Plurinational State of Bolivia, which as a gas-rich Latin American nation is a member of the GECF. The events were presided over

Speaking at the opening ceremony is Seyed Mohammad Hossein Adeli (l), Secretary General of the GECF; accompanied by Evo Morales Ayma (second r), Bolivian President; Luis Alberto Sánchez (third r), Bolivia's Minister of Hydrocarbons and Energy; Hasan Hafidh (third l), Head, PR & Information Department, OPEC; Jorge A Ciacciarelli (second l), Executive Secretary of the Regional Association of Oil, Gas and Biofuels Sector Companies in Latin America and the Caribbean (ARPEL); and Fuad Al-Zayer (c), JODI Coordinator at the IEF and formerly Head of Data Services at OPEC.

by Bolivian President Evo Morales Ayma, Luis Alberto Sánchez, Bolivia's Minister of Hydrocarbons and Energy, and Seyed Mohammad Hossein Adeli, the current Secretary General of the GECF.

JODI gas seminar

The first event was the JODI-Gas Seminar on November 21. The event, which was held at the Fexpocruz International Convention Centre in downtown Santa Cruz, had as its theme: *'Better data, better decisions'*.

Attended by President Morales, Minister Sánchez and representatives from all of JODI's partner organizations, the Seminar brought together experts and industry specialists alike for a day-long discussion on numerous important topics. These included the importance of energy data transparency for the industry and the market, improved and enhanced participation in data collection by JODI partner organizations, an overview of some of the key features of the JODI Gas World Database (WDB), as well as others issues.

The seminar programme was officially opened with keynote speeches by President Morales, Minister Sánchez and GECF Secretary General Adeli. These were followed by brief introductions from JODI's various partner organizations — the Asia Pacific Economic Cooperation (APEC), the Statistical Office of the European Union (Eurostat), the GECF, the International Energy Agency (IEA), the International Energy Forum (IEF), the Organization of the Petroleum Exporting Countries (OPEC), the Latin American Energy Organization (OLADE) and the United Nations Statistics Division (UNSD).

Speaking on behalf of OPEC, Hasan Hafidh, Head of the Public Relations and Information Department at OPEC, provided a short statement on behalf of the Organization and its Secretary General, Mohammad Sanusi Barkindo, who was unable to attend. Hafidh noted that "a decade and a half ago, OPEC welcomed the formation of the GECF. It also supported the creation of JODI. Today, we continue to recognize the importance of both organizations to the work of stakeholders around the world."

More focused presentations followed. Presentations were given on the history of JODI, delivered by Fuad Al-Zayer, JODI Coordinator at the IEF and formerly Head of Data Services at OPEC; and on the GECF Gas Data Exchange Mechanism and its benefits to policymakers by Roberto Arenas, Head of the Data and Information Services Department at the GECF.

In addition, there were presentations by Yui Torikata, an Energy Analyst at the IEF, who spoke about JODI participation assessments (a way to evaluate the level of engagement and participation of countries contributing to JODI data collection efforts) and an overview of the key features of the JODI Gas World Database; and Andres Schuschny, Director of Studies, Projects and Information at OLADE, speaking about his organization's own data gathering methods.

A roundtable discussion followed these presentations in which participants exchanged views on how to further enhance the engagement of the National Administrations set up by JODI who are responsible for JODI data collection and dissemination. The discussion was then brought to a close with concluding remarks from Secretary General Adeli.

In his comments, Hafidh highlighted the importance

Seyed Mohammad Hossein Adeli (l), Secretary General of the GECF; with Dr Mohammed Bin Saleh Al-Sada, Minister of Energy & Industry, Qatar.

Nicolás Maduro, President of Venezuela, attended the 4th GECF Gas Summit in Bolivia.

of data and data transparency for both the oil and gas markets. Praising the dedicated work of JODI and its partner organizations, Hafidh said that "such efforts demonstrate the commitment we all have to energy data transparency, something we at OPEC have long sought in the oil markets as well — for the sake of stability."

"The importance of stability", Hafidh continued, "in both oil and gas markets cannot be overemphasized. Recent price challenges have reminded us that joint efforts are needed on the part of all stakeholders." This was a sentiment echoed by all in attendance.

1st GECF International Seminar

The following day, November 22, GECF Secretary General, Adeli, hosted the inaugural edition of the GECF International Seminar, also at the Fexpocruz International Convention Centre. The theme of the Seminar was *'Natural gas: the fuel of choice for sustainable development'*.

During the event, participants discussed numerous themes, always in the context of international and sustainable development efforts in various countries of the 'Global South'. These themes included the short- and long-term prospects for natural gas markets; the importance of security of supply and demand — with a special focus on Latin America; and the role and contribution of gas to a clean environment — and to the achievements of the UN Sustainable Development Goals.

In addition, participants at the International Seminar discussed the growing demand for energy worldwide, especially in developing countries, and the role of economic development in driving this trend higher, particularly in developing countries like China and India. There was also extensive discussion about current concerns over carbon mitigation efforts and how this will contribute to making gas the fuel of choice for many countries over the coming decades.

The International Seminar was attended by Ministers of Energy of GECF Member Countries, as well as CEOs of International and National Oil Companies, the heads of various international organizations, gas industry analysts and commodity traders, and representatives from the academic world and the media. By all accounts, it was a lively, stimulating day which allowed participants to engage in discussions both during the plenary sessions, as well as on the sidelines of the Seminar.

4th GECF Gas Summit

After a one-day pause in activities — allowing Heads of State and Government to arrive and make their way to their respective hotels — the events held under the auspices of the Bolivian Government continued on November 24 with the 4th GECF Gas Summit of Heads of State and Government. Previous Gas Summits were held in Qatar in 2011, Moscow in 2013 and IR Iran in 2015.

Hosted by President Morales, the high-level Gas Summit was attended by Heads of State and other officials from Algeria, Egypt, Equatorial Guinea, IR Iran, Libya, Nigeria, Qatar, Russia, Trinidad and Tobago, UAE and Venezuela. In addition, Azerbaijan, Iraq, Kazakhstan,

the Netherlands, Norway, Oman and Peru all attended as Observers.

The Summit began with the singing of the national anthem of Bolivia and an inaugural statement by President Morales. He then presided over various official statements that were made by other Heads of State and dignitaries. These included statements by GECF Secretary General Adeli, and statements by high-level dignitaries from Equatorial Guinea, IR Iran and Venezuela. In addition, statements were made by the Heads of Delegation of Algeria, Egypt, Libya, Qatar, Russia, Trinidad and Tobago, Azerbaijan, Oman, Nigeria, UAE, Iraq and Norway. These official statements were followed by a technical presentation by Minister Sánchez.

During the Summit, there were vigorous discussions and a healthy exchange of viewpoints. Various Heads of State and Government, as well as the Heads of Delegations, exchanged their views about recent and ongoing developments in the international gas markets. There were extensive discussions about many different aspects of the industry, with officials sharing their outlook for both the market and global macroeconomic conditions, which may facilitate or hinder the further development of the gas market in the short-term, depending on economic trends.

The Gas Summit concluded with the drafting and signing of the 'Declaration of Santa Cruz de la Sierra', which was a manifestation of the "spirit of solidarity and cooperation" present during the Gas Summit.

The Declaration makes 11 points — among these are: that delegates to the Summit resolve to 'develop and implement policies for production and consumption of natural gas as a reliable, clean, efficient and vital source in the global energy mix'; that signatories resolve to 'develop and implement coordinated policies and actions among GECF Member Countries to promote the long-term natural gas contracts'; that they further resolve to 'pursue equitable risk sharing approach to the issue of gas pricing mechanism'; that they resolve to 'strengthen the GECF as a platform to plan, coordinate positions and advance both the profile and the cause of the [GECF]'; and that they commit to 'promote and develop effective channels of dialogue between producers and consumers of natural gas'.

Having this document as a tangible outcome of the Gas Summit was seen by participants as a welcome and important sign of the importance with which all in attendance approach the GECF and its work.

Overall, the 2017 Gas Summit provided GECF Member Countries and their invited guests the opportunity to discuss, at the highest levels, the trends, developments, patterns and policies affecting energy in general, and natural gas in particular. Discussions, of course, are ongoing and the next GECF Gas Summit is set to be held in Equatorial Guinea, an OPEC Member Country, in 2019.

Nicolás Maduro, President of Venezuela (r); with Evo Morales (l), President of Bolivia.

A bright future

Based on the news reports and the comments of participants, the three inter-related gas events held in Bolivia were a success. In many ways, it was a gathering of all of the world's natural gas stakeholders and gas industry leaders. In fact, based on the number of GECF members who were there, and the other gas industry stakeholders who were also in attendance for the three events, approximately three-fourths of the world's gas reserves were represented, according to local news reports.

Despite the variety of perspectives they brought to each event, participants, according to press reports, found common and shared understandings of the nature of the challenges facing the gas industry — and even, in some cases, found opportunities for possible collaboration and joint projects.

What remains to be seen now is how and when members of the GECF and other non-member gas producing nations are able to develop concrete plans for shared interactions — and which steps to take as the industry continues to forge its way into the future for the benefit of gas producers, the energy industry as a whole, and the global economy.

All images courtesy GECF.

Kuwait appoints new Minister of Oil

Kuwait appointed Bakheet S Al-Rashidi as its new Minister of Oil on December 11, 2017, replacing Issam A Almarzooq who had held the position since December 2016.

Al-Rashidi brings a wealth of experience to the position of Minister of Oil, having operated the OPEC Member's international refining unit as the business expanded from Italy to Vietnam. He spent most of his career with Kuwait National Petroleum Co (KNPC), KPC's domestic downstream arm, heading functions ranging from operational planning to technical services and corporate planning. From 2007 to 2013, he was KNPC's deputy chairman and deputy managing director for planning and local marketing.

He has served on the board of Kuwait Oil Co, Kuwait Petroleum Co's (KPC) upstream arm, and as chairman and managing director of a local joint venture, Kuwait Aromatics.

Almarzooq became known for his work chairing the Joint Ministerial Monitoring Committee (JMMC) throughout 2017. The JMMC was formed on December 10, 2016, under the 'Declaration of Cooperation' between 24 OPEC and non-OPEC oil producing countries, to ensure the implementation of the historic declaration.

The efforts of the 'Declaration of Cooperation', supported by the JMMC and the supporting Joint Technical Committee (JTC), have been central to the oil market recovery witnessed in 2017. The two bodies have proven invaluable for providing information to OPEC and non-OPEC Ministers in order to help them make the necessary decisions to help maintain and accelerate the oil market recovery.

As its Chair, Almarzooq helped build the Committee from the ground up — along with Co-Chair, Alexander Novak, Minister of Energy of the Russian Federation — showing exemplary leadership throughout the six meetings held in 2017.

Bakheet S Al-Rashidi, Minister of Oil and Minister of Electricity & Water, Chairman of the Kuwait Oil Company.

Work on 200,000 b/d Nigerian oil field to finish in 4Q18

Oil major Total said it expects work on a major oil field offshore Nigeria to conclude in the fourth quarter of next year, eventually adding ten per cent to the country's oil output. Total's Egina project, with an estimated 200,000 b/d in output is now 88 per cent complete, the company said in a statement.

The 330-metre long, $3.3 billion floating, production, storage and offloading (FPSO) vessel set sail for Nigeria in October, from its origin at the Samsung Yard in Geoje, South Korea, and work on the vessel will be completed in Nigeria. The vessel left on October 31, 2017, and is expected to take about 90 days to reach the SHI-MCI FZE quayside in Lagos where it will be integrated locally before moving on to the deep offshore oil field.

Total is developing the offshore field in Oil Mining License 130 in partnership with state oil firm NNPC, China's CNOOC, SaPetro and Petrobras.

Samsung Heavy Industries (SHI) was awarded the contract for the engineering, procurement, construction, integration, and commissioning of the 2.3 million barrels capacity FPSO, being developed by Total at a cost of $18 billion.

Total's Egina field is not the first deepwater field to be developed in Nigeria; the country already has five other giant deep offshore producing oil fields — Shell's Bonga; ExxonMobil's Erha; Chevron's Agbami; Total's Akpo; and the ExxonMobil-operated Usan field, which was also developed by Total.

However, Egina is a first on many fronts. In the area of engineering and management, the project management team (PMT) and all the main contractors' PMT offices are based in Nigeria, with 94 per cent of the basic engineering executed in Lagos by Nigerian companies. Moreover, the detailed engineering was done in-country with a consortium of three Nigerian companies with 85 per cent of engineering man-hours expended in Nigeria.

In the area of fabrication and integration, SHI had also set a new record in Nigerian content development when it locally fabricated six modules or about 60,000 tonnes of the equipment out of the 18 modules, representing over 30 per cent of the main packages of the project.

The Egina oil field, some 130 km off the coast of Nigeria at water depths of more than 1,500 m.

Saudi Aramco and SABIC sign Memorandum of Understanding

Saudi Aramco and SABIC have signed a memorandum of understanding (MoU) to develop a fully integrated crude oil to chemicals (COTC) complex in the Kingdom of Saudi Arabia, which governs the execution of the Front End Engineering Design (FEED) before a final investment decision is made.

Yousef Abdullah Al-Benyan, SABIC Vice Chairman and CEO.

Amin H Nasser, Saudi Aramco President and Chief Executive Officer (CEO).

COTC complex

The COTC complex is expected to process 400,000 b/d of crude oil, which will produce approximately 9 million tons of chemicals and base oils annually and is expected to start operations in 2025.

Saudi Aramco President and Chief Executive Officer (CEO), Amin H Nasser, said: "This project converges the commercial and strategic interests of both Saudi Aramco and SABIC, while reinforcing Saudi Aramco's efforts to optimize the investment of our petroleum resources. COTC will also help expand our downstream portfolio, reducing our focus on the transportation sector and securing new and promising commercial opportunities."

SABIC Vice Chairman and CEO Yousef Abdullah Al-Benyan said: "This venture will contribute to the realization of one of the major aspirations of Saudi Vision 2030, namely achieving economic prosperity by boosting our investment capacity, diversifying the economy and creating jobs for Saudi nationals. It will help strengthen our economic growth and attract world-class quality investments thanks to our unique and strategic geographic location."

This announcement marks a historic alliance between the two largest Saudi global entities, in addition to solidifying the Kingdom's position as a global leader in chemicals by substantially increasing production and further maximizing value across the entire hydrocarbons chain through integration. The COTC complex will be constructed based on an innovative configuration that achieves crude oil to chemicals conversion that is unprecedented in the industry.

This MoU follows the Heads of Agreement (HoA) signed in June 2016 between the two companies, which governed the feasibility study for the development of a fully integrated petrochemicals complex in the Kingdom. A Saudi team developed innovative COTC configurations derived from best-in-class refining and chemical technologies.

ADNOC Distribution successfully lists shares on ADX

Abu Dhabi National Oil Company for Distribution (ADNOC Distribution), successfully listed its shares on the Abu Dhabi Securities Exchange, ADX, on December 13, 2017, following a bell ringing ceremony led by Dr Sultan bin Ahmad Sultan Al Jaber, Minister of State and ADNOC Group CEO and Hamad Al Shamsi, Chairman of the ADX.

The IPO of ADNOC Distribution forms part of ADNOC's strategy to manage its business assets and capital more proactively. The successful listing represents a further milestone in the ongoing transformation of ADNOC, and is a tangible example of ADNOC executing the comprehensive value creation strategy it announced in July.

Important transactions

Al Jaber said: "As we accelerate the transformation of ADNOC to drive value, growth and returns across our business, we are also undertaking a number of important, strategic transactions that are unprecedented in ADNOC's history. Transactions, such as this IPO, will allow ADNOC to better manage our capital and portfolio of assets, and expand our range of new and existing partnerships — from the upstream to the downstream. The IPO also supports the reinvigoration of the ADX, and will be a catalyst for further growth and development of the UAE capital markets."

The shares of ADNOC Distribution were priced at AED2.50 per share on December 8, 2017, giving the company a market capitalization of approximately AED31.3 billion at the time of listing. The final investor allocations were approximately 90 per cent for qualified investors (split 60 per cent local and 30 per cent international) and ten per cent for individual and other investors.

Interest

"We were extremely pleased with the demand for this landmark IPO. We received substantial interest from the international investment community, as well as an overwhelming response from investors in the UAE. We now look forward to delivering the business and growth objectives of ADNOC Distribution, as well as the long term, sustainable returns and benefits to our new investors and the UAE," added Al Jaber.

The IPO achieved a number of 'firsts' for both ADNOC and ADX, namely that the IPO represents the first international offering on the ADX; the IPO was the first on the ADX since 2011, and the largest IPO on the ADX in the last ten years; and the transaction marks the first time an ADX company has marketed an IPO using a book building process, in-line with international best practice.

Street sign leading to Abu Dhabi Securities Exchange, the stock exchange in Abu Dhabi, United Arab Emirates.

Venezuela names new People's Minister of Petroleum

Venezuelan President, Nicolás Maduro, assigned Manuel Salvador Quevedo Fernandez, as the People's Minister of Petroleum of Venezuela and Head of PDVSA, the government's oil company, on November 26, 2017. Maduro said that the government has been working on a thorough restructuring of the oil industry.

Chavez ideals

Quevedo, announced he will eradicate "corrupt bureaucracy" from PDVSA. He vowed to bring PDVSA closer to the ideals of late leftist leader Hugo Chavez.

Quevedo takes over from two industry veterans — Nelson Martinez (PDVSA) and Eulogio Del Pino (Oil Minister) — to become one of the most powerful players in the country, which is home to the world's largest crude reserves.

The new Minister attended the 173rd OPEC Ministerial Conference and the 3rd OPEC and non-OPEC Meeting at the OPEC Secretariat on November 30.

Manuel Salvador Quevedo Fernandez, People's Minister of Petroleum, Venezuela, talks to journalists at the beginning of he 173rd OPEC Ministerial Conference in Vienna, Austria, in November 2017.

Yamal LNG loads its first cargo with Putin present

On December 8, 2017, the first liquefied natural gas (LNG) from the Yamal LNG plant was loaded onto the 'Christophe de Margerie' tanker, with the formal command to start loading given by President Vladimir Putin. The loading ceremony took place in Sabetta, the Yamal-Nenets Autonomous Area.

"I congratulate you all, the entire huge team of Novatek, all those who worked on this project, and all those who have just got on-board and are now working, on this wonderful occasion, the first loading of the gas carrier, a new tanker named after our friend Christophe de Margerie. Unfortunately, he is not with us today but we have a tanker named after him. He was one of the pioneers of this project," Putin said.

Russian Energy Minister, Alexander Novak, and his Saudi counterpart, Khalid Al-Falih, oversee Yamal LNG, Russia's second liquefied natural gas plant in the Arctic port of Sabetta, Yamalo-Nenets district, Russia.

The ceremony was also attended by top executives of Yamal LNG shareholders, including Novatek Chief Executive Officer (CEO), Leonid Mikhelson, and Total CEO, Patrick Pouyanne. Russian Minister of Energy, Alexander Novak, Saudi Arabia's Minister of Energy, Industry and Mineral Resources, Khalid A Al-Falih, and Gazprom CEO, Alexei Miller, also took part in the ceremony.

Mikhelson said: "Novatek officially enters the global gas markets by shipping the first tanker loaded with LNG from our flagship Yamal LNG project. This event begins the process of developing and liquefying our massive natural gas resources on the Yamal and Gydan peninsulas into more than 70 million tons of LNG. This potential gives our country an opportunity to become one of the biggest global LNG exporters."

World-class LNG project

Pouyanné said: "This first LNG cargo is a testament to the tremendous efforts of the project partners, contractors and all parties who managed to deliver Yamal LNG on time and on budget. Together we managed to build from scratch a world-class LNG project in extreme conditions to exploit the vast gas resources of the Yamal peninsula."

Russian President, Vladimir Putin, attends the inauguration of the Yamal LNG plant on December 8, 2017.

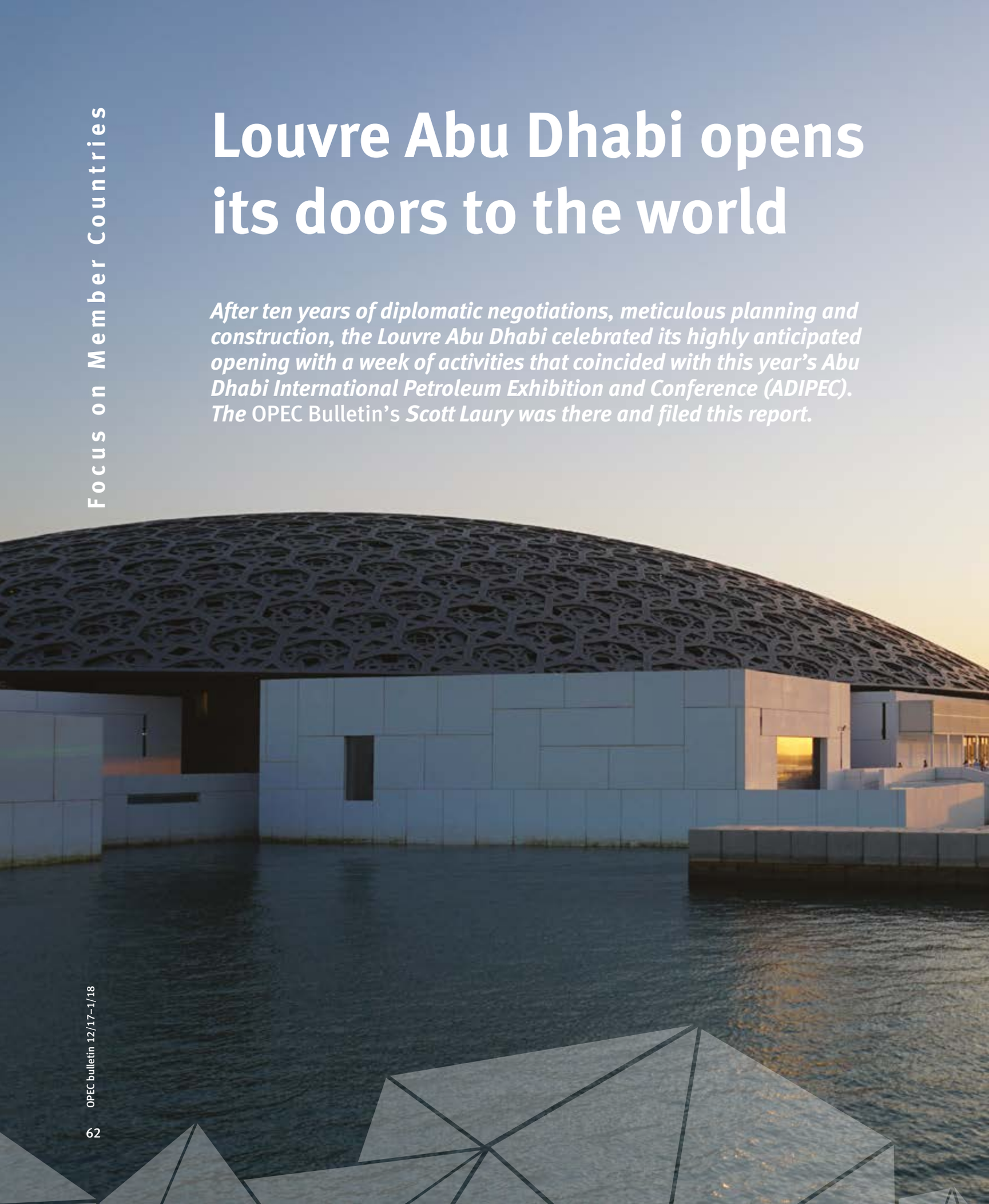
Yamal LNG processes natural gas from the giant onshore South Tambey gas and condensate field, located on the Yamal peninsula.

The project includes an integrated gas treatment and liquefaction facility with three trains each having a capacity of 5.5m t/year, storage tanks, port and airport infrastructures. The construction of the first train as well as the logistic facilities was successfully completed with more than 30,000 personnel actively involved on site at peak. The second and third trains are expected to be commissioned in 2018 and 2019, respectively.

The project is operated by Yamal LNG company, owned by Novatek (50.1 per cent), Total (20 per cent), CNPC (20 per cent) and Silk Road Fund (9.9 per cent).

Louvre Abu Dhabi opens its doors to the world

After ten years of diplomatic negotiations, meticulous planning and construction, the Louvre Abu Dhabi celebrated its highly anticipated opening with a week of activities that coincided with this year's Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC). The OPEC Bulletin's ***Scott Laury was there and filed this report.***



A cover article authored for the January–February 2016 issue of the *OPEC Bulletin* entitled 'UAE's cultural renaissance in full swing' provided a detailed preview of the UAE's ambitious plans to build an extravagant cultural complex on an island just outside central Abu Dhabi.

The vision for this massive undertaking was, by anyone's standards, grandiose. And when completed, the venture was expected to transform the Emirate of Abu Dhabi into a magnet for international cultural tourism and a regional cultural hub for the Middle East.

The tranquil white sands and glistening turquoise waters of Saadiyat Island, located about 15 kilometres north-east of the city centre, were set to become a cultural playground for visiting regional and international tourists, as well as the city's own art and culture enthusiasts.

In addition to the Louvre Abu Dhabi, the grand plan for the arts and culture complex will eventually include a local branch of New York's Guggenheim Museum, as well as the Zayed National Museum, a Maritime Museum and a Performing Arts Centre.

Besides presenting world-class art, culture and performance, these institutions all boast magnificent, signature designs by some of the world's leading 'starchitects', including Jean Nouvel, Frank Gehry, the late Zaha Hadid, Lord Norman Foster and Tadao Ando.

The first of these iconic buildings to move from the planning phase to being fully constructed is the Louvre, which officially opened on November 11, 2017. This same day, the OPEC delegation was travelling to Abu Dhabi for the ADIPEC event, which took place from November 13–16 *(see feature on p38)*.

This wonderful coincidence in timing presented a perfect opportunity for the *OPEC Bulletin* team to visit the museum during its opening week.

A dream come true

The Louvre's unique spaceship-like dome hovering on the sparkling Gulf waters first came into sight while crossing the sprawling Sheikh Khalifa Bridge from the mainland to Saadiyat Island.

Up to this point, architectural drawings and renderings allowed one to dream about this structure's amazing design and location. But, now, seeing it completed for the first time up close and in person seemed almost surreal.

Stepping out of the taxi, we stared in awe at the spectacular location of museum, built on and surrounded by the gentle surf of the pristine Gulf. This unique setting evoked pleasant memories of former visits to Venice where cultural institutions co-exist with the ebbs and flows of the Venetian Lagoon and the Adriatic Sea.

An inviting exterior

The exterior grounds of the museum are designed to provide visitors with ample opportunity to observe and

photograph the stunning architecture, which was the expert handiwork of world-famous, Pritzker Prize-winning French architect, Jean Nouvel.

There is a promenade that meanders along the sea, flanking both sides of the museum, offering differing vantage points. Elegantly landscaped gardens adjacent to the promenade, which were still in the process of being completed, provide areas to sit under palm trees that are strategically placed to offer shade from the sun above.

The colour contrast between the turquoise waters of the Gulf, the bright white exterior walls of the museum and the deep blue sky above was a dazzling sight to behold.

A cutting-edge design

Entering the museum, one is immediately taken aback by the juxtaposition between inside and outside space, as the lobby, plazas and common areas, though under the large dome, are all technically still outside. This creates a very airy and open atmosphere.

This was part of Jean Nouvel's unique plan to create the exotic and playful atmosphere of a medina, or small village, with a series of low-lying white buildings, containing the galleries, all connected and spread out across the plaza and common areas under the protection, and shade, of the massive, ornate domed roof.

The dome, in and of itself, is a masterpiece. Measuring 180 metres in diameter and weighing 7,500 tonnes, about the equivalent of the Eiffel Tower, it provides a unifying force over the various galleries and other public areas underneath it.

And perhaps, the most spectacular aspect is the magnificent light that filters downward through the dome's eight layers of cladding, which, together, form 7,850 star-shaped patterns or apertures.

The effect is such that, when the sun is high in the sky, beams and rays of light shower downward through the dome, illuminating the walls and surfaces around you.

The dome was inspired by traditional Arabian architectural forms, including the mosque and mausoleum, as well as palm branches, which are the traditional roofing material in UAE from ages ago. At night, the museum is illuminated on all sides, creating what the museum's website describes as "an oasis of light under a spangled dome."

Nouvel explains that his idea to integrate this interplay between light, water and architecture into the design was motivated by historical Middle Eastern design.

"A microclimate is created by drawing on sensations that have been explored countless times in great Arab architecture, which is based on the mastery of light and geometry — a structure made up of shadows, of movement and discovery," he says. "I wanted this building to mirror a protected territory that belongs to the Arab world and this geography."

A universal museum

After receiving our press credentials, we were escorted to the galleries, which are located in a maze of different rooms that zig-zag their way through the museum's medina-like footprint and ending back where we began the tour.

The philosophy behind this unique pathway through the galleries is explained by Jean-Francois Charnier, who is the Research and Collections Director of Agence France-Museums (AFM), the organization created in 2008 to coordinate with the Abu Dhabi Government agencies overseeing the project, namely the Abu Dhabi Tourism and Culture Authority (TCA) and Tourism Development and Investment Company (TDIC).

"The circuit of galleries is arranged in a spiral that ends where it begins, the broad idea being to redefine, through the history of humanity, what is universal in this era of intense globalization," he says in an interview with The Art Newspaper. "The phrase 'universality of humankind' could be seen as a question: what do people, cultures and civilizations have in common? Using historical insight and art as witnesses, museums could be the right places to shed new light on that kind of question. We have the opportunity here to review the concepts that were framed in the 19th century; we are attempting to trigger moments in the galleries that reveal dialogues and links between cultures and civilizations."

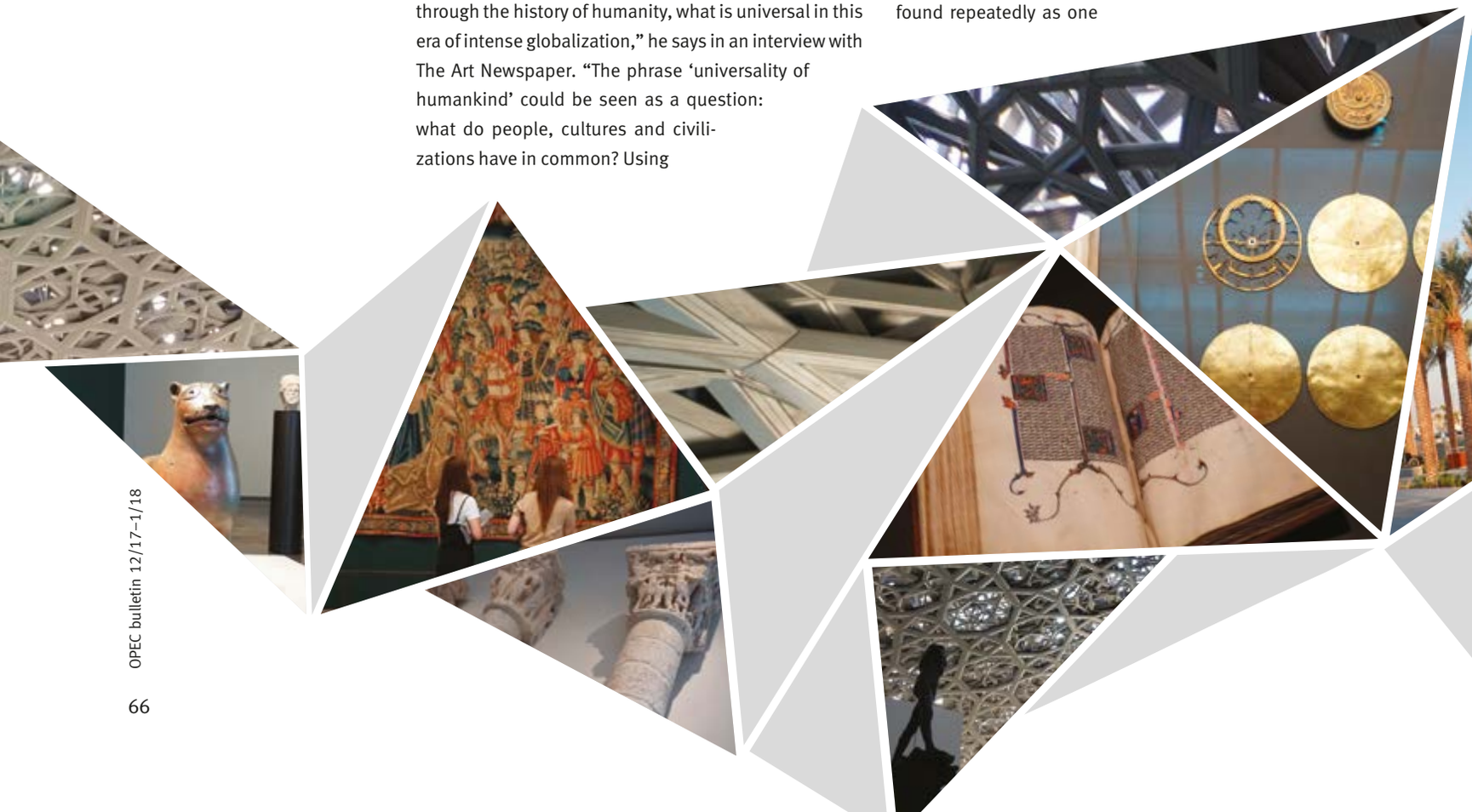
There are a total of 12 galleries hosting a body of artwork that spans a vast timeframe, from pre-history to contemporary art. Each gallery displays five to six topics through artworks and artifacts that encompass the world's diverse cultures.

The permanent collection contains around 300 works of art, and an additional 300 pieces will be sourced from 13 major French art institutions.

As you begin the journey through the exhibits, you realize this is not the usual taxonomical structure most museums use, focusing on regional segmentation. Instead, you are taken on a voyage through time seeing art from a wide variety of cultures and traditions displayed side by side.

This cross-cultural approach is evident in the first gallery, which is entitled *'The first villages'*. Here, you notice a plank idol statue with two identical heads, as if portraying twins, from Cyprus dated 1900–2300 BCE located close to an Egyptian statue of Isis, the mythological goddess of marriage, fertility, motherhood, magic and medicine dated the 4th to the 7th century BCE.

This universal aspect of the museum can be found repeatedly as one



continues through the exhibits, which go on to cover broad themes such as universal religions, Asian trade routes and on to more contemporary themes such as modernity and globalization.

For the UAE, the Louvre's message of openness to the world and unity among cultures was an important aspect of the project as it attempts to boost tourism in the Middle East and internationally through arts and culture.

"The messages coming out of Louvre Abu Dhabi are those on which the government is focused: openness and cultural connection. We are one world; we are a society of acceptance," explains Mohamed Khalifa Al Mubarak, Chairman of the TCA and TDIC. "One of our audiences is the Arab world; we feel today that much of the Arab world is missing these messages. We want our visitors from Saudi Arabia, North Africa and Egypt to take this message back to their countries. Louvre Abu Dhabi is an instrument to express what we believe the UAE can bring the world."

A golden sunset

After a captivating couple of hours, we had finished navigating the winding 'medina' of galleries, and felt as if we had been on an odyssey through history, experiencing the world's rich diversity of cultures, religions, empires and trade routes.

As we were leaving the museum to head back to Abu Dhabi, it was dusk, and we were lucky to catch the sun setting behind the museum, which bathed the structure and its surrounding grounds in a wonderfully warm amber hue.

It was a fitting way to end a spectacular visit to this exciting new institution, which will have a lasting impact on the arts and culture heritage of the UAE for decades to come.

Perhaps Al Mubarak, put it best when he said "It is not the Louvre Paris. We do not want it to be. It has a completely different understanding of a museum. It is a museum that wants to talk to everybody. We do not want anyone to feel overpowered when they walk into it, that they are not cultured enough to be there. It is all about understanding yourself and understanding the world around you. We hope that you'll walk out of the museum feeling that you can be a better person."

A festive opening week

To celebrate its grand opening, the Louvre Abu Dhabi organized a lively programme of special events held from November 11–14. The* OPEC Bulletin's *Scott Laury was there and filed this report.

Guided tours of the museum were offered, art workshops for adults and children were held, and a variety of music and dance performances featuring internationally acclaimed artists were presented.

There were firework displays, an innovative light and multimedia performance, roving Chinese lion and dragon parades, as well as traditional Dogon percussion and dances from Mali, West Africa.

Additionally, several special performances were held with headliners such as Mubarak Al Otaiba's traditional Emirati Al Ayyala performance, the famed US Lucinda Childs contemporary dance troupe and Lebanese jazz trumpeter Ibrahim Maalouf.

The official opening week brochure described the vision behind the week's programme of activities as one in which the world would be unified through performing art.

"We want to show that there is more that connects us than divides us, that we have more in common with each other than we think. Our programming reflects that, with artists and musicians whose work straddles boundaries of genre or nation, bringing together old with new, tradition with innovation."

In its welcoming message, the event's organizers said the opening week was an opportunity to celebrate after nearly ten years of hard work and planning.

"Louvre Abu Dhabi is the culmination of a ten-year journey. Teams in France and in Abu Dhabi have forged strong and lasting professional partnerships. Jean Nouvel has conceived an extraordinary architectural vision. We have assembled a collection of masterpieces showcasing humanity's creativity. Now the museum is ready, and we are delighted to celebrate this moment with you."

I had the opportunity to cover the final evening's festivities, which brought the celebratory week to an emotional highpoint.

Indian flute master

The evening began slowly on a tranquil, even meditative note with legendary Indian flutist, Pandit Hariprasad Chaurasia, who gave the local attendees an authentic taste of Indian classical music, performed by one of its finest and most esteemed elder musical statesmen.

The event was held outdoors on the auditorium plaza under the museum's gleaming dome.

The 79-year old master musician plays the Indian bamboo flute, called the *bansuri*, an instrument that has a very warm and fluid tone with brisk ascents and descents in melody.

For this performance, he was accompanied by two percussionists, one playing the two-headed tabla drums and the other the ancient double-headed *mridanga* drum. Another musician strummed the *veena*, a drone instrument that provides the undertone for the improvising flute, and a second *bansuri* player served as the perfect counterpoint to Chaurasia as both seemed to constantly speak to one another musically throughout the evening.

During the captivating 45-minute performance, the songs performed started out gently, and then, gradually increased in tempo and energy to reach a climax with the percussionists, guided by Chaurasia, reaching a frenzied pace, before stopping with dramatic finales.

For the encore, Chaurasia turned to the audience, the majority from his native India, for requests, of which there were many. He then proceeded to perform two more pieces to the crowd's delight.

The audience clearly respected the elder musician with great reverence, as seen by the long line-up after the performance to meet Chaurasia in person and request autographs and photographs.

Born July 1, 1938, in Allahabad, Uttar Pradesh, Chaurasia began learning music at the age of 15, despite

his father's aspirations for him to become a wrestler. He later commented on his preference for choosing a career in music. "I was not any good at wrestling. I went there only to please my father. But maybe because of the strength and stamina I built up then, I am able to play the *bansuri* even to this day," he said.

After taking vocal lessons with his neighbour at the age of 15, he went on to study the classical Indian flute with many of India's great *bansuri* masters.

Over the years, Chaurasia developed his own style that is a fascinating balance between the ancient traditions of Indian classical music and innovation.

He has collaborated with a wide variety of Indian and western musicians, including renowned jazz guitarist John McLaughlin and saxophonist Jan Garbarek.

Chaurasia has received many awards for his music, including the prestigious National Award of the Sangeet Natak Academy in 1984 and was named Chevalier in the French Order of Arts and Letters, one of France's highest cultural distinctions.

Dancing the night away

After Chaurasia's magnificent presentation of the best in Indian classical music, the evening took a very different turn, concluding with a headline concert featuring Colombian singer Sonia Bazanta Vides, better known as Totó la Momposina, and her full group of musicians.

Within minutes of the first song beginning, much of the standing-room-only crowd, many from Abu Dhabi's Latin American community, leapt to their feet to dance to the infectious Colombian Cumbia and Bullerengue rhythms. And it continued this way for nearly the entire evening as the audience literally danced the night away.

The 77-year-old Momposina put in a powerful performance both as the lead singer and as a talented dancer, constantly moving around the stage, accompanied by several dancers in typical folkloric clothing.

She was backed by a full Afro-Columbian orchestra, complete with four percussionists playing traditional instruments, a brass section, background singers and the usual musical repertoire of bass, guitar and keyboards.

On several occasions, Momposina paused to greet the audience in both French, having lived for several years in France and since the evening's event was sponsored by the Paris-based Louvre, and in her native Spanish.

Momposina hails from Talaigua, a small island village in northern Colombia located along the Magdalena River.

Krupasindhu Mudali, Wikimedia Commons

Ebollis1, Wikimedia Commons

Born into a musical family that goes back five generations, she is of both indigenous and African descent, which is clearly reflected in the rich musical mix for which she has become known.

International fame

After many years of performing in Colombia and in Europe, a 1993 recording entitled 'La Candela Viva' on Peter Gabriel's Real World Records elevated her onto the international stage.

Since then, she has gone on to record four more albums, the latest being 'El Asunto', which was released on Sony Colombia in 2014.

Momposina has received several awards for her work, including the WOMEX Lifetime Achievement Award in 2006 and the Latin Grammy Lifetime Achievement Award in 2013. In 2016, she was honoured by the French Government, who named her Chevalier in the French Order of Arts and Letters.

It was clear on this pleasantly warm evening in Abu Dhabi, under Jean Nouvel's sparkling new dome that Momposina was in her element and relishing her role as a passionate ambassador of Colombia's rich musical heritage.

Even after two or three encores at the end of the show, the ebullient local crowd of Latinos, many of them drenched in sweat from dancing, did not want to let her go. They chanted *"otra, otra";* another, another! And one had the impression that Momposina would have stayed and played all night for them. However, the manager signaled that it was time to go.

And so, the Louvre's opening week's festivities came to an end. But, in actuality, this was really just the beginning of an exciting legacy for the future for arts and culture in the UAE.

A visit to the Grand Mosque of Abu Dhabi

During its recent trip to Abu Dhabi to cover the 2017 Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC), the* OPEC Bulletin *team had the opportunity to visit the magnificent Grand Mosque of Abu Dhabi. Scott Laury reports.

Just a short drive from the ADIPEC Conference Centre, the massive Sheikh Zayed Grand Mosque of Abu Dhabi, with its pure white marble facade, rises up majestically from the surrounding desert landscape, clearly visible from many locations in the city.

The third largest mosque in the world, after Mecca and Medina in Saudi Arabia, the Grand Mosque is named after the founder and first President of the UAE, the late Sheikh Zayed bin Sultan Al Nahyan.

He chose the location and was personally involved in the architectural planning and design of the mosque. According to his wish, the mosque is also the last resting place of its namesake, who passed away in 2004.

History

Construction on the massive project began at the end of 1996 and cost an estimated AED 2.5 billion. It took around 3,500 workers and 38 contracting companies nearly 12 years to complete the mega-project.

The mosque was officially opened to the public on December 20, 2007, with the first prayer being held in the presence of Sheikh Khalifa bin Zayed Al Nahyan, President of the UAE.

A masterpiece in design

The mosque, designed to accommodate more than 40,000 worshipers at any one time, is a massive structure featuring four

107-metre-high minarets, more than 80 marble domes and 1,000 pillars that support the roof.

More than 100,000 tonnes of sleek white Greek and Macedonian marble were used for flooring and pillars. Some of the pillars have colourful inlaid floral motifs using mother-of-pearl, amethyst, abalone, lapis lazuli and other precious stones.

The massive prayer hall features the world's largest loomed carpet, made from 12 t of Iranian cotton and 35 t of wool from New Zealand. The mostly green-coloured carpet with arabesque floral motifs took more than 1,300 skilled craftsmen nearly two years to complete. Much of this time was devoted to the painstaking process of hand-knotting the 5,700 square metres of thread on a cotton base.

Above this huge sea of carpet hang seven magnificent steel, gold, brass and crystal chandeliers, the largest of which weighs around 12 t. These masterpieces were made with Swarovski crystals and 40 kg of 24-karat galvanized gold.

The mosques massive courtyard, spanning around 17,000 sq m, features a series of intricately designed, colourful mosaics that depict a range of flowers, some of which are native to the UAE. The floral designs are based on poppies, jasmine, red frangipani, morning glories and the desert-dwelling pergularia tomentosa.

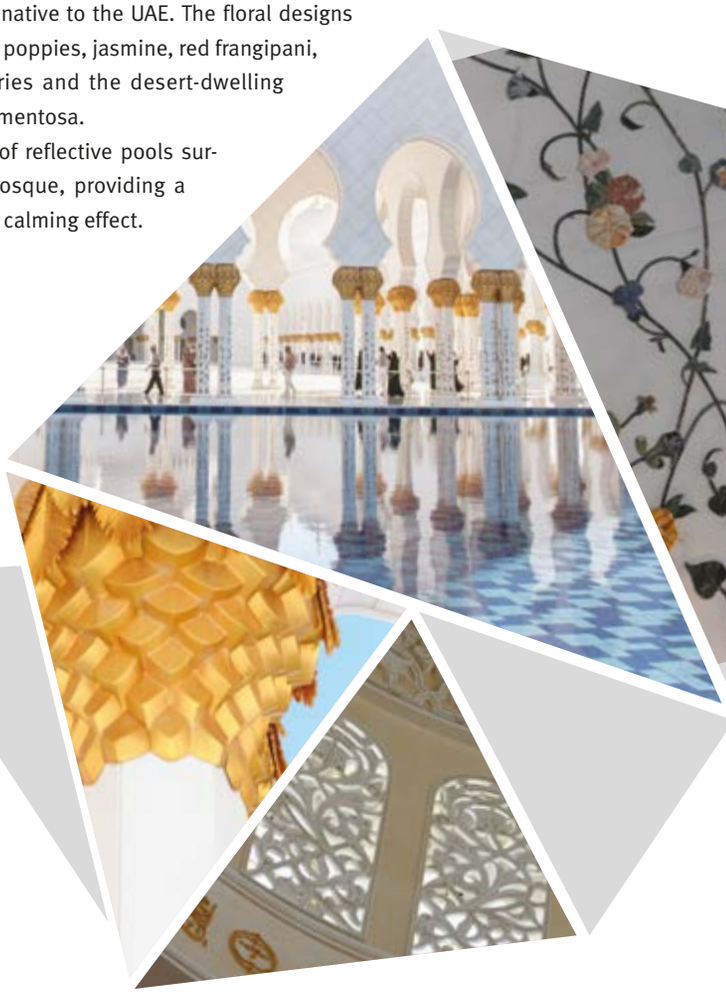
A series of reflective pools surround the mosque, providing a peaceful and calming effect.

Tribute to UAE's founding father

The grandeur and majesty of Abu Dhabi's Grand Mosque is a fitting tribute to the country's founding father, the beloved late Sheikh Zayed bin Sultan Al Nahyan.

He was a patriot and visionary that saw the potential of his people to rise up and achieve their true potential in the future. He was, indeed, their greatest advocate.

"There is no glory without the glory of the country and its citizens. We have to be proud of our forefathers, who were able to face the harshness of life with a strong will and dedication to shape a better collective future," he once eloquently proclaimed. "A nation without a past is a nation without a present or a future. Thanks to God, our nation has a flourishing civilization, deep-rooted in this land for many centuries. These roots will always flourish and bloom in the glorious present of our nation and in its anticipated future."



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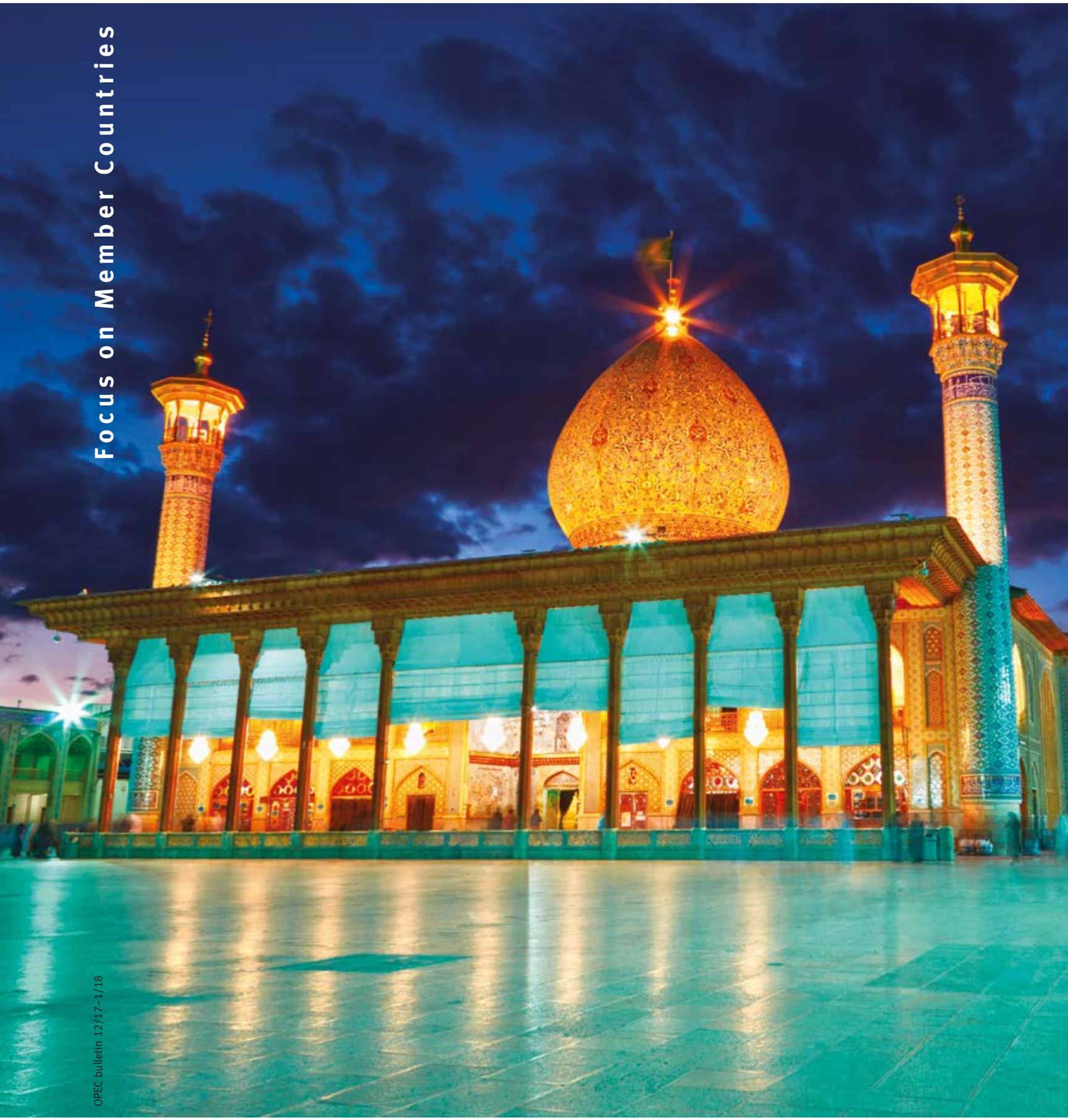
OPEC CITIES IN FOCUS

The old castle in the city of Shiraz.

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.

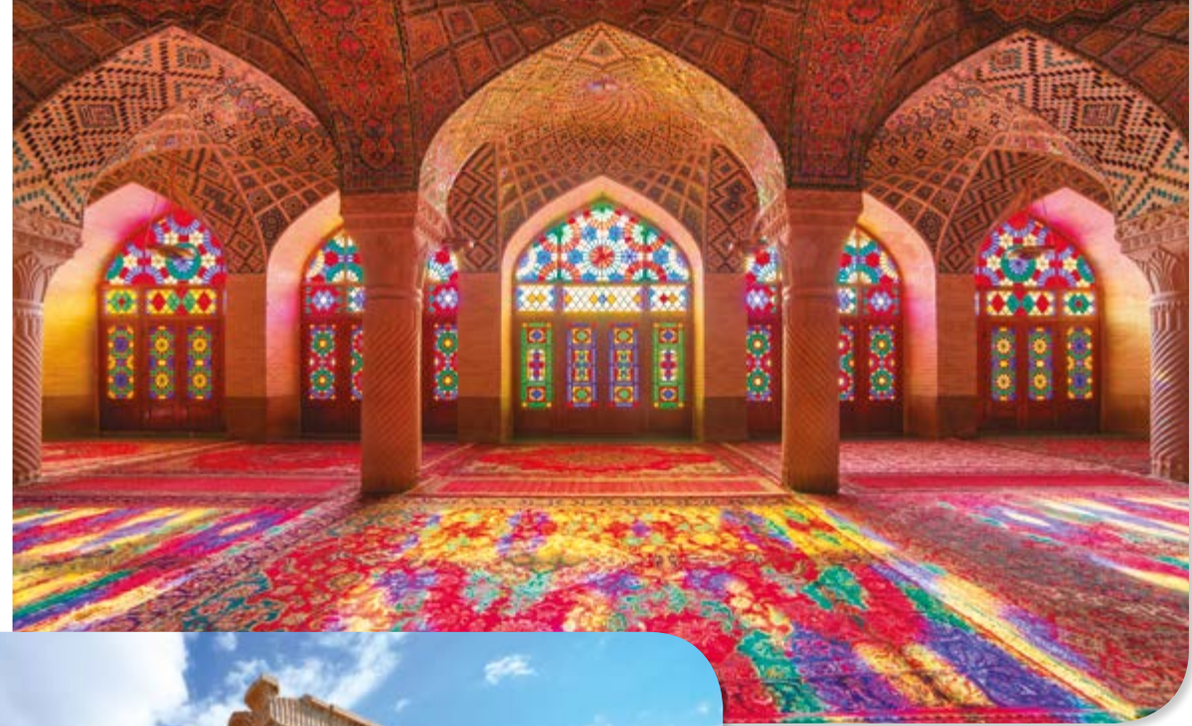


Traditional scarfs on a market in Shiraz.

The Shah Cheragh mosque after sunset in Shiraz.

Shiraz: History and prosperity

*For many centuries, the Islamic Republic of Iran has been steadfastly preserving its rich history, while also taking solid and proactive steps toward building the economic foundations for the country to flourish and progress. The iconic city of Shiraz soars as a testimony to both the country's history and the prosperity achieved by one of OPEC's Founding Members over the years. In the sixth instalment of the series 'OPEC Cities in Focus', **Ayman Almusallam** profiles Shiraz — IR Iran's oldest city.*



The Nasir Al-Mulk Mosque in Shiraz, also known as 'Pink Mosque'.

One of UNESCO world heritage sites and a famous place to visit, is the Persepolis ancient city.

The historical city of Shiraz is situated in the south-west of the Islamic Republic of Iran on a green plain, overlooking the river Roodkhaneye Khoshk and at the foot of Zagros Mountains. The city is 800 kilometres away from the country's capital — Tehran.

Shiraz spreads out over a land area of approximately 224 square km. Its population is estimated at 1.5 million, according to the United Nations Statistics Division, thus ranking as IR Iran's sixth most populous city.

The earliest reference to the city of poets and literature dates to 2000 BC, when explorers discovered a set of clay tablets belonging to Elam — an ancient civilization that thrived in today's territories of IR Iran. It denoted the city by its former name — Tirazis.

The Achaemenid Empire, also called the First Persian Empire, which was established around 550 BC, expanded its zone to maintain control over Shiraz and neighbouring areas, including Persepolis and Susa. Additionally, Sasanians also recognized the importance of the city.

Ever since, Shiraz has been serving the region as its central hub.

Following the Arab invasion of Istakhr, the capital city of the Sasanian Empire, Shiraz became the province's capital. It led to Shiraz experiencing a notable boom in several domains, including socioeconomics.

In 934, Shiraz became the capital of the Buwayhid Empire. Being passionate for architecture, the Buyids took solid steps in developing the city's landscape to enhance the exquisiteness of its scenery, as well as its various facilities.

Being at risk of a Mongol invasion, the local ruler of Shiraz submitted to the will of Genghis Khan's general offering him various tributes. This resulted in keeping the city protected and secured from possible destruction.

Over the years, the city's leaders invested markedly in attracting outstanding scholars and renowned artists to relocate to Shiraz, thus the city was renamed *Dar Al-Elm* — House of Knowledge.

In the 11th century, the city witnessed a notable increase in population, which was the result of the continuous growth that Shiraz had accumulated in previous years, a trend that continued in the following centuries.

In the early 1500s, the forces of Ismail the First, the founder of the Safavid dynasty, gained control over the city of Shiraz.

More than a century later, the city experienced a minor downfall due to several raids carried out by Afghans. This led to the destruction of a few historical buildings. Many inhabitants also attempted to emigrate to neighbouring areas seeking shelter and safety.

In the early second half of the 18th century, Karim Khan Zand, who established the rule of the Zand dynasty, took control of Shiraz.

During his reign, the city witnessed notable progress across a broad spectrum. He also constructed a royal district that was protected by a fortress and featured several administrative facilities, as well as mosques and beautiful bazaars.

Karim Khan Zand also constructed a moat to further the city's security. Focusing on economic growth and welfare, he invested in developing trade routes to waterways in the south, in addition to a stable irrigation and drainage system.

In the early 1900s, the Pahlabi dynasty gained control over the region. During their reign, the city underwent a number of development schemes that helped Shiraz to maintain its leading image.

The historic Islamic Revolution that took place in 1979 saw Shiraz strengthen its position as a significant administrative, cultural and historical centre.

The government of the Islamic Republic of Iran has commenced numerous projects over time focused on restoring historical structures and reconstructing old monuments, such as the restoration of the old city quarters and the refurbishment of the Quran Gate, among many others.

In recent years, several development and construction projects additionally have been inaugurated to modernize Shiraz. These solid steps, which display the strong commitment of Iranian officials toward the advancement of the city, have notably contributed to the growth of tourism.

Industry

The city of Shiraz has been a cornerstone for the economy of IR Iran's Southern region. In the 1800s, the city experienced a remarkable growth that led to a significant transformation in the city's economy. Additionally, the establishment of the Suez Canal contributed positively to this change.

Eventually, being situated between Europe and India provided Shiraz with a strategic edge in international trade, which led the sector to become critical for its regional economy. Additionally, Iranian merchants realized the importance of marketing networks.

In a concrete attempt to strengthen Shiraz's economy, several industries were additionally developed, such as agriculture as they grow fruits, rice and cotton among many other crops, cement, wood, fertilizers, textile and fabrics, carpets, and electronics.

In 1908, Iran discovered the country's and the Middle East's first oil well in the province of Khozestan — Masjid-i-Solaiman well. Since then, the Islamic Republic has invested significantly in advancing the industry and was one of the Founding members of OPEC in 1960. Presently, Shiraz accommodates one of IR Iran's oil refineries.

Following the continuous efforts to enhance the city's economy, the Shiraz Special Economic Zone (SEEZ) was established in 2000 for the purpose of furthering and supporting the manufacturing of IT and communication technologies, and electronics. The zone comprizes of ten bazaars and more than 25 malls, and it is found in the southern part of the city.

Transportation

The government of IR Iran realized the utmost importance of developing solid transportation schemes to facilitate the city's economic growth and flourish.

A traditional Iranian bazaar and one of the oldest and largest bazaars of the Middle East.

A traditional Iranian carpet shop in Vakil Bazaar, an important tourist attraction in Shiraz.

Embossed bas relief carving of a lion hunting a bull on one of the staircases in the UNESCO world heritage site, Persepolis, near Shiraz, belonging to the Achaemenid Empire, 500 BC.

Shiraz International Airport is the largest airport serving the southern region of the Islamic Republic. In 2005, the airport underwent several development and revamp projects to enhance its services and facilities.

A well-developed metro system was introduced in 2001, furthering the transportation options available to locals, as well as international tourists. Additionally, a comprehensive bus network that consists of 71 bus lines, operates across the city.

Shiraz is also connected to the country's national railway network, where trains arrive and leave from Shiraz Railway Station.

View of the city of Shiraz from the surrounding hills.

Climate

In general, Shiraz experiences a hot semi-arid climate, which is similar to the hot-summer Mediterranean climate. In summer, the temperature rises to convenient levels, while it sinks to below-freezing temperatures during winter. Rainfalls occur mostly in the cold months of the year.

Attractions

As a result of Shiraz's established legacy, the city accommodates a number of distinctive landmarks and historic sights showcasing Shiraz's exceptional magnificence. What follows are a few selected sights that provide a flavour of Shiraz's distinct charm, from both history and present day.

Eram Garden

Eram Garden, a UNESCO world heritage site, is a spectacular wonder of the Islamic Republic. The garden is situated at the northern shore of the Khoshk river, and has been occasionally referred to as *Bāgh-e Shāh* — the Emperor's Garden.

Today, Eram Garden is part of Shiraz Botanical Garden, exhibiting a wide range of plants and flowers. The garden is perceived by many as a unique attraction that has mesmerized local and international visitors over the years.

The site is also protected by IR Iran's Cultural Heritage, Handcraft and Tourism Organization, as part of the nation's effort to preserve the iconic site.

Nasir ol Molk Mosque

The Nasir ol Molk Mosque — or the Pink Mosque — is a traditional mosque located in the Arab Quarter of Shiraz.

The mosque, which was built in 1888, attests to the region's rich history and notable interest in architecture and art. The mosque's exquisite facade is decorated with an extensive coloured glass. Additionally, it uses a large number of pink tiles as part of its interior design.

Qavam House

The monument represents the home of the Qavam family, a prominent family that gained importance and position in Shiraz's political spectrum during the reign of the Zand dynasty. During this period, the family actively participated in the city's government for a number of years.

The traditional house was constructed in the late 1800s, indicating the elegance and sophistication of Shiraz's upper-class families. Inspired by Europe's Victorian period, the house's low ceilings were decorated with creative paintings.

Presently, the traditional house is a museum that can be visited by the public.

Vakil Bazaar

Shiraz's main bazaar is situated in the city's old downtown covering an area of 3,000 square metres. The historical bazaar was completed in 1760s during the era of the Zand dynasty. However, some historians believe that it was built many years earlier.

The historical monument consists of a large number of courtyards, bath houses, shops, as well as mosques.

Gulf Complex

The mega shopping mall, which is located in Sadra in the north of Shiraz, opened its doors to the public in 2011. It is spread over an area of 450,000 sq m, accommodating 2,500 stores, shops and service providers.

The complex encompasses an iconic 262-room splendid hotel — the Burj Fars International — that features indoor and outdoor swimming pools, sport and business facilities and a helipad. Additionally, it includes amusement parks, cinemas, bowling alleys, and a gigantic parking space.

The old gate arch, the historic entrance for the old city of Shiraz.

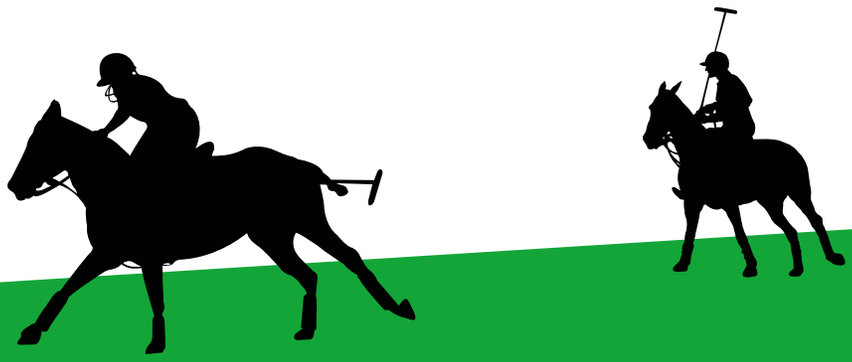
The Persian garden of Eram with its beautiful pavilion, a traditional Iranian fountain system and Palm trees, in city of Shiraz.

Past and present

Celebrated as the heartland of Persian culture for over 2000 years, Shiraz is one of the most beautiful and historical cities in the world. It blends the past with the present, in a unique and unparalleled balance of rich history and modern elegance.

All images courtesy Shutterstock.

Over the last 100 years, the sport of polo has grown by leaps and bounds in Nigeria thanks to an increasing number of talented players, supportive patrons and eye-catching tournaments that have swept the country. A steady rise in the number of polo clubs has provided an influential base to enable the sport with its unique attributes and enduing lifestyle to expand so much. Public Relations and Information Department temporary Social Media Specialist, Suraj S Matori, reports on how far 'The Game of Kings' has come and the impact it has made on the lives of ordinary Nigerians and the privileged alike.



Polo in Nigeria: The Game of Kings

For those who are just waking up to the thrills and excitement of polo, or the Game of Kings, as it is commonly referred to in Nigeria, it may be hard to believe that this unique sport, reputed as the oldest team sport in the world, has been in Nigeria for over a century now. This would make the game the first organized sport in the country, decades before other popular sports like boxing, athletics and football.

The game of polo, when first introduced to the shores of Nigeria by the British colonialists at the beginning of the 20th century, was more or less associated with the Royals and privileged of the country. It was more popularly played in the Northern region of the country as horse riding was already a common means of transportation and a symbol of high status for the Hausa/Fulani Kings and the influential.

The father of Nigerian polo

The late Emir of Katsina, His Royal Highness Mohammed Dikko, who was born in 1865 and ruled from 1906 to 1944, is believed to be the foremost noble that first introduced 'the Game of Kings' to the northern region of Nigeria and made it common among the elites. Dikko, a skilled horseman himself, encouraged the use of Katsina's hitherto war horses for sports like racing and polo. He dedicated and constructed a large polo ground, which is still in use today.

The Emir also encouraged his own sons and other nobles to play the sport. Dikko's son and successor, Usman Nagogo, attained a handicap of +7, the highest ever attained by an African. Dikko's successors still hold the life presidency of the Nigerian Polo Federation.

The love and passion for the game continued to grow within the country both in the Northern and Southern regions over the

Fifth Chukker Polo Club

Action from a professional polo match at Fifth Chukker Polo and Country Club.

years. After Nigeria gained its independence from the British, the sport continued to thrive and caught the attention of subsequent military leaders as a sport for the exclusive few.

The late General Hassan Usman Katsina, the grandson of Emir Mohammed Dikko, then a senior military officer, had a very strong passion for the sport and was a player himself like his father Emir Usman Nagogo. The late General Hassan promoted the sport among the top echelons of the military at the time and also made the sport accessible to everyday Nigerians, as his personality was one of openness and compassion.

National and international competition

In Nigeria, the game of polo is managed and regulated by the Nigerian Polo Federation, with Captain Francis Ogboro serving as its current President. The country is also an ardent member of the Federation of International Polo (FIP), the international regulatory body for professional polo, and competes in international competitions against countries from around the world.

There are a wide variety of polo clubs and fields throughout Nigeria that host tournaments at various times of the year. These clubs represent the heart of the game throughout the nation and are magnets for anyone interested in the sport. Some of the clubs are exclusive in their management and hosting of games, providing them with a greater level of influence than other clubs.

Nigerian polo clubs and teams

Kaduna Polo Club

The Kaduna Polo Club is considered among the oldest and most prestigious clubs in the country and plays host to games and tournaments throughout the year. The Club is home to six polo teams that compete at a wide variety of levels, ranging from international-level competition to amateur matches.

The Club aims to help promote and preserve the game as a national sport in Nigeria by encouraging visitors to attend tournaments, hire and ride a horse or even purchase equestrian products. Additionally, veterinary care is provided through a hospital located on the grounds.

Fifth Chukker Polo and Country Club

The Fifth Chukker Polo and Country Club, located at the picturesque Kangimi Resort in Kaduna State, was founded in 2001 as a private polo club. Through the years, the Club has grown to become a world-class destination resort in West Africa, and also attracts guests from around the world.

The Club, spanning three thousand hectares, offers a range of lodging, dining, equestrian and outdoor leisure activities. Its facilities include three professional polo fields, 400 stables, an exercise track, an arena sand school, tack and storage rooms, as well as trails for horse trekking and hiking.

Fifth Chukker hosts two major tournaments annually and offers facilities for private polo tournaments and sponsored events. The Access Bank UNICEF Charity Shield is one of the most important events on the African Polo calendar and has been played between the handicap brackets of 12 to 21 goals. Held every May/June, the tournament is solely sponsored by Access Bank and supports UNICEF's development activities in Northern Nigeria.

The African Patron's Cup is a 12-goal tournament played in October and November. It is organized in partnership with MTN and focuses on breast cancer awareness, a cause Fifth Chukker has supported since 2011.

Fifth Chukker Polo Club

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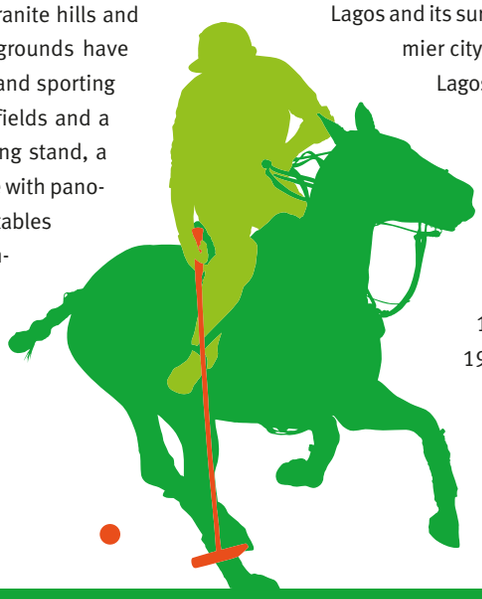
Twelve Twelve Polo and Turf Club

The Twelve Twelve Polo and Turf Club — locals refer to it simply as the Twelve Twelve (12/12) — is a pioneer of sorts, being the first of its kind to open in Nigeria's capital. The Club's founding was borne out of a desire to bring the beautiful game of polo and the exhilaration of horse riding to thrill seekers in the booming metropolis of the Federal Capital Territory (FCT), and aims to be the benchmark in polo and turf sports in the country.

Conceived in the mind of the club founders as a tribute to the establishment of Abuja as a capital city on December 12, 1991, the Club took its name from its founding date, when its doors first opened to receive members, distinguished guests, competitors and the general public. They wanted 12/12 to be synonymous with Abuja's foundations as the greatest capital city in Africa, and for the club to stand alongside it representing the strength, beauty and resourcefulness of the FCT.

The Club is located on over 60 hectares of prime real estate at the base of Gwarimpa Model City in Abuja. Initially a sprawling area with lush highlands, granite hills and red-earthed flatlands, the extensive grounds have been transformed into a first-rate turf and sporting centre featuring two top-quality polo fields and a horse racing track, a 2,000-seat viewing stand, a three-storey tall all-purpose club house with panoramic views of the city, fully equipped stables housing dozens of champion thoroughbred horses and a dedicated riding academy.

The 12/12 holds a number of polo tournaments each year, including the prestigious President's Cup and the Abuja Open, as well as regular horse racing competitions such as the Abuja Derby Cup. Families and enthusiasts will also be able to sign up for riding lessons.



Lagos Polo Club

Lagos was the birthplace of polo in Nigeria in 1904. It was introduced by British Naval Officers, and was played on an airstrip that was shared between the Lagos Polo Club and the Ikoyi Club, which had a golf course. The strip was then transformed into a playing field, while the horses were stabled in the barracks.

Then in 1914, Kaiser Wilhelm II, of Germany, presented a sterling silver cup, now known as the Independence Cup, for a polo championship between Nigeria and then German Cameroon.

The Lagos Polo Club evolved rapidly over the next 30 years along with the city of Lagos. The members and players, who formerly consisted of mostly British naval officers, were now expatriates, Nigerian civil servants and senior citizens.

Lagos and its surroundings were developed to become the premier city in Nigeria, which had a positive effect on the Lagos Polo Club, as was recalled by author and longtime club member, Dr Majekodunmi, in his autobiography *My Lord What a Morning*. The Club was basically comprised of the playing field, the club house and temporary stables. Other cups were played for alongside the Kaiser Wilhelm Cup, until 1962, when Dr Majekodunmi, a member since 1949, donated the now famous Majekodunmi Cup to be competed for by the highest handicap players at club tournaments.

AVIVA player Nasir Lukat (l) attempts to block Sultana Farms player Ibrahim Mohammed (r) during the Peace and Unity polo tournament at the Guards Brigade polo ground in Abuja, Nigeria, in 2015.

Spectators participating in divot stomping during a match break at Fifth Chukker.

On December 20, 1949, the Club completed its first major redevelopment with the opening of the new club house, which was commemorated by then President of Nigeria, Dr. Nnamdi Azikiwe. This major refurbishment saw the Lagos Polo Club become one of the premier clubs in Nigeria.

With Lagos the capital of Nigeria at the time, the charismatic Head of State, General Yakubu Gowon, spent his spare time on the field playing polo and in the club house. During this period, the Club hosted the crème de la crème in Lagos and from across Nigeria, including the late Usman Dantata and Colonel Ahmadu Yakubu, as well as international polo personalities and enthusiasts such as HRH Prince Charles (Prince of Wales), Alphonso Pieres, Gonzalo Pieres, Alan Kent and The Hipwood brothers (Alan and Julian).

In 2010, the Club's committee began an ambitious ten-year redevelopment plan and road map to help transform the Club into a must-see destination for both locals and international visitors while in Lagos.

El-Amin Polo Club and Team

Although the El-Amin Polo Club, which was founded in 1995, is not classified as one of Nigeria's oldest clubs, its achievements since being founded have been phenomenal.

Since making its debut in the Nigerian polo scene, the Club's team has won every conceivable tournament and trophy, making it not only Nigeria's best and most dominant team, but one of the finest outfits in the world.

Mohammed Babangida and his El-Amin superstars have been a team in a perpetual quest for glory. Player for player, pony for pony, tournament after tournament, this team has battled and conquered all, cementing their status of supremacy in the noble Game of Kings.

Located in the northern part of Nigeria, the Club's games and tournaments have become significant events on the social and tourism calendar in the region.

Thanks to its daring quest and self-confidence, which has been its hallmark trait in the last two decades, the El-Amin squad has been victorious, not only in the infamous Georgian Cup, but has also won other high-goal titles like the Majekodunmi Cup in Lagos, the Emir of Katsina Cup in Kano, the Nigerian Cup in Katsina, the IBB Cup in Minna and the Hassan Katsina Cup in Port Harcourt.

Living icons

At its illustrious height, Nigerian polo welcomed the likes of Prince Charles, Alphonso Pieres, Gonzalo Pieres and Alan Kent, who were hosted by the country's polo greats, including Colonel Abubakar Dangiwa Umar, Ahmed Joda, Francis Ogboro, Dawule Baba (known as 'the teacher'), to mention a few.

Most of these men no longer play the game as age has caught up with them, however, they remain as passionate and involved in the game today as ever before. Their hope is that their children will follow in their footsteps, and that the game will thus be passed on to future generations.

Today, Nigeria's top ranking and highest rated polo player is Bello Buba, who has won a record thirteen Georgian Cups. He plays with the triumphant Kaduna El-Amin team, which became the highest goal-scoring team in Nigeria after winning


Fifth Chukker Polo Club


Reuters

Emir of Kano Muhhamadu Sanusi II (l) presents the winner's trophy to Muhammed Babangida of the Mtn polo team during the presentation of the Hassan EHadeja Cup in Kaduna, Nigeria, in 2015.

the Argentine Ambassador Cup and the Sardauna Cup this year. Buba is the latest in a string of professional players in Nigeria who have achieved excellence in the sport over the years and who have brought a new level of interest and thrill to the game and its supporters.

A bright future

When one considers the great transformation and growth the game of polo has undergone over the years in Nigeria, and subsequently, the wide exposure and outreach the sport has garnered, the future looks bright for Nigerian polo.

The country's polo clubs are increasingly offering vast and well-enriched youth academies similar to those offered in other sports such as soccer and tennis. These facilities will help promote grassroots development and sustenance of the sport across the country.

There are success stories of professional players who are now competing at the highest levels of the game both locally and globally. For example, Ibrahim Dangaye is a phenomenon who graduated from being a horse trainer and has made a name for himself by becoming one of the top polo players in the country.

In an effort to widen interest in the sport, some clubs are offering programmes to attract youth and families. A case in point is the Riding Academy at the 12/12 Polo Club in Abuja, which offers horse riding lessons for families and horse enthusiasts to help spark their interest in the game of polo. Riding instructors are on hand to teach students of all ages the basics, including walking, trotting, cantering and turning circles. More experienced riders are also able to sign up for riding sessions.

A sport for all

Even though the game of polo has historically been played predominantly by men, women have made giant strides over the years in playing and competing alongside men.

One prime example in Nigeria is 25-year-old Uneka Atawodi who grew up in Kaduna and was exposed to the game at an early age by spending most of her time watching matches at the Kaduna Polo Club. It was there that she fell in love with the game.

She proceeded to obtain a stage 4 riding accreditation from the British Horse Society and started playing polo at the age of 14. She went on to earn a bachelor's degree in equestrian science and today is a professional polo player competing in tournaments both locally and internationally.

The road to success, however, was not always easy for Atawodi. When she first told her parents that she wanted to be a professional polo player at the age of 16, they advised her to steer away from such an unconventional career path. The parents tried talking her out if it, and when that did not work, they stopped paying for the upkeep of her horses.

A decade later, Atawodi is the only black woman in the world who plays professionally.

"When people say: 'Oh, I didn't know black people play,' I understand that it is new and different to people. I'm happy to patiently explain to them the diverse and expanding world of polo," the 25-year-old says after a meal in an upmarket bar she runs in the Nigerian capital, Abuja.

Atawodi is an inspiration not only to young Nigerians hoping to take up the exciting sport of polo, but to all who have overcome adversity in their lives to ultimately achieve success.

Tajikistan and Afghanistan: Sustainable energy changes lives

By Arya Gunawan Usis


Welthungerhilfe

OFID is fully committed to supporting the 2030 Agenda for Sustainable Development and all 17 of the United Nations Sustainable Development Goals (SDGs) — a comprehensive, far-reaching and people-centered set of universal and transformative goals. Goal 10 focuses on reducing inequality, and all of OFID's work, which aims to support the world's most vulnerable populations, contributes to this end in some respect. The following article takes a look at an OFID-supported project in Tajikistan and Afghanistan that demonstrates the organization's reach and resourcefulness. The project highlights how reducing inequality can transform lives.

A recently completed project in Tajikistan and Afghanistan, supported by OFID, has changed the lives of residents by enabling them to enjoy an electricity supply — provided through renewable energy and energy efficient technology — for the first time. Using local resources and providing training will ensure the benefits are felt well into the future.

Darai Nolak is a hamlet in the district of Baljuvon, Tajikistan, about 150 km to the east of the capital Dushanbe. Until recently, Darai Nolak residents were still part of the world's 1.1 billion people without access to electricity. To meet energy needs, they used traditional sources such as firewood and animal waste. But since early 2017, some Darai Nolak residents have entered a new era. Thanks to a communal micro-hydro system, daily life has been made far safer and easier.

Darai Nolak's hydropower unit serves about 50 households, two community mosques and one school and means that lighting, television and radio sets and basic electronic appliances can now be used. Hydropower units with slightly different capacities have also been installed in two other villages. Aspiringon village, in the same Baljuvon district, was similarly lacking electricity but now has a plant with a 13 kw capacity. Tens of houses, one school and one mosque enjoy electricity supplied by the plant. In Shibanai village, in the Temurmalik district, a 16 kw hydropower unit supplies one school with 300 students, four business premises and a hospital. Previously, Shibanai only received a limited daily electricity supply from the government from just after twilight until 21:00 hours.

The same OFID-funded project also installed 36 mid-sized solar panel systems. The resulting electricity

Electricity harnessed from solar panels has provided numerous families with clean water for drinking and irrigating crops.

Field promoters receiving training to use more energy efficient household items (above), such as a heat-exchanger for stoves and a special pressure-cooker (below).

supplies small businesses such as barber and coffee shops. It also supports community services, including clean water pumps for irrigation and drinking water. In one village, electricity from a solar panel pumps up to about 10,000 litres of water; enough to meet the needs of some 20 families. Elsewhere, farmers' cooperatives use the water to irrigate previously unused fields. The project has clearly provided opportunities for improved income and local food security.

Extending into Afghanistan

The project, which also extends to Afghanistan, has brought about similarly life changing improvements in

targeted communities there. Eight mini hydropower electricity plants and 11 solar panels have been installed to pump clean water. Nearly 400 solar panels were also made available for household use.

Projects implemented in Central Asia — including in Tajikistan — have used imported parts from Russia or China. But for this project, turbines were produced locally in Afghanistan. Such turbines are more resilient and fit for rural areas, and can be more quickly repaired by local technicians if they are damaged; thereby building a value chain in the region.

In mid-2016, two Tajikistani technicians were sent to help — and also to learn about — turbine production in Afghanistan for a project in Kabul. Following a two-week 'internship', the two technicians had learned the skills necessary to produce and repair turbines. Similar training was also organized in Tajikistan and dozens of electricians learned turbine production and repair skills.

In accordance with the prime objectives of the project, this use of local resources will ensure the results are sustainable and that progress can be made without continued external support.

Commenting on the project, Dr Walid Mehalaine, Head of the Grants and Technical Assistance Unit, said: "This intervention is in line with OFID's flagship Energy for the Poor Initiative, which has been implemented through various financing windows including the Grants Programme. The impact this project has had on the beneficiary population shows explicitly how access to modern, reliable and affordable energy can dramatically improve people's lives and spur development in other sectors."

From September 2014 to April 2017, OFID contributed $800,000 to the project through its Grants and Technical Assistance Programme. The Federal Ministry for Economic Cooperation and Development of Germany also supported the project, disbursing a total of $720,000, while the Bonn-based non-governmental aid agency, Deutsche Welthungerhilfe (WHH), contributed $72,000 and acted as the implementing partner.

WHH noted that in the Tajikistan target areas, thanks to the introduction of electricity, around 700 tonnes of trees that would otherwise have been cut down for fuel should be saved each year. Similarly, hundreds of tonnes of animal waste will no longer be burned and can instead be used as fertilizer. In this sense, the project has helped to prevent deforestation as well as against the negative health effects associated with burning more traditional forms of energy.

Field promoters learn how to install more energy-efficient windows.

Visitors of the OPEC Secretary General

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

October 2, 2017

An 'Induction Programme for OPEC and non-OPEC Producing Countries' representatives', was hosted by Mohammad Sanusi Barkindo, OPEC Secretary General. Pictured are Embassy staff based in Vienna and OPEC staff members.

December 18, 2017

Ms Heusden visits OPEC Secretary General
Renée Heusden (r), Community Lead Oil & Gas, Global Leadership Fellow at the World Economic Forum, visited Mohammad Sanusi Barkindo (l), OPEC Secretary General.

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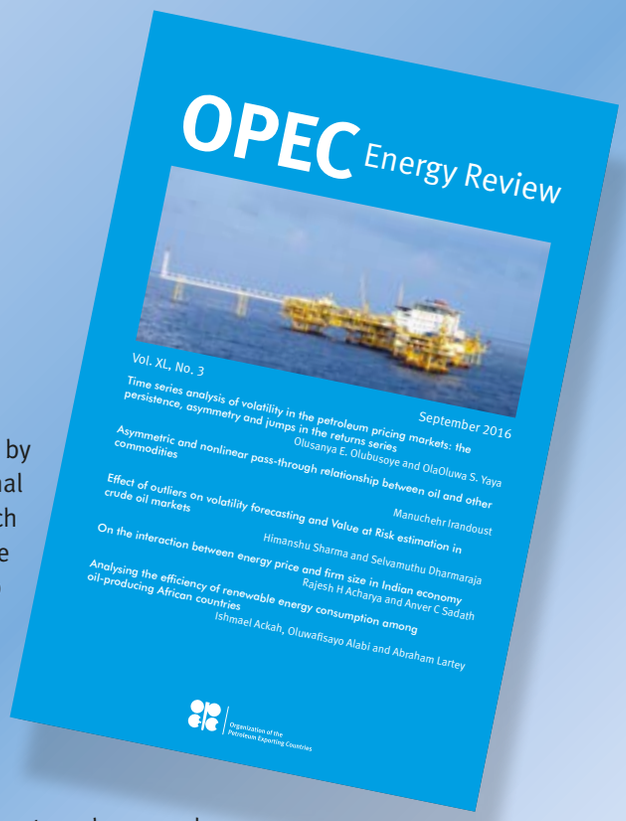


The OPEC Energy Review is a quarterly energy research journal published by the OPEC Secretariat in Vienna. Each issue consists of a selection of original well-researched papers on the global energy industry and related topics, such as sustainable development and the environment. The principal aim of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

The three main objectives of the publication are to:

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

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

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

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

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

September 27 Students from the Modellschule Obersberg, Bad Hersfeld, Germany.

September 28 A group of senior citizens from Pessin, Germany.

October 4 Students from Association BerMüPa e.V., Munich, Germany.

October 5 Students from Bundesgymnasium & Bundesrealgymnasium GRG 19, Vienna, Austria.

October 6 Executives from the Oil and Natural Gas Corporation (ONGC), India.

October 16 Students from the University of South Carolina, Columbia, South Carolina, USA.

October 16 Participants of the WebMUN 2017 conference of Webster University, Vienna, Austria.

October 16 Officials from Latref International B V, The Hague, Netherlands.

November 9 Students from the NRG Study Association of Energy Science of the Utrecht University, Utrecht, Netherlands.

November 9 Executives from the Oil and Natural Gas Corporation (ONGC), India.

November 15 Students from the WU Executive Academy, Vienna, Austria.

November 16 Students from the University of Debrecen, Hungary.

November 20 Students from IES Abroad (Institute for the International Education of Students), USA.

December 5 Executives from the Oil and Natural Gas Corporation (ONGC), India.

December 11 Students from the Vienna Business School, Vienna, Austria.

Energy Demand Analyst

The Energy Studies Department monitors, analyses and forecasts world energy developments in the medium and long term and reports thereon, in particular providing in-depth studies and reports on energy issues. It monitors developments and undertakes specific studies on energy demand and production-related technology, assessing implications for OPEC. It identifies and follows up key areas of energy-related emerging technologies and research and development (R&D), facilitates and supports planning and implementation of collaborative energy-related R&D programs of Member Countries, as well as identifies prospects for OPEC participation in major international R&D activities. It carries out studies and reports on developments in the petroleum industry, providing effective tools for carrying out model-based studies of analyses and projections of energy supply/demand and downstream simulation. It elaborates OPEC Long Term Strategy and monitors, analyses and reports on relevant national or regional policies (fiscal, energy, trade and environmental), assessing their impacts on energy markets.

Objective of position:

The Energy Demand Analyst develops medium to long-term assessments of future oil demand growth at the sectoral level, understanding the main drivers and key uncertainties.

Main responsibilities:

Over the medium- to long-term:

- Analyses the dynamics of the transportation sector.
- Assesses oil demand in the industry sector, particularly related to the petrochemical sector.
- Analyses oil use in households, as biomass is replaced by commercial energy in developing countries.
- Assesses demand in the agriculture and commercial sectors.
- Analyses trends in oil use in electricity generation.
- Assesses nature and scale of oil use in marine bunkers.
- Contributes to and/or delivers speeches, articles and presentations to internal meetings and various international forums.
- 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, energy economics or related fields; advanced degree preferred.
Work experience: University degree: eight years; advanced degree: six years.
Training specializations: Economic analysis; energy economics; knowledge of oil market developments.
Competencies: Communication skills; analytical skills; presentation skills; interpersonal skills; customer service orientation; initiative; integrity.
Language: English.

Status and benefits:

Members of the Secretariat are international employees whose responsibilities are not national but exclusively international. In carrying out their functions they have to demonstrate the personal qualities expected of international employees such as integrity, independence and impartiality.

The post is at grade E reporting to the Head of Energy Studies Department. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:

Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in a résumé and an application form which can be received from their Country's Governor for OPEC.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **March 3, 2018,** quoting the job code: 5.4.04 *(see www.opec.org — Employment)*.

Systems/Network Specialist

The Organization of the Petroleum Exporting Countries (OPEC) has a vacancy based in Vienna, Austria, for a Systems/Network Specialist in its Administration & IT Services Department.

Main responsibilities:

Carries out research and troubleshooting of network related problems; improves the performance between software and infrastructure; finds peaks in DataStream and provides for bottlenecks; identifies future needs compared to general software and hardware development. Develops and implements new procedures to improve computer network services; and creates automated tasks to warn and prevent service errors and interruptions to limit total down time. Monitors all installed servers for performance and security, searches for bottlenecks and access peaks and investigates for software settings; adjusts software parameters and finds security compromising services and tasks. Maintains and upgrades software/hardware installations, installs regular security patches, determines necessary hardware extensions and prevents hardware related service interruptions. Provides user support, troubleshoots user accounts and provides help to prevent further problems; identifies software errors and searches for software updates and patches. Keeps abreast of technological development and runs tests on new software and hardware to identify improvements for the Secretariat. Examines trade magazines and attends computer trade shows to obtain latest information on technology that will benefit the Secretariat. Carries out any other tasks assigned by the relevant superiors as pertain to his/her background, qualifications and position.

Requirements:

University degree in computer science, information technology or other science studies related to information technology; professional certification in network operating systems and related technologies (preferably Microsoft OS); four years of work experience.

Skills and knowledge:

Networking concept; Microsoft, CISCO and VMW; Exchange e-mail server; Firewall concept; computer hardware; video & web conferencing; communication skills; analytical skills; presentation skills; interpersonal skills; customer service orientation; initiative; integrity

Offer:

Commensurate remuneration package (ie monthly basic salary of €3,976 x 12 per year) with tax-free benefits and six weeks of annual leave.

Applications:

Applicants should kindly complete the 'Application Form' which can be downloaded from our website (www.opec.org) and send it to:
OPEC, Finance & Human Resources Department, Helferstorferstrasse 17, A-1010 Vienna, Austria; or Email: recruitment@opec.org

Online applicants should quote 'Job Code 10.3.04' in the 'Subject' field. An automatic reply will be sent to them to confirm the successful submission of the documents. The deadline for receipt of applications is February 18, 2018. Acknowledgements will only be sent to short-listed candidates.

Information Assistant

The Organization of the Petroleum Exporting Countries (OPEC) has a vacancy based in Vienna, Austria, for an Information Assistant (Maternity leave replacement for one year and two months approximately) in the Information Center/Data Services Department.

Main responsibilities:

Handles all aspects of journal (print and electronic) subscriptions, including subscription lists, budget preparation, budget & expenditure reports and processing of invoices, contracts, and claims for missing journal issues.

Handles all aspects of online subscriptions, including registration and activation of all library/corporate and institutional access to online subscriptions as well as maintenance of assigned user lists for subscriptions.

Maintains the electronic periodical catalogue using the Library Integrated System Biblioteca2000, including registration and cataloguing of all new subscriptions and updating the electronic Kardex system.

Prepares and maintains circulation and display journal lists.

Maintains the physical periodical collection, including handling of the archive storage, selecting journals for binding, shelving and discarding and updating manual records.

Carries out reference and research services and assists staff, delegates and authorized visitors with reference inquiries and literature search.

Carries out any other tasks assigned by the relevant superiors as pertain to his/her background, qualifications and position.

Requirements:

Secondary School certificate plus special courses; three years (with a minimum of one year in a library).

Skills and knowledge:

Library management system; MS Office; typing; Copyright Law (data protection); communication skills; interpersonal skills; customer service orientation; proficiency in written and spoken English.

Offer:

Commensurate remuneration package ie monthly basic salary of (€3,055 x 12 per year) with tax-free benefits and six weeks of annual leave.

Applications:

Applicants should kindly complete the 'Application Form' which can be downloaded from our website (www.opec.org) and send it to:
OPEC, Finance & Human Resources Department,
Helferstorferstrasse 17, A-1010 Vienna, Austria; or Email:
recruitment@opec.org

Online applicants should quote 'Job Code 3.4.03' in the 'Subject' field. An automatic reply will be sent to confirm the successful submission of the documents.

The deadline for receipt of applications is February 4, 2018. Acknowledgements will only be sent to short-listed candidates.

Forthcoming events

Middle distillates conference, February 1–2, 2018, Antwerp, Belgium. Details: Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 1766142; fax: +44 207 176 8512; e-mail: cynthia_rugg@platts.com; website: www.platts.com.

4th annual maintenance Kuwait summit 2018, February 4–7, 2018, Kuwait City, Kuwait. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: https://maintenancekuwait.iqpc.ae/?utm_medium=portal&mac=IQPCCORP.

European petrochemicals conference, February 5–6, 2018, Rotterdam, The Netherlands. Details: Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 1766142; fax: +44 207 176 8512; e-mail: cynthia_rugg@platts.com; website: www.platts.com.

Japan LNG and gas summit, February 6–7, 2018, Tokyo, Japan. 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.cwcjapanlng.com.

Cameroon oil and gas summit 2018, February 6–8, 2018, Yaounde, Cameroon. Details: 10–18 Vestry Street, 1st ll, London N1 7RE, UK. Tel: +44 207 11 11 615; fax: +44 207 18 37 945; e-mail: info@irn-international.com; website: www.cameroonsummit.com.

West Africa international petroleum exhibition and conference, February 6–8, 2018, Lagos, Nigeria. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 3615 2873: fax: +44 20 3615 0679; e-mail: conferencemarketing@dmgevents.com; website: www.dmgenergyevents.co.uk/event/west-africa-international-petroleum-exhibition-conference.

Kuwait EPC conference 2018, February 11–14, 2018, Kuwait City, Kuwait. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: https://kuwaitepcprojects.iqpc.ae/?utm_medium=portal&mac=IQPCCORP.

Liquefied natural gas conference, February 12–13, 2018, Houston, TX, USA. Details: Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 1766142; fax: +44 207 176 8512; e-mail: cynthia_rugg@platts.com; website: www.platts.com.

EGYPS Egypt petroleum show, February 12–14, 2018, Cairo, Egypt. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 3615 2873: fax: +44 20 3615 0679; e-mail: conferencemarketing@dmgevents.com; website: www.egyps.com.

Kuwait international HSE conference and exhibition, February 15–16, 2018, Kuwait City, Kuwait. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 3615 2873: fax: +44 20 3615 0679; e-mail: conferencemarketing@dmgevents.com; website: www.kihse.com.

Kingdom Industrial IoT, February 21–22, 2018, Riyadh, Saudi Arabia. Details: Fleming Gulf Conferences, Dubai Airport Free Zone, P O Box 54772, Dubai, UAE. Tel: +971 4 60 91 555; fax: +971 4 60 91 589; e-mail: info@flemminggulf.com; website: https://fleming.events/en/events/energy/kingdom-industrial-iot.

12th Arctic shipping summit, February 21–22, 2018, Montreal, Canada. Details: Active Communications International, 5–13 Great Suffolk Street, 4th Floor, London SE1 0NS, UK. Tel: +44 207 981 98 00; fax: +44 207 593 00 71; e-mail: claire@acieu.net; website: www.wplgroup.com/aci/event/arctic-shipping-summit.

CERI 2018 oil and gas symposium, February 26–28, 2018, Calgary, AB, Canada. Details: Canadian Energy Research Institute (CERI), #150, 3512–33 Street NW, Calgary T2L 2A6, Canada. Tel: +1 403 282 1231; fax: +1 403 284 4181; e-mail: sjohnsgaard@ceri.ca; website: www.ceri.ca/2018-oil-gas-symposium.

Nigeria oil and gas, February 26–March 1, 2018, 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.

FPSO Europe congress 2018, February 27–28, 2018, London, UK. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: http://fpsoeuropecongress.iqpc.sg/?utm_medium=portal&mac=IQPCCORP.

Iraq petroleum, February 27–28, 2018, Berlin, Germany. 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.cwciraqpetroleum.com.

Offshore pipeline technology conference, February 27–March 1, 2018, Amsterdam, The Netherlands. Details: Informa Group PLC, 5 Howick Place, London SW1P 1WG, UK. +44 207 01 75 000; e-mail: headoffice@informa.com; website: https://energy.knect365.com/offshore-pipeline-technology.

Ukrainian energy forum, February 27–March 1, 2018, Kyiv, Ukraine. Details: Adam Smith Conferences, 6th Floor, 29 Bressenden Place, London SW1E 5DR, UK. Tel +44 207 017 7444; fax +44 207 017 7447; e-mail info@adamsmithconferences.com; website: www.ukrainianenergy.com.

13th LNG Supplies for Asian Markets 2018, February 28–March 2, 2018, Singapore. Details: Conference Connection Administrators Pte Ltd, 105 Cecil Street #07-02, The Octagon, 069534 Singapore. Tel: +65 6222 0230; fax: +65 6222 0121; e-mail: info@cconnection.org; website: www.fgenergy.com/events/upcoming-events-fge-is-attending/13th-lng-supplies-for-asian-markets-lnga-2018.aspx.

Global smart energy summit, March 6–8, 2018, Dubai UAE. Details: Informa Group PLC, 5 Howick Place, London SW1P 1WG, UK. +44 207 01 75 000; e-mail: headoffice@informa.com; website: www.middleeastelectricity.com/globalsmartenergysummit/en/home.html.

Review of 2017 — outlook for 2018

December 2017

World economic growth in 2017 has been supported by strong momentum across all major economies and sectors. In OPEC's Monthly Oil Market Report *(MOMR)* for December, growth now stands at 3.7 per cent, up from an initial forecast at the state of the year of 3.2 per cent. The healthy momentum is expected to continue in 2018, with growth forecast at 3.7 per cent.

According to the *MOMR*, the OECD, supported by the US and the Euro-zone and to some extent Japan, is considered a vital element of this dynamic, with growth of 2.2 per cent in 2018, only salightly below this year's 2.3 per cent. Moreover, upside from the envisaged tax-reform may lead to even higher growth in the US.

In the non-OECD, the *MOMR* states, the growth momentum in China is forecast to slightly decelerate in 2018 to 6.5 per cent, compared to 6.8 per cent in 2017. India is likely to rebound from sluggish growth of 6.5 per cent in 2017 to show growth of 7.4 per cent in 2018. Brazil and Russia are forecast to continue their recovery at growth of 1.5 per cent and 1.8 per cent in 2018, after 2017 growth of 0.8 per cent and 1.9 per cent, respectively.

As many economies now expand at or even above growth potential, the *MOMR* notes "that the upside may be limited." Moreover, it adds that "geopolitical developments and the pace of monetary policy normalisation will be aspects that need close monitoring in 2018. Stability in the oil market also remains a key contributor for global economic growth."

From the perspective of world oil demand growth, the *MOMR* estimates a level of 1.53m b/d in 2017, which is well above the initial forecast and maintains the consistently healthy growth seen over the last three years.

It states that "OECD Europe contributed most of the upward revisions, due to solid progress in the industrial sector in addition to strong transportation demand. In non-OECD, China oil demand growth has been robust in 2017 as the petrochemical and the transportation sectors continued to expand at a healthy pace and the overall economic activities improved from initial expectations."

For 2018, the main assumptions behind the forecast, according to the *MOMR*, "are firm economic growth, lending support to industrial and construction fuels in both the OECD and non-OECD." It expects expansion in the transportation sector to provide the bulk of oil demand growth, while growth in petrochemical demand is projected to be one of the fastest-growing contributors in the US, China, South Korea and the Middle East. As such, the *MOMR* says, "world oil demand growth is estimated at 1.51m b/d in 2018, compared to 1.26m b/d in the initial forecast."

In terms of non-OPEC oil supply, the *MOMR* notes that growth in 2017 performed well above initial market expectations to now stand at 810,000 b/d. It adds that higher-than-expected supply growth in the US, Canada and Kazakhstan have been the key contributors to the upward revisions, particularly US tight oil, with US oil output now expected to grow at 610,000 b/d this year.

According to the *MOMR*, the momentum seen this year is expected to continue in 2018 on the back of increased investment in US tight oil and improved well efficiency, as well as higher output from Canada, due to already sanctioned oil sands projects. As a result, the *MOMR* says that "non-OPEC supply is expected to grow by 990,000 b/d in 2018." However, it adds that the forecast is associated with considerable uncertainties, particularly regarding US tight oil developments.

Based on the supply and demand forecasts, the *MOMR* sees expectations for OPEC crude in 2018 standing at 33.2m b/d, which is higher than the OPEC production levels seen in 2017. Combined with continued efforts by OPEC and non-OPEC to support oil market stability through the 'Declaration of Cooperation', the *MOMR* notes that "this should lead to a further reduction in excess global inventories, arriving at a balanced market by late 2018."

MOMR ... oil market highlights

December 2017

The **OPEC Reference Basket** surged near ten per cent to $60.74/barrel in November, its highest since June 2015. Crude futures prices improved further to levels not seen since summer 2015. Continuing bullish oil market fundamentals and optimism that OPEC and non-OPEC would extend the production adjustment which would support the oil market over November. ICE Brent averaged $5.22 higher, at $62.87/b, while NYMEX WTI increased $5.07 to $56.66/b. The ICE Brent/NYMEX WTI spread widened to $6.20/b. Money managers raised net long position in ICE Brent and NYMEX WTI futures and options to 934,463 contracts. Brent and Dubai remained in backwardation, while the WTI contango eased.

The **global GDP growth** forecast remains at 3.7 per cent for both 2017 and 2018. US growth was revised up in both 2017 and 2018 to 2.3 per cent and 2.5 per cent respectively. Growth in the Euro-zone remains unchanged at 2.3 per cent in 2017 and 2.1 per cent in 2018. Japan's growth in 2017 remains unchanged at 1.6 per cent, while 2018 expectations have been lifted to 1.4 per cent. India's soft 3Q17 GDP growth led to a downward revision to 2017 GDP from 6.8 per cent to 6.5 per cent, while growth in 2018 remains unchanged at 7.4 per cent. China is seen growing at 6.8 per cent in 2017 and 6.5 per cent in 2018.

Global oil demand is projected to grow at around 1.53m b/d in 2017, in line with last month's forecast. China is projected to lead oil demand growth in the non-OECD, followed by Other Asia — which includes India — and OECD Americas. In 2018, world oil demand is expected to grow by 1.51m b/d. OECD will contribute positively to oil demand growth, adding some 280,000 b/d, whereas the bulk of the growth will come from the non-OECD with 1.23m b/d of potential growth.

Non-OPEC **oil supply** growth for 2017 now stands at 810,000 b/d, representing an upward revision of 150,000 b/d from the previous report. For 2018, the forecast for non-OPEC supply growth has been revised up by 120,000 b/d to now stand at 990,000 b/d. The 2018 forecast for non-OPEC supply is associated with considerable uncertainties, particularly regarding US tight oil developments. US oil supply is now expected to grow by 1.05m b/d next year, representing an upward revision of 180,000 b/d and following growth of 610,000 b/d in 2017. OPEC NGLs and non-conventional liquids are expected to increase by 180,000 b/d in 2018, compared to 170,000 b/d this year. In November, OPEC crude production decreased by 133 tb/d, according to secondary sources, to average 32.45m b/d.

Product markets in the Atlantic Basin showed positive performance during November. In the US, higher export opportunities amid unexpected refinery outages product markets provided support. Product markets in Europe also improved, supported by counter-seasonal domestic gasoline demand, despite weakness in the middle of the barrel amid large diesel import volumes. In Asia, product markets showed marginal weakening, as lower middle and bottom of the barrel demand offset the positive contribution from firm regional gasoline consumption.

Tanker spot freight rates for dirty vessels were mostly stable in November, maintaining the gains achieved a month earlier and supported by seasonal tonnage demand. VLCC and Suezmax freight rates were flat m-o-m. Meanwhile, Aframax freight rates declined, mainly on the back of weak rates in the Mediterranean, which also exhibited a decline in clean tankers spot freight rates in November as market activities were limited.

Total OECD commercial **oil stocks** fell in October to stand at 2,948m b. At this level, OECD commercial oil stocks are 137m b above the latest five-year average. Crude and products stocks indicate a surplus of around 110m b and 27m b above the seasonal norm, respectively. In terms of days of forward cover, OECD commercial stocks stand at 62.1 days in October, some 1.8 days higher than the latest five-year average.

Based on the current global **oil supply/demand balance**, OPEC crude in 2017 is estimated to stand at 32.8m b/d, some 600,000 b/d higher than the 2016 level. In 2018, OPEC crude is forecast at 33.2m b/d, an increase of around 300,000 b/d over the 2017 level.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for December 2017. 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	2016 Nov	Dec	2017 Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Weeks 44-48-/2017 (week ending) Nov 3	Nov 10	Nov 17	Nov 24	Dec 1
Arab Light – Saudi Arabia	43.32	51.92	52.29	53.63	50.68	51.64	49.30	45.21	47.12	49.63	53.29	55.73	61.08	58.93	61.83	60.73	61.38	61.67
Basrah Light – Iraq	41.97	50.87	51.66	52.66	49.82	50.75	48.56	44.55	46.43	49.26	53.03	55.02	60.21	58.20	61.19	59.71	60.37	60.80
Bonny Light – Nigeria	45.20	53.91	54.98	55.24	51.91	53.02	50.77	46.92	48.66	51.69	56.55	57.97	63.29	61.52	64.90	62.29	63.11	64.22
Es Sider – Libya	43.63	52.12	53.08	53.46	50.00	51.04	48.90	44.87	46.96	50.31	55.07	56.48	61.58	59.89	63.19	60.58	61.40	62.54
Girassol – Angola	44.95	53.41	54.41	55.21	51.89	52.68	50.36	46.46	48.75	52.31	56.83	57.88	62.97	61.26	64.52	61.95	62.80	64.01
Iran Heavy – IR Iran	42.42	51.41	51.90	53.16	50.27	51.12	49.00	44.62	46.01	48.70	52.27	54.29	59.27	57.33	60.15	58.95	59.44	59.77
Kuwait Export – Kuwait	42.14	50.93	51.48	52.85	49.87	50.81	48.65	44.37	46.19	48.70	52.23	54.50	59.58	57.54	60.36	59.26	59.83	60.08
Marine – Qatar	44.25	52.08	53.44	54.14	50.89	52.39	50.24	46.26	47.45	49.71	52.91	55.14	60.47	58.33	61.14	60.31	60.86	60.83
Merey – Venezuela	39.37	45.86	46.81	47.03	44.14	46.15	45.16	42.49	43.41	45.38	49.13	50.70	55.86	53.64	56.40	55.70	56.25	56.27
Murban – UAE	47.25	54.93	55.97	56.31	52.96	54.32	51.96	47.86	49.02	51.51	54.94	57.39	62.76	60.71	63.52	62.63	63.06	63.05
Oriente – Ecuador	41.69	48.67	48.64	50.08	46.83	48.70	46.91	43.11	45.21	47.45	51.30	53.77	59.23	56.82	59.38	58.65	60.33	60.26
Rabi Light – Gabon*	43.92	52.22	53.13	54.04	50.63	51.71	49.48	45.45	47.54	50.69	55.10	56.31	61.66	59.87	63.27	60.66	61.48	62.62
Saharan Blend – Algeria	45.13	53.82	54.84	55.06	51.40	51.84	49.80	46.07	47.96	51.31	56.32	57.88	63.23	61.44	64.84	62.23	63.05	64.19
Zafiro – Equatorial Guinea*	43.40	52.77	53.80	54.75	51.73	51.98	49.96	45.92	48.19	51.67	56.57	57.73	62.75	60.96	64.34	61.73	62.57	63.79
OPEC Reference Basket	**43.22**	**51.67**	**52.40**	**53.37**	**50.32**	**51.37**	**49.20**	**45.21**	**46.93**	**49.60**	**53.44**	**55.50**	**60.74**	**58.72**	**61.66**	**60.29**	**60.94**	**61.35**

Table 2: Selected spot crude prices

$/b

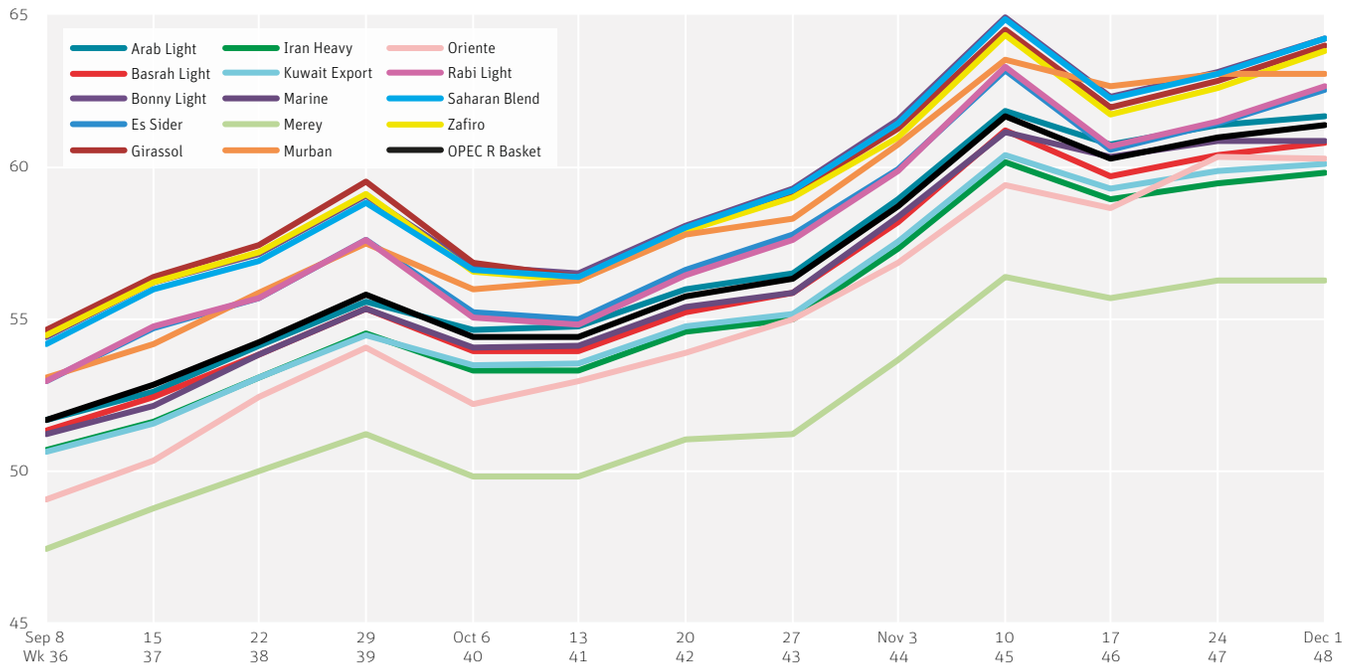
Crude/country	2016 Nov	Dec	2017 Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Weeks 44-48-/2017 (week ending) Nov 3	Nov 10	Nov 17	Nov 24	Dec 1
Arab Heavy – Saudi Arabia	40.96	49.70	50.56	51.97	48.86	49.97	47.92	43.64	45.76	48.55	51.78	53.99	59.03	57.00	59.89	58.79	59.20	59.38
Brega – Libya	45.18	53.52	54.43	54.86	51.40	52.19	49.85	45.77	47.61	50.76	55.34	56.78	61.99	60.31	63.59	60.98	61.80	62.95
Brent Dtd – North Sea	45.13	53.57	54.58	55.06	51.60	52.59	50.45	46.42	48.51	51.66	56.07	57.28	62.63	60.84	64.24	61.63	62.45	63.59
Dubai – UAE	43.98	52.08	53.71	54.41	51.21	52.31	50.47	46.38	47.59	50.24	53.51	55.63	60.81	58.77	61.67	60.60	60.96	61.05
Ekofisk – North Sea	44.97	53.67	54.62	55.17	51.50	52.57	50.43	46.40	48.63	52.30	57.15	57.85	63.28	61.33	65.03	62.25	62.87	64.51
Iran Light – IR Iran	43.45	51.85	52.35	52.35	49.13	50.04	47.34	43.85	47.03	50.85	54.45	56.25	62.12	60.04	63.82	61.26	62.08	62.74
Isthmus – Mexico	45.64	53.81	54.98	56.09	52.26	53.81	51.85	48.21	50.75	52.92	55.20	56.08	61.35	59.46	61.96	60.56	61.87	62.43
Oman – Oman	44.54	52.72	54.01	55.12	51.71	52.82	50.57	46.50	47.63	50.37	53.95	55.63	60.84	58.70	61.71	60.58	61.03	61.05
Suez Mix – Egypt	42.13	50.59	51.72	51.97	48.24	49.71	47.31	43.82	46.12	49.59	53.19	55.11	60.83	58.94	62.54	59.93	60.75	61.41
Minas – Indonesia*	40.72	49.68	50.63	51.19	48.35	47.95	45.96	42.65	43.96	45.91	49.20	50.55	55.50	53.53	56.36	54.93	55.65	56.36
Urals – Russia	43.83	52.28	53.42	53.67	49.94	51.55	49.04	45.52	47.82	51.30	54.89	56.81	62.53	60.64	64.24	61.63	62.45	63.11
WTI – North America	45.67	52.02	52.50	53.40	49.58	51.06	48.56	45.17	46.67	48.03	49.71	51.57	56.67	54.60	57.05	55.90	57.33	57.83

Note: As per the decision of the 109th ECB (held in February 2008), the OPEC Reference Basket (ORB) has been recalculated including the Ecuadorian crude Oriente retroactive as of October 19, 2007. As per the decision of the 108th ECB, the ORB has been recalculated including the Angolan crude Girassol, retroactive January 2007. As of January 2006, monthly averages are based on daily quotations (as approved by the 105th Meeting of the Economic Commission Board). As of June 16, 2005 (ie 3W June), the ORB has been calculated according to the new methodology as agreed by the 136th (Extraordinary) Meeting of the Conference. From January 2009–December 2015, the ORB excludes Minas (Indonesia). As of July 2016, the ORB includes Rabi Light (Gabon).

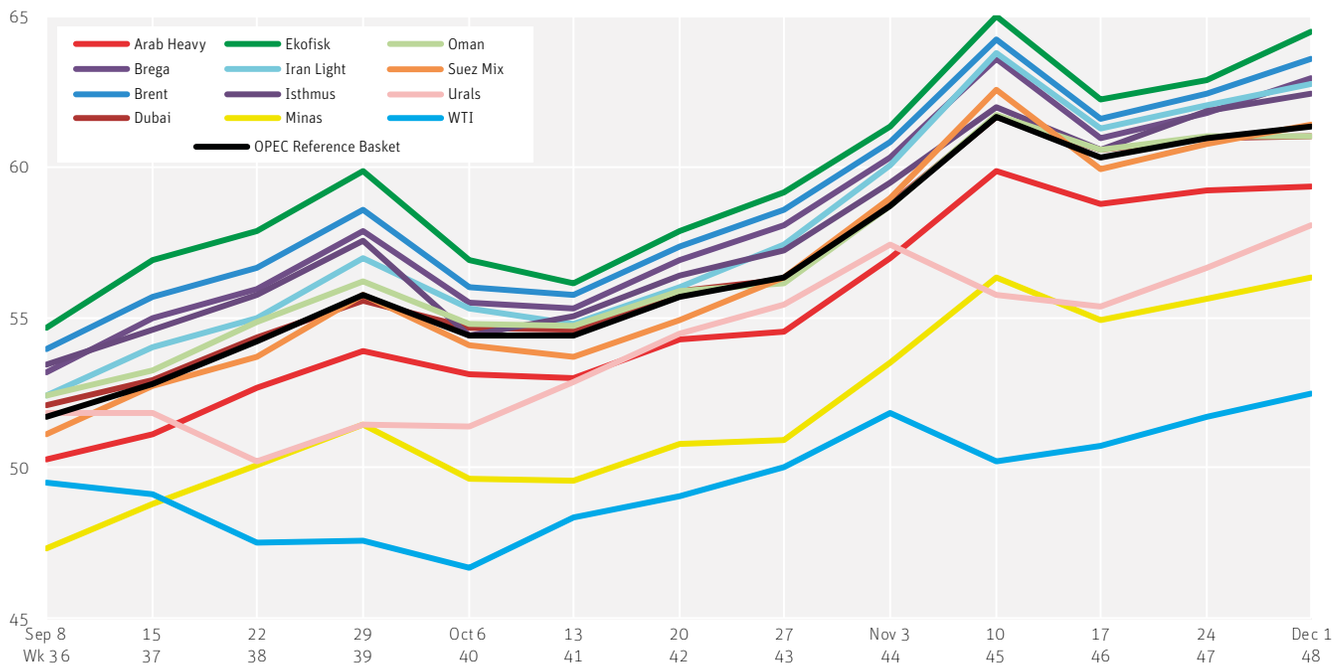
* *Indonesia joined in 1962, suspended its Membership on December 31, 2008, reactivated it again on January 1, 2016, but suspended its Membership again on December 31, 2016. Gabon joined in 1975 and left in 1995; it reactivated its Membership on July 1, 2016. Equatorial Guinea joined on May 25, 2017.*

Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.
Sources: The netback values for TJL price calculations are taken from RVM; Platt's; as of January 1, 2016, Argus; Secretariat's assessments.

Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2017 $/b



Graph 2: Evolution of selected spot crude prices, 2017 $/b



Note: As per the decision of the 109th ECB (held in February 2008), the OPEC Reference Basket (ORB) has been recalculated including the Ecuadorian crude Oriente retroactive as of October 19, 2007. As per the decision of the 108th ECB, the basket has been recalculated including the Angolan crude Girassol, retroactive January 2007. As of January 2006, monthly averages are based on daily quotations (as approved by the 105th Meeting of the Economic Commission Board). As of June 16, 2005 (ie 3W June), the ORB has been calculated according to the new methodology as agreed by the 136th (Extraordinary) Meeting of the Conference. As of January 2009, the ORB excludes Minas (Indonesia).
Indonesia suspended its OPEC Membership on December 31, 2008, this was reactivated from January 1, 2016, but suspended again on December 31, 2016.

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

$/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2016	November	45.82	64.62	57.36	57.29	40.98	35.71
	December	50.90	71.37	64.50	64.89	46.70	42.28
2017	January	55.06	73.82	65.60	65.05	50.60	43.03
	February	54.82	75.66	66.35	66.13	49.73	43.13
	March	50.70	70.06	62.29	62.21	44.86	39.94
	April	51.54	75.36	64.21	64.11	46.95	41.71
	May	48.43	72.61	61.13	61.11	46.26	40.64
	June	44.69	69.62	57.81	57.06	43.95	39.68
	July	47.29	70.31	61.17	60.90	45.03	42.23
	August	51.00	75.17	65.71	64.70	46.64	44.06
	September	55.76	79.57	70.72	71.33	49.82	47.00
	October	57.45	76.10	71.36	71.69	50.61	47.35
	November	63.44	82.88	78.12	75.35	55.64	51.68

Note: Prices of premium gasoline and diesel from January 1, 2008, are with 10 ppm sulphur content.

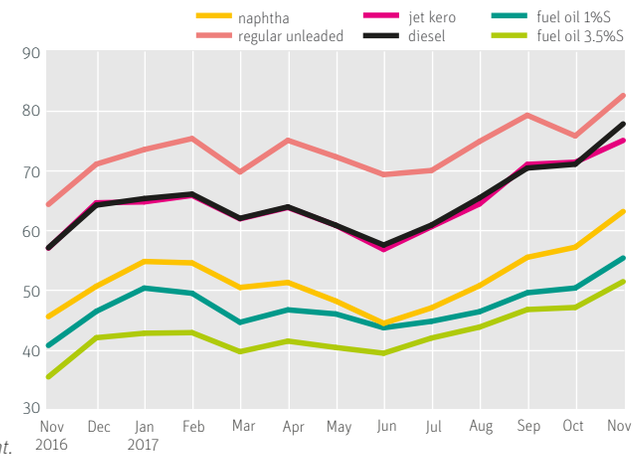


Table and Graph 4: South European market — spot cargoes, fob Italy

$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2016	November	45.09	57.83	57.93	40.71	37.30
	December	49.70	64.86	65.41	48.84	44.01
2017	January	54.21	66.95	66.54	52.19	45.77
	February	54.46	68.26	67.52	50.41	45.75
	March	49.55	62.59	63.15	46.24	42.34
	April	50.67	67.89	65.24	48.03	43.95
	May	47.31	63.74	62.28	47.10	42.85
	June	43.57	59.92	58.01	45.56	42.13
	July	46.31	61.17	62.06	45.35	43.60
	August	50.46	66.85	65.54	46.70	44.94
	September	54.97	71.24	71.77	49.97	48.10
	October	56.67	68.30	72.03	51.51	48.88
	November	62.85	72.97	76.17	56.06	53.14

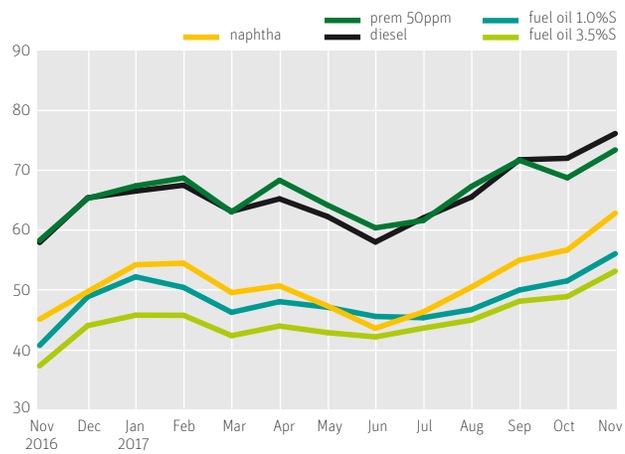


Table and Graph 5: US East Coast market — spot cargoes, New York

$/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
2016	November	61.34	55.44	57.47	48.22	38.69
	December	68.59	62.91	63.94	55.97	46.34
2017	January	67.54	64.13	65.12	59.23	48.51
	February	64.75	64.43	67.20	59.44	47.74
	March	62.83	60.48	62.20	53.62	44.19
	April	67.65	61.79	64.80	55.17	45.96
	May	64.47	59.10	60.71	52.99	43.94
	June	60.62	54.86	56.52	50.63	41.98
	July	65.78	58.03	62.55	53.78	45.17
	August	70.86	61.59	69.45	53.97	46.26
	September	77.64	68.78	76.57	58.56	48.81
	October	71.96	68.26	71.93	59.19	50.31
	November	77.29	75.33	77.53	64.25	55.65

* *FOB barge spot prices.*

Source: Platts. As of January 1, 2016, Argus. Prices are average of available days.

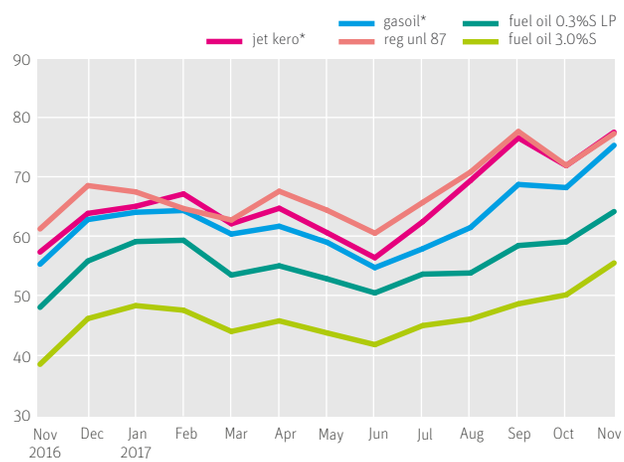


Table and Graph 6: Singapore market – spot cargoes, fob

$/b

		naphtha	premium gasoline unl 95	premium gasoline unl 92	gasoil	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
2016	November	46.82	58.99	56.51	56.84	56.63	43.90	41.68
	December	51.51	66.68	64.25	62.91	64.10	51.68	49.47
2017	January	55.71	69.47	66.77	65.15	65.17	55.05	50.47
	February	56.58	69.90	67.54	66.76	66.26	54.59	49.07
	March	50.82	64.28	61.94	62.94	61.93	50.74	45.64
	April	52.31	67.66	64.81	64.68	63.88	52.47	47.34
	May	48.71	64.40	61.68	61.19	60.82	51.58	46.01
	June	44.94	59.78	57.41	57.54	57.03	50.17	44.60
	July	45.92	61.76	59.02	61.05	59.77	50.45	45.58
	August	50.58	67.51	64.70	63.51	63.11	51.91	47.08
	September	55.20	70.43	67.55	68.49	68.08	55.73	50.55
	October	57.79	70.04	67.37	68.61	68.36	57.07	51.72
	November	64.67	75.59	73.07	73.14	74.02	62.02	56.67

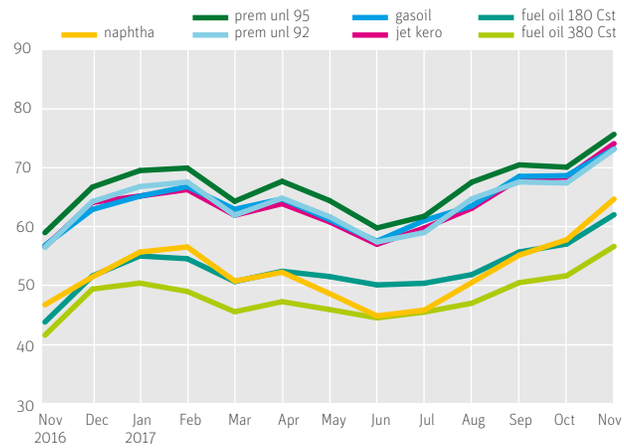
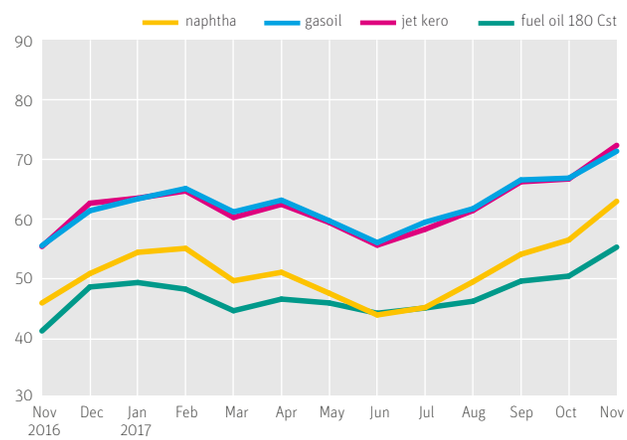


Table and Graph 7: Middle East Gulf market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2016	November	45.93	55.53	55.39	41.24
	December	50.85	61.39	62.65	48.61
2017	January	54.42	63.38	63.50	49.35
	February	55.08	65.11	64.70	48.24
	March	49.65	61.19	60.26	44.63
	April	51.07	63.16	62.46	46.58
	May	47.55	59.70	59.42	45.93
	June	43.92	56.05	55.62	44.21
	July	45.16	59.47	58.28	45.09
	August	49.48	61.73	61.43	46.22
	September	54.09	66.55	66.24	49.59
	October	56.49	66.85	66.71	50.43
	November	62.97	71.37	72.35	55.29

Source: Platts. As of January 1, 2016, Argus. Prices are average of available days.



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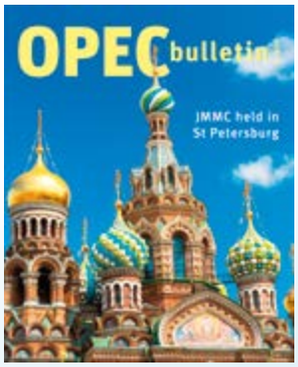

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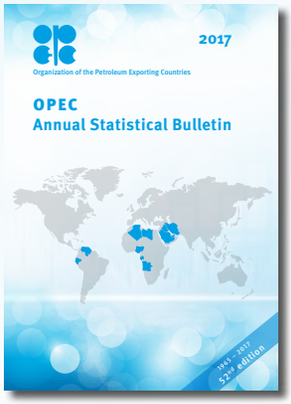

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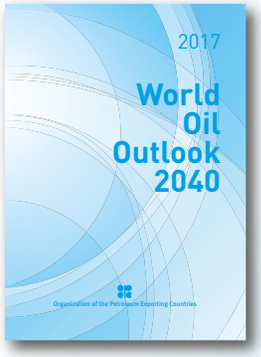

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