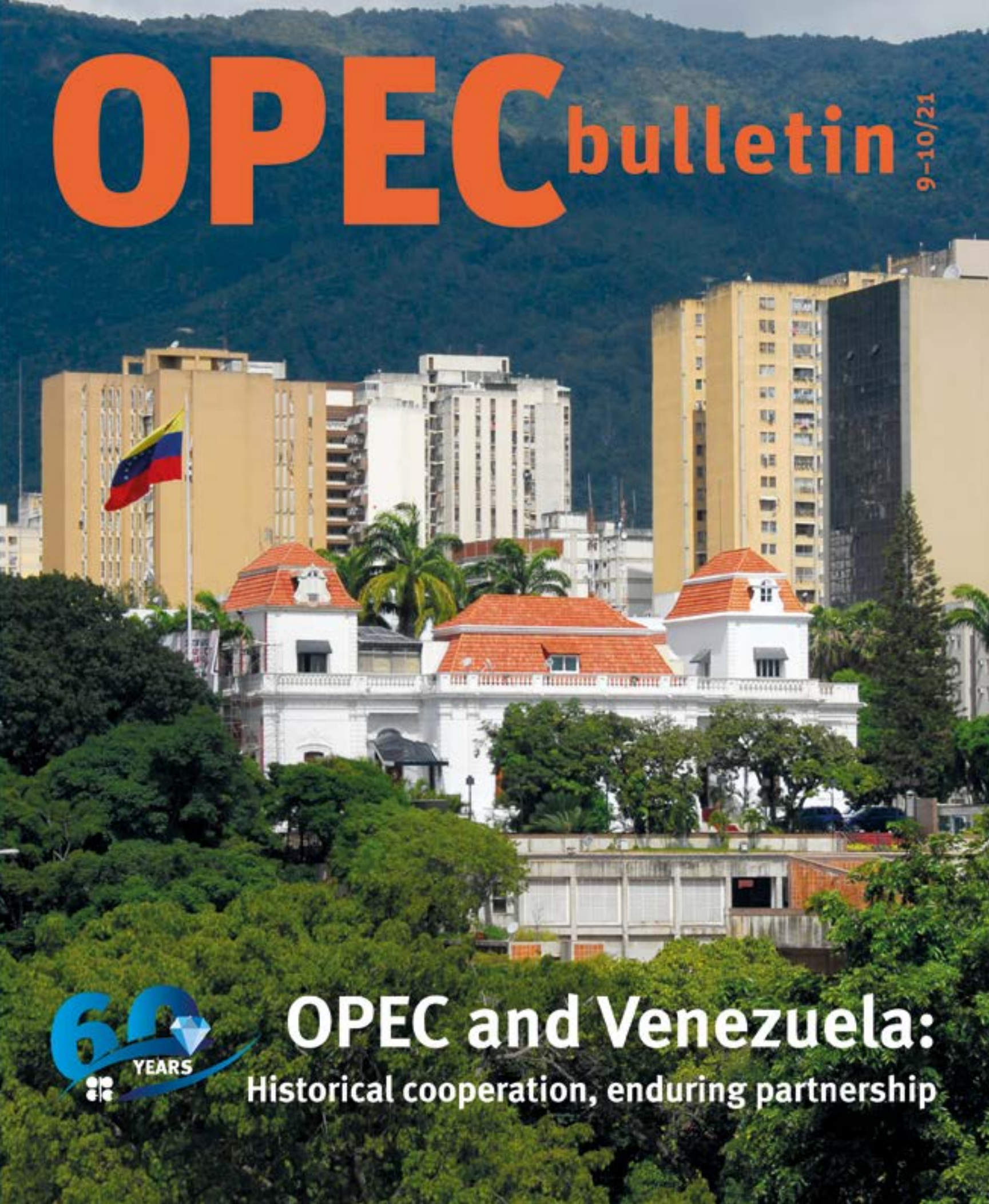
# OPEC bulletin

9–10/21



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# Algiers and its influence on the oil outlook

Each year the release of the *World Oil Outlook (WOO)* is a signature event on the OPEC calendar, drawing the attention of top energy analysists, market-watchers and journalists keen to mine one of the foremost publications of its kind.

This year's launch of the WOO's 15th edition, on September 28, was no different. Besides providing the OPEC Secretariat's in-depth analysis of the impacts of the COVID-19 pandemic, it contains much-anticipated medium- and long-term projections for the global oil and gas industry. This year's edition broke new ground with a chapter focused on India, the country that is expected to be the largest contributor to incremental global oil demand for the foreseeable future.

The launch of the WOO on September 28 coincided with another significant milestone. On that day in 2016, the 170th (Extraordinary) Meeting of the OPEC Conference established a High-Level Committee to develop a framework for consultations between OPEC and non-OPEC oil-producing countries. The decision came about in response to the acute imbalances that had roiled the oil market for two years.

The historic decisions of the 170th OPEC Conference, meeting in Algiers, created the impetus for the key outcomes of the 171st Meeting of the OPEC Conference in Vienna a few weeks later, on November 30. These efforts culminated in the signing of the landmark 'Declaration of Cooperation' (DoC) framework by OPEC and ten non-OPEC oil-producing countries on December 10, 2016.

"The series of events that took place five years ago, starting with the 'Algiers Accord' and leading to the signing of the DoC, represent pivotal moments in the history of OPEC," Mohammad Sanusi Barkindo, OPEC Secretary General, said on the fifth anniversary of the meeting in Algiers. "Though the visionary leaders at the time could not foresee a challenge as monumental as the COVID-19 pandemic, a large part of the oil market stabilization that has occurred over the past 18 months can be attributed to the historic actions undertaken by the countries in the DoC.

"Together," he added, "we have averted a far deeper market crisis, helped restore order to the global oil market, and have provided a platform for recovery. We would not be where we are today were it not for the key decisions taken in Algiers in September 2016 that helped pave the way for this historic level of cooperation by OPEC and non-OPEC oil-producing countries."

The year 2021 may well be remembered as a time of recovery and renewed potential following one of the most tumultuous episodes in the history of oil. The DoC's bold and decisive actions that began in April 2020 have supported the draw-down of inventory levels, helped restore stability and boosted market confidence. These efforts have not gone unnoticed by policymakers, energy analysts and some of the biggest names in the international oil industry. The CEO of one oil major called the OPEC-led efforts 'brilliant', while another credited his company's rebound this year in part to the DoC's actions.

Recognizing the need for continued diligence, the OPEC and non-OPEC participants, meeting in July this year, extended their current efforts beyond the original April 2022 target until the end of 2022. They also set the stage to support the economic recovery through upward production adjustments of 400,000 b/d, a decision reaffirmed at the September and October Ministerial Meetings.

Without such efforts to steer the oil market through the pandemic, it is difficult to see how the oil industry could regain lost ground and keep pace with the expected 28 per cent growth in primary energy demand and doubling of the global economy between 2020 and 2045. As the 15th edition of the WOO points out, the historic response to the pandemic-induced market slump "was a sign not only of the commitment, motivation and dedication of OPEC and the DoC partners in attending to the short term, but in focusing on the medium and long term too."

Against this backdrop, the developments in Algiers on September 28, 2016, have earned a well-deserved place in the history books. Yet the foundation for these achievements was actually laid decades ago, on September 14, 1960, when OPEC was founded at the Al-Shaab Hall in Baghdad. Today, the timeless value of the Organization is reflected in its tireless pursuit of cooperation to support the sustainable stability of a commodity that will remain essential to the world's energy needs for decades to come.



Russian Energy Week

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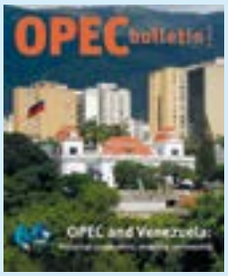
OPEC bulletin




**Cover**
*This month's cover reflects the OPEC Secretary General's mission to Venezuela in September 2021, showing the Miraflores Presidential Palace in Caracas (see article on page 16). Cover image courtesy Alamy.*

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**OPEC Membership and aims**
OPEC is a permanent, intergovernmental Organization, established in Baghdad, on September 10–14, 1960, by IR Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. Its objective — to coordinate and unify petroleum policies among its Member Countries, in order to secure a steady income to the producing countries; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the petroleum industry. Today, the Organization comprises 13 Members: Libya joined in 1962; United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); Nigeria (1971); Angola (2007); Equatorial Guinea (2017). Ecuador joined OPEC in 1973, suspended its Membership in 1992, rejoined in 2007, and suspended its Membership again on December 31, 2019. Qatar joined in 1961 and left on December 31, 2018. Indonesia joined in 1962, suspended its Membership on December 31, 2008, reactivated it on January 1, 2016, but suspended its Membership again on December 31, 2016. Gabon joined in 1975 and left in 1995; it reactivated its Membership on July 1, 2016. The Republic of the Congo joined the Organization on June 22, 2018.









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# OPEC launches 15th edition of the World Oil Outlook

***With ongoing analysis of the impacts of the COVID-19 pandemic, as well as medium- and long-term forecasts for the global oil and energy industry, the World Oil Outlook (WOO) was launched from the OPEC Secretariat in Vienna on September 28. The* OPEC Bulletin *reports on the event, and the key findings of this year's Outlook.***

"For the second year it has not been an easy task, given the restrictions on office-based working (due to the COVID-19 pandemic), but I salute each and every one of you for your dedication and commitment to delivering this flagship annual publication," the OPEC Secretary General, Mohammad Sanusi Barkindo, said in his foreword to the WOO 2021.

The acknowledgement was to all those involved in researching, writing, editing, producing and distributing the 15th edition of the publication, including the tireless support of Member Countries, Ministers, Governors and National Representatives. It had been another tough year, but the WOO team had delivered yet again.

The event was moderated by Eithne Treanor and included comments from Hardeep Singh Puri, India's Minister of Petroleum and Natural Gas and Minister of Housing and Urban Affairs, and Professor Thomas Lindner from the Executive Academy of the Vienna University of Economics and Business.

Singh Puri recognized the commendable work undertaken by the OPEC-India high-level dialogue and added that "the ground is fertile for our increased cooperation and I look forward to working with you to achieve even stronger India and OPEC relations."

He also stated that the decision to have an Indian-centric chapter in the WOO 2021 is a further step towards getting a better appreciation of India's perspectives and policy priorities. This was also referenced by Barkindo, who said that "it is a clear sign of our ongoing and ever-evolving cooperation, which continues to go from strength-to-strength."

With the Executive Academy of the Vienna University of Economics and Business sponsoring the event, Lindner underscored the positive relations that the academy has with OPEC and the Organization continues to "an important partner for our activities in research and teaching." Barkindo concurred in his remarks, stating that "our relationship … has solidified and expanded in recent years, and we look forward to it flourishing further in the years to come."

## Another challenging year

In reviewing the past year, Barkindo began by stressing


*OPEC Secretary General, Mohammad Sanusi Barkindo, presents the World Oil Outlook 2021.*

it had been another challenging one. "The COVID-19 pandemic has continued to upend the world, with the spread of new variants, particularly the Delta one, and many countries and regions today still face some form of lockdowns and restrictions on mobility."

Nonetheless, he said, it is clear "that the vaccination rollout in 2021, alongside huge fiscal and infrastructure packages totaling around $24 trillion, has put the global economy on the road to recovery."

Moreover, he added, the "decisive actions of OPEC and non-OPEC participants in the 'Declaration of Cooperation' (DoC), with flexibility and adaptability to the fore in ensuring that the production adjustments enable a balanced and sustainable oil market, have also had a positive knock-on impact for the global economy."

The WOO itself underscores the seismic changes that the world has undergone as a result of the COVID-19 pandemic, provides an in-depth review and analysis of the global oil and energy industries, and offers a thorough assessment of various sensitivities in the medium- and long-term development of the oil industry. This assessment includes insights into the upstream and downstream, supply and demand, investments, the potential impact of policies, and the environment and sustainable development.

In providing an overview of the key takeaways, the Secretary General also stressed that it is important to reiterate that the *Outlook* is not about making predictions. "No one has a crystal ball. The *Outlook* should be viewed as a helpful and insightful reference tool, one that underscores the Organization's commitment to knowledge sharing and data transparency."


*Hardeep Singh Puri, India's Minister of Petroleum and Natural Gas.*

*Dr Ayed S Al-Qahtani, Director of OPEC's Research Division.*

## More energy required

Barkindo underlined that the world will need more energy in the decades to come. "In the period to 2045, the global economy is estimated to more than double; world population is set to expand to 9.5 billion; and we need to remember that there is huge potential for socio-economic development in terms of expanding access to modern energy services for those billions who continue to go without."

In the period to 2045, the WOO 2021 sees global energy demand expanding by 28 per cent. With this, Barkindo said, we need to draw on the strengths of all energy forms to support the post-pandemic recovery, the energy transition and address long-term energy needs.

"Renewables witness the largest growth," said Barkindo, rising from a global fuel share of around two per cent in 2020 to over ten per cent by 2045. He also noted that OPEC Member Countries are making significant investment in renewables as they look to diversify their energy mix.

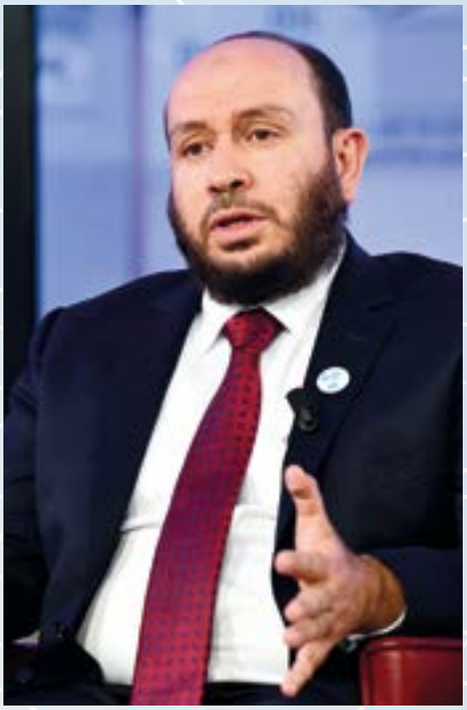
Gas sees the second largest growth in the Outlook, driven in part by higher urbanization rates, industrial demand and its competiveness over coal in power generation. In fact, all energies are set to witness growth, with the exception of coal.

It is oil, however, that retains its number one position in the energy mix, stated Barkindo. It is still expected to provide 28 per cent of global energy needs by 2045.

## Oil supply and demand

From the perspective of oil demand, Barkindo highlighted that "given the huge 9.3 million barrels a day (m b/d) drop in global oil demand in 2020, incremental demand by 2026 is almost 14m b/d higher than in 2020, albeit only 4.4m b/d higher than in 2019." Long-term oil demand growth slows over the outlook period and total demand reaches just over 108m b/d by 2045.

Following the energy trend, it is the non-OECD that dominates oil demand growth, led by India, China, other Asian countries, OPEC and Africa. The OECD sees a steady decline from around the mid-2020s onwards.



*Dr Abderrezak Benyoucef, Head of OPEC's Energy Studies Department.*

*Irene Etiobhio, Senior Petroleum Industry Analyst.*

*Dr Jan Ban, Senior Research Analyst.*

On the supply side, Barkindo stated that "non-OPEC liquids supply is set to continue the recovery witnessed in 2021. It is forecast to expand by 7.5m b/d from its 2020 low to 70.4m b/d in 2026." Beyond the medium term, however, non-OPEC liquids peak in the late 2020s, in line with US tight oil, then slowly decline to 65.5m b/d by 2045. In fact, non-OPEC liquids are forecast to be at the same level in 2045 as they were in 2019.

It means that OPEC liquids, said Barkindo, recover to pre-pandemic levels around 2025 and rise strongly thereafter to reach a level of nearly 43m b/d in 2045. In terms of market share, this implies an increase from 33 per cent in 2020 to 39 per cent by 2045.

## Investment

To support the expected expansion, the WOO 2021 shows that investments of $11.8 trillion will be required between now and 2045 in the upstream, midstream and downstream sectors.

Placing this in some further context, Barkindo underscored that "upstream capital expenditure fell by around 30 per cent in 2020 as a result of the impact of the pandemic, and this follows drops of 27 per cent in both 2015 and 2016."

He added that "the investment requirements clearly underline that any talk of the oil and gas industries being consigned to the past and of the need to halt new investments in oil and gas is wrong-headed.

"If the necessary investments are not made it could have knock-on implications, as viewed in current gas developments in Europe and elsewhere around the world, leaving long-term scars, not only for producers, but consumers too."

In highlighting these recent events, he said: "We are witnessing strains and conflicts related to energy affordability, energy security and reducing emissions. Focusing on only one of these issues, while ignoring the others, can lead to unintended consequences, such as market distortions and price volatility … It is not in the interests of either producers or consumers."

He added that it once again "shows us the need for a diversified energy mix in a stable, inclusive and

*Professor Thomas Lindner of the Executive Academy of the Vienna University of Economics and Business.*

*Eithne Treanor moderated the launch.*

equitable energy transition. We should have a holistic view of the energy sector, and not put all our eggs in one or two baskets."

## Challenges and uncertainties

The *Outlook* also underscores significant uncertainties for the supply and demand outlooks, related to possible alternative GDP growth trajectories, additional policy measures supporting faster fuel substitution and penetration of more efficient technology, as well as supply side risks.

Barkindo also underlined that the global energy future is also focused on "shrinking global emissions, alleviating energy poverty, and finding a sustainable way forward that delivers for each and every person on this planet." He added that it is vital to "tackle both climate change and energy poverty, within the context of sustainable development and the UN SDGs, with SDG7 calling for universal and sustainable energy access."

In looking at the role of the oil and gas industries, he said that "there is no doubt that the oil and gas industry can foster its resources and expertise and help unlock our carbon-free future, through its role as a powerful innovator in developing cleaner and more efficient technological solutions to help reduce emissions."

With COP26 on the horizon, the Secretary General reiterated that "OPEC and its Member Countries have been directly involved in the evolution of the UN Framework Convention on Climate Change (UNFCCC), which birthed the Kyoto Protocol and the Paris Agreement, and fully support the multilateral approach to addressing climate change and the energy transition. He added that "the core principles of the UNFCCC, particularly equity, historical responsibility and national circumstances, as well as common but differentiated responsibilities and respective capabilities, must be considered at all junctures moving forward."

## Panel session

Following the opening remarks and a video of the highlights of the WOO 2021, a panel session ensued with Dr Ayed S Al-Qahtani, Director of OPEC's Research Division, and Dr Abderrezak Benyoucef, Head of the Energy Studies Department, leading an engaging discussion. It included the Secretary General, as well as key WOO contributors and analysts, Irene Etiobhio, Senior Petroleum Industry Analyst, and Dr Jan Ban, Senior Research Analyst.

The panel responded to a variety of questions on relevant topics, including what is new in this year's *Outlook*; oil demand trajectories, when compared to other forecasting institutions; prospects for Africa; the penetration of electric vehicles; the energy transition; $CO_2$ emissions; US tight oil supply forecasts; investments; the petrochemical sector; and the outlook for the downstream.

In concluding, Barkindo said that "the *Outlook* offers continuity in a time of disruption; and stability in a time of uncertainty." It is, he added, "part of OPEC's ongoing focus on promoting international cooperation and dialogue. This is 'front and centre' of everything OPEC stands for and the actions we take." This was evident in the openness and transparency of the panel session.

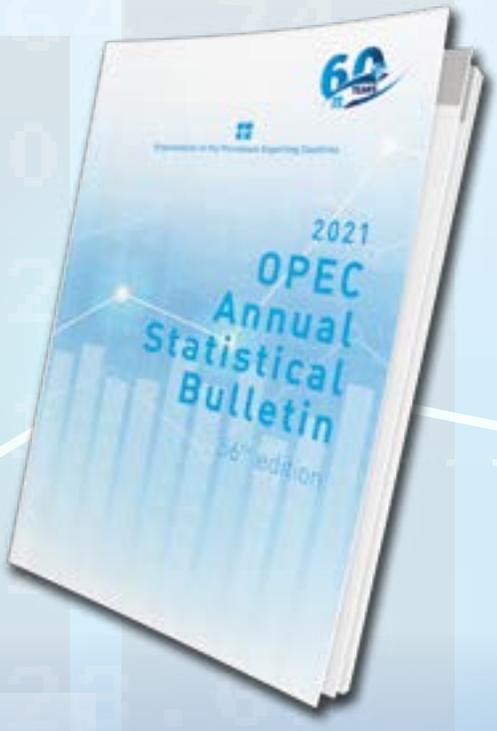
He ended with a line Jalal-ad-Din-Muhammad Rumi: *"Patience with small details makes perfect a large work, like the universe."*

It is an apt line for the *Outlook*, and one also for the Organization, he stated. "We do not leave any stone unturned. It is the small things we do that are the building blocks for success, whether that be in our research and analysis, our publications, our commitment to dialogue and cooperation and in helping balance and stabilize the market."

# Specific highlights from the WOO 2021

- The year 2020 saw the largest ever global drop in energy and oil demand, but 2021 has witnessed a significant rebound as vaccines were rolled out, lockdowns were eased, mobility increased, economies opened up further, and fiscal and infrastructure packages were implemented.
- Total primary energy demand is set to expand by a robust 28 per cent in the period to 2045.
- All forms of energy will be needed to support the post-pandemic recovery in a sustainable way, balancing the needs of people in relation to their social welfare, the economy and the environment.
- 'Other renewables' — combining mainly solar, wind and geothermal energy — see the largest growth in both absolute and percentage terms, leading to a share over ten per cent by 2045. Gas witnesses the second largest increase in absolute terms.
- Oil is expected to retain the largest share of the energy mix throughout the outlook period, accounting for just over a 28 per cent share in 2045.
- All major fuel types witness growth, with the exception of coal.
- Global oil demand is forecast to reach 108.2m b/d by 2045, from a low of 90.6m b/d witnessed in 2020.
- The non-OECD drives oil demand with growth of 25.5m b/d by 2045 (compared to 2020), whereas the OECD region is expected to contract by 7.9m b/d.
- India is expected to be the largest contributor to incremental demand, adding 6.5m b/d between 2020 and 2045.
- Oil demand in road transportation will continue to dominate the sectoral breakdown, increasing by 6.3m b/d over the forecast period, with the total vehicle fleet (passenger and commercial vehicles) set to expand by over 1.1 billion by 2045 to around 2.6bn.
- The long-term share of alternative fueled vehicles in the total fleet is projected to reach a level of around 24 per cent in 2045, but conventional vehicles remain dominant.
- Oil demand in the aviation sector was most affected by COVID-19 restrictions in relative terms, but it is projected to recover in the long term with an expected expansion of 5.8m b/d out to 2045.
- Non-OPEC liquids supply is expected to continue its recovery and grow by 7.5m b/d from its 2020 low to 70.4m b/d in 2026, driven by US tight oil, as well as barrels from Brazil, Russia, Guyana, Canada and Kazakhstan.
- After US supply peaks at 20.5m b/d around 2030, total non-OPEC liquids supply is also expected to decline, reaching 65.5m b/d in 2045.
- OPEC liquids, which recover to pre-pandemic levels by around mid-decade, rise strongly thereafter, reaching nearly 43m b/d in 2045. In terms of market share, this implies an increase from 33 per cent in 2020 to 39 per cent by 2045.
- Estimated refining capacity additions in the medium term are a robust 6.9m b/d, while another 7.1m b/d of incremental capacity is required in the long term, predominantly in developing countries.
- Refinery capacity closures of 4.5m b/d between 2020 and 2026, mostly in developed countries, will help to balance out the downstream market in the medium term.
- After the 2020 drop, global inter-regional crude and condensate trade is projected to recover and reach levels above 38m b/d in 2025, and increase further to above 40m b/d from 2035 onwards.
- The Asia-Pacific region is the main outlet for crude and condensate imports, increasing from 23.5m b/d in 2019 to almost 30m b/d in 2045. The Middle East remains the largest supplier to this region, increasing exports by 4.8m b/d over this period.
- Cumulative oil-related investment requirements amount to $11.8 trillion in the 2021–45 period. Of this, 80 per cent, or $9.2tr is in the upstream, with another $1.5tr and $1.1tr needed in the downstream and midstream, respectively.
- The pandemic has affected UN climate change and sustainable development processes, with implications for the implementation of the Paris Agreement and the 2030 Agenda.
- Enhanced global cooperation could allow for a more coherent, balanced and integrated approach for realizing the Paris Agreement and interlinked 'Sustainable Development Goals'.
- Technological advancements are set to shape the global energy landscape and the world needs to look for cleaner and more efficient technological solutions everywhere, across all available energies.
- Uncertainties related to the outlook for oil demand and supply are abundant, and will need to be closely monitored.

# OPEC launches 2021 Annual Statistical Bulletin




WU EXECUTIVE ACADEMY

***On September 30, 2021, OPEC officially released the 56th edition of its flagship Annual Statistical Bulletin (ASB) at a special launch event, which was livestreamed via the OPEC website and the Organization's YouTube channel. The* OPEC Bulletin's *Scott Laury reports.***

The special launch event was attended by Mohammad Sanusi Barkindo, OPEC Secretary General; Professor Thomas Lindner of the Executive Academy at the Vienna University of Economics and Business (WU), which sponsored the launch event; as well as OPEC officials and members of Management.

## Information into insight

The Secretary General began by welcoming all to the event and provided an historical perspective on the ASB. "First published in 1965 and now in its 56th edition, the Annual Statistical Bulletin is one of OPEC's flagship publications," he explained. "Through the decades, it has become a highly valued resource for stakeholders across the industry."

He added that over its lifespan, the ASB has covered a wide variety of industry environments and oil market cycles that have experienced great successes but also very challenging down-swings.

Through it all, he said, the ASB has, "time and again successfully fulfilled its mandate of providing a thorough, yearly statistical overview on OPEC's Member Countries and the global industry."

*Mohammad Sanusi Barkindo, OPEC Secretary General, presents the 2021 Annual Statistical Bulletin together with OPEC staff members.*

*Panelists Mohammad Sanusi Barkindo (third l), Secretary General; Dr Ayed S Al-Qahtani (second l), Director of OPEC's Research Division; Boshra AlSeiari (third r), Head, Data Services Department; Mohamed Mekerba (second r), IT Development Coordinator; Dr Hossein Hassani (l), Statistical Systems Coordinator; and Dr Pantelis Christodoulides (r), Senior Statistical Research Analyst.*


*Professor Thomas Lindner of the Executive Academy at the Vienna University of Economics and Business (WU).*


Quoting a corporate chief executive, Barkindo said "'The goal is to turn data into information and information into insight'. These words encapsulate perfectly what we are trying to achieve with this publication."

In reference to the publication's content, he said that the ASB has become as a leading industry reference for time-series data detailing key aspects of the petroleum industry, such as production, demand, imports, exports, exploration, transportation and refining. It also features key statistics on the oil and gas activities in OPEC's 13 Member Countries: Algeria, Angola, Congo, Equatorial Guinea, Gabon, IR Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates and Venezuela.

The 2021 edition, he noted, also captures the wide-ranging industry impacts of the COVID-19 pandemic.

"This year's edition reflects some of massive shifts in the industry that have resulted from the unprecedented effects of last year's COVID-19 pandemic," he said. "This global health crisis has had massive implications for OPEC's Member Countries and the entire industry value chain, which are still in various stages of recovery. These trends are captured in the ASB's extensive time-series data, which will provide industry leaders and analysts alike with valuable input as to the future prospects for the industry."

## Data accuracy and transparency

Emphasizing the value the ASB provides to its readership, which includes industry leaders and policymakers, he said, "What they glean from the pages of the ASB will help them both form their insights and inform their decisions."

The Secretary General also emphasized the crucial importance of data accuracy and transparency to supporting stability in the global oil market.

"We at OPEC are dedicated to enhancing data transparency through broad dissemination of accurate and


timely oil and gas data, not only for the ASB, but for all of our publications," he stated. "Indeed, maintaining transparency in all that we do underpins our core goal of establishing sustainable oil market stability."

In line with the Secretariat's efforts to expand access to the ASB, this year's edition is available as an interactive version and a PDF on the OPEC website, as well as through a smart app compatible with iOS and Android platforms.

"In order to maximize access to this publication, we continue to leverage the latest emerging technologies to make the ASB's valuable content available at virtually any time and wherever you may be in the world," he said.

*Eithne Treanor moderated the event.*

## Optimizing data flows

The Secretary General emphasized that data will remain at the core of OPEC's activities, and praised the ongoing efforts of OPEC and its non-OPEC partners of the 'Declaration of Cooperation' (DoC) who continue to make highly responsible and effective decisions based on accurate and timely data, and, all of this, on behalf of furthering stability in the global oil market.

He also recognized the ongoing contributions of the OPEC Conference, the Board of Governors and the Economic Commission Board — OPEC's economic think-tank — for their highly valuable contributions to helping optimize data flows in the interest of oil market stability.

Another priority area highlighted by Barkindo is the ongoing collaboration with the Joint Organisations Data Initiative (JODI), which he said is helping "ensure that accurate, timely and transparent data flows are constantly being optimized for the benefit of our joint efforts and for the wider oil industry."

He concluded by thanking the OPEC Secretariat staff and the Member Countries for their many hours of hard work and dedicated efforts in producing this high-quality publication.

"I would like to take a moment before closing to thank our colleagues at the OPEC Secretariat for their formidable efforts in collaborating with our Member Countries to develop this excellent piece of work," he said. "I commend you all for producing a publication of high quality and timeliness that will be of great benefit to industry stakeholders."

## Roundtable and media Q&A

The event then featured a screening of the official ASB video highlighting the main takeaways from this year's ASB. This was followed by a roundtable panel discussion with Secretariat research analysts led by Boshra AlSeiari, Head of OPEC's Data Services Department, which focused on the themes and highlights of this year's edition of the ASB. Finally, a media question and answer period took place, before the Secretary General concluded the event with closing remarks.

"Year after year, for 56 years now, we have steadily enhanced the ASB and refined it to the point at which it has become a standard-bearer in this industry," the Secretary General said. "Consequently, today, industry stakeholders rely on it as a trusted and valuable source. Thus, it is with great pleasure that we once again release this flagship publication and provide it as a service to the global energy industry. The ASB is just one of many initiatives OPEC continues to pursue in our overarching goal of promoting oil market stability, strengthening transparency while deepening the understanding of OPEC's role within the global energy community."

# ASB 2021 key data points

Total world crude oil production declined in 2020 by 6.15 million barrels per day (m b/d), or 8.2 per cent, as compared to 2019, to average 69.09m b/d, marking a historical year-on-year drop notably after the outbreak of the COVID-19 pandemic. OPEC crude oil production declined sharply year-on-year by 3.72m b/d, or 12.7 per cent, while crude production by non-OPEC countries fell by 2.43m b/d, or 5.3 per cent.

With an average of 90.73m b/d in 2020, world oil demand was heavily impacted by the COVID-19 pandemic and fell by a historic 9.30m b/d y-o-y. OECD oil demand fell sharply in 2020, while in the non-OECD it declined for the first year in history. Oil demand in OPEC Member Countries was sluggish in 2020, losing 8.2 per cent y-o-y. Distillates and gasoline accounted for around 55.1 per cent of 2020 world oil demand with a steep downward trend, amid COVID-19 containment measures. Residual fuel oil requirements were about 7.1 per cent of total oil demand in 2020.

OPEC Member Countries exported an average of 19.70m b/d of crude oil in 2020, a sharp decrease of about 2.78m b/d, or 12.4 per cent, compared to 2019 and marking the fourth consecutive annual decline. Following the pattern in previous years, the bulk of crude oil from OPEC Member Countries — 14.43m b/d or 73.2 per cent — was exported to Asia, particularly China and India. Considerable volumes of crude oil — about 3.13m b/d — were also exported to OECD Europe in 2020, which, however, represents a decline compared with 3.74m b/d recorded in 2019. OECD Americas imported 840,000 b/d of crude oil from OPEC Member Countries, which was about 380,000 b/d, or 31.1 per cent, less than the 2019 volumes.

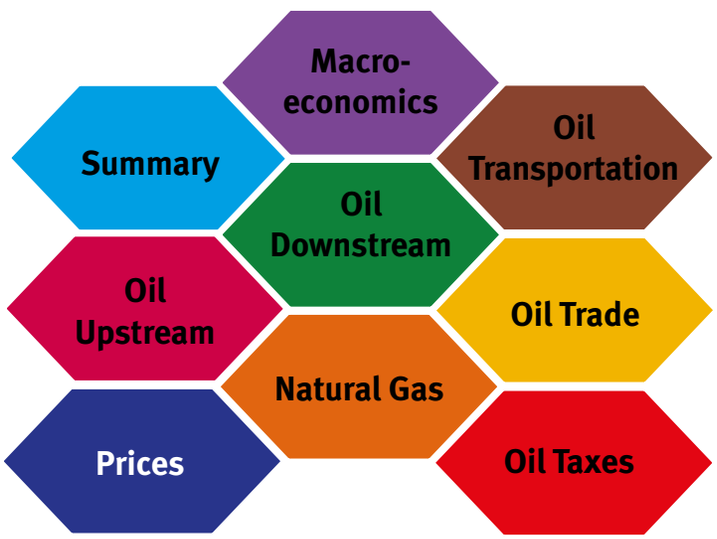
Exports of petroleum products from OPEC Member Countries averaged 3.48m b/d during 2020, down by around 400,000 b/d, or 10.4 per cent, compared to 2019. Imports of petroleum products by OPEC Member Countries averaged at 1.52m b/d in 2020, roughly 170,000 b/d, or 9.8 per cent, lower than in 2019.

World proven crude oil reserves stood at 1,549 billion barrels at the end of 2020, increasing by 0.2 per cent from the level of 1,546bn b recorded at the end of 2019. Proven crude oil reserves in OPEC Member Countries increased by 0.3 per cent to 1,237bn b at the end of 2020, following a firm increase during 2019.

At the end of 2020, world proven natural gas reserves fell by 0.4 per cent to approximately 206.7 trillion standard cubic metres (cu m). Proven natural gas reserves in OPEC Member Countries stood at 73.74tr standard cu m at the end of 2020, down 1.4 per cent from the level at the end of 2019.

World refinery capacity shrank by 300,000 barrels/calendar day (b/cd) to stand at 101.1m b/cd during 2020. The non-OECD region, particularly China, other Asia and the Middle East, recorded refining capacity additions. Refinery capacity in the OECD declined sharply in 2020, as compared to 2019. Globally, refinery throughput fell by a historic 9.1 per cent to reach 78.0m b/d in 2020, amid bearish oil demand during the COVID-19 pandemic.

The OPEC Reference Basket averaged $41.47/b in nominal terms during 2020, down from $64.04/b in 2019, a strong decrease of $22.57/b, or 35.2 per cent. The volatility level was $12.55/b, or 30.3 per cent, relative to the yearly average.



*On his mission to Venezuela, Mohammad Sanusi Barkindo (l), OPEC Secretary General, met with Nicolás Maduro, President of the Bolivarian Republic of Venezuela.*

# OPEC and Venezuela: Historical cooperation, enduring partnership

***The relationship between OPEC and Venezuela has been marked by many shared milestones since the founding of the Organization in 1960 — including in recent years the landmark 'Declaration of Cooperation' (DoC) in 2016 and the endorsement of the 'Charter of Cooperation' (CoC) in 2019. This rich mutual history was manifested throughout the Secretary General's mission to Venezuela in September 2021. The*** OPEC Bulletin's ***Ayman Almusallam reports on the visit.***

The significant role played by Venezuela in the oil industry and its history is undoubtedly evident. For example, the country is not only a Founder Member of OPEC, but its relationship with fellow Founder Members and crude oil producers dates to before the establishment of the Organization.

Venezuela was a key architect of the 'Gentlemen's Agreement' with Iran, Iraq, Kuwait and Saudi Arabia in 1959 at the Maadi Yacht Club in Cairo, Egypt, which culminated in the founding of OPEC on September 14, 1960, in Iraq at the seminal 'Baghdad Conference'.

In this spirit, OPEC Secretary General, Mohammad Sanusi Barkindo, visited Venezuela in September of this year at the gracious invitation of its government to celebrate the Organization's 61st Anniversary.

The mission lasted for four days and included several high-level engagements and bilateral meetings, including with Nicolás Maduro, President of Venezuela; Delcy Rodríguez Gómez, the country's Vice President; Tareck El Aissami, People's Minister of Petroleum and Head of Delegation to OPEC; Félix Plasencia, Minister of Foreign Affairs; and Asdrúbal Chávez, President of the national oil company — Petróleos de Venezuela SA (PDVSA).


*Delcy Rodríguez Gómez (l), Venezuela's Vice President, with Mohammad Sanusi Barkindo, OPEC Secretary General.*

## Advocacy of OPEC and DoC

During his meeting with the Secretary General, President Maduro conveyed the reassurance of Venezuela's utmost support to OPEC and the DoC, praising the strength of the partnership between OPEC and non-OPEC oil producing participants to address oil market challenges.

The President also highlighted the leading role played

*Tareck El Aissami (l), People's Minister of Petroleum and Head of Delegation to OPEC, with Secretary General Barkindo.*

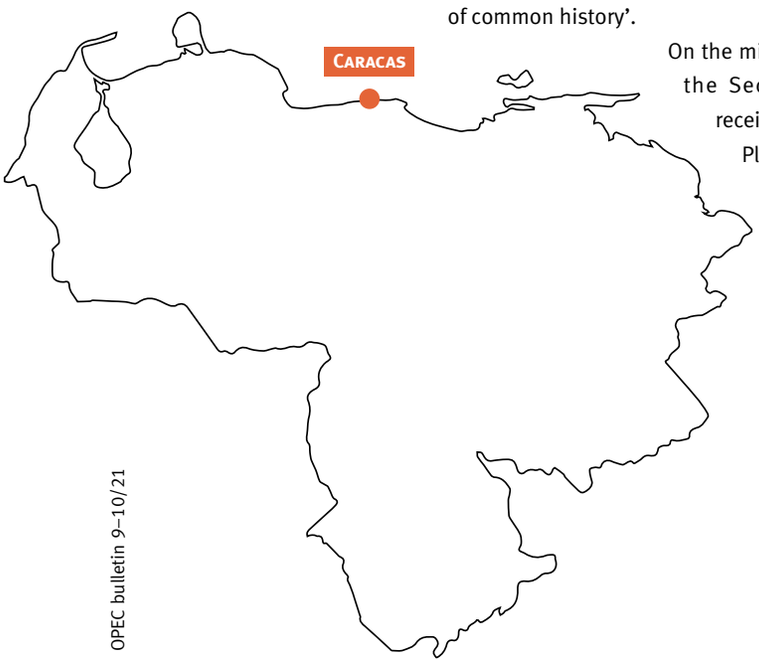
by the Organization during the COVID-19 pandemic. He commended the Barkindo for his efforts in fostering dialogue and building consensus to find viable solutions.

President Maduro reiterated the importance of the DoC, with 23 oil-producing counties pursuing policies that support the process of oil market rebalancing and stability, as well as tackling future challenges facing the industry.

In return, the Secretary General thanked the President for his exemplary leadership and utmost support to the DoC process, particularly the decisions adopted in 2020, which were critical to addressing oil market challenges caused by the pandemic.

The meeting was held at the Miraflores Palace in Caracas, during which Minister El Aissami was present.

The Secretary General also met with Venezuela's Vice President, Delcy Rodríguez Gómez. They together opened a photo exhibition titled 'OPEC and Venezuela, 61 years of common history'.




On the mission's inaugural day, the Secretary General was received by Foreign Minister Plasencia and an accompanying delegation at Simón Bolívar International Airport in Caracas.

## Enhancing ties

The Secretary General called on Minister El Aissami at his office in Caracas.

At the meeting, the Minister welcomed the Secretary General to Venezuela, noting that this is the fifth visit for the Secretary General to the OPEC Member Country since 2016. The Minister also noted that the meeting served as his first in-person engagement with the Secretary General.

Barkindo in return expressed his appreciation for the gracious invitation to celebrate the Organization's 61st Anniversary in Venezuela, the land of the legendary Simón Bolívar and the home country of OPEC veteran Juan Pablo Pérez Alfonzo, who represented Venezuela at the Organization's founding meeting in the Iraqi capital of Baghdad.

They also discussed the successful efforts of the DoC in supporting oil market stability, which has contributed positively to the global recovery process from the COVID-19 pandemic. Both acknowledged that the current oil cycle is the most complex one in the industry's history.

The Secretary General and the Minister held a joint press conference following the conclusion of the meeting.

Secretary General Barkindo also met with PDVSA's President Chávez and Members of the company's Board of Directors, during which the Secretary General conveyed his appreciation for the support received during his visit to Venezuela.

They discussed current developments and perspectives related to Venezuela's oil production, as well as exchanged views on the prospects of the global oil market.

The Board's Members also debated issues related to the oil market, following a presentation focused on the

*Félix Plasencia (r), Venezuela's Minister of Foreign Affairs with Secretary General Barkindo.*

uncertainties associated with economic recovery and oil demand delivered by the OPEC Secretariat.

## Venezuela: Nation with influence and stature

On the occasion of OPEC's 61st Anniversary, the Secretary General wrote an article titled 'Venezuela has played a crucial role in OPEC's history', drawing attention to the country's constructive and valuable contributions to the Organization.

In the article, Barkindo stated: "The 14th of September is a date of profound significance for OPEC. It was on this day in 1960 that the five Founding Fathers of OPEC — Juan Pablo Pérez Alfonzo of Venezuela, Abdullah al-Tariki of Saudi Arabia, Dr Tala'at al-Shaibani of Iraq, Dr Fuad Rouhani of Iran and Ahmed Sayed Omar of Kuwait — gathered together in the Al-Shaab Hall in Baghdad and brought the Organization into being."

"It is a tremendous source of pride for me, as Secretary General that I can commemorate this year's 'OPEC Day' on an official visit to the Bolivarian Republic of Venezuela. As a Founder Member, Venezuela has played a crucial role in the Organization's formation and its subsequent successes throughout its history," he wrote.

The Secretary General recalled a number of key moments in the Organization's history, during which Venezuela prevailed due to its extraordinary contributions, including during OPEC's early days.

Barkindo continued by praising Venezuela for its leading role during the most recent oil market downturns.

"Venezuela was also extremely active in OPEC's responses to the oil market downturn of 2014–16 and the severe oil demand contraction due to the COVID-19 pandemic in 2020. This enterprise, known as the DoC process, involves OPEC working with ten non-OPEC producing countries to take concerted action in the interests of oil producers, consumers and the global economy.

"As a result of the courage and selflessness of this remarkable group of countries, a calamity in the oil market was averted," Barkindo wrote, adding, "Venezuela has been an outspoken champion of these efforts, a valued member of our Joint Ministerial Monitoring Committee and held the Presidency of the OPEC Conference in the critical year of 2019.

"In all these undertakings, the steadfast support and wise counsel of Nicolás Maduro, President of the Bolivarian Republic of Venezuela, was and remains critical. Through his interventions at the highest level, diplomatic skill and strategic thinking, President Maduro has been instrumental in ensuring the DoC has had such a positive impact on the global oil market."

In conclusion, the Secretary General said: "Given the richness of the history of the Venezuelan contribution to the success of OPEC, my visit is an expression of the gratitude and affection that the entire OPEC Family feels toward this country."

*Asdrúbal Chávez, President of the national oil company, Petróleos de Venezuela SA.*

# Staying the course

## *OPEC and non-OPEC Ministers reaffirmed at their October meeting the production-adjustment roadmap to gradually adjust upwards monthly output until at least December.*

In a further sign that the stabilization efforts undertaken since April 2020 continue to support the market, the 21st OPEC and non-OPEC Ministerial Meeting (ONOMM) decided to adjust upward monthly output by 400,000 b/d for November.

The brief meeting on October 4 by countries participating in the 'Declaration of Cooperation' (DoC) took place amid signs of overall market improvements but also against a backdrop of caution given the lingering uncertainties related to the COVID-19 pandemic.

In an interview with Rossiya-24 television after the videoconference, Alexander Novak, Deputy Prime of the Russian Federation, said the combination of rising oil demand in sectors such as transportation and declining inventories showed that the market was rebalancing.

The oil-producing countries in the DoC decided at the 19th ONOMM on July 18 to gradually return 400,000 b/d to the market beginning in August. This decision was reconfirmed at the 20th ONOMM on September 1.

The meeting on October 4 was the ninth ONOMM of the year in keeping with the DoC Ministers' decision to hold monthly meetings. Since the decisions of the 10th ONOMM on April 12, 2020, the 23 DoC participating countries have undertaken unprecedented efforts to stabilize the market in response to the pandemic-induced demand slump.

The ONOMM, chaired by HRH Prince Abdul Aziz Bin Salman, Minister of Energy of Saudi Arabia, and co-chaired by Novak, followed a brief meeting of the Joint Ministerial Monitoring Committee (JMMC) where market conditions and the oil demand outlook for the coming months were reviewed.

*Mohammad Sanusi Barkindo, OPEC Secretary General, with Members of the OPEC Management at the 21st OPEC and non-OPEC Ministerial Meeting.*

# OPEC-Russia Energy Dialogue held in Moscow

***The 8th High-Level Meeting of the OPEC-Russia Energy Dialogue took place in Moscow on October 14, 2021, on the sidelines of Russian Energy Week.***

The meeting was co-chaired by Mohammad Sanusi Barkindo, OPEC Secretary General, and Alexander Novak, Deputy Prime Minister of the Russian Federation.

The exchange constitutes an important milestone in the energy dialogue and provided a dynamic platform to discuss oil market developments, the 'Declaration of Cooperation' (DoC) and 'Charter of Cooperation' (CoC), as well as to exchange insights on the short-, medium- and long-term prospects for the energy sector. It additionally addressed technological cooperation between OPEC Member Countries and the Russian Federation, as well as topics related to the upcoming UN Conference of the Parties (COP26) meeting.

The attendees commended progress achieved by the DoC participants, including the high conformity to adopted voluntary production adjustments and efforts to support the rebalancing process in the global oil market.

They underscored the strategic importance of the relationship between OPEC and the Russian Federation on many levels, including through the bilateral dialogue, the DoC and the CoC. The energy dialogues, which began in 2012, continue to be instrumental in enhancing ties between OPEC and the Russian Federation.

Barkindo expressed his sincere thanks to President Vladimir Putin for his ongoing support of the DoC and CoC. "He has been instrumental in the prospering of relations between OPEC and Russia. President Putin was also crucial in the development of the DoC."

Key meetings between President Putin and Saudi Arabian leaders in 2016, which helped kick-start the DoC, and again in 2020 as the impact of the COVID-19 pandemic began to roil the oil market, were critical to its ongoing success, said Barkindo.

"President Putin's ongoing active support of the DoC process has been strongly felt through media statements, as well as the personal meetings I have been honoured to partake in over the past few years. This has had an undoubtedly powerful influence on stabilizing the oil markets."

He also praised the great work of Novak in the evolution of the high-level meetings, adding that the Deputy Prime Minister has attended every meeting since their inception.

Barkindo stated that throughout OPEC's 61-year history, dialogue has been central to the Organization's work and core philosophy.

"We are convinced that only with constructive, meaningful and regular dialogue can we reach the understanding and awareness required to arrive at the conditions required to attain and sustain a stable oil market," the Secretary General said.

This also applies to the COVID-19 crisis, which has underscored the importance of multilateral dialogue and cooperation.

*OPEC and Russian delegates during the Dialogue.*

"Through our highly applauded actions, we have boosted the reputation of OPEC as a reliable dialogue partner, securing its place as a world centre of energy dialogue par excellence."

## Crucial platform

Barkindo stated: "We believe that these dialogue meetings are essential to share our outlooks and perspective, and for further deepening our understanding of each other. They have become a crucial platform for knowledge sharing, stakeholder cooperation and data transparency."

The successful outcome of the Fourth Technical Meeting of the OPEC-Russia Energy Dialogue, held on October 7, 2021, was noted. The Dialogue also highlighted ongoing active engagement at the research and technical levels between the parties.

The Secretary General presented the 2021 edition of the *World Oil Outlook* to Novak. In return, Russia's Deputy Prime Minister presented a copy of its 'Low GHG Socio-Economic Development Strategy'.

*Mohammad Sanusi Barkindo (l), OPEC Secretary General, with Alexander Novak (r), Deputy Prime Minister of the Russian Federation.*

# What a difference **two years** make

# *OPEC's* World Oil Outlook 2021 *and the 'Declaration of Cooperation' headline key panel discussions as the Russian Energy Week conference returns to the Manege Central Exhibition Hall in Moscow.*


Russian Energy Week opened on October 13 against a backdrop of headline-making concerns about natural gas supplies in Europe and policy discussions leading up to the UN's COP26 climate negotiations in Glasgow.

But taking centre-stage in some high-level panel discussions was the role the OPEC and non-OPEC countries in the 'Declaration of Cooperation' (DoC) played in supporting oil market stability and sustainability throughout the COVID-19 pandemic.

"When we were gathering here two years ago, in 2019 at the Russian Energy Week, nobody could have predicted how the situation would evolve in 2020 and 2021," Alexander Novak, Deputy Prime Minister of the Russian Federation, said at the opening of a panel, *'The future of traditional energy: is the world ready to eschew hydrocarbons?'*, on the second day of the conference.

"Two years ago nobody could have predicted that in 2020 the decline in demand and the decline in the world energy sector would amount to five to six per cent in 2020 on average, and if we talk about the oil sector, the decline would reach 25 per cent at the peak in spring last year. And again nobody could have predicted how 2021 would bring us recovery and how quickly we could

*Attending the session on 'The future of traditional energy: is the world ready to eschew hydrocarbons?' are (l–r): Parviz Shahbazov, Minister of Energy of the Republic of Azerbaijan; Suhail Mohamed Al Mazrouei, UAE's Minister of Energy & Industry; HRH Prince Abdul Aziz Bin Salman Al Saud, Saudi Arabia's Minister of Energy; Alexander Novak, Deputy Prime Minister of the Russian Federation; the panel's moderator, broadcast journalist, Ryan Chilcote; Alexander Dyukov, Chairman of the Management Board and Chief Executive Officer of Gazprom Nef; Mohammad Sanusi Barkindo, OPEC Secretary General; and Robert Dudley, Chairman of the Oil and Gas Climate Initiative.*


*Russian President Vladimir Putin opened the Russian Energy Week 2021.*


*Alexander Novak, Deputy Prime Minister of the Russian Federation, spoke at the opening of a panel, 'The Future of Traditional Energy: Is the World Ready to Eschew Hydrocarbons?', on the second day of the conference.*

overcome the crisis that we went through in 2020," said Novak, who has been a champion of the DoC from its inception in 2016 and Co-Chairs the Joint Ministerial Monitoring Committee (JMMC).

Turning to the panel's moderator, broadcast journalist Ryan Chilcote, he said: "The markets have recovered fairly quickly. Speaking of the gas market, this is almost a complete recovery … and the oil market is recovering step-by-step. But we are very much hopeful of a complete recovery of the (oil) market by the end of the year. I would like to say that OPEC+ has brought a very positive impact to the global market."

Novak was not alone in pointing to the role of the DoC in helping to stabilize the market after the freefall in April 2020 and supporting the market's gradual rebound.

## Importance of cooperation

HRH Prince Abdul Aziz Bin Salman, Minister of Energy of the Kingdom of Saudi Arabia, praised the collaborative approach of the countries participating in the DoC.

"What we care about is sustainability and the stability of the market. The sustainability and stability of the market does not happen haphazardly. It has to happen through cooperative activities," he said.

Chilcote noted that senior officials in Washington had urged the DoC countries to adjust output further to address the economic recovery. But Prince Abdul Aziz pointed out that the participating countries were already making upward adjustments while keeping a watchful eye on overall market conditions to avoid a supply and demand imbalance in the coming months.

Suhail Mohamed Al Mazrouei, Ministry of Energy and Infrastructure of the United Arab Emirates (UAE), also addressed the DoC's efforts and the need to remain cautious.

"We have done a great job," he told the Russian Energy Week audience. "I am not worried that we will have a heated market with the collaboration we have seen. We still have reserves that we can put into the market, but don't want to overdue that. If we don't do things with balance … then we may end up overdoing it and not incentivising more investments."

The panel discussion touched on a wide range of other topics, including concerns about a winter energy crunch in Europe due to a tight gas market and the COP26 climate talks in Glasgow.

OPEC Secretary General, Mohammad Sanusi Barkindo, was also part of the panel along with Parviz Shahbazov, Minister of Energy of the Republic

*Panelist, HRH Prince Abdul Aziz Bin Salman, Minister of Energy of the Kingdom of Saudi Arabia, praised the collaborative approach of the countries participating in the DoC.*

of Azerbaijan; Alexander Dyukov, Chairman of the Management Board and Chief Executive Officer of Gazprom Nef; Kirill Dmitriev, CEO of the Russian Direct Investment Fund (RDIF); and Robert Dudley, Chairman of the Oil and Gas Climate Initiative.

A number of panellists pointed out that the growing calls for divestment in oil and gas contribute to the uncertainties related to winter fuel supplies. Dudley, a former Group CEO of BP, said the gas situation came on quite suddenly and can be attributed to several factors, including low storage levels in Europe, delays in expanding pipeline capacity, and reduced renewables output in some areas which increased demand for gas in the power generation sector. He said the situation underscored the need for diverse and resilient sources of energy.

## COP26 and policy challenges

The panel's moderator shifted the conversation to the UN climate negotiations, and turned to Barkindo, asking him about OPEC's position on COP26.

The OPEC Secretary General, a well-known veteran


*Suhail Mohamed Al Mazrouei, Ministry of Energy and Infrastructure of the UAE, addressed the DoC's efforts and the need to remain cautious.*

*Mohammad Sanusi Barkindo, OPEC Secretary General.*


*Robert Dudley, Chairman of the Oil and Gas Climate Initiative.*

of the UN climate negotiations, urged all stakeholders to focus on developing fair, comprehensive and inclusive solutions to address climate change.

The Secretary General also stressed the need to use COP26 as a platform to build global consensus. He said that OPEC and its Member Countries fully subscribe to the Paris Agreement, noting that all 13 Members have signed the accord and are working towards achieving its goals.

He noted the importance of securing funding, as provided by under the 2015 Paris Agreement, to assist developing countries in their efforts to adopt adaption and mitigation efforts towards climate change.

"The much talked about $100-billion annual fund is gradually being levelled as a transition fund. But the Paris Agreement agreed upon that fund to assist developing countries adopt adaptation policies, programmes and projects in order to bring them at par or at least on the same page as parties in the advanced industrial countries," Barkindo said.

The global conservation ahead of the Glasgow deliberations "is unfortunately being overtaken by emotions rather than based on the science and the facts."

The OPEC Secretary General said that proposals being floated on carbon neutrality and zero-carbon targets "are totally extraneous to the Paris Agreement — they are voluntary."

In expressing hope for successful COP26 meetings, he concluded: "What the world will look forward to in Glasgow is a comprehensive, all-inclusive agreement that will bring both developed and developing countries parties on the same page, so that we can achieve the objectives of the Paris Agreement."

## Saudi Arabia, UAE climate plans

Prince Abdul Aziz and Al Mazrouei also used the panel discussion to promote technology-driven solutions to climate change and to improve efficiency across the industry's value chain. Both Saudi Arabia and the UAE have outlined ambitious plans to expand their own use of renewables while continuing to maximize the efficiency of their abundant oil and gas resources. Al Mazrouei pointed to his country's growing investments in hydrogen. "The key here is that we need to focus on all forms of hydrogen and not just green hydrogen, he said.

Blue hydrogen is produced from hydrocarbons, while the so-called green variety is created using electrolyzers that convert wind and solar power into hydrogen.

The UAE Minister noted that while these technologies are costly today, the costs of production will decline


*Alexander Dyukov, Chairman of the Management Board and Chief Executive Officer of Gazprom Nef.*

*Parviz Shahbazov, Minister of Energy of the Republic of Azerbaijan.*


as their use becomes more mainstream, just as they did with wind and solar.

## Presenting the *World Oil Outlook*

The energy future, and OPEC's *World Outlook (WOO)* in particular, formed the basis for another panel discussion — the 'International Energy Organization Dialogue' — on October 14.

Barkindo introduced the *Outlook* by thanking the hosts for organizing Russian Energy Week and holding a live event in the face of ongoing challenges related to the COVID-19 pandemic. The conference was organized by the Ministry of Energy of the Russian Federation, the Government of Moscow and the Roscongress Foundation and featured participants from more than 80 countries.

In his remarks, the Secretary General stressed that all forms of energy will be needed in the decades ahead to address the world's growing economy and expanding population. In the period to 2045, the *WOO 2021* sees global primary energy demand expanding by 28 per cent.

"It's a no-brainer that we are going to need more energy to meeting growing demand," Barkindo said in his remarks.

"Our projections show that nearly all sources of energy will grow over the next quarter of a century, led by renewables, which will rise from a global fuel share of around two per cent in 2020 to over ten per cent by

*Parviz Shahbazov (r), Minister of Energy of the Republic of Azerbaijan; with Mohammad Sanusi Barkindo, OPEC Secretary General.*

*Participants to the Russian Energy Week 2021.*

2045," he stated, adding, "Oil is expected to continue to take leading position in addressing the world's energy needs for the foreseeable future."

"Incremental demand by 2026 will be nearly 14 million barrels/day higher than in 2020, and total demand is expected to be just over 108m b/d by 2045. Oil and gas together will provide nearly 53 per cent of the world's energy needs in 2045 — a little over 28 per cent for oil and 24 per cent for gas," he said.

The Secretary General emphasized that in the face of anticipated growth, it is essential to have secure, stable and sustainable sources of energy going forward.

## Energy poverty

Energy access in the context of growing demand was also a topic of discussion during the session.

According to the *WOO*, 759 million people still do not have access to reliable electricity, around 600m of whom are in in Sub-Saharan Africa, while 2.6 billion people globally still rely on unsafe and unhealthy fuels to cook their meals and heat their homes. The number


*Panelists at the Session on 'International Energy Organization Dialogue: predicting the development of energy and global markets'.*

in the sub-Saharan region has actually risen in the past decade — from 793m in 2010 to around 963m.

The world has committed, through UN Sustainable Development Goal No 7, to alleviate the scourge of energy poverty. The Secretary General alluded to this and the need for affected countries to be able to tap all energy sources to expand energy access.

"As an African, I know very well that we need to harness all the energy resources at our disposal, from the sun over our heads to the abundant fuels that lie beneath our feet, if we are to ease energy poverty and develop our continent's economies," Barkindo said.

Following Barkindo's remarks and the showing of the *WOO* video, Yury Sentyurin, Secretary General of the Gas Exporting Countries Forum (GECF), presented his Organization's outlook for gas through 2050.

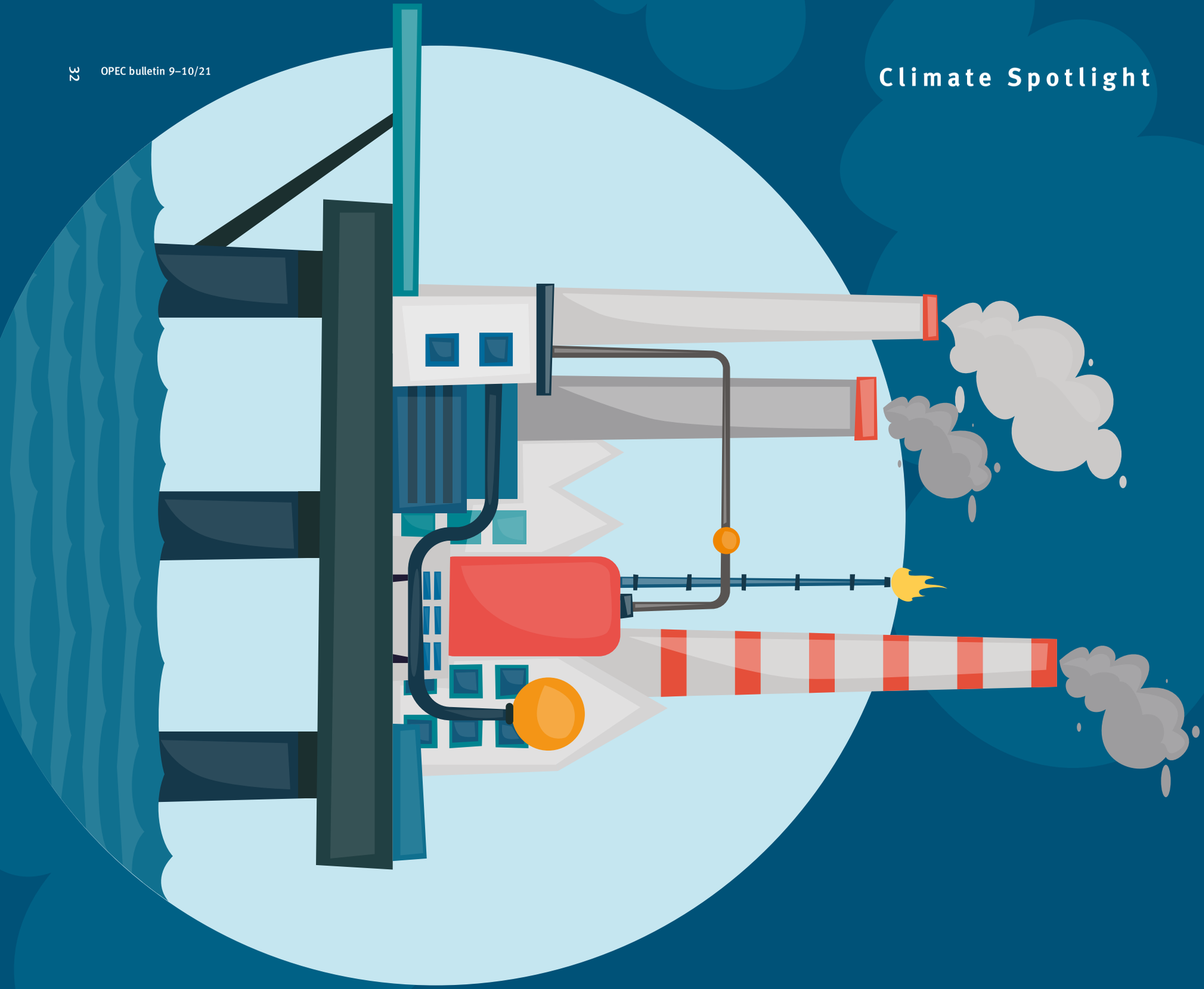
Others participating in the lively discussion were Karen Kostanian, Head of the Russian Equity Research Department at Merrill Lynch Securities; Alexey Kulapin, General Director of the Russian Energy Agency (REA) of the Ministry of Energy; Yury Plakitkin, Head of the Centre for Analysis and Innovation in Energy at the Energy Research Institute of the Russian Academy of Sciences; and Deb Ryan, Head Low Carbon Market Analytics at S&P Global Platts.

The panel was moderated by Tadzio Schilling, CEO of the Association of European Businesses (AEB).

Russian Energy Week attracted a wide-range of energy stakeholders during two days of panel discussions and high-level presentations. The third day, October 15, was devoted to youth agenda.

*All images courtesy Russian Energy Week.*

# Climate Spotlight



# Oil and gas in a net-zero world

*In the lead up to COP26, the Atlantic Council Global Energy Center held a discussion on the role of oil and gas in a net-zero world. The event helped launch the Global Energy Center's new 'Oil and Gas Net-Zero' project, and examined the technologies, policies, and business models that will define the role of oil and gas going forward. With the OPEC Secretary General,* ***Mohammad Sanusi Barkindo****, in attendance, the* OPEC Bulletin *reports.*

In its introduction to the September 27 event, the Global Energy Center said: "As the world pursues decarbonization and emissions reduction technologies in the pursuit of net-zero, oil and gas will continue to play a role in the energy system. This only underscores that oil and gas must also be a part of a broader net-zero conversation, and the technologies and business models needed to decarbonize the industry should not be forgotten as policymakers aggressively pursue much-needed climate action."

It underlines both the continuing importance of oil and gas, and the challenges that the industry faces in navigating future sustainable pathways, with implications for both consumers and producers.

These were the issues discussed and examined by the OPEC Secretary General, and his fellow panellists, Helima Croft, Managing Director and Global Head of Commodity Strategy, RBC Capital Markets; and Majid Jafar, Chief Executive Officer, Crescent Petroleum. The session was introduced by Randolph Bell, Senior Director and Richard Morningstar Chair for Global Energy Security at the Atlantic Council, and moderated by Alex Dewar, Senior Director, Center for Energy Impact, Boston Consulting Group.

## Broader engagement

Barkindo began by highlighting the vital role of multilateralism and the need for broader engagement. "What is clear is that our industry has to engage with other stakeholders, investors, governments and the general public. We need to make our voices heard, highlight what our industry is doing to reduce emissions, and emphasize just how important oil and gas will be in the energy transition, in both the developed and developing world."

It was a point picked upon by Jafar who stated that there is a vital role to be played by the oil and gas industry in the energy transition. But he feared that the industry was being unfairly maligned and the disinvesting campaign focused on the sector could hurt the move to a successful, equitable and just energy transition.

He stated that as companies and operators, there are two important things to bear in mind. First, he said, "it is what we do, our processes." From the perspective

*Helima Croft, Managing Director and Global Head of Commodity Strategy, RBC Capital Markets.*

of Crescent Petroleum, he added: "We have been in business 50 years now, we have gradually been transitioning more and more to natural gas … we have made a concerted effort to bring down our flaring … and other things like eliminating single use plastics as part of our sustainability strategy. And then we offset the remaining emissions with carbon credits supporting wind power to achieve carbon neutrality across our operations."

Secondly, he noted, we need to explain "why we do it?" He stressed that as an industry "we need to explain our products and their vital role in the energy transition. I think this is often neglected. First of all on oil, in any net-zero world in 2050 … there is going to be an important role for oil.

"The largest growing sector for oil is petrochemicals. I think people out there under appreciate to what extent we all depend upon oil in everyday life and everything around us. Just as an example, take the COVID-19 pandemic, almost everything we have come to rely on utilizes oil and its products, the screens on which we are watching the panel right now, smart phones, masks, sanitizers, and even every vaccine has glycol as a stabilizing agent."

The role of oil and gas going forward was also elaborated on by Barkindo. He said that it "is clear the oil and gas industries are part of the solution; they possess vital resources and expertise that can help unlock an emission-free future."

He added that "OPEC supports innovation and technological advancement, and the need to look for clean and more efficient technological solutions across all available energies. We are believers that solutions can be found in technologies, such as carbon capture utilization and storage, as well in energy efficiency measures and the promotion of the circular carbon economy."

## Underinvestment

Barkindo also highlighted issues related to environmental social governance (ESG) and the climate disclosure drive from the financial community, as well as the possible consequences of underinvestment in the oil and gas industries, which has been exacerbated by the COVID-19 pandemic, with oil industry investments declining by around 30 per cent in 2020.

He stated that: "We need to be cognizant of the implications of underinvestment. A shortfall in investments could cause volatility in markets. We need to wary of what I might term unintended consequences, which can be viewed in the current gas turmoil, particularly in Europe."

This issue was picked upon by Croft, who stated that the Atlantic Council discussion was well-timed, heading into COP26 and in the midst of an energy crisis in Europe. She said that there are "real questions for policymakers about what you do in the near-term to prepare your populations for an energy transition and what type of investments do you need. I think this is going to be a profound debate. There are real question marks about whether you can get enough gas into Europe, and what if you have a particularly cold winter?"

She said that the potential implications, or what Barkindo called "unintended consequences", could be consumers in Europe revolting against the net-zero agenda if there are issues related to energy access. "I do think it is a really important inflection moment," she added.

Turning to Washington, she also noted that "the Biden administration has really made the net-zero imperative a key part of its whole policy agenda." However, with prices of West Texas Intermediate (WTI) crude rising, she noted the "increasing calls from this administration for more oil from OPEC that is raising interesting policy debates in the US. We have resources here, so do we support the industry here, or are we going to ask foreign governments to produce oil?"

In terms of COP26, she said that governments are

trying to get everyone mobilized around net-zero, while at the same time ensuring that consumers have access to affordable energy. "It is not an easy line to walk, is what they are finding out," she added.

## Equitable and just transition

The OPEC Secretary General stated that OPEC remains fully engaged and supportive of the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. "We fully support the science, and what science tells us is that we have to reduce emissions. The challenge of tackling emissions has many paths, as evidenced by the Intergovernmental Panel on Climate Change. It is not just one path for all, whether that be a country or an industry."

He noted that "it is important to recognize that achieving net-zero emissions by 2050, as some countries are now focusing on, is an extremely challenging goal even for advanced economies. This further underlines the massive challenges for developing countries to reach net-zero — many of which are focused on such issues as energy access, living wages and supplying basic necessities."

In this regard, he underscored the importance of recognizing that climate change and energy poverty were two sides of the same coin, highlighting that the UN's Sustainable Development Goal 7 ensures access to affordable, reliable, sustainable and modern energy for all. "We need to transition to a more inclusive and equitable world in which every person has access to energy," he said.

*Majid Jafar, Chief Executive Officer, Crescent Petroleum.*

# Dignitaries attend opening of expanded Fujairah storage complex

*OPEC's Secretary General takes part in a ceremony marking the opening of the second phase of state-of-the-art storage facilities at one of the world's key energy gateways.*

OPEC Secretary General, Mohammad Sanusi Barkindo, on September 22 participated in a ceremony to mark the opening of the latest phase of an expansive new storage complex at the Port of Fujairah.

Sheikh Mohamed Bin Hamed Al Sharqi, Crown Prince of the Emirate of Fujairah, opened the ceremony at the Brooge Petroleum and Gas Investment Company (BPGIC) complex.

The event marked the beginning of operations of the second phase at BPGIC's storage complex. The facility includes eight tanks with a capacity of 600,000 cubic metres (cu m) and features pumping capacity of 16,000 cu m/hour. The tanks can store both crude oil and clean petroleum products, marking a breakthrough in terminal technology.

The Port of Fujairah, located on the north-east coast of the United Arab Emirates (UAE), is the second largest bunkering hub and third largest storage hub globally, offering world-class facilities at the heart of the world's leading energy corridor. Its excellent infrastructure includes nine deep-water berths and a jetty for very large crude carriers (VLCCs).

In his remarks, the Secretary General pointed to the technological advances at the BPGIC storage complex and the port's modern facilities, saying they "demonstrate a bedrock commitment to innovate and to grow our all-important industry.

"Furthermore, the continued investments in state-the-art storage and precision shipping facilities at the Port of Fujairah send a clear signal to the world that this industry is harnessing the power of technology to shrink our environmental footprint," he said.

In addressing the audience at the Port of Fujairah, the Secretary General noted that the demand for energy is growing and cited the all-important role of oil and gas play in meeting the world's energy requirements.

"Based on the latest data available, we anticipate that primary global energy requirements will expand by around 28 per cent between now and 2045, driven by robust population and economic growth — especially in developing countries," he said. He pointed out that oil and gas together are expected to supply at least half of the world's energy needs for the foreseeable future, with oil about 28 per cent following by gas at 24 per cent. "These figures underscore the vital importance of sustained investment in production, exploration, storage and delivery infrastructure," he said.

## Congratulations to the Ruler of Fujairah

During the visit the Secretary General also met His Highness Sheikh Hamad bin Mohammed Al Sharqi. During the BPGIC ceremony, Barkindo congratulated the Sheikh the on his 47th year as Supreme Council Member and Ruler of Fujairah.

In his remarks to at the BPGIC event, the Secretary drew attention to the Sheikh's anniversary. "His noble leadership has brought enormous economic, social and educational progress to Fujairah, and his strategic vision is facilitating the development of the world-class energy facilities like those that surround us today."

*Mohammad Sanusi Barkindo (sixth from r), OPEC Secretary General, and Timipre Sylva (fifth from l), Nigeria's Minister of State for Petroleum Resources, join dignitaries at the Port of Fujairah.*


*Mohammad Sanusi Barkindo, OPEC Secretary General, takes part in the opening ceremony at the Brooge Petroleum and Gas Investment Company (BPGIC) complex in Fujairah.*

Barkindo also thanked Suhail Mohamed Al Mazrouei, the UAE's Minister of Energy and Infrastructure, for his contributions to OPEC and the 'Declaration of Cooperation' (DoC). The two shared the stage a day earlier, September 21, at the opening of the Gastech Exhibition and Conference in Dubai and participated in a panel discussion entitled *'Leading the net-zero agenda'*.

The Secretary General also expressed his appreciation to BPGIC officials, including Housam Celman Elemri, the founder and CEO; co-CEO Nicolaas Paardenkooper; and Lina Saheb, Chief Strategy Officer. "It is noteworthy that this extensive project was completed without delay despite the global disruptions caused by the COVID-19 pandemic," Barkindo said. "Since BPGIC was established in 2013, you have evolved into one of the largest holders of storage assets in Fujairah, and continue to map out visionary plans for expansion."

Timipre Sylva, Nigeria's Minister of State for Petroleum Resources and Head of its Delegation to OPEC, also attended the ceremony after participating in the Gastech conference in Dubai.

BPGIC, a leading independent storage company founded in 2013, plans a third phase of expansion at its home base in Fujairah. The second phase received its first cargo on September 9.

In a statement announcing the start of Phase 2

*Dignitaries examine a model of the storage facilities at the Port of Fujairah.*

operations, Paardenkooper said: "This is a major milestone for Brooge Energy and follows months of careful planning, construction, contract negotiations and testing, all while navigating a challenging macro-environment which impacted on our supply chain and construction timelines."

He added: "We are pleased that our Phase 2 facility, which now includes capacity to store crude oil along with fuel oil, is officially open and revenue-generating, having received its first cargo. Oil storage in the Port of Fujairah in the Middle East is in high demand, which has enabled us to fully contract the entire capacity with multi-year take-or-pay contracts."

In May 2019, Barkindo attended a BPGIC meeting in Abu Dhabi focused on the company's achievements and investment plans.

## Importance of the DoC

Also in his remarks at the BPGIC ceremony, the Secretary General pointed to the need for inclusive discussions on climate change ahead of key UN discussions scheduled in late October and November.

Barkindo emphasized that continuous investment at an adequate level is required across the supply chain to meet the growing demand for oil, noting that predictable investment can prevent market volatility.

He also pointed to the historic efforts by the DoC to help restore stability to the global oil market throughout the pandemic and referred to the UAE Minister of Energy and Infrastructure's contributions.

"I would like to take this opportunity to once again thank Suhail Mohamed Al Mazrouei for his instrumental support of the 'Declaration of Cooperation' and our collective efforts on behalf of the global oil market," Barkindo told the audience.

"At OPEC," he continued, "we have a long and proud history of fostering cooperation to address significant challenges. Our efforts over the past 18 months, in conjunction with ten non-OPEC countries participating in the DoC, are evidence of this — and I would add that our achievements are commended and recognized by key energy stakeholders.

"Working side-by-side, the DoC countries have been instrumental in countering the unprecedented impact of COVID-19 on the oil market, drawing on our fund of mutual expertise to support market stability. And in doing so, we have helped provide a platform for the worldwide economy to recover."

Referring to the uncertainties related to COVID-19, he said: "While we are hopeful that the heavy weight of the pandemic will soon be lifted fully from our shoulders, we are committed to continue our work together beyond the short term to support a sustainable and

stable oil market in the interests of producers, consumers and the global economy."

## UAE's success in vaccinations

Barkindo ended his remarks by pointing out that the UAE's skilful management of the pandemic has kept energy supplies flowing and contributed to getting the global industry get back on its feet. "The UAE was one of the first countries to begin life-saving vaccinations against COVID-19, and today its is a global leader in vaccinating its population, a success that has made it possible to have important occasion like this."

He quoted the late Emirati leader Sheikh Zayed bin Sultan Al Nahyan, a visionary who was instrumental in the founding of the UAE in 1971, who once said: "Future generations will be living in a world that is very different from that to which we are accustomed. It is essential that we prepare ourselves and our children for that new world."

"Today," Barkindo said in wrapping up his remarks, "you are taking another huge step towards ensuring that future generations can benefit from a stable and sustainable energy supply."

*Mohammad Sanusi Barkindo (l), OPEC Secretary General, meeting with Sheikh Hamad bin Mohammed Al Sharqi, Ruler of Fujairah and Member of the UAE's Supreme Council.*

# Honouring the Ruler of Fujairah

During an audience with His Highness Sheikh Hamad Bin Mohammed Al Sharqi on September 22, the Secretary General delivered a letter congratulating the Sheikh on his 47th year as Supreme Council Member and Ruler of Fujairah.

"Your visionary leadership brought huge economic, social and educational progress to Fujairah, and your strategic forward thinking enabled Fujairah to become one of the major driving forces in the Emirate's economy, having the major oil hub in the region with world-class energy facilities. These great accomplishments in the Emirate of Fujairah and the wisdom of the UAE's leadership have elevated the strategic and high commercial value of Fujairah's oil hub. The ongoing and potential investment projects, services as well as facilities in the region now provide unique opportunities as a premier centre for bunkering, oil storage and trading activities," the letter said.

"OPEC is deeply indebted to the United Arab Emirates for the leading role it has played and continues to play in support of OPEC as an Organization, and in the historic OPEC and non-OPEC 'Declaration of Cooperation' (DoC) process. We again wish to convey our thanks, Your Highness, for your noble leadership and forbearance in all our efforts, and for being such a strong believer and supporter of our Organization."


*The opening session of Gastech 2021.*

# Back in business

***Gastech 2021 draws thousands of participants and hundreds of exhibitors as the energy conference business begins to return to normal.***

With major energy events beginning to switch from virtual to in-person platforms, one of the world's foremost gas industry events kicked off on September 21 in Dubai, United Arab Emirates (UAE), featuring three days of wide-ranging energy discussions.

Dr Sultan bin Ahmad Sultan Al Jaber, UAE's Minister of Industry and Advanced Technology and CEO of ADNOC Group, opened the Gastech Exhibition and Conference by pointing out his country's own history as one of the world's pioneering gas producers.

"For almost 50 years the UAE has viewed gas in all its forms as one big opportunity, and we've built our gas business on a number of firsts," he said at the opening ceremony, which took place ten weeks before the UAE marks the golden anniversary of its founding on December 2, 1971.

"As the world consolidates its recovery from the COVID-19 pandemic, LNG and broader gas markets globally are tightening, with demand outpacing supply," Al Jaber said. "Longer-term, the outlook is also robust, driven particularly by markets in Asia. Today, gas provides almost one-quarter of the world's energy supply and will continue to play a critical role in the global energy system. No other fuel source can reliably supply the baseload power to heat and cool homes, drive heavy industry and expand economies, all while keeping emissions at a minimum."

The conference's three days of high-level and expert exchanges began with a panel discussion titled 'Gastech 2021 — Leading the net-zero agenda'. It featured Suhail Mohamed Al Mazrouei, UAE's Minister of Energy and Infrastructure and Head of its Delegation to OPEC; OPEC's Secretary General, Mohammad Sanusi Barkindo; Arifin Tasrif, Indonesia's Minister of Energy and Mineral Resources; Eng Saad Sherida Al-Kaabi, Qatar's Minister


*Gastech 2021 was held in Dubai, UAE.*

of State for Energy Affairs and President and CEO of Qatar Petroleum; and Dr Alparslan Bayraktar, Turkey's Deputy Minister of Energy and Natural Resources.

The panel addressed a number of relevant issues, including the energy outlook, market fundamentals, investment and prospects for the post-pandemic global economy. The panellists, who were moderated by John Defterious, former CNN Emerging Markets Editor, also raised issues related to the UN climate negotiations in Glasgow and climate policy in general.

## Timely discussions

During the discussions, Barkindo underlined the importance and timeliness of Gastech, noting that the platform provided an opportunity to address key issues and concerns related to the industry in a live setting following a difficult period caused by the COVID-19 pandemic.

Barkindo stressed the vital role of oil in meeting the world's growing demand for energy, adding that predictable investment is required to address increasing global needs. He also highlighted the need to address energy poverty and meet global commitments to expand energy access, with oil and gas being an important part of the solution.

Referencing OPEC's *World Oil Outlook 2021*, the Secretary General noted that oil and gas together would continue to supply more than half the world's energy needs in 2045, with oil at around 28 per cent followed by gas at 24 per cent.

"The world needs continuous, predictable, and adequate investments in energy, particularly in oil and gas, which are irreplaceable because of the scale of their contribution to the global energy mix," he said. Future economic and population growth mean the investment community needs to support the energy sector,

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

including oil and gas, to meet expanding market needs, he added.

## Al Mazrouei: Finding the right balance

In his comments, Al Mazrouei said that gas is vital commodity for households, industry and the economy in general and needs continuous investment. He stressed that investors "should create the right balance" between focusing on sustainability while keeping in mind countries' need to grow and develop. He added that the UAE is taking a lead in reducing its carbon footprint.

Speaking later in a video interview on the sidelines of the meeting, the Minister said: "We are so happy and excited to host Gastech for the first time here in the UAE. As you can see, the signs of success are there. I think this is the beginning of the transition to normal life in the near future. There have been a great many companies participating here and very interesting panel discussions alongside the exhibition. We are excited for everybody to have these discussions."

The Minister said the tight global gas market that was the subject of growing global concern at the time of the conference was partly related to the lack of investment. He said the return of investment and development of new projects would stabilize the market and support it in meeting future demand.

Asked about how the UAE was addressing climate


issues that were a focus of discussion at Gastech, the Minister said: "We are working on different fronts. On the extraction side, we are trying to produce the cleanest barrel of oil worldwide and we have benchmarks to reduce the carbon footprint in the production process itself. Second, we are capturing $CO_2$ and injecting it instead of natural gas." He added that the UAE's industry is working to capture carbon, prevent venting of gas, and using the best technologies to improve efficiency, for example in gas turbines.

Ihsan Abdul Jabbar Ismaael, Iraq's Minister of Oil and Head of its Delegation to OPEC, and Timipre Sylva, Nigeria's Minister of State for Petroleum Resources and Head of its Delegation to OPEC, were also among the high-level officials at Gastech. Sylva took part in a panel discussion on *'Policies to support the rapid expansion of the hydrogen supply chain'*.

Gastech 2021 was held under the patronage of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai and supported by the UAE's Ministry of Energy and Infrastructure.

Organizers estimated that more than 15,000 attendees from the global gas, LNG, hydrogen and energy industry attended and that 250 companies had exhibitions. Like many events of its kind, the conference was held virtually last year due to travel difficulties and restrictions related to the COVID-19 pandemic.

*All pictures courtesy dmg events.*

# Secretary General addresses 2021 ARDA Week

*On October 11, 2021, **Mohammad Sanusi Barkindo** (l), OPEC Secretary General, addressed the 2021 Conference of the African Refiners and Distributors Association (ARDA), which was held via videoconference. The* OPEC Bulletin's ***Scott Laury** reports.*

In a videotaped message, the Secretary General began by thanking Anibor Kragha, Executive Secretary of ARDA, for the invitation to participate in the 2021 edition of ARDA Week and share OPEC's views on the Conference theme of *'Developing Africa's Downstream Energy Transition Plan'*.

ARDA is the only pan-African organization dedicated to representing the African downstream oil sector. The organization was established in March 2006 in Cape Town, South Africa and is now headquartered in Abidjan, Ivory Coast.

The Secretary General complemented ARDA's active role in promoting Africa's downstream industry on the global stage, including its participation in OPEC's recently inaugurated high-level dialogue with Africa and its producing countries.

"Mr Kragha, I would like to thank you for representing ARDA at our inaugural high-level meeting of the OPEC-Africa Dialogue, which took place last June," Barkindo said. "This highly successful Meeting was attended by representatives of some of Africa's leading energy organizations, including the African Petroleum Producers' Organization, the African Energy Commission and, of course, ARDA."

The Secretary General noted that this dialogue was an important step forward for OPEC.

"With seven African oil-producing countries being Members of the Organization, this new dialogue was a

logical next step for OPEC," he explained. "Our hopes are that OPEC and Africa relations will be further enhanced through this new dialogue event, and that both sides will benefit thoroughly from the highly valuable exchange of outlooks and research."

## Africa and the energy transition

Noting the timeliness of the theme adopted for the Conference, the Secretary General added that the topics of climate change and the energy transition would be dominating the headlines in the coming weeks.

"One cannot read a newspaper or watch the news without hearing about the impending energy transition and how countries and the energy industry might respond to this global challenge," he said. "The fervour surrounding this topic has been intensified further by the recent volatility brought on by the COVID-19 pandemic, and discussions related to climate change and the energy transition have risen to the top of the energy industry agenda."

These discussion and debates, he added, would reach a climax in the lead-up to and during the UN Climate Change Conference — COP26 — in Glasgow, Scotland.

Barkindo said that OPEC would be fully engaged in this Conference and was continuing to work closely with its Member Countries to advocate for real change on these issues.

He noted the recent radical calls in the context of the net-zero 2050 proposals to discontinue investment in fossil fuels, adding that these were simply not realistic.

"We have recently witnessed investors, environmental lobbyists and even some corporate boards exerting increasing pressure on governments and oil companies to adopt radical policies and initiatives that could, in the end, be more disruptive than productive for the global energy industry," he stated. "Some extreme voices have even called for a discontinuation of investments in oil and gas. These views are both risky and unrealistic. Make no mistake, OPEC fully supports the need to decrease emissions, bolster innovation and enhance efficiency; however this cannot come at the cost of draining industry investment."

## Industry investment is critical

On the issue of investment, Barkindo pointed out, citing this year's *World Oil Outlook,* that cumulative oil-related investment requirements amount to $11.8 trillion in the 2021–45 period. Of this, 80 per cent, or $9.2 trillion, is in the upstream, with another $1.5tr and $1.1tr needed in the downstream and midstream, respectively.

The unpleasant reality, he added, is that the industry is still reeling from the devastating impacts of the COVID-19 pandemic, during which investment declined by a massive 30 per cent in 2020.

"This scenario of underinvestment, if it were to continue, could result in demand exceeding supply, creating heightened market volatility and an energy security risk to both producers and consumers," he said. "I assure you, no one wants to see this eventuality come to be. As an industry, we must approach these critical issues together through dialogue and cooperation, ensuring that all voices are heard and all viewpoints are considered."

The Secretary General called for a holistic, inclusive and balanced approach in addressing climate change.

"There is no 'one-size-fits-all' solution to addressing climate change," he explained. "Different countries around the world have varying capabilities and diverse needs. Thus, reducing emissions should have multiple paths, as set out by the Intergovernmental Panel on Climate Change (IPCC), and all of them should be regarded as potential options."

Moreover, he emphasized the importance of adhering to the core principles of the United Nations Framework Convention on Climate Change (UNFCCC), which include equity, historical responsibility and the principle of common but differentiated responsibilities and respective capabilities.

"This will be crucial," he added, "particularly for Africa, to ensure that no country gets left behind in the energy transition."

## A balanced and realistic approach

The Secretary General underlined the fact that achieving net zero emissions by 2050 is already a great challenge for advanced economies, some of which have even expressed reservations about the feasibility of achieving this ambitious goal. And thus, for developing nations, the

task is that much more daunting, particularly as their priorities day in and day out have to do with making sure their basic needs are met.

Three of the main challenges in achieving net-zero emissions by 2050, he added, are scale and timing, supply chains and the special circumstances of the developing world.

"The proposed timeframe from now until 2050 is simply not sufficient to achieve net-zero emissions, considering the massive investments required, the availability of land, the scale of expansion of the electricity grid and a list of roughly 400 milestones that have been targeted for the achievement of this goal," he stated.

Another challenge in achieving such a rapid transition, he added, is the dependence on a steady, robust supply of minerals such as copper, cobalt, lithium, nickel and aluminium, many of which are produced in geographically centralized areas. This can be compounded by long lead times on mining projects of 16 years or more.


*Offshore oil platform in Angola.*

Finally, the challenge of disparities between the developed and developing nations will make these ambitious targets hard to achieve.

"The net-zero scenario inaccurately assumes a level playing field for both developed and developing countries in terms of reaching the proposed targets by 2050," Barkindo said. "However, the unfortunate reality for developing countries is that a staggering 759 million people worldwide did not have access to electricity in 2019, with around 79 per cent of them located in Africa and 19 per cent in Asia. Moreover, there were roughly 2.6 billion people or 34 per cent of the global population who did not have access to clean cooking fuels and technologies — and this includes a massive 70 per cent of Africans who have no access."

Further complicating these unfortunate realities is the fact that these are the very regions of the world that are expected to experience the most rapid population growth by 2050.

The Secretary General complimented ARDA on the role it continues to play in helping mobilize the required investments to ensure that the rising fuel needs of the African people are met.

"Considering the richness of the continent's resources, both conventional and renewable, the scourge of energy poverty is simply hard to accept," he stated. "We continue to call on energy industry leaders around the world to unite on this issue to ensure an equitable distribution of energy. OPEC supports the first-ever universal goal related to energy, SDG7, which seeks to ensure access to affordable, reliable, sustainable and modern energy for all. Let's face it, energy should be treated the same as education and healthcare — as a human right."

The Secretary General then moved on to the critical topic of energy transition financing, which he said would be a hotly debated topic at the COP26 Conference.

"Needless to say, climate financing for adaptation and mitigation is an extremely complex process, and questions continue to be raised as to how the $100 billion per year committed in the Paris Agreement will be secured, much less the even more ambitious $5 trillion annual funding needed globally as set out by the net-zero 2050 plan," he said. "The challenge revolves around the false assumption that developing countries will receive the required financing and technological know-how they require in order to build and readjust their energy systems in line with the net-zero ambitions by 2050. This is simply not realistic."

Moreover, financing is increasingly being administered as loans, which means that developing countries are required to borrow at interest rates that can sometimes be prohibitively high, effectively leading them to defer or cancel their clean energy projects, he added.

"The challenges I have just identified make it clear that the energy transition will realistically take time and patience to achieve, especially if we want to move forward in a responsible, inclusive and equitable way," he said.

## Outlook for Africa

Moving to the topic of Africa and its medium to long-term energy outlook, the Secretary General purveyed a positive forward-looking vision for Africa's energy

industry, admitting, however, that the continent would not be spared its share of challenges.

"Despite the challenges we will surely face as an industry in the years to come, we foresee a bright future for Africa's oil industry with significant opportunities for growth," he explained. "The continent is home to five of the top 30 oil-producing countries in the world and several top gas-producing nations as well. The world will continue to rely on its precious resources in the long term in order to meet the rapidly rising global demand for oil and gas."

Sharing some key figures from the *2021 World Oil Outlook,* he said that in 2019, Africa produced approximately 8.5 million barrels/day (m b/d) of oil, which is around nine per cent of world output, and that the continent's proven oil reserves amounted to around 126 billion barrels. Of this, Nigeria held the majority with an estimated 36.9bn b, or 29 per cent, of the continent's total reserves.

Turning to the downstream sector, Barkindo said that last year's oil demand shock caused by the COVID-19 pandemic resulted in numerous refinery closures worldwide, and that there will be additional closures in the coming years.

"Looking ahead, from 2021 to 2026, we expect to see around 6.9m b/d of new refining capacity come online, mostly in the Middle East, Asia-Pacific and Africa," he stated. "Africa's potential refining capacity is expected to start increasing in 2022 at just below 400,000 b/d, before reaching just above 1m b/d in 2026. Many of these projects will involve petrochemical integration."

On the longer term, to 2045, he added that there will be 14m b/d of capacity additions, mostly in developing countries, and in Africa, long-term demand growth will lead to an increase in refinery throughputs of almost 5m b/d in 2045, up from 2.4m b/d in 2019.

Another important area to consider, he said, relate to global refinery utilization rates, which are forecast at a rate of 81 per cent in 2024 and slightly lower by 2026, yet still higher when compared to 2019 levels.

"These rates are forecast in consideration of recovering demand, in addition to the realization of numerous closures triggered by the COVID-19 pandemic," he explained. "In the longer term, utilization rates are expected to drop to approximately 76 per cent in 2045 as more capacity comes online and demand declines in developed regions. This, of course, will result in additional closures in order to maintain rates at sustainable levels."

The upside to these overall positive developments in the African downstream, he said, will help increase local refined product output while reducing product imports from other regions.

In terms of downstream investment, he pointed out that an estimated $1.5 trillion will be spent during the period 2021–45, and of this, $450bn will be invested in new refinery projects and expansions of existing units. The majority of these projects, he added, will be located in developing countries, including Africa.

## Importance of dialogue and cooperation

The Secretary General highlighted the importance of industry stakeholder collaboration, especially considering the potential hurdles that the industry will face in the years to come.

"I would like to emphasize the dire importance of dialogue and cooperation at all levels and amongst all stakeholders in the years to come as together we seek to address common challenges," he said. "OPEC continues to be a leading example of multilateral engagement through the highly successful, landmark OPEC and non-OPEC 'Declaration of Cooperation'. This pioneering framework for multilateral energy cooperation continues to contribute greatly to the post-pandemic economic recovery as a vital stabilizing force in the global oil industry."

In closing, Barkindo cited the eloquent words of Nelson Mandela — *"We must use time wisely and forever realize that the time is always ripe to do right"* — as an inspiration for all industry stakeholders to contribute all they can to helping make Africa be all that it can be.

"Heeding these passionate words, let each of us not relent in "doing right" until we see our continent reach its full and unbridled potential. Let us act now, so that future generations can thrive and flourish."

# An equitable and just energy transition

*At the Energy Intelligence Forum 2021, the OPEC Secretary General,* ***Mohammad Sanusi Barkindo*** *(l), shared a platform with Iraq's Minister of Oil, Ihsan Abdul Jabbar Ismaael, with discussions covering such issues as the energy transition, investments and the 'Declaration of Cooperation' (DoC). Moderated by Amena Bakr, Chief OPEC Correspondent at Energy Intelligence, the* OPEC Bulletin *reports on the session.*

The Energy Intelligence Forum 2021, held virtually and under the theme *'An industry redefined: energy in an evolving world'*, brought together decision-makers, thought-leaders and innovators from the worlds of energy, finance, politics and business to debate, discuss and develop sustainable solutions to the energy challenges of the 21st century.

Energy Intelligence said when announcing the four-day event that the Forum would explore the opportunities and challenges that the industry faces, as the world begins to emerge from the COVID-19 pandemic. "The pandemic has accelerated society's shift toward a cleaner and more diverse mix of energy, whether to oil and gas with lower carbon emissions, renewable energies, or more cutting-edge options including hydrogen. At the same time, the global challenge of addressing climate change has shown the need to ensure that the energy transition is efficient and equitable, to power the global economic recovery."

Many of this issues were covered in the panel discussion with Barkindo and Ismaael, with Bakr beginning with a question on the role of oil and gas in the energy transition.

## Rational discussions, not emotional outbursts

In her question, Bakr also referenced recent comments to a government meeting from Russian President Vladimir Putin on the gas crisis engulfing Europe. He talked of hysteria and some confusion in markets and was reported as saying: "Some people are speculating on climate change issues, some people and underestimating things, some are starting to cut back on investment in the extractive industries. There needs to be a smooth transition."

It was a point picked upon by Barkindo who stressed that "the gas and electricity crisis we are witnessing in Europe, and now more broadly globally, is a wake-up call for policymakers, in particular, and the global community, in general."

He said that "the global conversation around the energy transition and climate change has been overtaken by hype. The narrative is being distorted. We see emotional outbursts, not rational discussions. We need to pause at this time, we need to think and act rationally."

**The focus needs to be on inclusivity, he said, with a "comprehensive energy transition based on facts and** science. No one should be left behind. We need sustainable solutions and technologies. The transition is not about transferring from one energy source to another. We need all energies. And we also need to recognize that climate change and energy poverty are two sides of the same coin."

In this regard, he referenced the *World Oil Outlook (WOO)* that sees energy demand increasing by 28 per cent by 2045, and that oil and gas are still expected to make up over 50 per cent of the energy mix by then.

In looking to COP26 in Glasgow, Scotland, held under the Presidency of the United Kingdom, he said that "policymakers cannot abdicate their responsibility going into COP26. We remain cautiously optimistic that global leaders will come back to the table — use facts, hard data and science. COP26 could be a turning point in the energy transition."

## Vital investments

Barkindo was also asked about the importance of maintaining investments in oil and gas going forward, and the possible implications if supply does not meet demand. Here, he referenced oil industry investment in the *WOO 2021* of $11.8 trillion out to 2045, and recalled the massive investment contraction of around 30 per cent in 2020 due to the COVID-19 pandemic.

Barkindo's comments on future energy needs and investment requirements evidently points to the fact that any talk of the oil and gas industries being consigned to the past and of the need to halt new investments in oil and gas is misguided.

The importance of investments was also raised by Ismaael who stated that recent developments and investments in Iraq should be viewed as "remarkable for the energy transition and the economy of Iraq."

The main focus was on the recent announcement that France's TotalEnergies will build four giant energy projects in southern Iraq under a $27 billion deal. Ismaael stated that the Iraq National Oil Company (INOC) would have a 40 per cent stake in the project as a financing partner.

The agreement will see the construction of a new gas gathering network and treatment units to supply local power stations, the construction of a large-scale seawater treatment unit to increase water injection capacities in southern Iraq oil fields and the construction and operation of a photovoltaic power plant with a capacity of one gigawatts to supply electricity to the grid in the Basra region.

When the deal was signed, Patrick Pouyanné, TotalEnergies' Chairman and CEO, said that these agreements "signal our return through the front door to Iraq, the country where our company was born in 1924 … This

project perfectly illustrates the new sustainable development model of TotalEnergies."

Ismaael said that work to upgrade the Basra oil export terminal's infrastructure will raise Iraq's southern export capacity to 6 million b/d (m b/d) by 2024, from 4m b/d now. In terms of gas, he stated: "Our target is to reach not less than four billion cubic feet per day (bcf/d) by the end of 2025 from associated gas … and to add another 1.5 bcf/d of free gas by the end of 2027." He added that this was intended to give Iraq greater energy independence and to diversify the country's economic resources.

The minister also highlighted that Iraq is talking to a European company about developing gas in its western desert region and is discussing with Chevron about a large oil and gas project.

Barkindo took the opportunity to commend Iraq on the recent agreement with TotalEnergies. He said it underscores "the commitment of producing countries within OPEC to ensure that the oil and gas industry is invested in continuously through this transition."

He emphasized that we need continuous investment like we have seen in Iraq because in the period to 2045, the global economy is estimated to more than double; world population is set to expand to 9.5bn; and there is huge potential for socio-economic development in terms of expanding access to modern energy services for those billions who continue to go without.

## DoC commitment

Both panellists were also asked about recent oil market developments, and the role of the DoC going forward. Barkindo stressed that "participants in the DoC have demonstrated time and again their continued commitment to a balanced and sustainable market." In this, he looked back to the historic decisions taken in April 2020, and how those decisions have positively impacted the oil market and the global economy in the period since.

He stressed that "maintaining market balance, and stability, in the interests of both consumers and producers, is a continuous exercise, which is why we hold monthly meetings." He said that the group has been tested many times, but it has always come out much stronger, likening the strength to the 'Rock of Gibraltar'.

Ismaael stated his support for the actions of the DoC, and said "we want to avoid volatility", which is important given the investments being made in the country.

It is clear that the DoC, and the 'Charter of Cooperation' (CoC) with its long-term look, will be vital in the years ahead, in helping maintain a balanced and stable market, and in helping navigate the energy transition.

Barkindo concluded that the coming together of OPEC and non-OPEC producers in the DoC and CoC is vital, and "I cannot think of any alternative for the global oil market."

# Dr Sultan bin Ahmed Al Jaber receives 'Energy Executive of the Year' Award

***Dr Sultan bin Ahmed Al Jaber**, the Minister of Industry and Advanced Technology of the United Arab Emirates (UAE) and Managing Director and Group CEO of the Abu Dhabi National Oil Company (ADNOC), was honoured with the 'Energy Executive of the Year Award for 2021' by Energy Intelligence.*

The Energy Executive of the Year Award is one of the most prestigious in the industry, with Energy Intelligence gathering nominations from the heads of the world's 100 largest oil and gas companies and stakeholders, as determined by the annual group's Top 100 rankings.

In awarding Al Jaber the Energy Executive of the Year Award, Energy Intelligence noted his role in mapping a path of modernization for national oil companies. "Dr Al Jaber has distinguished himself as an innovator at a time of great change," said Raja Sidawi, Chairman and Chief Executive of Energy Intelligence. "He has reimagined ADNOC's operations, its strategy and its culture."

In a letter offering his congratulations, Mohammad Sanusi Barkindo, OPEC Secretary General, said: "I cannot speak highly enough of your work and achievements; they are a clear reflection of your objectivity, resolve and far-sightedness. Through your commitment and expertise, you have earned the respect of the industry in transforming ADNOC into a diversified and integrated energy company, with a truly global reach."

Dr Al Jaber is the 25th recipient of the award. Previous honourees have included Amin Nasser of Saudi Aramco (2020), Ben van Beurden of Royal Dutch Shell (2019), Bob Dudley of BP (2018), Patrick Pouyanné of Total (2017), Khalid Al Falih of Saudi Aramco (2016), and Rex W Tillerson of ExxonMobil (2015).

Receiving the award virtually at the Energy Intelligence Forum, Al Jaber explained how decisive the support of the UAE Leadership and His Highness Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi and Deputy Supreme Commander of the UAE Armed Forces, was.

"The fact is, I would not be receiving this award today without the vision and continuous guidance of His Highness Sheikh Mohamed bin Zayed Al Nahyan, the Crown Prince of Abu Dhabi. He enabled everything I have achieved so far, both at ADNOC and beyond ADNOC. He has challenged me to push the boundaries of the possible. He has inspired me with his wisdom and guidance. And when times were tough, his support has been unwavering."

He also thanked his family, and his colleagues across the energy industry. "You have given me insight, support, and advice at key moments, and I thank you for that. And, importantly, I would like to recognize the tireless efforts of my colleagues at all levels, as well as all our partners across our businesses. This is an award built on the work of many. It is proof that we succeed together, in partnership."

During his speech, Al Jaber also rallied the oil and gas industry to embrace the opportunities being created by the energy transition and highlighted the steps ADNOC is taking in this regard.

"We should embrace this transition as a unique opportunity for growth. Opportunity is what is driving ADNOC's investment into new zero-carbon energies like hydrogen. Opportunity is shaping the business case for our carbon capture technologies. And opportunity is creating a premium for the most carbon-efficient barrels in the world."

"At the same time," he said, "let us remember that the energy transition is exactly that — a transition that will require a mix of energies that we provide. Together, our companies represent the few who have lifted the many to attain the most prosperity in history. Now our mission is to continue to supply the energy for that prosperity, using the lowest carbon sources available."

# OPEC, ECS and OPEC Fund hold 3rd joint Annual Legal Workshop

***The OPEC Secretariat, the Energy Charter Secretariat (ECS) and the OPEC Fund for International Development jointly hosted the 3rd Annual Legal Workshop via videoconference on October 18. The* OPEC Bulletin's *Maureen MacNeill reports.***


*Dr Abdulhamid Alkhalifa, Director-General of the OPEC Fund for International Development (OPEC Fund).*

*Dr Urban Rusnák, Secretary General of the Energy Charter Secretariat (ECS).*




*Staff of the Secretariat's Legal Office with (l–r): Leonardo Sempértegui, General Legal Counsel; Dr Taiwo Adebola Ogunleye, Legal Advisor, International Matters; Beatriz Patiño-Moulinier de Skotton, Legal Advisor; Khadija Umar, Assistant Legal Counsel.*

The Workshop constitutes an important part of OPEC's partnership and outreach programme, through which the Organization strives to share information and knowledge with its Member Countries and other oil producing countries, based on exchanges with various industry stakeholders, academia, international organizations, investors, among others.

The workshop consisted of two sessions with panel discussions among speakers from academia, international oil companies, energy service companies, international organizations, and attendees from OPEC Member Countries, countries participating in the 'Declaration of Cooperation' (DoC) and other oil-producing countries. It was carried out under the Chatham House Rule.

The first panel involved presentations and discussions on national laws enacted and bills proposed on climate matters and the second, presentations and discussions on judicial decisions related to climate change.

OPEC Secretary General, Mohammad Sanusi Barkindo, opened the workshop by highlighting its timeliness and relevance, adding, "This workshop is an outcome of the Organizations' unwavering commitment to work together to address the complex challenges of our age."

## UN climate talks

In reference to the Conference of the Parties (COP26) meeting in Glasgow, Barkindo underscored the importance of the conference and advance discussions.

Referring to the rational titans of the Scottish Enlightenment, the Secretary General wondered what they would think if they were to consider the narrative that is shaping the public discourse on climate change today.

"This public discourse is having a major impact on policy makers, corporate executives and civil society, and by extension, many national climate laws and jurisprudence," he stated.

The Secretary General also emphasized the need to develop a fair, inclusive and comprehensive approach to addressing the climate change challenge, in order to ensure the involvement of the entire global community, including developing countries.

It is not a question of whether one is for or against fossil fuels, stated Barkindo, and this ultimate false dichotomy erroneously limits the options available to reduce emissions.

He emphasized that the principles of equity, historical responsibility and common-but-differentiated responsibilities as key to understanding and finding a solution that addresses all three aspects of the energy trilemma: energy security, energy affordability and climate change.

"Furthermore within the discussion, we are seeing a tendency for emotion to overtake science, rationalism, empirical evidence or fact."

Achieving net-zero emissions by 2050, which has become part of the discussion, has never been part of the United Nations Framework Convention on Climate Change (UNFCCC) or even the Paris Agreement, he said. It is an incredibly challenging goal even for advanced societies, and further underlines the massive challenges of developing countries in reaching net-zero emissions.

"We all share this planet. We need multilateralism at the centre of energy, climate and sustainable development future," he said, adding "OPEC, as an intergovernmental organization, has always been a proud member of the multilateral system."

He continued by stressing several issues of global concern, such as energy poverty and accessibility to affordable, reliable and sustainable energy sources.

"It is important to state that OPEC has continuously been a promotor of both sustainable development and

*The third annual OPEC-Energy Charter Secretariat (ECS)-OPEC Fund for International Development legal workshop in progress.*

efforts to combat climate change, with a focus on the need to utilize all solutions to reduce GHG emissions and adapt to their impact, and at the same time ensure energy access for all," Barkindo said.

## Four key principles

The Secretary General also highlighted the potential of oil and natural gas in supporting climate change mitigation efforts.

"We need to show how the oil and gas industry can foster its resources and expertise and help unlock our carbon-free future, through its role as a powerful innovator in developing cleaner and more efficient technological solutions to help reduce emissions."

The General Legal Counsel, Leonardo Sempertegui, in his opening remarks, highlighted four key principles to be considered in the development of balanced legal frameworks:

- Legal rules and decisions should be made based on facts and science, leaving aside ideology, propaganda, political short-term interest, bias and noise.
- Legal rules should be compatible with the international mechanisms agreed unanimously by the global community to tackle climate issues.
- Legal instruments should be crafted in a comprehensive, balanced way, striving to achieve environmental, energy and developments objectives in a complementary way.
- Law should be an instrument of justice, leaving no one behind, especially the most vulnerable.

## First session

The first session focused on the legal landscape of the US on climate change. The first speaker underscored the country's commitment to decarbonization and added that energy must be affordable, reliable and sustainable, with the creation of a resilient energy grid.

He introduced US actions on climate change in the different branches of government. The speaker stated that there is only one major law, the Clean Air Act of 1970, which has been used to address climate change issues. It has not yet been deployed significantly due to constraints on its legal authority, as it was not originally intended for climate change.

The plans of President Joe Biden's administration on this topic were presented. They would see a move beyond traditional federal vehicles for climate change such as the Environmental Protection Agency (EPA), said the speaker. This approach demands that every agency or part of federal government must take climate change into consideration within their relevant projects.

Two different legislative packages are being considered in the US Congress which would use varying mechanisms to address climate change. The government has also released a report on sustainable finance.

The next panellist focused on European Union (EU) commitments to climate change and that of her country, Spain.

The speaker highlighted that the EU has set a net-zero emissions goal for 2050. She noted that Spain has ratified the Paris Agreement and is a member of the EU, which is also a signatory to the Paris Agreement.

She pointed to the EU's ambitions to become the first climate-neutral continent and the legal obligation behind achieving net-zero greenhouse gases. This obligation is transposed on Spain as a member of the EU, and it will thus have to be ensured via government policy within energy and climate plans.

The speaker also discussed the new Spanish Climate Change and Energy Transition Law, which entered into force on May 20, 2021. This law enshrines into Spanish normative the target of reaching climate neutrality by 2050 at the latest. However, she indicated that while there are legally binding targets, there are no sanctions for non-compliance.

The third panellist, from the International Energy Agency (IEA) focused on the legal status of various net-zero targets. He highlighted the role of the IEA in providing an analysis of laws, technology and markets and the subsequent uses of these analyses in policy advice. He informed the workshop that the IEA would be presenting this information during COP26.

During the Q&A session, it was pointed out that climate change itself is causing huge insecurity, such as the extreme heat that led to forest fires during the summer of 2021. The fires destroyed electricity grids and increased demand for cooling.

Moreover, the role of fossil fuels within the energy transition was explored. It was highlighted that renewable energies, such as wind and solar, could be coupled with other flexible fuel forms,

such as hydropower, and fossil fuels with carbon capture, utilization and storage (CCUS) to ensure energy supplies remain secure and environmentally friendly.

## Second session

In the second session, several recent judicial decisions issued by national courts that have had a direct or indirect impact on climate policies or actions from governments and the private sector were reviewed, as well as their possible impact on energy security and energy access in those jurisdictions and beyond.

The first speaker discussed a recent decision by the German Federal Court, which stated that Germany's current Climate Protection Act was not sufficiently ambitious in the short term. He stated the decision was unusual on two fronts, because the court is normally conservative and avoids judicial activism, and because the plaintiffs were from Bangladesh.

Nonetheless, the decision introduced the concept of intertemporal rights. Thus, if emissions are not reduced readily at this point in time, freedoms will be reduced drastically in the future so that climate goals can be met. This led to the principle of a negative duty, wherein later governments would have to refrain from excessive and disproportionate infringements.

As the German Constitution only vaguely refers to preserving the natural environment, the Court relied on the Paris Agreement, which has been ratified by Germany, adopting it and making its target the country's own.

Next, a recent court case against Royal Dutch Shell in the Netherlands was presented. It had been brought forward by six non-governmental organisations (NGOs) and 17,000 citizens. The speaker highlighted that to his knowledge, this was the first major climate change litigation against a corporation, and thus of fundamental importance.

The court held that Shell would have to reduce its emissions by 45 per cent from 2019 by 2030. The jurisdiction was founded upon the fact that Shell bases its headquarters in the Netherlands. The court extended the scope of reduction not only to the Netherlands, but to worldwide emissions.

Finally, the third speaker highlighted two famous litigation cases, Urgenda and Juliana. He then related these developments to the US and why and how climate litigation is likely to be less successful in the US than in European jurisdictions. He expressed scepticism regarding the role of the judiciary in the US to advance climate objectives, since it is considered to be a task for the legislative branch.

## Closing reflections

Barkindo closed the workshop, stating it had been very informative, "with a lot of detail coming from our guests on the state of energy and climate change law in their respective geographical regions. You have set the scene for us in a very clear and concise way."

He said it is clear that there are many quite different approaches to addressing decarbonization and varying energy strategies, adding the level of ambition as put forward at the meeting is very promising, though a large ambition gap still remains.

Barkindo added that judicial decisions by national courts range from a very hands-off approach, which puts politics in the driver's seat, to ground-breaking rulings that are quite invasive.

He added one panellist stated that climate change issues cannot be effectively handled by the courts, a sentiment that President Vladimir Putin had put forward during this year's Russian Energy Week.

Furthermore, Barkindo stated that, from its inception, when the UN and the global community agreed to adopt the UNFCCC, it was decided it is a scientific issue.

In order to get appropriate responses by the global community, it cannot be addressed by one country or a group of countries, he said, adding that there is a question mark on national legislation and national climate laws, because all countries have to come together. "It may be unfair to judges in courts to ask them to solve the problems we have failed to address."

The objective going into Glasgow was to bring the Paris Agreement back on track, stated the Secretary General. "It went off track. Because of this vacuum the past few years, many extraneous issues have come to dominate the conversation. Net zero and carbon neutrality are totally extraneous to UNFCCC talks and also what took place in Paris. If they want to reinvent wheel in Glasgow, it will be a huge challenge for the world."

Barkindo said the scientists on the Intergovernmental Panel on Climate Change (IPCC) are doing excellent work and, "we support the IPCC fully. We believe in science and statistics and are guided by what comes out of the IPCC.

"We have digressed greatly ... We remain optimistic in OPEC that the global community will come back on track again."

The inaugural joint workshop was held in November 2019, followed by the second iteration held in October 2020.

# OPEC holds inaugural technical workshop with energy companies

***On October 11, 2021, the OPEC Secretariat hosted the 'First Technical Workshop with Energy Companies' via videoconference. The event brought together national and international oil companies for the first time to discuss issues of mutual interest and exchange outlooks on the energy markets. The* OPEC Bulletin's *Scott Laury reports.***

The workshop constitutes the Organization's latest outreach initiative to promote dialogue and international cooperation in support of its overarching objective of fostering a sustainable stability in the global oil market.

In its first iteration, the event attracted more than 100 participants, including national oil company delegates from both OPEC Member Countries and non-OPEC countries participating in the 'Charter of Cooperation' (CoC), in addition to participants from international oil companies, as well as industry experts and analysts.

Over the event's three sessions, presentations and discussions centred on the role of petroleum in the energy transition, as well as opportunities and challenges associated with adapting to the rapidly changing industry dynamics.

## Promoting partnerships

OPEC Secretary General, Mohammad Sanusi Barkindo, opened the meeting by highlighting the goals and significance of the new event.

"This inaugural event signifies a new milestone in OPEC's ongoing outreach efforts and builds on our long tradition of promoting partnerships with a wide range of industry stakeholders, including public and private sector organizations and corporations."

"OPEC has a long, historical connection to its Member Country national oil companies, and, more recently, we have intensified our efforts to hold informal meetings and exchange information with international oil companies," Barkindo added.

Commenting on the event's theme, the Secretary General said: "Today, we will tackle what I would call the 'issue of the moment' — and that is the role of the petroleum industry in the energy transition."

In this regard, he underscored the significant role that oil and gas are expected to play globally in the years ahead.

## Meeting future demand

Referencing OPEC's *World Oil Outlook 2021,* Barkindo noted that primary energy demand is projected to increase by 28 per cent in the period to 2045, and thus all forms of energy, including oil and gas, will be required to meet these rising requirements. Of this, he added, oil will retain the largest share of the energy mix, with a little over 28 per cent, in 2045.

In reference to the COVID-19 pandemic, the Secretary

*Mohammad Sanusi Barkindo (second r), with Members of the OPEC Management.*

General said that, despite the plunge in demand of 2020, the oil and gas industry was recovering well and that demand is picking up at a healthy pace.

"To give you an idea as to how well the industry is recovering from last year's unprecedented drop in demand, we now see global oil demand reaching just over 108 million b/d by 2045, after sinking to a low level of 90.6m b/d in 2020 due to the severe impacts of the COVID-19 pandemic."

Despite this good news, Barkindo noted that both the pandemic and the UN Climate Change Conference in Glasgow, COP26, were resulting in radical and premature calls for divestment in fossil fuels.

"As many of you are aware, some voices in the industry continue to call for a rapid transition to a carbon-free economy, which even includes some radical calls for an immediate discontinuation of investments in oil and gas," he said. "The debates on these issues will be front and centre at COP26 in Glasgow, Scotland. OPEC and its Member Countries will be actively involved in these meetings to ensure that a balanced and equitable approach is adopted as we seek to mitigate the impacts of climate change."

He went on to emphasize that OPEC fully supports the need to decrease emissions, while advancing innovation and increasing efficiency. However, he said that this cannot come at the cost of depleting industry investment.

## Investment a top priority

"The fact remains: the world needs energy, energy requires investment and investment relies on companies," he stated.

In terms of investment, he noted that to meet future energy needs, the world will require an estimated $11.8tr in cumulative oil-related expenditures from 2021 to 2045.

"Meeting these levels of investment will require major commitments by industry stakeholders across the value chain," he added. "Industry investment took a major hit last year, sinking by a massive 30 per cent, due to the adverse impacts of the pandemic. If this trend were to continue, we could see a supply shortfall and the potential for unwanted volatility, risks to energy security and potentially geopolitical ramifications. These are eventualities that no one in this industry wants to see."

## Diverse needs, diverse paths

In terms of the upcoming climate talks and discussions related to the energy transition, Barkindo pointed to the crucial aspect of multilateral dialogue and cooperation, which he said would be key in making sure that all voices are heard and all viewpoints are considered in Glasgow.

"The fact is that different countries around the world have diverse needs and varying capabilities, and therefore reducing emissions should have multiple paths," he said. "In the development of any future energy and climate roadmap, we will need to make sure that the core principles of the United Nations Framework Convention on Climate Change are strictly observed — namely equity, historical responsibility and the principle of common but differentiated responsibilities and respective capabilities."

These goals, he emphasized, will only be realized in a holistic manner through broad-based, inclusive stakeholder cooperation.

"As we heard in the many presentations and comments from today's sessions, the importance of dialogue and cooperation will only be elevated in the years to come as this industry transitions and adapts to a new energy paradigm. No one stakeholder has the answers, and thus we must all work together if we intend to create a sustainable and equitable solution for future generations."

In closing, the Secretary General cited the wise words of Henry Ford, who said: *"If everyone is moving forward together, then success takes care of itself."*

"These words contain much foresight as we seek to make prudent and responsible decisions in Glasgow and beyond that will affect the future of this industry and future generations. Let us, indeed, heed these words and move forward together towards our common success."

# IR Iran appoints new Head of Delegation to OPEC

***The Islamic Republic of Iran appointed Eng Javad Owji as its new Minister of Petroleum and Head of Delegation to the Organization.***

Eng Javad Owji was nominated by IR Iran's new President Ebrahim Raisi and his appointment was approved by Parliament on August 25. He attended the 20th OPEC and non-OPEC Ministerial Meeting one week later.

The career of the new Minister spans many decades, allowing him to bring a wealth of knowledge, technical expertise and leadership to OPEC and its Ministerial Conference – the Organization's supreme authority.

From 1990 to 1994, the Minister served the National Iranian South Oil Company in Ahwaz as a senior expert on oil and gas reservoirs at the Department of Petroleum Engineering.

He then moved to the National Iranian South Oil Company (NISOC) to hold the position of senior expert in petrophysical engineering from 1994 to 1998.

During the next two years, Owji headed the Oil and Gas Reservoirs Evaluation Department in the Iranian Central Oil Fields Company.

In 2000, Owji was appointed as the Head of Petroleum Engineering at the South Zagros Oil and Gas Production Company, a position he held until 2002. Owji also served as the company's Technical Deputy from 2002 to 2004. He was then promoted to serve as the company's Managing Director and Vice Chairman of its Board of Directors from 2004 to 2009.

Owji in 2009 became the Chairman of the Board of Directors of the Supervision of Gas Production and Refineries. He was also appointed as a Member of the Board of Directors of the Oil Industry Pension Fund and the Chairman of the Board of Directors of Iran Gas Development Engineering Company until 2013.

During the same period, he was appointed as Deputy Minister of Petroleum and Managing Director of the National Iranian Gas Company.

From 2010 to 2013, Owji served on the Board of Trustees of the University of Petroleum Industry. He was also the Chairman of the Board of Directors of Gas Refineries of the National Iranian Gas Company.

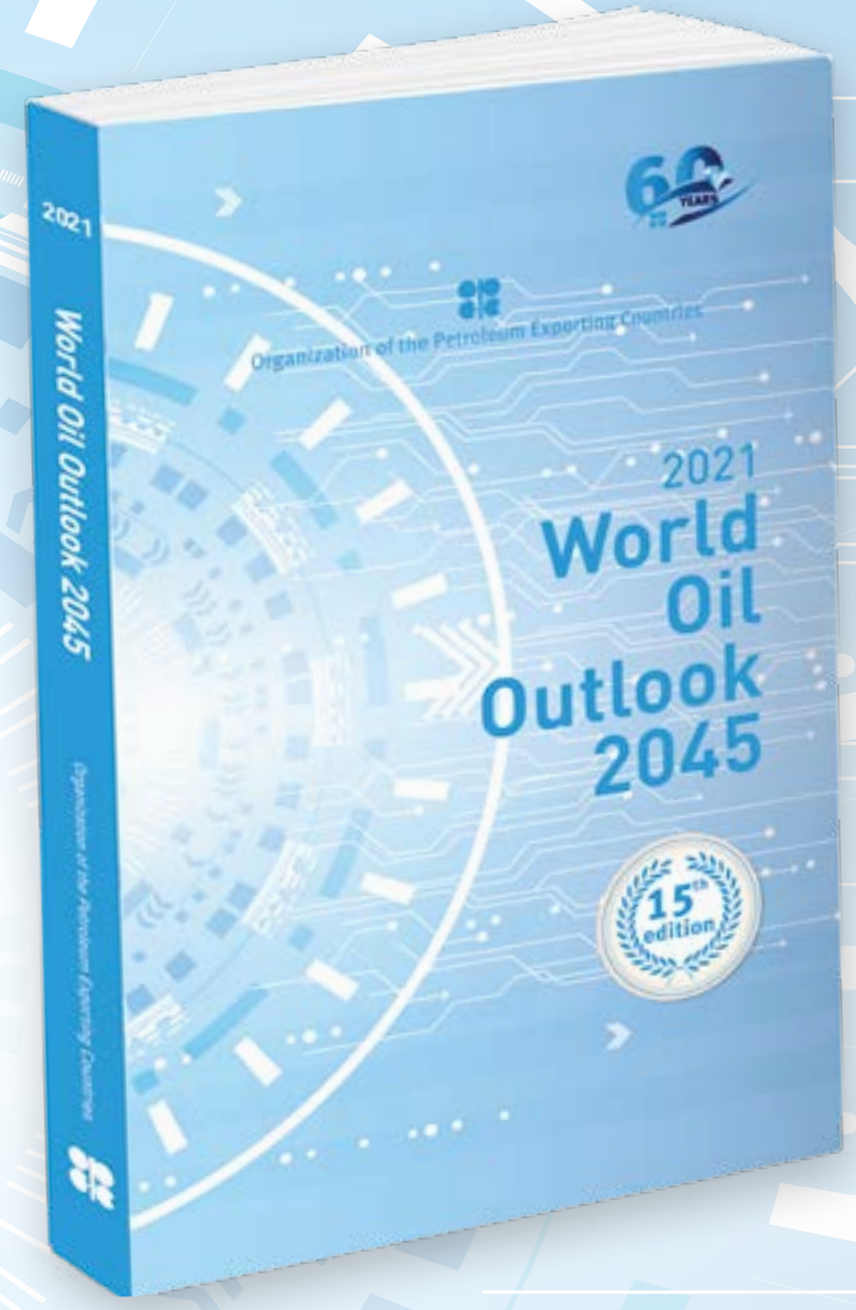
Owji was appointed as the Managing Director and Vice Chairman of the Board of Directors of Petro Mofid Oil and Gas Holding Development from 2013 to 2017.

In 2014, the new Minister served as the Chairman of the Board of Directors of the Petrochemical Investment Company until 2017.

During the next two years, he served as the Managing Director of Mofid Economic Group.

From 2019 to 2021, he led Sina Energy Gostar Holding. He also served as a Member of the Board of Directors of Razavi Oil and Gas Company.

The Minister earned a degree in petroleum engineering from Abadan Petroleum University in 1987.

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# Abdelaziz Bouteflika

*The former President of Algeria was a leading supporter of OPEC and instrumental in the negotiations leading to the 'Declaration of Cooperation'.*

Abdelaziz Bouteflika, Algeria's longest serving President who played a leading role in the OPEC-led efforts to establish the 'Declaration of Cooperation' (DoC), passed away on September 17, 2021 at the age of 84.

Bouteflika hosted many OPEC meetings and leading industry events during his 20 years as president, from 1999 to 2019. He earned a special place in OPEC history books for his crucial support of the discussions by OPEC and leading non-OPEC oil-producing nations that would bring about the DoC in 2016.

The 170th (Extraordinary) Meeting of the OPEC Conference, which took place in Algiers on September 28, 2016, established a High-Level Committee to develop a framework for consultations between OPEC and non-OPEC oil-producing countries, including taking proactive measures that would ensure a balanced oil market on a sustainable basis. This key outcome was the initial step in the series of events that would lead to the signing of the landmark DoC framework a little more than two months later, on December 10, in Vienna.

On many succeeding occasions, both the OPEC and non-OPEC participating countries took note of Bouteflika's influential role in supporting the establishment of the DoC. The DoC's Joint Ministerial Monitoring Committee (JMMC), meeting in Algiers on September 23, 2018, nearly two years after the 170th (Extraordinary) OPEC Conference, "paid special tribute to Abdelaziz Bouteflika, President of the Republic of Algeria, in recognition of Algeria's unwavering support and leading contribution to the landmark DoC."

## Visionary leadership

OPEC Secretary General, Mohammad Sanusi Barkindo, recalled Bouteflika's many contributions to OPEC — and to international cooperation — in a letter of condolence sent to Mohamed Arkab, Algeria's Minister of Energy and Mines and the country's Head of Delegation to OPEC.

"It is with a heavy heart that I received the very sad news of the passing of former President Abdelaziz Bouteflika, who will be long remembered for his dedication to our Organization and his decisive support for the DoC," he said.

"Though the visionary leaders at the time could not foresee a challenge as monumental as the COVID-19 pandemic, I believe a large part of the oil market stabilization we have seen over the past 18 months can be attributed to the historic actions undertaken by the countries in the DoC. Together, we have averted a far deeper market crisis, helped restore order to the market, and have provided a platform for recovery. We would not be where we are today were it not for the key decisions taken in Algiers in September 2016 that helped pave the way for this historic level of cooperation by OPEC and non-OPEC oil-producing countries."

Reuters

*Abdelaziz Bouteflika (r), President of Algeria, with Dr Purnomo Yusgiantoro, (then) Minister of Mines & Energy of Indonesia, at the 129th OPEC Conference in 2004.*

## A leading pan-Africanist

Bouteflika joined Algeria's struggle for independence and quickly became known for his sharp intellect. A year after independence in 1962, still in his 20s, Bouteflika became the world's youngest Foreign Minister, a post he would hold for 16 years. He became President of the 29th UN General Assembly in 1974 and the Sixth Special General Assembly in 1975.

Among his many accomplishments as Algeria's top diplomat, Bouteflika was instrumental in supporting the non-aligned nations and by providing an influential voice on the global stage.

In his letter of condolence, Barkindo also paid tribute to Bouteflika's championship of African cooperation. The former President, Barkindo wrote, would be remembered "as a pan-Africanist who was instrumental, along with the Presidents of Nigeria and South Africa, in establishing the New Partnership for Africa's Development (NEPAD) in 2001. In the years that followed, President Bouteflika continued to support NEPAD's role within the African Union as a strategic framework to promote socio-economic development, opportunity and cooperation across the African continent."

In recalling such achievements, Barkindo said: "We must never forget the legacy of those visionaries who were instrumental in bringing them about. Abdelaziz Bouteflika, who devoted his life to public service, global diplomacy and ultimately the Presidency of Algeria, will be among those we shall remember and revere."

## First OPEC Summit in Algiers

Algeria has been instrumental in supporting the Organization's many achievements since becoming an OPEC Member Country in 1969. When the future President Bouteflika was serving as Foreign Minister, Algeria hosted the First OPEC Summit, the Conference of Sovereigns and Heads of State of OPEC Member Countries, from March 4 to 6, 1975. The Summit culminated in the adoption of the Organization's First Solemn Declaration and the establishment of 'The OPEC Special Fund', later known as the OPEC Fund for International Development. Today, the OPEC Fund is a leading force in funding development projects in energy, transportation, agriculture, water and sanitation, health, and education in many developing countries.

As President, Bouteflika attended key events like the Second OPEC Summit of Heads of State and Government on September 26–27, 2000, in Caracas, Venezuela;

*Abdelaziz Bouteflika, presenting the opening address to the 151st Meeting of the OPEC Conference in 2008, in Oran, Algeria.*

and the Third OPEC Summit of Heads of State and Government in Riyadh, Saudi Arabia, from November 12–18, 2007.

The Second Solemn Declaration issued at the Caracas Summit accommodated new challenges that had arisen over the years, placing them in the context of the overall vision and objectives of the Organization. This included adding environmentalism, broadening out the concept of economic development to embrace the key component of sustainability, and at the same time, placing a heavy stress on eradicating poverty.

Among its many outcomes, the Third Solemn Declaration issued in Riyadh called for strengthening and broadening the dialogue between energy producers and consumers, and for enhanced cooperation to address global energy poverty and other global development initiatives.

Bouteflika was elected four times to the Presidency of his country, in 1999, 2004, 2009 and 2014. He was laid to rest at the El Alia cemetery for independence heroes in Algiers on September 19, 2021.

*Abdelaziz Bouteflika (centre left), with Heads of Delegation of OPEC Member Countries during the 151st Meeting of the OPEC Conference in 2008, in Oran, Algeria.*


*Abdelaziz Bouteflika (r); with Chakib Khelil (l), (then) Minister of Energy & Mines, Algeria; and Abdalla Salem El-Badri (c), (then) OPEC Secretary General, at the 151st Meeting of the OPEC Conference in 2008, in Oran, Algeria.*

# UAE Embassy hosts session on female emancipation


*Mohammad Sanusi Barkindo, OPEC Secretary General, and Boshra AlSeiari, Head of OPEC's Data Services Department, join OPEC staff members in presenting the 2021 Annual Statistical Bulletin on September 30.*

***Boshra AlSeiari**, OPEC's Head of the Data Services Department (HDSD), spoke about the empowerment of women and girls at a virtual Emirati Women's Day event, hosted by the United Arab Emirates (UAE) Embassy in Vienna on September 15.*

Boshra AlSeiari spoke upon invitation of Ibrahim Al Musharrakh, Ambassador of the UAE in Vienna, as a representative of successful Emirati women.

AlSeiari talked about her background, stating, "I am first and foremost an Emirati woman, raised and educated in my home country."

She added that she is a certified leader by Cambridge University, and an Executive MBA holder with a bachelor's degree in computer science. She started her work experience in 2001 and five years later was elected by the management of her company to join the Abu Dhabi future leaders programme, where she attended leadership education through Cambridge Business School.

AlSeiari has held the position of HDSD at OPEC since January 2020 and, as she noted, is "the first female heading a research department in the history of OPEC."

She added that the UAE's strategic vision for women is based on providing them with the necessary tools to achieve professional excellence and ensure that all career tracks remain open to them should they choose to pursue them. The UAE understands that it is a national imperative for women to contribute to the development process, she said.

## 'We face no obstacles'

"From my perspective, the UAE has pursued societal development, including gender equality, ever since it was formed 50 years ago under our founder, the late Sheikh Zayed bin Sultan Al Nahyan. He and his wife immediately saw the potential of women and set about to make their role equal in society. Since the beginning, he insisted all girls be educated — we face no obstacles.

"As of 2015, women occupied 66 per cent of public sector jobs, one of the highest proportions worldwide."

AlSeiari stated that having a strong and supportive family has been instrumental in her success, along with a cultural belief that "when you do something, you give your best or you don't do it at all. Thus, I am confident that when I do something I will succeed."

Despite all of the encouragement and benefits

that women have, she said, many do not move up to higher positions. She puts this down to a lack of self-motivation and stated that getting the girls outside of their "luxury bubble" and engaged in humanitarian activities in their early years may propel them to self-realization.

Another issue women face is that they have weaker networks in general than men, in part because they additionally play the time- and energy-consuming role of wife and mother at home.

"However, they should not feel guilty for working. This slows down their career. Nobody knows how to balance their home-work life, neither men nor women.

"Women are strong by nature, and I ask women to stand up and reach for their potential. We can have strength and also have our feminine side. We should accept and be accepted for who we are. Just be ourselves," she concluded.

## Other speakers

Ambassador Al Musharrakh stated that women in the UAE have always been the backbone of family life and social structure, and continue to maintain the state's heritage and culture. He added that the General Women's Union (GWU) was established under the Chairmanship of HH Sheikha Fatima Bint Mubarak in August 1975. It is the national mechanism for women's empowerment and leadership in the UAE.

"The subject at hand is one of utmost importance and a priority for the UAE leadership," he said. The UAE constitution guarantees equal rights to all citizens. Women in UAE have same claim to education and to practice a profession as their male counterparts.

Additionally, the Arab Charter on Women's Rights was launched in October 2019 in Abu Dhabi for all member states to provide information for legislation and Arab women's rights.

"The UAE has adopted a 100 per cent women's policy and aims to enhance protection of women and girls as part of all UAE-funded humanitarian projects and in crisis," said Al Musharrakh.

"This year's 50-year anniversary of the UAE provides a chance for Emirati women to follow in footsteps of the founders to further strengthen the UAE globally," he said. The UAE was founded in 1971.

## Empowering Emirati women

Meanwhile, Maryam Bin Theneya, Member of the UAE Federal National Council, stated that the slogan for celebration of Emirati's Women's Day on August 28, 2021, was: 'Women are ambitious and shining for the 50th' (anniversary).

"Leadership has paid great attention to supporting and empowering women, to creating a supportive environment and programmes to help unleash creative energies and rise to highest leadership positions in country."

She added the leadership has paved the way for Emirati women to work, and they can be found in economic, health and political sectors, including the former speaker of the Federal National Council. They have diplomatic positions, are in National Service, space sciences, engineering, medicine, and so forth.

Bin Theneya added the 2010 federal national elections are seen as the most important regarding political empowerment in the UAE, with Resolution No 1 raising the percentage of women's representation in parliament to 50 per cent.

"I am proud to be one of those in parliament," she said, adding a 2021 report ranked the UAE one of four countries in world that has achieved parity in parliament.

## Rights issues in Europe

Larissa Lassmann, who focuses on women's issues and human rights at the Austrian Ministry of European and International Affairs, stated: "Our minister for Foreign Affairs just returned from an excellent journey to the UAE and was grateful for the warm welcome and discussions to implement a strategic partnership between the two countries. We are looking forward to even stronger ties between our countries."

Austria is a member of the UN Human Rights Council for the period 2019–21 and held its presidency in 2020. "Our ambassador was the second woman in history to preside."

Jacqueline Niavarani, Directorate for Women and Gender Equality at the Austrian Federal Chancellery, talked about the situation in Austria. Her office oversees equal treatment in the public and private sector; gender budgeting and mainstreaming; and prevention of and protection from violence.

Austria enacted a law in 1997 that protects women against violence, she said. "We are the first EU country to have this law. We were amongst the first and a lot of countries followed."

When asked why there is still a struggle in Europe for gender equality, Niavarani answered that there are different countries with different approaches in Europe, but the common ground they all have achieved is a legal basis for gender equality. Despite this, she added, gender stereotypes still exist and have to be addressed, as they are harmful for both men and women.

Lassmann answered a question about the conflict between women's career and other traditional roles, stating that the ambitious agenda set out at the World Conference on Women in 1995 has still not been fully achieved.

The UAE has drawn from the rich experience of the West in examining women's rights, according to Bin Theneya.

"The UAE has not yet reached the top level of empowerment, but "we are on the right track. What we have achieved in the last 50 years will be the pillar of what we will achieve for the next 50 years."


*Boshra AlSeiari, Head of OPEC's Data Services Department (HDSD).*

# OPEC and the City of Vienna host the first Vienna Energy Scholar Programme

*Thirteen university students were part of the ground-breaking Vienna Energy Scholar Programme (VESP), a new and innovative programme held under the auspices of the OPEC Academy. The* OPEC Bulletin's *Maureen MacNeill reports.*


*Mohammad Sanusi Barkindo (c), OPEC Secretary General; with Mag Thomas Resch (r) from the City of Vienna; and Dr Ayed S Al-Qahtani, Director of OPEC's Research Division and Chairman of the OPEC Academy.*


*Mohammad Sanusi Barkindo (c), OPEC Secretary General; Mag Thomas Resch (centre r) from the City of Vienna; and Dr Ayed S Al-Qahtani (centre l), Director of OPEC's Research Division and Chairman of the OPEC Academy; with participants of the first Vienna Energy Scholar Programme.*

Excitement was in the air as the first VESP students entered the OPEC Secretariat on October 4 filled with anticipation and a thirst for knowledge. They will go down in history as the inaugural class for the programme.

Thump! The tennis ball hits the wall, where number cards are taped. The duo throwing the ball has to pick the number they hit, which has an OPEC-related question to research and later relate to the group. The VESP integrated a number of new and innovative ways to involve the students in the learning process, which the students seemed to appreciate.

The Academy oversees several educational programmes under one umbrella at OPEC. The VESP — which has advanced-degree students attend a unique and interactive learning environment for one week, followed by a week-long trip to an OPEC Member Country — was thought to be a novel way to learn about the oil market, the Secretariat and Member Countries, while promoting dialogue and exchange with OPEC's host country Austria, other European countries and OPEC.

The bright, young attendees were chosen based on their education, experience and desired career trajectory.

Chairman of the OPEC Academy, Dr Ayed S Al-Qahtani, Director of OPEC's Research Division stated: "All of OPEC's work depends on diplomacy of one kind or another. Coming together, exchanging ideas and thoughts, working towards

*Dr Ayed S Al-Qahtani, Director of OPEC's Research Division and Chairman of the OPEC Academy.*

*Dr Ayed S Al-Qahtani (centre r), Director of OPEC's Research Division and Chairman of the OPEC Academy, at the opening of the programme.*

a common goal. These are the pillars upon which our institution is built, and we hope to bring the spirit of this to you through this very special two-week programme."

After carefully examining similar exchange programmes developed by other organizations around the world, a lot of thought went into the format of the VESP, with the goal to make it very distinct from other programmes offered under the OPEC Academy.

Al-Qahtani added that the programme both honours the long and rich history between the OPEC Secretariat and host city Vienna and sets an even higher bar for future collaboration. Vienna has been home to OPEC's Secretariat since 1965, and "like every great idea, the VESP started out as a seed, watered by our desire to deepen our connection with our host city.

"To us, Vienna is more than just the location of the OPEC Secretariat. It is our home. It is where our families are. Where our children go to school.

"Many people from OPEC Member Countries have come to work in Vienna and ended up seeing Vienna as more than a temporary home, having made deep and lasting connections over years and sometimes decades. That is what diplomacy and indeed life are about. Deep and lasting connections that we can call upon in times of both joy and need."

## OPEC history

After being forged on the banks of the Tigris River in Baghdad, Iraq, in 1960, OPEC's five founders came to represent the courage and dreams of this small group, which expanded over time, "to create a better world for their children and grandchildren," stated Al-Qahtani.

"Nobody could have imagined in the years and decades that followed the wide swathe that OPEC has cut through its diplomacy and tact, developing more and more connections through the consumer-producer dialogue."

Today OPEC meets regularly with nearly all major producers and consumers, as well as other organizations and institutions worldwide.

"In fact, the Secretariat has become the brain centre for exchanging ideas and collaborating on topics within the international energy arena," he said. "Our reputation as a reliable, dependable partner carries a great deal of weight and precedes us in every interaction we have."

This has been strengthened through the 'Declaration of Cooperation' (DoC), which came about in December 2016 during a period of severe market instability, he continued. The 'Charter of Cooperation' (CoC) followed in July 2019. Fortified by the gains made over the years, these bodies have proven critical and indispensable during the pandemic.

*Mayor of Vienna, Michael Ludwig.*

*Mohammad Sanusi Barkindo, OPEC Secretary General, addressed the audience.*

"Together with our DoC countries, we are continuing to expand our horizons far beyond the oil industry," said Al-Qahtani. "OPEC has, for example, been involved in the UN climate change process since its inception and remains active. Other topics we discuss and debate include the environment, energy poverty and the energy transition."

After playing some informative warm-up games the morning of the first day, the students moved into in-depth activities with the different departments, offices and units of the Secretariat, with a focus on short- and long-term market outlooks; data and technology, and climate topics, including the Sustainable Development Goals (SDGs) and the United Nations Framework Convention on Climate Change (UNFCCC).

This was broken up by other activities, such as dialogue proposals, a day at Austria's Climate Ministry, the Ministry of Foreign Affairs, City of Vienna and the municipal energy company, Wien Energie, along with a trip to OPEC's sister institution, the OPEC Fund for International Development.

## City Hall reception

The students and an OPEC delegation were gracefully welcomed for an evening reception on October 6 at the spectacular Vienna City Hall, where Mayor Michael Ludwig and OPEC Secretary General Mohammad Sanusi Barkindo addressed the rapt audience and broke bread together. Abdulhamid Alkhalifa, Director General of the OPEC Fund for International Development (OPEC Fund), was also present.

The Mayor welcomed the students and discussed climate change, the energy transition and the view of the City of Vienna on these topics.

"There can be no better or more poignant location to hold this dinner than the gothic-style Vienna City Hall, one of the most splendid amongst the numerous monumental buildings along Vienna's Ringstrasse, which encircles the city centre. It is also symbolically reflects our excellent relationship with the

*The Mayor of Vienna, Michael Ludwig (l), at the magnificient Vienna City Hall, with Mohammad Sanusi Barkindo, OPEC Secretary General.*

*Leonardo Sempértegui (c), General Legal Counsel, explains the Legal Office's activities.*

City of Vienna, and is just a stone's throw from the OPEC Headquarters," said the OPEC Secretary General.

"As the city has grown and advanced to become the polished and stunning centre of dialogue, beauty and music it is today, so has OPEC been growing and developing into a centre of excellence and focal point for the international energy dialogue. Our reputations precede us both!"

Barkindo discussed the goal of engaging the students to improve their knowledge about the most pertinent elements of energy policy and the energy industry, along with providing more insight into OPEC Member Countries and the challenges they face as developing oil-producing countries.

Over the decades that have come to pass, OPEC has faced and overcame many challenges, he said. "It has created a reputation as a fair collaborator and non-partisan voice of reason selflessly seeking consensus on the issues of the day in the collective interests of consumers, producers and the global economy."

The Secretary General discussed the DoC, signed in December 2016, stating: "For the first time ever, OPEC Countries coordinated with a large group of non-OPEC producing countries in a concerted effort to accelerate stabilization in the oil market after a critical downturn."

The broader CoC followed in July 2019, he said, adding that the Charter provides a platform to facilitate dialogue and exchange views regarding conditions and developments in the global oil and energy markets.

"The goal is to contribute to a secure energy supply and lasting stability. Without the DoC and CoC in place, the oil industry and indeed the world may have looked a lot different after the onset of the COVID-19 pandemic

*Maureen MacNeill (r), Editor in OPEC's PR & Information Department, guiding partcipants through the programme.*

*Dr Abderrezak Benyoucef (c), Head, Energy Studies Department, chairing the session on the activities of the Energy Studies Department.*

in early 2020. These tried and true platforms were able to quickly restabilize the market after its deepest downturn in history."

Barkindo celebrated being able to meet face-to-face once again. The VESP was the first in-person meeting held at OPEC since the onset of the COVID-19 pandemic.

## Dialogue with the Secretary General

On the last day of the first week, the Secretary General met with the students in the OPEC Conference Room. The students delivered interesting and stimulating presentations on how the world of oil and OPEC could look in the future.

The Secretary General stated, "Welcome to the OPEC family. I consider you now to be the newest members of our family. OPEC is a product of powerful ideas, and also shows the power of ideas. Ideas can change the world."

Barkindo reminisced about the beginnings of OPEC through an informal meeting on the sidelines of the 1st Arab Petroleum Conference at the Maadi Yacht Club in Cairo, Egypt. Two upstart friends who had met while studying in the US — Juan Pablo Pérez Alfonzo of Venezuela and Abdullah al-Tariki of Saudi Arabia — returned home after studying and were called upon to serve their governments, he said. Al-Tariki became the Minister of Petroleum, while Alfonzo was invited to serve as the Minister of Energy.

"They continued to contact each other. They had no Internet. No cell phone. Then they met in Cairo in 1959 at the 1st Arab Petroleum Conference. Both thought it was a golden opportunity to meet again and network with other producers, and to advance the ideas they had had as students," he said.

*Participants during the briefing on the activities of the Petroleum Studies Department.*

*The first VESP students were filled with anticipation and a thirst for knowledge.*

They were very careful, as an organization of producers was not welcome at that time. Then Wanda Jablonski, an inspiring, young journalist from the US, who later founded the *Petroleum Intelligence Weekly,* clicked in Cairo with the two young upstarts.

She decided there was no better place to sow the seeds of a new producer group than there, and decided to convene an informal gathering away from the conference venue at the Maadi Yacht Club.

Jablonski reached out to others, inviting Dr Fuad Rouhani of Iran; Dr Tala'at alShaibani of Iraq and Ahmed Sayed Omar of Kuwait to join the other two. Among themselves, they signed a Gentleman's Agreement, which was the starting point of OPEC. The Organization was officially formed over a year later in Baghdad.

"These five guys changed the course of history and formed this Organization," continued Barkindo. "Here we are 61 years after Baghdad."

Unfortunately, due to the COVID-19 pandemic, plans to hold the 60th celebration of OPEC in the newly renovated Al-Shaab Hall in Baghdad had to be postponed, he said.

Turning to the industry, the Secretary General stated that people around the world depend on secure, steady, reliable and affordable energy. In achieving this, OPEC focuses on the fundamentals of supply, demand, stocks and market stability.

Without stability it would be difficult to invest, explore, produce and market oil for consumption around the world.

"We have to have access to funding from banks and

*Participants and OPEC staff attending the closing ceremony.*

*Taking time out at the Vienna City Hall upon invitation of the Mayor of Vienna, Michael Ludwig (c); with Mohammad Sanusi Barkindo (centre r), OPEC Secretary General; and Dr Abdulhamid Alkhalifa (centre l), Director-General of the OPEC Fund for International Development.*

the financial community ... consumer countries need stability to grow ... Stability of the oil market is in the interest of producers, consumers and the global economy."

OPEC has ongoing, fruitful, productive dialogues with the EU, China, India and the US, stated Barkindo, adding that OPEC is as "transparent as a fish bowl". All data from 1960 to today is available online.

The Organization rests upon three pillars, one of which is energy and the environment, he said.

"There are no climate deniers here," stated Barkindo, adding all OPEC Countries have signed the Paris Agreement.

"We all believe in climate change, it's real. All Member Countries live the impact of climate change every day from floods, to desertification to hurricanes. All of our countries face this on a daily basis.

"We at OPEC decided to be part of the climate change discourse from Day 1, long before you were born," said Barkindo. "We can't stay on the sidelines. We must be part of the solution."

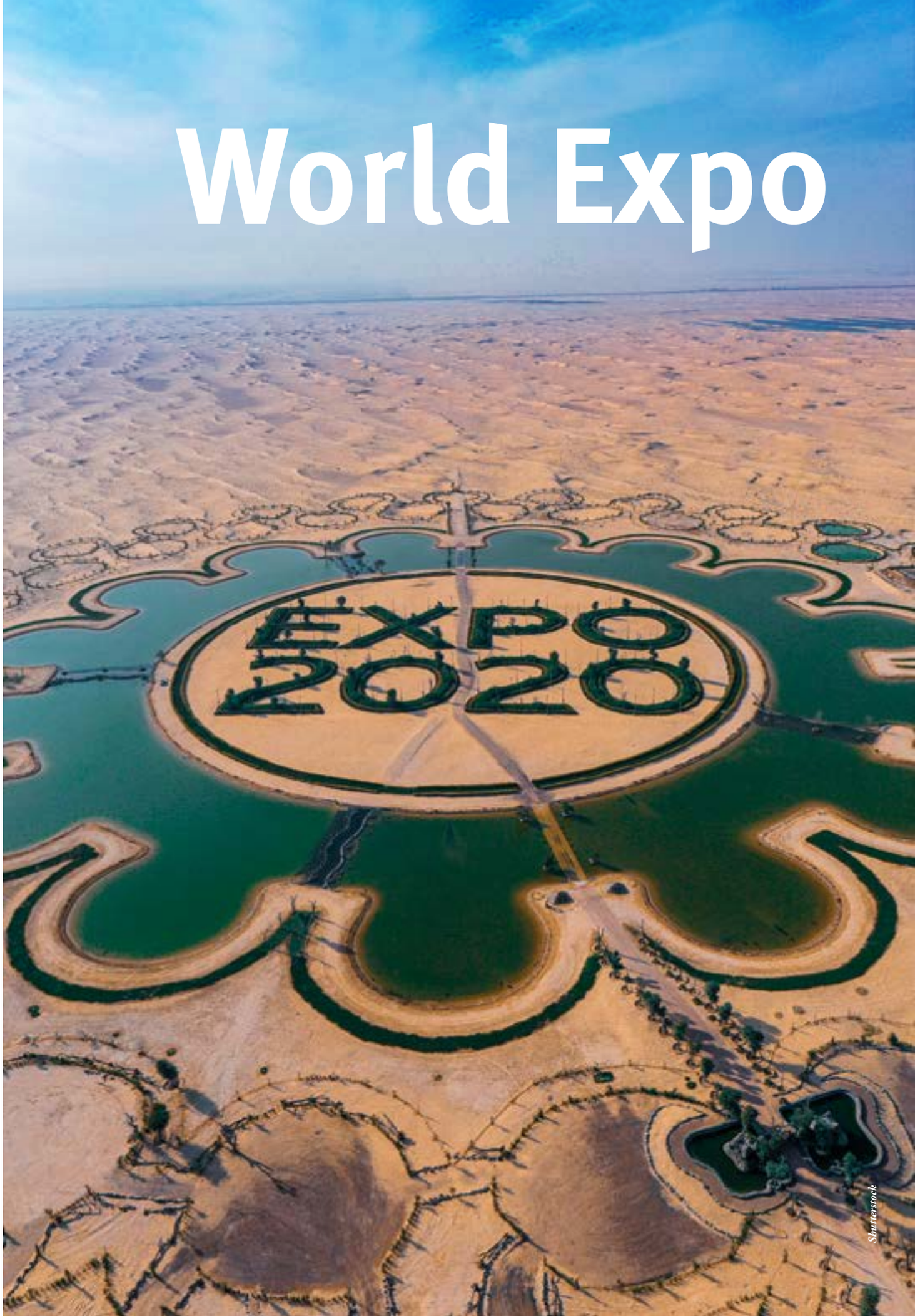
The Secretary General himself has been personally involved in the process all the way through, starting from COP1.

"The objective of these conversations and agreements is to address greenhouse gas emissions, nothing else. They can be reduced and make our world a better place. We are strong believers that technology is required to achieve this."

The concepts of equity, fairness, inclusiveness, comprehensiveness, common-but-differentiated responsibilities and respective capabilities are what have guided the process and any attempt to divert away from this will cause difficulties. "We need a global solution."

He closed by stating, "You are kick-starting what we hope will be a continuous programme. This is all about your future. You are all now ambassadors."

# World Expo

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# begins in Dubai

***The opening of the world-renowned event marks a milestone for the United Arab Emirates (UAE) in its Golden Jubilee year. The Expo symbolizes the hope for a strong global recovery from the COVID-19 pandemic and a more resilient, interconnected future.***

Expo 2020 Dubai opened its doors to the world on October 1, 2021, following a spectacular ceremony to kick off the first international exposition ever held in the Middle East, Africa and South Asia region.

The star-studded grand opening, broadcast live around the world, took place before 3,000 dignitaries and guests gathered at the architecturally stunning Al Wasl Plaza on the Expo grounds in Dubai. The global audience was welcomed by Sheikh Nahayan Mabarak Al Nahayan, UAE Minister of Tolerance and Coexistence and Commissioner General of Expo 2020 Dubai, and His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai. Dimitri Kerkentzes, Secretary General of the Bureau International des Expositions (BIE), also delivered welcoming remarks.

The programme began with the playing of the UAE national anthem and flag-raising in the presence of many national and international dignitaries, followed by a parade of flags representing the 192 participating countries. The ceremony, which took place on the eve of the opening day, then featured eclectic music and entertainment punctuated by fireworks that lighted the sky over Dubai.

The Expo's Firdaus Orchestra was one of the highlight's of the performances. Directed by the young Lebanese musician and conductor Yasmina Sabbah, the ensemble features 50 female musicians from more than 20 countries.


*Left: A lake, trees and sand are used to replicate the Expo 2020' s logo in Dubai.*


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## Proud moment for OPEC

OPEC Secretary General, Mohammad Sanusi Barkindo, congratulated the UAE on the opening of the Expo and the country's Golden Jubilee. "Today, all of us at OPEC join in the celebration of Expo's opening in one of our Member Countries and congratulate the United Arab Emirates for bringing our world together in Dubai. Expo 2020 Dubai's breath-taking architecture and captivating exhibitions reflect the wonders of our world and its rich social, cultural, artistic and culinary diversity."

He added, "It is fitting that the Expo, a symbol of solidarity and cooperation, coincides with the 50th Anniversary of the UAE's founding. The successful opening of the Expo also reflects the UAE's commendable handling of the pandemic and its highly effective vaccination efforts that have enabled the beginning of the return to normal life."

Under the theme 'Connecting Minds, Creating the Future', Expo 2020 Dubai is scheduled to run for 182 days — until March 31, 2022. It is the first World Expo to be held in the Middle East, Africa and South Asia region in the 168-year history of the event, according to the organizers, and is the largest such event to be held in the Arab world. The Dubai event has been recognized for its precedent-setting level of innovation and sustainability efforts. The sprawling site will become an office and business campus after the Expo.

The Expo, which was scheduled to open on October 20, 2020, was postponed until this year because of the COVID-19 pandemic and its impact on global travel. It was among the numerous high-profile international events to be rescheduled in response to the pandemic, including the 2020 Summer Olympics in Tokyo, which were held earlier this year.

Manal Al Bayat, Chief Engagement Officer for the Dubai Expo, has noted the historic timing of the rescheduled event. "In the year of the UAE's Golden Jubilee, celebrating 50 years of growth, achievement, and social progress, we stand in good stead to look forward to the next


*Left: Al Wasl Plaza dome at the Expo 2020 in Dubai is the central hub for the exposition.*


*An interior view of the elegant Al Wasl dome.*

50 with a clear purpose, and the infrastructure, people, and vision to achieve it," she wrote in an article published in the *BIE Bulletin*.

"We set our sights on solving some of the world's greatest challenges, positioning ourselves as a global incubator for new and exciting ideas. At the heart of that proposal sit the people of the UAE alongside the best minds from around the world that we welcome each and every day to collaborate and create a future we are all proud of," Al Bayat said.

In his welcoming remarks at the grand opening, Kerkentzes, Secretary General of BIE, called Expo 2020 Dubai 'a transformational event' that will 'make our world better'.

"For tens of millions of people, Expo 2020 Dubai is a tremendous occasion to reconnect with the whole world, to truly engage with critical questions of universal importance and to showcase innovative and cutting-edge solutions to our global problems," he said.

The Paris-based BIE oversees and regulates the World Expo and other international exhibitions for the 170 member countries. The World Expo after Dubai is scheduled in Osaka, Japan, in 2025.

## Architecture draws attention

The Expo features stunning designs by some of the world's leading architects, many building on the desert surroundings using innovative designs and colours.

The huge dome-shaped Al Wasl Plaza, where the opening ceremony took place, is located at the heart of the Expo and mirrors its world-class design diversity. According to the Expo's organizers, "Long ago, travellers referred to Dubai as Al Wasl, or 'the connection' — a name that reflects the area's heritage as a meeting point. This spirit of coming together takes shape in Al Wasl Plaza, Expo 2020's spectacular centrepiece and gathering ground for celebration and wonder. Situated at


*Entrance of Terra Sustainability Pavilion designed by Asif Khan.*

the meeting point of Expo's three thematic districts, Al Wasl Plaza's dome is tall enough to fit the Leaning Tower of Pisa beneath it. By night, she transforms into a 360-degree projection screen, blanketed by more than 250 state-of-the-art projectors."

Architectural Digest Magazine has noted that eight of the Expo's pavilions are particularly noteworthy and reflect the event's theme — 'Connecting Minds, Creating the Future'. "From palm-treed solar panels to structures featuring performances of light, these pavilions are the ones to watch during this universal exposition," the magazine wrote, drawing special attention to the pavilions of IR Iran and Saudi Arabia, as well as the Alif, the mobility pavilion, and that of the Emirates National Oil Company (ENOC).

The entry portals to Dubai Expo, designed by the London architect Asif Khan, have been short-listed for the 2021 Dezeen architecture and design awards.

## UAE: A popular destination

The World Expo in Dubai symbolizes UAE's growing importance in hosting major events both within the energy industry and other global events. The Gastech Exhibition and Conference, one of the largest events of its kind supporting the gas sector, took place from September 21 to 23 at the Dubai World Trade Centre under the patronage of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai.

The annual Abu Dhabi International Exhibition and Conference (ADIPEC), one of the world's leading energy events, is scheduled to take place November 15 to 18 this year.

Abu Dhabi also will host the Formula 1 Grand Prix, one of the world's premier single-seat auto racing events, from December 10 to 12 at the Yas Marina Circuit on the city's Yas Island.

# OPEC Member Countries at the World Expo: *A tapestry of diversity*

***The World Expo features more than 190 participating nations and their pavilions offer a microcosm of each country's history, culture, life, architecture, art and food. The pavilions of the participating OPEC Member Countries are featured here.***

*The United Arab Emirates (UAE) Pavilion at Expo 2020 Dubai is shaped like a falcon with wings that open at sunset.*

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Suneesh Sudhakaran/Expo 2020 Dubai

## Algeria Pavilion: *A voyage through the rich heritage of Algeria*

*Architect: Pico*
*Location: Mobility District*

Steve Holland/Expo 2020 Dubai

## Angola Pavilion: *A tribute to indigenous tradition and a future of innovation*

*Architect: Nascimento, Toso, Acuto*
*Location: Mobility District*

Expo 2020 Dubai

## Republic of the Congo Pavilion:
### *Showing the Congolese as game changers and taste makers*

*Location: Opportunity District*


Expo 2020 Dubai

## Equatorial Guinea Pavilion:
### *Ripe for transformation and replete with resources*

*Location: Sustainability District*

Expo 2020 Dubai

## Gabon Pavilion: *Breathtaking landscapes, natural culture, abundant wildlife*

*Location: Sustainability District*

## Islamic Republic of Iran Pavilion:
### *A blend of traditional and contemporary architecture*

*Architect: Shift Process Practice*
*Location: Mobility District*

Expo 2020 Dubai


Stuart Wilson/Expo 2020 Dubai

## Iraq Pavilion: *A nation rich in history reveals its goals for the future*

*Architect: RAW-NYC Architects*
*Location: Opportunity District*

Sunesh Sudhakaran/Expo 2020 Dubai

## Kuwait Pavilion: *An ambitious gateway to the future*

*Architect: Marco Pestalozza*
*Location: Sustainability District*


Expo 2020 Dubai

## Nigeria Pavilion: *A nation with immeasurable potential and opportunities*

*Location: Opportunity District*


Suneesh Sadhakaran/Expo 2020 Dubai

## Saudi Arabia Pavilion:
## *Reflection of the Kingdom's past, present and shared future*

*Architect: Boris Micka Associates*
*Location: Opportunity District*


Suneesh Sudhakaran/Expo 2020 Dubai

## United Arab Emirates Pavilion:
### *An iconic structure with an inspirational message*

*Architect: Santiago Calatrava*
*Location: Opportunity District*

## Venezuela Pavilion:
### *The connection of interests between people and projects*

*Architect: Wanders Werner Falasi*
*Location: Opportunity District*

Suneesh Sudhakaran/Expo 2020 Dubai

# Iraq expands its renewable energy portfolio

Iraq has concluded a deal with a consortium to construct two solar power plants in an effort to reinforce the country's energy capacity.

The new plants are planned for the cities of Karbala and Iskandariyah with projected production capacities of 300 MW and 225 MW, respectively. The consortium comprises Al-Bilal of Iraq, Orascom of Egypt and Scatec of Norway.

The OPEC Founder Member signed a number of agreements of energy cooperation with an aim to usher a new era in the Iraqi energy sector.

Iraq recently finalized agreements with Masdar from the United Arab Emirates (UAE) and French TotalEnergies.

According to Argus, the cooperation with TotalEnergies will encompass a wide range of domains, including the development of solar energy projects, as well as oil production. The French energy giant will also collaborate in building a solar energy project in Basra in the southern part of Iraq with one GW capacity.

The deal between Iraq and Masdar will help facilitate the development of five solar energy plants across the country.

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# United Arab Emirates, United Kingdom enter new era of cooperation

The Emirati national oil company, ADNOC, Masdar and British Petroleum (BP) have announced the signing of several strategic agreements to further enhance the ties between the United Arab Emirates (UAE) and the United Kingdom (UK).

The scope of the concluded deals included energy and sustainable development, such as the plan to develop clean hydrogen hubs in both countries with a minimum capacity of two gigawatts.

The agreements were signed by Dr Sultan bin Ahmad Sultan Al Jaber, UAE's Minister of Industry and Advanced Technology, CEO of ADNOC's Group and Chairman of Masdar, and Bernard Looney, CEO of BP. The signing took place on the margins of the visit of Abu Dhabi's Crown Prince and Deputy Supreme Commander of the Emirati Armed Forces, Sheikh Mohamed bin Zayed Al Nahyan, to the UK.

"The UK and the UAE have enjoyed decades of strong economic ties and the agreements signed between ADNOC, Masdar and BP will serve to deepen the strategic relationship between our countries. We look forward to building upon this legacy to strengthen both countries' ambitions to generate economic growth through low-carbon initiatives. These initiatives will make a direct contribution to the 'Principles of the 50', the economic blueprint for sustainable growth recently announced by the UAE's leadership," Minister Al Jaber stated.

Referencing the agreements, Looney said: "The UK and the UAE governments have bold plans for decarbonization. The UK is our home and we have worked in the UAE for nearly a century. By partnering with the visionary leaders of ADNOC and Masdar, we see a massive business opportunity to generate the clean energy the world wants and needs — and at the same time revitalize local economies and create the jobs of the future."

Among the common areas that were underscored is the countries' leading role in identifying viable technology-driven solutions to the global climate challenge, as well as the commitment to utilize decarbonization to broaden future economic prospects on different scales.


*Dr Sultan bin Ahmad Sultan Al Jaber, UAE's Minister of Industry and Advanced Technology, CEO of ADNOC's Group and Chairman of Masdar.*


*BP's Chief Executive Officer, Bernard Looney.*

The agreements will also assist in defining new avenues of cooperation, such as building and operating sustainable energy and mobility solutions in urban population centres.

# THE OPEC FUND: COMMITTED TO ENERGY FOR LIFE


***Energy, the life force for social and economic development, has always been at the heart of our work. From investing in renewable energy projects to supporting transmission infrastructure or trade of strategic commodities for increased energy access, the OPEC Fund has focused on energy since its foundation in 1976, long before SDG 7 was adopted as part of the 2030 Agenda. We launched our Energy for the Poor initiative in 2008, and have since been an integral part of UN efforts in the field, including the Sustainable Energy for All (SEforAll) coalition.***

Despite accelerated progress in some aspects of SDG 7, 790 million people around the world still lack access to electricity. To continue the progress, greater efforts are essential to scale-up energy-related investments in developing economies. Since our inception, we have committed some $3.3 billion to projects that enhance access to energy services. Our projects have generated 1.3 GW of electricity capacity and supported 18.8 GW of total generation capacity. Currently, energy is our second-largest sector of investment in terms of government-led initiatives. We are also supporting projects led by the private sector, which has a vital role to play in achieving a clean and inclusive energy transition.

SDG 7 promises "access to affordable, reliable, sustainable and modern energy for all." The challenge today is to find the right balance: How can we meet people's basic needs and improve access to energy and how can we do this sustainably? While some countries and economies that are lagging behind in energy access are working to find the right energy mix for themselves, others are boosting their efforts for an ambitious transition to renewable and clean energy.

The five targets linked to SDG 7 (https://bit.ly/3hNoWtp) provide a clear roadmap on how to find that balance. The OPEC Fund continues to work with governments, partners, the international development finance community and the private sector in all five of the defined targets. We are also deepening our involvement in the renewable energy sector — which already represents one-quarter of total energy projects approved.

## Increasing electricity transmission and generation in Mozambique

***Public-Private-Partnership: The OPEC Fund's public and private sector teams are working together to help boost global access to electricity***

- In cooperation with major multilateral development partners, the OPEC Fund extended a $36 million public sector term loan to the government of Mozambique to finance the development of 563 km of transmission infrastructure.
- The OPEC Fund separately approved a $50 million private sector loan facility to finance construction of a 420 MW thermal power plant in Temane.

# PRIVATE SECTOR: A LEADING FORCE **IN GLOBAL ENERGY TRANSITION**


*Jordan's Tafila Wind Farm; Richard Egobi (right) and Tareq Alnassar (below left).*

All around the world governments and leaders are acknowledging the urgent need to address global climate change and decarbonizing economies.

All OPEC Fund member countries are signatories of the Paris Agreement, and are working to diversify their energy economies. In March, Saudi Arabia launched two initiatives to collectively plant 50 billion trees, as well as to propel the Middle East region toward achieving more than ten per cent of global carbon emissions reduction targets. The UAE is bidding to host the COP28.

Aligned with all the efforts by countries to move towards a more sustainable energy future, the OPEC Fund's private sector department has also been increasing its role in the energy transition. "We have been at the forefront of advocating for access to affordable, clean energy for many years and are participating in landmark projects which exemplify cooperation between governments, development finance institutions and private sector actors," says **Tareq Alnassar**, OPEC Fund's Assistant Director-General for Private Sector and Trade Finance Operations.

It is estimated that around $30-40 trillion in investments will be allocated to the markets to support the energy transition. The International Renewable Energy Agency (IRENA), in a recent analysis[1] suggests that to put the world on track with the objectives of the Paris Agreement, cumulative investment in renewable energy needs to reach $27 trillion in the 2016–50 period. Who is going to fund this energy transition?

"To a great extent, the private sector," says Alnassar. "With public funds allocated to more urgent needs, such as the COVID-19 pandemic, public resources are scarcer than ever. Mobilizing private capital for investments is not an easy task due to the perceived risks and challenges involved. However, the private sector, along with the governments and international development finance institutions, can play a leading role to fill the funding gap. On our part, as the development finance community, we should support countries in their bid to increase renewable energy penetration in line with SDG 7. Such intervention needs to include a focus on electricity sector root problems, like grid stability issues, high level of transmission losses, energy storage, and the need for local currency power purchase agreements to hedge foreign exchange risks in order to ensure proper implementation and sustainable results."

The OPEC Fund's most comprehensive impact in the renewable energy sector to date has been in Jordan. The country has been at the forefront of renewable energy deployment in the Middle East since 2012 with the implementation of the Renewable Energy Law in 2010, which aims to diversify Jordan's energy mix. As a result, the OPEC Fund and other development finance institutions, led by the World Bank's International Finance Corporation (IFC), co-financed the country's first renewable energy project: the 117 MW capacity Tafila Wind Farm, with a total investment of nearly $300 million. The successful launch of Tafila and the valuable lessons learned from project implementation, catalyzed many other projects so that today, renewable energy projects represent 20 per cent of Jordan's overall generating capacity. The OPEC Fund has also participated in financing three solar PV plants with the capacity to generate approximately 250 MW in Jordan in the following years.

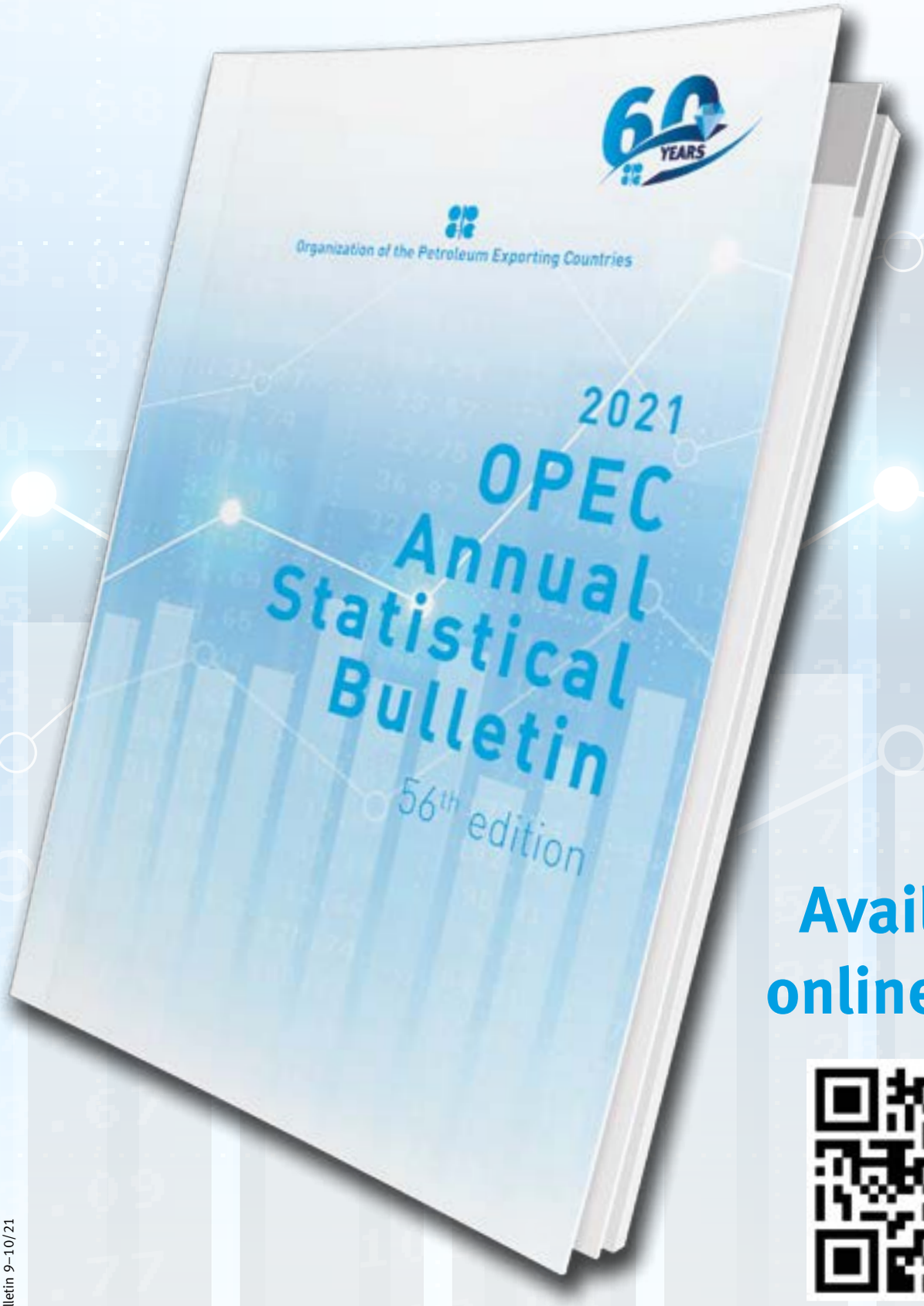
OPEC Fund's Senior Investment Manager **Richard Egobi** believes our co-financing with other development partners has been critical to this transition in Jordan. "Such landmark projects sometimes help to open up markets and encourage other market players to enter. This is the power of partnerships," says Egobi.

Another stand-out example of our engagement in the renewable sector is in Egypt. Recently, the OPEC Fund extended a long term loan towards the development of the 200 MW Kom Ombo Solar Power Plant. The project will help Egypt achieve its target of increasing the share of renewable energy generation to 42 per cent by 2035. According to the Egypt Renewable Energy Outlook[2] report, pursuing higher shares of renewable energy could reduce the country's energy bill by up to $900 million annually in 2030.

"This financing further demonstrates our commitment to supporting energy transition in emerging markets. We offered the much-needed, exceptionally long term financing to improve the bankability of the project and to ensure that the project's tariff was affordable," says Egobi. Even more importantly, he notes: "The OPEC Fund extended the flexibility and adaptability required to structure and close the financing despite challenges associated with COVID-19."

[1] *Global energy transformation: a roadmap to 2050 (2019 edition): https://bit.ly/3CirEyM.*

[2] *Egypt Renewable Energy Outlook: https://bit.ly/3ClAAU9.*

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# Assessment of the global economy in 2021 and 2022

## *September 2021*


OPEC Monthly Oil Market Report

13 September 2021

Feature article:
Assessment of the global economy in 2021 and 2022



Although the global economy continues to be affected by developments related to COVID-19, 1H21 saw a healthy economic recovery. Following the strong quarterly economic growth in 3Q21, growth is forecast to slightly decelerate towards the end of the year. It should be noted that the recovery this year has been widely supported by unprecedented government-led stimulus, and global efforts done to contain COVID-19, particularly in Western economies and China. Assuming a recovery in global consumption and investment growth in 2021, global GDP growth is forecast at 5.6 per cent. However, a further rise in COVID-19 infections, especially considering the upcoming winter season in the Northern Hemisphere, could dampen current growth projections. In addition, ongoing global supply chain disruptions, rising sovereign debt levels in many regions, together with inflationary pressures and central bank responses, remain key factors that require close monitoring. Healthy growth is also projected for 2022, with the GDP rising by 4.2 per cent. This will be supported by ongoing fiscal and monetary stimulus and continued efforts to contain COVID-19 infections. Upside to both annual growth levels may come from further US fiscal stimulus and improvements in developments related to COVID-19.

In terms of a geographical breakdown, the OECD shows a strong rebound in 2021, led by the US. US growth is forecast at 6.1 per cent in 2021, supported by unprecedented fiscal and monetary stimulus. This is followed by projected growth of 4.1 per cent in 2022, with further potential upside that may come from additional fiscal stimulus. Growth in the Euro-zone has also picked up strongly, especially in 2Q21, with economic growth for the entire year forecast at 4.7 per cent, followed by 3.8 per cent in 2022. Japan is facing ongoing COVID-19-related challenges and its economy is forecast to expand by 2.8 per cent in 2021 and by two per cent in 2022, albeit current domestic political changes and potential fiscal decisions may require revisions to these projections in the months to come.

In the non-OECD, the economic recovery has continued, though the pace and dynamics vary within the regions. China's 1H21 GDP figures confirmed a stable economic recovery, albeit the renewed COVID-19 variant outbreak is forecast to limit 2021 growth at 8.5 per cent. China's anticipated softening of the 2H21 growth momentum is forecast to continue into 2022, leading to growth of six per cent. India's growth is forecast at nine per cent for 2021 and 6.8 per cent in 2022. Notwithstanding, there are still considerable uncertainties related to COVID-19 in India, as well as the likelihood of rising inflation. Growth forecasts for 2021 in Brazil and Russia stand at 4.7 per cent and at 3.5 per cent, respectively, followed by 2022 growth of 2.5 per cent in both economies. However, rising inflationary pressures have already led Brazil and Russia to lift key interest rates in recent months, potentially dampening the recovery going forward.

The global economic recovery, in combination with a considerable rebound in mobility, significantly lifted oil demand growth in 1H21. While this dynamic is forecast to soften towards the end of 2021, the overall positive trend has led to projected global oil demand growth of 6.0 million b/d for 2021, followed by growth of 4.2m b/d in 2022. Non-OPEC supply is expected to grow by 900,000 b/d in 2021, followed by forecast growth of 2.9m b/d in 2022. Nevertheless, numerous uncertainties, including the continued COVID-19 impact on the global economic recovery, will require continued coordinated policies, including the commendable efforts undertaken by OPEC and non-OPEC oil producers participating in the 'Declaration of Cooperation', to ensure stability and balance for the global oil market.

# MOMR ... oil market highlights

## September 2021

**Crude oil price movements** — The OPEC Reference Basket (ORB) averaged $70.33/barrel in August, representing a decline of $3.20 m-o-m, or 4.4 per cent. Year-to-date (y-t-d), ORB was $25.42, or 62.8 per cent, higher, averaging $65.93/b. Crude oil futures prices on both sides of the Atlantic moved sharply lower in August, reaching their lowest levels since last May, as concerns about short-term Asian oil demand, mixed economic data, and the prospect of higher global oil supply triggered a sell-off. In August, the ICE Brent front-month declined $3.78 m-o-m, or 5.1 per cent, to average $70.51/b, and NYMEX WTI fell $4.72 m-o-m, or 6.5 per cent, to average $67.71/b. Consequently, the Brent/WTI front-month futures spread widened in August by 94¢ to average $2.80/b, its strongest since May. The market structure of all three major crude benchmarks — ICE Brent, NYMEX WTI, and DME Oman — remained in backwardation, however, their respective forward curves flattened on uncertainty about the oil demand outlook, lower seasonal crude demand in Asia, and the prospect of rising global oil supply. In August, hedge funds and other money managers extended the previous month's sell-off, reducing their net long positions to the lowest since November 2020.

**World economy** — Global economic growth forecasts for both 2021 and 2022 remain unchanged from the last month's assessment at 5.6 per cent and 4.2 per cent respectively. However, this robust growth continues to be challenged by uncertainties such as the spread of COVID-19 variants and pace of vaccine rollouts worldwide, as well as ongoing global supply-chain disruptions. Additionally, sovereign debt levels in many regions, together with inflationary pressures and central bank responses, remain key factors requiring close monitoring. In the current recovery, the US economy forecasts are unchanged at 6.1 per cent for 2021 and 4.1 per cent for 2022. Euro-zone economic growth remains at 4.7 per cent for 2021 and 3.8 per cent for 2022. The forecast for Japan is also unchanged at 2.8 per cent for 2021 and 2.0 per cent in 2022. China's economy is seen to grow at 8.5 per cent in 2021 and 6 per cent in 2022, in line with the previous month's assessment. Meanwhile, India's 2021 growth forecast is revised slightly down to 9 per cent, following a weaker-than-expected recovery in 2Q21, although growth for 2022 remains unchanged at 6.8 per cent. Given strong growth in 2Q21, Brazil's growth forecast for this year is revised up to 4.7 per cent, while grow in 2022 is unchanged at 2.5 per cent. Russia's forecast for 2021 is revised up to 3.5 per cent, benefitting from the stabilized oil market, while the forecast for 2022 remains unchanged at 2.5 per cent.

**World oil demand** — World oil demand growth in 2021 remains unchanged from last month's assessment, showing growth of 6.0 million b/d despite some offsetting revisions. Oil demand in 3Q21 has proved to be resilient, supported by rising mobility and travelling activities, particularly in the OECD. At the same time, the increased risk of COVID-19 cases primarily fuelled by the Delta variant is clouding oil demand prospects going into the final quarter of the year, resulting in downward adjustments to 4Q21 estimates. As a result, 2H21 oil demand has been adjusted slightly lower, partially delaying the oil demand recovery into 1H22. Global oil demand in 2021 is now estimated to average 96.7m b/d. In 2022, oil demand is expected to robustly grow by around 4.2m b/d, some 900,000 b/d higher compared to last month's assessment. Revisions were driven by both the OECD and non-OECD, as the recovery in various fuels is expected to be stronger than anticipated and further supported by a steady economic outlook in all regions. Oil demand in 2022 is now projected to reach 100.8m b/d, exceeding pre-pandemic levels.

**World oil supply** — Non-OPEC liquids supply growth in 2021 is revised down by 170,000 b/d from the previous month's assessment, due to a downward adjustment of 500,000 b/d in 3Q21. The revisions are mainly due to outages in North America from a fire on a Mexico's offshore platform and the disruptions caused by Hurricane Ida. The estimate for North Sea production has also been revised down due to lower-than-expected output in 3Q21, resulting in an annual growth forecast of 900,000 b/d to average 63.8m b/d. The main drivers for 2021 supply growth remain to be Canada, Russia, China, the US, Brazil and Norway, with the US expected to see y-o-y growth of only 80,000 b/d. The non-OPEC supply growth forecast for 2022 is unchanged at 2.9m b/d, amid offsetting revisions, to average 66.8m b/d. The main drivers of liquids supply growth are Russia and the US, followed by Brazil, Norway, Canada, Kazakhstan, Guyana and other countries in the 'Declaration of Cooperation' (DoC). OPEC NGLs are forecast to grow by 100,000 b/d in both 2021 and 2022 to average 5.2m b/d and 5.3m b/d, respectively. OPEC crude oil production in August increased by 150,000 b/d m-o-m, to average 26.76m b/d, according to available secondary sources.

**Product markets and refining operations** — Global refinery margins continued to trend upwards, supported by the seasonal strength in transportation fuels, amid easing mobility restrictions. In the US, product markets were supported by a reduction in total product inventory levels, while seasonal support pushed gasoline margins to new record highs. In Europe, refining margins benefitted from a positive performance across the barrel, while a contraction in fuel outputs from key traditional fuel suppliers within the region helped strengthen European product markets. Meanwhile, in Asia, weakness from rising regional fuel output levels were overshadowed by the robust performance in the jet fuel- kerosene and fuel oil markets, driven by an improvement in summer-related air travel and cooling requirements. Robust fuel consumption levels in India added to the upturn in regional refining economics.

**Tanker market** — The VLCC tanker rates remained at depressed levels in August, weighed down by ample tonnage availability despite increased tanker demand. Suezmax and Aframax rates managed a better performance in intra-Asian routes, as well as the Atlantic basin, particularly from West Africa to the US Gulf. Clean tanker rates showed a healthy improvement East of Suez but slipped in the West. The arrival of Hurricane Ida in the Gulf of Mexico at the end of the month resulted in temporary dislocations, lending some support to dirty Aframax rates, while depressing clean rates in the early days of September as Gulf Coast refineries remain offline.

**Crude and refined products trade** — Preliminary data shows US crude imports averaged 6.3m b/d in August, while crude exports recovered to just under 3.0m b/d. US product imports rose m-o-m to a robust 2.6m b/d, while product exports averaged 5.3m b/d in August, as lower demand from Latin America offset higher flows to Asia. Disruptions caused by Hurricane Ida at the end of August will likely impact these crude and product flows in September, as oil installations along the US Gulf Coast seek to restart. China's crude imports averaged 9.7m b/d in July, remaining relatively flat since April, although recently released data for August shows crude inflows jumping to 10.5m b/d now that refiners have a further round of quotas. India's crude imports continued to fall in July, averaging 3.6m b/d, but positive expectations remain for a pick-up in August, as state-owned refiners look to increase runs to maximum capacity during 4Q21. Japan's crude imports averaged 2.1m b/d in July, as the country's COVID-19 state of emergency continued to weigh on refinery runs amid uncertainty about product demand.

**Commercial stock movements** — Preliminary data shows total OECD commercial oil stocks up by 10.5m b m-o-m in July. At 2,912m b, inventories were 305.9m b lower than the same month a year ago; 122m b below the latest five-year average; and 57.2m b lower than the 2015–19 average. Within components, crude stocks fell by 5.6m b m-o-m while product stocks rose by 16.1m b. At 1,404m b, crude stocks in the OECD were 106.9m b below the latest five-year average and 80.0m b below the 2015–19 average. Meanwhile, OECD product stocks averaged 1,508m b, representing a deficit of 15.1m b compared with latest five-year average, but 22.7m b above the 2015–19 average. In terms of days of forward cover, OECD commercial stocks rose 0.1 day m-o-m to stand at 63.7 days in July. This is 11.6 days below the same month last year and 1.2 days below the latest five-year average, but 1.5 days above the 2015–19 average.

**Balance of supply and demand** — Demand for OPEC crude in 2021 is revised up by 300,000 b/d from last month's assessment to stand at 27.7m b/d, representing an increase of 4.9m b/d over the previous year. Demand for OPEC crude in 2022 is revised up by 1.1m b/d to stand at 28.7m b/d, around 1.1m b/d higher than in 2021.

*The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for September 2021. 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 the OPEC Reference Basket and crude and oil product prices in general.*

# Winter oil market outlook

## *October* ***2021***


Following the outbreak of COVID-19 and resulted lockdown measures in 2020, refined oil product consumption, along with refinery intakes, recovered considerably in 2021. As road transportation fuel demand picked up during the summer season this year, and petrochemical feedstock requirements increased, refinery intakes in August rose by 6.4 million b/d, compared with the same month a year earlier. This marks a significant measure ahead of the usual refinery maintenance season beginning in September, and corresponds to a hefty 10.5m b/d increase relative to levels seen in May 2020. Despite this considerable recovery, intakes in August still remain nearly 2.5m b/d below the pre-pandemic 2018-2019 average of 82m b/d.

Refinery utilization rates in 2021 have been firmly supported by stronger product fundamentals with robust gasoline performance, mainly in the US and Europe, leading to strong conversion margins in recent months and, ultimately, solid improvement in refining economics.

The recovery in transportation fuels, as well as in the naphtha segment, was mostly driven by stronger consumption levels and robust economic activity amid improved mobility indicators. At the same time, cautious management of refinery intakes in an attempt to prevent product oversupply, amid a rise in unplanned outages during the hurricane season in the US, contributed to an increasingly stronger product balance and further supported product markets and refining economics in recent months.

These supply-side constraints ultimately drove product prices to soar to post-pandemic record highs, with gasoline prices in the US in reaching a multi-year record high of $99.50/b in July, compared with $52.51/b a year earlier and $88.55/b in July 2019.

Refinery offline capacity began its seasonal rise in September, up by 891 tb/d m-o-m, according to preliminary estimates. Based on historical data and announced maintenance plans, the rise in offline capacity is projected to peak at around 9.3m b/d in October, compared with 6.1m b/d seen in August, before the onset of maintenance.

At the same time, the renewed spread of COVID variants continues to pose a downside risk to product markets, despite the positive vaccination rollout progress, particularly with regard to air travel and jet fuel markets, the hardest pandemic-hit product segment, which has yet to fully recover.

Recently, soaring natural gas prices, which have reached record-high levels, particularly in Europe during September, have triggered a growing interest in switching from natural gas to liquid fuels at the industrial level, as energy companies attempt to drive down cost. Should this trend continue, fuels such as fuel oil, diesel, and naphtha could see support, driven by higher demand from power generation, refining and petrochemical use. On the other hand, record high natural gas prices have pushed electricity costs and, consequently, refining operational costs higher. This could weigh on refinery intakes and industrial production and partially offset the upside potential. Forecasts for a colder-than-average winter in 4Q21 could set the stage for positive support for heating oil markets, particularly in December, but this could be offset by seasonal weakness from other key products across the barrel, particularly gasoline.

Looking ahead, despite expectations of a seasonal pick-up in heating oil demand, as well as a potential switch from natural gas to liquid fuels, product markets are expected to see some weakness during the coming winter due to higher refinery throughput leading to ample supply. Although refineries are expected to increase run rates in line with seasonal trends to replenish stocks, any considerable growth in global intake levels could pose a challenge to product markets. Meanwhile, concerns of potential renewed COVID-19-related mobility restrictions during the winter could weigh on product markets and, consequently, refinery intakes. Thus, as oil markets continue to emerge from the COVID-19 pandemic, countries participating in the 'Declaration of Cooperation' continue to maintain a vigilant watch over market fundamentals in an ongoing effort to support balance in oil market.

# MOMR ... oil market highlights

## October 2021

**Crude oil price movements** — Crude oil prices rebounded m-o-m in September, gaining about five per cent, supported by robust oil market fundamentals amid a slow restart of US oil production, further recovery of oil demand and a drop in inventories, along with easing COVID-19-related mobility restrictions in several Asian countries. Moreover, worries about natural gas and coal shortages in Europe and Asia boosted sentiment for higher oil demand. The OPEC Reference Basket (ORB) value rose by $3.55 or 5.0 per cent m-o-m in September to settle at $73.88/b. Year-to-date (y-t-d), the ORB was up by $26.21, or 64.5 per cent, to average $66.83/b compared with the same period last year. The ICE Brent front-month rose $4.37, or 6.2 per cent, m-o-m in September to average $74.88/b, while NYMEX WTI increased by $3.83, or 5.7 per cent, m-o-m to average $71.54/b. Consequently, the Brent/WTI spread widened further in September to $3.34/b, its highest point since last April. The market structure of all three major oil benchmarks — Brent, WTI and Dubai — remained in backwardation. However, the Brent forward curve strengthened, while WTI and Dubai backwardation flattened slightly. Hedge funds and other money managers boosted bullish wagers in September as oil prices rose to multi-year highs, as the risk of a natural gas and coal shortage urged speculators to bet on higher oil prices.

**World economy** — Global economic growth forecasts for both 2021 and 2022 remain unchanged from the last month's assessment at 5.6 per cent and 4.2 per cent, respectively. Given somewhat slowing 3Q21 momentum, the US economy forecast for 2021 is revised down slightly to 5.8 per cent from 6.1 per cent, while the forecast for 2022 remains unchanged at 4.1 per cent. Euro-zone economic growth is revised up to 5 per cent from 4.7 per cent for 2021 and to 3.9 per cent from 3.8 per cent for 2022, after a strong rebound in 2Q21. The forecast for Japan is revised down to 2.6 per cent from 2.8 per cent for 2021, due to ongoing COVID-19-related social-distancing measures in 3Q21, while the forecast for 2022 remains at two per cent. After a strong recovery in the first half of the year, China's economy is seen to slow somewhat, leaving the growth forecast at 8.3 per cent in 2021 and 5.8 per cent in 2022, representing a 0.2 percentage point downward revision for both years. Meanwhile, India's 2021 growth forecast is unchanged at nine per cent for 2021 and 6.8 per cent for 2022, although downside risks prevail. Russia's forecasts are revised up from 3.5 per cent to four per cent for 2021 and from 2.5 per cent to 2.7 per cent for 2022, benefitting from the more stable oil market. Brazil's growth forecast remains unchanged for both 2021 and 2022 at 4.7 per cent and 2.5 per cent, respectively. The ongoing robust growth in the world economy continues to be challenged by uncertainties, such as the spread of COVID-19 variants and the pace of vaccine rollouts worldwide, as well as ongoing global supply-chain disruptions. Additionally, sovereign debt levels in many regions, together with rising inflationary pressures and potential central bank responses, remain key factors requiring close monitoring.

**World oil demand** — World oil demand is estimated to increase by 5.8m b/d in 2021, revised down from 5.96m b/d in the previous month's assessment. The downward revision is mainly driven by lower-than-expected actual data for the first three quarters of this year, despite healthy oil demand assumptions going into the final quarter of the year, which will be supported by seasonal uptick in petrochemical and heating fuel demand and the potential switch from natural gas to petroleum products due to high gas prices. Both OECD and non-OECD figures are adjusted lower, with the downward revision in OECD regions focused in 1H21, while the non-OECD revision is concentrated in 3Q21.The world is expected to consume 96.6m b/d of petroleum products this year. For 2022, world oil demand growth is unchanged at 4.2m b/d. As a result, global demand next year is seen averaging 100.8m b/d. Demand is anticipated to be supported by healthy economic momentum in the main consuming countries and better management of the COVID-19 pandemic.

**World oil supply** — Non-OPEC liquids supply growth in 2021 is revised down by 300,000 b/d from the previous month's assessment to now stand at 700,000 b/d. The revisions were driven mainly by a downward adjustment in 3Q21 due to factors such as production outages in the US Gulf of Mexico caused by Hurricane Ida; maintenance in the Tengiz field in Kazakhstan; and a force majeure in Canada at the Suncor oil sands site. The impact of the Hurricane led to a downward revision in US liquids supply in 2021 from growth of 100,000 b/d to a contraction of 100,000 b/d. The main growth drivers for 2021 supply growth continue to be Canada, Russia, China, Norway and Brazil. Similarly, the non-OPEC supply growth forecast for 2022 is revised up by 100,000 b/d due to the base change to now stand at 3.0m b/d. Russia and the US are expected to be the main drivers, followed by Brazil, Norway, Canada, Kazakhstan, Guyana, and other countries in the DoC. OPEC NGLs are forecast to grow by 100,000 b/d in both 2021 and 2022 to average 5.2m b/d and 5.3m b/d, respectively. OPEC crude oil production in September increased by 490,000 b/d m-o-m, to average 27.33m b/d, according to available secondary sources.

**Product markets and refining operations** — Refinery margins further extended their upward trend in September globally, with solid support coming from the middle of the barrel. The tightness in product balance caused by supply side constraints in previous months was exacerbated by the start of peak refinery maintenance season amid lower product exports from China. Middle distillates were the main margin driver in all regions, while in Asia this upside was outpaced by robust fuel oil performance. Meanwhile, gasoline markets weakened as their crack spreads stepped down from post-pandemic highs registered the previous month, due to a less optimistic demand outlook as peak driving season approached its end.

**Tanker market** — Dirty tanker rates remained soft in September amid a continued imbalance between tonnage supply and demand, keeping rates at low or even loss-making levels. Meanwhile, some positive signs are emerging for the final quarter of the year, as loading schedules should see a 20 per cent increase in waterborne Russian exports and ten per cent increase in North Sea flows, amid ongoing planned upward adjustments in OPEC production. However, a sustained recovery in the tanker market could take as long as 12 months to materialize to allow for a return in demand from emerging and developing markets and sufficient scrapping to reduce the overhang in tonnage availability.

**Crude and refined products trade** — Preliminary data shows US crude imports in September recovering from a slight dip the month before to average a healthy 6.4m b/d, while US crude exports averaged 2.6m b/d in September, continuing an alternating pattern of rises and dips, this time on the lower side. After four months of relatively muted levels, China's crude imports jumped to 10.5m b/d in August, pushed higher by the arrival of storm-delayed cargoes, although policy-led uncertainties continued to impact China's trade flows. India's crude imports finally saw a recovery, after following a general downward trend since December 2020, to average 4.1m b/d in August. Tanker tracking data show India's crude imports remaining steady in September. Japan's crude imports continued to recover from low levels, reaching their highest point since April 2020 at 2.7m b/d in August. The country's crude and product imports are expected to see a boost from demand in the power sector for fuel oil as well as crude for direct burning, amid reports of a restart of oil-fired power units.

**Commercial stock movements** — Preliminary August 2021 data showed that total OECD commercial oil stocks fell by 19.5m b m-o-m to stand at 2,855m b. This was 363m b lower than the same time one year ago, 183 less than the latest five-year average and 131m b below the 2015–19 average. Within components, OECD commercial crude stocks fell by 23.0m b m-o-m in August, ending the month at 1,362m b. This was down by 102m b compared with the latest five-year average, and 87m b below the 2015–19 average. By contrast, OECD total product inventories rose by 3.2m b m-o-m in August to stand at 1,493m b. This was 81m b lower than the latest five-year average and 43m b below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks fell by 0.1 days m-o-m in August to stand at 62.5 days. This was 12.3 days lower than the same period in 2020, 2.5 days below the latest five-year average and 0.3 days below the 2015–19 average.

**Balance of supply and demand** — Demand for OPEC crude in 2021 is revised up by 100,000 b/d from the previous month's assessment to stand at 27.8m b/d, around 5.0m b/d higher than in 2020. Demand for OPEC crude in 2022 was also revised up by 100,000 b/d from the previous month's assessment to stand at 28.8m b/d, around 1.0m b/d higher than in 2021.

*The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for October 2021. 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 the OPEC Reference Basket and crude and oil product prices in general.*

## Table 1: OPEC Reference Basket spot crude prices

$/b

| Crude/Member Country | 2020 Sep | Oct | Nov | Dec | 2021 Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Weeks 36-40/2021 (week ending) Sep 3 | Sep 10 | Sep 17 | Sep 24 | Oct 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arab Light – Saudi Arabia | 42.09 | 40.32 | 42.98 | 49.24 | 54.78 | 61.49 | 65.20 | 64.09 | 67.72 | 72.76 | 74.15 | 71.36 | 75.01 | 72.84 | 72.70 | 74.89 | 75.75 | 78.36 |
| Basrah Light – Iraq | 42.09 | 40.60 | 43.12 | 49.95 | 54.73 | 61.40 | 65.17 | 63.48 | 66.96 | 71.79 | 73.40 | 70.39 | 73.75 | 71.66 | 71.37 | 73.52 | 74.55 | 77.24 |
| Bonny Light – Nigeria | 40.78 | 39.64 | 41.91 | 49.59 | 55.01 | 62.24 | 65.57 | 64.17 | 67.61 | 72.21 | 75.37 | 71.23 | 74.09 | 72.61 | 71.75 | 73.31 | 74.71 | 78.19 |
| Djeno – Congo* | 33.13 | 32.56 | 35.09 | 42.29 | 47.28 | 54.78 | 58.11 | 57.01 | 61.04 | 65.51 | 67.54 | 63.35 | 66.95 | 65.17 | 64.61 | 66.17 | 67.57 | 71.11 |
| Es Sider – Libya | 39.18 | 37.71 | 40.24 | 48.09 | 53.08 | 60.83 | 63.56 | 62.11 | 66.16 | 71.01 | 73.64 | 69.45 | 72.75 | 71.09 | 70.41 | 71.97 | 73.37 | 76.91 |
| Girassol – Angola | 41.10 | 40.72 | 44.11 | 51.50 | 55.84 | 62.99 | 66.04 | 64.00 | 68.39 | 73.47 | 75.45 | 70.93 | 74.76 | 72.70 | 72.29 | 73.87 | 75.45 | 79.26 |
| Iran Heavy – IR Iran | 41.93 | 40.24 | 42.88 | 49.20 | 54.38 | 60.66 | 64.30 | 63.00 | 66.72 | 71.68 | 72.98 | 70.34 | 74.08 | 71.64 | 71.61 | 74.04 | 75.01 | 77.55 |
| Kuwait Export – Kuwait | 42.12 | 40.38 | 42.99 | 49.36 | 54.83 | 61.31 | 64.86 | 63.75 | 67.54 | 72.54 | 73.80 | 71.06 | 74.92 | 72.47 | 72.50 | 74.83 | 75.80 | 78.31 |
| Merey – Venezuela | 28.22 | 26.23 | 27.07 | 32.70 | 37.40 | 42.87 | 46.47 | 46.16 | 49.13 | 53.52 | 54.49 | 51.76 | 54.96 | 52.96 | 52.89 | 54.84 | 55.67 | 58.08 |
| Murban – UAE | 41.88 | 41.06 | 43.09 | 49.48 | 54.93 | 60.99 | 64.33 | 63.35 | 66.82 | 72.34 | 73.64 | 69.89 | 73.41 | 71.05 | 70.97 | 73.33 | 74.23 | 77.11 |
| Rabi Light – Gabon | 39.38 | 39.01 | 42.12 | 49.28 | 54.27 | 61.77 | 65.10 | 64.00 | 68.03 | 72.50 | 74.53 | 70.34 | 73.94 | 72.16 | 71.60 | 73.16 | 74.56 | 78.10 |
| Saharan Blend – Algeria | 40.98 | 39.76 | 42.59 | 49.99 | 55.08 | 62.38 | 65.76 | 64.01 | 67.81 | 72.31 | 75.34 | 71.05 | 73.85 | 72.39 | 71.51 | 73.07 | 74.47 | 78.01 |
| Zafiro – Equatorial Guinea | 40.62 | 39.99 | 43.41 | 50.43 | 55.07 | 62.46 | 65.99 | 64.75 | 68.49 | 73.50 | 75.66 | 70.41 | 74.03 | 72.07 | 71.71 | 73.27 | 74.67 | 78.21 |
| OPEC Reference Basket | 41.54 | 40.08 | 42.61 | 49.17 | 54.38 | 61.05 | 64.56 | 63.24 | 66.91 | 71.89 | 73.53 | 70.33 | 73.88 | 71.75 | 71.52 | 73.63 | 74.65 | 77.46 |

## Table 2: Selected spot crude prices

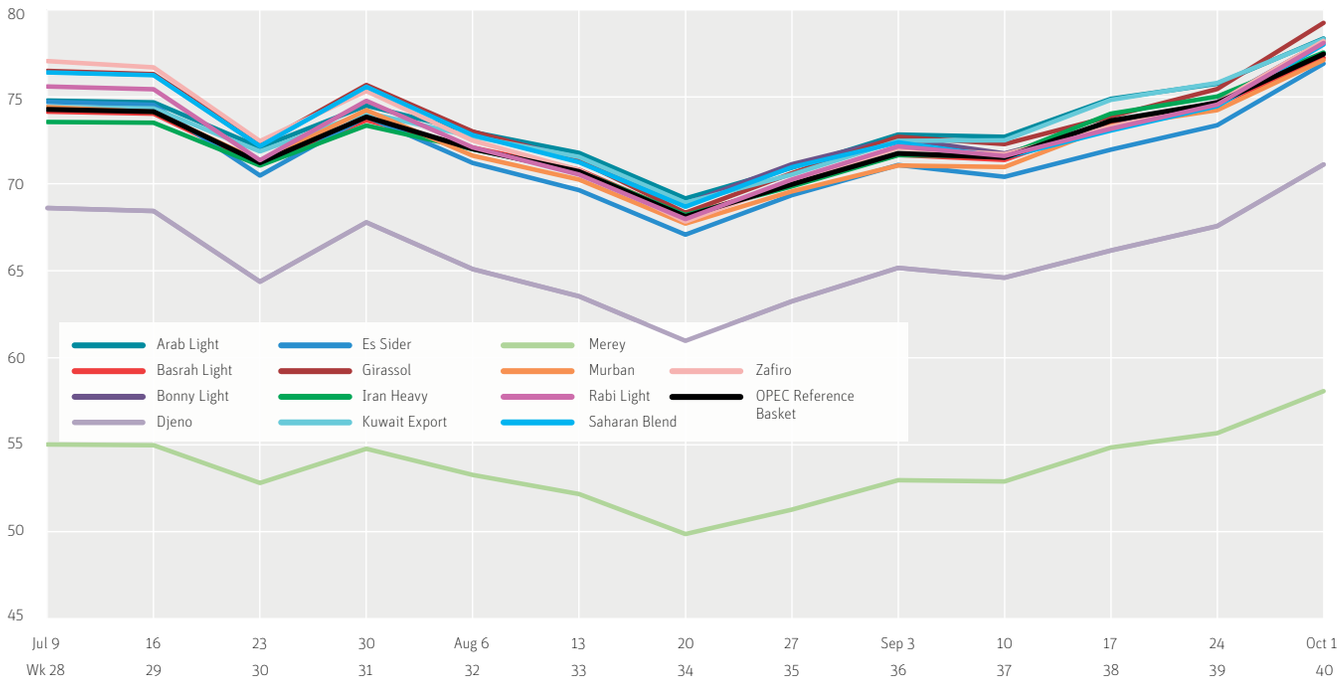
$/b

| Crude/country | 2020 Sep | Oct | Nov | Dec | 2021 Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Weeks 36-40/2021 (week ending) Sep 3 | Sep 10 | Sep 17 | Sep 24 | Oct 1 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arab Heavy – Saudi Arabia | 42.13 | 40.61 | 43.28 | 49.59 | 54.88 | 61.16 | 64.72 | 63.31 | 67.22 | 72.08 | 73.25 | 70.65 | 74.07 | 71.89 | 71.72 | 73.93 | 74.90 | 77.41 |
| Brega – Libya | 39.28 | 37.81 | 40.69 | 48.69 | 53.78 | 61.28 | 64.11 | 62.66 | 66.51 | 71.21 | 73.74 | 69.35 | 72.80 | 71.08 | 70.46 | 72.02 | 73.42 | 76.96 |
| Brent Dtd – North Sea | 40.58 | 40.01 | 42.54 | 49.74 | 54.73 | 62.23 | 65.56 | 64.46 | 68.51 | 72.96 | 74.99 | 70.80 | 74.40 | 72.62 | 72.06 | 73.62 | 75.02 | 78.56 |
| Dubai – UAE | 41.45 | 40.70 | 43.33 | 49.78 | 54.76 | 60.83 | 64.40 | 62.92 | 66.41 | 71.50 | 72.83 | 69.37 | 72.57 | 70.55 | 70.20 | 72.38 | 73.38 | 76.18 |
| Ekofisk – North Sea | 40.94 | 40.14 | 42.64 | 50.29 | 55.17 | 63.01 | 66.30 | 65.00 | 69.44 | 73.54 | 76.24 | 71.85 | 74.74 | 73.78 | 72.16 | 73.66 | 75.37 | 79.11 |
| Iran Light – IR Iran | 39.41 | 38.69 | 41.78 | 48.50 | 53.32 | 59.90 | 62.72 | 61.58 | 65.73 | 70.00 | 71.52 | 66.51 | 71.08 | 68.96 | 69.09 | 70.63 | 71.55 | 75.01 |
| Isthmus – Mexico | 38.06 | 38.15 | 40.26 | 46.60 | 52.06 | 58.90 | 61.88 | 60.94 | 64.47 | 68.61 | 69.61 | 65.25 | 68.82 | 66.80 | 66.55 | 68.74 | 69.31 | 72.77 |
| Oman – Oman | 41.60 | 41.11 | 43.83 | 50.00 | 54.79 | 60.88 | 64.43 | 63.10 | 66.42 | 71.66 | 72.87 | 69.54 | 72.78 | 70.58 | 70.43 | 72.68 | 73.62 | 76.24 |
| Suez Mix – Egypt | 39.28 | 38.56 | 41.65 | 48.37 | 53.19 | 59.77 | 62.59 | 61.45 | 65.60 | 69.87 | 71.39 | 66.38 | 70.95 | 68.83 | 68.96 | 70.50 | 71.42 | 74.88 |
| Minas – Indonesia* | 39.81 | 39.30 | 41.42 | 47.91 | 53.00 | 59.84 | 63.63 | 62.86 | 66.06 | 71.12 | 72.24 | 68.45 | 72.62 | 70.12 | 70.11 | 72.30 | 73.50 | 76.75 |
| Urals – Russia | 40.98 | 40.26 | 43.35 | 50.07 | 54.89 | 61.47 | 64.29 | 63.02 | 67.26 | 71.57 | 73.09 | 68.14 | 72.65 | 70.30 | 70.66 | 72.20 | 73.12 | 76.58 |
| WTI – North America | 39.61 | 39.53 | 41.52 | 47.05 | 52.11 | 59.08 | 62.35 | 61.71 | 65.23 | 71.38 | 72.58 | 67.73 | 71.46 | 69.12 | 68.96 | 71.62 | 72.15 | 75.30 |

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

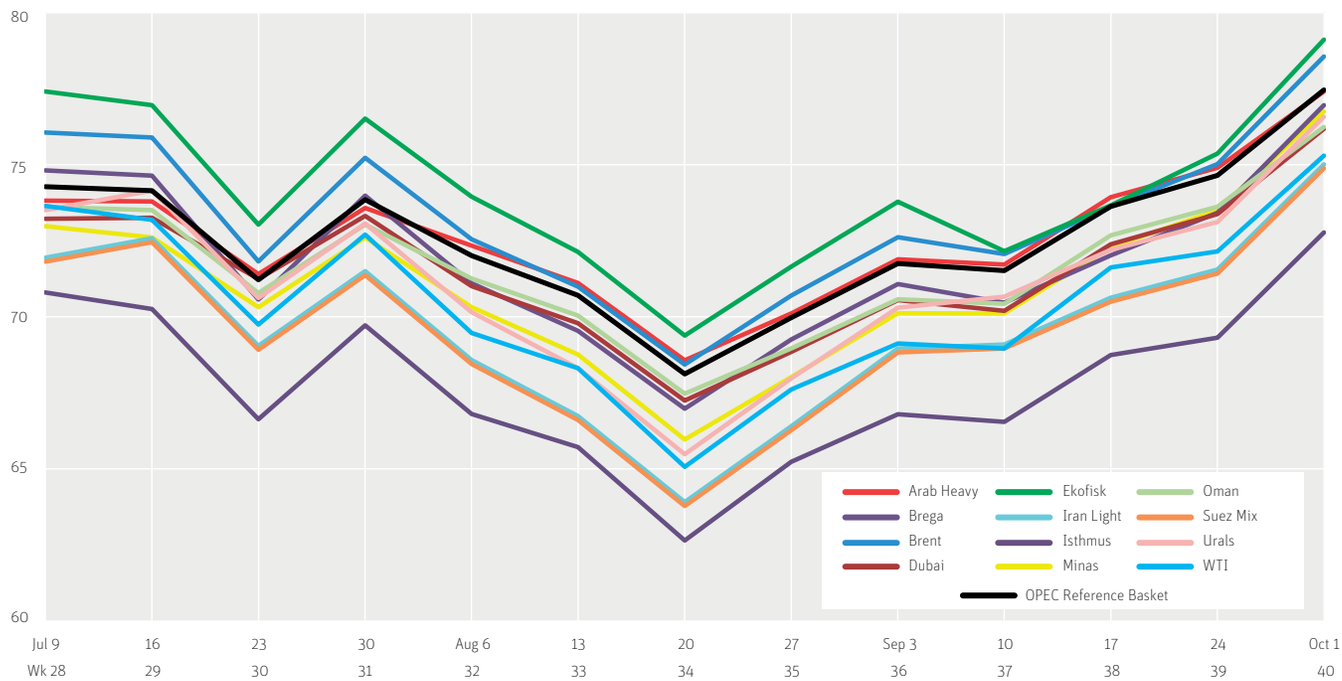
## Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2021

$/b




## Graph 2: Evolution of selected spot crude prices, 2021

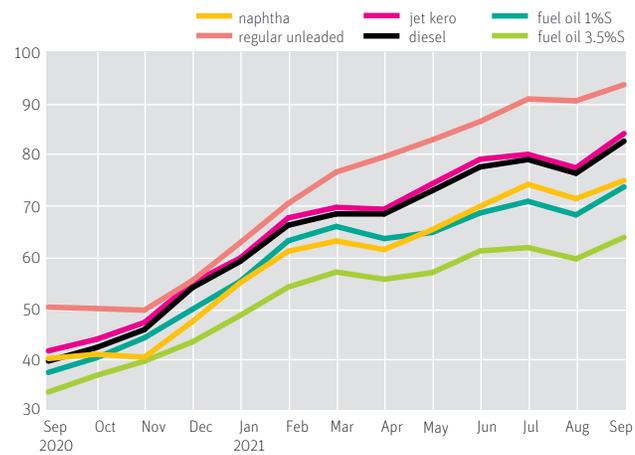
$/b



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

*$/b*

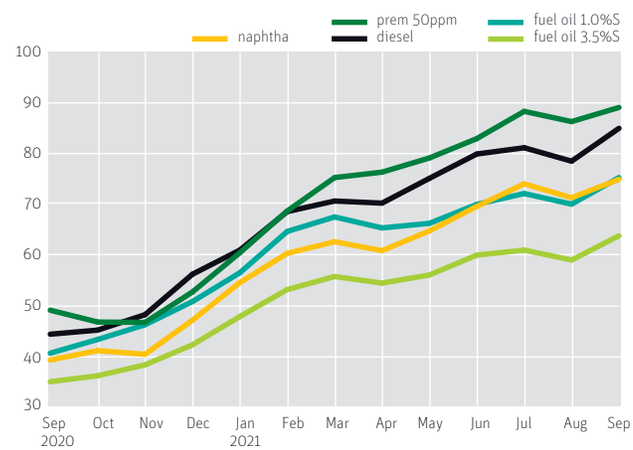
| | | naphtha | regular gasoline unleaded | diesel ultra light | jet kero | fuel oil 1 per cent S | fuel oil 3.5 per cent S |
|---|---|---|---|---|---|---|---|
| 2020 | September | 40.42 | 50.45 | 39.93 | 41.92 | 37.71 | 33.88 |
| | October | 41.26 | 50.19 | 42.55 | 44.17 | 40.57 | 37.12 |
| | November | 40.67 | 49.86 | 46.07 | 47.45 | 44.46 | 39.90 |
| | December | 47.63 | 55.64 | 54.25 | 55.20 | 50.02 | 43.65 |
| 2021 | January | 55.22 | 63.06 | 59.40 | 60.06 | 55.52 | 48.85 |
| | February | 61.37 | 70.71 | 66.45 | 67.89 | 63.42 | 54.38 |
| | March | 63.36 | 76.83 | 68.66 | 69.93 | 66.22 | 57.31 |
| | April | 61.70 | 79.81 | 68.65 | 69.58 | 63.84 | 55.90 |
| | May | 65.58 | 83.11 | 73.18 | 74.53 | 65.03 | 57.19 |
| | June | 70.13 | 86.70 | 77.83 | 79.34 | 68.84 | 61.43 |
| | July | 74.43 | 91.10 | 79.27 | 80.29 | 71.11 | 62.09 |
| | August | 71.63 | 90.74 | 76.59 | 77.67 | 68.47 | 59.88 |
| | September | 75.19 | 93.89 | 82.87 | 84.35 | 73.93 | 64.09 |




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

*$/b*

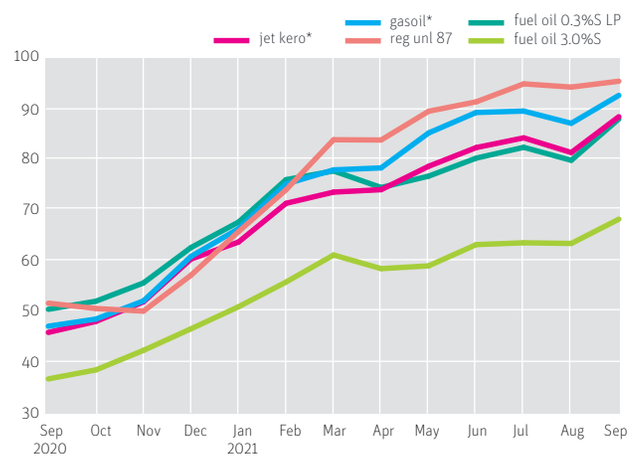
| | | naphtha | premium gasoline 50ppm | diesel ultra light | fuel oil 1 per cent S | fuel oil 3.5 per cent S |
|---|---|---|---|---|---|---|
| 2020 | September | 39.21 | 48.52 | 44.31 | 40.56 | 34.92 |
| | October | 41.07 | 46.18 | 45.12 | 43.27 | 36.10 |
| | November | 40.34 | 46.11 | 48.17 | 46.17 | 38.25 |
| | December | 47.08 | 52.12 | 56.16 | 50.76 | 42.21 |
| 2021 | January | 54.51 | 59.87 | 60.93 | 56.45 | 47.80 |
| | February | 60.28 | 68.13 | 68.54 | 64.62 | 53.13 |
| | March | 62.59 | 74.73 | 70.63 | 67.48 | 55.71 |
| | April | 60.82 | 75.80 | 70.21 | 65.31 | 54.41 |
| | May | 64.72 | 78.60 | 75.11 | 66.22 | 56.01 |
| | June | 69.56 | 82.43 | 79.92 | 69.97 | 59.94 |
| | July | 74.03 | 87.81 | 81.16 | 72.11 | 60.93 |
| | August | 71.28 | 85.79 | 78.50 | 70.01 | 58.97 |
| | September | 74.92 | 88.58 | 85.00 | 75.26 | 63.76 |




## 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 |
|---|---|---|---|---|---|---|
| 2020 | September | 51.58 | 47.05 | 45.83 | 50.37 | 36.70 |
| | October | 50.53 | 48.45 | 47.99 | 51.96 | 38.47 |
| | November | 50.01 | 52.02 | 51.83 | 55.55 | 42.30 |
| | December | 57.06 | 60.75 | 60.24 | 62.50 | 46.54 |
| 2021 | January | 65.63 | 66.20 | 63.58 | 67.50 | 50.87 |
| | February | 73.85 | 75.00 | 71.19 | 75.84 | 55.73 |
| | March | 83.68 | 77.76 | 73.39 | 77.55 | 61.04 |
| | April | 83.63 | 78.15 | 73.87 | 74.30 | 58.36 |
| | May | 89.28 | 85.02 | 78.47 | 76.53 | 58.91 |
| | June | 91.13 | 89.04 | 82.14 | 80.07 | 63.08 |
| | July | 94.66 | 89.31 | 84.05 | 82.19 | 63.44 |
| | August | 94.02 | 86.91 | 81.17 | 79.64 | 63.31 |
| | September | 95.18 | 92.40 | 88.21 | 87.76 | 68.08 |



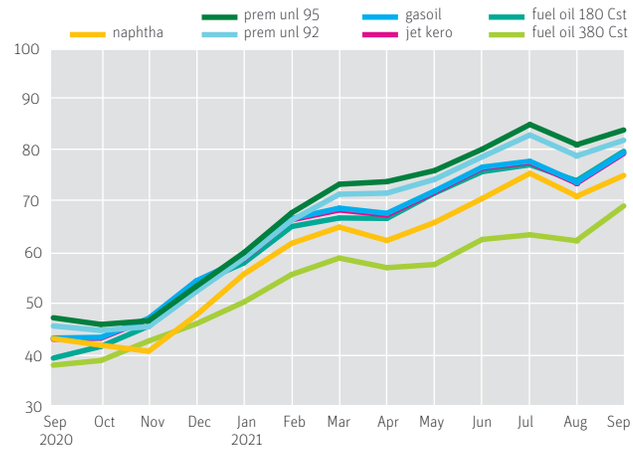

* *FOB barge spot prices.*

*Source: Argus. Prices are average of available days.*

## Table and Graph 6: Singapore market – spot cargoes, fob

$/b

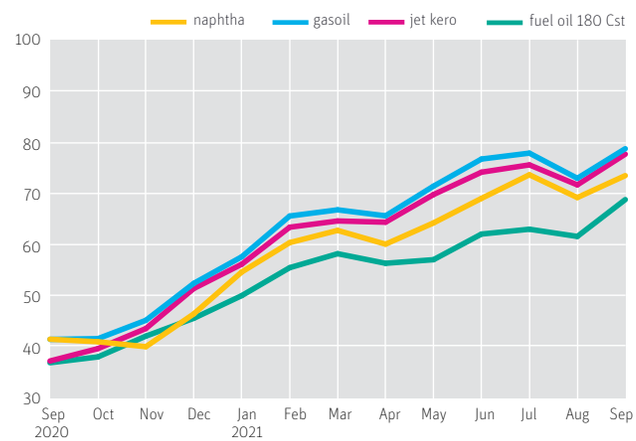
| | | naphtha | premium gasoline unl 95 | premium gasoline unl 92 | gasoil | jet kero | fuel oil 180 Cst | fuel oil 380 Cst |
|---|---|---|---|---|---|---|---|---|
| 2020 | September | 43.19 | 47.27 | 45.66 | 43.30 | 43.07 | 39.37 | 37.98 |
| | October | 41.88 | 45.96 | 44.79 | 43.43 | 43.28 | 41.65 | 38.90 |
| | November | 40.71 | 46.67 | 45.51 | 47.15 | 47.01 | 45.64 | 42.72 |
| | December | 47.80 | 53.43 | 52.40 | 54.50 | 54.40 | 53.87 | 46.08 |
| 2021 | January | 55.83 | 60.03 | 58.92 | 58.87 | 58.77 | 58.02 | 50.35 |
| | February | 61.85 | 67.83 | 66.36 | 66.70 | 66.45 | 65.15 | 55.74 |
| | March | 65.03 | 73.43 | 71.47 | 68.75 | 68.39 | 66.82 | 58.97 |
| | April | 62.40 | 73.94 | 71.69 | 67.73 | 67.40 | 66.74 | 57.08 |
| | May | 65.94 | 76.11 | 74.38 | 72.11 | 71.90 | 71.71 | 57.70 |
| | June | 70.64 | 80.31 | 78.81 | 76.78 | 76.61 | 75.91 | 62.62 |
| | July | 75.57 | 85.14 | 83.08 | 77.93 | 77.72 | 77.25 | 63.53 |
| | August | 71.01 | 81.13 | 78.94 | 73.77 | 73.55 | 74.05 | 62.33 |
| | September | 75.15 | 84.06 | 82.05 | 79.66 | 79.46 | 79.88 | 69.18 |




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

$/b

| | | naphtha | gasoil | jet kero | fuel oil 180 Cst |
|---|---|---|---|---|---|
| 2020 | September | 41.88 | 41.85 | 37.66 | 37.32 |
| | October | 41.39 | 41.99 | 40.06 | 38.45 |
| | November | 40.43 | 45.55 | 43.95 | 42.48 |
| | December | 46.80 | 52.72 | 51.72 | 45.94 |
| 2021 | January | 54.92 | 57.87 | 56.43 | 50.34 |
| | February | 60.62 | 65.78 | 63.61 | 55.76 |
| | March | 62.99 | 66.98 | 64.82 | 58.47 |
| | April | 60.32 | 65.82 | 64.58 | 56.61 |
| | May | 64.44 | 71.57 | 69.94 | 57.31 |
| | June | 69.20 | 76.83 | 74.28 | 62.28 |
| | July | 73.78 | 77.98 | 75.70 | 63.22 |
| | August | 69.36 | 73.10 | 71.82 | 61.82 |
| | September | 73.62 | 78.84 | 77.78 | 68.97 |




*Source: Argus. Prices are average of available days.*

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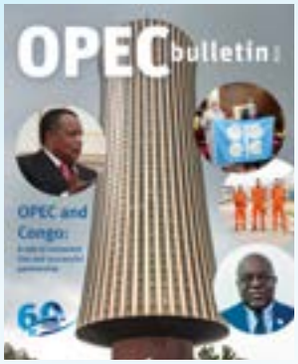


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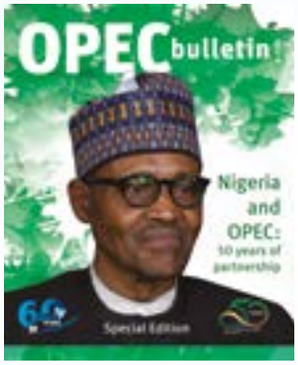


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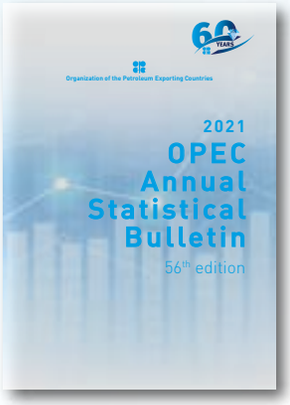


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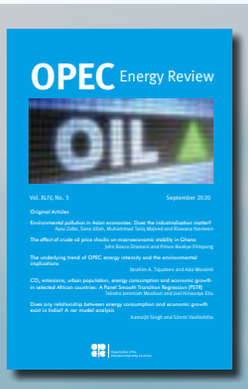


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