

# OPEC bulletin

10-11/19

## KOGS:

The best is yet to come for the oil and gas industry

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# OPEC

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# Oil industry ready and willing to tackle climate change issues

It's time to talk about a controversial issue on everyone's agenda; developments in climate change and the oil industry. As you will see when you read this month's magazine, this topic appears many times in many stories from many speakers. It is clearly a hot topic, and it has appeared in one way or other at every event covered in this month's *OPEC Bulletin*.

However, this should not be a for or against debate, but rather one about how these two seemingly opposing sides can work together to achieve the same goal in a harmonious and smooth manner — reducing greenhouse gas (GHG) emissions while ensuring a secure supply of energy for the world and addressing the scourge of energy poverty.

Fossil fuels are coming under pressure, including the oil industry. This is clear from regular protests, to investment banks backing away from spending and investing in fossil fuels. Many OPEC Member Countries are leaders in combatting climate change through policies such as zero flaring and investing in solutions such as carbon capture utilization and storage (CCUS) and energy efficiency improvements.

There is a mistaken public perception that renewables are the only solution to the climate challenge, and that the oil and gas industry is the only or main source of pollution. This is not the case and does not match the views of either scientists or experts.

OPEC Secretary General, Mohammad Sanusi Barkindo, is tackling this topic head-on in his speeches and iterations. It turns out to be of great personal importance, as he has been proactively engaged with the evolving United Nations Framework Convention on Climate Change (UNFCCC) since its inception. "I have spent almost all my working life in this process," he said in an interview earlier this year. He has always advocated that the oil industry must be a part of the solution, harnessing its technology, manpower and knowledge to bring low-emissions solutions to the world.

Many of the messages in this edition of the *OPEC Bulletin* support a gradual and orderly energy transition. Recently many leaders have spoken out, from Microsoft mogul Bill Gates, who said climate proponents would be better off abandoning their divestment crusades and instead encouraging investments in alternatives such as disruptive technologies that will slow emissions, to CEO of BP, Bob Dudley, who spoke at the Oil and Money Conference in London in October, where he said when tackling emissions there needs "to be recognition that ... there are many paths and we need to pursue them all."

In the context of sustainable development, it is imperative to promote social justice within climate justice, including eradicating the scourge of energy poverty. The current disconnection lies behind the most recent protests in Santiago, Chile, which led to the necessity of shifting the upcoming COP25 meeting to Madrid, Spain.

OPEC has always supported the UNFCCC and energy efficiency improvements. All forms of energy must be embraced to

meet growing energy needs and eradicate energy poverty. Many OPEC Member Countries are investing strongly into technology to mitigate GHG. However, the fact remains that particularly developing energy-producing countries stand to be hit hardest by discriminatory climate response measures, along with the actual manifestations of climate change itself.

As Saudi Aramco CEO, Amin Nasser, said at the World Energy Congress in September, the energy transition will take place and will be challenging, but the world needs to be aware that oil and gas are still essential and will be at the heart of the global energy mix for years to come. The impact of a 'crisis of perception' on long-term investments in the oil and gas industry, if it continues, could leave to supply shortfalls. This in turn would hurt national economies, threaten energy security and potentially create social disruption by making energy less affordable.

OPEC Member Country United Arab Emirates aims to reduce its carbon footprint by 70 per cent by 2050, and has delivered a long-term strategy in the region promoting low-emissions energy. State-owned oil and gas giant Abu Dhabi National Oil Company (ADNOC) has laid down plans to spend \$1.8 billion by 2023 in projects involving CCUS; abatement of flaring; and reduction of unintended emissions. Other OPEC Member Countries are similarly addressing this issue.

In a recent round-table discussion, Barkindo extolled the virtues of Big Data as a way to harness massive amounts of data in a way that is helpful to sustainable development, energy poverty and the environment.

OPEC's first Annual Legal Workshop discussed how the law can be an instrument for positive transformation in the energy sector, particularly with the 2030 Agenda, its Sustainable Development Goals and the Paris Agreement increasingly informing national policies and legislation.

Industry is also stepping up as we see in a warning from Total chief executive, Patrick Pouyanne, who says that the oil and gas industry must act now to maintain a license to operate amid growing public concern about climate change. "We have a lot of stakeholders today who look at us as dinosaurs. Dinosaurs have disappeared. I don't want Total to disappear. But the only way not to become a dinosaur is to act, to invest and progress together. We have the technologies, people and financing."

These are just a few of the comments which we hope will awaken the reader to consider the bigger picture. The world needs an orderly energy transition, a major requirement of which is energy security. This can only be done when no energy source is discriminated against and we instead look together for solutions to reduce GHG from all sources.

Dialogue, collaboration and cooperation are the only ways forward to meet this and indeed all major issues facing mankind today. OPEC has seen this mindset work to reverse a severe oil market imbalance, and it is essential to implement these same tools in the climate change conversation. 



<b>KOGS</b>	<b>4</b>	KOGS: ‘The best is yet to come for the oil and gas industry’
	<b>10</b>	Oil industry facing major challenges: Kuwait
	<b>12</b>	Kuwait’s architectural and cultural masterpiece
<b>ADIPEC</b>	<b>14</b>	Oil industry must double down on mission to modernize
	<b>18</b>	Big Data attracts huge interest at ADIPEC
	<b>26</b>	Dubai makes must-see travel list for 2020
<b>Kazakhstan Energy Week</b>	<b>28</b>	Kazakhstan Energy Week: Fueling the future through innovation
	<b>36</b>	Kazakhstan soars in the global domain
	<b>40</b>	OPEC Secretary General visits historic Kashagan oil field
	<b>44</b>	OPEC Secretary General receives a medal of recognition
<b>World Oil Outlook Launch</b>	<b>46</b>	OPEC launches World Oil Outlook 2019
<b>Charter of Cooperation</b>	<b>54</b>	Saudi Arabia and the Russian Federation sign the landmark ‘Charter of Cooperation’
<b>Russian Energy Week</b>	<b>58</b>	From Russia with love: OPEC lauded for efforts to stabilize oil market
	<b>63</b>	Russian Energy Week: Unlocking the potential of cooperation
	<b>64</b>	OPEC, GECF sign MoU to strengthen cooperation
<b>Spotlight</b>	<b>66</b>	OPEC Secretary General emphasizes importance of OPEC-Russian ties at Valdai Discussion Club



**Cover**  
 This month’s cover shows the Kuwait Towers, which are regarded as a landmark and symbol of modern Kuwait, host to the Kuwait Oil and Gas Show 2019 (see feature starting on page 4). Image courtesy Shutterstock.

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**OPEC Membership and aims**

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

<b>Newsline Spotlight</b>	<b>72</b>	Saudi Arabia holds the third Future Investment Initiative
	<b>76</b>	Circular carbon economy for sustainable growth
<b>Dialogue Legal Workshop</b>	<b>78</b>	'Great leap forward' made in China-OPEC dialogue
	<b>84</b>	OPEC hosts first Annual Legal Workshop
<b>Oil &amp; Money 2019</b>	<b>88</b>	Many pathways to the energy transition
	<b>94</b>	Ben van Beurden: my path to purpose
<b>CERA Week</b>	<b>96</b>	India takes centre stage at key energy event
<b>World Energy Congress</b>	<b>100</b>	Africa not ready for full energy transition drive: two OPEC Member Countries comment
	<b>101</b>	Saudi Aramco chief executive urges bold response to beat climate change
	<b>102</b>	UNFCCC Figueres urges industry to act now on emissions
	<b>103</b>	OPEC Countries make forward progress on climate change: CCUS drive set for expansion in the UAE
<b>Newsline</b>	<b>104</b>	Angola intensifies efforts to reduce gas flaring
	<b>104</b>	ADNOC undergoes project expansion plans
<b>OPEC Fund News</b>	<b>106</b>	Cocoa in Ghana: a strategically important commodity
<b>Arts &amp; Life</b>	<b>108</b>	Dazzle and delight for youngsters
<b>Briefings</b>	<b>110</b>	Visits to the OPEC Secretariat
<b>Noticeboard</b>	<b>114</b>	Oil industry events
<b>Market Review</b>	<b>117</b>	Winter oil market outlook
	<b>119</b>	Recent developments in global oil inventories
<b>OPEC Publications</b>	<b>125</b>	Reading material about OPEC



**Errata:** Please note a correction in the *OPEC Bulletin March 2019* on page 7. The last paragraph should read:

#### Four new members of the JMMC

... The JMMC also endorsed adjustments to the baselines of three countries: Brunei Darussalam, Ecuador and Malaysia. Brunei Darussalam requested to have its reference production at 135,000 b/d; Ecuador requested to be referenced at 531,000 b/d (September 2018) and Malaysia at **653,000** b/d. Taken together, these total an adjustment of **37,000** b/d. This adjustment reflects the spirit of collegiality that pervades the JMMC. *The online version has been corrected accordingly.*

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#### Contributions

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

#### Editorial policy

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Mohammad Sanusi Barkindo, OPEC Secretary General (l).

## KOGS: ‘The best is yet to come for the oil and gas industry’

*The Kuwait Oil & Gas Show and Conference began with a discussion on policy prescriptions for addressing the energy transition. OPEC Secretary General, Mohammad Sanusi Barkindo, joined other leading industry officials in addressing policies surrounding the ‘New energy transition’ during the executive plenary session of the Kuwait Oil & Gas Show and Conference.*



*Delegates stand during the opening session of the Kuwait Oil and Gas Show and Conference 2019.*

**M**ore than 6,000 energy professionals participated in the October 13–16 event that featured ground-breaking discussions and an industrial exhibition held in Kuwait City.

“As is true of any business, the oil industry faces inevitable challenges and uncertainties,” Barkindo said during the panel discussion. “Today, we are feeling the headwinds of the US-China trade situation and other geopolitical tensions, slowing growth in some of the leading economies, and the risk of supply/demand imbalance.

“Yet if we look a little further down the road, the outlook for the petroleum industry remains bright,” he added. Barkindo cited OPEC projections that overall energy demand will increase by 33 per cent from 2015 to 2040, led by India and China, while crude oil will continue to account for the largest share of the energy mix by 2040 — around 28 per cent.

Barkindo told participants that while the outlook for the petroleum sector is bright, “the industry also has a responsibility to be part of the solution to the challenge of climate change. We must be more than a stable energy supplier.” To be part of the solution, he said, the oil industry needs “both a seat at the table in the discussions on the energy future — and a level playing field when it comes to energy policy making.”

The Secretary General praised OPEC’s support for the Paris Agreement and its engagement at the multilateral level in discussions on climate policy. “We too believe that we have no alternative planet,” he said.

### Why cooperation matters

The panel discussion followed the KOGS 2019 opening ceremony which featured Dr Khaled Al-Fadhel,

Sheikh Nawaf S Al-Sabah (l), KOGS Conference Executive Committee Chairperson, President and CEO of KUFPEC and KPI; pictured with Ayed S Al-Qahtani, Director of OPEC's Research Division.



Ayed S Al-Qahtani (r), Director of OPEC's Research Division (DRD), participated as a speaker in the 2019 KOGS Panel Session 1 titled 'Energy outlook as an empowering strategy'.

KOGS 2019's theme is: 'New energy transition: delivering value through collaboration and capability'. The Panel Session was held on October 14, 2019, at Kuwait International Fair (KIF), Mishref in Kuwait.

The entrance of the KOGS exhibition hall.



Kuwait's Minister of Oil, Electricity and Water; Hashem Sayed Hashem, Deputy Chairman and CEO of the Kuwait Petroleum Corporation; and Dr Sami Alnuaim, President of the Society of Petroleum Engineers (SPE) and Manager of the Petroleum Engineering Application Services Department at Saudi Aramco. SPE organized the conference portion of the combined event.

Barkindo said OPEC has demonstrated over and over again how dialogue, transparency and cooperation are effective in tackling challenges.

"Allow me to cite the example of the 'Declaration of Cooperation' between 14 OPEC Member Countries and ten other important oil-producing nations. This strategic partnership is built on — and owes its success to — the

values I just mentioned: dialogue, transparency and working together.

"The 'Declaration' has been a game-changer for the industry. The production adjustments undertaken by the participating countries over the past three years have reversed the severe oil market crisis of 2014-2016 and restored durable stability to the global oil market."

The Secretary General lauded His Highness Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah, the Emir of Kuwait, for the leadership role he played in the 'Declaration of Cooperation'. "The epitome of statesmanship and humility, I was privileged to drink from his fountain of wisdom and immensely benefited from his rich reservoir of knowledge as well as extensive global experience in those difficult times," Barkindo said.



*Khaled Al-Fadhel (l), Kuwait's Minister of Oil and Minister of Electricity and Water; and His Highness the Prime Minister Sheikh Jaber Al-Mubarak Al-Hamad Al-Sabah; presented a special token to Mohammad Sanusi Barkindo, OPEC Secretary General.*

He further praised Kuwait for its unwavering support of the 'Declaration of Cooperation' and the leadership set forth by Al-Fadhel.

The 'Charter of Cooperation', which has the unanimous support of the 14 OPEC and ten non-OPEC countries participating in the 'Declaration of Cooperation', "puts us in a stronger position over the longer term to address areas of common interest, including energy security, the energy transition and the challenge of climate change."

### **Sustained technological leadership**

In other remarks about the energy transition, Barkindo said there is a need for sustained leadership in the

development and deployment of technologies to foster progressive improvements in efficiency, exploration and delivery.

"Looking ahead, the successful deployment of carbon capture, utilization and sequestration [CCUS] and other emission-reducing innovations could strengthen the industry's competitiveness and affirm its commitment to tackle climate issues," he said.

Barkindo pointed out that many OPEC Member Countries are fortunate to have abundant renewable energy potential and are working to exploit these resources for industrial and domestic use, while also harnessing advanced technologies to improve efficiency along the entire petroleum production chain.

The oil industry needs a supportive investment



Mohammad Sanusi  
Barkindo, OPEC  
Secretary General.



The exhibition hall  
at KOGS 2019.

climate if it is to meet the world's energy needs and deliver solutions to climate challenges, Barkindo explained in his remarks.

“The most disadvantageous and harmful factors that dampen investment in the oil and gas sector are extremes in market volatility, geopolitical interference, and more recently the discriminatory nature of policies against oil and gas,” the Secretary General added.

“Oil has fuelled the current civilization and will continue to remain a fuel of choice in a broader energy mix if the whole industry and major stakeholders

— policymakers, corporate chieftains, scientific institutions, the financial and investment community — all rise in unison and confront the twin challenges climate change and energy poverty. The best is yet to come for the oil and gas industry.”

### Kuwait's hospitality and leadership

Barkindo applauded Kuwait, a Founder Member of OPEC, and Al-Fadhel for “helping to make this event possible and for hosting us so generously, and the inexhaustible



*Sheikh Sabah Al Ahmad Al Jaber Al Sabah, the Emir of Kuwait, is known for his acute political mind, diplomacy and long service to his country. He was Foreign Minister for some 40 years.*



*Visitors at the OPEC stand at KOGS 2019.*

energy he devotes to OPEC since his arrival as a key member of the family.”

The panel included moderator Nader Sultan, Senior Partner at Fand N Consultancy; Sheikh Nawaf S Al-Sabah, CEO and President, Kuwait Foreign Petroleum Exploration Company (KUFPEC) and Kuwait Petroleum International (KPI); Charles O Holliday, Chair of the Board, Royal Dutch Shell; and Musab Al-Mahruqi, Group CEO, Oman Oil Company (OOC) and Oman Oil Refineries and Petroleum Industries Company (Orpic).

“I am honoured to participate in the Kuwait Oil and

Gas Show, under the patronage of the Prime Minister, Sheikh Jaber Al-Mubarak Al-Hamad Al-Sabah, and to be part of this panel with such esteemed colleagues,” Barkindo said. “I have great admiration for our moderator, Dr Nader Sultan, who has distinguished himself through his life-long contributions to the world of energy.”

“It is a testament to the hard work of all the organizers and contributors that the Kuwait Oil & Gas Show has in a very short time become a premier industry event, held in this heart of the world’s most important oil-producing region.”





## Oil industry facing major challenges: Kuwait

*Khaled Al-Fadhel (above), Kuwait's Minister of Oil and Minister of Electricity and Water, stated that the oil industry is facing major challenges affecting oil-producing countries at the 4<sup>th</sup> Kuwait Oil and Gas Conference, held from October 13–16, in Kuwait City.*



*Khaled Al-Fadhel (), Kuwait's Minister of Oil and Minister of Electricity and Water; with Mohammad Sanusi Barkindo, OPEC Secretary General.*

**K**haled Al-Fadhel made the statement during the opening ceremony of the show, held under the patronage and in the presence of His Highness the Prime Minister Sheikh Jaber Al-Mubarak Al-Hamad Al-Sabah.

The challenges include developing the techniques of oil production and refining, digitizing product marketing, climate change and the risks of cyber terrorism, the minister told the conference, according to the Arab Times, an excerpt of the coverage of which is shown here.

Despite changes affecting the global oil industry, Kuwait has been committed to maintaining stability of global oil prices, in a way that does not negatively impact the development march of oil-exporting countries, said the Minister.

He added that the oil markets have dealt with the volatility of prices, thanks to the unprecedented commitment to the implementation of what has been agreed upon among the members of OPEC.

Al-Fadhel pointed to the role of Kuwait in boosting cooperation among member states and its commitment to restoring stability to the oil markets. He stressed the need to attract developed world expertise and boost the country's technical capacities.

The Minister extolled the country's pioneering and distinguished role on both local and international levels in all aspects of the oil and gas industry. "We always work

on developing and bringing the latest technologies into the oil industry to reduce greenhouse gas emissions in the atmosphere and qualifying oil operations to become environmentally friendly," he said.

He indicated that the Kuwaiti oil sector is taking into consideration climate change conventions and partaking in international events aiming to protect the environment.

In a press statement after the ceremony, His Highness the Prime Minister lauded the large participation of Arab, national and foreign companies as well as international organizations at the conference.

He said the remarkable participation of these institutions confirms Kuwait's distinguished reputation and embodies its pioneering position in the oil industry and energy. His Highness the Premier noted that the conference is a big event for those who are exploring available investment opportunities.

He pointed out that the conference also offers a chance to share expertise and display the latest techniques and achievements, and focus on obstacles facing the oil and gas industry.

His Highness expressed his confidence in Kuwait's human resources working in this field and stressed the government's full commitment to creating a healthy workplace in order to be able to enhance the productivity of oil institutions. 

*Images in this feature, unless otherwise credited, courtesy KOGS.*



Shutterstock

## Kuwait's architectural and cultural masterpiece

*With its stunning design, the Sheikh Jaber Al-Ahmad Cultural Centre complex is a world-class venue for the arts and important events such as the plenary session of the recent Kuwait Oil & Gas Show and Conference.*



*The Sheikh Jaber Al-Ahmad Cultural Centre.*

**T**he Kuwait Oil & Gas Show and Conference (KOGS) kicked off four days of discussion and exhibitions at the Sheikh Jaber Al-Ahmad Cultural Centre, a world-class complex for the cultural and performing arts, which forms part of the modern National Cultural District in Kuwait City.

The KOGS Conference opening ceremony on October 13 took place at the Jaber Al-Ali Concert Hall, one of the architecturally stunning structures that form the Cultural Centre complex. The steel and glass buildings — which also house a theatre, national library and conference facilities — sparkle in the sun, evoking the impression of jewels.

“Complex geometric forms inspired by Islamic architecture create the richly textured outer skin of each building resulting in dramatic public spaces below that benefit from the interplay of light and shadow,” according to the SSH architectural firm, which designed the complex. The firm is renowned for its striking designs of buildings, public spaces and infrastructure in Kuwait, as well as Algeria, Iraq, Saudi Arabia and the United Arab Emirates.

## Sheikh Jaber

The Cultural Centre is named for Sheikh Jaber Al-Ahmad Al-Sabah, who was Emir from 1977 until his death in 2006. Throughout his long life of service to the Kuwaiti people, Sheikh Jaber was instrumental in developing the economy as Minister of Finance, Premier and ultimately Emir.

“Sheikh Jaber’s legacy is a testament to his diplomacy; his deep respect for all cultures and commitment to mutual understanding ensured his role as an influential figure in Kuwait for generations to come,” according to the Cultural Centre’s website. The complex “aims to match the late Emir’s spirit of democracy, respect and dedication towards social and cultural development.”

In a reflection of Sheikh Jaber’s commitment to social development, the Kuwait Fund for Arab Economic Development was established under his tenure as Minister of Finance and he served as its first chairman. Since its founding in 1961, the Kuwait Fund has worked to improve infrastructure and socioeconomic progress in more than 100 countries.

Under the current Emir, Sheikh Sabah Al-Ahmad Al-Jaber Al-Sabah, the Kuwait Fund continues its invaluable work.

## A world of talent

The Sheikh Jaber Al-Ahmad Cultural Centre opened on October 31, 2016, under the auspices of the Emir.

Recent scheduled celebrities and events at the Cultural Centre have included the Sudanese novelist Hammour Ziada, winner of the 2014 Naguib Mahfouz medal for his novel *The Longing of the Dervish*; Kuwaiti musician Nawal Al-Kuwaitiya; Lebanese singer Marwan Khoury; and a classical programme featuring the Prague Philharmonia.

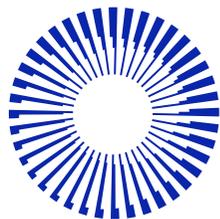
# MR. DR. SULTAN AHMED AL JABER

GROUP CEO, ADNOC



Abu Dhabi International Petroleum Exhibition & Conference  
11 - 14 November 2010





أديبك ADIPEC

Abu Dhabi International Petroleum  
Exhibition & Conference

11 - 14 November 2019

# Oil industry must double down on mission to modernize

*Sultan Ahmed Al Jaber, ADNOC Group CEO, delivered a motivating speech at the Abu Dhabi International Exhibition and Conference held from November 11–14 on the need for the industry to adapt to fast-paced changes happening on a global scale.*

It gives me great pleasure to welcome you to ADIPEC 2019. This year marks ADIPEC's 35<sup>th</sup> anniversary and during that period this event has evolved to become the world's pre-eminent gathering of our industry.

By bringing together professionals and policymakers, corporate and government leaders this platform has put Abu Dhabi and the UAE at the center of the global energy dialogue.

And this week by working together we have an opportunity to set the agenda that will drive our industry forward.

## Disruptions to industry

Allow me to be clear and get straight to the point. We have to admit that our industry is being disrupted on multiple levels.

Disrupted by new technology; new business and operating models; new forms of energy and a new geopolitical order.

*Sultan Ahmed Al Jaber, ADNOC Group CEO.*



This era of disruption is just beginning and will only gather pace over time. Yet, the oil and gas company of today can be a winner of tomorrow, if it operates at a lower level of cost and a higher level of performance — if it brings digital into the core of its operations. If it embeds sustainability into its DNA.

And if it rethinks how to leverage its partnerships, enable its people and re-center its customer relationships. This, in fact, is the mission we defined together here last year as Oil and Gas 4.0.

By doubling down on this mission-to-modernize we can, and we will, remain an essential pillar of the future diversified energy mix. The fact is, by 2040, all the energy currently consumed in the United States, India and Japan will be added to global demand. And, even in the most fast-paced transition scenarios, oil and gas will still provide the source for over half of it. These facts are undisputed and simply make a compelling case to invest in the future of our industry.

### ADNOC on track

Here at ADNOC, we are working with partners to increase our available resources. We are well on track to expand our oil production capacity to four million barrels by the end of next year. We are finding new reserves of natural gas, getting closer to gas self-sufficiency and will eventually become a net exporter. In fact, our progress is picking up pace.

New discoveries this year include over seven billion barrels in oil reserves, 58 trillion cubic feet of conventional gas, and, significantly, over 160 trillion cubic feet of unconventional gas.

This progress was only achieved through the vision of our leadership, the collaboration of our partners, and the hard work, determination and dedication of all my colleagues across the ADNOC family. And, as a result, the UAE has moved up from seventh to sixth place in the ranking of the largest oil and gas reserves, in the world.

As we adjust to a shifting energy landscape, we are deepening our partnerships globally and also pivoting towards Asia, where energy demand is growing fastest.

Following our historic concession agreements with India and China, last month, we introduced our first Russian concession partner. And, as we enter new markets, we are growing our trading capabilities to better

*Sultan Ahmed Al Jaber, ADNOC Group, CEO.*

align with where our customers are and how to meet their needs. In the last six months, we established a global trading arm in a joint venture with Eni and OMV.

We secured a stake in VTTI, with storage and terminal operations in 14 countries across the US, Africa, Asia and the Middle East. And, just last week, the Supreme Petroleum Council made historic changes to the way our oil is traded. These changes are centered around Murban — our high quality, highly sought-after, light sweet crude that customers know and rely on and is unique to the UAE. And, to facilitate this new trading mechanism, I am pleased that the Inter-continental Exchange, ICE, announced just this morning that it will set-up a futures' exchange right here at the Abu Dhabi Global Market.

I am also pleased to announce that ADNOC will join major IOCs, traders and customers as founding partners of ICE Futures Abu Dhabi or IFAD. Leveraging the UAE's position at the pivot point of growth economies, IFAD will be home to the Murban Futures Contract. Crucially, this contract will replace retroactive pricing with forward pricing. It will allow buyers to hedge their risk in the open market. And it will help capture more value from every barrel we produce.

## Historic milestone

This represents a bold step and a historic milestone that offers our partners and our customers significant benefits. And, it places Abu Dhabi and the UAE at the geographic *center* of global crude trading. We are also leveraging our geography as we expand downstream.

Here in Ruwais, we are creating one of the world's largest integrated refining and petrochemical complexes in the world. We are developing a plug-and-play manufacturing ecosystem that will:

- nurture the growth of the small and medium-sized enterprises (SME) sector;
- increase in country value;
- and generate sustainable, home-grown jobs.

I invite all our partners, and the UAE private sector, to take advantage of our high quality feedstock, world-class integrated infrastructure, globally connected logistics and pivotal geographic location. Let us work together, seize this opportunity for growth and unlock greater value.

As our industry embraces an age of disruption, digitization is the next frontier to driving efficiencies, curbing costs and extracting the highest value from every molecule we produce.

At ADNOC, artificial intelligence powers our panorama digital command center, enabling clearer, real-time, business-critical decisionmaking. Advanced robotics are transforming our surface and subsurface operations. And predictive analytics are significantly minimizing our operational downtime and maximizing our savings.

Technology is also the key to unlocking one of the central challenges facing our industry: How to deliver more energy with fewer emissions.

At ADNOC, we are constantly innovating to remain among the least carbon-intensive producers in the world. We are expanding the Middle East's first commercial-scale carbon capture, utilization and storage (CCUS) facility to capture at least 4.3 million tonnes of CO<sub>2</sub> annually by 2030. That equals the amount of CO<sub>2</sub> captured by 5 million acres of trees, or a forest over twice the size of the UAE.

As we expand our operations, we are pioneering the use of optical drones to monitor fugitive emissions, helping us maintain our best-in-class methane intensity. These innovations will help us keep our longstanding commitment to protecting the environment. And honour the legacy of our founding father, Sheikh Zayed, who embedded responsible production into our DNA.

As a committed employer of Emiratis, one of ADNOC's most important tasks is attracting and developing the best talent. And our ability to appeal to the next generation will be determined by how well we communicate why we exist. In other words, our defining purpose as an essential driver of economic development. Our industry is in the business of progress around the world. And it has made a vital contribution to the journey of our beloved country, the UAE, that is now one of the few nations to have put a man in space.

Our industry has pushed the frontiers of progress throughout its history. This week, we have an opportunity to stretch those frontiers even further. Working together through creative partnership, we will drive economic growth responsibly.

We will stay at the cutting edge of innovation. And we will continue to drive growth and prosperity throughout the UAE and the wider world. 



L—r: John Deferios from CNN, moderator; Condoleezza Rice, former US Secretary of State; Suhail Mohamed Al Mazrouei, Minister of Energy & Industry, United Arab Emirates; Dharmendra Pradhan, Minister of Petroleum and Natural Gas and Minister of Steel, India; Mohammad Sanusi Barkindo, Secretary General of OPEC.



# Big Data attracts huge interest at ADIPEC

*OPEC's round table on how Big Data can revolutionize the oil and gas industry draws an influential audience at one of the world's foremost energy events.*

**O**PEC led a ground-breaking round-table discussion on how Big Data holds enormous potential for the future of the oil and gas industry, one of several strategic discussions held at the Abu Dhabi International Petroleum Exhibition and Conference (ADIPEC), which took place from November 11–14.

Big Data is transforming the way companies worldwide are integrating, managing and using an avalanche of

information to improve operational efficiency, strengthen their technological capacity and maximize market share.

In the oil and gas industry, the power of digitalization is being deployed to maximize efficiencies in exploration, maintenance and asset surveillance. This is also the case with transport, refining and retailing.

For OPEC, Big Data is leading to far-reaching improvements in the data services and information provided to



Mohammad Sanusi Barkindo (on screen), Secretary General of OPEC, during the opening ceremony.



Mohammad Sanusi Barkindo (c), answering questions of the international media.



Mohammad Sanusi Barkindo (l), with Mariam and Malik, student volunteers from UAE universities, who assisted at the OPEC stand at ADIPEC.

Member Countries through online platforms and publications.

The ADIPEC event, *'Big data: a pillar of tomorrow's petroleum industry'*, was organized by the OPEC Secretariat and took place on November 12. The round-table discussion was attended by Suhail Mohamed Al Mazrouei, Minister of Energy and Industry, United Arab Emirates, and other government dignitaries; national and international petroleum company leaders, including the Abu Dhabi National Oil Corporation (ADNOC); and academic representatives of Abu Dhabi's Khalifa University.

"The ability to achieve radical improvements in integrating, managing and utilizing enormous amounts of information has important implications going forward," OPEC Secretary General Mohammad Sanusi Barkindo said in opening the session. "Indeed, the link between transparent, accessible data and a secure, sustainable energy supply will only grow in importance."

"For OPEC, Big Data is leading to far-reaching improvements in the data services and information we provide to our Member Countries – and to the public at large – through our online platforms and publications," Barkindo added.

### Tackling energy poverty, climate change

The OPEC Secretariat is pioneering efforts to develop a comprehensive and easy-to-use multi-dimensional tool for analyzing variables relevant to the oil market. This marks an unprecedented effort to integrate multiple global data sources, harness structured and unstructured data, and revolutionize current and future needs.

Furthermore, the Big Data project involves developing tools to optimize response rates for data requests and integrate multiple databases into a single user-friendly platform.



OPEC's Big Data event garnered great interest.





Suhail Mohamed Al Mazrouei (above), Minister of Energy & Industry, United Arab Emirates; and Mohammad Sanusi Barkindo (below), Secretary General of OPEC.



**Moderator**

**John Deferios**  
CNN Business Emerging Markets  
Editor and Anchor



**Dr Ayed S Al-**  
Director of Research  
OPEC

Big Data can also be harnessed to help develop responses to energy poverty and climate change, according to Barkindo.

Nearly one billion people lack access to electricity, and around three billion lack access to clean fuels for cooking, according to the 2019 edition of the World Oil Outlook. “With the help of Big Data, we have a new arsenal of tools to rectify this injustice,” Barkindo said of energy poverty, adding that “Big Data bolsters our capacity to develop and deploy game-changing technologies – such as carbon capture, utilization and storage – that contribute to climate change mitigation efforts.”

During the round-table discussion, brief videos were shown highlighting the value of Big Data to the industry, plus how it can be used to mitigate climate change and alleviate energy poverty.

**WOO presentation at ADIPEC**

Following its widely attended launch in Vienna on November 5, the *World Oil Outlook 2019* also attracted great interest and discussion during a presentation at ADIPEC on November 13.



Al-Qahtani  
Research Division

**Dr Jan Ban**  
Senior Research Analyst  
Energy Studies Department  
OPEC

**Costanza Jacazio**  
Senior Economist  
ADNOC

**Dr Haris Aliefendic**  
Senior Research Analyst  
Energy Studies Department  
OPEC

**Julius Walker**  
Senior Research Analyst  
Energy Studies Department  
OPEC



*L–r: The panel discussion focused on the key findings of the WOO 2019 and included moderator, John Deferios from CNN; Dr Ayed S Al-Qahtani, Director, Research Division; Dr Abderrezak Benyoucef, Head of OPEC's Energy Studies Department (ESD); Dr Jan Ban, Senior Research Analyst, ESD; Costanza Jacazio, Senior Economist, ADNOC; Julius Walker, Senior Research Analyst, ESD; Dr Haris Aliefendic, Senior Research Analyst, ESD.*

In introducing the 13<sup>th</sup> edition of OPEC's flagship reference publication, Barkindo pointed to the WOO's 2040 projections that renewables will experience the largest growth in percentage terms, natural gas the largest growth in terms of volume, while oil will remain the fuel with the largest share in the energy mix. "In fact, oil and gas combined are still expected to make up more than 50 per cent of the energy mix by 2040. In this regard, it is important to stress that we do not see any reputable publication in their reference outlooks forecasting that renewables will come anywhere close to overtaking oil and gas in the decades ahead."

Drawing on the importance of investment and innovation, Barkindo added that a key message in this year's publication is the importance of technologies in reducing emissions. "We need to look for more efficient technological solutions everywhere, across all available energies, and utilize all available and innovative options to reduce emissions from the energy sector. The oil and gas industries have to be part of the solution."

## ADIPEC opening ceremony

During a discussion at the opening of ADIPEC on November 11, panellists discussed the future of the oil and gas industry in the face of competition from other energy sources.

Suhail Mohamed Al Mazrouei and Mohammad Sanusi Barkindo participated in the panel discussion along with Dr Condoleezza Rice, US Secretary of State (2005–09), and Shri Dharmendra Pradhan, India's Minister of Petroleum and Natural Gas.

"It is very clear that despite the growth rate in renewables, which we applaud and support, we need to support diverse sources of energy to maintain a balanced energy portfolio," Barkindo said.

"We need to continuously invest to meet the insatiable appetite for energy" while also addressing the climate change challenge, "and the need for our industry and producing nations to adapt to these changes."



At the OPEC stand (l-r): Hasan Hafidh, Head, Public Relations & Information Department; Shaker Mahmoud A Al Rifaiey, Head, Office of the Secretary General; Peter Kutemann, President and CEO, and Anouschka Kutemann, Member of the Supervisory Board, both at Dietsmann NV.



Mohammad Sanusi Barkindo (l), Secretary General of OPEC, during interviews with Steve Sedgwick (l), CNBC Anchor; and Eithne Treanor (r), for ADIPEC.



Dharmendra Pradhan (c), Minister of Petroleum and Natural Gas and Minister of Steel, India; Mohammad Sanusi Barkindo (fourth l), Secretary General of OPEC; and other dignitaries.

## OPEC-India cooperation discussed

Barkindo also met with Pradhan on the sidelines of ADIPEC. In their bilateral meeting, the Secretary General praised the Indian minister's visionary leadership, supportive partnership and his appreciation for OPEC's commitment to market stability.

"We are very proud of what we have achieved in our discussions that covered multiple issues," he said of the meeting, at which both sides agreed to hold the next OPEC-India High-Level Energy Dialogue in Vienna in early 2020.

The first OPEC-India Dialogue was held in 2015 and the next will mark the 4<sup>th</sup> high-level meeting. These events symbolize India's enthusiasm for producer and consumer dialogue and have contributed enormously to OPEC's success in restoring sustainable stability to the world oil market.





Eng Ahmed Mohamed Alkaabi, the United Arab Emirates Governor for OPEC, was among the many OPEC dignitaries attending ADIPEC.



## ADIPEC debuted in 1984

Since it was first held in 1984, ADIPEC has grown into one of the world's foremost energy events. It is held under the patronage of His Highness Sheikh Khalifa Bin Zayed Al Nahyan, President of the UAE.

This year's topic, 'Oil and Gas 4.0', focused on how the industry can develop and deploy innovative and disruptive technologies to ensure a secure and sustainable energy future.

The event involved more than 2,200 participating companies, over 50 national and international oil firms, and 10,400 delegates from 167 countries.



# Dubai makes must-see travel list for 2020

*A leading guidebook publisher's 'Best in Travel' list highlights the vibrant Emirati city's culture, design, cuisine – and its numerous shopping opportunities.*



*The Al Fahidi fort, an ancient Arabic fortress in the Dubai Museum, Dubai, United Arab Emirates.*

Lonely Planet, the guidebook publisher best known for its edgy writing and advice for budget-conscious adventurers, has named Dubai one of its top-ten city destinations for 2020.

“Dubai is a stirring alchemy of profound traditions and ambitious futuristic vision wrapped into starkly evocative desert splendour,” Lonely Planet says of the Emirati city.

Known globally as a shopping haven — from traditional souqs to contemporary commercial centres — Dubai is also richly endowed in history, culture and architecture. Lonely Planet’s recommendations include the Dubai Museum, Sheikh Mohammed Centre for Cultural Understanding, the Jumeirah Mosque and Al Fahidi Historic District.

Other Dubai attractions recommended by Lonely Planet’s ‘Best in Travel 2020’ guide include the city’s exciting dining scene and Earth’s largest indoor theme park, the IMG Worlds of Adventure.

## Culture, faith and tradition

“The first Middle Eastern city to make the UNESCO list of creative cities of design, Dubai is a bustling microcosm peacefully shared by cultures from all corners of the world,” according to Lonely Planet.



*The Jumeirah Mosque in Dubai, UAE.*

“This diversity expresses itself in the culinary landscape, fashion, music and performance. Although rooted in Islamic tradition, this is an open society where it’s easy for newcomers and visitors to connect with myriad experiences ... Dubai is a fertile environment conducive to breaking down cultural barriers and preconceptions.”

The travel publisher also highlights many other attractions across the United Arab Emirates (UAE). Beyond the Emirate of Dubai, Lonely Planet notes, “awaits a diverse mosaic of six more emirates, each with its own character and allure.”

Furthermore, it highlights the UAE’s growth as a centre for arts, anchored by the Louvre Abu Dhabi; rich history, including

the Mleiha Archaeological Site in Sharjah; and the UAE's magnificent natural diversity, from its stunning desert landscape to the breathtaking Hajar Mountains.

## UAE: A destination for global events

The UAE is gaining a reputation as a destination of choice for major international events.

Dubai's appearance on Lonely Planet's annual list of recommended places to visit comes as the city prepares to host Expo 2020. The 173-day international exhibition begins on October 20, 2020, and will feature culture, food and exhibitions from more than 190 countries under the motto 'where creating a better world is in your hands.'

The World Expo is the first 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 UAE hosted the World Energy Congress in September and the Abu Dhabi International Exhibition and Conference (ADIPEC) in November.

The Emirati capital city is also hosting the Formula 1 Etihad Airways Abu Dhabi Grand Prix, the sixth consecutive year that it will host one of the world's premier single-seat auto racing events. The Abu Dhabi National Oil Company (ADNOC) is an official partner of the Grand Prix, with the qualifying race on November 30 and the season finale on December 1 at the Yas Marina Circuit on Abu Dhabi's Yas Island.

Dubai is the UAE's leading travel destination, hosting around 16 million visitors, followed by Abu Dhabi with five million, according to government hotel and tourism data. Travel and tourism account for more than 12 per cent of GDP, a figure that is projected to grow by nearly five per cent annually.

## No longer a 'lonely planet'

Lonely Planet was founded in 1973 with the publication of its first guidebook on Asia focusing on younger travellers eager for an adventure on a limited budget. Though Lonely Planet's signature blue guides are still a staple in the rucksacks of many adventure travellers, it has expanded to become a global brand offering travel guides, magazines and digital services.

Besides Dubai, which ranked No 9, Lonely Planet's other recommended cities to visit in 2020 are:

1. Salzburg, Austria;
2. Washington, DC;
3. Cairo, Egypt;
4. Galway, Ireland;
5. Bonn, Germany;
6. La Paz, Bolivia;
7. Kochi, India;
8. Vancouver, Canada;
10. Denver, Colorado.



An advertisement board of the indoor amusement park IMG Worlds of Adventure, in Dubai.

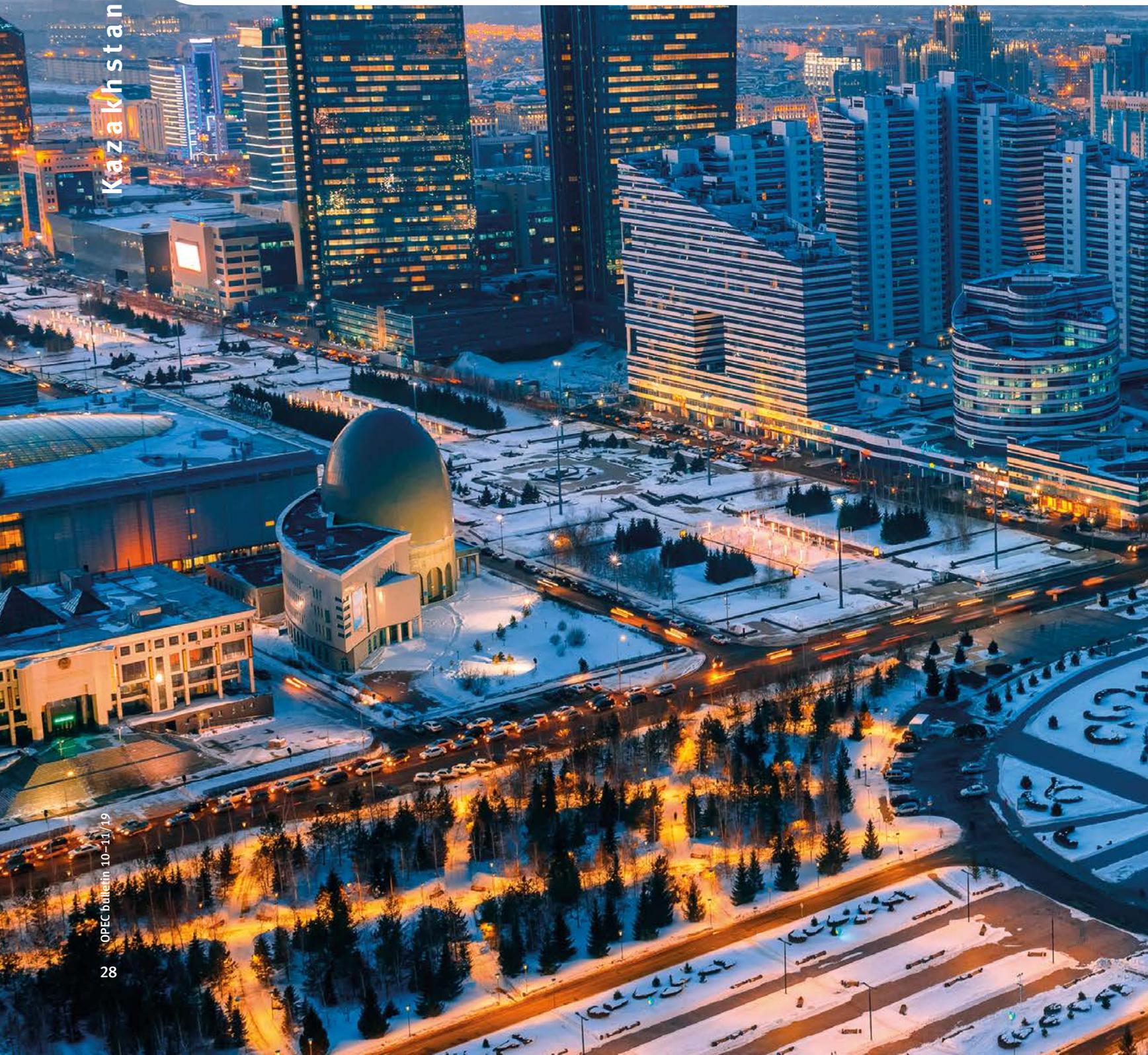


The theme park at Global Village, a 1.6-million-square-metre park that is the world's biggest theme park in the Far East gate, at night with floating boat restaurant stands.



Philately house and Sheikh Mohammed Centre for Cultural Understanding, located in the Al Fahidi historical neighbourhood (Al Bastakiya).

# Kazakhstan Energy Week: Fueling the future through innovation



*From September 23–29, 2019, energy leaders from around the world converged on Nur Sultan for Kazakhstan Energy Week. Mohammad Sanusi Barkindo, OPEC Secretary General, was a featured speaker and panelist at the event’s Kazenergy Eurasian Forum. The OPEC Bulletin takes you behind the scenes.*



*“This city, formerly known as Astana, was renamed in March of this year to honour Kazakhstan’s first President Nursultan Nazarbayev, who faithfully served this country from 1990 until March of this year.”*



Before the event, OPEC Secretary General, Mohammad Sanusi Barkindo, was received by Kazakhstan's Prime Minister, Askar Mamin, who officially welcomed the OPEC delegation to Kazakhstan and reaffirmed the country's support for the ongoing 'Declaration of Cooperation' and 'Charter of Cooperation'.

Barkindo lauded Kazakhstan's leading role in the process, and expressed his sincere appreciation to the Prime Minister and his predecessors, Bakhytzhan Sagintayev and Karim Massimov, for their valuable contributions to this landmark endeavour.

### Opening ceremony

Before the opening ceremony, the Secretary General was invited to join fellow panelists for a special VIP tour

of the exhibition, which opened on September 23. The tour, led by Prime Minister Askar Mamin, made a stop at the OPEC stand, which highlighted OPEC's wide variety of initiatives, including ongoing efforts in international energy cooperation.

The Secretary General delivered opening remarks at the Forum's opening ceremony, highlighting Kazakhstan's rich history and bright future.

After thanking the Prime Minister and Minister of Oil, Kanat Bozumbayev, for the invitation to speak at the event, he made reference to the capital's recent name change and its historical significance.

"This city, formerly known as Astana, was renamed in March of this year to honour Kazakhstan's first President Nursultan Nazarbayev, who faithfully served this country from 1990 until March of this year," he said.

"The renaming of the capital city was a fitting gesture



Askar Mamin (l), Kazakhstan's Prime Minister; with Mohammad Sanusi Barkindo, OPEC Secretary General; during the opening ceremony.

for this founding father, a visionary leader who brought this nation through nearly three decades of steady development and progress. He was a staunch advocate for unity and cooperation, which he knew were only possible through peace and dialogue.”

### A lasting legacy

Barkindo then outlined how the leader's career has benefited current efforts in global energy cooperation and Kazakhstan's rapid advancement.

“This great leader repeatedly throughout his illustrious career sowed the seeds of collaboration and dialogue, and now those seeds are blossoming through Kazakhstan's participation on the international stage through the ‘Declaration of Cooperation’ (DoC) and ‘Charter of Cooperation’ (CoC),” he explained. “Nazarbayev's legacy is evident today when you drive

through this metropolis of just over one million people and witness a truly magnificent cityscape with gleaming skyscrapers dotting the horizon. It is indeed a living tribute to the advancements this country has achieved over the years.”

The Secretary General also referred to Kazakhstan's rich intellectual heritage and the country's academic success and provision of talent to its energy industry.

“10<sup>th</sup> century Kazakh scholar and intellectual Abu Nasr Al-Farabi is widely regarded as a leading philosopher in the Islamic world. His works in various fields, including religion and science, have influenced, among others, Avicenna, Averroes and Maimonides, who followed in his footsteps. A leading founder of Peripatetic philosophy in the East, he became known as ‘The Second Teacher’ after Aristotle,” he said.

“Al-Farabi has had such an impact on this country and its culture that Kazakhstan named its leading



Mohammad Sanusi Barkindo (c), OPEC Secretary General; Kanat Bozumbayev (l), Kazakhstan’s Minister of Oil; and Jambulat Sarsenov (r), Vice-Chairman of the Kazenergy Association.

university after him. The Al-Farabi Kazakh National University is the leading institution of higher education in Kazakhstan and the first to be certified to offer a full range of academic studies. This impressive institution is cultivating the top talent in Kazakhstan and continues to provide its oil and gas industry with the high-quality staff it needs for the future.”

### Investing in the future

Turning to Kazakhstan’s energy footprint, Barkindo commended the massive progress being made through its dedication to investing in its oil and gas assets.

“With massive investments in its energy sector, Kazakhstan is now seeing the fruits of its labour as major projects, such as the giant Kashagan field and the equally impressive Tengizchevoil project, are helping provide significant boosts in liquids production capacity, thereby ensuring security of supply to the market,” he stated.

“This is just the ‘tip of the iceberg’, though, and I am certain there are still many chapters to be written in the ongoing success story of this country.”

In reference to the short-term oil market outlook, Barkindo pointed out that although fundamentals are generally strong, economic uncertainty and geopolitics,

including the recent attack on Saudi oil facilities, continued to create some downward pressure.

“This prevailing uncertainty was aggravated further with the recent attacks on the Abqaiq facility and Khurais oil field in Saudi Arabia. In a matter of minutes, an estimated 5.7 million barrels/day of crude oil production were taken off the market. In the immediate aftermath, the oil price jumped by more than 18 per cent, the highest volatility in 30 years!” he said.

“The rapid response from the government of Saudi Arabia and Saudi Aramco to restore production as quickly as possible was absolutely essential in calming the market’s fears of extended volatility. I commend Minister of Energy, HRH Prince Abdulaziz bin Salman, for his swift action in responding to this unprecedented attack. He has also vowed that Saudi Arabia will maintain its production levels as agreed at the Joint Ministerial Monitoring Committee meeting on September 12 in the United Arab Emirates.”

### Security of supply

With these factors in mind, the Secretary General emphasized the urgent need to protect the security of supply on all occasions to ensure consumers’ needs are met.



*Delegates attending the plenary session.*

“Let me emphasize here that any disruption to the steady and secure supply of oil and gas products anywhere in the world is counterproductive and detrimental to the industry and to the wider global economy. OPEC is firmly committed to market stability and remains a dependable, reliable source of supply for its customers worldwide.”

Moving on to the topic of climate change and referring to the Climate Action Summit taking place at the United Nations in New York the same week, the Secretary General urged delegates to consider the facts.

### All forms of energy needed

“The fact is, all forms of energy will be required to meet future demand; it is not about choosing one form of energy over another. Oil and gas are expected to remain the fuels with the largest share in the energy mix throughout the forecast period to 2040,” he pointed out. “We also expect to see robust growth in long-term global oil demand, which is expected to rise to almost 112 million barrels/day by 2040. Most of this will come from developing countries with high population growth rates, expanding middle classes and strong economic growth.”

In terms of electric vehicles, he said that there will be a gradual increase but conventional vehicles will still dominate.

“Another notion I want to dispel is that electric vehicles are on the verge of replacing conventional vehicles,” he stated. “This is simply inaccurate. Our research tells us that although the rate for new sales of electric vehicles is very high, the share of the total stock in 2017 was only 0.3 per cent and 1.3 per cent of total vehicle sales.

We will see the long-term share of electric vehicles in the total fleet reach a level of around 13 per cent by 2040, but conventional vehicles will still see the majority of growth of the total vehicle fleet.”

### Technology and innovation

He also emphasized the vital role to be played by technological innovation, energy and fuel efficiency enhancements and carbon capture, utilization and storage, which he said will provide a balanced and effective approach to meeting the world’s energy needs in an environmentally friendly way.

He closed by highlighting Kazakhstan’s influential role in the ‘DoC’ and the ‘CoC’, and stressed the importance of making this a permanent relationship.

“The participating producers of the ‘Declaration of Cooperation’, in which Kazakhstan continues to play a key role, have created a blueprint for effective international energy cooperation,” he proclaimed. “So, let us now go forth and build upon this through the ‘Charter of Cooperation’, which was endorsed at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting on July 2, 2019. The Charter is an extension of the highly successful ‘Declaration of Cooperation’, providing a permanent platform for discussion and cooperation.”

### Plenary session

At the conclusion of the opening ceremony, a plenary session entitled ‘*Fuelling the future: Reality and forecasts*’ took place, featuring the Secretary General; Kanat Bozumbayev, Minister of Energy of Kazakhstan; Alik



*Mohammad Sanusi Barkindo (l), OPEC Secretary General; with Askar Mamin (r), Kazakhstan's Prime Minister; visiting the OPEC stand at the exhibition.*

Aidarbayev, Chairman of the Board, NC 'KazMunayGas' JSC; Tom Schuessler, Senior Vice President, ExxonMobil Upstream Oil and Gas; Alessandro Puliti, Chief Upstream Officer, ENI SpA; Bernard Clement, Vice President, Caspian and Southern Europe, Total Exploration & Production; William Harwood, Senior Vice President, Argus; and Malcolm Forbes-Cable, Vice President, Wood Mackenzie.

Moderated by Ryan Chilcote, television host and Special Correspondent for the PBS NewsHour, the session covered a wide spectrum of themes, including prospects

for peak supply, the impacts of the energy transition on Kazakhstan and other energy-producing nations, the ongoing developments of OPEC and non-OPEC cooperation, industry investment and the importance of effective partnerships between governments and energy stakeholders.

During the discussions, the Secretary General commended Kazakhstan for its strong commitment to the DoC and the CoC and thanked its leadership for their loyal support. In terms of long-term oil market prospects, he pointed out that oil and gas combined are forecast to

*Mohammad Sanusi Barkindo (c), OPEC Secretary General; with Olzhas Kemelov (r), Government and External Affairs Coordinator, North Caspian Operating Company N V, at the OPEC stand.*





*Mohammed Sanusi Barkindo (second r), the OPEC Secretary General, participated in a joint press conference along with Kanat Bozumbayev (c), Kazakhstan's Minister of Oil; Urban Rusnak (second l), the Secretary General of the International Energy Charter; Valérie Ducrot (l), Executive Director, Global Gas Centre; and moderator Jambulat Sarsenov (r), Vice-Chairman of the Kazenergy Association.*

supply over 50 per cent of the world's energy needs by 2040, with oil at around 28 per cent and gas at 25 per cent. As far as demand goes, he added that there is no expectation for peak oil demand over the forecast period, with long-term demand expected to increase by 14.5m b/d to reach 111.7m b/d by 2040.

### Press conference

After the plenary session, Mohammed Sanusi Barkindo,

the OPEC Secretary General, participated in a joint press conference along with Bozumbayev; the Secretary General of the International Energy Charter, Urban Rusnak; and moderator Jambulat Sarsenov, Vice-Chairman of the Kazenergy Association.

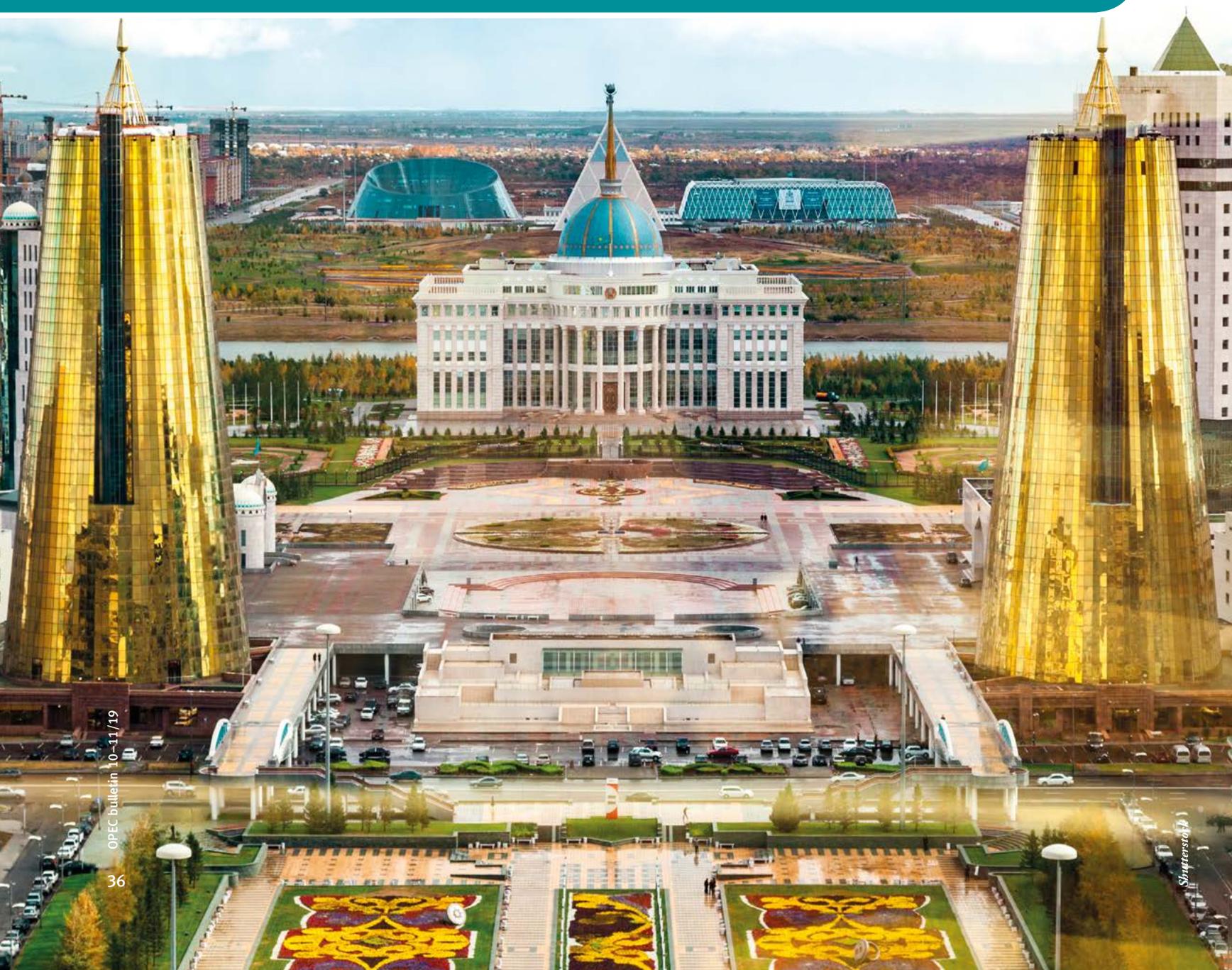
The leaders fielded a wide array of questions from both national and international media on the global energy markets, Kazakhstan's oil and gas industry, the ongoing OPEC and non-OPEC cooperation, as well as current and future industry challenges.

*Mohammed Sanusi Barkindo (r), OPEC Secretary General, held an interview with Atameken Business News TV, following his successful participation in a press conference attended by Kanat Bozumbayev, Kazakhstan's Minister of Energy.*



# Kazakhstan soars in the global domain

*The nation of Kazakhstan and its charming capital Nur Sultan are rising to world prominence in recent years, the result of growing economic significance and increasing political importance. The country's mounting legacy is a consequence of the continuous efforts and hard work exerted by its able leadership. In this article, OPEC's Ayman Almusallam reports on the recent developments and prosperity enjoyed by Kazakhstan, and its capital and precious gem — Nur Sultan.*





Shutterstock

*Nursultan Nazarbayev, Kazakhstan's founding President.*

***“We have to acknowledge that peace is in danger and mankind still has not realized the priority to be given to world dialogue versus armed conflict and bloodshed.”***

*— Nursultan Nazarbayev, Kazakhstan's founding President*

In September 2019, a number of leaders, dignitaries, decision-makers and industry experts gathered in the Kazakhstani capital of Nur Sultan to attend the 2019 edition of Kazakhstan Energy Week (KEW) and the 12<sup>th</sup> Kazenergy Eurasian Forum.

While the event was only launched in recent years, it has nonetheless ridden the path of success to rise in global eminence to become a leading gathering in the energy sector.

In his remarks, OPEC Secretary General, Mohammad Sanusi Barkindo, commended the remarkable efforts executed by Kazakhstan's Minister of Energy, Kanat

Bozumbayev, and the organisers of Kazakhstan Energy Week.

“I congratulate you and the Organizing Committee on the very impressive and wide-ranging programme you have put together for this week-long event, which has risen in stature to become one of the top global industry gatherings,” the OPEC Secretary General said.

### **Nur Sultan**

Standing on the banks of the Ishim River, the Kazakhstani capital of Nur Sultan is located in the northern part of the



Bridge over the river Ishim in the capital of Kazakhstan, Nur Sultan.

Asian country. The vibrant city was established as a settlement and defence line in 1830.

Nowadays, the city serves as the seat of government, key administrative hub and important commercial centre. Its population is estimated at more than 1.02 million, while it covers a land area of around 800 square kilometres.

The city held various names throughout its rich history. In 1961, the city was named 'Tselinograd'. This was changed in 1992 to 'Akmola', a name that the city held until 1998 when it became 'Astana'. In March 2019, the Parliament of Kazakhstan unanimously voted to name the capital 'Nur Sultan', in honour of the legacy and accomplishments achieved by Kazakhstan's founding President and able leader, Nursultan Nazarbayev.

### Successful leadership

The OPEC Secretary General paid a glowing tribute to President Nazarbayev in appreciation of the remarkable legacy he left.

Barkindo said: "This city, formerly known as Astana,

was renamed in March of this year to honour Kazakhstan's first President Nursultan Nazarbayev, who faithfully served this country from 1990 until March of this year. The renaming of the capital city was a fitting gesture for this founding father, a visionary leader who brought this nation through nearly three decades of steady development and progress."

The Secretary General also lauded Nazarbayev's strong commitment and sense of responsibility towards his home country. "He was a staunch advocate for unity and cooperation, which he knew were only possible through peace and dialogue," Barkindo added.

During his tenure as the President of Kazakhstan, Nazarbayev loudly promoted solidarity, constructive dialogue and the peaceful exchange of views on regional and global scales, exhibiting his exemplary leadership and long-term vision.

In this context, the Secretary General emphasized: "No matter one's background or heritage, he knew that together, we are stronger."

Being an ambitious and forward-looking leader, Nursultan Nazarbayev had continuously identified means



Exterior view of the National Museum of Kazakhstan in Nur Sultan, the capital of Kazakhstan.

to further propel Kazakhstan’s national economy and social welfare through promoting unity. “Interethnic and spiritual accord is our strategic resource, the basis for progress of our society and state,” the President once said.

The Secretary General presented the ‘Declaration’ and ‘Charter of Cooperation’ as a leading global case, through which Kazakhstan and 23 other oil-producing partners, including OPEC’s 14 Member Countries, have drafted an unprecedented, landmark chapter in the history of the oil sector.

These distinctive efforts were primarily characterised by diplomatic, peaceful, forward-looking and fair cooperation.

### Policy for posterity

At the forum, the OPEC Secretary General also commended the futuristic and visionary policies that were developed and exerted by President Nazarbayev during his tenure, resulting in an everlasting accumulated legacy.

He said: “Nazarbayev’s legacy is evident today when

**“Interethnic and spiritual accord is our strategic resource, the basis for progress of our society and state.”**

— Nursultan Nazarbayev, Kazakhstan’s founding President

you drive through this metropolis of just over one million people and witness a truly magnificent cityscape with gleaming skyscrapers dotting the horizon. It is indeed a living tribute to the advancements this country has achieved over the years.”

Being a symbol of growth and prosperity, Nur Sultan also serves as a testament to the intellectual abilities and intelligence of Kazakhstan’s leadership and citizens.

Its many-decades-old, rich history had witnessed the birth of many distinguished scholars and enlightened thinkers, including the 10<sup>th</sup> century’s Abu Nasr Al-Farabi.

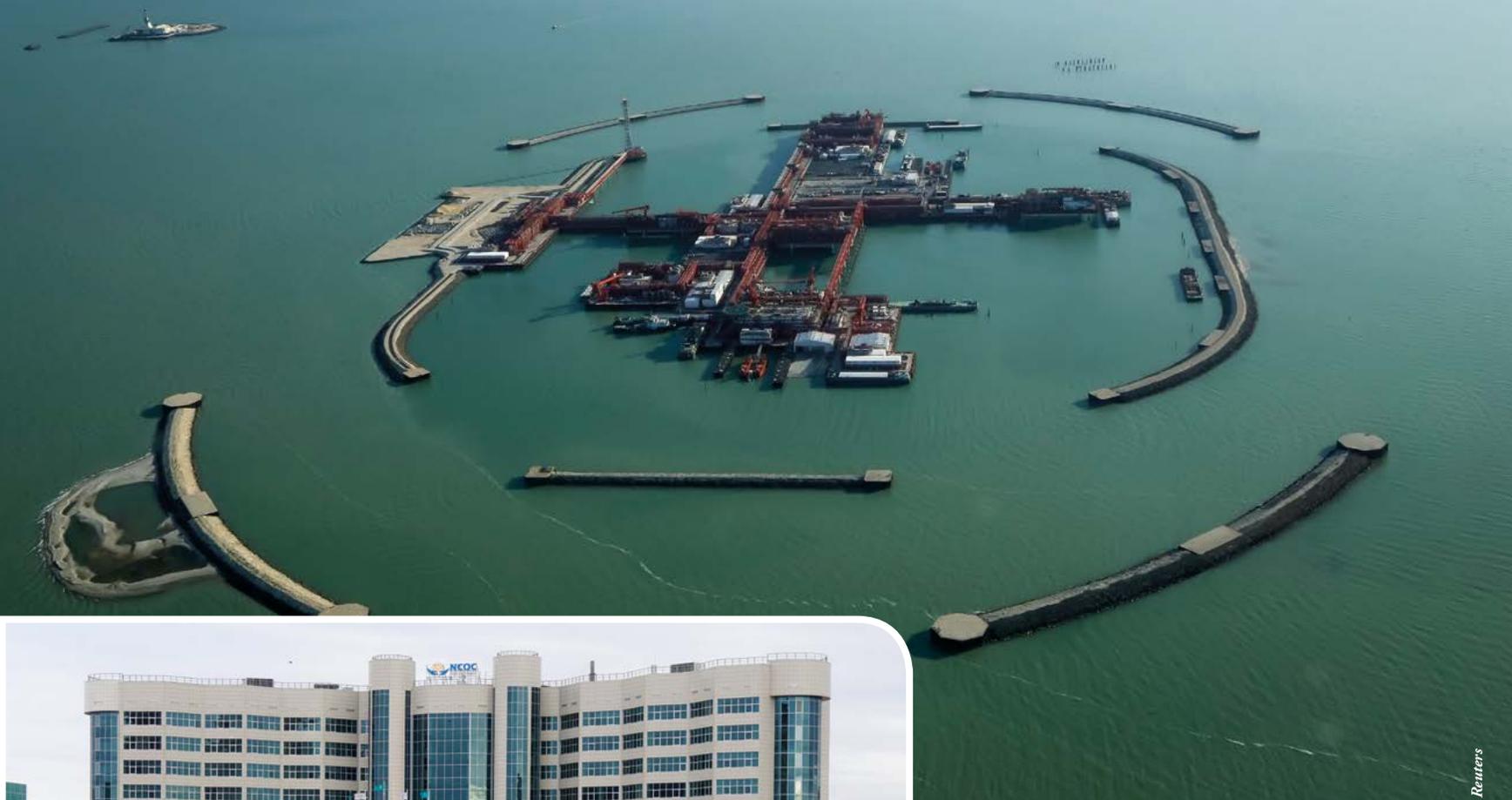


*Kazakhstan celebrates 120 years of a thriving oil sector*

# OPEC Secretary General visits historic Kashagan oil field

*During his mission to Kazakhstan for the Kazakhstan Energy Week (KEW) and the 12<sup>th</sup> Kazenergy Eurasian Forum, Mohammad Sanusi Barkindo, OPEC Secretary General, and an accompanying delegation, had the unique opportunity to visit the landmark Kashagan oil field. The oil field, which was discovered in 2000, holds global significance, as it is deemed as one of the world's largest offshore fields. OPEC's Ayman Almusallam reports on the visit.*





Reuters

*An aerial view shows the artificial islands at the Kashagan offshore oil field in the Caspian Sea in western Kazakhstan.*



Reuters

*The office of the North Caspian Operating Company N V (NCOC), in Atyrau, Kazakhstan, the operator of the Kashagan oil field.*

Following OPEC's successful participation in Kazakhstan Energy Week (KEW) and the 12<sup>th</sup> Kazenergy Eurasian Forum, an OPEC delegation led by Mohammad Sanusi Barkindo, Secretary General, flew to the Kazakhstani region of Atyrau to visit the giant Kashagan field, marking the conclusion of a historic visit to the Republic of Kazakhstan.

Upon their arrival in Atyrau, the delegation was welcomed by the region's Governor, Nogayev Nurlan, and Deputy Governor, Aibek Krambayev. They were then flown to the offshore oil field by helicopter. The region of Atyrau overlooks the Caspian Sea, and is located at the mouth of the Ural River.

The Secretary General also visited a respected training centre, the Atyrau Training Centre, established in 2005 to train oil and gas specialists, and the Kashagan Project Museum.

Reaffirming the project's remarkable importance, Barkindo commended the distinctive achievements

reached so far, noting their significance for economic development and technological innovation in Kazakhstan.

This major oil field symbolizes Kazakhstan's first offshore petroleum development.

### Thriving oil sector

The Secretary General's landmark mission to Kazakhstan coincided with a historic milestone in the country's oil industry, as it marks its 120<sup>th</sup> birthday.

In his remarks at the forum, Barkindo highlighted: "I think the delegates here today are very aware of this country's rich past, with more than 120 years of experience in the oil industry!"

The Secretary General also lauded the commitment and determination of Kazakhstan's government and people in further propelling the energy sector to reach unprecedented distinction.

*An OPEC delegation led by Mohammad Sanusi Barkindo, Secretary General, flew to the Kazakhstani region of Atyrau to visit the giant Kashagan field.*



*Mohammad Sanusi Barkindo (front row, second l), OPEC Secretary General, his accompanying delegation and Kazakh delegates at a visit to the Kashagan training centre.*

“With massive investment in its energy sector, Kazakhstan is now seeing the fruits of its labour as major projects, such as the giant Kashagan field and the equally impressive Tengizchevoil project, help provide a significant boost in liquids production capacity, thereby ensuring security of supply to the market. This is just the ‘tip of the iceberg’, though, and I am certain there are still many chapters to be written in the ongoing success story of this country,” he added.

Barkindo also noted the pivotal role that minerals have played in advancing the growth of the national economy and social welfare. He said: “The success story of which I speak would not have come to pass without Kazakhstan’s rich blessing of mineral resources, which it has effectively developed to propel this country forward to become a leading economy in the Eurasia region.”

### Strengthened partnership

Relations between OPEC and Kazakhstan are at an all-time high, and this successful mission marks another important chapter in its history.

Being a responsible producer and exporter of crude oil, Kazakhstan was a leading figure in the development of the ‘Declaration of Cooperation’ in 2016, which

provided 24 oil-producing countries, including OPEC Members, with a platform to cooperate to accelerate the return of oil market stability.

During the consultation and implementation phases, the Kazakh leadership attended several meetings to dialogue and exchange views in an attempt to identify the best means to achieve the noble objectives of the ‘Declaration of Cooperation’.

Those meetings revealed the remarkable knowledge and technical competence base of the country’s dignitaries and representatives. Consequently, Kazakhstan was invited to join the Joint Ministerial Monitoring Committee (JMMC) and the Joint Technical Committee (JTC). The two bodies are tasked with reviewing and reporting on the performance of the ‘Declaration of Cooperation’s’ participants.

Similar exceptional qualities were demonstrated during discussions in the lead-up to the historic ‘Charter of Cooperation’, which was endorsed in July 2019 at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting in Vienna, Austria. The Charter is a permanent initiative that allows its participants to dialogue and debate issues of importance and interest in the energy sector.

With its wise leadership, able citizens and massive hydrocarbon reserves, Kazakhstan is set to play a key role in the global oil industry for decades to come. 



Upon arrival in Atyrau, the OPEC delegation was welcomed by the region's Governor, Nogayev Nurlan (c), and Deputy Governor, Aibek Krambayev (third l).

## Kashagan oil field

Kashagan is an offshore oil field discovered in 2000. The field is located close to the city of Aytau, in the northern region of the Caspian Sea.

Efforts to operationalize the oil field continued until 2016, when the Government of the Republic of Kazakhstan announced the beginning of its commercial activities.

Ranked as one of the largest oil fields worldwide, giant Kashagan possesses approximately 9–13 billion barrels of recoverable crude oil. Its reservoir lies 80 kilometres away from Atyrau city, and its depth is estimated at around 4 km.

The project's operator is the North Caspian Operating Company N V (NCOC).



A worker on D Island, the main processing hub at the Kashagan offshore oil field in the Caspian Sea in Kazakhstan.

## History of Kashagan oil field

**1992:** Kazakhstan announces its decision to develop its resources in the Caspian Sea

**1996:** Nursultan Nazarbayev, founding President of Kazakhstan, visits the region

**1997:** Seven global oil companies sign the North Caspian Sea Production Sharing Agreement

**1999:** Drilling operations are launched, including drilling of exploration well Kashagan East-1

**2000:** Hydrocarbon discovery in Kashagan East-1 is announced

**2002:** Kashagan declared commercially viable

**2005:** Nursultan Nazarbayev inaugurates the Atyrau Training Centre

**2013:** Kazakhstan celebrates construction completion of Kashagan's facilities

**2016:** Kazakhstan announces the beginning of commercial oil production at Kashagan oil field

# OPEC Secretary General receives a medal of recognition

*During his trip to the Republic of Kazakhstan, OPEC Secretary General, Mohammad Sanusi Barkindo, was presented with a medal of recognition at a gala dinner in Nur Sultan’s magnificent opera house on September 26, 2019. The award was given in acknowledgement of his exceptional efforts and notable achievements as Secretary General of the Organization, as well as the vital role he has played since assuming office in August 2016. The OPEC’s Ayman Almusallam reports on the event.*



*Uzakbay Karabalin, Deputy Chairman of the Kazenergy Association; with Mohammad Sanusi Barkindo, OPEC Secretary General; during the award ceremony.*

OPEC bulletin 10–11/19

**O**n the margins of Kazakhstan Energy Week (KEW) and the 12<sup>th</sup> Kazenergy Eurasian Forum, Mohammad Sanusi Barkindo, OPEC Secretary General, and OPEC delegates were invited to attend a gala dinner at the splendid, modern opera house of Nur Sultan.

The event was held to commemorate the organization

of a successful, historic energy week that featured a series of notable events, including the 12<sup>th</sup> Kazenergy Eurasian Forum, which a number of dignitaries, decision makers and industry experts attended.

The celebrations also featured outstanding shows, with contemporary and classic routines by the house’s top performers.



### Accomplished leader, industry veteran

The recognition comes at the beginning of Barkindo's second term as Secretary General of OPEC. His inspiring tenure has witnessed a number of milestones that have led to new chapters in the history of the oil sector.

In December 2016, the landmark 'Declaration of Cooperation' between 24 oil producing countries — including OPEC's 14 Members — was signed, following a period of consultation and dialogue in which the Secretary General played a key role as top diplomat and successful negotiator.

The unprecedented 'Charter of Cooperation' was endorsed on July 2, 2019, at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting. It paves the way for its 24 participants to indefinitely continue to discuss and exchange views on issues of importance and interest in the energy sector. As an extraordinary diplomat and industry veteran, Barkindo facilitated the efforts made to draft and endorse the historic Charter.

In fact, the Nigerian national has been involved in the affairs of the Organization and the petroleum industry for many decades.

Secretary General Barkindo was born in Yola on April 20, 1959. He completed his Bachelor degree in political science from Ahmadu Bello University in 1981. Barkindo finished his post-graduate studies to receive a diploma in petroleum economics from Oxford in the United Kingdom seven years later.

He also holds a MBA in finance and banking from Washington University and honorary doctorate in science from Yola's University of Technology.

His impressive career and achievements are a source of inspiration. Barkindo has held several key positions, aiming to boost

the prosperity and development of his home country, including Nigeria's Governor for OPEC, Acting Secretary General for OPEC, Nigeria's National Representative on OPEC's Economic Commission Board and CEO of Nigeria National Petroleum Corporation (Nigeria's national oil company).

### Long list of recognition

The latest recognition is one of many the Secretary General has received since assuming office on August 1, 2016.

In 2018, he received the Abdullah Bin Hamad Al Attiyah Energy Award for Lifetime Achievement for the Advancement of OPEC in recognition of his pivotal role within the transformative 'Declaration of Cooperation' of 2016. The ceremony took place in Doha, Qatar.

Barkindo was also presented with the 'Africa Oil Man of the Year' Award in the same year, acknowledging his leadership in guiding OPEC through one of the most difficult times in the history of the oil sector, including the signing of the historic 'Declaration of Cooperation'. His distinctive efforts have led to the gradual return of stability in the global oil market. The award was granted in a ceremony at the *Africa Oil & Power* conference.

The British House of Lords also honoured the notable achievements of the Secretary General in April 2019, when he received the 'EuroKnowledge Oil and Gas African Icon' Award. Barkindo was acknowledged for his significant and effective efforts in further developing the Organization and bringing about the 'Declaration of Cooperation', in addition to his long-term role in UN climate change negotiations and his remarkable efforts in promoting dialogue and cooperation. ■■



The welcoming address was held by Dr Rainer Seele, CEO of OMV.



Mohammad Sanusi Barkindo, Secretary General of OPEC, holding the opening remarks.

# OPEC launches World Oil Outlook 2019

*Among OPEC's various objectives is the need to continually strive to provide transparent and comprehensive analysis and oil market data to energy stakeholders, as well as to the general public. Over the years this has been underscored through OPEC's annual World Oil Outlook (WOO), with the 13<sup>th</sup> edition most recently launched at a distinguished gathering at the Wiener Börsensäle – the old Vienna Stock Exchange – in early November. The OPEC Bulletin reports.*

**W**ith oceans of marble, acres of stucco, forests of columns and no end of space, the Wiener Börsensäle, a neo-renaissance masterpiece, provided a perfect backdrop for the more than 100 assembled guests who came to witness the launch of the WOO 2019.

The 2019 launch was supported by OMV, the Austrian oil, gas and petrochemical company, with its chief executive officer, Rainer Seele, in attendance and on hand to deliver some opening remarks.

Seele began by emphasizing the importance of the WOO as a “high-quality piece of research” and thanking



*Yuri Sentyurin, Secretary General of GECF.*



*Karin Kneissel, Austria's Former Minister of Foreign Affairs.*

OPEC Secretary General, Mohammad Sanusi Barkindo and his team at the OPEC Secretariat for providing such a detailed publication to the world.

He also picked upon a number of key themes central to the WOO, which would be discussed by other speakers and in the Q&A panel session bookending the proceedings. This included the requirement for more energy, the threat of climate change, and the future role of technology in the energy sector.

Seele said that “protecting the planet and the climate is without any doubt part of our agenda. We also need to acknowledge that the modern way of life and the way out of poverty — anywhere in the world — is purely possible through the contribution of the energy industry and related petrochemical industries.”

In term of technologies, Seele stated that OMV “has been investing into new energy technologies and we urge governments around the world to remain open to allowing these new technologies a healthy development.”

He underscored “new energy solutions with CO<sub>2</sub> efficiency” and stated that “Austria is a great example for finding the right balance between energy efficiency requirements and renewable energy targets set out by the authorities, while also ensuring that jobs, prosperity and economic growth are in a healthy balance.”

Seele also addressed the importance of collaboration and partnerships, specifically referencing OMV’s relationships in a number of OPEC Member Countries. This important issue neatly led into the main speech by the OPEC Secretary General, who began by underscoring the importance the Organization places on dialogue and cooperation.

### **Guiding principle**

Barkindo noted that that WOO had come a long way since it was first launched back in 2007, but one thing had remained the same. “In the first edition back in 2007, it was emphasized that the Outlook was meant to contribute to the Organization’s commitment to support sustainable market stability and to provide a platform from which to review, analyze and evaluate how the oil and energy scene may develop. This key guiding principle remains central to the Outlook.”

He also noted that the issue of sustainable market stability, as well as helping return balance to the market, can be seen clearly in the success of the ‘Declaration of Cooperation’ between 24 OPEC and non-OPEC producers, as well as in the July 2019 endorsement of the ‘Charter of Cooperation’, which provides a longer-term institutional framework for this landmark cooperation.



*John Deferios from CNN, moderated the event.*



*A panel discussion focused on the key findings of the WOO 2019 was led by Dr Ayed S Al-Qahtani, Director, Research Division.*

## Energy demand growth

In turning to the key messages from the WOO 2019, Barkindo stated that total primary energy demand is set to expand by a robust 25 per cent between 2018 and 2040. “This will be driven by expansion in the global economy, which in 2040 is expected to be double the size it was in 2018, and population growth, which is projected to reach around 9.2 billion in 2040, an increase of around 1.5bn from today’s level.”

Moreover, he added, “we also need to remember that close to one billion people still have no access to electricity and almost three billion people still lack access to clean energy fuels. It is a universal obligation to address the major challenge of energy poverty. Energy is a central facet that links our daily lives; it is not on call, it cannot take a holiday, it cannot call in sick. Energy is a 24-hour service.”

The WOO underlines that all forms of energy will be required to help meet this expanding demand in a sustainable way, balancing the needs of people in relation to their social well-being, the economy and the environment.

The Secretary General highlighted that “renewables are coming of age and are forecast to witness the largest growth in percentage terms, but even by 2040 all renewables combined are only estimated to make up around 19 per cent of the global energy mix.

“Natural gas experiences the largest demand growth, the share of coal drops the most, and oil is expected to remain the fuel with the largest share in the energy mix throughout the forecast period to 2040.”

He stressed that some will view these forecasts as an OPEC forecast, and dispute the numbers, but in this regard he highlighted two points.

“First, let me say that many OPEC Member Countries have great sources of solar and wind, and we are seeing huge investments being made in this field. We fully support the development of



*OPEC staff from the Energy Studies Department during the panel discussion (l-r): Dr Abderrezak Benyoucef, Head, Energy Studies Department; Dr Jan Ban, Senior Research Analyst; Julius Walker, Senior Research Analyst; Dr Haris Aliefendic, Senior Research Analyst.*

renewables. And second, we do not see any reputable publication projecting, in their reference outlooks, that renewables will come anywhere close to overtaking oil and gas in the decades ahead.”

## Oil demand

Oil demand is forecast to reach 110.6 million barrels/day (m b/d) by 2040, with the non-OECD driving oil demand with expected growth of 21.4m b/d by 2040, compared with 2018, whereas the OECD region is estimated to contract by 9.6m b/d. Long-term oil demand growth comes mainly from petrochemicals at 4.1m b/d, road transportation at 2.9m b/d and aviation at 2.4m b/d.

In the road transportation sector, which will remain by far the largest sector for oil demand, according to Barkindo, “the total vehicle fleet — including passenger and commercial vehicles — is estimated to grow by more than 1 billion to around 2.4 billion vehicles on the road by 2040.”

It is also noticeable that the long-term share of electric vehicles in the total fleet is projected to reach a level of around 13 per cent in 2040, supported by falling battery costs and incentivizing policies, but the majority of the growth continues to be for conventional vehicles.

One key point to underline from the Outlook, added the Secretary General, is that “in the period to 2040, fuel efficiency improvements are expected to result in a greater reduction in oil demand than the increasing penetration of alternative fuel vehicles.”

## Supply side

On the supply side, said Barkindo, “non-OPEC liquids supply is projected to grow by 9.9m b/d between 2018 and 2024. The majority is forecast to come from US tight oil, but Brazil, Norway, Canada, Guyana and Kazakhstan are also expected to contribute to this increase.”

From the mid-2020s, however, “non-OPEC sees a steady decline, with US total liquids supply set to peak around this time. It underscores that it is OPEC Member Countries that will be required to meet the majority of the longer-term demand requirements.”

The Secretary General added that “demand for OPEC liquids is projected to increase to around 44.4m b/d in 2040, up from 36.6m b/d in 2018.

## Downstream and trade

From the perspective of the downstream, crude distillation capacity additions of around 8m b/d are expected between 2019 and 2024, with over 70 per cent in Asia-Pacific and the Middle East.

Barkindo noted that this is “close to 50 per cent of the expected total capacity additions of 16.5m b/d required in the long-term to 2040, which points to the potential for significant excess refining capacity in the medium-term period.”

In terms of trade, global crude oil and condensate trade is estimated to remain relatively flat at around 38m b/d between 2018 and 2025, before increasing to around 42m b/d by 2040.



*The closing remarks were given by Nadir Guerer, Senior Research Analyst, OPEC's Research Division.*

The Secretary General stated that two trends are worth highlighting in this regard. “The first is that in the medium term the US & Canada, as one region, is expected to increase crude and condensate exports, on the back of growth in tight oil production.

“The second is that over the entire forecast period, the major oil trade route remains the Middle East to Asia-Pacific. Total Middle East exports are set to increase by around 7m b/d between 2025 and 2040 to reach around 23m b/d.”

## Investments

The scale of what lies ahead is brought home by investment requirements. Oil-related investment needs across the upstream, midstream and downstream are estimated at around \$10.6 trillion in the period to 2040.

From OPEC’s perspective, Barkindo said, “we fully identify with the fact that the foundation for investment, growth and economic diversification can only come through balance and stability in the market. In this regard, OPEC Member Countries remain fully committed to investments across the whole industry value chain, and the issue of returning global investments is a core focus of the ‘Declaration of Cooperation’.”

## Technologies and policies

This year’s Outlook also reviews a plethora of technology innovations, policy issues and energy matters related to sustainable development. A key focus is on the Paris Agreement, which Barkindo said OPEC is fully engaged with and supportive of. “All 14 OPEC Member Countries have signed the Paris Agreement and ten have ratified it.”

He added that “the Outlook highlights that energy-exporting developing countries are likely to be disproportionately affected by the impacts of climate response measures related to possible economic diversification options. It is vital that there is an enhancement of the understanding of the measures’ impacts and a proper treatment of their implications.”

It also emphasizes the importance of economic diversification efforts as an approach to mitigate risk arising from the implementation of climate response measures, although Barkindo noted that “there is no one-size-fits-all prescription for these efforts.”

What is also evident is the importance of technologies in reducing emissions. The Secretary General said “we need to look for more efficient technological solutions everywhere, across all energies,



and utilize all available and innovative options to reduce emissions from the energy sector. We should not limit ourselves by putting all our eggs in one basket.

“The oil industry has to be part of the solution; it possesses critical resources and expertise that can help unlock our emissions-free future and ensure there is enough supply to meet expected future demand growth.”

## Stimulate debate

Barkindo also emphasized that that the “WOO is not about making predictions. We believe that the Outlook should be viewed as a tool of reference to stimulate informed discussion and debate among industry stakeholders, which we hope will lead to a better understanding of the future of the industry, and, hence, allow us to develop optimal strategies.”

The importance of this was underlined by two other speakers at the launch. Karin Kneissel, Austria’s Former Minister of Foreign Affairs, said that there were “12 editions of the WOO already sitting on my bookshelves at home and I have used them for teaching and as a reference book for my own work for many years.”

Kneissel added that “I could not have done my work over the past decades if I had not had the opportunities that OPEC provides through its own publications, as well as through the Secretariat’s library.”

She concluded that “today, we are in a world of emotions; in particular, in the political arena. And this is also true for business. We need much more rational deliberation and analysis. The WOO is an opportunity for us to focus on this.”

Yury Sentyurin, GECF Secretary General, also highlighted the





*Dr Rainer Seele (l), and Mohammad Sanusi Barkindo.*



*Karin Kneissel in discussion with Dr Rainer Seele and Mohammad Sanusi Barkindo.*

importance of the WOO for enlightened debate, while stating that 2019 was a special year for OPEC and the GECF. In October 2019, the two organizations signed a Memorandum of Understanding to strengthen cooperation in research and the sharing of best practices, which he saw as “very promising and exciting.”

### Panel session

The debate continued into the final part of the launch of the programme, with John Deferios of CNN as moderator. The panelists were all from OPEC’s Research Division (RD): Dr Ayed S Al-Qahtani, Director, RD; Dr Abderrezak Benyoucef, Head of the Energy Studies Department (ESD); Dr Jan Ban, Senior Research Analyst, ESD; Dr Haris Aliefendic, Senior Research Analyst, ESD; and Julius Walker, Senior Research Analyst, ESD.

Deferios said that session would allow the panelists, alongside audience participation, to drill down into some of the numbers, and challenge some of the premises put forward by the WOO in robust debate.

Topics discussed included OPEC and non-OPEC cooperation, the positive impact on market stability and balance; slowing oil demand growth over the forecast period, albeit

with no peak envisaged; US tight oil developments; the US and China trade dispute; the evolution of electric vehicles; the expansion of renewables; the role of gas and LNG developments; the possibilities of storage for electricity generation; the expanding role of petrochemicals, with a particular focus on NOCs and developments in the Middle East and Asia; single use plastics and recycled plastics; the importance of investments to the longer-term outlook; and the role of energy efficiency across all sectors.

### Just the start

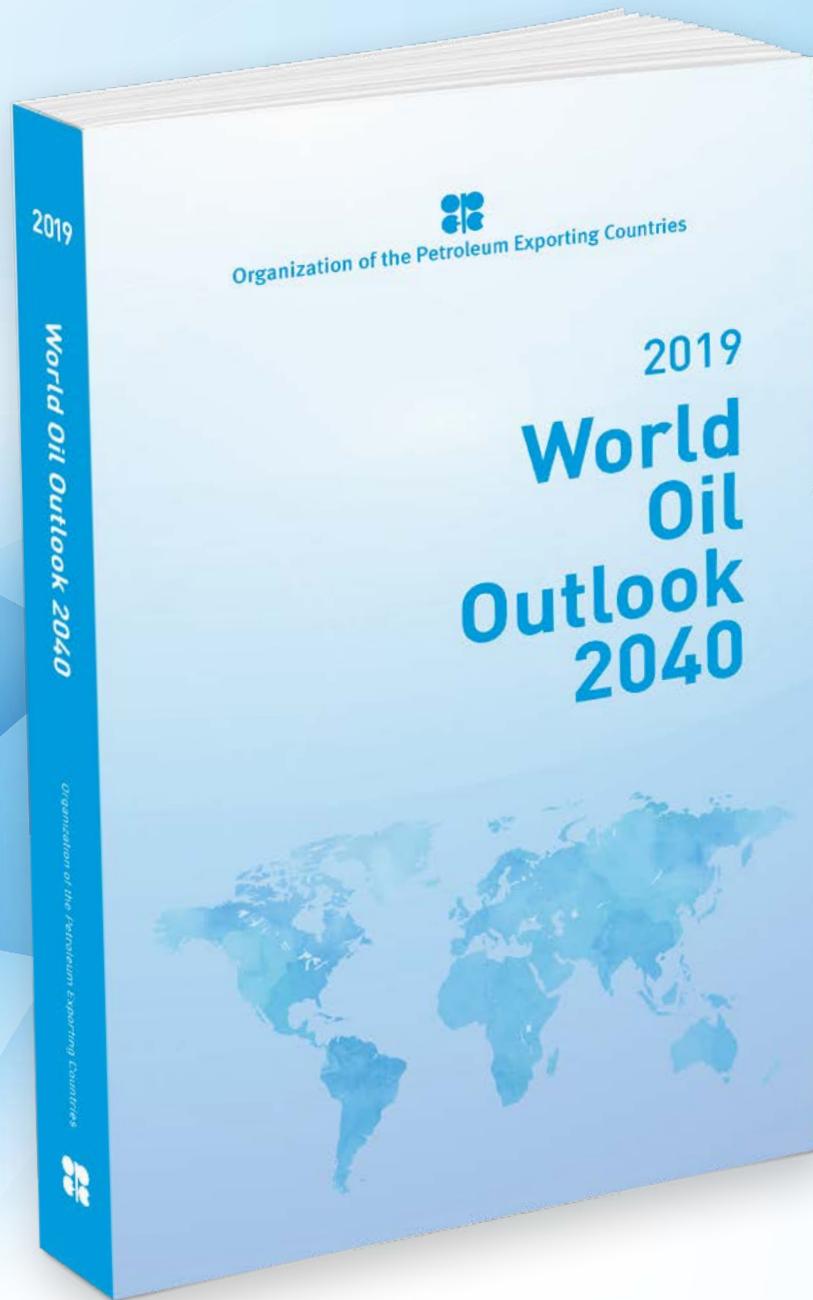
The event was concluded with some brief closing remarks from Nadir Güner, Senior Research Analyst, RD, who thanked all the speakers, panelists and guests for being in attendance. “We appreciate you listening, and your active participation. It has truly made this morning a success.”

He added that this was not the end, and given that the launch was in Vienna, he highlighted a famous Austrian proverb:

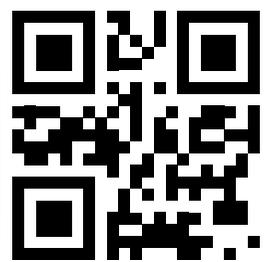
“First bake the strudel, then sit down and ponder.”

He said that he hoped that “you will continue to debate, discuss and offer further constructive critique of what we have served up today in the weeks and months to come.”





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# Saudi Arabia and the Russian Federation sign the landmark ‘Charter of Cooperation’

*The Kingdom of Saudi Arabia and the Russian Federation marked the OPEC and non-OPEC ‘Charter of Cooperation’ during a visit by Russian President, Vladimir Putin, and a high-level delegation to the Kingdom.*

*Russian President Vladimir Putin (l), and Saudi Arabia’s King Salman (r) attend the official welcome ceremony in Riyadh, Saudi Arabia, October 14, 2019.*

In an effort to strengthen the remarkable ties between the Kingdom of Saudi Arabia and the Russian Federation, the Federation’s President, Vladimir Putin, accompanied by a high-level delegation, visited the OPEC Founding Member

in Riyadh. The delegation included Russian Minister of Energy, Alexander Novak, and Minister of Foreign Affairs, Sergei Lavrov.

The Custodian of the two Holy Mosques, King Salman



Bin Abdulaziz Al-Saud, highlighted the significance of the visit. He said that the meeting provides an important opportunity to reach consensus on various issues and visions.

In return, the President of the Russian Federation, Vladimir Putin, considered the visit to be a boost to the bilateral relations between the Kingdom and Russia. He also noted that such coordination is important for stability and security.

### Permanent cooperation

In the presence of King Salman Bin Abdulaziz, Saudi Arabia's Crown Prince, Deputy Prime Minister and Minister of Defence, HRH Prince Mohammed bin Salman bin Abdulaziz and President Putin, the able Ministers of Energy, HRH Prince Abdul Aziz Bin Salman and Alexander Novak signed the unprecedented, historic Charter.

At the ceremony, the distinguished ministers emphasised that oil will remain an essential factor in the development of the global economy.

Prince Abdul Aziz Bin Salman lauded the efforts carried out by his home country and the Russian Federation. He said that the two countries have begun a new era of cooperation, addressing various fields of development in line with Saudi Arabia's landmark 'Vision 2030'.

The Prince also noted the constructive, key roles played by the two countries in achieving stability in the global oil market. He said: "The new OPEC+ cooperation agreement will enhance cooperation and provide strong support for greater stability in the oil market."

"At the Saudi-Russian Joint Committee, we are working together to harmonise the Kingdom's Vision 2030 reform plans with its strategic objectives and Russia's strategic development plans," His Royal Highness added.

Hailing from the landmark 'Declaration of Cooperation' of 2016, the 'Charter of Cooperation', is an unprecedented voluntary platform that allows continued and proactive dialogue between 24 oil-producing countries at the ministerial and technical levels, in the interest of oil producing and consuming countries, as well as the global economy.

*Saudi Arabia's Crown Prince Mohammed bin Salman (r); with Russian President Vladimir Putin.*





*Saudi Arabia's Crown Prince Mohammed bin Salman speaks during talks with Russian President, Vladimir Putin, in Riyadh, Saudi Arabia.*

## History made

In July 2019, participants of the ‘Declaration of Cooperation’ jointly endorsed the draft ‘Charter of Cooperation’ in a commemorative ceremony and agreed to take the draft through the required national processes for ratification. The consensus was reached at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting held in the Austrian capital of Vienna on July 2.

The ‘Declaration of Cooperation’ constitutes a historic decision in the field of cooperation for the oil industry, and for OPEC.

Following a long period of fruitful discussions and consultations in 2016, OPEC Members Countries joined hands with 11 (now ten) oil producing countries to coordinate their efforts to accelerate the stabilisation of the global oil market through voluntary production adjustments. The unprecedented milestone was endorsed at the 1<sup>st</sup> OPEC and non-OPEC Ministerial Meeting held on December 10, 2016, effective for a period of six months.

The success accumulated through these distinctive

efforts led to several extensions of collaboration and voluntary production adjustments, following careful examination of oil market conditions, shifting dynamics and potential developments.

The Parties agreed to extend voluntary adjustments until March 31, 2020, at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting.

The ‘Declaration of Cooperation’ revolves around three key principles: transparency, equity and fairness. These principles form the core of the partnership between OPEC Members Countries and non-OPEC oil producing partners, including cooperation at the technical level.

## Framework for the future

The ‘Charter of Cooperation’ serves as a future platform for oil producing countries to get together and exchange views regarding conditions and developments in the global oil market in an attempt to secure sustainable stability in the interest of producers and consumers, as well as the world economy.

In recent remarks, Mohammad Sanusi Barkindo,

OPEC Secretary General, a key figure in the development of the innovative frameworks, noted that the 24 partners have strengthened their joint efforts through the historic ‘Charter of Cooperation’, “which provides an institutional framework for our continued and intensified dialogue going forward.”

## Major agreements

In addition to inking the ‘Charter of Cooperation’, the historic visit also witnessed the conclusion of a number of major agreements under the distinguished leadership of both countries. Those deals covered a wide range of sectors, including petroleum, tourism, aviation, health, space and satellite navigation, and culture.

The agreements further cement the already-strong ties between the two major oil producers, building on the remarkable success achieved in recent years. They also strengthen cooperation between the private and financial sectors of the two nations.

Among those agreements, Saudi Arabia’s Agricultural and Livestock Investment Company inked a deal with the Russian Direct Investment Fund (RDIF) to join efforts and cooperate in finding investment opportunities and projects in Russia’s agriculture industry.

The Saudi Space Authority also finalised an agreement with the Russian State Space Corporation in the domain of manned space flight and GLONASS (Global Navigation Satellite System).

In line with Saudi Arabia’s momentous roadmap ‘Vision 2030’, the two countries announced their intention to facilitate the issuing of visas for citizens of both countries. They also concluded a memorandum of understanding focusing on cooperation at the technical level regarding tax administration.

The Kingdom’s energy giant — Saudi Aramco — also inked an agreement with the Russian Direct Investment Fund (RDIF) and Rusnano to acquire shares in Novomet, a leading manufacturer of technology in the oil and gas industry.

*HRH Prince Abdul Aziz Bin Salman (r), Minister of Energy of Saudi Arabia, after the signing with Alexander Novak, Russia’s Energy Minister.*



# From Russia with love: OPEC lauded for efforts to stabilize oil market



MINISTRY OF ENERGY  
OF THE RUSSIAN FEDERATION

ROSCONGRESS

РОСКОНГРЕСС

Российская  
Энергетическая  
Неделя 2019

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РОССИЙСКОЙ ФЕДЕРАЦИИ

Keir  
SIMMONS

Robert  
DUDLEY

Mohammad Sanusi  
BARKINDO

Vladimir  
PUTIN

*Vladimir Putin applauds the ‘Declaration of Cooperation’ for reducing market vulnerability, while Mohammad Sanusi Barkindo, OPEC’s Secretary General praises the Russian President’s crucial support in helping to restore market balance.*





HRH Prince Abdul Aziz Bin Salman, Minister of Energy of Saudi Arabia.

OPEC and the ‘Declaration of Cooperation’ partners were a prime focus of discussions during the three-day Russian Energy Week International Forum, a premier industry event that focused on global challenges, partnerships and the energy transition.



Russian President Vladimir Putin opened his plenary remarks on October 2 by praising the efforts undertaken by OPEC and non-OPEC producing countries, led by Russia, which participate in the ‘Declaration of Cooperation’.

“We see that the scale and interdependence in global energy is growing alongside its vulnerability, and that instability in some parts of the world affects supply and demand worldwide,” Putin said in his opening remarks.

“It is especially important in this context to make use of all the available mechanisms to balance the market and find mutually acceptable solutions based on respect for the interests of all sides,” he said.

Putin noted that the OPEC+ oil production adjustments represent “the first-ever case of cooperation between OPEC and non-OPEC countries.”

Through the ‘Declaration of Cooperation’ process, “we have achieved a result that satisfies both oil producers and consumers. The deal has created conditions for the further development of the oil sector and for launching new, long-term projects.”

The Russian President expressed hope for further cooperation. “I am referring not only to oil production volumes, but also to close cooperation in the introduction of new hydrocarbon production, processing and transportation technologies and the resolution of environmental issues.”

Putin delivered the opening remarks during a plenary panel entitled, ‘Energy Partnership for Sustainable Growth’, which featured Barkindo as a panellist, along with several top industry executives.

### ‘Positive results’

In a meeting between Barkindo and Putin prior to the plenary session, the President applauded the strong relations between the Russian Federation and OPEC.

“Mr Secretary General, we highly appreciate your personal contribution to the development of relations between Russia and OPEC. The energy dialogue between your organization and countries that are not OPEC members is producing positive results both for us and the entire world energy market, that is, for the entire world economy,” Putin said as Russia’s Energy Minister Alexander Novak looked on.

Barkindo in turn praised the Russian leader’s enduring support in bringing sustainable stability to the oil market.

“Mr President, on behalf of OPEC and on behalf of OPEC+, we wish to extend our deepest gratitude for the leadership that you have continued to provide to us,” Barkindo said.

“As recently as June this year, at the G20 summit in

Gabriel Mbagi Obiang Lima, Equatorial Guinea’s Minister of Industry, Mines & Energy.

Osaka, Japan, you so kindly met with the Crown Prince of Saudi Arabia Mohammad bin Salman, and that meeting, Mr President, was extremely important to us,” Barkindo said. “It paved the way for our [production adjustment extension] agreement in July. And I recall that previous to that, in 2016, we met during the G20 in Hangzhou, China, with Crown Prince Mohammad, which also paved the way for the ‘Declaration of Cooperation’.”

The OPEC Secretary General also thanked Putin for being a stabilizing force in times of uncertainty.

“In the current circumstances that we have found ourselves, with the heightened geopolitical tensions in the region that are impacting on the oil market and on our work, we look up to you to continue to provide that leadership,” Barkindo said.

## OPEC in the limelight

The Russian Energy Week International Forum took place on October 2–4 at the historic Manege Central Exhibition Hall in Moscow.

During the event, OPEC was well represented, with a distinguished line-up of speakers.

Besides the **Secretary General**, others invited to participate in Russian Energy Week panel discussions were:

**Bijan Namdar Zanganeh**, Minister of Petroleum of IR Iran: ‘Towards Leadership in the Global Energy Mix: Priorities of the Gas Industry’

**Timipre Sylva**, Minister of State for Petroleum Resources, Federal Republic of Nigeria: ‘Maintaining Energy Connectivity in an Unstable World’

**HRH Prince Abdul Aziz Bin Salman**, Minister of Energy of Saudi Arabia: ‘Maintaining Energy Connectivity in an Unstable World’ and ‘Global Energy: New Alliances’

**Manuel Salvador Quevedo Fernandez**, People’s Minister of Petroleum of Venezuela and President of the OPEC Conference: ‘Maintaining Energy Connectivity in an Unstable World’

Meanwhile, **Dr Abderrezak Benyoucef**, Head of the OPEC Energy Studies Department, spoke on a panel focusing on the ‘Global Energy Industry Development Outlook to 2040’.

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



Vladimir Putin (r), President of The Russian Federation; with Alexander Novak, Russia’s Energy Minister.





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



Timipre Sylva, Nigeria's Minister of State for Petroleum Resources attending the Russian Energy Week.

Vladimir Putin (l), President of The Russian Federation, with Mohammad Sanusi Barkindo, OPEC Secretary General.



# Russian Energy Week: Unlocking the potential of cooperation

**T**he Russian Energy Week International Forum was held October 2–4 at the Manege Central Exhibition Hall, a dazzling example of early 19<sup>th</sup>-century architecture located in central Moscow.

This year's event attracted a record 10,500 participants and more than 200 companies from 80 countries.

## Technical and technological progress

"We are confident that this interest is based on a desire to cooperate and to build up trust, which serves to boost the technical and technological progress of the fuel and energy sector and to ensure the world's energy and environmental security," Russian President Vladimir Putin said during the plenary discussion, panel members of

which included OPEC Secretary General Mohammad Sanusi Barkindo.

This year's forum was held "to demonstrate the prospects of the Russian fuel and energy industry and unlock the potential of international cooperation in energy", according to the organizers.

The event was capped by Youth Day on October 5, aimed at encouraging students and young professionals to pursue career opportunities in energy.

The Russian Energy Week International Forum was established by the government in 2016, with the first event held in 2017. It is organized by the Ministry of Energy of the Russian Federation and the Roscongress Foundation, with the support of the Moscow City government.

*HRH Prince Abdul Aziz Bin Salman (l), Minister of Energy of Saudi Arabia; with Alexander Novak, Russia's Energy Minister.*



# OPEC, GECF sign MoU to strengthen cooperation



Mohammad Sanusi Barkindo (r), Secretary General of OPEC; and his GECF counterpart, Yury Sentyurin, signing the MoU.

***OPEC and the Gas Exporting Countries Forum (GECF) agree to bolster cooperation on sharing information and best practices at a meeting between their Secretaries General during Russian Energy Week.***

**T**he Organization of the Petroleum Exporting Countries and the Gas Exporting Countries Forum have agreed to strengthen cooperation in research and the sharing of best practices.

Mohammad Sanusi Barkindo, Secretary General of OPEC, and his GECF counterpart, Yury Sentyurin, signed a Memorandum of Cooperation (MoU) to expand cooperation on the sidelines of the Russian Energy Week forum in Moscow on October 3.

## Signing ceremony

“We look forward to utilizing the framework we signed today in our MoU to deepen discussions, as well as undertake joint work and actions, in the interest of our members, the entire industry, and the global economy”, Barkindo said at the signing ceremony. “It is the

mainstream consensus that oil and gas together will continue to be the fuels of choice for the foreseeable future. In fact, most projections validate that oil and gas will continue to dominate the energy basket.”

Barkindo echoed the remarks of Sentyurin that the signing ceremony is a milestone in the evolving productive relationship between OPEC and the GECF, which started two years ago.

The purpose of the MoU is to establish and strengthen cooperation in order to carry out activities and share experiences, views, information and best practices in areas of mutual interest.

Areas of cooperation identified in the MoU include:

- Energy market monitoring, analysis, modelling and forecasting;
- Energy market research studies covering the short, medium and long term, and their methodologies;



*Mohammad Sanusi Barkindo (r), Secretary General of OPEC; and Yury Sentyurin, Secretary General, GECF.*

- Energy market data and statistics, data and statistical operational topics (such as methodologies of data gathering, assessment and dissemination);
- Energy initiatives and developments aimed at sustainability, along with environmental and social responsibility;
- Other areas and matters involving common interests and concerns.

OPEC and the GECF also agreed to cooperate, where possible and appropriate, on the exchange of information and data; hold expert meetings and internal bilateral workshops to promote the exchange of knowledge and experience; and cooperate on seminars, workshops, conferences and publications.

In addition, OPEC and the GECF may identify other appropriate means to further their cooperation.

The MoU follows discussions that took place earlier this year between the Secretaries General on the sidelines of the 9<sup>th</sup> IEA-IEF-OPEC Symposium on Energy Outlooks. The symposium took place at the International Energy Forum (IEF) Secretariat in Riyadh, Saudi Arabia.

At their February 27, 2019, meeting, the Secretaries

General recognized numerous areas of mutual interest to both Organizations; they also have many Member Countries in common: Algeria, Equatorial Guinea, IR Iran, Libya, Nigeria, the United Arab Emirates and Venezuela are members of both Organizations.

OPEC Member Countries Angola and Iraq are also GECF Observers.

They emphasized their desire to continue working closely together, both at a high level, as well as on a technical level.

## **GECF**

The GECF, headquartered in Doha, Qatar, is an international governmental organization established with the aim of supporting the sovereign rights of its Member Countries over their natural gas resources and their ability to develop, preserve and use such resources for the benefit of their peoples through the exchange of experience, views, information and coordination in gas-related matters. The GECF was established during the First Meeting of Ministers held in Tehran, IR Iran, on May 19–20, 2001. ■■



Vladimir Putin, Russia's President, opening the Plenary Session.

## OPEC Secretary General emphasizes importance of OPEC-Russian ties at Valdai Discussion Club

*OPEC is always keen to take part in premier international forums and engage in dialogue with a broad range of stakeholders. For this reason, **Mohammad Sanusi Barkindo**, OPEC Secretary General, was delighted to participate at the 16<sup>th</sup> Annual Meeting of the Valdai Discussion Club, held in Sochi between September 30 and October 3. The OPEC Bulletin reports.*



During the special session on energy entitled ‘World energy markets: how to avoid instability and ensure a balance of interests’, (l–r) Mohammad Sanusi Barkindo, OPEC Secretary General, shared the floor with Alexander Novak, Minister for Energy, The Russian Federation. The session was moderated by Andrey Bystritskiy, Chairman of the Board of the Foundation for the Development & Support of the Valdai Discussion Club.

## The History of the Valdai Discussion Club

The area surrounding Lake Valdai in the Novgorod Oblast, Russian Federation, is steeped in history. It is located near Veliky Novgorod, one of the oldest and most important cities in Russia. This unique setting provided the backdrop for the first meeting of the Valdai Discussion Club in 2004.

The reputation of the Valdai Discussion Club has gone from strength-to-strength over time. Distinguished speakers from some of the world’s most reputable think-tanks and universities have attended the Valdai club and delivered important speeches. Russian President Vladimir Putin has greeted participants for every installment of the club since it was founded. The topic of the 2019 edition of the Valdai club was ‘The dawn of the East and the world political order’.

According to the Valdai Club’s official website, “The forum will be the culmination of the Club’s work during the preceding year, which has included a series of

regional conferences and new formats for international dialogue, as well as events dedicated to the East in a broad sense. At the forefront are questions about the influence of the East on the world order, and about a changing world where the role of Asia is growing and non-Western perspectives and political systems are coming to the fore.”

At this year’s event, together with President Putin, King Abdullah II of Jordan, and Ilham Aliyev, the President of Azerbaijan, took part in the Plenary Session.

## Russian-OPEC friendship

The blossoming friendship between OPEC and Russia was the main theme of the Secretary General’s remarks. He participated in a session entitled: ‘Special session on energy: World energy markets: how to avoid instability and ensure a balance of interests’, sharing the floor with the Russian Minister for Energy, Alexander Novak.



*Vladimir Putin, Russia's President, took part in the Plenary Session.*

The Secretary General noted the unique sporting heritage of the city of Sochi, “I recall watching with rapt attention the Winter Olympics in 2014 and several of the football World Cup games in 2018. Yesterday, we watched together the Formula One World Championship at the Sochi Autodrom, already the sixth one held here. More importantly, when I spoke to anybody who attended the Olympics, the World Cup games or other international events in Sochi, they all unanimously spoke about the same thing: the gracious hospitality and warm welcome they received from the Russian people. And as someone who has been fortunate enough to be a regular visitor of this great country, such reviews came as no surprise to me!”

The Secretary General lauded the healthy state of OPEC-Russian relations. He said that we are currently in the midst of an historic era for OPEC-Russian relations. The partnership has evolved into a permanent,

transformative force-for-good in the energy market; one that has had a profoundly positive effect on the industry and the global economy.

### **Praise for Russia's leaders**

The Secretary General had warm words for Russia's leadership, stating, “Our Organization has been infinitely enriched from our association and cooperation with President Putin.”

He continued by adding that the ‘Declaration of Cooperation’ between OPEC Member Countries and ten non-OPEC producing countries, led by Russia, which came into force on January 1, 2017, resuscitated the fortunes of the global oil industry. President Putin has been one of the key architects and authors of making this endeavour a success.

The Secretary General turned to Russia's Minister of



King Abdullah II of Jordan, took part in the Plenary Session of the 16<sup>th</sup> Annual Meeting of the Valdai Discussion Club.

Energy and his enormous contribution to the success of the ‘Declaration of Cooperation’. The Secretary General said: “We have been very fortunate that President Putin appointed one of the ablest minds in the industry as Russia’s Minister of Energy, a fine example of his impeccable judgement. I speak, of course, of Alexander Novak, who throughout this entire process, especially in his role as Alternate Chairman of the Joint Ministerial Monitoring Committee and co-chair of the OPEC and non-OPEC Ministerial Conference, has been a pillar of sound decision making, knowledge and exceptionally good instincts.”

### **How to avoid instability and ensure a balance of interests?**

A theme which has been central to the Secretary General’s interventions in recent public engagements

was reemphasized at the Valdai club. He stressed that the challenges which the industry faces are inherently complex. No single stakeholder possesses all of the answers or, indeed, knows all of the questions. It is only through working together that we can hope to surmount the obstacles we face.

This was particularly apparent during the severe downturn which beset the industry between 2014 and 2016. The collapse in commodity prices pushed many developing countries to the verge of recession. The oil market went into sharp disequilibrium when a rampant world supply surge of 5.5 million barrels/day significantly overtook the oil demand increase of 4.1m b/d. By July 2016, the OECD commercial stock overhang reached a record high of about 403m b over the five-year industry average. The OPEC Reference Basket price fell by an extraordinary 80 per cent between June 2014 and January 2016.



Ilham Aliyev, President of Azerbaijan, took part in the Plenary Session.

Nearly one trillion dollars in investments were either frozen or discontinued, and a record number of companies in our industry filed for bankruptcy. According to the consulting firm Graves & Co, almost half a million jobs were lost in the global oil and gas industry.

As the Secretary General explained, this was the backdrop for the ‘Declaration of Cooperation’. He said, “Russia and OPEC knew that in the face of this crisis, action must be taken. Hence, the ‘Declaration of Cooperation’ was signed on the December 10, 2016. This action reversed the downturn and contributed to an improvement in the health of the global economy in 2017 and 2018.”

### ‘Charter of Cooperation’

The Secretary General highlighted the fact that the

‘Charter of Cooperation’ is the logical progression from the successes achieved hitherto. “Together, we embarked on a remarkable journey over the last three years; one which has served the interests of producers, consumers and the global economy. We decided to further build on this cooperation through the ‘Charter of Cooperation’ which was endorsed at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting, on July 2, 2019.

“The ‘Charter’ can steer us through challenges we may face in the future. This is especially apparent given the fact that our industry is often vulnerable to external shocks beyond the capacity of any one stakeholder to control: geopolitics; trade tensions; monetary policy; natural disasters and other factors. However, the ‘Charter of Cooperation’ is a sturdy ship, which can navigate these tempestuous waters.”



© Valdai Discussion Club

Alexander Novak took part in the special session on energy.

The Secretary General repeated the usual refrain that the ‘Charter of Cooperation’ is open to all 97 oil producing countries and extended an invitation to all of them to join the common endeavour.

### Climate change challenge

In an interview with Valdai Club organizers, the Secretary General discussed one of the most important challenges of our age — that of climate change. He said that there are no climate change deniers in OPEC and the Organization recognizes the gravity of the threat posed by global warming.

He emphasized that the oil industry should be part of the solution to the climate change challenge, as it possesses expertise and resources which could be put to use in reducing carbon emissions. He also

stressed the importance of balancing the needs of the fuel poor in policies which seek to address climate change.

### Successful mission

The mission to Sochi was a success, reflecting the state of OPEC’s ongoing partnership with Russia. The SG highlighted two pertinent quotes in his remarks which demonstrate this relationship.

The Russian poet, Osip Mandelstam, once wrote: *“Friendship is similar to treasure: you cannot draw more than you invested.”*

Additionally, the Russian author, Leo Tolstoy, once said: *“To be true friends, you need to be confident in each other.”* These quotes are very apt when one considers OPEC-Russian relations today. 

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# Saudi Arabia holds the third Future Investment Initiative

As part of its ongoing efforts to promote constructive debate and global dialogue, the Kingdom of Saudi Arabia successfully hosted the third edition of the *Future Investment Initiative (FII)* from October 29–31, 2019.

Saudi Arabia's Minister of Energy, HRH Prince Abdul Aziz Bin Salman, noted that the gathering allows stakeholders to debate various issues of key importance, including sustainability of economic growth, signalling its global significance and the positive implications it entails.

Over the span of three days, a remarkable number of heads of state, distinguished leaders, respected ministers and notable experts participated to discuss various issues of interest and global importance, including Prince Abdul Aziz, the Kingdom of Saudi Arabia's Minister of Energy; Mohammed Al-Jadaan, Saudi Arabia's Minister of Finance; Dr Majid Al Kasabi, Saudi Arabia's Minister of Commerce and Investment; Naif Falah Al-Hajraf, Kuwait's Minister of Finance; Dr Sultan Al Jaber, Minister of State and Director General of UAE's ADNOC; Muhammadu Buhari, President of Nigeria; Narendra Modi, Prime Minister of India; Jair Bolsonaro, President of Brazil; King Abdullah II of Jordan; Shaikh Salman bin Khalifa Al Khalifa, Bahrain's Minister of Finance and National Economy; Rick Perry, US Secretary of Energy; Yasir O Al-Rumayyan, Governor of the Public Investment Fund and



Muhammadu Buhari (r), President, Nigeria, participated in the session on ‘What’s next for Africa: How will investment and trade transform the continent into the next great economic success story?’

Chairman of Saudi Aramco’s Board of Directors; Khaldoon Khalifa Al Mubarak, CEO and Managing Director of Mubadala Investment Company; and Yousef Al-Benyan, Vice-Chairman and CEO of SABIC.

The global gathering, which is also known as ‘*Davos of the Desert*’, was a witness to enriching discussions and a fruitful exchange of views about the global economy, energy and technological innovation, global capital markets, investment and the importance of sovereign wealth funds.

UAE’s Minister of State and Director General of ADNOC, Dr Sultan Al Jaber, lauded the vision and efforts undertaken by the leadership of the Kingdom to ensure a sustainable, bright future for their country and people.

He added: “The Future Investment ... [Initiative] is a truly global platform that affirms Saudi Arabia’s status as a destination for investment. The high-level attendance demonstrates global confidence in the economic opportunities that Saudi Arabia has to offer.”

### Circular Carbon Economy

The event also witnessed a proposal by the host country on how to tackle the

issue of carbon emissions. HRH Prince Abdul Aziz Bin Salman said: “The Kingdom of Saudi Arabia offers the concept of a Circular Carbon Economy. “The Circular Carbon Economy is a framework where emissions of carbon from all sectors, and all types of greenhouse gases, are addressed through the 4Rs: reduce, reuse, recycle and remove. Such a closed-loop system, much like what happens in nature, will help restore the balance of the carbon cycle,” he added.

*(See full speech of HRH Prince Abdul Aziz Bin Salman, Saudi Arabia’s Minister of Energy, to the FII, overleaf).*

On the sidelines of the third FII, the General Investment Authority of Saudi Arabia announced that 23 agreements between Saudi and foreign companies were concluded. Their value was estimated at around \$15 billion.

According to the *Asharq Al-Awsat*, a leading Saudi newspaper, Saudi Aramco intends to found the Jazan Power Joint Venture, in cooperation with ACWA, Air Products and Air Products Qudra.

Saudi Arabia’s energy giant also inked a deal worth an estimated \$230 million with Baker Hughes to cooperate in the field of artificial intelligence and digital transformation.



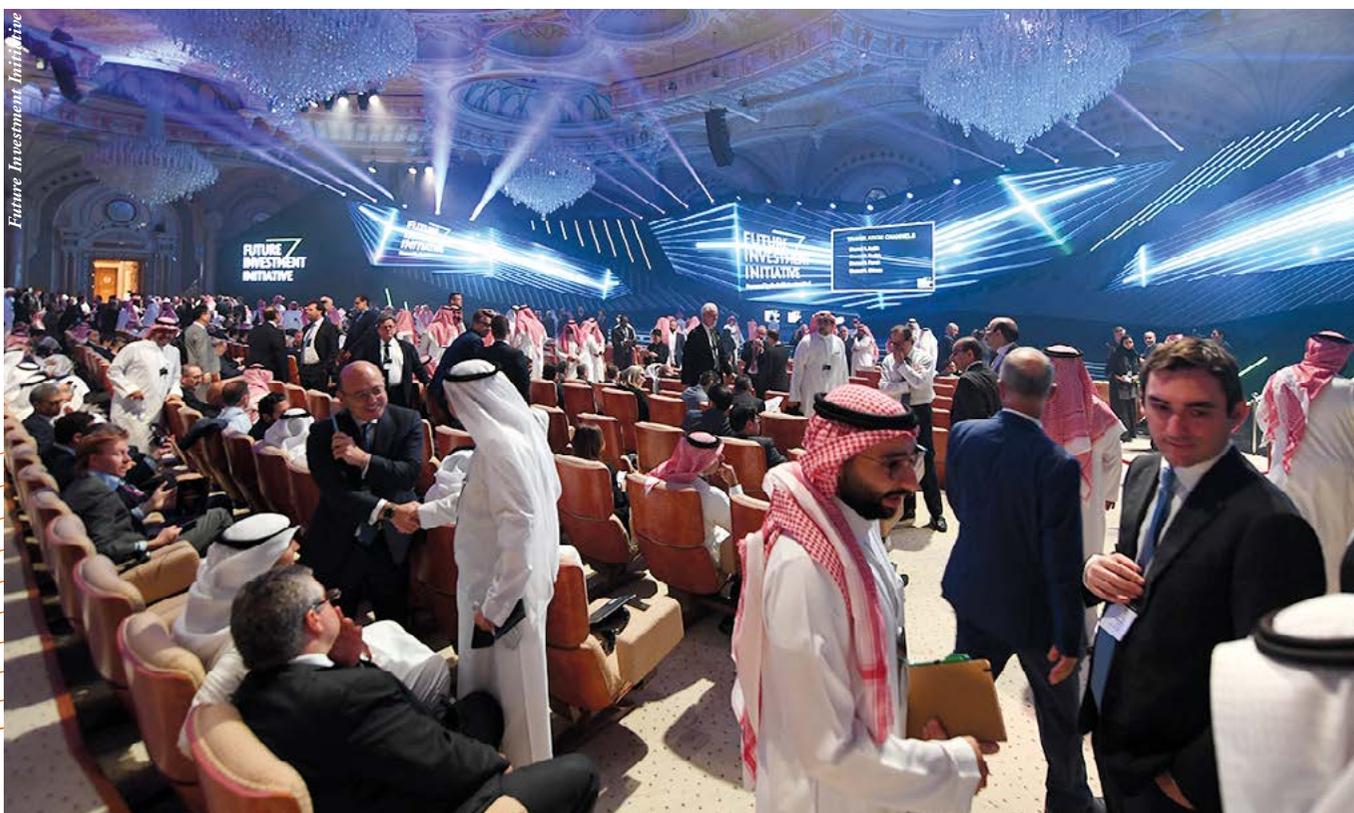
*Dr Sultan Al Jaber, Minister of State and Director General of UAE's ADNOC.*

Ahmad A Al Saadi, Saudi Aramco's Senior Vice President of Technical Services, reiterated the Kingdom's intention to further develop its energy and industrial base.

He said: "Saudi Aramco aims to promote business investment opportunities through technology across the Kingdom's energy services sector ecosystem. The

agreements signed today support the Kingdom's plans to develop industrial zones, create jobs and attract foreign direct investment, as well as drive economic diversification."

Previously, the Kingdom of Saudi Arabia hosted the Future Investment Initiative in 2007 and 2008. 



# Circular carbon economy for sustainable growth

*OPEC Member Country Saudi Arabia lauds a new prospective way to manage greenhouse gas emissions. Below is the speech given by **HRH Prince Abdul Aziz Bin Salman**, Saudi Arabia’s Minister of Energy, at the recently held Future Investment Initiative.*

Let me begin by welcoming you all to Saudi Arabia, and express how much we appreciate you attending the Future Investment Initiative (FI). We look forward to discussing the transformational journey taking place in the Kingdom and to share ideas on sustainability of economic growth. I believe this has positive implications for the whole world.

It is a pleasure to share the stage with such esteemed speakers and friends of Saudi Arabia.

Today, we are faced with a challenge of targeting growth and development in a sustainable way. Over the past 100 years, reliable and affordable energy — mostly in the form of hydrocarbons — contributed to lifting billions out of poverty.

- But how sustainable is the current economic model?
- Can it achieve what we aspire to?
- And at what cost?
- The question remains, how do we continue to grow and develop in a sustainable way?

Saudi Arabia is one of the global energy leaders and produces over ten million barrels/day and has around 267 billion barrels of reserves. It is one of the top ten gas producers with over 9,000 billion cubic metres of proven gas reserves.

Considering our pivotal role, it is our responsibility to find solutions through innovation and collaboration to create a sustainable framework for growth. A holistic and pragmatic approach is needed to achieve more sustainability in the economic system. To this end, the Kingdom of Saudi Arabia offers the concept of a Circular Carbon Economy.

The Circular Carbon Economy is a framework where emissions of carbon from all sectors, and all types of greenhouse gases, are addressed through the 4Rs: reduce, reuse, recycle and remove. Such a closed-loop system, much like what happens in nature, will help restore the balance of the carbon cycle.

It offers a new way of addressing the challenges of sustainable development that implicitly values all options and encourages all efforts to mitigate carbon accumulation in the atmosphere while also facilitating global economic growth.

Adoption of this holistic model is vital because, as important as renewables are, and as much progress as they have made in recent years, most analyses suggests the world cannot achieve a balance between sources and sinks through renewables and reduction alone. Much of the world’s energy is consumed in sectors that are hard to decarbonize, such as heat, industrial processes and transport. So achieving a carbon balance will inevitably include fossil fuels, however their carbon emissions must be managed.

This concept is proven and not new for Saudi Arabia. Historically the Kingdom used to flare associated gases coming from oil production, such as methane. But in 1980, we embarked on a major initiative to recover those associated gases and use them to produce a variety of chemicals. This has enabled the petrochemical industry in Saudi Arabia to create thousands of jobs, industrial cities and to contribute to GDP growth. It also fueled our power plants and desalination facilities. We estimate that more than 2.8 gigatons of CO<sub>2</sub> equivalent have been removed from the atmosphere since then. Therefore, this has enabled a future economic circularity of greenhouse gases that will create value for carbon while meeting global sustainability goals.

## Transformation within

For us, transformation begins from within. The Kingdom is putting its resources behind the Circular Carbon Economy by investing heavily in new energy and efficiency solutions for the world. In fact, Saudi Arabia is reforming its entire energy ecosystem. This includes the development of several programs such as Power System Integration which will work on restructuring the sector to make it more efficient through several initiatives such as displacement of crude and other liquids in utilities and utilization of smart metres; the diversification of the Kingdom’s energy mix; establishment of critical institutions; and increased focus on research and development and technology deployment.

We have also been focused on improving energy efficiency in industry, buildings and transportation, which make up 94 per



*Saudi Arabia's Minister of Energy, HRH Prince Abdul Aziz Bin Salman, participated in a panel discussion during the Future Investment Initiative conference in Riyadh, Saudi Arabia.*

cent of the Kingdom's energy use. Impressive results have been achieved.

Since the establishment of the Saudi Energy Efficiency Program, the Kingdom has reduced energy intensity by eight per cent:

- During a similar period, energy intensity in the petrochemicals sector was reduced by nearly three per cent and in the steel industry by almost two per cent.
- The average fuel economy of passenger vehicles improved by 11 per cent, while the efficiency of air conditioning units improved by 57 per cent.
- The Government decided to lead by example by launching a National Energy Service Company, which is currently overseeing the retrofit of thousands of its buildings, as well as over one million street lights through working with private energy services companies.
- Since the establishment of the Super Energy Service Company back in 2017, the number of energy services companies grew tenfold from four businesses to more than 40 companies providing energy efficiency solutions.

The energy efficiency programme has recently been expanded to include the supply side of electricity and water desalination in addition to feedstock use in industrial processes.

The Kingdom has taken bold steps in energy price reforms starting in 2016 by changing the prices for all key energy products. We have developed a price reform plan that will rationalize consumption while ensuring the sustainability of economic growth.

We believe that these efforts combined will reduce Saudi Arabia's local demand by as much as 2 million b/d of oil equivalent by 2030 compared with previous projections.

The Kingdom currently operates the largest carbon capture and

utilization plant in the world, turning half a million tons of CO<sub>2</sub> annually into products such as fertilizers and methanol. We also operate one of the regions most advanced CO<sub>2</sub> enhanced oil recovery plants that captures and stores 800,000 tons of carbon dioxide annually. Furthermore, we have a plan to deploy additional carbon capture, utilization and storage infrastructure Kingdom-wide.

We believe that nature-based solutions will play an important role in removing carbon as part of the Circular Carbon Economy. Recognizing this, we are taking actions to achieve these goals, including expanding our mangrove forests and plantations, seagrass meadows and coral reefs in both the Red Sea and Arabian Gulf.

The Circular Carbon Economy is a concept that is embedded in the natural order of the world; with the four R's, it becomes less challenging to achieve growth and development while realizing sustainability.

We recognize that the achievement of the Circular Carbon Economy is a grand challenge – but this challenge will ultimately create unprecedented opportunities. No single country or private sector entity can do it alone. As Saudi Arabia hosts the G20 next year, one of our main focuses will be on energy access and development as well as on sustainable and integrated cleaner energy systems. This will provide a backbone for delivering a Circular Carbon Economy and will lead to achieving global development and climate goals.

As I like to say, life is based on carbon so obviously carbon is not the enemy. With the Circular Carbon Economy, carbon will be the opportunity. This is our call to action and we look forward to your collaboration and investment in all sectors that support the Circular Carbon Economy as well as our Vision 2030 goals. 🌱



Mohammad Sanusi Barkindo (c), OPEC Secretary General; Dr Xiansheng Sun (r), Secretary General, International Energy Forum (IEF); and Dr Ayed S Al-Qahtani (l), Director of OPEC's Research Division.

## 'Great leap forward' made in China-OPEC dialogue

*The 3<sup>rd</sup> High-Level Meeting of the OPEC-China dialogue saw both sides find common ground and underlined the enthusiasm of both to work together. The large Chinese delegation included, along with the National Energy Administration (NEA), China National Petroleum Corporation (CNPC), Sinopec Corp, China National Offshore Oil Corporation (CNOOC) and Sinochem Corporation.*

Official dialogue between the two Parties started a long time ago, in 2005, and then stalled for many years. With the 2<sup>nd</sup> dialogue held in Beijing in 2017 and the 3<sup>rd</sup> on October 21 of this year, a trend can be seen for the dialogues to be held closer together, "a trend which I hope to see sustained," said Mohammad Sanusi Barkindo, OPEC Secretary General, in his opening speech.

"This underwrites the enthusiasm on both sides to deepen our relations and look for future possibilities for knowledge exchange," he added.

The meeting was co-chaired by Zhang Jianhua,

Administrator of the National Energy Administration, People's Republic of China, who arrived at the OPEC headquarters with a large delegation, and Mohammad Sanusi Barkindo. Sun Xiansheng, Secretary General, International Energy Forum, also delivered some opening remarks.

In a joint conclusion it was stated that: "The meeting provided an excellent platform for knowledge exchange and the deepening relationship between China and OPEC, according to both parties. China is an essential trade partner for OPEC Countries, the significance of which has grown greatly in recent decades, as well as

being one of the largest and fastest-growing energy consumers. China has become the world's largest importer of crude oil, acquiring the majority of its oil from OPEC Member Countries. Thus, a strong collaboration between the two parties is essential for the interests of both, as well as the global economy.”

energy transition, clean energy and low-carbon fuels were also touched upon, as were developments related to the Shanghai Future Exchange.

They determined concrete ways to go forward, including strengthening cooperation between OPEC and China; improving timely and accurate communications; aiding



*Zhang Jianhua, Director of the Chinese National Energy Administration.*

Zhang applauded OPEC's ongoing efforts to stabilize the world oil markets during discussions, adding that the OPEC dialogues with China and other countries enhance mutual understanding and global energy security. He added the dialogue process provides solid groundwork for deepening future cooperation.

Discussions covered several topics including the 'Declaration of Cooperation' and 'Charter of Cooperation'; short-, medium- and long-term market developments and outlooks; and planning for future activities and the way forward.

Chinese experts made presentations on the country's oil and gas sector, and stressed the importance of OPEC Member Countries, which accounted for over half of the country's total crude oil imports in 2018. The

in developing future outlooks; and examining technological developments and their implications. Additionally, they decided to continue their successful collaboration through internships, technical cooperation and joint studies, among others and to maintain communication channels at all times and exchange facts and data to lessen the impact of unforeseen events.

### **Mutual importance**

Both sides emphasized the importance of China-OPEC relations. China is a very important trade partner for OPEC Member States, one whose significance has grown over time, said Barkindo, in his opening speech.

“The trade numbers, for example, tell the story.



*Mohammad Sanusi Barkindo (l), OPEC Secretary General; with Dr Abderrezak Benyoucef, Head of OPEC's Energy Studies Department.*



*Dr Xiansheng Sun, Secretary General, IEF.*



*Zhang Jianhua  
(second r), Director of  
the Chinese National  
Energy Administration,  
with members of his  
delegation.*

OPEC exports to China have risen from over \$5.5 billion in 2000 to over \$104bn in 2018. Meanwhile, OPEC imports from China have also drastically jumped from \$8.3bn in 2000 to nearly \$176bn in 2018. This represents massive growth in overall trade between China and our Member Countries.”

China’s role in global GDP growth from 2017 to 2040 is expected to rise from 18 per cent to 24 per cent, according to the OPEC *2018 World Oil Outlook (WOO)*, which indicates the country plays a critical role in both the global economy and the energy industry. Additionally, China is expected to account for nearly 30 per cent of the growth in world oil demand in the same time frame. The percentage of oil in China’s fuel share is expected to rise from 18 per cent in 2015 to 19.5 per cent in 2040.

The share of renewables and nuclear energy in China’s energy pie are also set to rise dramatically by 2040, and per capita energy consumption will rise significantly, as the country’s middle class expands. The country’s vehicle stock levels are expected to rise twice

as fast as the rest of the world, between 2017–40, at 4.3 per cent per annum. This will be dominated by internal combustion engines, though the amount of electrical vehicles will also rise significantly.

The petrochemical sector will see strong growth, coming second only to the US between 2018 and 2023, adding 20 per cent to overall growth.

“Our message at this important gathering is that even with the country’s great advances in renewables, oil is going to continue to remain a major and growing provider within China’s energy mix for the foreseeable future. Thus it is essential for us to grow our exchange and expand close and transparent collaboration over the coming decades.”

The Secretary General congratulated China on moving quickly to achieve a very diverse and balanced energy portfolio, which many countries have been trying to do. This includes reducing energy consumption and CO<sub>2</sub> emissions per unit of GDP, and taking actions to ensure energy access across a range of fields is more secure, affordable and reliable.



Delegates seen during the opening session.

Meanwhile, Barkindo said China has become the world's largest producer of renewable energy — it is the largest producer of hydroelectricity, solar power and wind power worldwide. This includes becoming the world's largest producer, exporter and installer of solar panels, wind turbines, batteries and electric vehicles, according to a recent report.

Additionally, the country has been working extensively to increase its strategic petroleum reserves in recent years, which shows a great deal of foresight and wisdom, according to Barkindo.

This is a stellar example to other countries struggling with energy security, he stated. "You have indeed become a leader and an example of starting to successfully move into the 'energy transition'."

He quoted President Xi Jinping when he said: "China will always remain the builder of world peace, a contributor to global development, and upholder of international order."

The oil and gas industry must be part of the solution to climate change, stated the Secretary General, adding that OPEC Member Countries have contributed strongly to the United Nations Framework Convention on Climate Change (UNFCCC) process from its inception, have actively participated in UN negotiation sessions and that the OPEC and UNFCCC Secretariats have expanded and deepened their relationship over the past years.

"OPEC partnered with China under the umbrella of the G77 and China (coalition of 134 developing countries in the United Nations), which I had the honour to chair, in producing the UNFCCC, its sister the Kyoto Protocol, the Paris Agreement and the current Talanoa Dialogue," he said.

OPEC is pleased to have been a strong partner throughout China's massive economic growth spurt in recent years, which in part has led to the country becoming the world's largest importer of oil. The Organization looks forward to continuing to be a strong partner fueling its rapid development and looks forward to a long and fruitful future collaboration.

### **'Declaration of Cooperation'**

OPEC and non-OPEC signatories to the 'Declaration of Cooperation', and indeed the entire energy market have learned a lot since the decision was signed nearly three years ago, said Barkindo.

It has led to a glorious new chapter in the history of oil and international dialogue, including with China, in the interest of producing and consuming nations, said the OPEC Secretary General.

"We have learned so much since then. Not only have we overcome all market challenges thrown our way since that time, we have done so quickly, effectively and always considering our underlying principles of equity, transparency and collaboration."



*Delegates gather for a group photograph.*

The process saw another great leap at the 6<sup>th</sup> OPEC and non-OPEC Ministerial Meeting in July with the signing of the ‘Charter of Cooperation’, he added.

“The power of cooperation is clear. Our collaboration has led to a new era of responsible oil market management, which has proven to be a necessary tool in a global environment that seems to only grow in complexity.”

Deepening relationships and understanding have been an initially unexpected benefit which has opened up more opportunities to work, learn and share experiences together, he said.

“I hope to see our relationship with China deepen and prosper under your able leadership, including pooling our collective expertise to better face tomorrow’s challenges.”

### **Valuable arsenal**

The Secretary General stated in his closing speech that the meeting would add “to the valuable arsenal of facts we received from your colleagues from the Chinese Academy of Social Sciences just a few days ago here at the OPEC Secretariat.”

He emphasized the necessity of having timely and reliable data and statistics in balancing the oil market for the benefit of producers, consumers, the world economy and the future development of mankind.

“This is particularly important in the case of China when one considers the massive influence your country has on world energy developments.”

The upcoming challenges are many and complex, said Barkindo: climate change, energy poverty, trade disputes, geopolitics, a softening economy, policy changes, population growth and sanctions, to name a few.

“We need to be ready for each challenge ahead of time, and prepare for every eventuality. We can only do this together as partners who are able to communicate quickly and openly as situations arise.”

Maintaining channels of communication at all times and exchanging facts and data regularly will lessen the impact of large bumps down the road, he added. It is the only way forward; in an industry that has become increasingly inter-connected over time, nobody can afford to go it alone anymore.

“We are honoured to be your partner in development and to tackle future problems together.”

In concluding the High-Level Meeting, the OPEC Secretary General said: “Our growing partnership represents a win-win situation not only for us, but for the entire oil market and world economy. I cannot emphasize enough the importance of our dialogue in shaping future decisions on production and investment.”

The Fourth High-level Meeting of the OPEC-China Energy Dialogue is scheduled to take place in Beijing in 2020.



# OPEC hosts first Annual Legal Workshop

*As part of OPEC's evolving and ever-expanding cooperation, the OPEC Secretariat organized and played host to the 1<sup>st</sup> OPEC-Energy Charter Secretariat-OPEC Fund Annual Legal Workshop at the end of October. With a plethora of high-level speakers, and two days of informed discussion and debate, the OPEC Bulletin reports on the event, which was held under Chatham House Rule.*



*Mohammad Sanusi Barkindo (c), OPEC Secretary General, opening the workshop; with Leonardo Sempertegui (l), OPEC's General Legal Counsel; and Violet Onyemenam (r), his counterpart at the OPEC Fund for International Development.*

In opening the proceedings, Mohammad Sanusi Barkindo, OPEC Secretary General, stressed that the staging of this first legal workshop was the fruits of OPEC's continued efforts to advance cooperation in a broad array of areas, which "has been exhibited clearly in recent years through the historic 'Declaration of Cooperation', and earlier in 2019 through the endorsement of the 'Charter of Cooperation', between 24 OPEC and non-OPEC producers."

He noted that this workshop brings on board other international organizations, namely the Energy Charter Secretariat and OPEC's sister organization in Vienna, the OPEC Fund for International Development. He personally thanked Dr Urban Rusnák, Secretary General of the Energy Charter Secretariat, and Dr Abdulhamid Alkhalifa, Director-General of the OPEC Fund, for their generous support of the important gathering.

## Key objectives

The OPEC Secretary General underscored a number of key objectives for the workshop. "First, it is an opportunity for all participants to review and discuss the latest developments in energy law, including legal and public policy changes, perspectives on climate change regulation, contracts, transparency and dispute resolution management, all of which can have significant impacts on oil-related activities in our countries."

He specifically underscored that "our learned friends are vital now and in the years ahead, specifically as we look to navigate the energy transition through regulations, laws and public policy and in diversifying our economies." Second, he added, "the workshop aims to develop a robust and better-connected legal community among OPEC Member Countries, countries in the 'Charter of Cooperation', international organizations, and other relevant stakeholders.

"Fostering the creation of a lawyer's network will not only help in exchanging ideas and best practices, but will also serve as an avenue to create longer-term relationships that have mutual benefits for all."

In this regard, he said, that "by linking up, and developing systems for correspondence and collaboration, it is hoped that our organizations and all our Member Countries can benefit."

And third, he stated, "I think it is important that over the next two days we discuss ways in which law can be an instrument for positive transformation in the oil and energy sector."



*Dr Gökçe Mete, Head of the Knowledge Centre at the International Energy Charter (ECS) in Brussels.*

## The programme

Leonardo Sempertegui, OPEC's General Legal Counsel, also provided some opening remarks, which offered up thanks to all those who had been involved in putting together the event, and briefly outlined some of the topics that would be broached over the two days.

He stressed that "in order to be the agents of development that we are called to be, as holders of the law, lawyers need to be permanently exposed to the best international practices in different areas. The world is evolving fast and sometimes law does not react as swiftly as needed."

In this regard, he cited as an example the Sustainable Development Goals (SDGs) that "are a new paradigm for the international community and they are increasingly informing national public policies and legislation. This circumstance implies an enormous change in the logic and background of how law is going to evolve in the coming years and decades. Lawyers, therefore, need to be actively engaged with the most prominent issues of the energy (and related matters) discussion."

He highlighted that talks will also delve into the formulation of such policies, a process in which lawyers need to be more and more involved; examine current trends, including the future of legal work, transparency and anti-corruption, climate change and cooperation; and, explore the issue of dispute resolutions.

For the latter point, Sempertegui said that "the



*Workshop participants gather for a group photograph.*

interpretation and application of regulations and contracts in energy and natural resources matters have been, and will continue to be, a major issue, creating risks and downsides for all the parties involved. Therefore, great care should be placed on prevention of conflicts.”

### **Day 1**

The first day saw much talk of the energy transition, with reference made by a number of speakers to the SDGs, specifically SDG 7 that aims to ensure access to affordable, reliable, sustainable and modern energy for all.

One speaker highlighted how various countries are integrating the energy transition into their long-term planning, and importantly, how they are pursuing it in many diverse ways. There was also reference to the importance of the effective management of foreign direct investment, which is required for the achievement

of the SDGs, particularly for countries that do not have the required means.

Another speaker emphasized the importance of understanding the often differing goals of various stakeholders, specifically referencing the distinctive challenges of developed and developing countries, as well as international oil companies (IOCs) and national oil companies (NOCs).

Discussions also covered the issue of gas flaring reduction, specifically the global initiative launched in 2015 for ‘Zero Routine Flaring by 2030’, and in this regard, the various issues to be addressed regarding the sorely needed development of regulatory frameworks. From the perspective of regulatory frameworks, one speaker also focused on strategies that can allow governments to leverage oil and gas production agreements with IOCs and the assets generated to rapidly accelerate the deployment of renewables and other energies.

There were also deliberations on topics that aimed to provide some lessons learned from negotiating

extractive industry contracts, particularly from a government perspective, and talk of attracting energy investments through taxation policy, with a focus on how a taxation regime can be a tool to accommodate both government and investor interests in an energy project.

## Day 2

The second day began on the topic of enhancing transparency in NOCs, with a specific focus on fiscal regimes, licensing and contract practices, beneficial ownership disclosures, and how revenues from extractive industries can have a significant impact on reducing poverty and boosting shared prosperity.

Related to the energy transition, another speaker touched upon climate change and possible energy industry legal challenges in the process of enforcing climate change commitments, with an emphasis on domestic litigation, human rights systems, the extra-territorial application of national law and contractual requirements. This also touched upon the evolving approaches for climate change response measures; multilateral and unilateral, as well as public and private.

One speaker also looked to the future and underscored the possibilities for next-generation legal

department operating models given increasing business complexity, escalating legal and regulatory risks, cost pressures, and technological disruption, with a specific reference to artificial intelligence.

Other speakers underlined the issue of dispute settlement, with a focus on best practices for managing energy disputes.

## Informative workshop

The rich and informative programme, the gravitas of the speakers, all of whom had ample time to share their knowledge and embrace discussions, was clearly evident over the two days.

In his remarks, the Secretary General, noted that “law is a critical piece of our industry’s complex jigsaw, and without it we would not be able to function. This is a vital workshop and we very much hope that this is the start of something that we can evolve and grow.”

In addition, the positive partnership between OPEC, the Energy Charter Secretariat and the OPEC Fund was a clear benefit to the proceedings. It is hoped that these types of interactions continue to flourish in the years ahead. The involved institutions are already preparing the second edition of the Annual Legal Workshop 2020. 🌐



Representatives from the OPEC Fund’s General Counsel & Legal Services Department, Ricardo J Gomez Puternicki (r), Senior Counsel; and Elizabeth Hassan, Legal Counsel.



Members of the Legal Office at the OPEC Secretariat: Leonardo Sempertegui (c), General Legal Counsel; and (l-r) Dr Taiwo Adebola Ogunleye, Legal Advisor, International Matters; Beatriz Patiño-Moulinier de Skotton, Legal Advisor; Gabriele Oesterreicher; and Intern, Oriana Jacome.



Heather Shaker, Image Maker

Mohammad Sanusi Barkindo,  
OPEC Secretary General.

## Many pathways to the energy transition

*The 2019 Oil & Money Conference in London was a landmark occasion in a number of ways. It was the 40<sup>th</sup> anniversary of an event that has for decades provided great speakers and lively debate and discussion, and a watershed with its relaunch next year as the Energy Intelligence Forum. With the OPEC Secretary General, Mohammad Sanusi Barkindo in attendance, the OPEC Bulletin reports from the event.*



Heather Shuker, Image Maker

Over the four decades of the Oil & Money conference the energy landscape has changed a great deal, and clearly OPEC as an Organization has too. There have been industry-changing technological advancements; the development of new sources of energy; the emergence of new energy producers and additional resources; increased recognition of the challenges posed by climate change; and the advancement of cooperation among a variety of stakeholders, most recently through the ‘Declaration of Cooperation’ and the ‘Charter of Cooperation’ between 24 OPEC and non-OPEC producers.

It is not an exhaustive list, but it underscores several of the evolutions, and in some cases revolutions, that the handful of people who attended the conference in both 1979 and 2019 will have witnessed.

However, one thing has remained constant over the 40 years: the ever-increasing need for stable and secure energy supplies as populations have expanded and economies have grown. This remains true in the decades to come.

### Energy demand growth

In his speech at the event, Barkindo noted that “the global economy in 2040 is expected to be double the size it was in 2018. And world population is projected to reach around 9.2 billion, an increase of around 1.5 billion from today’s level.”

He also underscored that we should not forget that “energy poverty remains a scourge of our time: even though, positively, the UN Secretary General’s progress



Heather Shaker, Image Maker

*Mohammad Sanusi Barkindo (l), OPEC Secretary General, with Amena Bakr, Senior Energy Correspondent, Energy Intelligence.*

*Bob Dudley, CEO of BP.*

report on the Sustainable Development Goals (SDGs) recently noted that the total number of people without access to electricity fell below one billion in 2017, there is much work still to be done. Moreover, three billion people still lack access to low-emission fuels for cooking.”

The Secretary General said: “Energy will remain central to our daily lives; the lifeblood that enables us all to function and prosper. Today, however, as referenced by the theme of this year’s conference, ‘Strategies for the Energy Transition’, the energy industry finds itself at a crossroads.

“The world needs more energy, but this needs to be done in an ever more efficient and sustainable way, taking on board the challenges posed by climate change to our future.”

### OPEC’s viewpoint

In addressing the conference, Barkindo stated that it is important to emphasize OPEC’s position on climate change and the much-talked-about energy transition.

“We fully support the science. This is a given. We do not deny the existence of climate change.

“OPEC takes climate change extremely seriously. As responsible citizens of the globe, we also believe there is ‘no planet B’.

“OPEC remains fully engaged and supportive of the UNFCCC and the Paris Agreement, which remain the only viable global frameworks to address climate change. All 14 OPEC Member Countries have signed the Paris Agreement and ten have ratified it.

“We see it as a positive development that climate change issues have garnered increased public attention and enthusiasm.

“It is our deeply held conviction that dialogue on this matter should be inclusive and broad to try and evolve this energy transition in the least disruptive manner.

“We need to think carefully about what an energy transition actually means; and we all need to follow the right paths to lead us to a sustainable energy future.

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

“We need to transition to a more inclusive world in which every person has access to energy. A world where no one is left behind.”

Many of these points were also encapsulated in a speech to the conference by Ben van Beurden, CEO of Shell, who said: “The world needs oil and gas because it is what the world relies on for so much including, often, its most basic needs of heat and food and shelter. And that will not change overnight. This is why Shell will continue to invest in oil and gas, even as we work to help speed progress to a lower-carbon future.”

### Sustainable energy future

Barkindo said: “There are clearly some who believe the oil and gas industries should not be part of our energy future; that we should be consigned to the past. That the future is one that can be dominated by renewables and electric vehicles.

“It is important to state clearly that the science does



Heather Shuker, Image Maker



Patrick Pouyane,  
CEO of Total.

Heather Shuker, Image Maker

not tell us this; it tells us that we need to reduce emissions and use energy more efficiently. The stark statistics related to the blight of energy poverty do not tell us this either.”

He emphasized that renewables are coming of age, with wind and solar expanding fast, but “even by 2040 in our *World Oil Outlook (WOO)* they are only estimated to make up around 19 per cent of the global energy mix.

“With nuclear expected to be at just over six per cent and coal at just over 21 per cent by 2040, it means that oil and gas combined are forecast to still supply over 50 per cent of the world’s energy needs by 2040, with oil at around 28 per cent and gas at 25 per cent.”

He noted that “some will view this as an OPEC forecast, dispute the numbers, and state that the Organization is against renewables”, but he was ready to refute these points.

Firstly, he said, “let me say that many OPEC Member Countries have great sources of solar and wind, and we are seeing huge investments being made in this field. We welcome the development of renewables.”

And secondly, “we do not see any reputable outlook projecting that renewables will come anywhere close to overtaking oil and gas in the decades ahead.”

From the perspective of electric vehicles, stressed Barkindo, “there is also no doubt that they will continue to see expansion in the transportation sector. We see this in our WOO with the share of electric vehicles in the total road transportation fleet projected to expand to around 13 per cent in 2040. Again, we support their development in a sustainable manner.”

However, for many of the world’s population, he added, “it is clear that no matter which way you look at electric vehicles they do not offer a viable alternative to the internal combustion engine

due to cost. Moreover, there is also a debate about how environmentally friendly they are considering the build process for them, especially the batteries, as well as where the electricity is sourced from.”

Here, he also highlighted one key detail from the WOO. “In the period to 2040, fuel efficiency improvements are expected to result in a far greater reduction in oil demand than the increasing penetration of alternative fuel vehicles.”

## All energies required

Barkindo said that the basic challenge of the energy transition we face today can be summed up in two questions.

“How can we ensure there is enough supply to meet expected future demand growth?

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

He underscored that “it all points to not limiting ourselves by putting all our eggs in one basket. We need to look for cleaner and more efficient technological solutions everywhere, across all available energies.

This was also emphasized in a speech at the conference by Bob Dudley, CEO of BP, who said when tackling emissions there needs “to be recognition that ... there are many paths and we need to pursue them all.”

Barkindo said that OPEC recognizes the complexity of the challenge and complex problems require comprehensive solutions. “The oil industry has to be part of the solution,” he said, as “it possesses critical resources and expertise that can help unlock our carbon-free future.”



Oil & Money 2019

Heather Shulken, Image Maker

Herman Franssen, Executive Director, Energy Intelligence, and Conference Chairman.



Mohammad Sanusi Barkindo (r), OPEC Secretary General, during an interview with Bloomberg's Anmarie Hordern.

He stressed that “for oil and gas, the environmental challenge is not oil and gas themselves. It is the emissions that come from burning them.

“We are believers that solutions can be found in technologies, such as carbon capture utilization and storage (CCUS) and others, that reduce and ultimately eliminate these emissions. We will need a very broad portfolio of emission removal technologies to tackle climate change.

“We welcome coordinated action within the industry and through various research and development platforms, such as the Oil & Gas Climate Initiative (OGCI).”

## Investments

Barkindo also stressed that it was important to appreciate that “policies and lobbying focused on shifting investors away from oil and gas are not the way forward.

“Firstly, as Microsoft co-founder and prominent philanthropist, Bill Gates, said in a recent interview with the *Financial Times*: “Divestment, to date, probably has reduced about zero tonnes of emissions.”

“And secondly, references to stranded assets and declining values in our industry advances a potentially dangerous scenario where the necessary investments may not be made, one that could increase volatility significantly and lead to a future energy shortfall.”

Moreover, he added, “if those billions of people in the developing world that suffer from a lack of energy access feel they are being sidelined from energies that have helped fuel the developed

world, then this could sow further divisions and expand the divide between the haves and have nots, the North and the South.

“I am sure I speak for everyone in this room when I say how important funding and investment is in any talk of an energy transition and diversification.” It was a point referenced unequivocally by Patrick Pouyanne, CEO of Total, in his speech to the conference.

The Secretary General stated that it is vital to have a stable environment and a level playing field; where the focus is not on the energy source, but on reducing emissions.

From OPEC’s perspective, he said, “let me stress that we fully identify with the fact that the foundation for investment, growth and economic diversification can only come through balance and stability in the market.

“OPEC Member Countries remain fully committed to investments across the whole industry value chain, and the issue of returning global investments is a core focus of the ‘Declaration of Cooperation’, and the recently endorsed ‘Charter of Cooperation’.”

## Cooperation: the way forward

I am often asked, said Barkindo, “what the best way forward is when you look at the plethora of opinions and divergent viewpoints about the future energy transition.

“I cannot say I have all the answers; no one does. And if anyone says they do; then I might have to politely say they may not be telling the truth.



*During Oil & Money 2019, Mohammad Sanusi Barkindo, OPEC Secretary General, participated in a press briefing, attended by media representatives.*



*On the sidelines of Oil & Money 2019, Mohammad Sanusi Barkindo (second l), OPEC Secretary General; with Bob Dudley (second r), CEO of BP; during a visit to BP headquarters in London. Barkindo was accompanied by Nadir Guerer (l), Senior Research Analyst; and James Griffin (r), Editor/ Speechwriter.*

“What I can say is that OPEC, and I am sure the entire oil and gas industry, welcomes dialogue with all stakeholders; and welcomes action too.”

He stressed that we “can no longer work in silos; we can no longer see our futures in polarized terms.

“We need to ensure sustainable growth, development

and prosperity for ourselves, for our children and for our children’s children.

“And we need to stress that the scale of the climate challenge means that no single energy source is a panacea; nor can the contribution of an entire industry or group of countries be overlooked.”



# Ben van Beurden: my path to purpose

*On the first evening of the 40<sup>th</sup> Oil & Money Conference, Ben van Beurden, Chief Executive Officer of Shell, was recognized by his industry peers with the Energy Executive of the Year award. On receiving the award, van Beurden shared his personal perspective on what has shaped his thinking on his journey to the top job of Shell. It was a personal and heartfelt address, and a moving one for those in attendance.*

Heather Shaker, Image Maker



Paul Clarke Photography

Ben van Beurden, Chief Executive Officer of Shell.

As a young man, van Beurden said he was captivated by chemistry; the excitement of new materials.

“The opportunities those materials offered, and the cool kit that could produce them. In short, the sheer magic of it all.”

On top of this, he said, was a wanderlust. “I had grown up the son of a factory foreman in a family that did not even have a car, let alone go on holidays. I desperately wanted to see the world.”

He was the first person in his family to go to university, and after graduating as a chemical engineer, he said he did “the only sensible thing a travel-hungry Dutchman could. I joined Shell.”

He continued that it was not long before he started lobbying for an overseas job. “They offered me the UK, then Norway. And, yes, although they were overseas, neither were what I had in mind. They then got serious and offered me Sudan.”

It was an opportunity that would shape van Beurden’s thinking. What follows is an extract from his speech.

## Sudan: the meaning of energy

“I arrived just a few weeks before the coup that brought Omar Bashir to power. I experienced first-hand what resourcefulness means when you have to keep things ticking over at home and at work, even as all resources



*Ben van Beurden (l), Chief Executive Officer of Shell, receives the Award from last year's winner, Bob Dudley, CEO of BP.*

— goods and services — steadily vanish. It was a lesson in resilience I will never forget.

“But the thing that stuck with me most at the time — and has stayed with me to this day — was how much having access to energy means to people who do not have it.

“I saw and experienced how the arrival of energy resulted in an immeasurable uplift in quality of life. I witnessed the breaking of poverty cycles by basic economic progress. I watched as families got access to health care and clean water. All of it enabled by energy.

“In a way, I had already learned that lesson — in a gentler, more benign setting — when I was very young. When I was a child my family only had two coal-fired stoves in the house. I would have to wash myself with a damp and rapidly cooling cloth in front of the stove in the kitchen. When natural gas came to my neighbourhood it transformed my life.

“But it was Sudan that brought the lesson home to me. It brought it home in the starkest possible fashion. What happened has shaped my thinking in the area most profoundly. So, even though I have told this story before, it bears telling again.

“I had made friends with the watchman at the building I lived in, in Port Sudan. Mohamed’s wife had a daughter just after I arrived. We provided a goat for her name-giving. Over the weeks and months that followed I

used my broken Arabic to talk with Mohamed. We spoke about his daughter every day.

“And then one day, before she reached the age of two, he told me she was dead. Mohamed had been helpless because he had no transport to get her to a doctor, no light, or fridge or even fan to provide her comfort, no modern energy at all.”

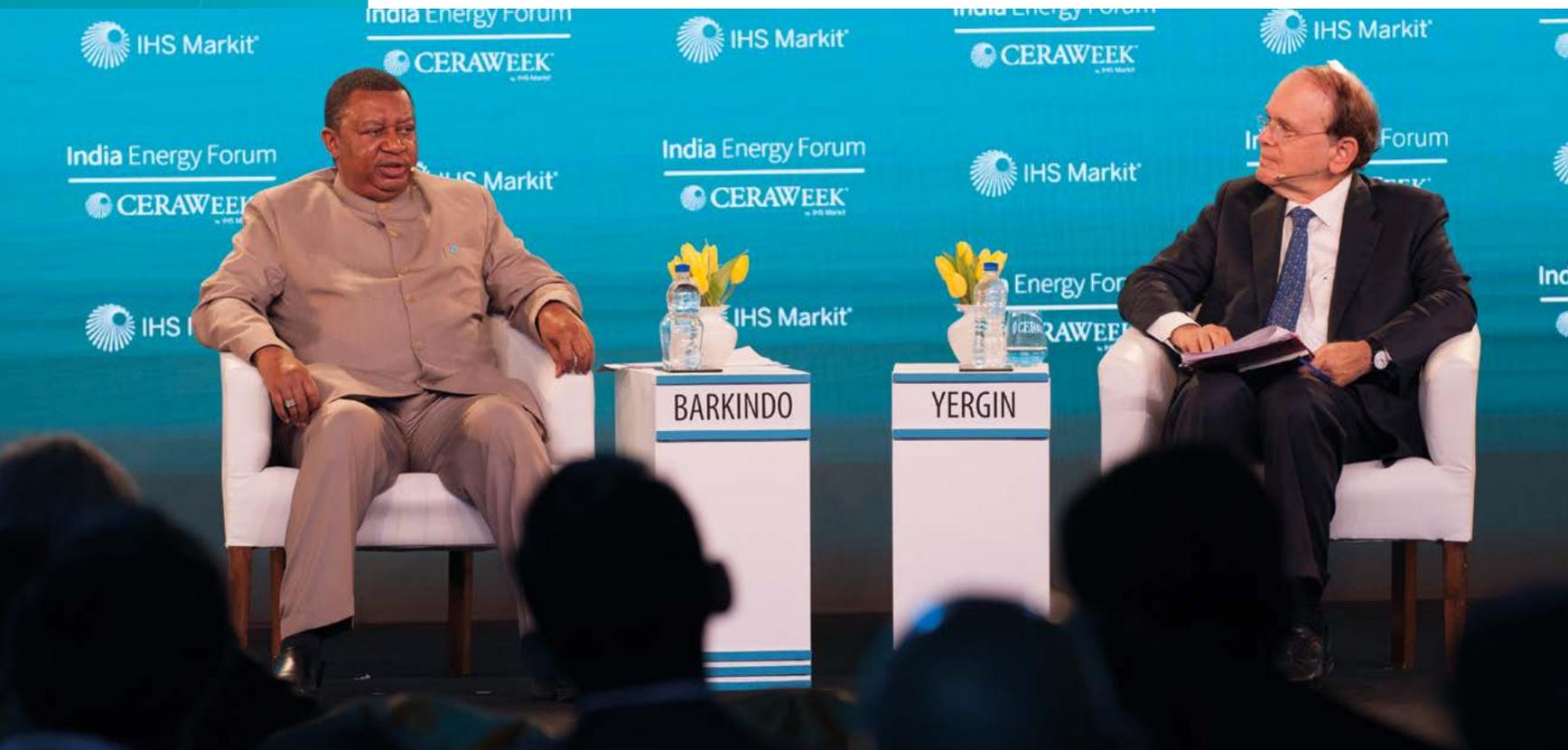
### Making a difference

It was a moment and an interaction that has continued to be a driving force for van Beurden. “Being close to something like that stays with you. It has been a driving force behind my belief that companies like ours should not only provide cleaner energy and more energy, but also energy to more.”

It was a key shaping moment for him, when he learned for himself “what was really important for our industry to pursue, and for me as a person. What matters is not nifty kit, not marvels, and certainly not travel, but making a real and valuable difference to people’s lives.

It was a genuine and heartfelt story, and one that resonated with many of those attending the awards dinner. It underscored the value energy has to those that continue to suffer from acute energy poverty; the almost one billion that still have no access to electricity and the three billion people still lack access to low-emission fuels for cooking. ■■

# India takes centre stage at key energy event



*Daniel Yergin (r), Vice Chairman, IHS Markit; with Mohammad Sanusi Barkindo, OPEC Secretary General.*

## *The 3<sup>rd</sup> India Energy Forum by CERAWEEK provided an opportunity to showcase the growing importance of the OPEC-India Energy Dialogue.*

India's enthusiasm for producer and consumer dialogue has contributed enormously to restoring sustainable stability to the world oil market, OPEC Secretary General, Mohammad Sanusi Barkindo, said in remarks to a leading energy event in New Delhi.

Barkindo applauded Dharmendra Pradhan, Minister of Petroleum and Natural Gas and Minister of Steel, for his strong engagement in the OPEC-India Energy Dialogue,

which began in 2015 and has become more valuable with each passing year. The next high-level energy dialogue is expected to be held in early 2020.

"India imports around 80 per cent of its oil from OPEC and our Member Countries are forging ever-closer investment ties with India," Barkindo said during a panel discussion entitled the *'Impact of global oil markets on India'*. "In this respect, our dialogues provide a



Shutterstock

*The OPEC Secretary General praised Indian Prime Minister Narendra Modi's (pictured) speech to the UN Climate Action Summit.*

deeper understanding of India's needs. Furthermore, our expanding technical consultations contribute to ensuring a secure and stable energy future.”

The 3<sup>rd</sup> India Energy Forum by CERAWEEK was held at the Taj Palace in New Delhi on October 13–15. Key topics at the event included India's energy transition; low-carbon and sustainable energy solutions for India; game-changing industry technologies; and the outlook for global oil and gas markets and investment.

Dan Yergin, renowned author, global energy icon and Vice Chairman of IHS Markit, participated in the panel with Barkindo. IHS Markit, with the support of the Ministry of Petroleum and Natural Gas, organized the energy forum.

## Partnerships and innovation

In his remarks, the Secretary General also praised Indian Prime Minister Narendra Modi's speech to the UN Climate Action Summit, which was held on September 23 in New York. The Prime Minister highlighted India's visionary plans for the energy transition and used the example of public-private partnerships to drive innovative solutions.

“India's colossal success in expanding access to energy is further testament to the country's socio-economic progress and commitment to sustainable development,” Barkindo said.

He added that at OPEC, “we also are engaged in and supportive of collective efforts — including the Paris



*Dharmendra Pradhan, Minister of Petroleum and Natural Gas and Minister of Steel, India.*

Agreement and the ongoing UN climate discussions — to address the climate change challenge. Looking ahead, we believe the most effective approach to mitigating the effects of climate change is through deeper cooperation and public policies that encourage a sustainable energy mix where oil is a fuel of choice.”

### Energy powerhouse

India is one of the major drivers of global economic and oil demand growth. The country’s GDP is projected to grow by 6.1 per cent in 2019 and 6.7 per cent in 2020, and annual growth will average 6.9 per cent between 2018 and 2024, making it one of the world’s fastest-growing economies.

The country is forecast to account for 15 per cent of global oil demand growth in 2019. Medium-term incremental oil demand is expected to grow from 4.7 million barrels/day in 2018 to 6m b/d in 2024, with the road transportation sector taking the lead.

Addressing this anticipated demand, the oil industry is in a much stronger position today to deliver a sustainable energy supply than it was just three years ago, Barkido said.

“This turnaround is thanks largely to the efforts undertaken by OPEC Member Countries and ten non-OPEC

oil producing countries, who came together under the ‘Declaration of Cooperation’ to reverse the 2014–16 industry crisis,” he added. “Since 2016, the production adjustments undertaken by the ‘Declaration of Cooperation’ partners have brought durable stability to the global oil market, restored investor confidence, and benefited producers and consumers.”

### Importance of the ‘Charter’

Barkido pointed out that the ‘Declaration of Cooperation’ partners have endorsed a voluntary ‘Charter of Cooperation’, saying it will benefit consuming nations like India by providing a further means to engage in a constructive and consultative process.

The Secretary General’s remarks on October 15 came a day after Saudi Arabia and the Russian Federation further underscored their commitment to the ‘Charter’ at a ceremony held during Russian President Vladimir Putin’s visit to Riyadh.

On the sidelines of the 3<sup>rd</sup> India Energy Forum, Barkido took the opportunity to discuss oil market developments with Pradhan. He also met with Sanjiv Singh, Chairman of the Indian Oil Corporation, to learn more about how the oil firm harnesses technology to address the challenges of climate change and energy poverty. ■■



*Dharmendra Pradhan (l), Minister of Petroleum and Natural Gas and Minister of Steel, India; with Mohammad Sanusi Barkindo, OPEC Secretary General.*



*Sanjiv Singh (r), Chairman of the Indian Oil Corporation; with Mohammad Sanusi Barkindo, OPEC Secretary General.*

## Timeline of OPEC-India Energy Dialogues

**December 15, 2015**

The 1<sup>st</sup> High-Level Meeting of the OPEC-India Energy Dialogue is held in New Delhi, with then-Secretary General, Abdalla Salem El-Badri leading the OPEC delegation

**October 17, 2018**

The 3<sup>rd</sup> Dialogue takes place once again in New Delhi

**May 22, 2018**

The OPEC Secretariat in Vienna hosts the 2<sup>nd</sup> Dialogue

**Early 2020**

The 4<sup>th</sup> Dialogue is scheduled to be held at the OPEC Secretariat in Vienna

# Africa not ready for full energy transition drive: two OPEC Member Countries comment



*Timipre Sylva, Nigeria's Minister of State for Petroleum Resources.*

**A**frica is not yet ready to fully embrace the energy transition as countries on the resource-rich continent must first be allowed to increase their electricity baseload before renewables can have any large-scale impact, according to speakers at a *World Energy Congress* panel.

Gas can play a critical role in both driving up this baseload and cutting carbon emissions but access to capital is crucial to help build the infrastructure necessary for regional power distribution, delegates were told.

"We in Africa do not yet have the baseload," **Timipre Sylva, Nigeria's newly installed Minister of State for Petroleum Resources**, said on an Africa-focused panel discussing critical enablers for the continent's energy transition. "The world must allow Africa to develop the baseload before we begin to join seriously the discussion about renewables," Sylva said.

Abubakar Sani Sambo, former Director General of the Energy Commission of Nigeria and current special advisor to President Muhammadu Buhari agreed, pointing to current levels of electricity access in Africa of around 50 per cent against an average of 90 per cent across the rest of the globe.

"Africa needs to come up to about 75 per cent or 80 per cent before you start to talk about a transition in Africa," Sambo said.

The continent still has an estimated 650 million people without stable access to electricity. "Of course, we cannot discount the room for renewables for small communities that do not have access to the grid," Sylva added, although discounting the impact renewables can currently make on grid systems with the current low baseload in African countries.



*Gabriel Mbaga Obiang Lima, Equatorial Guinea's Mines, Industry & Energy Minister.*

Gas — either pipeline gas or liquefied natural gas — is seen as a significant potential contributor to increasing that baseload, with Sylva saying: "One way we think we can create that baseload is gas. "We are trying to build a pipeline to go across the continent — we are calling it the AKK (Ajaokuta-Kaduna-Kano) pipeline."

The AKK pipeline is being developed by state player Nigerian National Petroleum Corporation and is the first phase of the Trans-Nigeria Gas Pipeline project. The hope is for Nigeria to be able to utilize its large gas resources to feed into the grids of regional countries.

**Equatorial Guinea's Mines, Industry & Energy Minister, Gabriel Mbaga Obiang Lima**, pressed the case for the continued exploitation of hydrocarbons in Africa.

"Oil and gas are good for Africa ... the solution for Africa is oil and gas ... we have to be responsible with our resources — and use them," said Obiang Lima. However, Equatorial Guinea — and Africa at large — needs access to finance to build the necessary infrastructure projects.

"Since day one of oil and gas, we have thought about doing something with gas," said Obiang Lima, while adding that not a single African country can currently take any of its LNG cargoes, due to a lack of infrastructure. "We need access to capital to build the infrastructure for African countries. We can't continue exporting gas out of the continent," he said.

"If you do not give us funds to utilize our oil and gas, we won't have electricity ... (hydrocarbons) can transform the continent."

*Source:*

*Upstream: World Energy Council, September 11, 2019.*



# Saudi Aramco chief executive urges bold response to beat climate change

**S**audi Aramco Chief Executive, Amin Nasser, has emphasized the need for the oil and gas industry to respond boldly to the challenge of climate change by driving down as much as possible its own emissions.

However, the head of the Saudi state oil company also argued against suggestions there will be a rapid transition away from oil and gas, saying that it will remain at the heart of the global energy mix for decades to come.

Speaking at the World Energy Congress in Abu Dhabi, Nasser argued that the “entire industry must come together to make oil and gas much cleaner across the full spectrum and make it their urgent priority.”

“It needs (in its plans for cleaner energy) to be comprehensive. Efforts by the oil and gas industry should articulate clearly a carbon management long-term strategy,” he said.

Nasser said Aramco is taking a number of steps towards reducing its own greenhouse gas emissions but added that a lot more needs to be done to achieve a cleaner energy future.

He highlighted Saudi Arabia’s master gas system, which has been significantly expanded in recent years.

The system has managed to end gas flaring in the Middle East nation and thereby has eliminated 100 million tonnes of carbon dioxide equivalent in annual emissions since it was established in the 1970s, he said.

“Our upstream carbon intensity in the Kingdom — from well to refinery gate — is one of the lowest in the world at about ten kilogrammes of CO<sub>2</sub> equivalent per barrel of oil equivalent,” he said.

Nasser added the Kingdom’s methane intensity last year, based on third-party assessments, for greenhouse gas emissions was 0.06 per cent, which is also among the lowest in the world.

“This is especially important given that methane gas is 80 times more harmful to global warming in the first two decades after its release compared with CO<sub>2</sub>, he said.

Aramco is working on a range of technologies to bring in greater efficiencies and lower emissions, Nasser said.

“We aim to be the world leaders in CCUS (carbon capture, utilization and storage); turning a waste product like CO<sub>2</sub> into something very valuable,” he said.

Nasser added that while Aramco supports the growing

contribution that alternative forms of energy are making to help meet rising demand, he believes that a broader energy transition could take much longer than many expect.

“All energy transitions, including this one, take decades and will involve many challenges,” he said.

Nasser noted the world needs a “major awareness that oil and gas is still essential and will be at the heart of the global energy mix for decades to come.” He said the world has seen the impact of a ‘crisis of perception’ on long-term investments in the oil and gas industry and, if it continues, supply shortfalls will follow.

“That would hurt the competitiveness of national economies; threaten their energy security; and, potentially, create social disruptions by making energy less affordable,” he said.

Nasser too raised concerns about energy policies by governments around the world that do not consider the complexity and long-term nature of the global energy industry and the need for an orderly transition.

He argued that many governments are adopting policies favouring rapid transition that “seem to assume there are quick and easy answers to the many challenges that alternatives pose.

“The world can no longer afford policy miscalculations ... [they] could lead to supply shortfalls,” Nasser cautioned.

Source:  
*Upstream: World Energy Council, September 11, 2019.*



*Amin Nasser, Saudi Aramco's Chief Executive.*



# UNFCCC Figueres urges industry to act now on emissions

Oil and gas industry officials were urged by the former head of the United Nations Framework Convention on Climate Change to control emissions from their operations if they want to extend the industry's shelf life at a time when public sentiment is driving investors and politicians away from fossil fuels.

"By 2050, we will have net zero emissions come what may because if we don't ... humanity ... is condemned," Mission 2020 convenor **Christiana Figueres** told delegates at the Offshore Europe conference.

Mission 2020 is a global initiative to reduce greenhouse gas emissions by 2020 to protect the world's most vulnerable people from the worst impacts of climate change.

Figueres argued the oil and gas sector must offer a "radical reduction" in methane emissions to zero and "dramatic investment" in carbon capture, utilization and storage. "Future energy provision has to be really clean, has to be dependable, has to be low cost and it has to be there 24/7," she said.

Figueres also argued the oil and gas industry needs to make sure it is not linked to lobbying against climate change regulation, either directly or indirectly.

"If you are seen to be decarbonizing on the one side and lobbying against climate change on the other side, then you will totally lose whatever license you have to operate — that is not what you want," said Figueres, who is also on the advisory board of Italian major Eni.

Industry officials at the same event also highlighted the importance of reducing emissions, with Total chief executive Patrick Pouyanne echoing the arguments of Figueres and warning that the oil and gas industry must act now to maintain a license to operate amid growing public concern about climate change.

"We have a lot of stakeholders today who look at us as dinosaurs. Dinosaurs have disappeared. I don't want Total to disappear. But the only way not to become a dinosaur is to act, to invest and progress together. We have the technologies, people and financing," he said.

Pouyanne said the industry needed to improve its energy efficiency, invest in and trial more technologies such as carbon capture and storage, while also developing profitable low-carbon electricity businesses.

"Our mission is to ... provide reliable, affordable and clean energy to the world. All of these words are equally important,



*Christiana Figueres, former head of the United Nations Framework Convention on Climate Change.*

even if in fact the reality is today society is clearly putting more emphasis on ... clean energy," he said.

"We all claim that we want to become responsible energy majors ... to achieve this, we need to have some clear actions, not just speech."

Pouyanne said Total is aiming to reduce its carbon intensity by 15 per cent based on the emissions of the products it sells.

Wael Sawan, upstream director of Anglo-Dutch supermajor Shell added that "society's trust in us as a sector is questionable at the moment," with much endeavor needed to change public perception.

Sawan said this lack of trust is one of the underlying reasons why industry is finding it so hard to recruit young people who find the allure of technology companies such as Google and Amazon more rewarding.

"We are trying to grapple with some of the most challenging issues that mankind faces today. Those are the challenges that hopefully can attract (and retain) the youth of today to join our sector so (we) can be part of the solution," he suggested.

*Source: Upstream: World Energy Council, September 9, 2019.*



# OPEC Countries make forward progress on climate change: CCUS drive set for expansion in the UAE

**A**bu Dhabi National Oil Company (ADNOC) plans to expand its carbon capture, utilization and storage (CCUS) programme as it seeks to reduce greenhouse gas emissions from its operations by ten per cent in another four years, while also improving oil recovery from its aging oil fields.

The Abu Dhabi state-owned operator has laid down plans to spend \$1.8 billion by 2023 in projects involving CCUS, on the abatement of flaring and reducing unintended emissions.

It has already made investments of up to \$2.3bn over the past five years in CCUS projects and on other efforts to reduce its carbon footprint. ADNOC is planning to expand the capture of carbon dioxide from its operations for use in enhanced oil recovery (EOR) projects.

The company said earlier this year that from 2021 it “will gradually increase the utilization of CO<sub>2</sub>, reaching a total of 2.3 million tonnes per annum by 2025, by capturing additional CO<sub>2</sub> from its gas processing plants and injecting it into different onshore oil fields.”

ADNOC initiated its CCUS programme ten years ago with a pilot project aimed at injecting CO<sub>2</sub> for EOR projects. Three years ago, the Abu Dhabi clean energy company Masdar teamed up with ADNOC to launch Al Reyadah, which is now owned by ADNOC.

The state-owned giant’s Al Reyadah facility is already capable of capturing 800,000 tpa of CO<sub>2</sub> and injecting those volumes into reservoirs in the Rumaitha and Bab onshore oil fields to boost oil recovery.

The increased use of CCUS technology for EOR will have a double environmental benefit, ADNOC said earlier this year.

“Replacing gas with CO<sub>2</sub> injection into ADNOC’s maturing fields will allow the more productive use of valuable, cleaner-burning, lower emissions natural gas, whether for power generation, desalination or as petrochemicals’ feedstock,” the company said.

In addition, CCUS projects would “lock away significant amounts of CO<sub>2</sub> that would have otherwise been absorbed into the atmosphere,” it added.

ADNOC has set a target of positioning itself as one of the industry’s lowest emitters of greenhouse gases and plans to limit the impact of its operations on the environment.

The company argued this year, citing International Association of Oil & Gas Producers (IOGP) Environmental Performance Report



*Sultan Ahmed Al Jaber, UAE Minister of State and Abu Dhabi National Oil Company (ADNOC) Group CEO, speaks at the 24<sup>th</sup> World Energy Congress in Abu Dhabi, UAE.*

for 2017, that it ranked among the top five lowest greenhouse gas emitters in the industry.

ADNOC said its emissions were less than half the industry average, at 39.68 million tonnes of CO<sub>2</sub> equivalent, and that it had one of the lowest methane intensities of 0.01 per cent.

*Source: Upstream: World Energy Council.*





## Angola intensifies efforts to reduce gas flaring



Dr Diamantino Pedro Azevedo, Angola's Minister of Mineral Resources and Petroleum.

OPEC Member Country, Angola, continues to demonstrate its unwavering commitment to enhance efficiency and value in its hydrocarbon sector, as it aims to preserve around three billion cubic feet/day of associated natural gas from flaring. The efforts also exhibit the country's firm stand on environmental matters.

Angola's Minister of Mineral Resources and Petroleum, Dr Diamantino Pedro Azevedo, lauded the significant efforts undertaken and their potential benefits on his home country. He said: "Over the years, Angola has somewhat neglected to capitalize on the natural resources that it has to offer."

The Minister stated that the 3bn cu ft of natural gas found daily are associated with the production of oil or its reservoir. "Much of this gas was burned or flared and an opportunity for financial recovery was missed, not to mention the damage that was done to the environment," he added.

According to *Reuters*, the African nation is currently developing a major offshore project, with costs estimated at around \$12bn. The new venture is expected to increase Angola's exporting capacity by 5.2 million tonnes of liquefied natural gas (LNG) on an annual basis. Angola LNG is a joint venture between Sonangol, the country's national oil company (NOC), Chevron, BP, Eni and Total.

Angola, which is an active Member of OPEC and the historic 'Charter of Cooperation', produces 1.47m b/d of crude oil and possesses impressive proven oil reserves, estimated at 8.16bn b, according to OPEC's *Annual Statistical Bulletin*. 



## ADNOC undergoes project expansion plans



*World Energy Council* — The Abu Dhabi National Oil Company (ADNOC) is swiftly moving ahead on a series of onshore and offshore development projects as it aims to significantly ramp up its oil and gas production capacity by 2030.

The state-owned giant is investing billions of dollars in a programme to boost its oil production capacity up to 4m b/d by 2020 and to 5m b/d by 2030.

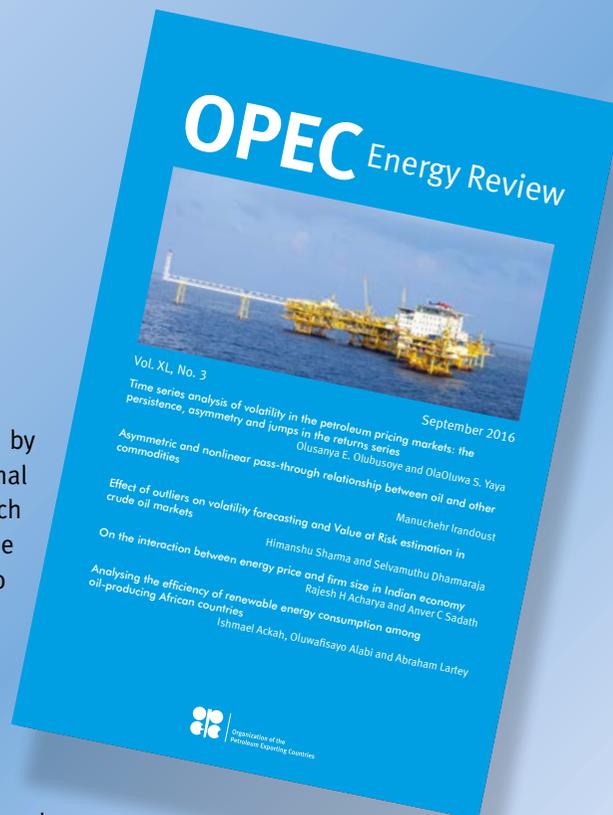
In addition, as a part of an ambitious effort to boost domestic gas production, it has embarked on a \$20 billion-plus plan to develop sour gas projects, including the Hail & Ghasha, Dalma, Nasr and Shuwaihat fields.

ADNOC presently produces more than 10.5 billion cubic feet/day of natural gas and aims to add more than 1.5bn cu ft/d of incremental production from offshore sour gas developments over the next five years.

The oil and gas company has issued tenders this year for multiple packages involving its giant Hail and Ghasha sour gas development, which together are likely to worth upwards of \$10bn. 

ADNOC Petrol Station in the Emirate of Fujairah, United Arab Emirates.

# CALL FOR PAPERS



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

The three main objectives of the publication are to:

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

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

The OPEC Energy Review welcomes submissions from academics and other energy experts.

Submissions should be made via Scholar One at: <https://mc.manuscriptcentral.com/opec> (registration required).

A PDF of "Author Guidelines" may be downloaded at Wiley's OPEC Energy Review page at:

[http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1753-0237/homepage/ForAuthors.html](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1753-0237/homepage/ForAuthors.html)

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

## **OPEC Energy Review**

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## Cocoa in Ghana: a strategically important commodity

“The cornerstone of our cocoa business is our strong footing in countries where the ingredients are grown.”

— Olivier Lieutard,  
Touton Deputy Chief  
Executive Officer

### Deep development impact

At a time when overseas development aid is declining, private investment flows sometimes seem unaligned with sustainable development, and trade tensions are ongoing, the OPEC Fund for International Development is working hard to strengthen its partnerships with other development actors and provide support where it's needed most.

Better international cooperation is needed to ensure that sufficient finance and knowhow exist to provide developing countries with the opportunity to achieve the Sustainable Development Goals. With this in mind, this article provides an example of the many ways the OPEC Fund works with others to deepen its development impact.



New investment aims at strengthening a sustainable supply chain that promotes good agricultural, economic, social and environmental practices.

Located along the Gulf of Guinea and the Atlantic Ocean, Ghana's tropical climate is conducive to growing good quality cocoa beans. The West African country is the second largest cocoa producer worldwide after nearby Côte d'Ivoire.

The cocoa industry is strategically important to Ghana, providing some 21 per cent of export revenues, accounting for about 3.5 per cent of GDP and supporting around 800,000 farmer families.

The privately owned Touton Group, one of the major cocoa traders with a significant world market share, has strong links to Ghana. It is one of the major off-takers of cocoa beans from the Ghana Cocoa Board and runs several cocoa sustainability programmes in the country.

The OPEC Fund recently agreed to contribute \$20 million to a trade finance facility to Cocoa Touton Processing Company (CTPC), arranged by French bank Natixis. CTPC is Touton's Ghanaian cocoa processing company, sourcing local cocoa beans and producing cocoa mass. The facility will be used for the purchase, storage, processing and sales of cocoa beans and cocoa products, as well as for the hedging of related commodity price risk. A consortium

of major banks are also participating in the transaction, which will provide a total facility of up to \$150 million for CTPC. “This is a very important facility for us,” said Touton's Deputy Chief Executive Officer Olivier Lieutard on a recent visit to the OPEC Fund's Vienna headquarters. “The facility will benefit Ghana's cocoa industry, its farmers and ultimately the country's economy. We already have 145 employees in CTPC Ghana and over 50 officers partnering with cocoa communities through Touton's Sustainable Rep Office in Ghana.

“Working with the OPEC Fund and its partners means we can prepay goods coming from smallholder communities and expand our operations.”

Touton is a leading agro-industrial company that delivers responsibly-sourced cocoa, coffee, vanilla and other natural ingredients to customers around the globe. “We have been a major player in the global cocoa trade for decades,” explained Lieutard. “In addition to sourcing cocoa beans, since 2015 Touton processes cocoa mass in Ghana. The cornerstone of our cocoa business is our strong footing in the countries where the ingredients are grown, which allows us to maintain control over

# OPEC Fund for International Development

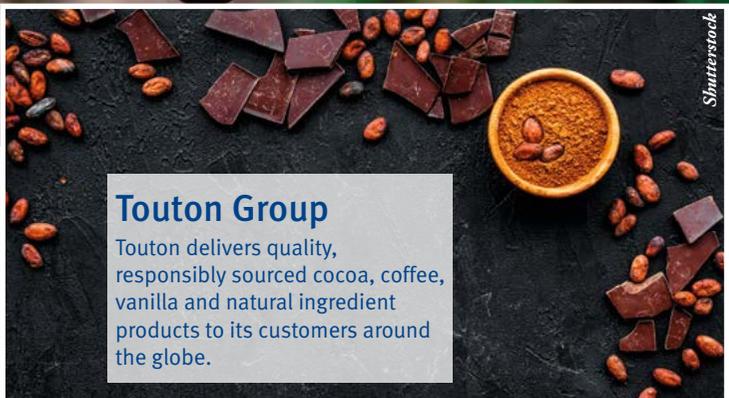


the supply of products from origin right up to delivery to customers.” With subsidiaries in originating regions, and agents in key locations, Lieutard says Touton’s strength lies in the skills of its workers, the cultural diversity of its teams, and a deep understanding of the countries in which the company operates.

Touton is committed to the development of a sustainable supply chain that promotes the implementation of good agricultural, economic, social and environmental practices.

The company’s first sustainability programmes date back to the late 1990s when the group started working on projects to increase cocoa farmers’ livelihoods around its own plantation in Côte d’Ivoire. The cocoa beans Touton sources through its sustainability programmes are traceable all along the supply chain, from origin to the consumer, allowing better monitoring and understanding of the communities of farmers the company works with.

Touton’s cocoa-related sustainable development achievements to date include: training more than 13,000 farmers on good agricultural, social and environmental practices; providing in-depth training for farmers on financial literacy; and promoting diversification to include cash crops to support cocoa households’ incomes and improve diets. In addition, Touton has developed a unique partnership with the Ghana Cocoa Board, Forestry Commission and a consortium of partners to address causes of deforestation through an ambitious Landscape Governance Programme. 



## Touton Group

Touton delivers quality, responsibly sourced cocoa, coffee, vanilla and natural ingredient products to its customers around the globe.

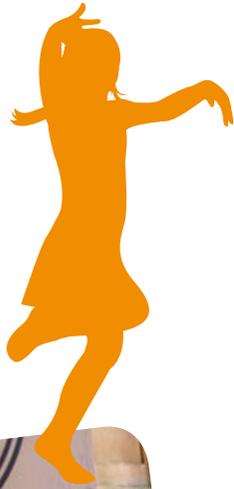
## TOUTON: in numbers

145 employees  
in CTPC Ghana

\$20m

Amount the OPEC Fund recently agreed to contribute to CTPC trade finance facility

50 officers  
partnering with cocoa communities



# Dazzle and delight for youngsters

*What do OPEC's talented staff do in their spare time? One of OPEC's hard-working support staff, Ena Romec, conducts a children's orchestra!*



There is no such thing in Vienna as a children's ball typically, because the ball season in Vienna is reserved only for adults.

However, this children's ball is a sister of the All for Autism concert. The All for Autism concert takes place every year in May at Vienna's Konzerthaus and it is organized by the Art Agency of Irina Gulyaeva.

Since big concert halls are rather boring for little kids, especially between two and six years old, the Art Agency came up with the idea of the Children's Ball.

All the proceeds from tickets (as well as the money from All for Autism ticket sales) go to charity, in this case the Österreichische Autistenhilfe, to raise awareness that Autism Spectrum Disorder (ASD) is not an illness and it should not be treated as an illness.

Unfortunately, in Austria, the public health insurance only covers diagnostic expenses for ASD. That leaves parents alone in their battle with this disorder and payment for proper treatment of ASD. Children with ASD are often either left alone in the corner of a classroom or kindergarten or are told to be still and quiet, which is very hard for them to do. Thus, the idea came about to bring them somewhere where they can express themselves freely, which could not be done in a big concert hall such as Vienna's Konzerthaus or Vienna's Musikverein (where the first All for Autism concerts were held).

With that in mind, the Art Agency of Irina Gulyaeva made up special activities at this year's Children's Ball. Activities for children and together with their parents include dance workshops, classical music workshops, ballet and violin workshops, toilet paper recycling, baking, and learning how to dance quadrille. Each child will receive a gift and children from 2–18 are welcome.

Every ball has its opening, and so does this one. In this case, it is a performance by Edmund Angerer's Toy Symphony. OPEC's Ena Romec will be conducting it. The symphony is extra-special because the children use so-called 'toy instruments'. These include the cuckoo, nightingale, quail, rattles, children's trumpet and children's drum, accompanied by stringed instruments (violins and cello).

*Photos courtesy Elena Prokhorova.*



## Briefings

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

### Visits to the Secretariat



**June 11**

Students from the University of Texas at Arlington, TX, US.



**June 11**

Officials from the Reform Commission China, Beijing, China.



**June 13**

Students from the Maria Curie-Skłodowska University, Lubin, Poland.



**June 21**

Students from the HTBLA Vienna, higher school of technical education (HTL), Vienna, Austria.



**June 27**

Young diplomats from the German Embassy to Austria, Vienna, Austria.



**July 8**

Students from the European Academy Bavaria, Munich, Germany.



**July 18**

Students from Austria and China, organized by IES Abroad, Vienna, Austria.



**July 22**

Students from the Youth Organization Freedom and Democracy, Amsterdam, the Netherlands.



**July 23**

Students from the World Youth Academy from Vienna, Austria, and Latin America.



**July 25**

Chinese youth diplomatic advanced training programme participants from the Research Center of United Nations and International Organizations (RCUNIO), Beijing, China.



**July 29**

Students from China, organized through the Diplomatic Academy Vienna, Austria.

## Forthcoming events

**Basra international oil and gas conference and exhibition, December 3–5, 2019**, Basrah, Iraq. Details: Expotim International Fair Organization, Inc Fulya Mah Vefa Deresi Sok, No: 9 34394, Sisli, Istanbul, Turkey. Tel: +90 212 356 00 56; fax: +90 212 356 00 96; e-mail: info@expotim.com; website: www.basraoilgas.com.

**Production optimization Middle East, December 3–5, 2019**, Manama, Bahrain. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.oilandgasiq.com/events-production-optimisation-middle-east?utm\_medium=portal&mac=IQPCCORP.

**US LPG and petrochemical feed stocks, December 3–5, 2019**, Houston, TX, USA. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/americas-lpg.

**National Oil Companies Assembly, December 4, 2019**, London, UK. Details: The Exchange Ltd, 5<sup>th</sup> Floor, 86 Hatton Garden, London EC1N 8QQ, UK. Tel: +44 207 067 1800; fax: +44 207 242 2673; e-mail: marketing@theenergyexchange.co.uk; website: www.energycouncil.com/event-events/noc-assembly.

**5<sup>th</sup> Jordan international energy summit, December 10, 2019**, Amman, Jordan. Details: Global Event Partners Ltd, London Office, 20–22 Bedford Row, London WC1R 4JS, UK. Tel: +44 203 488 11 91; e-mail: enquiries@gep-events.com; website: http://jies-summit.com.

**18<sup>th</sup> annual shutdowns turnarounds super conference, December 10–11, 2019**, Calgary, AB, Canada. Details: The Canadian Institute, 1329 Bay Street, Toronto, ON M5R 2C4, Canada. Tel: +1 877 927 7936; fax: +1 877 927 1563; e-mail: CustomerService@CanadianInstitute.com; website: www.canadianinstitute.com/18<sup>th</sup>-annual-shutdowns-turnarounds-superconference.

**Cyprus offshore pipelines and technology, December 10–11, 2019**, Nicosia, Cyprus. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.oilandgasiq.com/events-offshorecyprus?utm\_medium=portal&mac=IQPCCORP.

**18<sup>th</sup> gas storage outlook forum, January 7, 2020**, Houston, TX, USA. Details: S&P Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 17 66 142; fax: +44 207 17 68 512; e-mail: cynthia\_rugg@platts.com; website: www.spglobal.com/platts/en/events/americas/gas-storage-outlook/summary.

**Oil movement, storage and troubleshooting, January 12–16, 2020**, Dubai, UAE. Details: EuroMaTech, Training and Management Consultancy, Business Central Towers, Media City Dubai, UAE. Tel: +971 44 57 18 00; e-mail: info@euromatech.ae; web-site: www.euromatech.com/seminars/oil-movement-storage-and-troubleshooting.

**Argus Middle East petroleum coke conference, January 13–14, 2020**, Abu Dhabi, UAE. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website www.argusmedia.com/en/conferences-events-listing/middle-east-petroleum-coke.

**Argus Middle East LPG and petrochemical feedstocks Conference, January 15–16, 2020**, Abu Dhabi, UAE. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website www.argusmedia.com/en/conferences-events-listing/middle-east-lpg.

**Energy storage 2020, January 15–16, 2020**, Berlin, Germany. Details: ASDEvents, Amsterdam, The Netherlands. Tel: +31 20 48 61 286; e-mail: customerservices@asdevents.com; website: www.asdevents.com/event.asp?id=21706.

**13<sup>th</sup> European oil storage conference, January 22–23, 2020**, Amsterdam, The Netherlands. Details: S&P Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 17 66 142; fax: +44 207 17 68 512; e-mail: cynthia\_rugg@platts.com; website: www.spglobal.com/platts/es/events/emea/european-oil-storage/venue.

**Oil and gas IOT summit, January 22–23, 2020**, Lisbon, Portugal. Details: Intrinsic Communications Ltd, St Magnus House, Lower Thames Street, London EC3R 6HE, UK. Tel: +44 203 00 49 791; e-mail: info@intrinsic-communications.com; website: www.oilandgas-iot.com.

**Middle East and North Africa energy 2020, January 27–28, 2020**, London, UK. Details: Chatham House, 10 St James's Square, London SW1Y 4LE, UK. Tel: +44 207 95 75 700; fax: +44 207 95 75 710; e-mail: contact@chathamhouse.org; website: www.chathamhouse.org/conferences/middle-east-and-north-africa-energy-2020.

**European gas conference, January 27–29, 2020**, Vienna, Austria. Details: Oil and Gas Council, Bedford House, 69–79 Fulham High Street, London SW6 3JW, UK. Tel: +44 207 38 48 056; website: https://energycouncil.com/event-events/european-gas-conference.

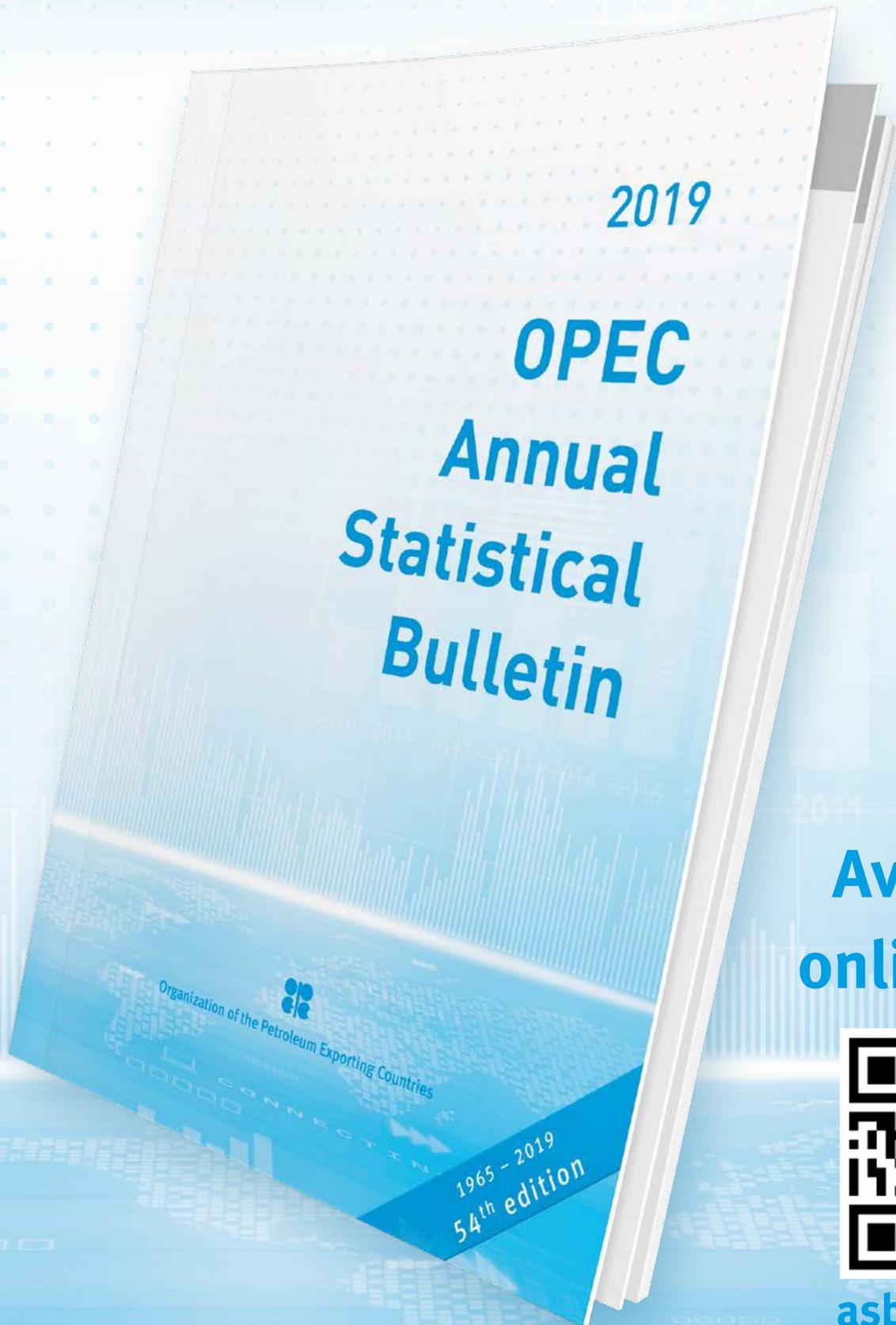
**LNG bunkering summit 2020, January 28–30, 2020**, Amsterdam, The Netherlands. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 368 9300; fax: +44 207 368 9301; e-mail: enquire@iqpc.co.uk; website: www.oilandgasiq.com/events-lngbunkering?utm\_medium=portal&mac=IQPCCORP.

**20<sup>th</sup> Caribbean energy conference, January 29, 2020**, Rio Grande, Puerto Rico. Details: S&P Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 17 66 142; fax: +44 207 17 68 512; e-mail: cynthia\_rugg@platts.com; website: www.spglobal.com/platts/en/events/americas/caribbean-energy/summary.

**Oil and gas pipeline leak detection, January 29–30, 2020**, Houston, TX, USA. Details: American Business Conferences, City Centre One, 800 Town & Country Blvd, Suite 300, Houston, Texas 77024, USA. Tel: +1 800 72 13 915; fax: +1 800 71 413 59; e-mail: info@american-business-conferences.com; website: www.pipeline-leakage-detection-congress-usa.com.

**10<sup>th</sup> middle distillates conference, January 30, 2020**, Antwerp, Belgium. Details: S&P Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 17 66 142; fax: +44 207 17 68 512; e-mail: cynthia\_rugg@platts.com; website: www.spglobal.com/platts/en/events/emea/middle-distillates/summary.





2019

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# Winter oil market outlook

October 2019

Product markets in the last two months have benefitted from seasonal maintenance which have led to a tighter product market environment, providing some support to product crack spreads and refining margins. With most refineries now back online in all main regions, refinery intakes have risen steadily, to stand some 1.0 million barrels/day higher in September compared with the same month last year. As a result of new refining capacity over the last year, refinery runs during winter are likely to reach new record highs, leading to potentially higher supply in the product markets. At the same time, economic headwinds pointing to a slowdown in manufacturing in the OECD may result in a possible decline in consumption of heavier fuels, weighing on the outlook for product markets over the winter season, while increased competition from ethane and LPG may also bite into demand for products including naphtha and transport fuels.

In the US, gasoil consumption is expected to receive support from the manufacturing, construction and freight sectors. Moreover, a seasonal pick up in heating oil demand this winter is expected, despite increasing substitution by natural gas. Jet fuel markets should also remain supported by an uptick in travel activities, particularly in the holiday season. In contrast, the seasonal decline in gasoline demand in the winter months will once again weigh on prices and ultimately refining economics. This may result in higher gasoline exports in 4Q19 to prevent strong inventory builds and to keep gasoline prices stable. Naphtha crack spreads will also come under pressure and suffer losses as strong LPG output, and lower LPG prices in the US continues to compete with naphtha.

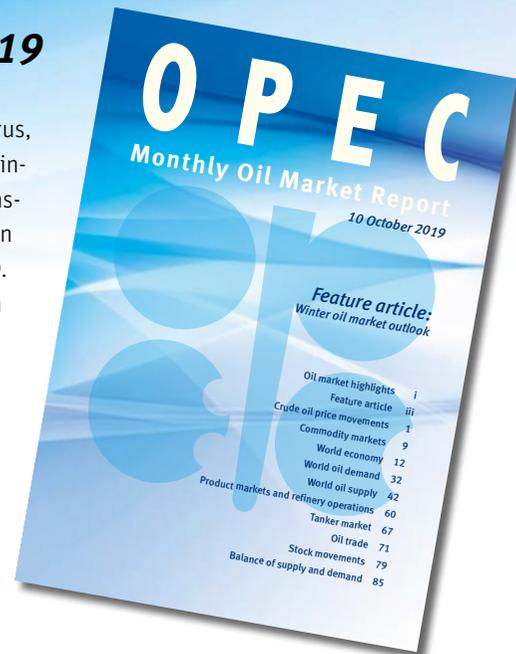
In Europe, the slowdown in transportation fuel demand will continue representing a challenge to product markets. Despite a slight pick-up in gasoline consumption in 1H19, mainly in France, unfavourable economic fundamentals have dampened demand in Germany. Moreover, a mild pick up in gasoline powered vehicle sales observed in France, Italy and Spain has been offset by a decline in overall car sales. The pressure in Europe's product markets could be further exacerbated by new cracking and other upgrading projects

in Russia and Belarus, which is projected to increase regional transport fuel production by the end of 2019. Furthermore, data reflects a declining trend in product demand in the fourth quarter, particularly for naphtha and residual fuel.

In Asia, gas-oil markets will remain supported by industrial and transportation demand. However, product balances will most likely soften compared with the previous year, once all refineries restore their operation activities in 4Q19, resulting in excess product supply, particularly for gasoline.

Concerning the IMO 2020, a combination of declining heavy crude availability, increased refinery conversion capacity, growing appetite for heavy crude, and stricter sulphur limits on marine bunker fuel are likely to lead to rising prices for low sulphur fuel oil (LSFO). At the same time, the declining availability of high sulphur fuel oil (HSFO) could also hold up prices for that product to some degree. Together with a mismatch in terms of quality between available and required crude slates for refinery intake, this could provide limited support to processing rates as refineries will have to resort to higher intakes to boost fuel oil or compliant marine fuel production.

Looking ahead, factors such as the onset of the winter season, healthy demand for middle distillates in Asia, and preparations for IMO should support middle-to-heavy product markets in the coming months. At the same time, uncertainties regarding the global economic outlook, declining car sales and fuel substitution programmes in Europe, as well as higher products supply from Asia could limit the upward trend in the product markets this winter.



# MOMR ... oil market highlights

October 2019

**Crude oil price movements** — The OPEC Reference Basket (ORB) rose \$2.74, or 4.6 per cent, month-on-month (m-o-m) in September to settle at \$62.36/b, supported by concerns about supply disruptions and geopolitical risks. In September, ICE Brent averaged \$2.79, or 4.7 per cent, m-o-m higher at \$62.29/b, while NYMEX WTI rose m-o-m by \$2.12, or 3.9 per cent, to average \$56.97/b. Year-to-date (y-t-d), ICE Brent was \$7.98, or 11.0 per cent, y-o-y lower at \$64.75/b, while NYMEX WTI declined by \$9.69, or 14.5 per cent, y-o-y to \$57.10/b. Brent and Dubai crude oil forward price structures were in steep backwardation in September, while the WTI backwardation curve flattened slightly in the front end. Hedge funds and other money managers turned slightly positive on the outlook for crude oil prices compared to a month earlier.

**World economy** — The global economic growth forecast remains at 3.0 per cent for 2019. All regions remain unchanged in terms of growth estimates for the year, with the exception of Russia, which was revised down by 0.1 percentage points (pp) to 1.0 per cent, following low 1H19 growth. For 2020, the global GDP forecast was revised down to 3.0 per cent from 3.1 per cent. Among other issues, it seems increasingly likely that the slowing growth momentum in the US will carry over into 2020, while ongoing uncertainties surrounding the EU, including Brexit, will remain. Moreover, rising US tariffs on EU imports and ongoing US-China trade issues are dampening growth momentum. US growth was revised down by 0.1 pp to 1.8 per cent for 2020, while Euro-zone growth remains at 1.1 per cent and Japan at 0.3 per cent. China's and India's growth forecast for next year is also unchanged at 5.9 per cent, and 6.7 per cent, respectively. Similarly, Brazil's 2020 growth forecast remains unchanged at 1.4 per cent, while Russia remains at 1.2 per cent.

**World oil demand** — In 2019, world oil demand growth was revised down marginally by 40,000 b/d to 980,000 b/d, reflecting the latest available data in OECD Americas and Asia Pacific which necessitated the downward adjustment. In 2020, world oil demand

is forecast to grow by 1.08m b/d, in line with last month's projections. OECD countries are anticipated to add 70,000 b/d to global oil requirements in 2020, while non-OECD countries are projected to be the largest contributor to world oil demand growth by adding an estimated 1.01m b/d, both unchanged from the last month's projections. As a result, total world oil demand is anticipated to average 99.8m b/d in 2019 and 100.88m b/d in 2020.

**World oil supply** — The non-OPEC oil supply growth forecast for 2019 was revised down by 160,000 b/d from the previous assessment to a level of 1.82m b/d. This is due to downward revisions mainly in the US, as well as in Norway and the UK, which outpaced upward revisions in Kazakhstan and China, among others. US oil supply growth has now been revised down to 1.67m b/d y-o-y. The non-OPEC oil supply growth forecast for 2020 was revised down by 50,000 b/d from last month's assessment to 2.20m b/d y-o-y due to downward revisions to Kazakhstan and Russia, which outpaced upward revisions, mainly to China. The 2020 non-OPEC supply forecast remains subject to many uncertainties including oil price levels, capital spending, infrastructure constraints, as well as drilling and completion activities, particularly in the US. OPEC NGLs were revised down by 20,000 b/d and are now expected to grow by 50,000 b/d to average 4.81m b/d in 2019, while growth will slow to 30,000 b/d in 2020, reaching 4.84m b/d. In September, OPEC crude oil production decreased by 1.318m b/d to average 28.49m b/d, according to secondary sources.

### Product markets and refining operations

— Globally, product markets saw mixed performances last month. In the US, product markets saw gains mainly supported by positive developments at the middle and bottom of the barrel, as refinery intake cuts from both scheduled maintenance and unplanned weather-related outages affected product prices, providing a lift in cracks. In Europe, the top of the barrel weakened, mainly due to lacklustre regional demand amid slower gasoline exports to the US. Asian product

markets showed the strongest positive performance compared with the other main regions, benefiting from solid gains recorded across the barrel. Strong gasoline spot deliveries to India as well as lower naphtha availability in the region, which led to higher prices for the same product, were the main contributors to the upside momentum.

**Tanker market** — Average dirty tanker spot freight rates rose 25 per cent m-o-m in September, with gains experienced across all classes. The seasonal upward trend was amplified by unplanned disruptions, allowing rates to recover from the relatively sluggish performance seen for most of this year, which has been due in part to a high level of new deliveries in the first half of 2019. Compared to a year ago, only VLCCs exhibited positive performances, which were offset by the cumulative declines in Suezmax and Aframax. In the clean tanker market, spot freight rates remained at low levels in September, weighed down by ample availability lists, particularly West of Suez.

**Stock movements** — Preliminary data for August showed that total OECD commercial oil stocks rose by 10.0m b m-o-m to stand at 2,937m b, which is 85m b higher than the same time one year ago, and 11m b above the latest five-year average. Within the components, crude stocks fell by 21.9m b m-o-m to stand at 28m b below the latest five-year average, while product stocks rose by 32m b m-o-m to remain 39m b above the latest five-year average. In terms of days of forward cover, OECD commercial stocks rose by 0.4 days m-o-m in August to stand at 60.9 days, which is 1.6 days above the same period in 2018, but 1.2 days below the latest five-year average.

**Balance of supply and demand** — Demand for OPEC crude in 2019 was revised up by 100,000 b/d from the previous report to stand at 30.7m b/d, which is 900,000 b/d lower than the 2018 level. Demand for OPEC crude in 2020 was also revised up by 200,000 b/d from the previous report to stand at 29.6m b/d, which is around 1.2m b/d lower than the 2019 level.

*The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for October 2019. Published by the Secretariat's Petroleum Studies Department, the publication may be downloaded in PDF format from our Website ([www.opec.org](http://www.opec.org)), provided OPEC is credited as the source for any usage. The additional graphs and tables on the following pages reflect the latest data on OPEC Reference Basket and crude and oil product prices in general.*

# Recent developments in global oil inventories

November 2019

Global oil inventories consist of three major components. The first is a combination of total OECD commercial oil stocks and Strategic Petroleum Reserves (SPR). OECD commercial stocks typically serve as a key indicator of the status of the oil market, as seasonal variations are linked to oil demand through an inverse relationship. Stocks in OECD countries are covered by data routinely obtained through national government reporting systems.

The second major component is non-OECD inventories, which have become more important in recent years as non-OECD oil demand has increased, requiring more stockpiling. Inventories in non-OECD are hard to track due to the lack of complete data. In the absence of regularly reported data, estimates are arrived at using information released by companies and ministries, as well as figures published in the JODI database, which features official country data.

The final component, independent storage as well as oil-at-sea, has emerged in recent years. While the latter provides an important operational link between exporter and consumer countries, it plays a negligible role in the market as the volumes at sea only fluctuate in a narrow range.

An assessment of developments in global inventories since the inception of the 'Declaration of Cooperation' (DoC) indicates diverging trends in OECD and non-OECD stocks. While OECD commercial inventories have fallen by 57 million barrels, non-OECD stocks are estimated to have seen a build of 138m b. At the same time, the surplus over the latest five-year average has fallen massively in the OECD by 272m b, while the overhang in the non-OECD has decreased by just 42m b.

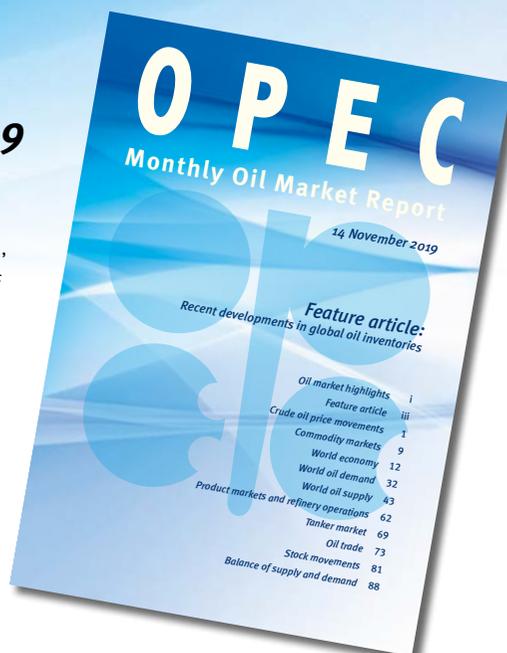
This is an indication that the DoC has had a stronger impact on OECD inventories compared with non-OECD stocks, as emerging and developing countries continue to build their reserves, as well as fill new refinery capacity to meet growing oil demand.

At the same time, since the beginning of the DoC to the end of 3Q19, non-OECD stocks have risen by more than two percentage points to now represent nearly a third of all global inventories. Meanwhile, in terms of days of forward demand cover, non-OECD inventories stood at around 42 days at the end of 3Q19, less than half of the OECD average of 92 days.

The growing share of non-OECD inventories in global stocks demonstrates the important role that non-OECD stocks play in the market, a trend that will continue as the bulk of world oil demand growth is projected to come from the non-OECD and as these emerging countries increase their inventories to reach the OECD standard for days of forward cover.

If the data of all global oil stock components are recorded accurately, the change in total oil stocks should theoretically be equal to the difference between world oil demand and global supply. Therefore, monitoring developments in non-OECD oil inventories is crucial to grasp the full picture of global oil stocks and reduce the observed discrepancies in the supply/demand balance and global inventories in recent years.

Looking ahead, the decisions taken by OPEC and participating non-OPEC producing countries in accordance with the 'DoC' have clearly played a key role in supporting stability in the oil market. Better transparency in reported data will also allow for a more accurate assessment of the state of the oil market and could help in continuing these efforts on a more sustainable path. ■■



# MOMR ... oil market highlights

## November 2019

**Crude oil price movements** — The OPEC Reference Basket (ORB) value declined by \$2.45/barrel, or 3.9 per cent, month-on-month (m-o-m) in October to settle at \$59.91/b. In October, ICE Brent was on average \$2.65, or 4.3 per cent, m-o-m lower at \$59.63/b, and NYMEX WTI fell m-o-m by \$2.96, or 5.2 per cent, to average \$54.01/b. Year-to-date (y-t-d), ICE Brent was \$9.37, or 12.7 per cent, lower at \$64.21/b, while the NYMEX WTI declined by \$10.46, or 15.6 per cent, to \$56.76/b, compared with the same period a year earlier. The backwardation price structures of both ICE Brent and DME Oman flattened in October, mainly in prompt forward months, while the NYMEX WTI market structure was slightly in contango for most of October. Hedge funds and other money managers were more concerned about the outlook of crude oil prices in October than they had been in the previous month.

**World economy** — The global economic growth forecast remains at 3.0 per cent for both 2019 and 2020. Growth forecasts for all major regions remain unchanged for 2019. For 2020 a small downward revision is expected for the Euro-zone and Brazil's forecast was revised up slightly. Euro-zone growth remains at 1.2 per cent for 2019 but was revised down to 1.0 per cent for 2020. Japan's growth forecast is unchanged at 0.9 per cent for 2019 and 0.3 per cent for 2020. China and India's growth forecast were also unchanged, standing at 6.2 per cent and 6.1 per cent for 2019 and 5.9 per cent and 6.7 per cent for 2020, respectively. Brazil's 2019 growth forecast remains unchanged at 0.8 per cent, while the 2020 forecast was revised up slightly to 1.6 per cent. Russia's forecast remains at 1.0 per cent for 2019 and 1.2 per cent for 2020. Risk remains skewed toward the downside, especially with underlying trade-related issues and associated uncertainties.

**World oil demand** — In 2019, global oil demand growth was unchanged, despite some upward revisions to the Middle East in 3Q19 and 4Q19 offset by downward revision in OECD Americas, mainly to reflect weaker-than-expected demand in OECD Americas during 2Q19 and 3Q19. Global oil demand growth is estimated at 980,000 b/d.

In 2020, oil demand growth is forecast at 1.08m b/d, also unchanged from the last month's report. Other Asia and China are assumed to be the largest contributors to oil demand growth with a combined addition of 680,000 b/d. The OECD is projected to increase by 70,000 b/d. Non-OECD is assumed to be the largest contributor to oil demand growth, rising by 1.01m b/d.

**World oil supply** — Non-OPEC oil supply growth for 2019 remains at 1.82m b/d y-o-y, as higher-than-expected oil production in Canada, the UK and Kazakhstan, was offset by downward adjusted production data for the US, and Indonesia, among others. The US, Brazil, China, the UK, Australia and Canada are the key drivers of growth in 2019 while Mexico and Norway are projected to see the largest declines. Non-OPEC oil supply growth in 2020 was revised down by 36,000 b/d from last month's assessment and is now forecast to grow by 2.17m b/d, mainly due to the US, which was revised down by 33,000 b/d to now show growth of 1.5m b/d for the year. The US, Brazil, Norway, Russia, Canada, Kazakhstan and Australia are expected to be the main growth drivers for next year, while Mexico, Indonesia, Egypt, the UK, Colombia and Egypt are forecast to see the largest declines. OPEC NGLs production in 2019 was revised down by 11,000 b/d and is now expected to grow by 0.04m b/d. For 2020, OPEC NGLs growth is forecast at 30,000 b/d y-o-y. In October, OPEC crude oil production increased by 943,000 b/d to average 29.65m b/d, according to secondary sources.

**Product markets and refining operations** — Product markets in October saw a mixed performance. In the Atlantic Basin, markets strengthened as heavy refinery maintenance works led to restricted product output, supporting product prices as well as refining economics. Another supporting factor this month was the recovery in naphtha markets in the US and Europe, as crack spreads for the same product trended upward for the second consecutive month, re-entering positive territory in the USGC. Meanwhile, in Asia, robust y-o-y growth in product output amid refining capacity additions in China has contributed to a rise in product inventory levels in Singapore,

which weighed on Asian product markets. The sanctions applied last month on some Chinese ships and the resulting hike in freight rates led to a severe weakening in fuel oil markets in all regions, with the largest impact being felt in Asia.

**Tanker market** — A host of factors in the tanker market in October pushed rates to record highs on all major routes. The market had been expecting a seasonal pickup in demand and some tightness on the tanker availability side, as tankers were scheduled to be taken out of the market to install scrubbers ahead of IMO 2020. However, geopolitical developments, such as the announcement of sanctions on two subsidiaries of one of the largest shippers in the world, China's Cosco, led to panic fixing and rates surged. While rates quickly fell back, average dirty spot freight rates in October were more than doubled m-o-m and were sharply higher y-o-y. Clean rates were also pulled higher, as some clean ships were repurposed to carry dirty freight, resulting in a lower, but still considerable, increase on average in clean spot freight rates.

**Stock movements** — Preliminary data for September showed that total OECD commercial oil stocks fell by 23.5m b m-o-m to stand at 2,945m b, which is 87.7m b higher than the same time one year ago, and 28.2m b above the latest five-year average. Within the components, crude stocks fell by 13.8m b m-o-m to stand at 12.5m b above the latest five-year average, while product stocks also decreased by 9.7m b m-o-m to stand at 15.7m b above the latest five-year average. In terms of days of forward cover, OECD commercial stocks fell by 0.7 days m-o-m in September to stand at 60.8 days, which is 1.6 days above the same period in 2018, but 0.8 days below the latest five-year average.

**Balance of supply and demand** — Demand for OPEC crude in 2019 was unchanged from the previous report to stand at 30.7m b/d, which is 900,000 b/d lower than the 2018 level. Demand for OPEC crude in 2020 also remained unchanged from the previous report to stand at 29.6m b/d, which is around 1.1m b/d lower than the 2019 level.



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**Table 1: OPEC Reference Basket spot crude prices**
**\$/b**

Crude/Member Country	2018			2019										Weeks 39-43/2019 (week ending)				
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25
Arab Light – Saudi Arabia	80.02	66.36	58.24	59.63	64.85	67.40	71.88	70.78	63.45	65.61	60.84	62.74	60.99	63.64	60.12	60.13	60.92	61.76
Basrah Light – Iraq	78.26	64.12	56.12	58.20	63.25	66.05	70.45	69.77	62.74	64.39	59.20	61.85	59.52	62.64	58.79	58.82	59.38	60.35
Bonny Light – Nigeria	82.09	65.90	57.82	60.51	65.19	67.71	72.81	72.24	65.59	65.95	60.46	64.02	61.45	64.30	60.83	61.38	60.99	62.44
Djeno – Congo*	78.52	62.06	54.36	56.77	61.40	63.48	68.55	68.25	61.43	61.31	56.23	59.97	57.13	60.25	56.56	57.06	56.67	58.12
Es Sider – Libya	79.62	63.11	55.66	58.27	63.15	65.38	70.45	70.25	63.58	63.36	58.38	62.32	59.78	62.60	59.15	59.71	59.32	60.77
Girassol – Angola	82.24	65.66	57.52	59.98	65.30	67.16	72.88	72.95	65.69	65.98	61.64	65.36	61.34	65.60	61.77	61.54	60.29	61.54
Iran Heavy – IR Iran	77.04	62.83	54.84	56.29	61.39	64.17	68.52	67.86	60.88	62.65	57.77	60.32	57.94	61.34	57.26	57.09	57.88	58.66
Kuwait Export – Kuwait	78.56	65.15	57.10	58.65	63.93	66.78	71.20	70.07	62.58	64.90	60.35	62.16	60.52	63.19	59.67	59.63	60.50	61.28
Merey – Venezuela	75.25	65.87	49.89	50.90	55.85	57.75	58.95	59.15	53.98	61.84	49.17	61.79	45.69	62.10	49.49	44.19	43.44	45.92
Murban – UAE	81.28	68.05	59.33	60.81	65.64	68.01	71.51	69.70	62.75	64.86	60.19	62.39	60.88	63.54	59.70	60.20	61.05	61.38
Oriente – Ecuador	75.48	59.76	51.26	55.10	60.42	63.66	67.61	65.60	58.57	61.46	56.09	57.47	54.60	57.00	51.59	51.67	54.05	58.12
Rabi Light – Gabon	80.37	63.91	56.21	58.62	63.25	65.33	70.40	70.10	63.28	63.16	58.08	61.82	58.98	62.10	58.41	58.91	58.52	59.97
Saharan Blend – Algeria	81.12	64.96	56.41	59.27	64.30	66.38	71.15	71.20	64.83	63.92	58.23	62.47	60.48	62.75	59.74	60.41	60.02	61.47
Zafiro – Equatorial Guinea	81.82	65.36	57.66	60.09	64.92	67.15	72.65	72.10	65.48	65.58	60.81	64.47	60.86	64.75	61.02	61.07	59.82	61.27
<b>OPEC Reference Basket</b>	<b>79.39</b>	<b>65.33</b>	<b>56.94</b>	<b>58.74</b>	<b>63.83</b>	<b>66.37</b>	<b>70.78</b>	<b>69.97</b>	<b>62.92</b>	<b>64.71</b>	<b>59.62</b>	<b>62.36</b>	<b>59.91</b>	<b>63.12</b>	<b>59.23</b>	<b>59.21</b>	<b>59.69</b>	<b>60.70</b>

**Table 2: Selected spot crude prices**
**\$/b**

Crude/country	2018			2019										Weeks 39-43/2019 (week ending)				
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Sep 27	Oct 4	Oct 11	Oct 18	Oct 25
Arab Heavy – Saudi Arabia	78.47	65.40	57.24	58.58	63.57	66.31	70.60	69.59	61.81	64.29	60.19	62.19	60.22	63.37	59.49	59.32	60.24	60.94
Brega – Libya	80.42	63.91	56.16	58.72	63.49	65.63	70.60	70.35	63.68	63.31	58.23	62.07	59.48	62.35	58.86	59.41	59.02	60.47
Brent Dtd – North Sea	81.12	64.66	56.96	59.37	64.00	66.08	71.15	70.85	64.03	63.91	58.83	62.57	59.73	62.85	59.16	59.66	59.27	60.72
Dubai – UAE	79.40	65.79	57.29	59.07	64.42	66.91	70.93	69.64	61.59	63.21	58.88	61.11	59.46	62.43	58.70	58.54	59.35	60.03
Ekofisk – North Sea	82.13	65.04	57.83	60.23	64.93	66.73	72.06	72.09	65.48	64.41	59.16	63.76	61.06	64.30	60.51	61.01	60.50	62.07
Iran Light – IR Iran	78.08	62.79	55.96	58.69	62.53	64.64	70.34	70.19	60.90	62.16	58.39	60.08	57.71	60.22	56.00	56.81	57.30	58.95
Isthmus – Mexico	80.03	65.43	55.58	58.13	63.81	66.53	70.34	69.04	62.95	63.58	58.71	62.07	59.13	62.48	58.42	58.55	58.53	60.29
Oman – Oman	80.23	66.31	57.69	59.39	64.62	67.01	71.17	70.04	61.72	63.87	59.79	61.97	60.27	63.01	59.45	59.40	60.42	61.13
Suez Mix – Egypt	78.46	62.71	55.83	58.56	62.40	64.51	70.21	70.06	60.77	62.03	58.26	59.95	57.58	60.09	55.87	56.68	57.17	58.82
Minas – Indonesia*	73.66	59.17	50.28	51.72	56.94	59.63	67.64	67.52	59.83	61.56	57.40	60.18	57.36	60.91	57.04	56.60	57.09	57.74
Urals – Russia	80.16	64.41	57.18	60.26	64.10	66.21	71.90	71.68	62.47	63.73	59.95	61.65	59.28	61.79	57.57	58.38	58.87	60.52
WTI – North America	70.75	56.75	49.52	51.63	54.98	58.16	63.87	60.73	54.68	57.51	54.84	56.86	53.98	56.87	53.12	53.24	53.49	55.15

Notes:

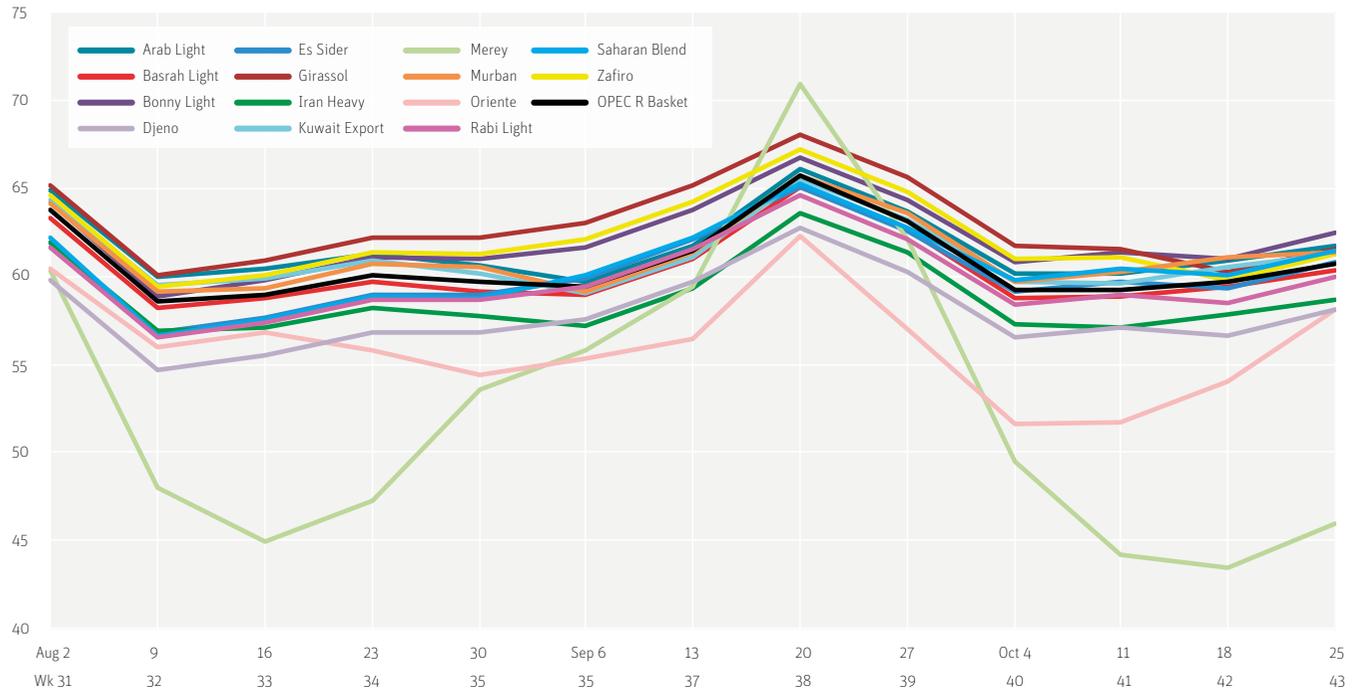
Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.

\* The Republic of the Congo joined on June 22, 2018.

Sources: Argus; Secretariat's assessments.

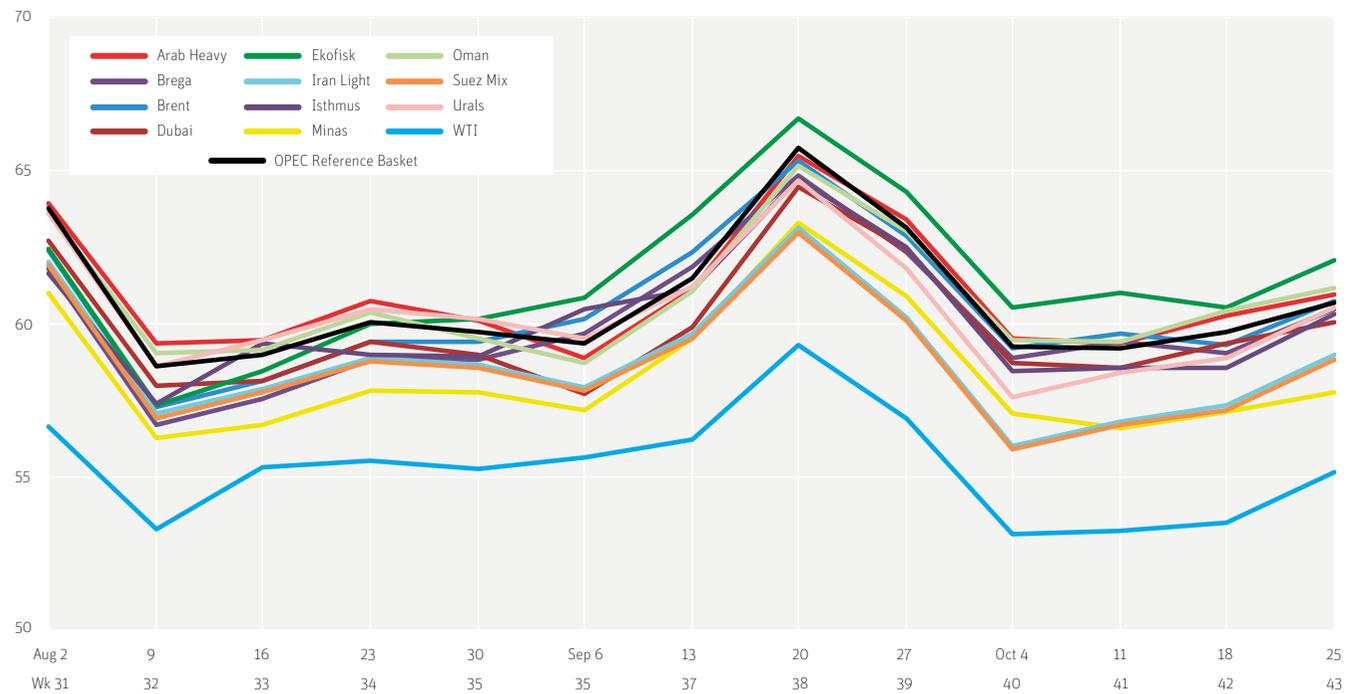
Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2019

\$/b



Graph 2: Evolution of selected spot crude prices, 2019

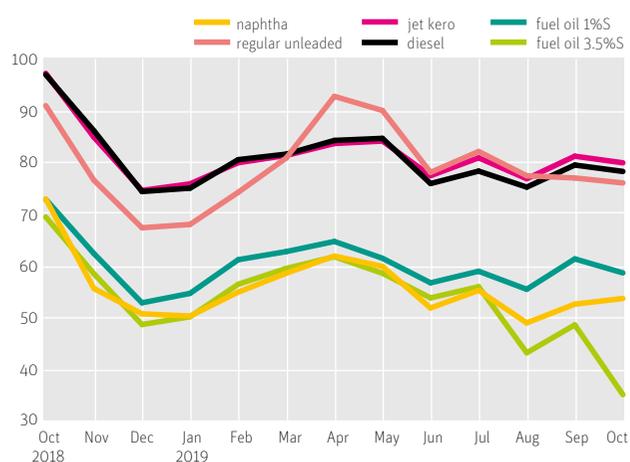
\$/b



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

\$/b

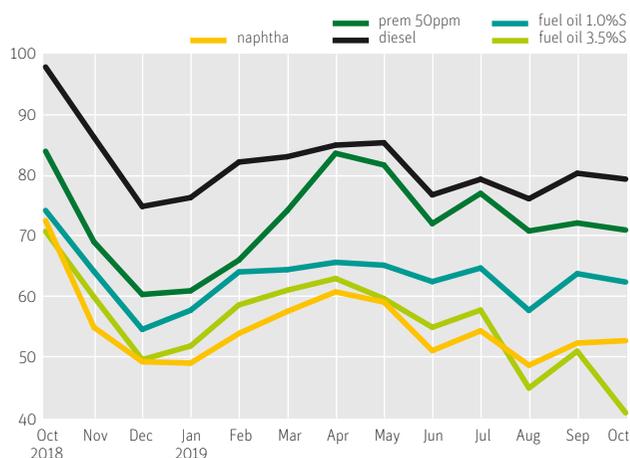
	naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
<b>2018</b>						
October	73.15	91.20	97.18	97.45	73.08	69.67
November	55.86	76.78	86.35	85.10	62.61	58.71
December	50.95	67.58	74.59	74.80	53.08	48.88
<b>2019</b>						
January	50.52	68.23	75.24	76.07	54.90	50.38
February	55.14	74.43	80.75	80.16	61.41	56.66
March	58.80	81.08	81.82	81.57	62.98	59.73
April	62.12	92.99	84.47	83.87	64.94	61.99
May	60.11	90.26	84.87	84.35	61.69	58.79
June	52.08	78.29	76.13	77.65	56.94	54.03
July	55.48	82.33	78.54	81.10	59.18	56.19
August	49.20	77.64	75.44	77.06	55.69	43.42
September	52.82	77.21	79.71	81.42	61.57	48.81
October	53.92	76.25	78.47	80.14	58.86	35.32



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

\$/b

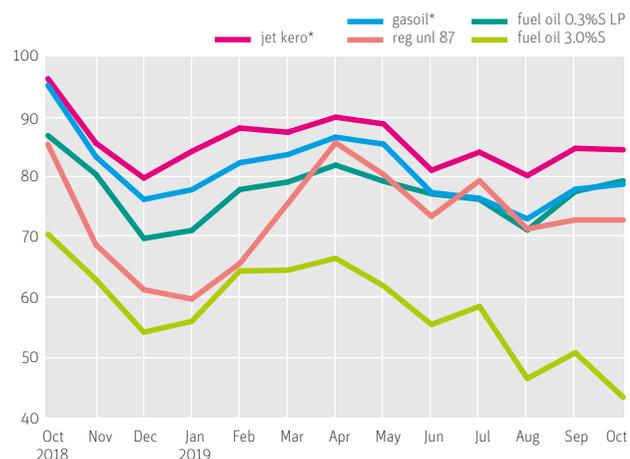
	naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
<b>2018</b>					
October	72.58	83.56	97.91	74.26	70.81
November	54.99	68.63	86.34	64.22	60.01
December	49.32	59.95	74.92	54.65	49.67
<b>2019</b>					
January	49.09	60.56	76.38	57.80	51.91
February	53.98	65.62	82.24	64.13	58.69
March	57.61	73.78	83.12	64.50	61.11
April	60.84	83.23	85.03	65.71	63.04
May	59.16	81.30	85.43	65.23	59.72
June	51.15	71.63	76.83	62.53	54.99
July	54.42	76.62	79.41	64.77	57.84
August	48.74	70.42	76.19	57.78	44.98
September	52.40	71.74	80.39	63.84	51.05
October	52.79	70.58	79.43	62.46	40.90



**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
<b>2018</b>					
October	85.32	95.12	96.22	86.79	70.44
November	68.68	83.28	85.54	80.36	62.93
December	61.24	76.22	79.75	69.75	54.20
<b>2019</b>					
January	59.71	77.82	84.17	71.07	56.00
February	65.58	82.29	88.05	77.85	64.36
March	75.53	83.64	87.35	79.09	64.48
April	85.61	86.54	89.85	81.90	66.46
May	80.34	85.37	88.74	79.23	61.88
June	73.41	77.36	81.05	77.14	55.47
July	79.32	76.39	84.05	76.23	58.48
August	71.32	73.01	80.16	71.14	46.53
September	72.82	77.91	84.68	77.52	50.80
October	72.80	78.73	84.44	79.31	43.41



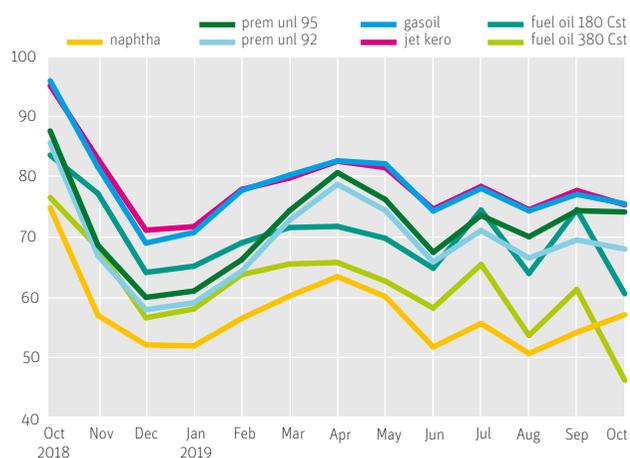
\* FOB barge spot prices.

Source: Argus. Prices are average of available days.

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

\$/b

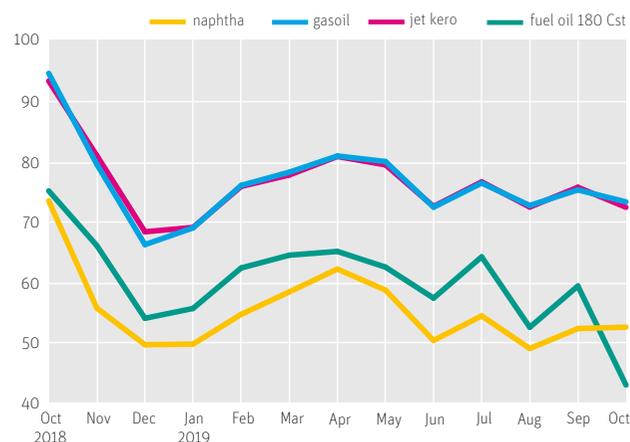
	naphtha	premium gasoline unl 95	premium gasoline unl 92	gasoil	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
<b>2018</b>							
October	74.90	87.64	85.66	95.97	95.16	83.63	76.59
November	57.01	68.65	66.92	81.63	82.97	77.24	68.25
December	52.13	60.02	57.98	69.03	71.17	64.16	56.63
<b>2019</b>							
January	51.96	61.07	59.12	70.79	71.75	65.19	58.10
February	56.54	66.27	64.36	77.78	77.93	69.07	63.79
March	60.24	74.42	72.83	80.31	79.82	71.61	65.56
April	63.47	80.72	78.77	82.68	82.61	71.79	65.80
May	60.14	76.25	74.45	82.19	81.55	69.82	62.71
June	51.79	67.49	65.88	74.35	74.67	64.85	58.25
July	55.68	73.61	71.11	78.10	78.43	74.51	65.49
August	50.70	70.08	66.55	74.37	74.57	63.99	53.70
September	54.21	74.40	69.55	77.11	77.75	74.58	61.34
October	57.14	74.19	68.04	75.55	75.38	60.62	46.25



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

\$/b

	naphtha	gasoil	jet kero	fuel oil 180 Cst
<b>2018</b>				
October	73.48	94.46	93.20	75.12
November	55.84	79.49	80.91	66.12
December	49.81	66.28	68.39	54.16
<b>2019</b>				
January	49.91	69.03	69.10	55.78
February	54.81	76.02	75.86	62.44
March	58.50	78.19	77.73	64.54
April	62.26	80.86	80.78	65.16
May	58.80	79.95	79.40	62.58
June	50.51	72.43	72.55	57.48
July	54.56	76.40	76.60	64.27
August	49.19	72.72	72.46	52.68
September	52.47	75.28	75.71	59.47
October	52.70	73.31	72.42	43.18

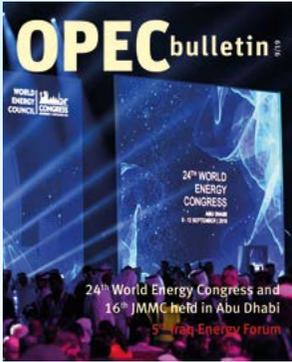


Source: Argus. Prices are average of available days.

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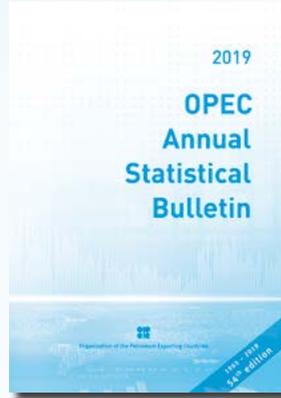
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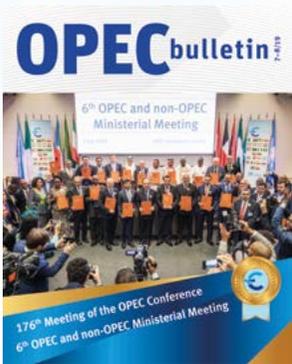
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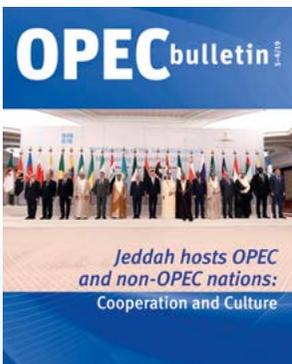
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