OPEC bulletin

7–8/23

8th OPEC International Seminar *Special*

Iraq hosts Anniversary celebration

Two seminal events linking OPEC's successful past with its bright future

Since the publication of the last edition of the OPEC Bulletin, there have been several events of immense significance for the Organization, namely, the 8th OPEC International Seminar and the celebration of the Organization's 60th Anniversary, at a moving ceremony that took place at the site of OPEC's founding, Al-Shaab Hall in Baghdad.

The celebration of OPEC's 60th Anniversary took place on 16 June 2023. The event was originally planned for 2020; however, it was postponed multiple times due to COVID-19. In attendance were officials and representatives of OPEC Member Countries and some non-OPEC countries, along with other dignitaries. It featured a full programme of festivities, including various cultural activities.

Whilst at Al-Shaab Hall, the Heads of Delegation also signed a document, entitled 'The journey from Baghdad — 63 years of progress.' It recalls the historic day of 14 September 1960, and reaffirms the Organization's core principles with a commitment to safeguarding legitimate national interests and helping ensure order and stability in the global oil market.

While 63 years may have elapsed between the founding of OPEC and the convening of the 8th OPEC International Seminar, the same spirit and principles that guided the founding fathers in Baghdad were manifest in the most recent edition of the Seminar: namely, a commitment to dialogue, international cooperation and a steadfast focus on safeguarding the interests of both producers and consumers.

OPEC's International Seminar is regarded as one of the premier events on the global energy calendar. Although they have come in various forms over the decades, the high-profile gatherings have been unified in their breadth of outreach. Seminar participants are a proverbial who's who of the 'great and the good' in the oil and energy industry, including Ministers from OPEC's Member Countries and other oil-producing and oil-consuming nations, as well as heads of intergovernmental organizations, chief executives of national and international oil companies, academics, specialist media and other energy experts.

As the parameters in which the oil and energy industry operate have evolved, so too have OPEC seminars, embracing areas such as global finance, sustainable development and the environment.

The 8th OPEC International Seminar, held on 5 and 6 July 2023 in Vienna, broke records with more than 1,000 delegates coming together for critical and constructive discussions on issues that globally matter, including energy security, climate change and the energy transitions. It was attended by 17 ministers from producing and consuming countries, including Heads of Delegation of OPEC Member Countries; 18 CEOs of energy firms; 13 heads of international organizations; and 12 media partners, along with numerous journalists and analysts from across the globe.

The theme of the 8th OPEC International Seminar was 'Towards a Sustainable and Inclusive Energy Transition.' In his opening remarks at the Seminar, the OPEC Secretary General, Haitham Al Ghais, explained the fundamental concepts behind the themes. "The concept of 'sustainability' is essentially about balance. It relates to how we fulfil the needs of current generations without compromising the needs of future generations; while ensuring a balance between the three pillars of sustainability: economic viability, environmental protection and social equity," he said.

"'Inclusivity' relates to ensuring all voices are heard in discussions on energy transitions; developing and developed countries, and producers and consumers. It means adhering to the principle of common but differentiated responsibilities. It means there is no 'one-size-fits all' solution to the climate challenge, instead, there are multiple pathways to reach the goals of the Paris Agreement," he added.

It proved to be a busy few weeks for the Organization, but these were replete with accomplishments and significant achievements. What was palpably central to all of it was one crucial word: cooperation. It is a principle upon which the Organization was founded and will guide its activities in the years to come.

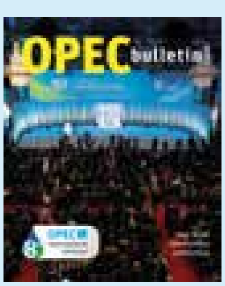
Contents

8th OPEC International Seminar

Anniversary celebration

Azerbaijan visit

OPEC bulletin



Cover
This month’s cover reflects the 8th OPEC Seminar, held in Vienna, 5–6 July 2023 (see story on page 4).

Vol LIV, No 4, July/August 2023, ISSN 0474–6279

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

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

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

Contributions

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

Editorial policy

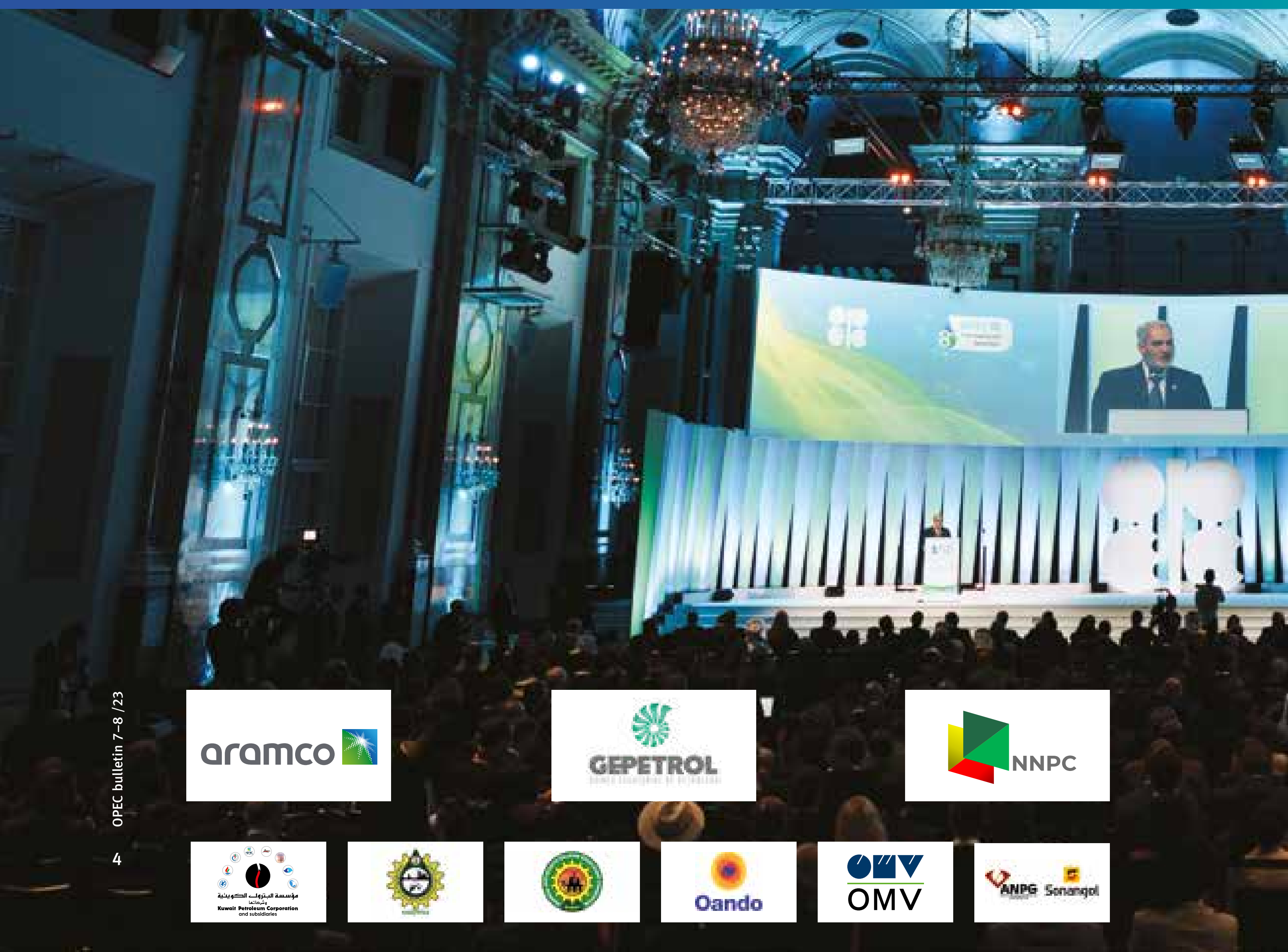
The *OPEC Bulletin* is published by the OPEC Secretariat (Public Relations and Information Department). The contents do not necessarily reflect the official views of OPEC or its Member Countries. Names and boundaries on any maps should not be regarded as authoritative.

The OPEC Secretariat shall not be held liable for any losses or damages as a result of reliance on and/or use of the information contained in the *OPEC Bulletin*. Editorial material may be freely reproduced (unless copyrighted), crediting the *OPEC Bulletin* as the source. A copy to the Editor would be appreciated.

Indexed and abstracted in PAIS International

Printed in Austria

Towards a sustainable and



inclusive energy transition

Opening ceremony

Speakers:
Haitham Al Ghais, *OPEC Secretary General*
Antonio Oburu Ondo, *President of the OPEC Conference 2023, Minister of Mines and Hydrocarbons, Equatorial Guinea*

Moderated by:
John Defterios, *Professor of Business, NYU, Abu Dhabi*
Eithne Treanor, *Founder & CEO, ETreanor Media*

One of the most tangible manifestations of OPEC's commitment to dialogue is its eagerly anticipated International Seminar that is today regarded as one of the premier events on the global energy calendar. Although they have come in various forms over the decades, the high-profile gatherings have been unified in their breadth of outreach. Seminar participants are a proverbial who's who of the 'great and the good' in the oil industry, including Ministers from OPEC's Member Countries and other oil-producing and oil-consuming nations, as well as heads of intergovernmental organizations, chief executives of national and international oil companies, academics, specialist media representatives and other energy experts.

As the parameters in which the oil and energy industry operates have evolved, so too have the OPEC seminars, embracing areas such as global finance, sustainable development and the environment; unsurprisingly, their reputation has grown in stature over the decades, too.

The first OPEC Seminar was held in Vienna, from 30 June to 5 July 1969, with the theme, 'International oil and the energy policies of the producing and consuming countries'. An eight-year wait then ensued until the next one, which turned out to be the first in a mini-series, listed as follows:

10–12 October 1977 — 'The present and the future role of the national oil companies'

9–11 October 1978 — 'Downstream operations in OPEC Member Countries: prospects and problems'

3–5 October 1979 — 'OPEC and future energy markets'

24–26 November 1981 — 'Energy and development: options for global strategies'

An important milestone in the increasing prominence that environmental issues would play was the one-off 'Seminar on the Environment' from 13 to 15 April 1992, held to prepare for the Earth Summit in Rio de Janeiro in June of that year.

A new era began in 2001, with the launch of a new series called the 'OPEC International Seminar.' It comprises of the following:

September 2001: The First OPEC International Seminar (as it was then called), 'OPEC and the global energy balance: towards a sustainable energy future'.

Haitham Al Ghais, OPEC Secretary General.

Antonio Oburu Ondo, President of the Conference 2023, Minister of Mines and Hydrocarbons, Equatorial Guinea.

September 2004: The Second OPEC International Seminar, 'Petroleum in an interdependent world'.

September 2006: The Third OPEC International Seminar, 'OPEC in a new energy era: challenges and opportunities'.

March 2009: The Fourth OPEC International Seminar, 'Petroleum: future stability and sustainability'.

June 2012: The Fifth OPEC International Seminar, 'Petroleum: fuelling prosperity, supporting sustainability'.

June 2015: The Sixth OPEC International Seminar, 'Petroleum — an engine for global development'.

June 2018: The Seventh OPEC International Seminar, 'Petroleum — cooperation for a sustainable future'.

The 8th OPEC International Seminar, held from 5 to 6 July 2023 in Vienna, broke records, with more than 1,000 delegates coming together for critical and constructive discussions on issues that globally matter, including energy security, climate change and the energy transitions. It was attended by 17 ministers from producing and consuming countries, including Heads of Delegation of OPEC Member Countries; 18 CEOs of energy firms; 13 heads of international organizations; and 12 media partners, along with numerous journalists and analysts from across the globe.

The Seminar began with an innovative video that showcased the importance of oil to the development

The 8th OPEC International Seminar saw a distinguished line-up of participants and speakers, a proverbial who's who in the oil industry.

of civilization, and depicted the key themes that were due to be discussed over the forthcoming days.

In his opening remarks, OPEC Secretary General Haitham Al Ghais said, "It is a great honour to welcome you to the 8th OPEC International Seminar. Organizing an event on this scale is obviously only possible with intense teamwork. I would like to thank everyone who has contributed to making this Seminar a reality."

"My deep gratitude goes to my colleagues at the OPEC Secretariat, who have worked tirelessly, night and day, to produce this Seminar. The outcome of your hard work is this outstanding programme we have ahead of us."

The SG continued by thanking the Ministers from OPEC Member Countries and 'Declaration of Cooperation' (DoC) countries, other Ministers, Ambassadors, dignitaries, moderators, the Seminar sponsors, the heads of international organizations, the chief executives of national and international oil companies, and all the other speakers and panel members. He also paid special tribute to the host country of the OPEC Secretariat, the Republic of Austria.

The SG probed the concepts at the heart of the theme of the OPEC Seminar, 'Towards a Sustainable and Inclusive Energy Transition.' He stated, "The concept of 'sustainability' is essentially about balance. It

relates to how we fulfil the needs of current generations without compromising the needs of future generations; while ensuring a balance between the three pillars of sustainability: economic viability, environmental protection and social equity."

On the topic of 'inclusivity', he said, "'Inclusivity' relates to ensuring all voices are heard in discussions on energy transitions; developing and developed countries; and producers and consumers. It means adhering to the principle of common but differentiated responsibilities. It means there is no 'one-size-fits all' solution to the climate challenge, instead, there are multiple pathways to reach the goals of the Paris Agreement."

In his remarks, the President of the OPEC Conference, Antonio Oburu Ondo, the Minister of Mines and Hydrocarbons of Equatorial Guinea, stated, "The 2023 edition [of the OPEC International Seminar] is truly a prestigious event, with so many ministers from both producing and consuming countries, so many distinguished and high-level speakers, the leaders of tomorrow, and hundreds more delegates from all over the world. It is a who's who of global oil and energy industry thought leaders. The insights and wisdom of these leaders will undoubtedly provide for rich and engaging discussions."

The President noted the historic nature of the setting. He said, "Holding the event here in the Hofburg Palace also adds to the spectacle. The palatial rooms of this magnificent building have been central to cooperation and dialogue over many centuries.

"It was here where the Congress of Vienna met in 1814 and 1815, a meeting of ambassadors of European states chaired by legendary Austrian statesman Klemens von Metternich. It is a meeting that many believe created long-term stability across Europe.

"I have no doubt that the next two days of the OPEC International Seminar will add to the long history of this palace."

He concluded by returning to the theme of the Seminar. "The energy reality is that the world cannot do without oil. It has been central to our past, is fundamental to our present, and will be pivotal to our future. It is a 24/7 commodity and we cannot do without it," he said.

The Seminar in numbers ...

2 days
5 July 2023
6 July 2023

1,000+ delegates

7 OPEC Award winners

3 Diamond sponsors
7 Gold sponsors
9 Silver sponsors
2 Bronze sponsors

18 CEOs

17 ministers

13 heads of international organizations

50+ nations

12 media partners

89 journalists

13 booths in exhibition area

8,000+ pictures

Moderators

John Defterios
Professor of Business, NYU, Abu Dhabi

Eithne Treanor
Founder & CEO, ETreanor Media

Special introductory session

Speaker:
HRH Prince Abdul Aziz Bin Salman, *Minister of Energy, Kingdom of Saudi Arabia*

Moderated by:
Dr Paul Horsnell, *Global Head of Commodities, Standard Chartered Plc*

The 'Special introductory session' of the 8th OPEC International Seminar saw HRH Prince Abdul Aziz Bin Salman, the Minister of Energy of the Kingdom of Saudi Arabia, sit down with Dr Paul Horsnell, the Global Head of Commodities at Standard Chartered Plc for a one-on-one conversation to help set the scene for the coming two days.

Given that Prince Abdul Aziz is also co-chair of the OPEC and non-OPEC Ministerial Meeting (ONOMM), talk quickly turned to the recent production adjustments undertaken by OPEC+. This included those from the 35th ONOMM on 4 June, as well as the additional commitments announced earlier in the week of the Seminar.

On 3 July, Saudi Arabia extended its voluntary oil output adjustment of one million barrels a day (mb/d) for another month to include August, Russia adjusted its oil exports by 500,000 b/d in August, and Algeria adjusted its production by an extra 20,000 b/d in the same month.

Horsnell elaborated on these adjustments and asked Prince Abdulaziz on why the decisions had been taken, the market's reaction to them, and the challenges facing OPEC+ looking ahead.

In looking back to the ONOMM on 4 June, Prince Abdul Aziz highlighted the importance of transparency. He stated that there were issues that needed attending to and this had been achieved at the meeting.

In this regard, he underlined the adjustment of crude oil production for OPEC and non-OPEC participating countries in the DoC to the end of 2024, and noted a review of baselines with secondary sources for all participating countries, to take better account of current realities. "I always like the President Reagan line, 'Trust but verify,'" he said, stressing the instrumental role of independent sources in assessing production.

He also highlighted the additional voluntary production adjustment of 1 mb/d from Saudi Arabia, now for July and August, and was keen to point out voluntary adjustments were nothing new, recalling those in 2020 from a number of countries.

Prince Abdul Aziz stressed that developments earlier that week, particularly alongside "our colleagues from Russia … were also to mitigate the cynical side of the speculators."

Asked about the markets' muted reaction to the recent production adjustments, Prince Abdul Aziz called for patience. "You cannot change negativity that is emanating from a 'tell me' type of thing and not a 'show me' type of thing. Unfortunately the 'show me' thing comes a month or two later, but there is a great deal of negativism that is taking everything as a hostage," he said.

He believed that the OPEC+ group was doing a great job in aiding stability in the market, and said the "tools in our kit are working."

He said, that he was "in my comfort zone that the cohesion that we have, the consensus that we have, and the processes that we have created in OPEC+ will enable us to attend to these situations, now, next month, and the month after.

He added that the market will not be left "unattended", adding, "we will do whatever is necessary, whatever it takes."

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

Ministerial session 1

Market stability and energy security

Speakers:

***Antonio Oburu Ondo**, President of the OPEC Conference 2023, Minister of Mines and Hydrocarbons, Equatorial Guinea*

***Suhail Mohamed Al Mazrouei**, Minister of Energy and Infrastructure, United Arab Emirates*

***Parviz Shahbazov**, Minister of Energy, Azerbaijan*

***Ambassador Gabriel Tanimu Aduda**, Permanent Secretary, Ministry of Petroleum Resources, Nigeria*

Moderated by:

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

For both producers and consumers, energy security is a dominant concern. What goes hand in hand with this is sustainable energy market stability. In the case of the oil market, this means balanced and sound fundamentals, as well as a platform to ensure that the necessary investments across the full industry value chain are made to meet future demand. In this regard, it is important to recognize the potential impact of excessive volatility, in its various guises, on the oil market. For example, the impact of disconnects between the physical and paper markets, the role of speculative activities, and how policies and the environmental disclosure drive can lead to a shortfall in oil investments that leads to further energy insecurity.

The session was the first ministerial-level discussion of the 8th OPEC Seminar. It focused on market stability and energy security, two areas that have dominated headlines in recent years. **Dr Helima Croft**, Managing Director and Global Head of Commodity Strategy at RBC Capital Markets, moderated the panel.

She noted a strong demand outlook for the second half of 2023 — despite some concern regarding investor sentiment, positioning, and low liquidity — and began by asking each panel member for their views.

Suhail Mohamed Al Mazrouei

Minister of Energy and Infrastructure of the United Arab Emirates

Al Mazrouei praised the solidarity demonstrated by OPEC and the participating countries of the 'Declaration of Cooperation'. The 35th OPEC and non-OPEC Ministerial Meeting in June — "to me, the second most important meeting after April 2020" — had reaffirmed this, including on difficult issues like future production adjustments, and underlined the group's excellent pragmatism, fairness, and leadership.

This cooperation was aiding market stability, and could even be expanded to include other oil producers in the future. With OPEC and the DoC Participating Countries representing around 40 per cent of the world's oil production capabilities, "imagine if we comprised 60 or 70 per cent of the producers of the world, we would do an even better job… the more datasets we would have… our market prediction would be even better".

Regarding analysis of the market, he stressed that oil producers possessed more accurate datasets than traders and speculators alone. "Producers are dealing directly with the consumers; so the sets of data they have are definitely much more accurate than those of anyone else, no matter how big a trader may be." To ensure even better market forecasting, he noted that OPEC was consolidating and validating its data — including by working with independent third-party institutions — and thus would be even more effective and transparent moving forward.

Suhail Mohamed Al Mazrouei.

Minister Al Mazrouei assessed the frequency of OPEC and DoC meetings "to attend to the market" as being excellent, and praised the voluntary adjustments made by Saudi Arabia, Russia and Algeria as contributing to market stability. He noted that — as always — there would be a lag in time between when the reductions were made and when their actual impact was felt.

As per its new national energy plan, the United Arab Emirates was investing heavily in hydrocarbons and renewables. He cautioned that investments in hydrocarbons were declining across the globe, which could jeopardize efforts to ensure that the world had enough fuel to meet demand. For its part, the United Arab Emirates would expand its oil production capacity to 5 mb/d by 2027, while "any talk of oil demand plateauing or decreasing was not backed up by any substance".

Elsewhere, the contribution of renewable energy to the United Arab Emirate's energy mix would "reach 32 per cent by 2030 and 38 per cent by 2035", while the United Arab Emirates also planned to triple its renewable energy capacity from 2022 to 2030. It was reducing energy consumption in buildings and educating youth to improve future energy consumption habits too.

In addition, as per its hydrogen strategy, the United Arab Emirates planned to export hydrogen by 2030. It was targeting 1.2 million tonnes by that year, most of it green hydrogen, and 15 million tonnes by 2050, most of which would be exported. Hydrogen fuel would be used to reduce emissions in the United Arab Emirates's industrial sector as well.

Finally, the United Arab Emirates was also engaged in electrifying its transportation sector in anticipation of rapid growth in the use of electric vehicles and hybrid cars.

Antonio Oburu Ondo

2023 OPEC Conference President and Minister of Mines and Hydrocarbons of Equatorial Guinea

Ondo praised OPEC's important role in fostering market stability, which was ensuring greater certainty and positively affecting people's lives across the globe.

He believed that if even more oil producing nations — regardless of their size and output — worked more closely together, market stability and predictability would improve, along with the availability and quality of relevant data.

"OPEC is an organization that creates certainty, and in this respect the bigger it would be the better," he said.

Antonio Oburu Ondo.

Minister Ondo noted that market stability was critical for both consumers and producers, as without it, economic planning and budgeting were very difficult, and countries' ability to improve citizens' lives diminished accordingly.

Furthermore, he believed that OPEC Member Countries and the Participating Countries of the DoC were succeeding in delivering "more certainty in the way we are allocating production levels for each country, including through third-party organizations that are providing analysis and data that every country can accept as objective".

This in turn was fostering excellent unity, as reflected in the achievement of a number of strong decisions taken at the 35th OPEC and non-OPEC Ministerial Meeting. Agreement had been possible because "we were so conscious that what we were doing there was so important for ensuring the stability of the market, and thus stability for peoples' pockets and ways of life".

On the energy transition, Minister Ondo believed that the world required a pragmatic situation that entailed moving towards net zero while continuing to use commodities like oil and gas. Ultimately, countries would only be able to meet the rise in energy demand and ensure energy security by investing in and using "a combination of sources of energy, including both fossil fuels and renewables". Towards this end, delivering adequate investment for both was critical.

Parviz Shahbazov

Minister of Energy of Azerbaijan

Shahbazov said that the Seminar was extremely timely and would facilitate important discussions and action on a variety of pressing topics. Azerbaijan valued the excellent cooperation among OPEC and the DoC Participating Countries, and believed that — by working together — the whole was greater than the sum of its parts.

He viewed issues surrounding falling investment in the oil and gas sector with concern, as exemplified by Goldman Sachs' assertion that decreasing investment in the near future would lead to "a loss of 10 mb per year, plus 3 m/boe in liquefied natural gas", for example.

Minister Shahbazov outlined that renewables were very important for environmental security and sustainability, but also underlined that "80 per cent of energy for

Parviz Shahbazov.

the 100 trillion dollar world economy depends on fossil fuels; this fact means that we cannot abandon them in a short time."

He noted that "if OPEC did not exist, it would need to be immediately created and even expanded beyond the borders of oil into the energy sector as a whole. We are in a transitional time and need to think broadly, act widely and think about the future."

Elsewhere, he cautioned that the world was "not in a position to abandon any source of energy" and noted that "natural gas represents one of the most important pillars of the energy transition", necessitating appropriate investment policies and sensible rules regarding financial instruments and gas.

Azerbaijan was producing and exporting large quantities of natural gas, including to Europe, and would continue to do so moving forward. He said that all participants of the global energy market — both consumers and producers — should recognize that energy security remained everyone's responsibility and not just that of producers.

Minister Shahbazov praised OPEC Members Countries' serious support in transitioning towards developing green energy sources. This close co-operation was exemplified by investments in Azerbaijan from the United Arab Emirates and Saudi Arabia, while — partially based on its co-operation within the DoC and with OPEC — Azerbaijan would able to provide its partners in Europe with green energy in the future too.

Moving forward, he believed that it would become increasingly necessary to discuss all global energy issues together, and not just one sector at a time.

Ambassador Gabriel Tanimu Aduda

Permanent Secretary of the Ministry of Petroleum Resources of Nigeria

Aduda stated that OPEC and the DoC Participating Countries were helping to foster market regulation in a positive sense, stating that "a market that cannot be regulated, cannot be controlled, and a market that cannot be controlled, cannot be predicted. If one cannot predict, then one cannot ensure sustainability."

He believed that "all oil producers should be a part of OPEC", as it was helping Nigeria greatly, providing the country with a global picture, and improving the market.

Although Nigeria had experienced some challenges — for example, with regard to security — this had not deterred investors, including many IOCs, from wanting to invest even more in Nigeria's oil and gas industry. With its large population and resources, Nigeria represented a huge market in Africa for investors.

Aduda also noted that, "fossil fuels will be with us for a long time to come. We just have to ensure cleaner ways of extraction, reduce emissions, and ensure that we move along with the global agenda for energy transition". In addition, gas would be key in Nigeria moving forward, with Nigeria increasingly promoting domestic consumption of liquefied petroleum gas and compressed natural gas in every-day use.

Ambassador Gabriel Tanimu Aduda.

He noted that developing renewable energy sources as part of Nigeria's transition agenda required large investment, including, for example, to first enable the mining of minerals and construction of relevant infrastructure and equipment.

Ultimately, ensuring a successful and sustainable transition required technology, financing, and co-operation. "And this is what we have seen coming from OPEC and the DOC. OPEC has set Member Countries on the right path and should be applauded."

High-level roundtable 1

Energy sustainability trilemma

Speakers:

Eng Mohamed Hamel, *Secretary General, Gas Exporting Countries Forum*
Francesco La Camera*, Director General, International Renewable Energy Agency*
Amin Nasser*, President and CEO, Aramco*
Patrick Pouyanné, *Chairman and CEO, TotalEnergies*
Kadri Simson*, Commissioner for Energy, European Commission*
Jim Burkhard, *Vice President and Head of research for oil markets, energy & mobility, S&P Global Commodity Insights*

Moderated by:

John Defterios*, Professor of Business, NYU, Abu Dhabi*

In recent years, it has become clear that the energy world is facing challenges that are enormous, complex and interconnected. This has been evidenced by the strains and conflicting targets related to energy security, energy affordability and the need to reduce emissions, all integral components of the energy sustainability trilemma. In addition, it has become clear that focusing on one aspect of the trilemma, while neglecting the others, can lead to unintended consequences, such as market volatilities, price shocks and energy shortages. In order to avoid these unwanted effects, national and international energy policies should be evolved carefully, fine-tuned when necessary and involve all relevant stakeholders. With energy at the heart of the global economy, and people's everyday lives, it is vital to take a holistic view of the energy sustainability trilemma.

The session's moderator, **John Defterios**, Professor of Business, NYU, Abu Dhabi, began by highlighting some questions around the trilemma and the energy system, noting the importance of bringing together the key issues of energy security, energy affordability and decarbonization.

Eng Mohamed Hamel

Secretary General, GECF

In underscoring the importance of gas, Eng Mohamed Hamel kicked off the discussion by stating, "We see natural gas not just as a bridging fuel. We see it more as a destination fuel. In our recent outlook, we see demand for natural gas increasing by 36 per cent by 2050, and its share increasing from 23 per cent to 26 per cent." Even under the decarbonization scenario, natural gas demand would increase, he added.

He highlighted the issue of energy poverty, the desire for higher living standards and expectations that the world economy would more than double by 2050, as key reasons for expanding global energy requirements.

In terms of power generation, he emphasized coal-to-gas switching. "Natural gas is clean, available, versatile. It emits half the CO_2 emissions of coal, so switching from coal to gas is one of the most cost-effective mitigation pathways, in particular in developing countries. We should not forget that today 37 per cent of electricity generation is coming from coal."

From the perspective of COP28, Eng Hamel said he expected developed countries to fulfil their finance commitments, as well as accelerate funding for adaptation. He also wanted to see more progress on the transferal of technology and capacity building.

He noted that this year was important for the Sustainable Development Goals (SDGs) too, because there would be a global stocktake in September. He added that a recent UN report stated that only 12 per cent of the 140 targets were expected to be met by 2030. "We have to make efforts regarding climate change, but not forget the importance of the SDGs."

Eng Mohamed Hamel.

Francesco La Camera

Director General, IRENA

Francesco La Camera stated that the international community had already agreed on certain polestars and was

Francesco La Camera.

moving towards them, including the Paris Agreement. In this context, 83 per cent of installed generation capacity last year represented renewables — a record.

"The trend is clear, we are going to a new energy system, it will consist highly of renewables, with the complement of hydrogen, mainly green, and the sustainable use of biomass. So the direction of travel is there ... what is not there if we compare our path of achievement with the path of the Paris goal is the speed and scale of this transformation."

When asked about COP28, La Camera said the United Arab Emirates COP Presidency was doing an excellent job of trying to be as inclusive as possible and changing the way that the COP was working, with more of a focus on action.

He also talked about the importance of institutional capacity and professional skills in adapting to new realities, and the need to rewrite how international cooperation worked. "I hope the COP will set a very clear mandate for multilateral financial institutions to build the infrastructure needed in Africa and in South East Asia to make investment profitable. This has to be their main task."

Amin Nasser

President and CEO, Aramco

Amin Nasser.

All energy sources are needed in the future to meet the demand we are seeing, said Amin Nasser. He noted that along with expanding oil, Aramco would be "increasing gas production by more than 50–60 per cent by 2030, along with growing ... blue and green hydrogen and renewables. By 2030, 50 per cent of the utilities sector of the Kingdom will be met using renewables."

In terms of the energy trilemma, unless we meet "affordability, security of supply, and sustainability, you cannot meet the SDGs." He noted that affordability was key, highlighting the income disparities between industrialized nations and developing countries, and their different priorities. There is no one size-fits-all pathway, he stressed.

Cost was a deciding factor, too he stated. He said that blue hydrogen cost around $200–250 barrel of oil equivalent (boe), while green hydrogen cost $400/boe while the US, through its Inflation Reduction Act, which had set aside $400 billion, was offering an incentive of $225/boe.

Although North America and Europe too were offering incentives, which were currently causing some industries to prosper, it was not sustainable, he said. "How many countries can offer $225/boe as support? And you cannot sustain this for the long term. Incentives are not available for developing counties."

He added: "I think the roadmap for transition is a multi-speed transition depending on the economic maturity of each country… We need to have an optimal mix, with conventional energy, with reduced emissions by building carbon capture and storage and other things that will reduce emissions and at the same time you moderate conventional energy until renewables are ready."

We need a just and inclusive transition, he stressed, "a plan that takes all people from all countries from around the world to discuss these issues…it must be fair and take into consideration existing and new energies. The issue is emissions and we need to tackle emissions."

Patrick Pouyanné

Chairman and CEO, TotalEnergies

Patrick Pouyanné underlined that security of supply issues had come very strongly into the energy transition debate last year. For him, two lessons were clear.

Patrick Pouyanné.

For countries in Europe, diversification and long-term contracts were important to secure supply and access was also an issue, said Pouyanné. Last year "we suddenly discovered we had a lack of gas terminals, but we were able to build them and bring floating units, and face what we had to face. We discovered last year … you can become very innovative. Germany debated about 20 years to create a gas terminal and then three came on in six months. When you have no choice you do it, it is a lesson, it makes me very optimistic about the capacity of mankind to innovate."

In terms of the energy system, he said we had one that was "82 per cent run using fossil fuels, by the way when I joined the industry 25 years ago it was also 82 per cent. You could tell me there has been no progress, but yes we have had had lots of progress, lots of low-carbon energy systems have been developed."

He also highlighted an expanding population, meaning a growing need for energy and a desire for a better way of life. "It is not only about changing the system, it is answering to a larger demand for energy...We should not dream here, we are serious leaders. Only ten per cent of this amount is low-carbon today. We are not going to replace a system overnight, or in ten years, it is not true."

He said the solution was to lower the emissions of what was produced today. "When we produce oil, when we produce gas, it is our first duty to reduce the CO_2 emissions, and we can do it...We must reduce emissions of the present system, it's fundamental. We can divide the emissions by two." Pouyanné added that his company would reduce emissions by 80 per cent by 2032. "And while we are decarbonizing this system, we must build the new system."

Kadri Simson

Commissioner for Energy, European Commission

Kadri Simson stated that despite the geopolitical situation in Eastern Europe last year, "we were the only region globally that cut our CO_2 emissions by 2.5 per cent. And that happened despite the fact that last year was extremely difficult for our industry and for our households, because we witnessed the biggest energy crisis in a generation."

Last year was a record year in Europe for renewables, noted Simson, with 41 gigabyte (GB) of new solar installed and 15 GB of wind. On windy and sunny days energy prices were negative, she said. In the EU, she said, "we will also electrify sectors where we can do so."

Kadri Simson.

Simson also spoke about the importance of cooperation and that the EU wanted to offer our partners cooperation that went beyond fossil fuels.

When asked about COP28 in the United Arab Emirates, Simson said, it is important to build on the success of Sharm El-Sheikh (COP27) last year. "The industry methane pledge is a clear deliverable. Also, this sector can tackle the second most polluting greenhouse gas emission." Aside from tripling renewables, achieving the Paris Agreement targets would also require more efficient use of energy, she added.

Jim Burkhard

Vice President and Head of research for oil markets, energy & mobility, S&P Global Commodity Insights

On the question of whether underinvestment in oil would be a problem later, Jim Burkhard stated that there were a number of responses. In 2020, there was underinvestment in oil, he said, but due to developments in 2021 and 2022, including the actions of OPEC+, global oil supply this year was strong.

Jim Burkhard.

"When you add up all the gains outside of OPEC+, US crude oil production was 1 mb/d higher y-o-y. But it is not just the US, it is Canada, Brazil, Ghana, Norway, Mexican condensate, Chinese production... When you put that all together, when you add up all those barrels, the volume growth that we come up with outside of OPEC+ was over 2 mb/d this year. That is roughly comparable to global oil demand growth."

However, he stressed that "does not mean it is going to be that way next year or two to three years from now… there are more challenges facing upstream investment today than there were five years ago."

Ministerial session 2

Investments, finance and inclusive petroleum growth strategies

Speakers:

Saad Al Barrak, *Deputy Prime Minister, Minister of Oil, Minister of State for Economic and Investment Affairs, Kuwait*

Hayan Abdulghani Abdulzahra Alsawad, *Deputy Prime Minister for Energy Affairs, Minister of Oil, Iraq*

Mohamed M Oun, *Minister of Oil and Gas, Libya*

Eng Javad Owji, *Minister of Petroleum, Islamic Republic of Iran*

Moderated by:

Eithne Treanor, *Founder & CEO, ETreanor Media*

Investments are the lifeblood of the global oil industry. In OPEC's World Oil Outlook, required oil industry investments total $12.1 trillion to 2045. This equates to over $500 billion each year on average, with recent annual levels significantly below this, due to industry downturns, the pandemic, and the increasing focus on environmental, social, and governance (ESG) issues. Industry stakeholders can help to ensure a long-term investment-friendly climate, with sufficient finance available and supportive and inclusive policies. Investments should consider an 'all-peoples, all-fuels and all-technologies' approach to the issues of energy security and reducing emissions. One that is sustainable and works for both producers and consumers, as well as developed and developing countries.

Saad Al Barrak

Deputy Prime Minister, Minister of Oil, Minister of State for Economic and Investment Affairs, Kuwait

Deputy Prime Minister, Al Barrak began by saying that Kuwait was seeking to invest more than $300 billion in the oil and gas industry by the year 2040. Kuwait was continuing to invest in expanding its capacity. He noted that global investment levels were below required levels, which could affect the stability of energy markets. This could be exacerbated by geopolitical developments in some regions of the world.

He noted the extensive range of partnerships that Kuwait had with IOCs, including in the petrochemical sector. Kuwait was open to investing in the energy market. KPC was committed to being a global energy player, in all sources of energy.

The Deputy Prime Minister noted that investing in renewables was a 'no-brainer' and essential. He stressed that the oil produced by Kuwait was cleaner than many heavier crudes produced elsewhere. He concluded by stressing the need for peace in the world, which could fuel economic growth.

Saad Al Barrak.

Hayan Abdulghani Abdulzahra Alsawad

Deputy Prime Minister for Energy Affairs, Minister of Oil, Iraq

Deputy Prime Minister, Alsawad praised the Secretariat for organizing a great seminar. He said that Iraq had been honoured to host the 60 year anniversary celebrations of the founding of OPEC. Iraq had a promising

Hayan Abdulghani Abdulzahra Alsawad.

long-term programme for the oil industry. The country seeks to increase investment in the oil and gas sectors. Iraq had developed a partnership with Shell in Basra. The Minister outlined many of the current projects throughout the country aimed at enhancing gas production. Similarly fruitful projects were being undertaking in the oil industry. Specifically, he mentioned that Iraq and French oil major TotalEnergies had signed a $27 billion energy deal that sought to increase oil production and boost the country's capacity to produce energy with four oil, gas and renewables projects. The Minister noted the comprehensiveness of the projects and cooperation.

He also provided an overview of recent bidding rounds. A priority for the country and Government was satisfying its domestic needs. He described the progress Iraq had also made in the field of solar energy, and also provided an overview of the Government's efforts to stop gas flaring by 2030.

Iraq had an ambitious plan to utilize renewable energies, particularly solar. The country had plans to invest in solar energies. Solar was an area of particular interest to the Minister, as previously in his career, he had written many papers on the topic.

Mohamed M Oun

Minister of Oil and Gas, Libya

The Minister thanked the SG and Secretariat for organizing an outstanding Seminar. Libya had great potential both in conventional oil and gas and in shale. Forty per cent of the land in Libya had not been seismically surveyed, offering great potential. The Government sought to increase national production to 2 mb/d between three to five years. Several IOCs had begun to work on projects with the NOC.

Mohamed M Oun.

Eng Javad Owji.

The Minister was keen to see OPEC Member Countries cooperate and work together to finance projects. Libya was also diversifying its energy mix. Libya and TotalEnergies had signed a project in the field of solar energy. He noted that Libya and Malta had signed a memorandum of understanding in which the two countries pledged to work towards an energy interconnector linking their electricity grids, which would capitalize on Libya's outstanding potential in the field of solar energy.

The Minister stressed the importance of equitable access to all forms of energy, especially in Africa. Libya was committed to clean energy and a clean environment. He would like to see more cooperation between OPEC Member Countries in investment and other projects, and potentially in human resources.

Eng Javad Owji

Minister of Petroleum, Islamic Republic of Iran

The Minister thanked the SG and Secretariat staff for an outstanding Seminar. He noted IR Iran's great potential in oil and gas reserves. The Government had plans to increase the production of oil and gas. The country had made great progress in the expansion of its technological capability, both offshore and onshore. IR Iran was expanding its refining capacity. Several successful and fruitful partnerships had been signed with NOCs and IOCs.

The Minister noted the attractiveness to investors of Iran petroleum contracts, IPC, which offered a range of benefits. Companies who had availed of this, had made good profit. A priority for the country was to increase liquefied natural gas (LNG) production. Privileges would be granted to potential LNG investors. The return for investment period had shortened and become very attractive to investors. IR Iran had plans to develop its capabilities with regard to both solar and wind. The country also had several projects to reduce gas flaring. He stressed the importance of gas production.

Eithne Treanor.

High-level roundtable 2

Energy investment: challenges and opportunities

Speakers:

***John Hess**, CEO, HESS Corporation*
***Shaikh Nawaf S Al-Sabah**, CEO, KPC*
***Claudio Descalzi**, CEO, ENI*
***Russel Hardy**, President and CEO, Vitol*
***Sebastião Gaspar Martins**, CEO, Sonangol*
***Alfred Stern**, CEO, OMV*
***Jean Paul Prates**, CEO, Petrobras*

Moderated by:

***Bob McNally**, President, Rapidan Energy Group*

Energy is a central pillar of global economic growth and social welfare, underpinning old and new industries, investments, innovations, access to health, education and job opportunities. Access to reliable and affordable energy sources for all cannot be achieved without regular and steady investments. Today, investors are often caught up in dilemmas that challenge their impetus to invest, for example, political and regulatory uncertainty, ESG issues and the knock-on impacts of the pandemic. These challenges need to be faced head on, particularly given that OPEC's World Oil Outlook sees global energy demand rising by 23 per cent in the period to 2045. This expansion also underscores the opportunities in the energy space, and the massive investments required.

The session saw a host of well-known and respected industry CEOs tackle questions on the key issues related to investment. This included a focus on barriers to investment in the oil industry, the recent annual drop offs in investments, the role of government, policymakers and private investors in financing, and the dual investment challenge of energy security and decarbonization.

It was this last challenge that was initially picked up on by the moderator, **Bob McNally**, President, Rapidan Energy Group. He spoke of the delicate balancing act required in supplying energy and reducing emissions, one that required huge investments.

John Hess

CEO, HESS Corporation

It was a point picked up on by John Hess in his remarks, who said that over the past 18 months or so there had been a realization of the importance of energy security for an orderly energy transition. He added it was clear that "oil and gas were needed for a secure and just energy transition."

The key to a sustainable energy future, he added, was investment. He commended OPEC and OPEC+ for their role in aiding market stability, a fundamental pre-requisite for large-scale investments.

Hess also highlighted the need to remember that the oil and gas industry was a strategic one for the US, supporting around 12 million jobs. It was a fundamental business, and extrapolated this our more broadly stressing how vital the industry was to world security.

Looking ahead, he said the need for more energy and less emissions was a "herculean challenge", and it was vital that the oil and gas industry was united. In looking to COP28 in the United Arab Emirates later this year, he said, "we need climate literacy, energy literacy and economic literacy."

John Hess.

Asked about the company's offshore oil developments in Guyana, Hess described the country as one with massive resource potential, but underscored the importance of sustainability. In fact, in June 2023, Hess Corporation, together with the Government of Guyana, earned the annual Energy Transition Initiative Award from the Association of International Energy Negotiators.

The award was for a Carbon Credits Purchase Agreement through which Hess would purchase $750 million of carbon credits between 2022 and 2032 from the Government of Guyana. The arrangement would protect Guyana's forests, support the company's climate strategy, and provide capital to improve the lives of Guyanese citizens through government investments as part of Guyana's Low Carbon Development Strategy.

Shaikh Nawaf S Al-Sabah

CEO, KPC

"The energy transition will require hydrocarbons," said Shaikh Nawaf S Al-Sabah. He added that we had a responsibility to our customers to provide sustainable and strong supply. In looking at the Gulf region, he also

Shaikh Nawaf S Al-Sabah.

stated that they recognized that they had the world's strategic resource, with the lowest cost and lowest carbon density.

In talking about Kuwait's resource base, he said it was "gigantic" and KPC would be investing around $50 billion over the next five years.

He said that the country aimed to increase its oil production capacity to 3.2 mb/d by the end of 2024 and further to 4 mb/d by 2035.

Kuwait was also making significant investments in the downstream, such as the huge 615,000 b/d Al-Zour refinery. KPC said it aimed to achieve up to 1.6 mb/d of domestic refining capacity by 2025 with maximum conversion capabilities, while ensuring maximum offtake of domestic heavy oil and meeting local energy demand.

Claudio Descalzi

CEO, ENI

Looking back to 2022, Claudio Descalzi said it was a wake-up call for Europe on gas. It had been a challenging time, he added, and it was clear the region needed more time to compensate for Russian gas.

It was evident going forward, he added, that we "need a larger set of energies." In this regard, he said, "Eni is investing in all energies."

He said Eni was looking to play a leading role in the energy transition. By 2050, the company would achieve carbon neutrality: in order to do so, it was already relying on innovative solutions and proprietary technologies, new business models and a network of alliances for sustainable development.

Descalzi picked-up on technological innovation as a focal point of the company's strategy. Eni believed that technology was the key to decarbonization, and its approach considers the entire value chain.

Claudio Descalzi.

Russel Hardy.

Russel Hardy

President and CEO, Vitol

On the energy transition, Russel Hardy stressed that as a business like Vitol needed to think about regions differently, specifically the often diverse needs of developed and emerging markets.

He said that positioning the business for this future was important for Vitol and talked about three key areas.

The first was the traditional oil business, which he stressed was still very much needed. "We deliver 4 mb/d of crude to refiners around the world, and we deliver 4 mb/d of products to customers across the world. And that is going to grow in Africa and Asia."

The second was gas and power, which he said was a "growing business for us". The third was the opportunity to build a big sustainable business. "This year, half our capex is going into power and renewables. Certainly, from a European perspective, we see it as a business opportunity."

Sebastião Gaspar Martins

CEO, Sonangol

When talking about his home country of Angola, Sebastião Gaspar Martins said that while they supported the energy transition, "we cannot afford to live on the energy transition."

He underlined the need to recognize the challenges and the "different realities" of developing countries.

Sebastião Gaspar Martins.

'The level of needs for many areas of the world are not the same," he added.

He also noted that his country was still dependent on oil and gas for around 90 per cent of its revenue. "We still need to rely on these resources to provide for our own living standards," he said. It is important to see the energy transition as "a system" and not just restrict the discussion to renewables.

Sonangol's strategy was to invest in oil and gas, he said, and use some of the revenue generated to invest in the energy transition.

"We need to explore, produce and reduce emissions in the energy transition," he added.

Alfred Stern

CEO, OMV

"We have an exciting strategy going forward', said Alfred Stern. "We are supplying the energy needs of today with oil and gas, while we are using sustainability as an innovation and growth driver to transform the company into a net zero one in all three scopes by 2050."

Alfred Stern.

Transforming into a sustainable fuels, chemicals, and materials company with a strong focus on circular economy solutions, OMV believed, probably meant the most fundamental strategic shift in the company's history.

It was a big task, Stern added, and OMV was doing this by transforming into an integrated energy company. "Practically, this means two things. Change the product portfolio that we have, and second, we are changing the feedstock portfolio that we have."

In terms of products, he said the company was moving from products made with combustion to more long-lived chemical products that would be important enablers of the energy transition. Examples of this, he said, included making cars lighter with plastics, which reduced the energy requirement.

Jean Paul Prates.

Jean Paul Prates

CEO, Petrobras

When asked about recent calls to stop investments into greenfield oil and gas projects, Jean Paul Prates said that it was an "unrealistic target for the world to do that in the upstream."

From a company perspective, he said, there continued to be a focus for Petrobras on oil and gas, and the "big challenge for us is to decarbonize our own operations."

At the other end of the value chain, he said, it was vital to get the national and international collaboration of governments to change consumer habits, otherwise they would continue to have the same demand for plastics, particularly as economies grow and populations expand.

Bob McNally.

High-level roundtable 3

Technology and innovation for a low emissions future

Speakers:

***Fahad Alajlan**, President, KAPSARC*
***Vicki Hollub**, President and CEO, Oxy*
***Jeff Miller**, Chairman, President and CEO, Halliburton*
***Alessandro Bresciani**, Senior Vice President of Climate Technology Solutions, Baker Hughes*
***Dr Ayed S Al-Qahtani**, Director, Research Division, OPEC*
***Gerhard Thonhauser**, Professor, Montanuniversität Leoben*

Moderated by:

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

Technology advancements and innovations have the potential to improve performance across the entire oil industry value chain. They are vital for improving efficiencies, extending the industry's reach in terms of the way resources are identified and developed, enabling better optimization and automation, and in helping provide better, faster, cheaper, healthier and safer operations and products. The application of advanced technologies can help to significantly reduce the carbon footprint of the industry. This includes a variety of technologies such as carbon capture, usage and storage, direct air capture, blue hydrogen, crude-to-chemicals, integration of renewables and digitalization for increased process efficiency. A future focused on technology innovation will require significant investment for companies to stay ahead of the technology curve.

Moderator **Dr Helima Croft**, Managing Director and Global Head of Commodity Strategy, RBC Capital Markets, started the session by pointing out that this would be the first COP held in an OPEC Member Country, allowing the industry to be 'inside the tent' of discussions. She asked the panel what the ticket to entry was for the oil and gas industry, and the service industry into the transition conversation.

Fahad Alajlan.

Fahad Alajlan

President,KAPSARC

Fahad Alajlan stated that in Glasgow, not only were oil and gas excluded, but others were excluded as well, including nuclear.

"You could mention the word gas as a transition fuel, now we are talking about gas as a destination fuel…but a lot of things have changed. I think for COP28, we have seen the United Arab Emirates Presidency and Dr Sultan Al Jaber do a very good job of having this as an inclusive and action-oriented COP. We have seen what the leadership has asked of the oil and gas industry and it is a lot of things, but a lot of things that are doable, also in the short term," he said.

He said working on methane emissions through the Global Methane Pledge and carbon capture, utilization and storage (CCUS) were discussed, along with other technologies like hydrogen for a low-emission future.

"So we've seen the focus on the oil and gas sector, what the oil and gas companies can do and this is a group that has done a lot in the past, especially when it comes to innovation. If you look at the number of patents filed by the oil and gas industry, it's around 1,000 per year and that number has been consistent over the past decade, but the focus has changed significantly over the past few years," he said.

Alajlan said that around 70 per cent of university students were not interested in going into oil and gas, so it is a difficult challenge globally. Even in Saudi Arabia, a 2021 study showed oil and gas coming fourth as a preference for graduates after tech and financial services.

"So even in Saudi Arabia it's hard to attract the top talent to come into oil and gas…The problem is when we look at how students define tech, they still think about the oil industry like an old rig. They don't see the intelligent field, the reservoir simulation that's being done, the big data that are being done.

"For us at KAPSARC, we've expanded the team, it's doubled in size in the past two to three years, so we are handling more big data, we are actually doing a lot of interesting things, looking at data, looking at tech, but I'm not sure the perception is there for students this is a shortfall the industry needs to overcome," he said.

Alajlan added that Saudi Arabia was seeing investment in renewables and CCUS (it is creating the largest CCUS hub in the world), blue and green hydrogen, but also oil and gas. Saudi Arabia and Saudi Aramco are increasing production by 1 mb/d and increasing gas production by 50 to 60 per cent. "There's a lot of investment in Saudi Arabia. The question is what we do for other countries. The US has seen a lot of investment, but what about countries that can't afford to give incentives?"

Clean tech almost doubled to $79 billion, he added. "So there is growth there, but the question is how can we facilitate some of that in developing countries? Technologies are not being financed today because they're not ESG (environment, social governance) friendly, such as CCUS and energy efficiency…so it's very important that we work on this and how we can define it better."

"I'm optimistic about technology, I'm less optimistic about finance, and 50–50 on policy."

Vicki Hollub

President and CEO, Oxy

Vicki Hollub.

Vicki Hollub talked about the importance of focusing on emissions, not the source of emissions.

"I'm proud of the oil and gas industry and how we've changed over the years…the technology is amazing, I think some people don't understand the degree of the technology we have in our industry and that we've advanced over the life of the industry. Every time we've faced a challenge our industry has stepped up and faced that challenge and often exceeded what we were going to do. And I think that's going to happen here with this transition," she said.

Hollub said it was a transition not out of oil and gas, but into a world where emissions could be offset from oil and gas so that the rest of the world would have the right to develop resources. "The way we do that is through direct air capture (DAC), we use carbon capture from point sources, we put CO_2 back into the reservoir, and I know that is contrary to what people want to hear…but the reality is if you put CO_2 into an oil reservoir, you're going to produce incremental oil from that reservoir and that incremental oil is going to be carbon neutral or carbon negative…by doing that you are actually generating a lower cost of net-zero oil," she said.

Net zero oil can then create net zero jet fuels and net zero maritime fuels, so over time as the entire industry gets working on this, emissions from oil and gas production can be offset, she said.

"We were planning to build a large-scale capture facility in the Permian before this came out, but it will set a floor for the revenue we will get for our direct capture, which means we can accelerate the number of DAC facilities that we will build before 2035. We originally estimated 100 of these facilities, now we will do 130," she said.

"The first facility's going to extract 500,000 tons per year, the ones after that will extract one million tons per year. Some people say it's expensive and will not be so consequential, but it is, because it takes about three direct capture facilities of one million tons per year to offset the same amount of emissions that Tesla prevented by the number of cars they built last year," she said, adding, "If you combine what we are doing and what we intend to accomplish before 2035, putting all that together and working over industrial sectors to make it happen will over time cumulate to the point where it will make a difference, but its incentives rather than the carrot *versus* the stick. And I believe the kind of things being put in place in the US should be a model for what other countries do."

She hoped that in three years the world and UN would have a better plan and understanding about what it would take to manage the energy transition.

Jeff Miller

Chairman, President and CEO, Halliburton

Jeff Miller said that first and foremost service companies, including Halliburton, brought efficiencies to the table in the form of automation, lower cost and reliability.

Jeff Miller.

multiple sources of energy, which would require different technologies to decarbonize them.

"We can talk about post-combustion carbon capture, we can talk about direct carbon capture and there is a lot to do on the efficiency side, as well as on de-flaring activities. The Baker perspective is that there is no one solution, you need to play across the portfolio of potential solutions and we need to cover our bets, where we want to go and create the differentiation factor for our portfolio," he said.

Roadblocks to developing new technologies could be capital and people. What was important fundamentally was how "we can play together in order to accelerate the new technology." Bresciani said he could quote multiple examples. The company was working with Occidental on net power, building turbos for oxy-combustion type of solutions.

"This can be a really exciting technology which can see a break through the industry, use gas as power, with residual that is 97–98 per cent concentrated CO_2, so it is easier to handle than classic post-combustion carbon and capture. This is coming through cooperation, investing in programmes and obviously coming together on the path."

This was a multi-year investment that required resources and consistency on the path, he said. Bresciani added that it was essential to attract the new generation, because today 30 per cent of technology existed to help reduce the temperature of the planet, and 20–25 per cent of those technologies were in the incubation phase, with the rest yet to come.

"It's definitely a long-term plan we need to go through that requires new people coming into the industry, collectively we have to create environment to have

"In my experience, everything we set out to do improves. Safety has improved over my career dramatically. I think emissions improved over that time but one of the most important things we can do is to be efficient and automate. So we've automated drilling tools, we've automated cementing equipment, we've automated a lot of things to make them faster.

"We drilled a world-record length well in Abu Dhabi last year, 50,000+ feet. I was bragging about that to my customer and they stopped me and said, 'You need to quit characterizing that as the longest well in the world, quite frankly that's the lowest-emission well in the world also because we don't build an extra island, we don't have to move another rig…that's the way we continue to advance every single day in terms of lowering emissions," he said.

Historically, private industry has been the best at solving these problems, he added, stating that limiting access to oil and gas was not part of the solution. Miller saw it as a conflict between aspiration and reality. "Reality will win in terms of demand satisfaction, anything that gets in the way of that is taking us in the wrong direction," he said. Miller was optimistic that aspiration and reality would be reconciled over the next few years, adding, "My money is on reality every time."

Alessandro Bresciani

Senior Vice President of Climate Technology Solutions, Baker Hughes

Alessandro Bresciani pointed out that there was not just one recipe to decarbonize the oil and gas industry and that the energy transition was going to take

Alessandro Bresciani.

new talent…We need it to create something that is sustainable," he said.

Bresciani is optimistic about the next three years, "because three years is a very short of time, but it was also been demonstrated in the last three years that we have changed so many things. There's been so much acceleration in the industry and the world. The last three years have done a lot to reaffirm what the real priorities of the world are. That will help us out going forward."

Dr Ayed S Al-Qahtani

Director, Research Division, OPEC

Dr Ayed S Al-Qahtani.

Dr Ayed S Al-Qahtani started with numbers from OPEC's flagship World Oil Outlook (WOO). The WOO saw the world population increasing by around 1.9 billion people, or more than 2.5 times the size of Europe's population, he said.

"We see the global economy doubling, that will require a lot of energy, at least 65 million barrels of oil equivalent, about 23 per cent more energy than what we consume today. More than half of that volume will come from renewables, that shows how aggressive we are and how optimistic we are when it comes to renewables demanding a significant share of the energy mix going forward.

"We know that we will need a lot of energy, all sources of energy, oil, gas, nuclear, coal, renewables…… The global energy system is so huge that we cannot change it with a flip of switch between now and 2045, which is only 22 years from now," he said.

Al Qahtani said technology was slowly developing and that it would take an evolutionary as opposed to a revolutionary route. "We are looking into current technologies that will help us burn oil in a more environmentally responsible manner, we have a lot of available and economically feasible technologies.

"We have around 35 operating CCS plants as we speak, storing about 45 million tons of CO_2. We probably will have more than 200 facilities by 2030. To make a real dent on the climate change front, we would need north of 1,200 facilities. It remains a matter of financing and financing proves to be an issue," he said.

He added there was 95 million tons of hydrogen being produced. "We would need an additional 25 million tons by 2030, probably 15 of that could come from blue hydrogen and the oil industry can cater to that."

OPEC Member Countries were great examples when it came to low-carbon technology, said Al Qahtani. "When it comes to CCS, we have successful experiences of Saudi Aramco, the United Arab Emirates, Algeria, when it comes to direct capture the same. In hydrogen, we saw the first ammonia shipment going from Saudi Arabia to Japan seven to eight months ago.

"Members of OPEC are doing all of the above when it comes to energy transition. We are doing solar, nuclear, hydrogen, carbon capture, utilization and sequestration, and I think the oil industry is endowed with minds that have kept it a centre of excellence for many decades with many innovative approaches, and many inventions that have risen to the challenge," he stated.

Not only the technology transferral to the Global South, but also the availability of financing to these nations was desperately needed, he added. "Hopefully, three years from now the Global South will have a stronger voice in multiple fora, not only in banking, but in technology transferrals."

Gerhard Thonhauser

Professor, Montanuniversität Leoben

Gerhard Thonhauser stated that the framework that policy or politics set to innovate was very important, because if that is not there, there is not enough support.

"I think we as an industry are on a mission to go from hydrocarbons to hydrogen and carbon, which is the future I believe for a lot of what we do…We have to get much more efficient in what we do. I think the avenue is two-fold: digitalization…how can we feed these systems with more and better data, and that is a challenge that I have seen echoing for 25 to 30 years. The second part is we how can make what we do with a lower CO_2 footprint."

He gave an example of the global fleet of drilling rigs, which emitted about the same amount as 50 million cars in CO_2. There were about 2,000 to 2,500 rigs running, he said. "If we would improve by 20 per cent, we take

Gerhard Thonhauser.

Dr Helima Croft.

ten million cars off the road, which is a very honourable target. We can do this with efficiency, including how we fuel these rigs, which can be done with hydrogen," he stated.

"The second part…is changing our product. One technology that my university is embarking on massively is the conversion of methane to hydrogen and carbon."

There was something between green and blue hydrogen, added Thonhauser. "You can generate hydrogen from gas…very energy efficiently." If it was used in the place it was developed, transport was saved. The infrastructure was in place, he added.

Thonhauser told his students to make a difference by being part of the industry. "Everything we are discussing today is not going to happen without young people who want to work for us and share their talent with us.

"As an industry, we have a marketing problem in general. We are a shadow industry, people don't know what we are doing. We had a long-term programme in Austria to teach the teachers. We found that high school teachers don't know what oil and gas is so how will they tell a young kid what it is," he stated.

Thonhauser was very optimistic about COP28, as it would be first event when (the industry) was at the table, "So if we can deliver and show we can do what we do every day in the context of the energy transition we will have a good future ahead of us."

Gala Dinner and Awards Ceremony hosted by the Ministry of Mines and Hydrocarbons, Equatorial Guinea

Speakers:
***Haitham Al Ghais**, OPEC Secretary General*
***Antonio Oburu Ondo**, President of the OPEC Conference 2023, Minister of Mines and Hydrocarbons, Equatorial Guinea*

Moderated by:
***John Defterios**, Professor of Business, NYU, Abu Dhabi*
***Eithne Treanor**, Founder and CEO, ETreanor Media*

Omar Al Rawi, Member of Vienna's City Council.

(l–r): Dr René Ortiz of Ecuador; Haitham Al Ghais, OPEC Secretary General; His Royal Majesty King Dr Edmund Maduabebe Daukoru of Nigeria; and Dr Álvaro Silva Calderón of Venezuela.

The Gala Dinner, which took place at the City Hall of Vienna, opened with a stunning performance by the "ATEM" agency called the "light art show," which depicted in a visually arresting way OPEC's central mission and history.

In brief remarks, the President of the Conference stated, for "Equatorial Guinea, the Ministry of Mines and Hydrocarbons and GEPetrol, it is a great honour to host you all this evening." A video providing information on GEPetrol immediately preceded his speech.

Omar Al Rawi, member of Vienna's City Council, delivered welcoming remarks on behalf of the City of Vienna, sending the best regards of the Mayor of Vienna, Michael Ludwig.

This was followed by a tribute by the current Secretary General to the former OPEC Secretaries General who were present at the awards ceremony and received special recognition from the Organization: Dr René Ortiz of Ecuador; Dr Álvaro Silva Calderón of Venezuela; and His Royal Majesty King Dr Edmund Maduabebe Daukoru of Nigeria.

Dr Ortiz served as OPEC Secretary General from 1 January 1979 to 30 January 1981. In addition to his success in key energy positions within the Ecuadorian government, he served as Ecuador's representative to the OPEC Economic Commission Board and then

Antonio Oburu Ondo, President of the OPEC Conference 2023, Minister of Mines and Hydrocarbons, Equatorial Guinea.

Dr Carol A Dahl, Adjunct and Professor Emeritus at the Colorado School of Mines (l), accepted the OPEC Award for Research from Haitham Al Ghais, OPEC Secretary General.

Dr Ken Koyama, Senior Managing Director and Chief Economist at the Institute of Energy Economics of Japan (l), accepted the OPEC Award for Research from Haitham Al Ghais, OPEC Secretary General.

as Governor to OPEC, before then being appointed as Secretary General two years later.

Dr Calderón served as OPEC Secretary General from 1 July 2002 to 31 December 2003. He has had an exemplary career serving his country, OPEC and the global industry. Before coming to OPEC, he served as Venezuela's Minister of Energy and Mines. Earlier in his career, Dr Calderón had the privilege to serve as a member of the advisory team of Dr Juan Pablo Pérez Alfonzo, one of our Organization's founding fathers.

His Royal Majesty Dr Daukoru served as OPEC Secretary General and President of the OPEC Conference from 1 January 2006 to 31 December 2006. He also held prominent energy posts in the Nigerian government, including Presidential Advisor on Petroleum and Energy, Minister of State for Petroleum Resources and Group Managing Director of the Nigerian National Petroleum Corporation.

Awards Ceremony

As at past seminars, OPEC honoured distinguished scholars and accomplished journalists who have made outstanding contributions to the petroleum industry and related areas during their lifetimes through its 2023 OPEC Award for Research and OPEC Award for Journalism. In addition, this Seminar saw a number of new awards: the Award for the Best Energy Research Institute, the Award for the Best Energy Research Paper and the Award for the Best Young Energy Professional.

OPEC Award for Research is given in recognition of a career dedicated to the objective study and balanced analysis of the energy sector.

Dr Carol A Dahl is Adjunct and Professor Emeritus at the Colorado School of Mines. Dr Dahl received a University of Minnesota PhD studying under Nobel Economics Laureate Christopher Sims. She widely disseminates her energy economics research internationally through teaching, publishing, and presentations.

Dr Ken Koyama is Senior Managing Director and Chief Economist at the Institute of Energy Economics, Japan (IEEJ). Economic and political analysis of the world oil and gas market as well as energy security and the geopolitics of energy, have been Dr Koyama's main focus in his research career since he joined IEEJ in 1986.

The OPEC Award for Best Energy Institute is given in recognition of excellence exhibited in the continuous, impartial and scientifically-based research of energy- and oil-related issues.

King Abdullah Petroleum Studies and Research Center (KAPSARC) is an advisory think tank within global energy economics and sustainability, providing services to entities and authorities in the Saudi energy sector. Through their advisory services to the energy ecosystem, KAPSARC's experts provide day-to-day insights and updates using a multidisciplinary team approach to drive long-term value and deliver tangible results at scale.

The OPEC Award for Best Energy Research Paper is given in recognition of excellence exhibited in the objective, critical and impartial research of oil and energy-related issues.

The research, paper 'The value of OPEC's spare capacity to the oil market and global economy' was written by Dr Axel Pierru, Dr Hossa Almutairi and Dr James Smith. The paper investigated the extent to which OPEC has succeeded in stabilizing the oil market and related implications for the world's economy.

The OPEC Award for Best Young Energy Professional is given in recognition of the steadfast commitment to building a career dedicated to the objective study and balanced analysis of the energy sector.

Dr Abdulaziz Salem Ahmed Al-Qasim is leading CCUS and sustainability efforts within EXPEC ARC, Saudi Aramco. He was instrumental in sowing the seed for

Fahad Alajlan, President of the King Abdullah Petroleum Studies and Research Center (l), accepted the OPEC Award for Best Energy Institute.

Dr Axel Pierru (l) accepted the OPEC Award for Best Energy Research Paper on behalf of the team.

Dr Abdulaziz Salem Ahmed Al-Qasim, Saudi Aramco (l), accepted the OPEC Award for Best Young Energy Professional.

Dr Yousef Mohammad E Alshammari, CEO and Head of Oil Research, CMarkits (l), accepted the OPEC Award for Best Young Energy Professional.

the first Hydrogen Programme that outlines a detailed plan for hydrogen economy from upstream perspectives. He has about 100 patents, including disclosed and granted, published 70+ papers, including peer-reviewed ones, received 20+ prestigious awards and recognitions and deployed 10+ new technologies focused on decarbonization and sustainability.

Dr Yousef Mohammad E Alshammari is CEO and Head of Oil Research at CMarkits. He is an energy researcher, consultant and media analyst on energy markets at AlArabiya news channel, who has been listed as one of the world's top 50 global energy analyst by Gulf Intelligence. Dr Alshammari has been a member of the energy experts group at the UN advising countries on better strategies to make clean use of fossil fuels.

OPEC Award for Journalism

Amena Bakr is Chief OPEC Correspondent and Dubai Deputy Bureau Chief for Energy Intelligence. She covers energy and politics related to OPEC Member Countries. Prior to that, Amena was an Energy Correspondent for Reuters news agency for six years, posted in Dubai, Doha and Riyadh. She holds a BA in business administration from the Arab Academy for Science, Technology and Maritime Transport in Egypt, with a major in management information systems.

Amena Bakr was awarded the OPEC Award for Journalism.

Ministers, the Secretary General and OPEC Award winners gather for a group photograph.

COP28 President-Designate speaks at OPEC Seminar via video

Dr Sultan Ahmed Al Jaber.

On the second day of the 8th OPEC International Seminar, Dr Sultan Ahmed Al Jaber, COP28 President-Designate, and United Arab Emirates Special Envoy for Climate Change and Minister of Industry and Advanced Technology, delivered a video address.

He thanked OPEC for the essential role it played in balancing energy markets, promoting global prosperity and advancing the goals of sustainable development, as well as its unwavering support of the COP28 Presidency. Creating a sustainable and inclusive energy transition was one of the most complex issues facing mankind, he said.

"The science is telling us that we have just seven years to make a 43 per cent reduction in carbon emissions to keep the aspiration of 1.5 celsius within reach. In the same timeframe, energy demand will only increase, as an additional half a billion people join our planet. And, according to the most recent OPEC data, as economies continue to grow, energy demand will increase 23 per cent by 2045.

"Therefore, the critical challenge of this century is to dramatically reduce emissions, while maintaining robust sustainable development."

Al Jaber stated this meant a system-wide transformation of entire economies, which was challenging from a political, economic and social standpoint.

In addition, it was an engineering challenge, he continued, which was why the most skilled people from all relevant industries, including the oil and gas industry, must be leveraged.

"To get there, we need to rapidly build a new clean energy system, while comprehensively decarbonizing the system we rely on today."

Al Jaber outlined what he saw as the role of the oil and gas industry in the energy transition. This included the entire industry becoming aligned to achieve net-zero by or before 2050. Next, he wanted to see acceleration of an industry-wide commitment to reach net zero methane emissions by 2030. He also called for monitoring, measuring and validating progress at every step of the way. Finally, allocating capital at scale for clean energy solutions was essential.

"We can all make a positive difference, especially when it comes to helping to de-carbonize heavy emitting sectors, the hardest to abate scope 3 emissions," he said, adding, "Building a new energy system can only happen at speed and scale with united action on the supply and the demand side together. When it comes to supply, we need to massively scale up clean energies by 2030, triple renewable capacity to 11,000 gigawatt and double hydrogen production to 180 million tons."

He added that the phase down of fossil fuels was inevitable, but could not be irresponsible.

"We must manage this transition, ensuring energy security, accessibility and affordability, while also sustaining socioeconomic development. The speed of the transition will be driven by how quickly we scale-up zero-carbon alternatives. It will also depend on strong demand signals," he said.

This starts with national-level policies, including the updating of NDCs to accelerate 2030 trajectories to come in line with net-zero targets by 2050.

The United Arab Emirates is setting an example with its third NDC update to its second NDC, which pushes emissions reductions to 40 per cent compared with business as usual, an almost ten per cent improvement over the previous update.

"At the same time, we have announced a 54-billion-dollar capital investment programme over the next seven years to triple renewable and clean energy capacity, significantly expand our hydrogen production and completely phase out coal from our energy mix."

He called on governments to stimulate the adoption of clean energies, commercialize the hydrogen value chain, make carbon capture viable and affordable and incentivize R&D regarding battery storage, along with energy efficiencies and upcoming technologies.

Al Jaber said that investment was crucial to meeting these goals, and even though last year a record $1.5 trillion had been invested in clean technologies, the number needed to be three times bigger.

The final critical factor for success was capacity building and skills development, so that young people would be trained for the jobs of the future.

"Because we must deliver climate action and economic opportunity at the same time. We must hold back emissions, not progress. And we must build the new energy system…before we unplug the energy system of today.

"The energy transition represents the greatest leap in social and economic development since the first industrial age. It represents a massive opportunity for this industry to redefine its future…and contribute to the future of humanity. And just as this industry lifted millions out of poverty and created sustainable prosperity in the past, I know it can do so again."

Instead of being viewed as part of the problem, the industry must step up and change the script to show the world how essential it was to the solutions of the future, concluded Al Jaber.

Ministerial session 3

Pathways to just energy transitions

Speakers:

Tarek El Molla, *Minister of Petroleum and Mineral Resources, Egypt*
Ana Fontoura Gouveia, *Secretary of State for Energy and Climate, Ministry of Environment and Climate Action, Portugal*
Dr Diamantino Pedro Azevedo, *Minister of Mineral Resources and Petroleum, Angola*
Ana Palacio, *Former Minister of Foreign Affairs, Spain*

Moderated by:

John Defterios, *Professor of Business NYU, Abu Dhabi*

One of the major future challenges is how to construct sustainable and reliable energy systems. It requires a delicate balance between various targets, such as reducing emissions, energy availability and affordability, as well as energy security. Focusing on only one of these over the others can lead to unintended consequences, such as market distortions, heightened volatility and even energy shortfalls. The science tells us that tackling emissions has many possible paths. There is no one-size-fits-all solution, for countries or industries. The narrative that the energy transition from oil and other fossil fuels to renewables is misleading and potentially dangerous to a world that continues to be thirsty for all energy sources. It is vital to look at the role of R&D and technology to help improve the environmental credentials of all energies, and thus help move towards an inclusive and just energy transition for all.

Moderator **John Defterios**, Professor of Business NYU, Abu Dhabi, started the session by addressing Tarek El Molla, and pointing out that when hosting COP27, the country had brought forward a landmark focus on loss and damage, as well as brought Africa fully into the agenda. Defterios asked El Molla for his views on Egypt's natural gas discoveries, the energy transition, the push for decarbonization and the challenge of energy access. He queried: "Can we pull off the energy trilemma?"

Tarek El Molla.

Tarek El Molla

Minister of Petroleum and Mineral Resources of Egypt

Tarek El Molla stated that it was very important for every country to define its roles and responsibilities; there must be common goals, but different responsibilities.

"Sharm El Sheikh was a landmark COP, a very successful COP because we were able to achieve several goals. First, we were representing Africa…so we were able to demonstrate the needs of our African continent… we needed to highlight the importance of availing of their resources to develop their needs."

Thus, when talking about renewables and the transition for people who do not have access to electricity or clean cooking, it was important to note that Africans needed to develop their natural resources first, in parallel with revenues to be able to develop their journey for the transition, he said.

The second point, he said, was that for the first time ever at a COP oil and gas companies and leaders were welcomed. Thus, companies and this industry, could demonstrate that they could be part of the solution, he added.

"We were able to showcase how we can manage the energy transition successfully. I think COP27 also ended with a clear identification of a loss and damage fund for the first time ever, whereby countries not responsible for emissions were compensated by the countries making these emissions. It was an implementation COP and I think the road is paved for our brothers in the Emirates in this coming COP28 to capitalize on the achievements we have made."

Molla added that Egypt must update its energy strategy to include very important technological developments, such as low-carbon hydrogen and other advancements in renewables. The country now had a strategy to have 42 per cent of its energy mix from renewables by 2030 rather than 2035. Currently, 65 per cent of Egypt's hydrocarbons were in the form of natural gas, which was the elected and chosen cleanest hydrocarbon fuel, he said.

Ana Fontoura Gouveia

Secretary of State for Energy and Climate, Ministry of Environment and Climate Action, Portugal

Ana Fontoura Gouveia shared the Portuguese experience. She said that the country had started its energy transition more than 20 years ago with onshore wind and this had allowed it to better manage the recent energy crisis.

Ana Fontoura Gouveia.

"A few days ago a new goal was announced for renewable incorporation into the energy mix; it will be 85 per cent in 2030, it is already 60 per cent and that means we need to accelerate the path of the transition. We will do it by investing a lot in solar technology and offshore wind."

An auction for offshore wind, which would do a lot to stabilize the system, will be launched this year and the country is investing into floating technology, she said. "On floating technology there is a lot we can learn from the oil industry because the floating platforms are not that different.

"In Portugal, we are focusing on renewables because these are our endogenous resources, this is how we can ensure security of supply and how we can ensure affordable energy prices for families and industries and this is the way to attract new industries to the country."

Fontoura Gouveia stated that it is very important to involve younger generations, adding they want to be part of this debate and transition. "They have indeed strong views on the oil and gas industry and its important to engage in dialogue, because I think what the younger generations want is what we all want, a sustainable world but at the same time we want to ensure jobs, we want to ensure security of supply, and we want to ensure affordability."

Diamantino Pedro Azevedo

Minister of Mineral Resources and Petroleum, Angola

Diamantino Pedro Azevedo stated his goal today was to help the audience understand that for the energy transition to be just there must be a paradigm change.

"A fair, well-balanced energy transition, taking into account this specific moment and the needs of a country, cannot be imposed on anyone… We have 600 million people in African living in energy poverty. An energy transition imposed on them is not going to improve the situation, but it is going to make energy poverty even worse," he said.

Angola is an oil-producing country, but its energy matrix did not depend on oil, rather on hydroelectric energy resources, he clarified. About 60 per cent of Angola's energy was produced in a clean fashion and

Diamantino Pedro Azevedo.

the country wanted to make this energy matrix even cleaner.

"But we do not want to do this at the cost of our main source of foreign currency, which is oil. We have to do this in a well-balanced way to keep oil as the driving force of our economy and make sure we will have more value from the oil we produce in our country.

"That is the problem in Africa, we are the producers of the raw material, oil and other minerals, and we export them and we import products and this is something that has to change. In my own country, we export oil and import 80 per cent of oil derivatives. If we want a fair transition, we have to look at this and understand Africa and my country."

The energy transition has to take place with us all working together for the good of Africa, he said, because Africa was the continent growing the most and it was a great source for the energy transition.

Ana Palacio.

Ana Palacio

Former Minister of Foreign Affairs, Spain

Ana Palacio pointed out that the plurals in the title of the session were important "pathways to just energy transitions", because it clarifies that one size does not fit all. "In Europe, we do not have an issue of growing population, or bulging middle classes, so we are concentrating on energy efficiency. This is our transition, energy efficiency and CO_2 efficiency."

The EU was betting on renewables because it was important to the continent's independence, said Palacio. Currently, 90 per cent of the continent's energy was imported. Palacio said that Europeans saw only one pathway to one energy transition, but that this was wrong. "Europeans buy African gas to make electricity but they will not contribute to financing any gas-generated electricity in these countries, only renewables, because this is our dogma. What COP28 has to do is overcome the dogma that there is just one transition."

The polestar is not renewables, it is cleaner air, she said, adding that oil and gas were part of the solution. She stated, "One friend rom Mozambique told a German minister, 'We Africans, we are for decarbonization, but we have to carbonize a little first.' That is the challenge."

A narrative is needed that would bring youth along on the journey, she added. "They need to understand that oil and gas are part of the solution and frankly a big part, because otherwise there is no way out."

"We need more financing, but not just funds. We need de-risking of investment in Africa and we need transferral of technology. This is what should come in this COP."

Big and small oil companies should prove themselves at COP28 by setting standards and benchmarks, along with the independent auditing of benchmarks, she said. "This would be the success of the COP."

Palacio also highlighted funding and institutions. "The World Bank should concentrate on making tools for investment...there are instruments, but the World Bank does not finance anything but renewables and this is absolutely unacceptable," said Palacio, who used to work with the World Bank.

"One of the important messages I am getting from this conference is that we need a united voice from Africa," she added.

John Defterios.

High-level roundtable 4

Eradicating energy poverty

Speakers:

Demetrios Papathanasiou, *Global Director for the World Bank's Energy and Extractives Global Practice, The World Bank*

Dr Omar Farouk Ibrahim, *Secretary General, African Petroleum Producers' Organisation (APPO)*

Dr Fereidun Fesharaki, *Founder and Chairman, Facts Global Energy*

Mele Kyari, *CEO, NNPC*

Moderated by:

Richmond Osuji, *President, Lipservice Communication and Resources Limited*

Action is required more than ever to help eradicate energy poverty amid disruptions related to the impacts of the COVID-19 pandemic, geopolitics, and the global economic situation. At present, the world is falling behind in the attainment of UN Sustainable Development Goal (SDG) 7, related to energy poverty eradication. For example, the COVID-19 pandemic had widespread human and socio-economic ramifications, not least for developing countries and vulnerable groups who feel the effects acutely. International cooperation and finance are fundamental factors for achieving progress on SDGs, including on universal energy access, so that no one is left behind as the world looks at a just and inclusive energy transition.

The session began with the moderator, **Richmond Osuji**, highlighting individual examples of energy poverty challenges. It was a reminder to all of us, he said, that there were real people behind the billions without energy access, a challenge that only energy security could solve.

The session also saw a variety of questions related to tackling the energy challenge of eradicating energy poverty. These included: what are the obstacles facing efforts to eradicate energy poverty, and have these been exacerbated by COVID-19? And how can progress toward universal energy access be accelerated and allow for synergies between a sustainable energy system transition and resilient societies?

Demetrios Papathanasiou

Global Director for the World Bank's Energy and Extractives Global Practice

The COVID-19 pandemic that delayed many activities to do with alleviating energy poverty and electrification, said Demetrios Papathanasiou. He added: "In terms of access to modern energy services and SDG 7, progress actually stalled for two years."

In talking about electrification, he specifically focused on sub-Saharan Africa and highlighted a number of stark facts. "Today, two out of three health facilities in Africa do not have access to electricity, two out of three primary schools do not have access, and essentially one out of two people in Africa do not have access to electricity."

It was vital that we moved forward with electrification, he said, but added that although the pandemic looked to behind the world, the economic crisis today and rising inflation were headwinds.

Papathanasiou said the bank was doubling its efforts in the electrification area and it was vital to have the right policies in place. He added that to realize SDG 7 by 2030, two thirds of Africa needed to be interconnected with electricity, and the other third had to have a decentralized source.

Energy access had to be first and foremost, he said, and "whatever are the most economic options should go ahead."

Demetrios Papathanasiou.

Dr Omar Farouk Ibrahim

Secretary General, APPO

"This is the first time an African institution has been invited to the OPEC Seminar, I think this is very important", began Dr Omar Farouk Ibrahim. He also

Dr Omar Farouk Ibrahim.

Fereidun Fesharaki.

highlighted the positive outreach of the United Arab Emirates and COP28 to African countries and its national oil companies, to better understand the challenges the continent faced.

"Africa is now sitting at the table," he said, before adding it was vital that the continent did not continue to play the victim. "We have to show practically what we are doing. We cannot continue to rely on outsiders to solve our problems for us."

He stated that APPO had been examining the question of how the energy transition would affect Africa as a continent. He emphasized four main challenges around financing, technology, markets and expertise, and once more, underscored the need for solutions to come from Africa.

In terms of oil and gas, he said that they still had an important role to play for African economies and the global economy too, and noted the agreement between APPO and the African Export-Import Bank to set up the Africa Energy Bank. He hoped that the bank would be in place by the end of the year.

The bank's key objective is to finance oil and gas operations in Africa, providing a funding source for oil and gas projects on the continent after some international financing institutions started scaling back their funding for such projects.

Dr Fereidun Fesharaki

Founder and Chairman, Facts Global Energy

"People want to grow, they want to prosper, so there is no doubt that energy demand will increase", said Dr Fereidun Fesharaki. The only question, he added, was the composition of the energy mix.

From a climate change perspective, we need energy demand to be met by new energy, he said, but that was only one perspective. "The rich world has the luxury of focusing solely on climate change, because the basics are taken care of. It is a new religion in some parts of the rich world.

"The poor world, however, has to focus on immediate concerns of food and healthcare, they may care about climate change, but quite legitimately this is just one of their many concerns."

Fesharaki said the tensions would not go away and pretending they would, could not solve anything. He added that cleaner technologies were a central part of the solution in his view, and these new technologies must be transferred to the developing world at low cost to the poorer countries.

In a passionate ending, he said, "we cannot expect the poor world to stay in energy poverty, to save the world … Those living in energy poverty must use a combination of hydrocarbons and new energy, probably for a long time."

Mele Kyari

CEO, NNPC

For most developing countries, the key was access to clean, modern energy, said Mele Kyari. "In my country of Nigeria, 70 per cent of the people do not have access to clean cooking fuels," he added. He also highlighted that Africa only contributed about three per cent of the world's annual global emissions.

Mele Kyari.

Richmond Osuji, President, Lipservice Communication and Resources Limited.

He said the focus must be on the challenges of today, stating there must be a replacement mechanism where emissions could be reduced, and energy poverty dealt with too. In this regard, in Nigeria, "we are looking to deepen the utilization of natural gas as a transition fuel."

Leading a large energy company in Africa, noted Kyari, it was important that NNPC worked with other energy companies on the continent, "to see how we make enormous energy resources available to help alleviate energy poverty in Africa as a matter of business, and as a matter of necessity."

He added the continent "needs a regional framework where resources are available. And ultimately, this then needs to be part of the global community."

High-level roundtable 5

The pace of energy transitions and climate change policies

Speakers:

Carlos Garibaldi, *Executive Secretary, Association of Oil, Gas and Renewable Energy Companies of Latin America and the Caribbean*
Majid Jafar, *Chief Executive Officer, Crescent Petroleum*
Bernard Looney, *Group Chief Executive/CEO, bp*
Tan Sri Tengku Muhammad Taufik, *President and Group CEO, Petronas*
Balaji Krishnamurthy, *Vice President for Strategy and Sustainability, Chevron*
Simon Stiell, *Executive Secretary, United Nation Framework Convention on Climate Change*

Moderated by:

Eithne Treanor, *Founder and CEO, ETreanor Media*

Striking a balance between satisfying the energy needs of the global economy and building a comprehensive, resilient, sustainable, and climate-friendly energy system that supports and enables sustainable development is one of the key challenges of this generation. Many possible response actions are available across the world, with an increasing number of climate change policies emerging subject to national circumstances, many of which are relevant to the energy sector. Besides national policies, a stronger role for international climate change policy has been called for recognizing that the choice of a climate mitigation pathway should not be binary — namely, hydrocarbons or renewables — but an inclusive and just approach. Recently this has become more evident, but there remain divergent views on the pace for energy transitions.

Carlos Garibaldi

Executive Secretary, Association of Oil, Gas and Renewable Energy Companies of Latin America and the Caribbean

The Executive Secretary noted that the region he represented was suffering from a lack of investment in renewables. Cash flows from developed countries to support developing countries had not been sufficient. Latin America was blessed with a large 'Sun Belt' and wind potential. The region also possessed the potential for growth in green hydrogen. He emphasized that hydrocarbons continued to play a fundamental role for many countries in the region, including in poverty alleviation. Countries in the region had the right and obligation to develop their resources in a sustainable manner and properly monetize them. Hydrocarbons would continue to be developed in parallel with increasing the relative weight of renewables. The region would be very significant in the race to secure critical minerals. That race would have ramifications for sustainability especially if critical minerals are dredged from the seabed.

Majid Jafar

Chief Executive Officer, Crescent Petroleum

Jafar described the consequences of a failure to address all three components of the energy trilemma. A lack of investments in the oil and gas industry had resulted in price spikes and energy insecurity, in addition to more coal being used, which had resulted in increased emissions. Jafar argued that a policy of discouraging investment in oil and gas madd no sense. Starving supply while demand grew could have serious consequences. Europe had been returning to coal and subsidizing energy, while encouraging others not to do so.

Jafar stressed that the narrative of the transition had been dominated by the myth that the world could survive 100 per cent on solar and wind power. This was impossible. Natural gas and nuclear were the cleanest forms of energy, yet activists opposed them. There needed to a balance between all the 17 Sustainable Development Goals (SDGs). He stressed that there was a perception that global institutions, including the UN, appeared to be prioritizing some SDGs over the others.

He said that those who were calling for an end to oil and gas or reducing oil and gas consumption often overlooked the multitude of ways that petroleum and petroleum derived products are used in daily life.

Carlos Garibaldi.

Majid Jafar.

Bernard Looney.

Tan Sri Tengku Muhammad Taufik.

Bernard Looney

Group Chief Executive/CEO, bp

The CEO noted that the events of the last couple of years had reminded people that energy was the lifeblood of society. He said that we needed to build a cleaner energy system and a system that provided secure and affordable energy. bp approached this through 'and not or' strategy. bp invested in both the energy system of today, namely oil and gas, and that of the future. If we didn't invest in today's needs, there would be a mismatch of supply and demand. Oil and gas were the lifeblood of today's energy system. One could not focus on one KPI at the expense of others, as it could create a problem somewhere else. Energy security was a reality that needed to be addressed. The energy trilemma was a means of bringing all stakeholders to the table.

Tan Sri Tengku Muhammad Taufik

President and Group CEO, Petronas

For both demographic and economic reasons, Asia would play a pivotal role in the energy future. Two of the world's three largest economies were in Asia. Asia would be the centre of energy demand growth in the future. Many climate activists did not recognize the needs of the large burgeoning economies in Asia. Taufik stressed that Petronas was not a climate denier, in fact it was committed to investing in renewables. He noted that Asia would be the first to suffer from a climate emergency. What was critical was striking the right balance between the components of the energy trilemma.

He emphasized that those in energy poverty were focused on the realities of daily living. To some, they put more weight on security and affordability than sustainability. Many Asian countries had ambitious climate targets and plans.

Balaji Krishnamurthy

Vice President for Strategy and Sustainability, Chevron

Chevron had similar views on striking the right balance in the energy trilemma. There was a need to harness the industry's expertise to clean the energy systems. Chevron was continuing to invest in the energy systems of today and lower carbon technologies. It was also working on developing new energy business lines, including renewables, carbon capture and hydrogen.

Balaji Krishnamurthy.

Simon Stiell

Executive Secretary, United Nation Framework Convention on Climate Change

Stiell noted that some had suggested that he could not attend the Seminar, suggesting there was a conflict of interest. He stressed the energy transition process needed to be inclusive, and that all stakeholders needed to come together to address the climate challenge.

He emphasized credibility and integrity. He suggested he was not on the same page as some of the oil and gas majors, noting that the CEO of Shell, Wael Sawan, had said in an interview that cutting production of oil and gas would be 'dangerous and irresponsible.' The Executive Secretary said that he believed that this was not true and was an irresponsible statement.

Simon Stiell.

He stressed that the Paris Agreement was a global goal. He said that he felt what was missing in the discussion was a shared view on the 'how' we do this, adding that we need to go beyond realpolitik.

Ministerial session 4

Diversifying energy economies

Speakers:

Suhail Mohamed Al Mazrouei, *Minister of Energy and Infrastructure, United Arab Emirates*
Puot Kang Chol, *Minister of Petroleum, South Sudan*
Bruno Jean-Richard Itoua, *Minister of Hydrocarbons, Republic of the Congo*

Moderated by:

Bob McNally, *President, Rapidan Energy Group*

Increasingly stringent climate mitigation policies and actions could have important implications for energy exporting economies and their right to sustainable development. Economic diversification and resilience could provide innovative approaches to mitigate risks and offset any impacts arising from the implementation of climate response measures. Some countries are well under way in diversifying their economies, but it is clear that alternative pathways are being followed due to diverse economic conditions, comparative advantages, priorities, capabilities and national circumstances. All available approaches and viable options that could support economic diversification and enhance resilience, in light of resource availability, should be considered in order to create a more predictable environment for investment, trade and technology advancement, while offering the wider benefits needed to set the world on a sustainable and fair pathway.

Moderator **Bob McNally**, Rapidan Energy Group, stated that the three countries in attendance were at the forefront of energy and economic diversification and the transition. He commented on how important it was to combine economic diversification with the transition. He first addressed Suhail Mohamed Al Mazrouei, Minister of Energy and Infrastructure, United Arab Emirates. He asked for Al Mazrouei's perspective as a representative of a successful diversifying economy and leader in the transition.

Suhail Mohamed Al Mazrouei.

Suhail Mohamed Al Mazrouei

Minister of Energy and Infrastructure, United Arab Emirates

Suhail Mohamed Al Mazrouei stated that the United Arab Emirates had started to invest every dollar it could into creating one of the world's largest sovereign wealth funds. The country also invested in managing trade through port management and other means, which gave it extensive expertise in certain areas, so that it became an operator in so many parts of the world.

"That led us to the energy transition 16 to 17 years ago when we thought gas is finite and we are dependent on gas for electricity. Our leadership back then put a plan in place for diversification. We diversified our economy and energy sources," he said.

Today the plan was to have 32 per cent clean sources of energy in place by 2030, and 38 per cent by 2045, stated Mazrouei.

"Here are some numbers to shed light on the role we are playing as an export destination linking east and west, especially with our brothers in Africa: Non-oil foreign trade in 2022 jumped 17 per cent compared with 2021 to $599 billion. The outflow, FID (foreign direct investment) in 2021 saw growth of 19 per cent compared to 2020 and reached $22.5 billion. The inflow of FID to the United Arab Emirates was growing by 4 per cent compared with 2020 and in 2021 was at $20.7 billion. Those numbers show you that the United Arab Emirates has not only diversified its own economy but is also…investing billions to enable other countries to do the same," he said.

Many of these investments had gone to renewable energy, he continued, adding that the United Arab Emirates had invested $50 billion in more than 70 countries. "We are intending to invest another $50 billion in green technology/energy in the next ten years or less. That gives you a magnitude of the aspiration. It is to enable trade to expand between east and west, north and south and we are building the infrastructure for it and looking forward to cooperating with all countries we are currently investing in or will be investing in in the future," he said.

"The key is inclusiveness, and what we are trying to do at COP28… one thing that is very important is that we need to hear everyone. There is no path that is going to fit us all, we are at different paces and we have to recognize that certain countries will have to grow in order for them to diversify… but maybe we need the resources in Africa for us to transition to net-zero," he added.

He used the example of the United Arab Emirates, which was moving 100 per cent to relying on gas in its recently adopted energy strategy, "We will be saving more than $190 billion over 30 years.

He added that there were more than 200 countries in the world, and another 20 to 30 needed to step up.

"If we are serious about the pace, we need to come and do projects not just talk or lecture….. We need inclusiveness, we need everyone to speak out, that's what would make COP28 the most inclusive COP ever…to put forward some true numbers, and checks and balances on the progress. Then we can truly monitor if we are achieving or if we are falling behind. It looks like we are falling behind if we are not addressing all of those things we are talking about," he said.

Puot Kang Chol

Minister of Petroleum, South Sudan

Puot Kang Chol.

Puot Kang Chol said South Sudan was the youngest country in the world. For one to transition, one must start from somewhere. For a country like South Sudan, there was nowhere to transition from, as it was beginning afresh.

"It's important to have access to resources, we need them to be able to venture into other sources of energy, and we need access to the technology. Some countries are making it difficult for others to have access to technology. It has to do with politics. There must be cooperation between countries and governments and with international financing institutions and other governments."

"Absent that, it will be difficult for countries, particularly from my continent, to really move at the same speed as others are moving. We must recognize one another as people who are affected and who have the same fate… For us to diversify our economies, we need to sit at the same table as equal partners," he said.

"We all agree there is a need to transform, we all agree in Africa in particular that 600 million have no access to electricity. Some would say they have no access to clean cooking gas, but some don't even have something to cook, let alone cooking it clean," he said.

He added that South Sudan did not have reliable or accessible or affordable power. "The only means for a country like South Sudan is to continue the exploitation of our fossil fuels so we get the resources to develop the other sectors. Our economy depends on fossil fuel more than 90 per cent."

South Sudan had an opportunity, he added, "It has rivers, we can create dams, we can create hydro… we have the legal framework in place. But as a government our first responsibility is to exploit the resources at hand, and at the moment that is fossil fuels. So we are asking others to come invest, generate resources and income here and we will use this to develop other sectors."

Chol said that a 10 mb/d refinery that was built could not function because there was no road to move the product and limited storage capacity, so a shutdown of the refinery had been ordered until a means could be put in place to move the product.

Another example is that the country was told to stop importing cars using fossil fuels. Chol had a friend who was in Niger and wanted to go to Chad. Since there was no road, he had to fly from Niger to France and from France to Chad, even though it would only take two hours by land.

"If I have an electric car and nowhere to charge on the way, what do I do? What is a priority elsewhere may not be a priority in another location. Not because we don't want to accept this, but someone is ahead of us by some kilometres, and for us to get there we have to walk the same kilometres," he said.

The whole of the African continent emitted less than five per cent of greenhouse gases, but Europe emitted more than ten per cent, the US more than ten per cent, and China more than 20 per cent, he stated.

"Where is the polluter pay principle here? You have developed your cities by using fossil fuels and last year we were in Houston and were told 'you must stop'. My response is that Houston was built by money from fossil fuels, and now you're telling me to stop, telling me when I get sick I should not go to hospital because I don't have money to build that hospital," he said.

Bruno Jean-Richard Itoua

Minister of Hydrocarbons, Republic of the Congo

Bruno Jean-Richard Itoua stated that diversifying while being in an energy transition was an issue in developing and exporting countries. "In reality the problem is not to diversify…the issue is not that our population doesn't want the transition, but they need development… First, we want to ensure social and economic growth…Apart from petroleum we have everything else. We have soil that is fertile, we have sun, we have the sea, forest. We have nice tourism sites, and ambition to transform our natural resources through industry," he said.

"We have to continue to finance petroleum and gas in order to stimulate diversification… And we have a new challenge, the energy transition…first we have to invest in technology because we need technology in order to make a green petroleum and gas industry and then invest in renewables.

"I live near the Congo River, and I don't see investment into renewables. I don't see dams for hydro, financing for solar or wind, and hydrogen is just beginning. There are 600 million who don't have electricity. With this path we cannot get to the transition," he said.

"we have had very good conversations and panelists, and I am very happy because I see much progress on having common views on the transition. I think everyone agrees that we need a just and equitable transition. We will not have one transition, but transitions according to the situation of the country, stakeholders, etc," he added.

Itoua stressed that aside from investing in oil, the focus must be placed strongly on gas, as it was no longer meant to support the transition, but rather had become a target fuel, "which is a new and huge step. It is a solution like wind, solar and hydro," he added.

The countries in OPEC have the same position when it comes to dialogue, said Itoua. "I am very happy to have OPEC+, and so many other producing countries outside of OPEC+. We are happy to bring them inside just to talk and find the same position for the benefit not just of one or two countries, but the world economy."

Bruno Jean-Richard Itoua.

Investors are strongly interested in any profitable project, no matter where it was, said Itoua. More and more countries in Africa had discoveries of oil and gas, big discoveries.

"Maybe one day we will have 52 African countries producing oil and gas. Investors are coming, we see them, we explain to them, we try to provide the best legal framework, but they tell us there are pressures from government on them to stop investing so much in oil and gas, especially in Africa. There is pressure from governments on banks to stop providing money for that. That's why we decided to establish an African energy bank."

Itoua finished by saying, "We should not need to advocate for Africa, because Africa regarding the climate change issue/disaster has never been the problem, we are the victim. We have oil, we have gas, we have big rivers, we have the sun, we have wind, we have a big population, a good market, a young population that are becoming more educated, we are having more and more stability…the world should not see us like beggars.

"We are solution providers. We should talk not between someone on a humanitarian basis and another who needs help, we should talk as very good partners, and Africa is today one of the best partners for the climate change and energy transition issue."

High-level roundtable 6

The role of international cooperation in diversifying economies

Speakers:

Joseph McMonigle*, Secretary General, International Energy Forum*
Dr Amrita Sen*, Founder and Director of Research, Energy Aspects*
Ibrahim Al-Muhanna*, President, Saudi Energy Consultants*
Charif Souki*, Co-founder and Executive Chairman of the Board, Tellurian Inc.*
Paulino Jerónimo*, President, National Oil, Gas and Biofuels Agency, Angola*

Moderated by:

John Defterios*, Professor of Business, NYU, Abu Dhabi*

Economic diversification and enhancing economic resilience can be achieved through a range of pathways. Today, countries find themselves at different stages of economic development and diversification, and with varying capabilities and resource availability, all of which need to be taken into account. International cooperation and multilateral fora could play a key role in aiding the diversification of energy exporting and importing economies through the facilitation of knowledge sharing, technological exchanges, as well as in the energy space through actions aimed at improving market stability. Furthermore, the related challenges of sustainable development, addressing climate change and ensuring energy security will require widespread engagement at a multinational level, further underscoring the paramount importance of international dialogue.

The moderator, **John Defterios**, started his introduction by saying that the final session on international cooperation and diversification was an apt one on which to end and wrap up the key elements of the past two days. He said: "You cannot have a smooth energy transition, realistic investment into new resources, whether oil, gas or renewables, without the correct architecture of funding. At the heart of this is a diversification and an international cooperation conversation."

He added that there had been much talk throughout the Seminar on the needs of developing countries in the transition. He asked the question, how could the energy transition be accelerated and, at the same, how could developing countries be supported in their economic and social development?

Joseph McMonigle.

Joseph McMonigle

Secretary General, IEF

The population of Africa grew every two years about as much as a country like France or Thailand, said Joseph McMonigle. It underscores the dramatic growth on the African continent, which will evidently translate into expanding energy demand.

At the same time, however, said McMonigle, Africa was a continent today where access to energy was limited at many different levels. In providing perspective on this, he added, "the energy consumption of Heathrow airport is greater than the energy consumption of the entire country of Sierra Leone."

It was important that everyone understood this, particularly in the west, he said. "There needs to be a singular focus on fundamental energy access and affordability issues."

In this regard, he said: "One of the most important things is reforming or rethinking how multilateral lending agencies approach the whole issue of hydrocarbon project financing. Essentially, now they are banned, with a few exceptions. The energy crisis should be an example, a catalyst to really rethink these issues."

It was a call heard from a number of speakers in the previous session. He added that "developing countries, they need to industrialize … So we need to manage the transition, we need to make progress and take people along with us. And we still need to invest in hydrocarbons."

Looking ahead to COP28 in the United Arab Emirates, he stated: "I am hopeful the upcoming COP will focus on progress, not on perfection."

Dr Amrita Sen.

Ibrahim Al-Muhanna.

Dr Amrita Sen

Founder and Director of Research, Energy Aspects

Dr Amrita Sen began by highlighting that there had been a level of hypocrisy, particularly in Europe, when it came to investments in fossil fuels. She said, "Europe had been telling investment banks in Africa that you cannot finance fossil fuel investment, then the narrative changed to, you can only finance fossil fuel investment, as long as you export what you are producing to Europe."

She added that in Europe and the US an enormous amount of fossil fuels continued to be consumed, but that there was a prohibition on the financing of fossil fuels in nations where the basic fuels were coming from firewood, sometimes cow dung.

"What strikes me as really remarkable," she said, "is that we talk about energy transition, we talk about green energy… and the conversation is often about finger pointing … This is where the issue of international cooperation is key."

Dr Sen noted that people could take a leaf out of what OPEC+ had done. "Coming together, 23 countries, and at a time when you needed stability, particularly during COVID-19 in April 2020. It provided stability to the market."

She added: "We are unable to replicate that in the energy transition space. Energy transition is a global issue, but we seem to be looking to solve it through protectionism and at an individual country level."

In terms of making cooperation easier, she stated that simple measurable points on the energy transition would be beneficial to make progress.

Ibrahim Al-Muhanna

President, Saudi Energy Consultants

Looking at the OPEC+ grouping, Ibrahim Al-Muhanna said that "you need cooperation with Russia, and other producers." He specifically recalled how OPEC+ had helped to rescue the market in April 2020, and noted the help of producers even beyond the OPEC+ group.

He said that he could not imagine an oil market without some form of coordination, highlighting that through much of its history there had been some form, for example, the Texas Railroad Commission and the Seven Sisters.

He said that the stability that OPEC+ had helped to enable, was key to "planners, investors, producers and consumers."

Charif Souki.

Charif Souki

Co-founder and Executive Chairman of the Board, Tellurian Inc.

Commending what OPEC had done in trying to reduce market volatility, Charif Souki said this was vital to aid investments. He added that demand for energy was going to continue to grow, and the rest of the world wants to live the same way the west lived.

He said he was in favour of using all energies and "everyone should choose their own solution — both on the supply side and the demand side. It is two sides of an equation."

In terms of the environment, he added that we were all environmentalists, but the key question is, are you willing to pay the price for your beliefs? Decarbonization cost more, he said, and were people willing to contribute from their own pockets?

Paulino Jerónimo

President, National Oil, Gas and Biofuels Agency, Angola

Paulino Jerónimo talked about APPO being a key platform for cooperation, where all African countries and producers could come together.

"It is a place to find solutions for the current energy challenges, share knowledge and best practices, provide clean solutions for exploration and production and enable ways to solve the issue of emissions," he added.

He also referenced the need for African energy companies to access funding/financing, emphasizing the importance of setting up the African Energy Bank.

It was important to have a single voice for Africa, he said, and at the same time, cooperate with the rest of the world.

Paulino Jerónimo.

Speakers of high-level Roundtable 6 and the Secretary General.

Closing ceremony

Ministers and the SG during the closing ceremony.

Speakers:

Haitham Al Ghais, *OPEC Secretary General*

Antonio Oburu Ondo, *President of the OPEC Conference 2023, Minister of Mines and Hydrocarbons, Equatorial Guinea*

Antonio Oburu Ondo.

Students (l–r): Fu Yun; Tobias Gerber; and Reem Mehemed.

Haitham Al Ghais.

The closing ceremony began with some remarks by students who had attended the OPEC Seminar. This was a joint address delivered by Reem Mehemed from Libya; Fu Yun, from the China University of Petroleum, Beijing, and Tobias Gerber, Webster University, Austria. The students stated, “At this event, we have gained a global perspective on the future of energy and the environment, among other things, which has been highly enriching.” They continued by saying, “We must make sure that we do not lose sight of international targets and long-term progress on the environment, the economy and social issues, and at the same time provide energy to everyone across the world.” They thanked the Secretary General for the invitation to attend.

The President of the Conference began his closing remarks by saying, “What a two days it has been. I think the only word I can offer is ’Wow’. It has been an inspiring event with great speeches, discussions and networking. Interacting with all of you, especially the young students and leaders of tomorrow that are here, I feel a tremendous sense of optimism that even though we have achieved so much in the past; our Organization’s and the industry’s best days are ahead of us.”

He also thanked the sponsors, delegates, speakers, participants, moderators and OPEC Secretariat staff for making the Seminar a great success, particularly the tireless efforts of the Secretary General. He concluded by saying, “As the Head of Delegation for Equatorial Guinea, I would also like to say that my country is extremely proud to call OPEC home. We sincerely value the friendship and unity that resonates through the Organization. OPEC is very blessed to have such distinct and diverse Member Countries. In this regard, I would also like to thank all our 13 Member Countries for enriching this event.”

The Secretary General also delivered closing remarks. He said, “Hopefully the ideas stimulated at this Seminar can enhance our own personal and collective contributions to meeting the challenges and seizing the opportunities that exist in the energy industry.”

He thanked the Ministers and Ambassadors, the heads of international organizations, representatives from the City of Vienna, the chief executives of national and international oil companies, and all of the other speakers and panel members. He said, “Thanks go to our sponsors, partners, media partners, consultants and all others involved in this event. The authorities of the Congress Centre of the Hofburg Palace, and the Austrian security forces also deserve our gratitude.” He also thanked the OPEC Secretariat staff for their outstanding work.

Students participate at the 8th OPEC International Seminar, gaining new perspectives

Haitham Al Ghais, OPEC Secretary General, with students at the closing ceremony.

This was not the first time that OPEC invited students to participate in one of its main events or activities. OPEC and its Member Countries have always given due consideration to youth, including through a variety of educational, outreach and training programmes. For the 8th OPEC International Seminar, the Organization extended invitations to nominate qualified students to attend the Seminar to its Member Countries, partners under the framework of the OPEC International Energy Dialogues — China and India, as well as OPEC's host country Austria.

Over the years, OPEC has engaged with and supported youth in various activities and events. The 8th OPEC International Seminar was no different and provided a unique opportunity to enable youth to make their mark during what is an important and challenging time across many parts of the globe.

It also afforded the students an excellent opportunity to learn more about OPEC's role and objectives, and the challenges facing global energy markets.

The theme of this year's Seminar, "Towards a sustainable and inclusive energy transition", challenged many of the students to think critically and focus on how all stakeholders can work together effectively to formulate achievable and realistic goals.

Participation during the two-day event

Upon arriving at the venue, the students received a warm welcome by OPEC Secretary General Haitham Al Ghais, and other colleagues from the OPEC Secretariat, and were briefed on what to expect during the two day event. They visited the exhibition area and met oil and energy leaders, the President of the OPEC Conference 2023 and the OPEC Secretary General.

They also attended high-level, round-table discussions, where they could listen directly to key decision makers about contemporary trends and the future of the industry, and attended the Ministerial sessions on both days.

On day two, the students attended the rest of the sessions and benefitted from professional networking opportunities and first hand talks with ministers, CEOs of national and international oil companies, analysts, researchers, representatives of academia, and OPEC colleagues and other participants. Moreover, the students also had a brainstorming session on the energy transition challenge and offered their perspectives on the discussions they attended.

During the Seminar, the students were confronted with what they called, "challenging and sometimes conflicting arguments and worlds". For them, the Seminar was not only about learning and networking, it was about trying to understand how the energy transition should be best achieved and what they wanted the world to look like in the future. Some also mentioned that the Seminar had helped them to "appreciate" and better "understand" the role of OPEC and the ongoing "importance of crude oil."

In a joint concluding communiqué, the students collectively expressed their gratitude and profound appreciation for the invitation, and thanked the OPEC Secretariat and OPEC Secretary General for "supporting youth and getting them involved in this important global industry". They also thanked their individual countries for nominating them. Secretary General Al Ghais acknowledged the importance of the students' participation in his remarks at the Seminar, stating that "The theme of this Seminar looks to the future, and given that forward-facing orientation I am delighted that we are joined by the architects of our world's future: young people and students from across the globe. We encourage you to maximize the opportunity that this Seminar presents."

Student reflections

The Seminar not only challenged each student's perspectives and ideas, it also inspired them to "think outside of the box" and put themselves in decision makers' shoes, which they agreed was "not easy"!

Acknowledging the utility of attending the Seminar, the students each drafted the following messages:

Muhammad Khubab, *University of Vienna, Austria*

"It was very nice to interact with students, ministers, delegates and discuss plans for climate change

and the renewable energy transition. Before joining the Seminar I was confused and hesitant, as my focus was on climate change, but I was surprised to see that the industrial people were keen and sincere in trying to find solutions for the future generations." Mohammad also thanked his university and OPEC for this "unforgettable opportunity".

Abdulaziz Alshammari, *Kuwait University, Kuwait*

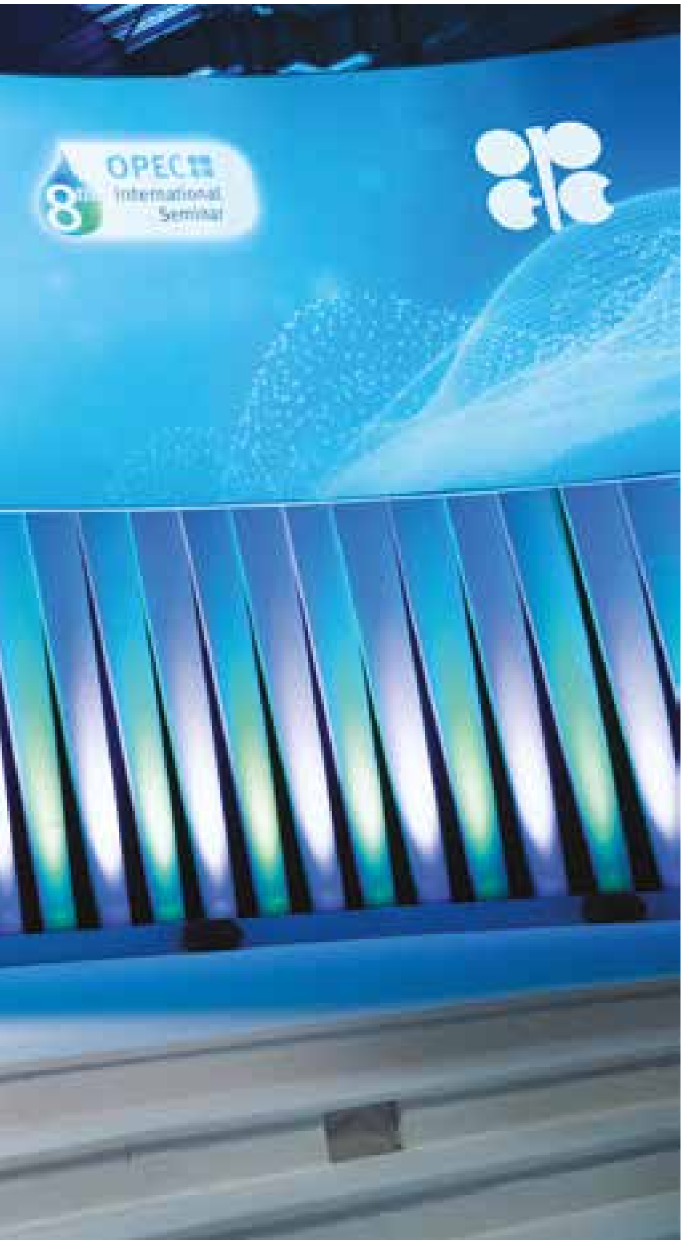
"I am very honoured to be here… as a student, it was beneficial to hear different views on the energy transition and approaches to uncertainties. Youth play an important role and advocate for more sustainable energy." He summarized the main outcomes from the Seminar in three concepts, namely "cooperation, global achievement and innovation".

Mohcen Boutaiba, *University of Boumerdes, Algeria*

"I was very thankful to be given the opportunity to exchange with policymakers. This was insightful and exceeded my expectations. I learned about how the energy future might look like."

Alexandra Schieferer, *Webster University, Austria*

"The OPEC Seminar has been such an enriching experience. I heard from experts and learned about the future



Three students delivered their own remarks at the closing ceremony (l–r): Reem Mehemed; Tobias Gerber; and Fu Yun.

energy transition; I also made so many connections and friendships that will last a life-time, hopefully."

Patrick Jasek, *Montanuniversität, Austria*

"It was a very enlightening experience to listen to global leaders and industry experts and despite seeing a lot of problems, I think the industry leaders have the tools to do the right thing and they are moving in the right direction."

Reem Mehemed, *Libya*

"I was happy to be here to hear from OPEC Member Countries and be able to share our ideas as well."

Abdullah Linjawi, *King Fahd University of Petroleum and Minerals, Saudi Arabia*

"I was honoured to represent KSA, had a great experience and would like to emphasize the importance of communication in securing a sustainable future."

Ali, *IR Iran*

"While the interaction was great, in future seminars I hope youth will be on stage too, delivering presentations and having their own special sessions."

Tobias Gerber, *Webster University, Austria*

"It was a superb networking opportunity and very interesting to listen to the various sessions."

Fu Yun, *China University of Petroleum, Beijing, China*

"Young people play an important role in this field and we are thankful to everyone who contributed to this great Seminar."

Wandi Manuel, *Universidade Agostinho Neto, Angola*

"The sessions were so interesting and I learned a lot about the energy transition."

Vanessa Ugoeze Abazie, *Crawford University, Nigeria*

"The Seminar was very insightful and an amazing experience. The theme was wonderful; we want an energy transition but to achieve that we need finance. In order to get finance, we need to rely on the oil industry, as this is where the money comes from. We must focus on what we have before moving to a complete transition."

Jakob Kulich, *Montanuniversität, Austria*

"I fully agree with OPEC that every country has its own capabilities but would love to see future plans on how to address the environmental issues."

Zakhir Mamedov, *Modul University, Austria*

"Oil is here to stay and the number one fuel in the energy mix; OPEC Member Countries are investing billions towards a sustainable energy transition and reducing our footprint, and that is why I think our future will be prosperous and ecofriendly."

Sponsors and exhibitors make their mark at the 8th OPEC Seminar

The 8th OPEC International Seminar was supported by the generous contributions of many leading oil and energy companies from OPEC Member Countries, as well as other dialogue partners. More than 22 sponsors in total, including OPEC Member Country national oil companies (NOCs), oil ministries, international oil companies (IOCs) and others, widely contributed to the success of the Seminar.

The Diamond sponsor exhibition booth of Saudi Aramco.

The exhibition area of the 8th OPEC International Seminar was officially opened on 5 July 2023 during a formal ribbon-cutting ceremony presided over by Antonio Oburu Ondo, the Minister of Mines and Hydrocarbons of Equatorial Guinea and current President of the OPEC Conference 2023, ministers from OPEC Member Countries and Haitham Al Ghais, OPEC Secretary General. Other officials and dignitaries, as well as OPEC Secretariat representatives, also joined the ceremony.

The Seminar included impressive, state-of-the-art booths from OPEC Member Countries and a variety of sponsors, which displayed, *inter alia*, how their NOCs were adopting green technologies and reducing carbon emissions.

Throughout the two-day Seminar, more than 1,000 participants visited the exhibition area and discussed the latest energy trends and perspectives with some of the largest oil companies in the world. Participants also benefitted from the vast amounts of information provided by each sponsor and company, which enabled them to develop a better understanding of the energy industry as a whole.

Sponsors

The Seminar provided the participating sponsors with a unique opportunity to present their work and benefit from a wide range of promotional opportunities.

Sponsors could contribute to one of four different sponsorship categories, namely Diamond, Gold, Silver and Bronze.

Each category conferred a variety of benefits related to visibility before, during and after the Seminar, while the first three categories also allocated a dedicated exhibition stand to each sponsor.

In addition, OPEC welcomed the generous contribution of the event's Diamond sponsors by granting them with an exclusive lounge in one of the most prominent areas of the Seminar.

Aramco, Saudi Arabia; Guinea Ecuatorial de Petroleos (GEPetrol), Equatorial Guinea; and Nigerian National Petroleum Company (NNPC), Nigeria, sponsored the event as Diamond sponsors, and thus received the largest stands in the main exhibition area and many exclusive benefits.

Agência Nacional de Petróleo, Gás e Biocombustíveis (ANPG), Angola; Sonangol, Angola; Hess Corporation, US; Kuwait Petroleum Corporation (KPC), Kuwait; Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA), Nigeria; Nigerian Upstream Petroleum Regulatory Commission (NUPRC), Nigeria; Oando PLC, Nigeria; and Österreichische

The Nigerian National Petroleum Company (NNPC) was also present as a Diamond sponsor.

Mineralölverwaltung (OMV), Austria, all contributed generously as Gold sponsors.

The 8th International Seminar was also marked by a large number of kind Silver sponsors, namely: the Abu Dhabi National Oil Company (ADNOC), the United Arab Emirates; the African Energy Chamber, South Africa; Crescent Petroleum, the United Arab Emirates; the Nigerian Content Development and Monitoring Board (NCDMB), Nigeria; Oriental Energy Resources Limited, Nigeria; the Petroleum Technology Development Fund (PTDF), Nigeria; the Oil Marketing Company (SOMO), Iraq, as well as TotalEnergies, France.

In addition, Petronas, Malaysia, and Sonatrach, Algeria, kindly contributed as Bronze sponsors.

The majority of this year's sponsors were from Africa, reflecting African companies' great interest in showcasing their technologies and utilizing the unique opportunity of the Seminar to promote their work, network and explore new opportunities.

All sponsors were keen to use the special platform provided by OPEC to promote their companies' work and emphasize the importance of cooperation and dialogue, and praised OPEC for the success of the 'Declaration of Cooperation'.

In addition, the OPEC Secretariat welcomed participants at its stand, where people could take flagship OPEC publications and gain valuable insights into the Secretariat's work.

Thanks

The Seminar concluded with many words of appreciation, including from the sponsors, who thanked Secretary General Al Ghais, the organizing committees and the OPEC Secretariat for making the Seminar a great success.

In return, the Secretary General conveyed OPEC's gratitude for all sponsors' support in realizing the Seminar's vision.

Impressions from sponsors

Diamond sponsor GEPetrol stated, through its General Director, Teresa Isabel Nnang Avomo: "We appreciated the topics discussed over the past two days, which were critical for producing countries … one of the key messages shared was that energy transitions could not be the same for all countries."

Diamond sponsor NNPC, through its Chief Strategy and Sustainability Officer, Oritsemeyiwa Eyesan, praised what she said had been an excellent and interactive seminar, adding: "The level of transparency was very insightful for us, as we believe in a just transition. It was a very fruitful Seminar."

Thanking OPEC for the "masterclass event and great organization," Ali-Rageh Fahd from the NMDPRA said: "My first experience has been great, full of quality people and good discussions."

The Chairperson and CEO of Sonangol, Sebastião Gaspar Martins, praised the Seminar for making it possible for "Africa and our country to be heard. We believe that this Seminar should happen more often, as it made it possible for everybody to be here and express their points of view."

Verner Ayukegba from the African Energy Chamber also noted his appreciation, stressing that he had been "thrilled to be at the 8th International Seminar … an amazing event and I am looking forward to continuing discussions and being here again next time."

Andreas Rinofner, Senior Advisor Public Affairs and International Relations at OMV, expressed his gratitude, saying: "We are happy that OPEC hosted the Seminar here in our home city and we found it amazing to bring all decision makers here to discuss and cooperate, especially now when it comes to energy transitions and climate change."

SOMO, a regular sponsor of the Seminar, thanked the Secretariat for its excellent organization through its PR representative, Shaymaa Jala Ahmed, who said: "We were happy to contribute to the Seminar again and look forward to the next one."

Crescent Petroleum, whose Chairman also spoke at the event, thanked the OPEC team. The Director of Communications at Cresent Petroleum, Hassan Fattah, said: "It was an excellent experience working with the OPEC team and we appreciate all of the hospitality and help that we got. We especially appreciated the very high-level, sophisticated discussions. Overall, it was a great experience and we look forward to sponsoring again in the coming years."

Diamond sponsor Guinea Ecuatorial de Petróleos (GEPetrol) at the exhibition.

OPEC Seminar Interviews

On the sidelines of the Seminar…

Antonio Oburu Ondo

Minister of Mines and Hydrocarbons, Equatorial Guinea, President of the OPEC Conference 2023

Antonio Oburu Ondo.

In an interview with the OPEC Webcast team, Antonio Oburu Ondo, Minister of Mines and Hydrocarbons, Equatorial Guinea, and President of the OPEC Conference 2023, said the Seminar "had been a great experience."

He said that there had been many important ideas discussed, specifically referencing the importance of OPEC and the industry is making their voices heard "when it comes to climate change and the energy transition." He added that talks on such issues in the past had often gone on without producers.

"OPEC has to make sure the world understands we cannot just rule out fossil fuels," Oburu Ondo said. "Those fossil fuels are very much needed, not only to fund the energy transition, but also as a source of energy for our future."

He also highlighted when it came to developing countries that the Seminar had underlined that "we need to address the energy transition at different speeds and on different levels".

Oburu Ondo underlined the importance of keeping in mind people and their lives. "The way of life of someone living in Vienna and the way of life of someone living in Malabo is very different. Whatever we do, in terms of the energy transition, one way or the other way, we need to make sure people have access to energy and that is taking care of people's lives."

In responding to a question about the importance of OPEC and OPEC+ to market stability during his time as OPEC Conference President, he stated that it had been vital, specifically in terms of helping reduce volatility and enable more market certainty.

He added: "Every country has to make sure their economic planning has certainty, their budget has certainty … That is why to me it is very important to make sure there is certainty in the oil market."

Diamantino Pedro Azevedo

Minister of Mineral Resources, Petroleum and Gas, Angola

Diamantino Pedro Azevedo.

Diamantino Pedro Azevedo, Minister of Mineral Resources, Petroleum and Gas, Angola, said he felt the Seminar had come at the right time for discussions on the oil market, as well as the energy transition.

In terms of the energy transition, he said that while some had stated that oil would not be needed, "we have to be careful of people saying things like that."

Oil would be needed, he said, "and will continue to be very important even for the energy transition. Without oil, I am not sure if we can maintain and improve the quality of life, not only in the developed world, but also for countries like Angola and other African countries where we still have very huge energy poverty."

In Africa, he added, "we are saying we need a just energy transition. Not only a just, but an equitable one, taking into consideration the state of development of African countries, because the situation is different.

"For us we count on our resources, not only oil, but other minerals too and we expect that the developed world understands that. We are not keen to just fulfil the agenda of other countries, we want that agenda to take into consideration the concerns of our countries."

Pedro Azevedo also stressed that while oil was vital to Angola, the country was also developing many projects in terms of solar energy, green hydrogen, biofuels and studying wind solutions.

He added that it had also been beneficial in terms of meeting fellow ministers to discuss mutual interests between Libya and their own countries.

Oun highlighted that in the energy transition, "the international community should give specific care to African nations that are still developing their own mineral resources, especially oil and gas."

From the perspective of Libyan oil and gas, he stated, "we are steadily improving the situation in Libya, we feel we may be in a position, in say at least 3–5 years, to send a considerable amount of gas and oil to Europe.

"We have an ambitious plan to increase our oil production from about 1.2 mb/d currently to about 2 mb/d in about five years. On the gas side, we also have many discoveries that can be developed and brought online. We now have a pipeline tying Libya to Sicily in Italy and we can duplicate that line as well."

Mohamed M Oun

Minister of Oil and Gas, Libya

"I think I came out with an excellent impression of the event, the OPEC Secretariat, the Secretary General, the staff, the organization, the city of Vienna," said Mohamed M Oun, Minister of Oil and Gas, Libya, when asked to reflect on this year's Seminar.

Ambassador Gabriel Tanimu Aduda

Acting Head of Delegation, Permanent Secretary, Ministry of Petroleum Resources, Governor for OPEC, Nigeria

In commending the Seminar, Ambassador Gabriel Tanimu Aduda, Acting Head of Delegation, Permanent Secretary, Ministry of Petroleum Resources, Governor for OPEC, Nigeria, said he welcomed all the topics

Mohamed M Oun.

Ambassador Gabriel Tanimu Aduda.

discussed and specifically referenced the talks on the energy transition.

In this regard, he stressed that "the world needs to move together. That is the truth. There is no one-size-fits-all solution with the global transition agenda. But one thing is certain; we need to move in the same direction."

He added that it was clear from the Seminar that "fossil fuels are not going anywhere soon." If this is the case, he added, "OPEC can do a lot by encouraging Member Countries to develop technology, fix financing and of course plan infrastructure in the area of natural gas."

Tanimu Aduda talked about the importance of gas as a big transition fuel, and as a resource that was readily available.

In terms of Nigeria, he noted, "we have declared the next ten years as the decade of gas in Nigeria … We are a major gas producing country, because we actually have more natural gas than crude. So, Nigeria is on that path and that is what we are pursuing … The goal is to ensure that the 200 plus million population in Nigeria embraces the use of natural gas as an alternative fuel."

In a question on the opening of the Dangote Refinery in Nigeria, Tanimu Aduda underlined its importance, but stressed "the refurbishing of three national refineries." He also oted that "a lot of modular refineries are also being encouraged and as we speak, about six are already on stream, they are already producing, so a lot is in the pipeline."

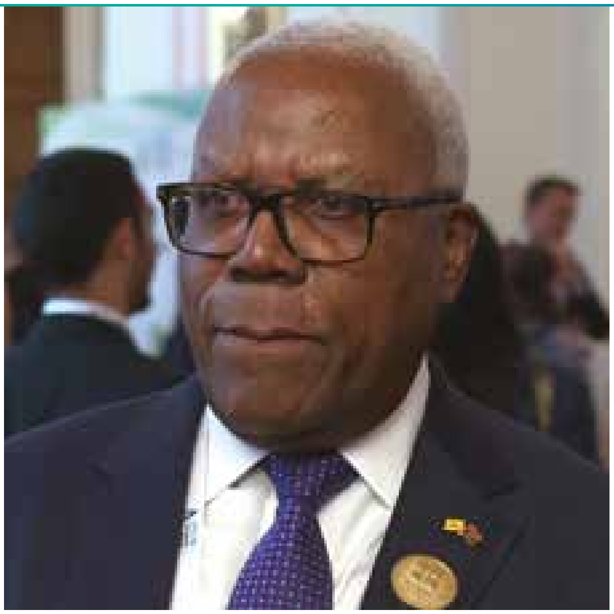
Sebastião Gaspar Martins

Sonangol President and CEO

Sebastião Gaspar Martins, Sonangol President and CEO, highlighted the importance of the Seminar covering topics related to "sustainability and inclusiveness of all countries in the climate change issue."

He said that "having this Seminar, we might be able to express the position that all our entities are interested in, improving the climate, but without jeopardizing the possibility of other countries not having the ability and access to energy."

Africa was in a different position compared to Europe or North America regarding energy access, said Gaspar Martins. "You have a different approach in the energy transition." He said that "people and the world are starting



Sebastião Gaspar Martins.

to understand that we need to take this approach gradually and it should be based on different possibilities and the development phase in each country."

In terms of COP28 later this year in the United Arab Emirates, he stressed that it "would be very good that all the African countries, all the OPEC countries, express their views so that the outcome of this can be something that is useful for us and the entire world."

From Sonanagol's perspective, he said the company's strategy was clear. "We should continue investing in oil and gas development, with a very responsible way to address the environmental issues and of course, use the resources that we make from oil and gas … in order to allow us reach the same level of other countries."

Tarek El-Molla

Minister of Petroleum and Mineral Resources, Egypt

"I have really enjoyed the Seminar over the last couple of days, it was very interesting, and we have seen a lot of interesting panelists, a lot of good sessions, a lot of good interviews, and a big audience too," said Tarek El-Molla, Minister of Petroleum and Mineral Resources, Egypt.

"We can see everybody was engaged" he added, "and I would say this was part of the success of this Seminar because it was inclusive. We could talk really openly about the challenges, the way forward and the future of energy."

When asked about Egypt's long relationship with OPEC, El-Molla recalled that earlier in 2023 "we

Tarek El-Molla.

celebrated at the (Maadi) yacht club in Cairo where the idea of OPEC was formed." He added that Egypt had always been a good friend to OPEC, and *vice versa*, and the relationship today was very good.

"I see this is something adding value to Egypt and our oil and gas industry to be somehow engaged and associated with the OPEC family, and we are always invited to conferences, meetings or seminars, to keep up with leadership, as well as the latest developments, policies and announcements made by OPEC," he said.

He also underscored the value that OPEC and OPEC+ bring in terms of helping to stabilize the oil market. "We do not want to see volatility, we do not want to see shortages, and therefore I think that the good intentions and good role of OPEC is positive."

When asked to reflect on the energy transition, the outcome of COP27 in Sharm El-Sheik last year, as well as COP28 in the United Arab Emirates, El-Molla also highlighted the African perspective and a "just transition."

He said that COP27 spoke about inclusiveness and "that is why we said we have to be all together, meaning the energy companies, the oil and gas companies, as well as renewables and whatever clean fuels we are talking about."

Patrick Pouyanné

Chairman of the Board and CEO of TotalEnergies

Patrick Pouyanné, the Chairman of the Board and Chief Executive Officer of TotalEnergies, praised the Seminar for bringing industry leaders together at a timely juncture, especially given the large amount of change since the last Seminar in 2018.

In the interim period, Pouyanné commended OPEC's role in fostering stability in what was often a volatile oil market, noting that "affordability of energy is essential."

He said that one of the Seminar's key lessons was that all energies remained necessary; the world needed oil and gas — the energies of today — while building low-carbon energies. He lamented that energy transition debates were often "anti-fossil fuels" and ignored the nature of energy security, pragmatism and reality. "We have to reduce emissions from fossil fuels, not ban them," he added.

Pouyanné noted that many OPEC Member Countries such as Saudi Arabia and the United Arab Emirates were already involved in the transition, investing heavily in renewables while also producing the oil that the world needed today.

Underlining that the transition was an "and" and not an "or" equation, he noted that five years ago TotalEnergies had been named Total. "Today it is TotalEnergies and the energies part is important ... our strategy is oil for sure — producing 1.4 mb/d — and we intend to maintain this production, but it is also gas, as over the last five years we became the third largest LNG marketer… and electricity from renewables and flexible capacities like gas-fired power plants."

"We are very serious about renewables in electricity, what we call integrated power", he said, "we are now

Patrick Pouyanné.

investing $4 billion per year in the field and we already have more than 20 GB of capacity; we can do it big and this is our ambition."

He concluded by outlining that TotalEnergies was sanctioning "oil and gas projects at $50/b and at $50/b my company is making returns of 10 to 12 per cent… for electricity, integrated power, we set the same target at ten per cent, and we are now publishing quarterly results from which people observe that we are on target."

Fahad Alajlan

President of the King Abdullah Petroleum Studies and Research Center (KAPSARC)

KAPSARC President Fahad Alajlan believed that the Seminar had proven to be very useful, especially its ability to bring together speakers, policymakers and decision-makers from OPEC Member Countries, OPEC+ and regions like the European Union and South America. This had ensured that a myriad of perspectives from numerous regions and sectors could enrich and inform the discussions.

He was proud of KAPSARC winning the OPEC Awards for Best Research Institution and Best Research Paper, attributing this success to a combination of years of effort and investment, and seeing the awards as further proof of KAPSARC's impact on domestic and global decision-making processes related to energy and sustainability.

Fahad Alajlan.

In terms of the market outlook, Alajlan believed that demand for oil — especially in the transportation sector — would remain high in the coming 20 to 30 years, plateauing somewhere between 100 and 110 mb/d. He noted that oil, gas and coal currently represented approximately 83 per cent of the global energy mix, while renewables — despite considerable progress — still only provided 14 per cent of global energy needs.

Regarding countries' energy transition processes, KAPSARC has been exploring "how we can increase financial flows into clean energy tech and clean energy investment, and focus on hydrogen, carbon capture and sequestration and other technologies that will help us reach carbon neutrality".

However, when considering energy transitions, Alajlan cautioned that policymakers should keep regional differences and regional imbalances in mind. For developing economies, taking economic development into account in addition to climate change and energy security would remain crucial.

He also noted that "the distribution of energy investment in OECD countries is pretty uniform across the board. However, almost half of investments in developing countries are in China alone. Hence, while we need to double clean energy investment globally overall, if one examines developing economies without China, it actually needs to increase more than fivefold."

Dr Axel Pierru

Acting Vice President of Knowledge and Analysis, KAPSARC, and co-author of the paper that won the OPEC Award for Best Energy Research Paper

Dr Axel Pierru, Acting Vice President of Knowledge and Analysis at KAPSARC and co-author of the paper that won the OPEC Award for the Best Energy Research Paper at the Seminar, was honoured to receive the prize. "It means that our work has reached policymakers and those who are active in the management of the oil market, which is great recognition for us."

Upon being questioned about the period outside the joint paper's research timeframe, namely post-August 2021, he noted that oil prices had remained remarkably stable despite a confluence of unprecedented shocks, such as exiting from a global pandemic, China's zero-COVID-19 policy and the conflict in Europe. Although the effects of these types of shocks on the market were

Axel Pierru.

difficult to measure, he planned to conduct a thorough analysis once sufficient data was available.

More specifically, future research would theoretically and empirically address the type and quality of information required to stabilize oil prices effectively in the face of uncertainties like oil demand, non-OPEC supply responses to adjustments in OPEC production, the timing and magnitude of shocks to the market, and prevailing conditions for inventories, for example.

The objective of this research would be to understand from a scientific perspective — rooted in market data and sound economic modelling — how the oil market could effectively be stabilized.

"The oil market is the most important commodity market in international trade and is critical for industrialization, economic growth and the global distribution of wealth. We want our research to be useful in policymaking; we want both the world of academia and the policymaking community to be able to understand exactly just how effective the management of the oil market currently is."

Hossa Almutairi

KAPSARC research fellow and co-author of the paper that won the OPEC Award for Best Energy Research Paper

KAPSARC research fellow Hossa Almutairi, who was a co-author of the paper that won the OPEC Award for Best Energy Research Paper, was honoured to receive the award and looked forward to continuing a similar line of research given her desire as an economist and analyst to understand what exactly was happening in the oil market and why.

Shedding further light on her research to date, Almutairi noted that the joint paper had examined to what extent OPEC had succeeded in stabilizing the oil market. She had done so by using monthly data from September 2001 until August 2021.

Hossa Almutairi.

"We broke this time down into three successive periods. The first was the commodity boom from September 2001 to the end of 2014, the second was the market share period in 2015 and 2016, and the third was the OPEC+ period. We used different scenarios and structural models and found that during the commodity boom and OPEC+ periods, OPEC's actions had reduced the volatility of oil prices by up to 50 per cent."

Upon being asked what the implications of this research were for the global economy, Almutairi stated that although this was a difficult and complex question to answer, "we tried to quantify this and looked at savings to GDP losses due to spare capacity of OPEC and found that this value was evaluated at $193 billion for the economy."

Ana Palacio

Former Minister of Foreign Affairs of Spain

Ana Palacio, former Minister of Foreign Affairs of Spain, spoke of how the energy transition needed to be tailored depending on different areas, countries and regions.

For example, regarding Europe, she cautioned that the shock in energy terms prompted by the escalation over the Russia-Ukraine conflict had posed a great challenge for the European Union. However, she hoped that this jolt had prompted Brussels to move away from the idea of "one transition in which

Ana Palacio.

the only star was renewables" and understand that Europe required "energy transitions, with an s, led through different pathways, as there is no one-size-fits-all approach."

In this regard, she cautioned that future energy demands could not be satisfied by renewables alone, and stated that Europe "cannot just bet on the Green Deal as it was portrayed."

Elsewhere, Palacio noted that there were "growing populations in Africa and Southeast Asia with bulging middle classes asking for more energy", which would contribute to rising global energy consumption. She argued that the solution to meeting these additional demands would be to ensure effective diversification of energy sources and "recognize that oil and gas have to be part of the equation".

In addition, she stated that Africa's current focus should be on ensuring access to sufficient, secure and affordable energy for all. She believed that relevant multilateral institutions' financial capabilities could be useful in facilitating this, and called for nimble efforts to foster and further minimize investment risk in Africa.

In this respect, she believed that the Multilateral Investment Guarantee Agency — a member of the World Bank Group — or a similar structure could be further developed and utilized to make private finance available for Africa and other regions.

Dr Helima Croft

Head of Global Commodity Strategy and MENA Research at RBC Capital Markets

Dr Helima Croft, the Head of Global Commodity Strategy and MENA Research at RBC Capital Markets, stated that although the interim period had witnessed a pandemic, the largest oil demand collapse in history, and the outbreak of conflict in Europe, OPEC's mission and desire to ensure market stability and transparency had remained the same.

She outlined that the present oil market was largely concerned with the broader macroeconomic picture, including the effects of rate hikes and recessionary trends; the Russia-Ukraine conflict remained a factor too, especially in terms of market stability.

Dr Croft underlined that recent years had seen a shift in perceptions regarding energy security, particularly for many western leaders who had had "to scramble to secure enough energy supplies". This change had also been apparent in the US, where oil producers had been encouraged to pump more oil, partially to counter "concerns about the economic impact of higher retail gasoline prices".

Moving forward, the aforementioned geopolitical developments had served to strengthen the role that

Dr Helima Croft.

natural gas would play in the energy transition too, with many countries around the globe now seeing gas as an essential fuel source.

When asked about the difficulty of predicting future oil market trends, Dr Croft noted that there was currently a discrepancy between what data from physical markets actually represented and some of the prevailing narratives in the media. Ultimately, however, she noted, "the actual demand for oil looks strong."

Regarding what OPEC could bring to the conversation around energy transitions, Dr Croft stated that her moderation of a fantastic panel at the Seminar had served to underline to her that "if you want to think about who has the technology to 'do' hydrogen, it is oil companies and oil producing companies."

Finally, she added that COP28 in the United Arab Emirates would offer a unique opportunity to bring all relevant "energy producers into the conversation on providing the technology needed for a low emissions future… [and enable] an inclusive dialogue about how everybody can work together to ensure that these really critically important climate goals are reached".

Dr Cornelia Meyer

Chairman and CEO of the MRL Corporation

The Chairman and CEO of the MRL Corporation, Dr Cornelia Meyer, praised OPEC's convening power and believed that the Seminar had offered an excellent post-pandemic opportunity to discuss what roles the oil and gas industry could play in energy transitions across the globe, and how fair and just energy transitions could be achieved.

She was heartened to see that representatives of the Global South were speaking with such a strong voice at the Seminar, and hoped the Global North would take heed, including moving forward in wider fora.

Dr Meyer noted that the mood of this year's Seminar had differed to that of 2018, attributing this to the pandemic, the intensifying COP energy transition debate, and conflict in Europe once again driving energy security to the fore.

Asked whether she believed the oil industry was doing enough to address the energy transition process, Dr Meyer responded that "the industry has always been very eager… especially the Gulf Cooperation Council countries, which are very good at producing barrels with a low carbon footprint… and whose energy policies are also about decarbonizing and bringing more renewables on board."

In addition, Dr Meyer stated that OPEC had a very important role to play in regions' ongoing energy transitions, "especially on educating people that we still need oil and gas, and about the fact that there are many places where oil and gas are being produced at a much lower carbon intensity".

Dr Cornelia Meyer.

In the future, Dr Meyer noted that "the matter of oil will not go away because we will have two billion more people on the planet by 2050." In this, "OPEC will have a huge role to play in producing the oil and gas that they will need and in educating the world that we will still need oil and gas", especially if everyone is to be lifted out of energy poverty.

Impressions from the OPEC Seminar


5-6 JULY 2023
HOFBURG | VIENNA

Iraq hosts Anniversary celebration

Al-Shaab Hall, the birthplace of OPEC in 1960, finally got to hold the Organization's 60th Anniversary celebrations on 16 June after being repeatedly postponed due to the COVID-19 pandemic and its effects on travel and health. The OPEC Bulletin *reports on the joyous occasion.*

On 10 September 1960, at the invitation of Iraq, representatives from Iran, Kuwait, Saudi Arabia and Venezuela arrived at Al-Shaab Hall in Baghdad for talks on creating a new organization.

For five days, delegates at the meeting deliberated. There was little fanfare, but the Heads of the Delegation and the five Founding Fathers of OPEC — Abdullah al-Tariki of Saudi Arabia, Juan Pablo Pérez Alfonzo of Venezuela, Dr Tala'at al-Shaibani of Iraq, Dr Fuad Rouhani of Iran and Ahmed Sayed Omar of Kuwait — reached a historic decision that would transform their countries, and the global oil industry.

In evoking the seminal meeting, Rouhani said in an OPEC Bulletin interview in July 1990 that he had "a very clear recollection of the meeting in Baghdad … it was one of unanimity with regard to the main objective, but one of openness towards the discussion of the different ways and means.

"I was very much impressed by the spirit and attitude of all those representatives who were present and their willingness to discuss matters objectively and without bias."

At the meeting's conclusion on 14 September the five countries decided to form a permanent intergovernmental body known as the Organization of the Petroleum Exporting Countries. The gathering became known as the historic 'Baghdad Conference'. It was the very first Meeting of the OPEC Conference.

The *Platt's Oilgram News Service* of 16 September 1960 headlined, "Baghdad parley approves permanent Organization", and noted that the chiefs of delegation in their closing speeches had stressed "full cooperation, deep comprehension and usefulness of the conference."

OPEC history on display

Today, OPEC is an Organization of 13 Member Countries, an established and respected part of the international energy community and the multilateral system, and a partner for other producing nations in the Declaration of Cooperation (DoC).

The success of any inter-organizational body is linked to the strength and solidarity of its Members, and OPEC is no exception. Despite the richness and diversity

Mohammed Al-Sudani, Iraq's Prime Minister.

Officials celebrate OPEC's 60th Anniversary with a commemorative group photograph.

of cultures, the wide geographical spread, the varied geological endowments and the pressures from external sources, OPEC Member Countries have displayed a commendable degree of unity and resolve over the past 60 plus years.

This was clearly on display at the celebrations at Al-Shaab Hall in June 2023. There were a host of high-level dignitaries from OPEC Member Countries and DoC nations present, with the hall packed on all levels.

The Prime Minister of Iraq, Mohammed Al-Sudani, said to the assembled guests that "when OPEC was established, oil wealth was managed by monopolistic companies, which led to countries losing their sovereignty and influence in the oil market." He said the establishment of OPEC had enabled producing countries to exercise "full sovereignty" over their resources.

Looking ahead, he added: "Oil continues to be a fundamental source of energy worldwide, remaining significant in terms of the economy, development, and the

Haitham Al Ghais, OPEC Secretary General.

Hayan Abdulghani Abdulzahra Alsawad, Iraq's Deputy Prime Minister for Energy Affairs and Minister of Oil.

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

environment. It is essential for countries that rely on its production or consumption." He also highlighted that it was imperative to prepare and develop strategies to align with the global energy transition towards alternative sources.

The Deputy Prime Minister for Energy Affairs and Minister of Oil of Iraq, Hayan Abdulghani Abdulzahra Alsawad, also spoke at the event. He stated that "Iraq is proud of hosting this historic celebration" and that "it is time for the Organization to celebrate all the accomplishments it has achieved throughout the last six decades and more."

He added that this significant milestone in OPEC's journey "reiterates our commitment to advancing energy policies that are beneficial not only to our Member Countries, but also to the global community at large."

Other OPEC Founders

The four other OPEC Founders — the IR Iran, Kuwait, Saudi Arabia and Venezuela — were also represented. The Minister of Energy of Saudi Arabia, Prince Abdul Aziz Bin Salman, underscored the importance of OPEC and OPEC+ in helping to stabilize the oil market, which benefited both Member Countries and the oil industry in general.

He said that this had been achieved over the years with consensus among OPEC and OPEC+, making specific reference to recent developments. He said that amid current conditions, economic fluctuations and the uncertainty facing the world, the unanimous outcome of the recent OPEC and non-OPEC Ministerial Meeting in early June had been a positive.

Manaf Abdulaziz Al Hajeri, Kuwait's Minister of Finance, Minister of State for Economic Affairs and Investments and Minister of Oil, said he was honoured to represent his country at the Al-Shaab Hall celebration.

Al Hajeri stressed that cooperation and dialogue had played an effective role in OPEC's work for over six decades, and undoubtedly this role would continue in the future for the benefit of producers, consumers, investors and the global economy as a whole.

He added that Kuwait was investing as part of its declared strategic plans to continue to play an enhanced role in the world as a secure source of energy and called for investments in all sources of energy to ensure that the world's growing needs were met.

The IR Iran was represented by its Governor for OPEC, Dr Amir Hossein Zamaninia, who said OPEC was the only organization from the developing world that had had a major global economic impact in the past six decades or more. He added that "Member Countries of this organization seek to achieve stability in the global oil market."

Zamaninia also referenced the historic nature of the Organization's cooperation despite the existence of some differences among Member Countries. He said that OPEC had been successful in maintaining common principles and ethics.

Venezuela's OPEC Governor, Eng Angel Gonzalez Saltron, represented his country and paid tribute to the Founding Fathers. He recalled the statement of Venezuela's Alfonso after the meeting in September 1980, when he said: "We are united, we are making history".

He noted the fundamental role OPEC had played in the national economy of its Member Countries through the sovereign, inalienable and permanent defence of their natural resources over the past six decades.

He also reaffirmed Venezuela's commitment to the Organization, and stressed the importance of OPEC and the DoC remaining focused on a stable and balanced oil market.

President, Secretary General, other Ministers

Antonio Oburu Ondo, President of the OPEC Conference and the Minister of Mines and Hydrocarbons of Equatorial Guinea, also provided remarks, reflecting upon the honour of being Conference President in 2023. He noted that he was following in a long line of esteemed OPEC Conference Presidents that could be traced back to the very first Meeting of the Conference in September 1960.

Looking around the hall, he added that "what was set in motion back in September 1960 was a pioneering act, one breaking new ground for developing nations across the world. It was an undertaking that we all benefit from today."

The OPEC Secretary General, Haitham Al Ghais, said it was great privilege to stand in Al-Shaab Hall, the

Manaf Abdulaziz Al Hajeri, Kuwait's Minister of Finance, Minister of State for Economic Affairs and Investments and Minister of Oil.

Dr Amir Hossein Zamaninia, IR Iran's Governor for OPEC.

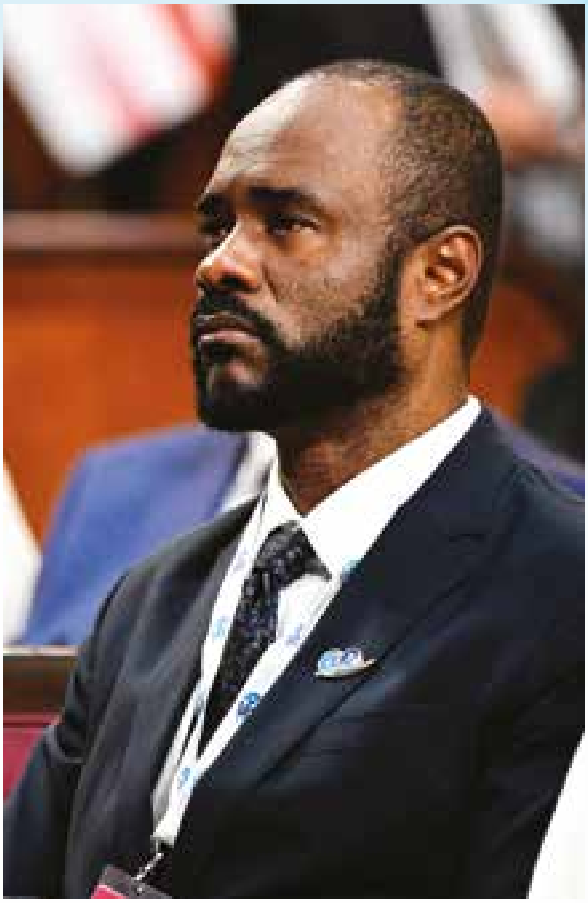
birthplace of OPEC, and extended the Organization's deep gratitude to the Iraqi Government, the oil ministry and the people of Iraq for hosting the event and preserving this historic monument.

Recalling the events on September 1960, Al Ghais said that the Founders had "had the courage to do something different, to stand up for their sovereign right to decide what happens to their indigenous resources … to forge a new path for oil-producing countries."

He added that OPEC's history was more than just an appendage to the history of oil. "Now with 13 Member Countries, it is a story of a family of nations and populations. A group that has faced and overcome many challenges and adversities. It is a story of an Organization evolving to become an established and respected part of the international energy community."

The United Arab Emirates' Minister of Energy and Infrastructure, Suhail Mohamed Al Mazrouei, also spoke at the gathering and said that OPEC in Baghdad was an affirmation of the strengthening and consolidating spirit of the Organization.

He added that joint teamwork was always a source of positive results and a pillar of strength for cooperation and unity, indicating that the main objective of OPEC and

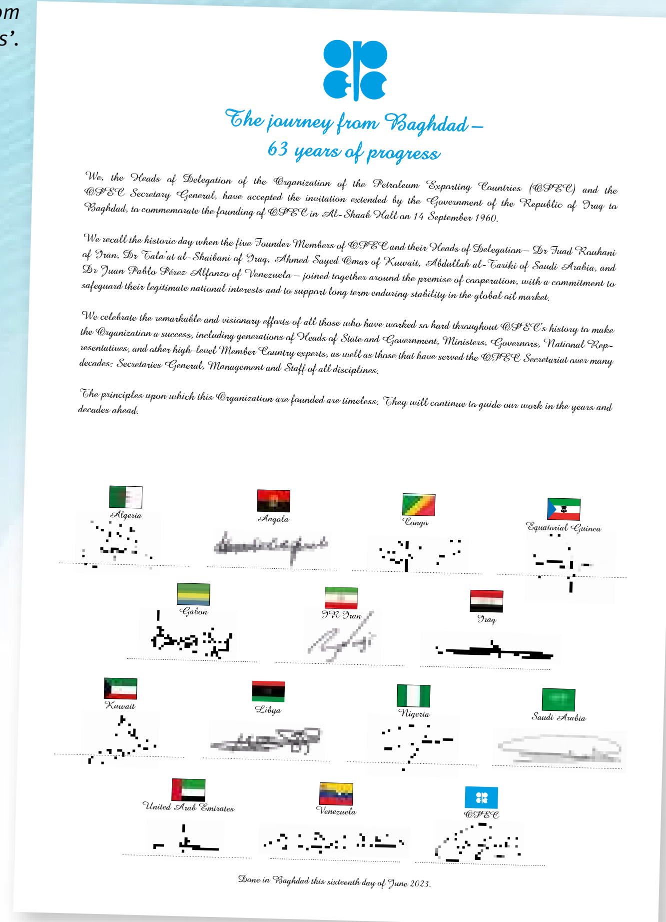


Antonio Oburu Ondo, President of the OPEC Conference and Equatorial Guinea's Minister of Mines and Hydrocarbons.

Eng Angel Gonzalez Saltron, OPEC Governor for Venezuela.

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

The signed document, 'The journey from Baghdad — 63 years of progress'.



The journey from Baghdad — 63 years of progress

We, the Heads of Delegation of the Organization of the Petroleum Exporting Countries (OPEC) and the OPEC Secretary General, have accepted the invitation extended by the Government of the Republic of Iraq to Baghdad, to commemorate the founding of OPEC in Al-Shaab Hall on 14 September 1960.

We recall the historic day when the five Founder Members of OPEC and their Heads of Delegation – Dr Fuad Rouhani of Iran, Dr Tala'at al-Shaibani of Iraq, Ahmed Sayed Omar of Kuwait, Abdullah al-Tariki of Saudi Arabia, and Dr Juan Pablo Pérez Alfonzo of Venezuela – joined together around the premise of cooperation, with a commitment to safeguard their legitimate national interests and to support long term enduring stability in the global oil market.

We celebrate the remarkable and visionary efforts of all those who have worked so hard throughout OPEC's history to make the Organization a success, including generations of Heads of State and Government, Ministers, Governors, National Representatives, and other high-level Member Country experts, as well as those that have served the OPEC Secretariat over many decades: Secretaries General, Management and Staff of all disciplines.

The principles upon which this Organization are founded are timeless. They will continue to guide our work in the years and decades ahead.

Algeria | Angola | Congo | Equatorial Guinea | Gabon | I.R. Iran | Iraq | Kuwait | Libya | Nigeria | Saudi Arabia | United Arab Emirates | Venezuela | OPEC

Done in Baghdad this sixteenth day of June 2023.

OPEC+ remained on ensuring market stability and achieving a balance between demand and supply in a way that supports global economic growth.

Declaration

While at Al-Shaab Hall, the Heads of Delegation also signed a document, entitled, 'The journey from Baghdad — 63 years of progress'.

The document recalls the historic day of 14 September 1960, and reaffirms the Organization's core principles with a commitment to safeguarding legitimate national interests and helping to ensure order and stability in the global oil market.

Festivities and Gala dinner

The ceremony at Al-Shaab also included short films on the history of OPEC and the history of Iraq's oil industry, as well as a dance and musical performance on OPEC's foundation.

The artistic performance traced the roots of Iraq first finding oil, the early authority of the 'Seven Sisters', the seven vertically integrated oil companies that dominated the world oil industry from the 1920s to the 1960s and 1970s, and the vital formation of OPEC in 1960.

The evening Gala dinner saw cultural activities from various folk groups from across Iraq and musical performances from a number of famous Iraqi artists. The themes focused on Baghdad and OPEC.

The dinner also included the opening of the Baghdad International Caricature Gathering, with a focus on oil, and the opening of the International Book Exhibition of Oil and Energy.

Gala dinner.

OPEC delegates attending the festivities in Baghdad.

Brief history of Al-Shaab Hall

Al-Shaab Hall, located in the Bab Al-Muaatham district in the heart of Baghdad, was built by a Dutch company in 1937.

Entering through the front of the hall there is a large wooden swing door before one enters the main theatre. The interior resembles a proscenium theatre, with a frame set around the stage. This creates a 'window' around the scenery and performers.

The hall is attached to the previous headquarters of the Ministry of Defence, which was in the past a small castle-like building erected during the Ottoman reign.

The birthplace of OPEC in 1960, Baghdad.

Impressions from the

Anniversary celebration

Impressions from the

Anniversary celebration

Appointment in Azerbaijan

*The OPEC Secretary General, **Haitham Al Ghais**, paid his first official visit to Azerbaijan as head of the Organization in mid-June. The trip included a meeting with the President of Azerbaijan, **Ilham Aliyev**, as well as talks with high-level officials and visits to the Alley of Honour, the Alley of Martyrs and the Sangachal Terminal. The* OPEC Bulletin *reports.*

Ilham Aliyev, President of Azerbaijan (r), with Haitham Al Ghais, OPEC Secretary General.

Azerbaijan is often labelled as the cradle of the modern oil industry. It was the location of many 'firsts' in the industry's great 'Oil Boom' in the latter half of the 19th century.

In 1846, more than a decade before Colonel Edwin Drake struck oil on US soil for the first time, a 21-metre well was drilled in Bibi-Heybat for oil exploration — the first successfully drilled oil well in human history.

Within three decades, Azerbaijan witnessed the building of the first wooden oil derrick in 1871, the first distillery in 1876 and the first oil tanker in 1878.

This history still resonates today, and Azerbaijan's proactive role within the Declaration of Cooperation (DoC) between OPEC and non-OPEC producers is further testament to its leadership role.

Meeting with President Aliyev

The role of the DoC and Azerbaijan's significant contributions to it were a key element of the OPEC Secretary General's meeting with President Aliyev. Al Ghais thanked the President for Azerbaijan's important role in the DoC and in helping promote oil market stability.

"Your Excellency, your leadership and wisdom are evident, and they continue to guide our market balancing efforts through the DoC framework for the benefit of all producing and consuming countries," Al Ghais said.

The talks also touched upon the importance of ensuring future investments in the oil industry, given the increasing demand for energy as a result of global economic growth. Both noted that the recent drop in investments represented some cause for concern.

They also noted that the application of new technologies was of particular importance with regard to reducing emissions.

Parviz Shahbazov, Azerbaijan's Minister of Energy (r); with Haitham Al Ghais, OPEC Secretary General.

Talks with Minister Shahbazov

The Secretary General also held talks with the Minister of Energy of Azerbaijan, Parviz Shahbazov, discussing energy market developments, energy transitions, energy security and the investment challenges facing the industry.

Both commended the decisions taken by the DoC's 23 participating countries at the 35th OPEC and non-OPEC Ministerial Meeting in early June.

In addition, the two explored means of boosting the ongoing cooperation between Azerbaijan and OPEC, and within the DoC. "The goal of cooperation within 'OPEC +' is to provide the world with the necessary energy for economic development. This can be possible using all types of energy," Secretary General Al Ghais stressed.

This was also referenced by Minister Shahbazov, who emphasized the need for cooperation on a wider platform, with the participation of Azerbaijan, OPEC, other countries and organizations to help reduce emissions in the oil and gas sector.

SOCAR

The State Oil Company of the Republic of Azerbaijan (SOCAR) was also a port of call for the Secretary General, including a meeting with the President of SOCAR, Rovshan Najaf.

At the meeting, both noted with satisfaction that the long-term cooperation between Azerbaijan and OPEC remained effective. In this regard, they highlighted that the OPEC+ format, with President Aliyev playing a leading role, was of great strategic importance and was making a valuable contribution to oil market stability and ensuring a balance between supply and demand.

Moreover, they emphasised the importance of sustainably increasing hydrocarbon production with clean technologies and underscored that SOCAR attached special importance to the application of low-emission and innovative technologies.

SOCAR

Rovshan Najaf, the President of SOCAR.

Visiting the Sangachal Terminal.

Sangachal Terminal

The Secretary General also paid a visit to the Sangachal Terminal, which is located around 40 kilometres south of Baku. Construction of the terminal began in 1996 with the Early Oil Project (EOP), and oil was first exported in October 1997. The terminal is a vital link for Azerbaijan's oil and gas industry.

The terminal covers an area of almost 700 hectares, making it one of the world's largest oil and gas terminals. It consists of two main parts: the EOP and the Sangachal Terminal Expansion Programme (STEP) that was started in 2001.

The EOP part of the terminal was constructed to process, store and export oil from the Chirag offshore field in the Caspian. This part of the terminal houses four crude oil storage tanks — 25,500 barrels each in capacity, with the ability to process, store and export in excess of six million tonnes of crude oil per year.

The STEP part of the terminal was expanded to receive, store and process oil from Azeri and Deepwater Gunashli sections of the Azeri-Chirag-Gunashli (ACG) field and gas from the Shah Deniz field. It houses a number of facilities, including three crude oil storage tanks each with a capacity of 880,000 barrels and ACG oil processing facilities

In 2022, the Sangachal Terminal exported more than 232 million barrels of oil and condensate, according to BP Azerbaijan. This included about 225 million barrels through the Baku-Tbilisi-Ceyhan (BTC) pipeline and around seven million barrels through the Western Route Export Pipeline (WREP).

Al Ghais receives a tour of the Sangachal Terminal.

Al Ghais at the Eternal Flame monument.

Paying Respects

During his visit, Secretary General Al Ghais also paid his respects at Azerbaijan's Alley of Honour and the Alley of Martyrs.

The Alley of Honour is a cemetery and memorial in Baku, which includes the graves of famous Azerbaijanis and Azerbaijan-affiliated expatriates, including several Presidents, scientists and artists. Al Ghais honoured the memory of the national leader of the Azerbaijani people, Heydar Aliyev, and laid a wreath at his monument.

The Alley of Martyrs remembers those who have died in the struggle for Azerbaijan's independence and territorial integrity, while Al Ghais also laid a wreath at the Eternal Flame monument.

Al Ghais pays his respects at the monument of Heydar Aliyev.

Haitham Al Ghais, OPEC Secretary General, speaks with the audience at ADA University.

Conversing with future leaders

*While in Azerbaijan, OPEC Secretary General **Haitham Al Ghais** took the opportunity to converse with the leaders of tomorrow at ADA University. In a relaxed atmosphere, he was able to share his thoughts and exchange views on OPEC, OPEC+ and the future of the oil industry.*

"Fostering the talents of young people, such as those in the audience today from ADA and other institutions, empowering them with knowledge and helping build the next generation of energy leaders is truly an inspirational endeavour", said OPEC Secretary General Al Ghais at ADA University in Baku.

The university was established in January 2014 when the Azerbaijan Diplomatic Academy and Information Technologies University merged under a decree from the President of Azerbaijan.

Al Ghais also spoke of the long history of Azerbaijan's oil industry, referencing that the many historic milestones of the industry would never have been reached without a skilled and dedicated local workforce. This past, he said, should be an inspiration to all of those present in the audience.

Azerbaijan and the DoC

The Secretary General also talked about Azerbaijan, its role in the Declaration of Cooperation (DoC), and how the latter had helped to revive the industry from two major downturns from 2014 to 2016 and most recently during the COVID-19 pandemic.

In this regard, he said: "I would like to personally thank His Excellency President Ilham Aliyev, who was a vocal supporter of bringing OPEC and non-OPEC producers together in 2016. He has been a steadfast advocate

Azerbaijan Oil Ministry

of the DoC, and his leadership honours his country's incredible history.

"I would also like to thank His Excellency Parviz Shahbazov, Azerbaijan's Minister of Energy for his tireless dedication to the common endeavours of the DoC. He is a consummate diplomat, and he and his team have been great hosts during our visit this week."

Looking to the future

Additionally, Al Ghais emphasized the importance of looking to the future, and encouraged those in the room to be part of the industry going forward. He stated that he firmly believed "that the future of this industry is bright."

In this regard, he referenced OPEC's World Oil Outlook (WOO) that sees energy demand increasing by a robust 23 per cent to 2045, and oil retaining the largest share of the energy mix, at 29 per cent, throughout the outlook period.

He added that the world would need all energies as economies grew, populations expanded, and given that there remained a critical need to bring modern energy services to the billions of people who continued to go without.

At the same time, he added, "we recognize the need to tackle climate change. At OPEC, we fully believe that the oil industry can be part of the solution, and help develop cleaner and more efficient technological solutions and evolve the energy transition.

"Or, as I am always keen to emphasize: energy transitions. In describing the concept, we should use the plural, as I firmly believe that each nation has its own energy transition pathway. The capacities and national circumstances of developing countries must be taken into account.

"The energy future is an 'and' question, not an 'or' question, he stated. "It is about meeting the world's energy needs and reducing emissions. Energy security for all and decarbonization must go hand in hand."

Investment

What this future also requires is massive investment, with OPEC's WOO seeing the oil industry alone requiring over $12 trillion in the period to 2045.

In recent years, however, said Al Ghais, "we have heard calls from some to limit or stop funding for new oil and gas projects, and witnessed the impact of environmental, social and governance constraints on financial institutions. This is disheartening, and particularly impactful on countries with oil and gas resources, such as Azerbaijan."

Officials at ADA University.

He stressed that as an industry "it was vital we make our voices heard. We need to underscore the value our industry has brought to the world, and the importance of it to our future. We all know we have to get our energy future right."

Attracting young talent

In talking further about securing the future of energy, Secretary General Al Ghais said that young talent, including in the audience today, could play a role in helping the industry successfully navigate the new energy paradigm.

He said: "Our industry offers dynamic opportunities to young people with diverse skill sets and educational backgrounds in the sciences, technology, engineering and mathematics. It is an industry that gives bright young people like yourselves the chance to make a meaningful and sustainable contribution to their community and the world at large.

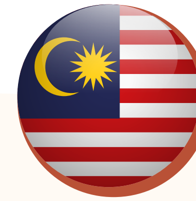
"The tech-savvy youth of this generation are uniquely equipped to utilize the latest technologies and innovations, and apply them to help adapt and enhance this industry in the decades to come. ADA University, and the many students I see before me, are at the forefront of creating the opportunities and managing the challenges that lie before the industry today."

He concluded by saying that he hoped, in some measure, to "have inspired you to take the baton and run with it because the future is in the hands of the coming generations."

Dato' Seri Anwar Ibrahim, the Honourable Prime Minister of Malaysia (l), with Haitham Al Ghais, OPEC Secretary General.

Malaysian Mission

*Towards the end of June, OPEC Secretary General **Haitham Al Ghais** delivered a keynote address at the Energy Asia event in Kuala Lumpur. On the sidelines, he also met with the Prime Minister of Malaysia, **Dato' Seri Anwar Ibrahim**. The* OPEC Bulletin *reports.*



From 26 to 28 June, delegates converged on Kuala Lumpur for the Energy Asia conference. It was an opportunity to discuss and debate energy issues related to the region. Asia comprises advanced, developing and emerging economies moving at multiple paces and at different stages of economic development and socio-economic standards.

Under the overall theme, 'Charting Pathways for a Sustainable Asia', the conference focused on striking the right balance between energy security, affordability and sustainability, the need for intra-regional collaboration, and the importance of investments.

Important partner

These were issues deliberated on when Secretary General Al Ghais met with the Prime Minister of Malaysia, Dato' Seri Anwar Ibrahim, where they also explored ways to strengthen the ties between Malaysia and OPEC.

Al Ghais thanked the Prime Minister in his keynote speech for Malaysia's continued support for the 'Declaration of Cooperation' (DoC) between OPEC and non-OPEC producers, widely known as OPEC+.

He said: "Malaysia's effective participation in the DoC since it was inaugurated at the end of 2016 has been instrumental in helping the oil industry overcome two historic downturns, most recently during the COVID-19 pandemic."

Al Ghais added that "we look forward to continuing to work with the government's Head of Delegation to DoC meetings, His Excellency Mohammad Rafizi Bin Ramli, Malaysia's Minister of Economy and his team in the coming months and years."

The Secretary General also took the opportunity to thank Tan Sri Tengku Taufik, the President & Group CEO of Petronas and Chairman of Energy Asia. "I recall meeting him earlier this year in Davos — and listening to his views on a host of topics, including the need for an inclusive and sustainable energy transition. He is an extremely eloquent advocate for the oil and gas industry," he said.

Recalling Malaysia's long oil industry history, dating back to 1910, when the country's first oil well was spudded on Bukit Telaga Minyak (Canada Hill) in Miri, Sarawak, which is now a monument, Al Ghais also underscored oil's continuing importance to the country today, stating "I firmly believe in its future".

Oil: vital to the future

What follows below is an extract from the speech delivered by the Secretary General at Energy Asia.

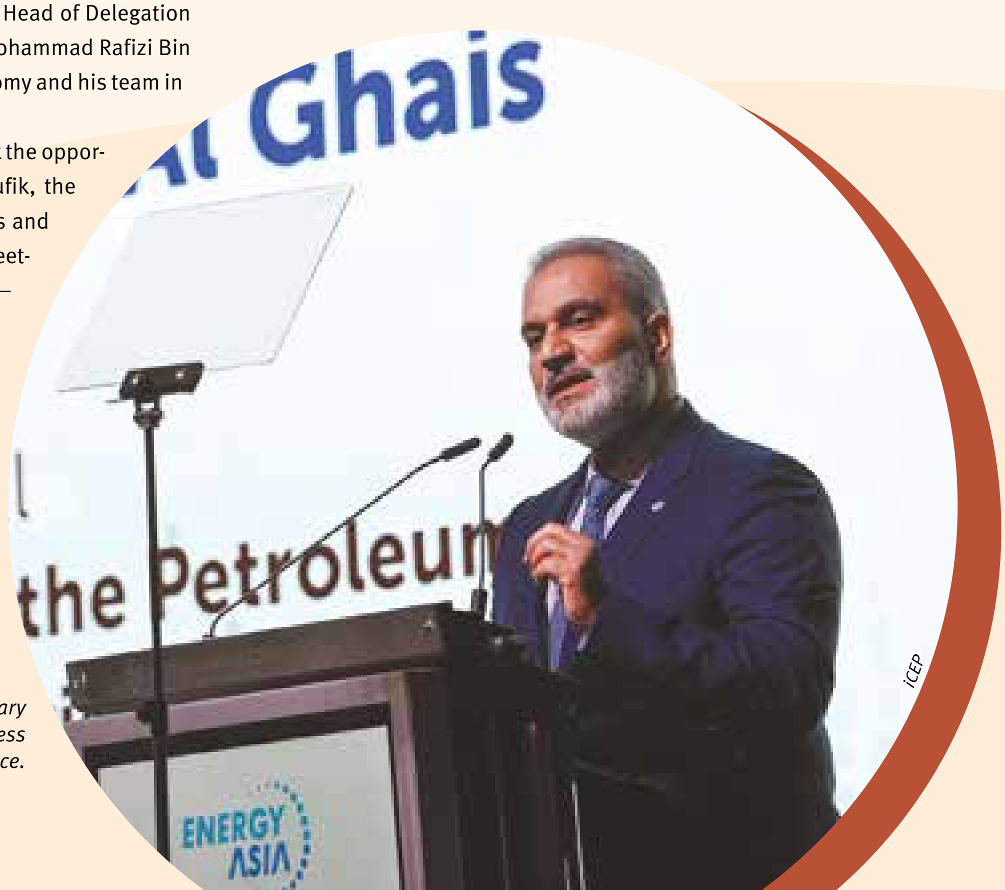
"In OPEC's World Oil Outlook (WOO), we see global energy demand increasing by 23 per cent through 2045, and I see no credible way to address this without utilizing all available energy sources, using energy market stability as a guiding light.

"Renewables will play a much greater role, and contrary to what some may say, OPEC Member Countries are already investing significantly in this area. Gas, hydro, nuclear, hydrogen and biomass will also expand, but it is clear that oil will remain an integral part of the mix.

"Every data-based forecast that I have seen shows that oil is irreplaceable for the foreseeable future. In

"Talk of no new investment in oil projects will only lead to energy chaos. We need energy clarity, not energy chaos."

— Haitham Al Ghais, OPEC Secretary General



iCEP

Haitham Al Ghais, OPEC Secretary General, delivering a leadership address at the Energy Asia conference.

The Kuala Lumpur Convention Centre was the venue for the Energy Asia event.

our WOO, we see global oil demand rising to 110 million barrels a day (mb/d) by 2045, and oil still making up about 29 per cent of the energy mix by then.

"A massive energy expansion is required, as we see the global economy more than doubling in size, and the world's population reaching 9.5 billion by 2045. Moreover, as we all know, there remains a critical need to bring modern energy services to those billions that continue to go without basic energy access in many parts of the world.

"While we must continue to provide more energy to the world, we also recognize the need to continually reduce emissions and decarbonize, subscribing to global best practices and cutting edge, best-in-class technologies. For example, carbon capture utilization and storage, clean hydrogen technologies, the circular carbon economy, and others.

"Meeting the expected future energy growth, while also lowering global emissions, requires unprecedented investment and collaboration."

Underinvestment

"Chronic underinvestment in the industry, not just oil, but across all energies, is putting the viability of the whole energy system at stake. It is a point I have continually highlighted since becoming OPEC Secretary General.

"In our WOO, for the oil industry alone, investment requirements equate to $12.1 trillion, or over $500 billion each year between now and 2045.

"Recent annual levels have been significantly below this, due to industry downturns, the pandemic, and an increasing focus on the environmental and social and governance issues.

"All industry policymakers and stakeholders need to work together to ensure a long-term investment-friendly climate, with sufficient finance available that works for producers and consumers, as well as developed and developing countries.

"For oil, we have heard appeals over the last year or so for producing countries to play a key role in ensuring stable and sustainable global energy supplies. At

the same time, however, we have heard constant calls to end the financing of oil projects. The two sentences simply do not fit together.

"Let me ask investors in the audience today: would you invest if you did not see security of demand, particularly in an industry where returns can take a decade or more?

"Talk of no new investment in oil projects will only lead to energy chaos. We need energy clarity, not energy chaos.

"We also need facts and not fantasy to take us through a just, inclusive and realistic transition."

Energy clarity

"In recent years, we have heard of net-zero targets and scenarios in which global demand drops to around 80 mb/d by 2030, which is more than 20 mb/d below today's level. We need to remember that 2030 is only six years from now!

"Over the period to 2030, however, it is expected that another half a billion people will move into cities across the world as the global economy continues to expand.

"Being in Malaysia, and to put this in an understandable context, this urbanization drive will require the addition of approximately 50 new Kuala Lumpurs.

"It goes without saying that the world will therefore need more, not less oil, alongside the need to continuously reduce emissions.

"This returns to the need for facts and energy clarity.

"What has become apparent in the past few years or so is that references to net-zero numbers have sown confusion among investors and policymakers. This is not a positive recipe for producers or consumers."

Energy Asia / iCEP

Energy transitions

"When I listened to my friend Tan Sri Tengku Taufik in Davos earlier this year, a line stuck out to me. He said when talking about the energy transition: 'Don't sacrifice the good for the perfect'.

"It makes absolute sense to me. We cannot get everything absolutely right. Moreover, we need to recognize that we should be talking about energy transitions.

"It has to be a plural, as I firmly believe that each nation and people has to have their own energy transition pathway. The capacities and national circumstances of developing countries must be taken into account.

"Addressing the energy and climate challenges must put fairness at its heart, making sure businesses, governments, and communities can come together to deliver genuine and real change.

"Standing here in Kuala Lumpur is a reminder of two things.

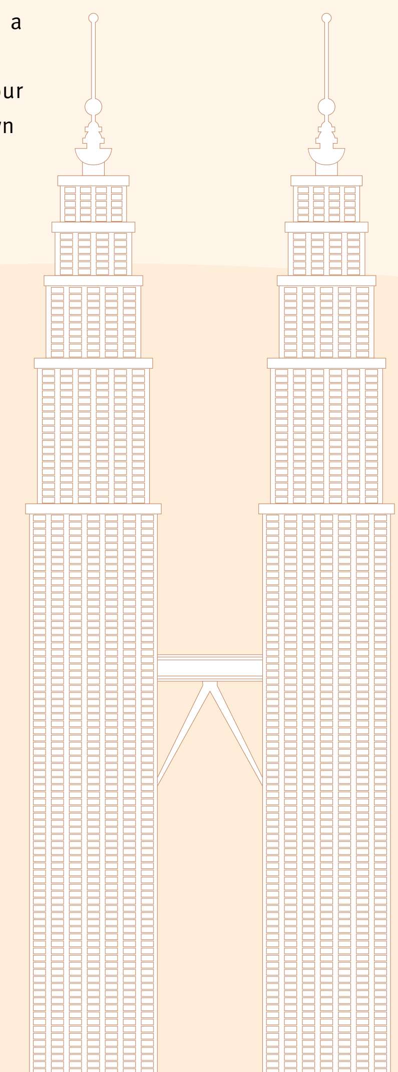
"Firstly, that Asia is at the heart of our global energy future. It has to have its own say in the challenges related to its energy security, availability and the need to reduce emissions.

"Secondly, the vital role of Malaysia, both as a partner with OPEC in the DoC and as a regional and global energy leader, through both the national government, and its national oil company, Petronas.

"At OPEC, we very much look forward to continuing our fruitful collaboration with Malaysia, and ensuring we deliver the energy clarity we all need."

"Addressing the energy and climate challenges must have fairness at heart, making sure businesses, governments, and communities can come together to deliver genuine and real change."

— Haitham Al Ghais, OPEC Secretary General



OPEC and OPEC Fund sign groundbreaking Memorandum of Understanding

Dr Abdulhamid Alkhalifa, Director-General of OFID (r); with Haitham Al Ghais, OPEC Secretary General.

On 13 June, OPEC signed a Memorandum of Understanding (MOU) with its sister organization, the OPEC Fund for International Development (OFID).

"There was a ceremony between the Secretary General (of OPEC, Haitham Al Ghais) and Director-General (of OPEC Fund, Dr Abdulhamid Alkhalifa) and the teams involved in developing this framework for cooperation," explained OPEC's General Legal Counsel Leonardo Sempértegui, OPEC's focal point for collaboration with the Fund.

The OPEC Fund was established in 1976, following the first Summit of Heads of State and Government in Algiers in 1975. The resulting document, The First Solemn Declaration, became the first international instrument to address the concept of South-South cooperation. It considered the plight of poorer nations and called for a new era of cooperation in international relations in the interest of world economic development and stability.

Through the OPEC Fund, OPEC countries have been able to embark on ambitious socioeconomic development programmes for the benefit of other developing countries.

The original Member Countries of OPEC became OPEC Fund's Member Countries and to this day most of the OPEC Fund's members also belong to OPEC, including Algeria, Gabon, IR Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, the United Arab Emirates and Venezuela.

The OPEC Fund has grown over the years and has committed over US$24 billion to development projects in over 125 countries to date.

"At the beginning of His Excelleny Al Ghais's tenure as OPEC Secretary General, the OPEC Fund Director General, Dr Alkhalifa, brought up the issue of collaboration and a high-level group was created with management levels from both sides to define areas and mechanisms of effective cooperation.

"This was a bottom-up process," said Sempértegui. "Members from different departments of both organizations met and determined the areas in which collaboration was more likely to bear fruit."

There will be a quarterly monitoring of progress to ensure that concrete results are being delivered in areas such as IT, public relations, and the legal sphere, said Sempértegui.

"We can share resources, exchange knowledge, create efficiencies and strengthen bonds."

Inside the MoU

The MoU specifically states that OPEC and the OPEC Fund are sister organizations with common Member Countries and have maintained close cooperation and collaborated in various areas in the past, including information technology, communications, and social and other activities. The organizations entered into an MoU on IT-related collaboration on 3 August 2012, for example.

The new MoU provides a broader framework for cooperation, and facilitates and strengthens collaboration in areas of strategic importance and activities, including, but not limited to:

- Organizing workshops to share lessons learned on strategy development and implementation within both institutions.
- Collaborating on areas of common interest relating to energy access, energy security and climate action.
- Jointly sharing knowledge and expertise related to data management, as well as sharing data that is relevant to both institutions.
- Collaborating on information technology and procurement-related matters.
- Collaborating on communications to promote joint activities such as Member Country learning and knowledge-sharing activities, the Vienna Energy Scholar Programme (VESP), and other visiting student groups and social events.
- Sharing knowledge and best practices, as well as co-hosting events to enhance legal awareness in relation to the relevant legal fields applicable to both Parties.
- Jointly identifying and preparing learning and development programmes and projects where cooperation would optimize success in collaborative implementation.
- Sharing knowledge and best practices in finance, HR and other relevant areas.
- Collaborating to enhance the relationship and level of engagement and strengthen the relationship with the host country and the City of Vienna.
- Exploring mechanisms to enhance ongoing collaboration via the VESP in order to enhance cooperation with Vienna and promote knowledge of topical energy-related issues among young people residing in the host country.
- Establishing a regular consultation mechanism to review the above-mentioned collaboration, discuss lessons learned and draw on each other's best practices and expertise in relation thereto.

OPEC SG visits Brunei Darussalam — the Kingdom of Unexpected Treasures

In a first-ever visit by an OPEC Secretary General to Brunei Darussalam — the latter translates as “Abode of Peace”, an apt description for this beautiful country of roughly 452,000 inhabitants — Haitham Al Ghais visited on 23 and 24 June.

Brunei Darussalam is located to the northwest of the island of Borneo, embraced geographically by the Malaysian state of Sarawak, and looks north to the South-China Sea.

During his visit, Secretary General Al Ghais was honoured to meet the Sultan of Brunei Darussalam, His Majesty Sultan Haji Hassanal Bolkiah Mu’izzaddin Waddaulah Ibni Al-Marhum Sultan Haji Omar ‘Ali Saifuddien Sa’adul Khairi Waddien, at the royal palace. The latter, Istana Nurul Iman, is located a few kilometers southwest of the country’s capital of Bandar Seri Begawan.

The meeting focused on energy market developments and the importance of market stability and investment to ensure energy security. Secretary General Al Ghais praised Brunei Darussalam and its ongoing “leadership role in the ‘Declaration of Cooperation’ (DoC) process since its inception in December 2016 in the interest of oil market stability”.

Al Ghais also met with the Honourable Pehin Dato Halbi Yussof, Minister at the Prime Minister’s Office and Minister of Defence II. Both praised the decisions made by OPEC’s 13 Member Countries and ten non-OPEC oil-producing countries at the 35^{th} OPEC and non-OPEC Ministerial Meeting (ONOMM) on 3 and 4 June, undertaken in the same spirit of trust, mutual respect and dialogue that has underpinned the DoC since its inception. They also discussed strengthening ties between Brunei Darussalam and OPEC moving forward.

Brunei Darussalam is sometimes referred to as the Kingdom of Unexpected Treasures, which is not unreasonable given that many will not know that the country plays host to one of the largest water settlements in the world, nicknamed “the Venice of the East”, or have witnessed Bandar Seri Begawan’s spectacular structures first-hand, such as the Omar Ali Saifuddien Mosque. However, its successful history of producing and exporting oil and gas is certainly well known, enabling this country of 5,765 square kilometres to punch above its size both regionally and globally.

Although Brunei Darussalam’s close co-operation with OPEC in the framework of the DoC began in 2016, its long history with oil dates back to 1899 when the first exploration well was drilled. Since the discovery of the Seria oil field in 1929 and a number of other commercial discoveries, the country’s petroleum sector has gone from strength to strength.

1932 marked the first year in which Brunei Darussalam exported oil, heralding the arrival of a new era in sustainable oil production in Southeast Asia. Building on these early successes, which were largely driven by the Seria oil field for decades, technical advances in the 1960s made offshore exploration feasible and resulted in even greater production than before, including from the appropriately named “Champion” oil field, where production began in 1972.

The Billionth Barrel Monument — one of the country’s most recognizable monuments — was built close to Seria Well No.1 in 1991 to commemorate Brunei Darussalam’s production of the billionth barrel of crude

Haitham Al Ghais, OPEC Secretary General (l), with His Majesty Sultan Haji Hassanal Bolkiah Mu'izzaddin Waddaulah Ibni Al-Marhum Sultan Haji Omar 'Ali Saifuddien Sa'adul Khairi Waddien, Sultan of Brunei Darussalam.

oil that year. Fast forwarding to 2023, oil and gas continue to make up a large proportion of the country's total exports, with the petroleum industry accounting for approximately half of Brunei Darussalam's gross domestic product.

Today, Brunei Darussalam is one of the wealthiest nations in Southeast Asia, and its mainly youthful population enjoys some of the world's highest living standards, including free healthcare and education. Unlike many parts of the world, people in Brunei Darussalam also have the ability to go shopping and enjoy a meal in an air-conditioned mall in the capital before visiting pristine rainforest just a few hours away if they wish. An Abode of Peace indeed!

Haitham Al Ghais, OPEC Secretary General (l), with the Honourable Pehin Dato Halbi Yussof, Minister at the Prime Minister's Office and Minister of Defence II of Brunei Darussalam.

22nd Nigeria Energy Week Strategic Conference

Nigeria's foremost international energy conference, NOG, held the 22nd edition of its annual Energy Week, from 9–13 July 2023, under the theme "Powering Nigeria's Sustainable Energy Future." It was held at the International Conference Centre (ICC), Abuja FCT, Nigeria.

OPEC Secretary General Haitham Al Ghais, delivered pre-recorded remarks. The following is an extract from his speech:

"Although I am unfortunately not able to join you there in Abuja due to scheduling issues, it is my great pleasure to address this 22nd Nigeria Energy Week Strategic Conference via teleconference from here at the OPEC Secretariat. I look forward to my next visit to Nigeria, which is currently in the planning stages.

Firstly, on behalf of OPEC, allow me to recognize His Excellency Bola Ahmed Tinubu who was officially sworn in on Monday, 29 May 2023, as the new President of the Federal Republic of Nigeria.

"The oil and gas industry has a long history of being at the cutting edge of innovation and technology, and now it has the possibility of bringing that expertise to bare on developing cleaner and more efficient technological solutions to help unlock an emissions-free future."

— Haitham Al Ghais, OPEC Secretary General

Excellency, as you undertake this extremely important role in leading Nigeria forward into the years ahead, rest assured that you have the full support of OPEC behind you. Indeed, we look forward to working closely with you and your esteemed leadership team, as together, we seek to continue promoting the path of stability and balance in the global energy markets.

Excellencies, ladies and gentlemen,

Just about one week ago, we hosted the world's top energy leaders in Vienna for the 8th OPEC International Seminar.

Under the very timely and relevant theme Towards a Sustainable and Inclusive Energy Transition, some of the industry's leading experts had a chance to share their insights on topics that will shape the future of the global energy industry.

An event of this magnitude is a massive undertaking, and we would not have been able to achieve success without the highly valuable support of our loyal Member Countries. Nigeria is no exception to this rule, and I would like to take a moment to express my sincere gratitude to the Government of Nigeria for its very generous support of the Seminar. Your contributions, along with those of our other Member Countries, have enabled us to organize an event that was at the highest calibre of professionalism.

Excellencies, ladies and gentlemen,

Allow me to turn now to the theme of this event, which is "Powering Nigeria's Sustainable Energy Future". This is a theme that is both timely and appropriate, especially as the industry continues to seek the right balance between pursuing two top priorities: 1) meeting the world's rising energy needs while also 2) addressing climate change.

One thing is certain, to achieve both well, we will need to see a fair, inclusive and equitable approach to ensure that we leave no one behind as we navigate the energy transitions to come.

This is of special importance to Nigeria and to Africa, a continent that is home to seven of OPEC's 13 Member Countries.

We at OPEC will continue to work closely with our Member Countries to ensure that all voices are heard and all circumstances are considered in any negotiations or discussions related to climate change.

There is simply no one right path to solving this complex issue, but rather a series of solutions that are geared to meeting the diverse needs of citizens no matter where they may come from.

Dealing with these issues is nothing new for OPEC. In fact, as an Organization, we have a long history of supporting environmental issues and sustainable development.

We have been directly involved in discussions that led to the United Nations Framework Convention on Climate Change. Starting back in 1990 with the UN Intergovernmental Negotiating Committee, these efforts have continued up until 2022 with COP27 in Sharm El-Sheikh.

And now, OPEC is proud that COP28 will be hosted later this year by our Member Country, the United Arab Emirates. This COP will provide unique opportunities to press for fair and equitable outcomes while also highlighting what our Member Countries are doing to help address climate change, including ongoing activities related to diversifying their energy resources.

According to our World Oil Outlook, global primary energy demand is forecast to increase by a significant 23 per cent in the period to 2045, which means we will need all forms of energy. This includes solar, nuclear, wind and waste-to-energy power. We will also require innovative solutions such as carbon capture utilization and storage and hydrogen projects, in addition to the Circular Carbon Economy, which has received a positive endorsement from the G20.

The oil and gas industry has a long history of being at the cutting edge of innovation and technology, and now it has the possibility to bring that expertise to bare on developing cleaner and more efficient technological solutions to help unlock an emissions-free future.

While there is great promise in many of these areas, there is also a grim reality shared by far too many around the world who have no access to energy at all.

According to the United Nations, for example, 733 million people do not have access to electricity. Furthermore, one third of the world's population use dangerous or inefficient cooking systems, which causes a host of health-related problems.

This uneven world of energy haves and have-nots will require that capacities and national circumstances of developing countries be taken into account when considering actions related to climate change. Policymakers must be keenly aware that even the best intentions can result in unintended consequences. And if policies are not well thought through, we could end up making things worse, with the potential for heightened volatility, energy shortfalls or other unwanted outcomes.

One area of great concern I would like to highlight is related to industry investment. The global oil sector alone will need a massive cumulative investment of $12.1 trillion through to 2045. We are currently not on track to reach that level, and, to make things worse, we have in recent years even heard calls from some to limit or stop funding for new oil and gas projects altogether.

This is, of course, unwise and is an unrealistic scenario that would be particularly devastating to developing countries that rely on revenues from their precious oil and gas resources to develop their economies. Africa, for example, is blessed with an estimated 120 billion barrels of proven oil reserves and 18 trillion standard cubic metres of natural gas.

Haitham Al Ghais, OPEC Secretary General, delivered pre-recorded remarks at NOG.

However, significant investment will be required to fully realize the potential of these resources to benefit Africa's citizens while also enabling the necessary mitigation actions needed to reduce the carbon footprint of the oil industry.

In some cases, financial institutions are either limiting or tightly controlling how money is invested into fossil fuels under environmental, social and governance guidelines. This situation is hindering Africa's progress despite the fact that Africa accounts for only around three per cent of global greenhouse gas emissions.

Moving forward, OPEC will continue to do its part in promoting a pro-investment environment by taking the actions necessary to encourage oil market stability under the Declaration of Cooperation.

Excellencies, ladies and gentlemen,

In conclusion, allow me to say that, despite the significant challenges that lie ahead for Nigeria, Africa and OPEC, we are presented with just as many opportunities.

And, as history has proven time and again, the only way we will persevere through hard times is by working together. The long-standing relationship between OPEC and Nigeria runs deep. Our tightly shared values go all the way back to 1971, when Nigeria joined OPEC. The contributions Nigeria has made to this Organization since that time are simply too many to list here today.

And now, as we look ahead, OPEC will continue to rely on Nigeria's crucial support and cooperation as His Excellency, President Tinubu takes the country forward to help meet the needs of Nigerians now and in the future.

Thank you, and I wish you all a highly successful Conference."

OPEC's Annual Statistical Bulletin launched

OPEC has launched its flagship ***Annual Statistical Bulletin*** *(ASB) 2023. The event was held at the OPEC Secretariat in Vienna.*

OPEC launched the 2023 edition of its Annual Statistical Bulletin (ASB) on Tuesday, 11 July 2023, at the OPEC Secretariat in Vienna, Austria. The event was held in a hybrid format. The publication and its key highlights were presented by OPEC Secretary General, Haitham Al Ghais, followed by a presentation and a panel discussion. A video featuring the publication's highlights was also shown during the launch. Dr Jakob Müllner, Associate Professor and Academic Director at the WU Executive Academy, the sponsor of the event, delivered remarks at the event's opening. The launch was moderated by Eithne Treanor, Founder & CEO, ETreanor Media.

In his remarks, the SG stated, "The Annual Statistical Bulletin (or ASB in brief) is a publication that OPEC is highly proud of. Now in its 58th edition, its significance and relevance has only grown since its inaugural release in 1965."

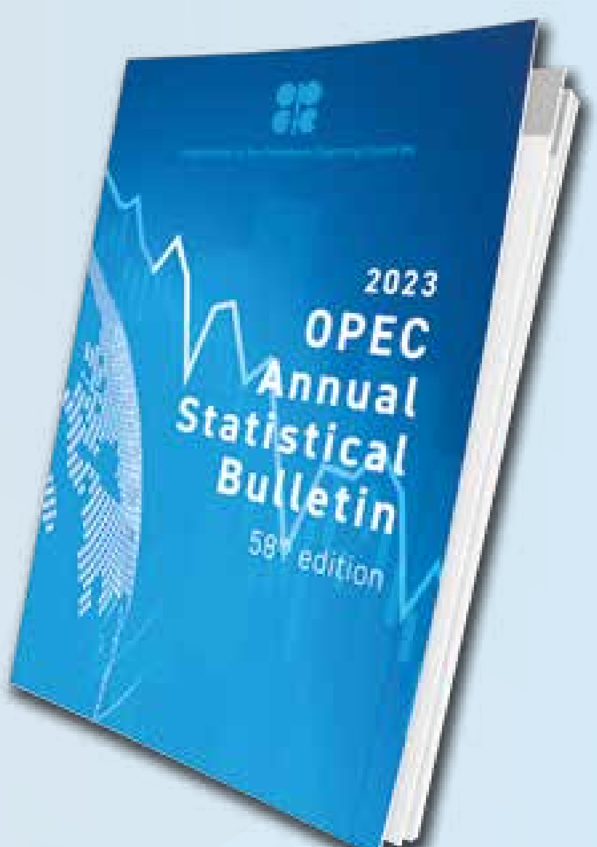
In his remarks, the SG emphasized that accurate data and impartial oil market analysis play a role in supporting solutions for today's challenges alongside the policy making process. "OPEC is focused on ensuring the quality and reliability of data research. The ASB is a vital component of OPEC fulfilling its mission and contributing to oil market stability, in the interests of producers, consumers and the global economy," he added.

The team from the OPEC Secretariat fielding questions during the launch was led by Dr Ayed S. Al-Qahtani, Director, Research Division; Huda Almwasawy, Head, Data Services Department; Mhammed Mouraia, Statistical Systems Coordinator; Dr Mohamed Khalefa Sarrab, IT Development Coordinator; Dr Mohammad Sattar, Senior Statistician; and Dr Pantelis Christodoulides, Senior Statistical Research Analyst. Some of the highlights which were discussed by the panel included:

1. Total world crude oil production increased in 2022 by 3.46 million barrels per day (mb/d) or 5.0 per cent, as compared to the 2021, marking the second consecutive annual increase since 2020, to

average of 72.80 mb/d. OPEC crude oil production rose year-on-year (y-o-y) by 2.53 mb/d, or 9.6 per cent, while crude production by non-OPEC countries rose by 0.92 mb/d, or 2.1 per cent.

2. With an average of 99.56 mb/d in 2022, world oil demand grew by 2.49 mb/d y-o-y, or by 2.6 per cent and almost reached pre-pandemic annual average levels. Oil demand grew y-o-y in almost every region and the largest gains were recorded for OECD Americas, OECD Europe, India, Other Asia, the Middle East and Africa. Oil demand in OPEC Member Countries was bullish in 2022, gaining 0.57 mb/d or 6.9 per cent, y-o-y. Distillates and gasoline accounted for around 54.9 per cent of 2022 world oil demand with an upward trend during the years 2021 and 2022. Residual fuel oil requirements were about 6.7 per cent of total oil demand in 2022.



Presenting the ASB 2023 (from l–r): Dr Ayed S Al-Qahtani, Director of the Research Division; Haitham Al Ghais, OPEC Secretary General; and Dr Jakob Müllner, Associate Professor and Academic Director at the WU Executive Academy of the Vienna University of Economics and Business.

Dr Jakob Müllner.

3. World refinery capacity increased in 2022 by an additional 0.76 million barrels per calendar day (mb/cd) to stand at 102.20 mb/cd. The Non-OECD region, particularly the Middle East and China recorded refining capacity additions. Refinery capacity in the OECD declined for the fourth consecutive year in 2022. Globally, refinery throughput increased by 2.19 mb/d or 2.7 per cent to reach 83.84 mb/d in 2022 amid robust oil demand.
4. OPEC Member Countries exported an average of 21.39 mb/d of crude oil in 2022, a strong increase of about 1.73 mb/d, or 8.8 per cent, compared to 2021 and remaining slightly below pre-pandemic levels. Following the pattern seen in previous years, the bulk of crude oil from OPEC Member Countries — 15.20 mb/d or 71.1 per cent — was exported to Asia. Considerable volumes of crude oil — about 3.86 mb/d — were also exported to OECD Europe in 2022, compared with 3.27 mb/d recorded in 2021. OECD Americas imported 1.07 mb/d of crude oil from OPEC Member Countries, which was about 0.13 mb/d, or 13.9 per cent above the 2021 volumes. Exports of petroleum products from OPEC Member Countries averaged 4.46 mb/d during 2022, up by around 0.43 mb/d, or 10.6 per cent, compared to 2021. Imports of petroleum products by OPEC Member Countries averaged at 1.67 mb/d in 2022, roughly 0.17 mb/d, or 11.1 per cent, higher than in 2021.
5. World proven crude oil reserves stood at 1,564 billion barrels (bn b) at the end of 2022, higher by 17

Eithne Treanor moderated the event.

Dr Ayed S Al-Qahtani, Director of the Research Division.

bn b, or 1.1 per cent from the 2021 levels. Proven crude oil reserves in OPEC Member Countries increased marginally to 1,244 bn b at the end of 2022, following a decline during 2021. At the end of 2022, world proven natural gas reserves increased by 2.4 per cent to approximately 210.06 trillion standard cubic metres (tr s cu m). Proven natural gas reserves in OPEC Member Countries stood at 75.12 tr s cu m at the end of 2022, up 1.2 per cent from the level at the end of 2021.

6. The OPEC Reference Basket averaged $100.08/b in nominal terms during 2022, up from $69.89/b in 2021, an increase of $30.19/b, or 43.2 per cent. The average volatility was $12.33/b, or 12.3 per cent, relative to the yearly average.

First published in 1965, the ASB, one of the Organization's flagship publications, continues to provide a broad range of statistics and figures on the global energy industry, particularly focusing on oil and natural gas, in addition to major key economic indicators, serving as a leading source of reliable data for officials, policymakers, industry experts, analysts, researchers, members of academia and other stakeholders. The publication features comprehensive annual data on the global oil and gas supply chain, particularly on OPEC's 13 Member Countries.

The publication is available as an interactive version and a PDF on the OPEC website, as well as through a smart app compatible with iOS and Android platforms.

Huda Almwasawy, Head of the Data Services Department.

Mhammed Mouraia, Statistical Systems Coordinator.

OPEC SG participates in G20 Energy Ministerial Meeting

*At the G20 Energy Ministerial Meeting in Goa, India, on 22 July, OPEC Secretary General, **Haitham Al Ghais**, delivered remarks and met with a number of other high-level energy industry stakeholders to highlight OPEC's views on energy transitions, that there is no one-size-fits-all pathway to a sustainable energy future, and the importance of continued investments into the oil industry.*

Haitham Al Ghais, OPEC Secretary General met with many dignitaries at G20, including ...

The G20 Energy Ministerial Meeting in Goa, held under India's G20 Presidency with the theme 'One Earth, One Family, One Future', focused on sharing, collaborating and building on the solidarity among G20 members and other stakeholders present to accelerate clean, sustainable, just, affordable and inclusive energy transitions which follow various pathways.

"At OPEC we believe that policymakers and industry stakeholders need to work together to ensure a long-term investment-friendly climate for all energies."

— Haitham Al Ghais, OPEC Secretary General

In his remarks at the meeting, OPEC Secretary General Haitham Al Ghais underscored the valuable relationship OPEC has with India as a key strategic partner. He stated that OPEC looked forward to working closely with India and the G20 to help promote a sustainable energy future for the world.

More energy and investment

In this regard, he noted that in the decades ahead, what was clear was that the world would need more energy, as populations expanded and economies grew. "In OPEC's World Oil Outlook, global energy demand will rise by 23 per cent between now and 2045."

Meeting this growth, ensuring energy security and affordable access, while also lowering global emissions in line with the Paris Agreement, he added, "requires all energies, technologies, and unprecedented investment and collaboration."

The oil industry alone required global investments of $12.1 trillion between now and 2045, he said, before stressing that there had been increasing calls over the past few years to end financing of oil projects.

He added: "OPEC believes this is neither pragmatic nor constructive for the way forward. Following this path will severely affect economies, constrain social mobility, limit affordable energy access and exacerbate energy poverty.

"At OPEC, we believe that policymakers and industry stakeholders need to work together to ensure a long-term investment-friendly climate for all energies. One that works for producers and consumers, as well as developed and developing countries."

Working together

Noting that a key message from the recent 8th OPEC International Seminar was that energy security for all and decarbonization must go hand-in-hand, Al Ghais also took the opportunity to state unequivocally that OPEC Member Countries were ready, willing and able

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

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

to play a key role in providing energy to the world and reducing emissions.

The importance of collaboration was emphasized in the G20 Energy Ministers communiqué, which also noted: "We firmly believe that energy security, energy access, market stability, and energy affordability need to be advanced simultaneously while advancing energy transitions, in pursuit of economic growth and prosperity, and ensuring access to modern energy for all, leaving no one behind.

"We also recognize the urgent need for advancing energy transitions, through various pathways, for contributing towards achieving our sustainable development goals as well as global net zero greenhouse gas emissions/carbon neutrality by or around mid-century."

... Shri Hardeep S Puri, India's Minister of Petroleum and Natural Gas and Minister of Housing and Urban Affairs ...

... Takagi Kei, Japan's Parliamentary Vice Minister of Foreign Affairs ...

... and Eng Mohamed Hamel, GECF Secretary General.

Iraq and Saudi Arabia boost ties through energy and power

Iraq and Saudi Arabia have recently signed several landmark energy and power agreements in yet another sign that the two countries are coming closer to each other. ***Ammar Abdulhafedh*** *looks at how these developments are ushering in a new era of cooperation.*

The two neighbours, Iraq and Saudi Arabia, share a land border of over 800 kilometres and today the countries are advancing diplomatic relations, further evolving bilateral trade and are aligned on developments through participation in the 'Declaration of Cooperation' (DoC).

In recent years, there has been much shuttle diplomacy between Baghdad and Riyadh, and this came to fruition in a number of agreements and projects in 2022 and 2023.

Linking power grids

In January 2022, the two countries announced that they had signed a memorandum of understanding (MoU) to link their power grids. "We aim to achieve optimal investment in the electrical connection with Iraq," said HRH Prince Abdul Aziz Bin Salman, Saudi Arabia's Minister of Energy at the signing ceremony.

What followed in July 2022 was a broader agreement between Iraq and the Gulf Cooperation Council Interconnection Authority (GCCIA). This was taken on the sidelines of the Jeddah Security and Development Summit and is set to be split into three stages.

> *"What connect us is not just electricity lines and pipelines, but rather veins and arteries. We share families and tribes … we seek to implement projects inside Iraq to help the country to achieve electricity stability … we hope that the electricity interconnection with Iraq will be the starting point for regional and international electrical power linkage."*
>
> *— HRH Prince Abdul Aziz Bin Salman, Saudi Arabia's Minister of Energy*

Iraq's Minister of Electricity, Engineer Ziyad Ali Fadel, said: "The first stage of the electrical power transmission will provide Basra city with 500 megawatts (MW) of electricity. And it will be separated from the Iraqi National Electricity Transmission Grid and connected directly to the GCC Interconnection Authority. In the second stage, when the energy transmission reaches the capacity of 2,000 MW there will be liabilities that need to be implemented from both Iraq and the GCCIA to reach 2,000 MW of electricity.

"The third stage is the most ambitious stage, as the electrical power transmission is estimated to reach the capacity of 8,000 MW of transmitted electricity and will connect the GCCIA with Basra, Mosul, and Baghdad to Turkey with a duration of nine to ten years of work."

According to figures from the Iraqi Ministry of Electricity, its national generators only produce around 20,000 MW, while the country consumes 31,000 MW.

From the perspective of Iraq and Saudi Arabia, Prince Abdul Aziz and Hayan Abdulghani Abdulzahra Alsawad, Iraq's Deputy Prime Minister for Energy Affairs and Minister of Oil held a meeting in the Saudi Arabian capital Riyadh in November 2022. The two discussed matters of common interest in the fields of energy and this meeting was the prelude to considerable activity in 2023.

2023: a year of progress

In June 2023, Prince Abdul Aziz and Minister Fadel, celebrated the start of the power connection between Iraq and the GCCIA.

Speaking at the event, Prince Abdul Aziz stated, "the visit has great significance, and we find it a good and fruitful opportunity to expand the horizons of

HRH Prince Abdul Aziz Bin Salman, Saudi Arabia's Minister of Energy (r) and Hayan Abdulghani Abdulzahra Alsawad, Iraq's Deputy Prime Minister for Energy Affairs and Minister of Oil.

cooperation and joint work between the two countries."

He added: "What connect us is not just electricity lines and pipelines, but rather veins and arteries. We share families and tribes ... we seek to implement projects inside Iraq to help the country to achieve electricity stability ... we hope that the electricity interconnection with Iraq will be the starting point for regional and international electrical power linkage."

Minister Fadel also underlined the value of the project and its broad objectives. "It is considered an important strategic project, as well as another link between Iraq and the Gulf region and Arab states."

The media office of the Iraqi Prime Minister, Mohammed S. Al-Sudani stated: "The Saudi-Iraq electrical power agreement will lead to more stabilization of the supply of electricity and lower costs."

It added that "the project is a promising start for Iraq to return to its regional status due to its important strategic location, and establishes the first opportunity to work with Arab countries. And it will allow Iraq to be a hotspot for energy transmission to Europe and Asia".

Gas and solar projects

In May 2023, the Governorate of Jeddah held the 5th session of the Saudi-Iraqi Coordination Council, which agreed to enhance cooperation in all fields. During the event, Iraq also signed a MoU with Saudi Aramco to develop Iraq's giant Akkas gas field. The initial agreement would allow Saudi Aramco to produce 400 million cubic feet of gas per day.

The Akkas field, which contains more than 5 trillion cubic feet of reserves, lies in Iraq's Anbar province near the Syrian border.

Saudi Arabia's ACWA Power company has also agreed to build a 1,000 MW solar power plant in Central Iraq's Najaf city in a joint venture. According to Minister Fadel, it will be the first clean energy project in the country.

Burgeoning relationship

In recent years, Iraq and Saudi Arabia have advanced their links in various sectors, and recent developments in the power sector will be beneficial to all parties, enabling Iraq to overcome power shortages, and furthering interconnectivity in the region.

Alongside its vital cooperation through the DoC, there are many positives developments in the relationship between Iraq and Saudi Arabia.

OPEC Secretary General's diary

*In the course of his official duties, **Haitham Al Ghais**, OPEC Secretary General, visits, receives and holds talks with numerous dignitaries. The following records some of those events.*

13 June: Al Ghais (r) held a bilateral meeting with Kei Takagi, Parliamentary Secretary for Foreign Affairs of Japan, at the OPEC Secretariat in Vienna.

30 June: Al Ghais (r) welcomed Sheikh Salem Abdullah Al-Jaber Al-Sabah, Kuwait's Minister of Foreign Affairs, to the OPEC Secretariat.

7 July: Al Ghais (r) received Dr Alvaro Silva Calderon from Venezuela, who served as OPEC Secretary General in 2002 and 2003, at the OPEC Secretariat.

7 July: Al Ghais (r) was visited by Dr Omar Farouk Ibrahim from the African Petroleum Producers' Organization (APPO), in the OPEC Secretariat..

7 July: Al Ghais (c) received Foday Mansaray (r), Director General of the Petroleum Directorate of Sierra Leone, at the OPEC Secretariat.

7 July: Al Ghais (c) was visited by Renée van Heusden (r), Head of Oil & Gas; and Roberto Bocca, Head, Centre for Energy & Materials and Member of the Executive Committee, World Economic Forum, at the OPEC Secretariat.

7 July: Al Ghais (second l) welcomed representatives from the Abu Dhabi National Oil Company (ADNOC), United Arab Emirates, at the OPEC Secretariat.

10 July: Al Ghais (r) was visited by Jean Paul Prates, President and CEO of Petrobras, at the OPEC Secretariat.

12 July: Al Ghais (r) was visited by Yusuf Abdulkarim Bucheeri, Ambassador and Permanent Representative of the Kingdom of Bahrain, in the OPEC Secretariat.

13 July: Al Ghais (l) welcomed Baker Fattah Hussen, Ambassador of the Republic of Iraq to Austria and Permanent Representative to the United Nations, to the OPEC Secretariat.

19 July: Al Ghais (r) met with Suleiman Dauda Umar, Ambassador of the Federal Republic of Nigeria to Austria and Permanent Representative to the United Nations in Vienna.

3 August: Al Ghais (r) received Cheikh Tidiane Sall, Ambassador of the Republic of Senegal to Austria and Permanent Representative to the United Nations, at the OPEC Secretariat.

Visits to the Secretariat

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 present on the Organization and the oil industry. Here we feature some snapshots of such visits.

6 June Students from University of Oradea, Romania.

6 June Students from Illinois, US.

11 July Visitors from Bundeswehr, Germany.

2 August Students from Cagliari, Italy.

(except two portraits): SVTP.GOV.MW

In the field

A tour of the massive Shire Valley Transformation Programme in Malawi demonstrated progress amid adversity, as well as environmental and social governance in action.

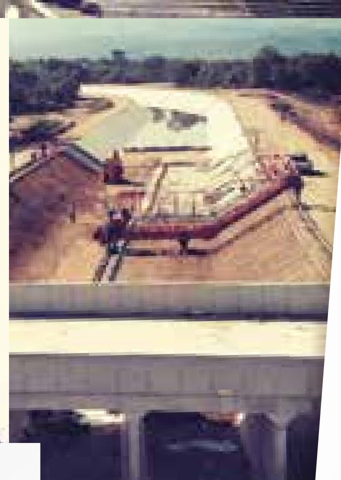
By Howard Hudson, OPEC Fund

OPEC Fund

Khaled Al-Zayer, OPEC Fund, Director, Eastern & Southern Africa, Public Sector Operations.

OPEC Fund

Sonia Siserova, OPEC Fund, Country Manager, Public Sector Operations.



“Revolutionary, even for the World Bank”


Shutterstock

An OPEC Fund delegation travelled to Malawi in April 2023 to appraise the Shire Valley Transformation Programme — a multi-sector project set to revolutionize the economy in the south of the country. Public Sector Director for Eastern & Southern Africa Khaled Al-Zayer and Country Manager, Sonia Siserova toured the site alongside analysts and environmental experts from the World Bank, the African Development Bank and others.

With Phase II co-financed for a total of just over $224 million, the programme will increase agricultural productivity and commercialization, while improving the sustainable management of natural resources. Specifically, the programme will provide access to reliable gravity-fed irrigation and drainage services, as well as securing land tenure for well over 50,000 smallholder families — including more than 15,000 female-led households.

Siserova explains: “Shire Valley is one of the poorest areas in Malawi, where local people rely on agriculture, but cannot produce enough to satisfy their needs. Many still rely on food aid. A major part of the project is to bring together thousands of smallholders into collectives and share resources such as seeds and livestock, while building storage areas and new roads to markets. Basically, upgrading the entire value chain.

“The project covers a large area, comprising not only the main canal, but also secondary and even tertiary canals. Putting all this in perspective, the World Bank representative who was touring the site with us said that they’d never done anything before on this scale. It’s revolutionary, even for the World Bank.”

Broader environmental aspects were also under scrutiny by specialists sent by co-financing partners. “The attention given to this initiative is tremendous,” says Al-Zayer. “It’s a complicated programme, so several environmental experts were brought in to solve a number of problems that arose during the construction phase. For example, the World Bank spent an additional $4 million on a barrier to stop tigerfish migrating from the Shire River to Lake Malawi.”

Siserova adds: “This was important because Lake Malawi is such a strategic resource for the country, with so many people depending on the fishing industry. Tigerfish are generally apex predators with voracious appetites, and they can jump around two meters out of the water. The World Bank made a recommendation and then built a three-meter barrier in the main canal to contain the tigerfish. It’s a good example of environmental and social governance in action.”

The Shire Valley Transformation Programme will also reinforce the management of wetlands and protected areas, including the nearby “Elephant Marsh” — an area spanning 60,000 hectares, which is home to hippos, rare butterflies and 20,000 waterbirds. The marshland also plays an important role in water storage, flood control and the supply of nutrient-rich sediment. Siserova says: “The dam and the intake are part of a natural reserve, so it’s been very important to build in a sustainable way to the highest of standards. To protect the reserve, a fence was temporarily erected, but will be removed once construction is finished and the programme is operational.”

After visiting parts of the dam and intake, which are located in a rural disaster-prone area and which had been damaged by Storm Ana in January 2022, Al-Zayer reports: “Malawi is often hit with crises, from droughts to cyclones, practically every year. This project will provide more climate-resilient and sustainable agriculture for the local communities, helping to mitigate both floods and droughts.”

Indeed, Malawi was hit by yet another cyclone in the form of Storm Freddy just one month prior to the visit. While the programme area was not heavily affected this time, violent flash floods and landslides caused extensive damage to homes, schools, health centres, agricultural lands and infrastructure and left more than half a million people displaced and in urgent need of humanitarian assistance.

In response the OPEC Fund approved an emergency relief grant of $300,000 in April 2023. Channelled through the International Federation of Red Cross and Red Crescent Societies, the funds addressed immediate needs, including shelter, healthcare, water and sanitation for more than 150,000 people in five districts. The relief work also aimed to restore livelihoods and strengthen resilience by providing cash assistance and in-kind items.

Al-Zayer sums up: “The development impact of the project is excellent, covering everything from climate and environmental issues to declining soil fertility and quality of crops, beside various institutional challenges. We are now preparing downstream investments for Phase II and look forward to the opportunity of participating in Phase III of this massive multi-year programme.”

Forthcoming events

Gastech Exhibition and Conference, 5–8 September 2023, Singapore. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 36 15 28 73; fax: +44 20 36 15 06 79; e-mail: conferencemarketing@dmgevents.com; website: www.gastechevent.com.

SPE Offshore Europe, 5–8 September 2023, Aberdeen, UK. Details: RX Global HQ, Gateway House, 28 The Quadrant Richmond, Surrey TW9 1DN, UK. Tel: +44 20 82 71 21 34; e-mail: rxinfo@reedexpo.co.uk; website: www.offshore-europe.co.uk.

RIU Good Oil and Gas Energy Conference, 6–7 September 2023, Perth, Australia. Details: Vertical Events, Suite 13–14, 186 Hay Street, Subiaco, 6008, Western Australia. Tel: +61 8 93 88 22 22; fax: +61 8 93 81 92 22; e-mail: info@verticalevents.com.au; website: www.riugoodoilconference.com.au.

100 Years World Energy Council, 7 September 2023, TBA. Details: The World Energy Council, 62–64 Cornhill, London EC3V 3NH, UK. Tel: +44 20 77 34 59 96; e-mail: worldenergycouncil@fticonsulting.com; website: www.worldenergy.org/experiences-events/events/entry/100-years-world-energy-council-austria.

Argentina Oil and Gas Expo, 11–14 September 2023, Buenos Aires, Argentina. Details: Messe Frankfurt Argentina, Mariscal Antonio José de Sucre 1530 – Piso 7, C1428DUT, Ciudad Autónoma de Buenos Aires, Argentina. Tel: +54 11 70 78 48 00; e-mail: aog@argentina.messefrankfurt.com; www.aogexpo.com.ar.

Latin American Refining Technology Conference, 12–14 September 2023, Rio de Janeiro, Brazil. Details: The World Refining Association, Bedford House, Fulham Green, 69–79 Fulham High Street, London SW6 3JW, UK. Tel: +44 207 38 48 013; fax: +44 207 38 47 843; e-mail: enquiry@wraconferences.co.uk; website: https://worldrefiningassociation.com/event-events/lartc.

Angola Oil and Gas Conference and Exhibition, 13–14 September 2023, Luanda, Angola. Details: Energy Capital Power, 30 Hudson St, De Waterkant, Cape Town 8001, South Africa. E-mail: sales@energycapitalpower.com; website: https://angolaoilandgas.com/event/angola-oil-gas-2023.

South East Asia Australia Offshore and Onshore Conference, 13–14 September 2023, Darwin, Australia. Details: Informa Connect, Level 4, 24 York Street, Sydney, NSW, 2000, Australia. Tel: +61 2 90 80 43 07; e-mail: info@informa.com.au; website: https://ntresourcesweek.com.au/seaaoc.

Oil and Gas Asia, 13–15 September 2023, Kuala Lumpur, Malaysia. Details: Informa PLC, 5 Howick Place, London SW1P 1WG, UK. Tel: +44 20 80 52 04 00; website: www.oilandgas-asia.com.

Oil and Gas Indonesia, 13–16 September 2023, Jakarta, Indonesia. Details: PT Pamerindo Indonesia, Menara Jamsostek, Menara Utara, 12th floor, Unit TA–12–04, Jl. Jendral Gatot Subroto No.38, Jakarta 12710, Indonesia. Tel: + 62 21 25 25 320; e-mail: indira@pamerindo.com; website: www.oilgasindonesia.com.

24th World Petroleum Congress, 17–21 September 2023, Calgary, AB, Canada. Details: World Petroleum Council Canada, 1408, 240 – 70 Shawville Blvd S.E., Calgary, AB T2Y 2Z3, Canada. Tel: +1 403 21 82 000; e-mail: info@24wpc.com; website: www.24wpc.com.

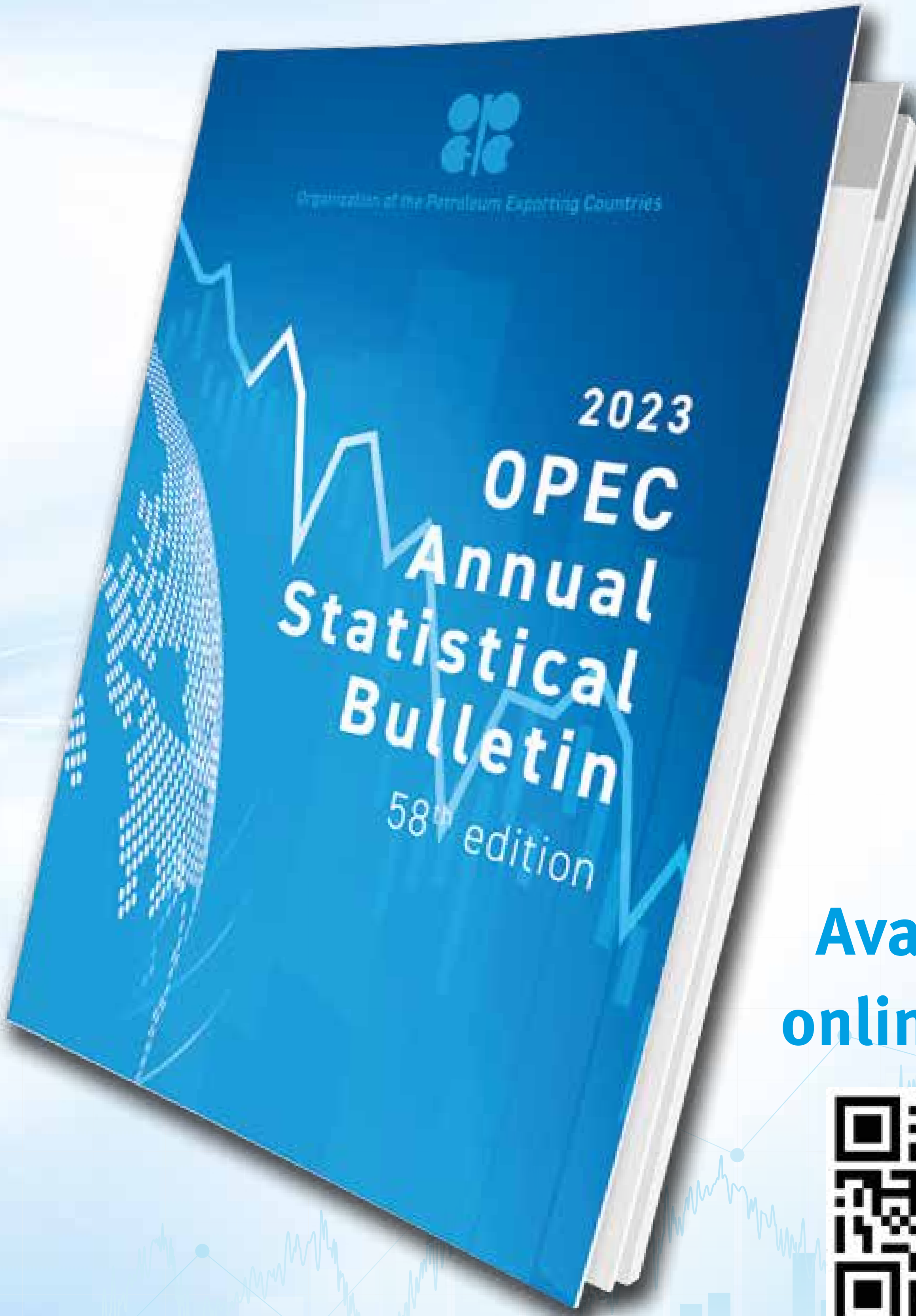
International Downstream Week, 19–20 September 2023, Istanbul, Turkiye. Details: Euro Petroleum Consultants Ltd, 44 Oxford Drive, Bermondsey Street, London SE1 2FB, UK. Tel: +44 207 35 78 394; fax: +44 207 35 78 395; e-mail: kay_mitchell@europetro.com; website: https://europetro.com/idw.

Tanzania Energy Congress, 20–21 September 2023, Dar Es Salaam, Tanzania. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 36 15 28 73; fax: +44 20 36 15 06 79; e-mail: info@tanzaniaenergycongress.com; website: www.tanzaniaenergycongress.com.

Papua New Guinea Energy Summit and Exhibition, 26–28 September 2023, Port Moresy, Papua New Guinea. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 36 15 28 73; fax: +44 20 36 15 06 79; e-mail: info@pngenergysummit.com; website: www.pngenergysummit.com.

Asia Refining and Petrochemicals Tech Forum, 27–28 September 2023, Hanoi, Vietnam. Details: Euro Petroleum Consultants Ltd, 44 Oxford Drive, Bermondsey Street, London SE1 2FB, UK. Tel: +44 207 35 78 394; fax: +44 207 35 78 395; e-mail: info@europetro.com; website: https://europetro.com/asiatech.

Carbon Capture Technology Expo, 27–28 September 2023, Bremen, Germany. Details: Trans-Global Events Ltd, High Point, 3rd floor, Sydenham Road, Guildford, Surrey GU1 3RX, UK. Tel: +44 14 83 33 00 18-209; e-mail: charlie.brandon@trans-globalevents.com; website: www.carboncapture-expo.com/about.


Organization of the Petroleum Exporting Countries
2023
OPEC
Annual
Statistical
Bulletin
58th edition


Visit our website
www.opec.org

The outlook for the oil market in 2024

July 2023

World GDP growth in 2024 is forecast at 2.5 per cent, slightly below this year's expected growth level of 2.6 per cent. Key oil-consuming countries, including China and India, along with some other developing economies in Asia, will continue their healthy growth levels and be responsible for around half of next year's global economic growth. This is under the assumptions that general inflation will continue retraction in 2H23 and 2024. Tight monetary policies are also assumed to continue and key policy rates to peak by the end of 2023. Moreover, central banks are expected to engage in more accommodative monetary policies by 2H24. The services sector is expected to remain the main global economic growth driver for the remainder of 2023, with a normalization of the growth dynamic expected in 2024, when industrial production picks up again. In the OECD, GDP growth is expected at 0.9 per cent in 2024, down from 1.1 per cent in 2023. In the non-OECD, 2024 GDP growth is forecast at 3.9 per cent, the same level as in 2023. Numerous uncertainties remain, to include high inflation, monetary tightening and high global debt levels.

Global oil demand in 2024 is set to grow year-on-year (y-o-y) by a healthy 2.2 million barrels per day (mb/d), on the back of a continued rebound in Chinese economic activity, and firm growth in other non-OECD countries. Within the regions, OECD oil demand is forecast to rise y-o-y by 260,000 b/d, while non-OECD oil demand is projected to show a considerable increase of nearly 2.0 mb/d, mostly in China and India, and supported by incremental demand in other regions.

In terms of oil products, transportation fuels — including jet fuel and gasoline — are expected to drive oil demand growth in 2024, with air travel expected to see a further recovery and expansion. Gasoline requirements will continue to see support from steadily rising road mobility in major consuming countries, such as China, India and the US. Both on-road diesel, including trucking, as well as healthy industrial, construction and agricultural activities in non-OECD countries are expected to support diesel demand. Light distillates are projected to be supported by capacity additions, and petrochemical margins in non-OECD countries are expected to remain healthy.

Non-OPEC oil supply is forecast to grow y-o-y by 1.4 mb/d in 2024, supported by healthy demand and upstream investment. Upstream capex investment in non-OPEC countries is expected at around $480 billion, roughly the same level as 2023 and 9 per cent more than in 2022. US liquids production growth in 2024 is forecast at 700,000 b/d, mainly from Permian crude and non-conventional NGLs, as well as from the Gulf of Mexico. Oil production in Canada, Guyana, Brazil, Norway, Kazakhstan, and Argentina is forecast to increase through new field start-ups, ramp-ups or the optimization of existing projects.

The continued commitment of the countries participating in the Declaration of Cooperation (DoC) and the successful approach of being precautious, proactive and pre-emptive and the carefully devised production adjustments have added a considerable measure of stability to global oil market, based on which the solid oil market fundamentals seen this year are expected to extend into 2024.

MOMR ... oil market highlights

July ***2023***

Crude oil price movements — The OPEC Reference Basket (ORB) declined by 63¢, or 0.8 per cent, month-on-month (m-o-m) to average $75.19/b in June. The ICE Brent front-month contract fell by 71¢, or 0.9 per cent, m-o-m to $74.98/b, and the NYMEX WTI front-month contract declined by $1.35, or 1.9 per cent, m-o-m to average $70.27/b. The DME Oman front-month contract rose by 13¢, or 0.2 per cent, m-o-m to settle at $74.91/b. The front-month ICE Brent/NYMEX WTI spread widened by 64¢ m-o-m to average $4.71/b in June. The futures forward curves of ICE Brent, NYMEX WTI and DME Oman weakened during the month, and hedge funds and other money managers heavily cut bullish positions in ICE Brent and NYMEX WTI, extending the previous month's selloffs.

World economy — World economic growth in 2023 remains broadly unchanged at 2.6 per cent and the initial forecast for 2024 economic growth is expected at 2.5 per cent. US economic growth for 2023 is revised up slightly to stand at 1.4 per cent, followed by 0.7 per cent for 2024. Euro-zone economic growth for 2023 is revised down slightly to stand at 0.7 per cent, while growth in 2024 is forecast at 0.8 per cent. Japan's economic growth for 2023 is revised up slightly to 1.1 per cent, while growth in 2024 is forecast at 1.0 per cent. China's 2023 economic growth remains at 5.2 per cent, with economic growth forecast in 2024 at 4.8 per cent. India's economic growth remains at 5.6 per cent in 2023 and is expected to expand by 5.9 per cent in 2024. Brazil's economic growth in 2023 is revised up to 1.3 per cent and is expected to grow by 1.1 per cent in 2024. Russia's economic growth in 2023 is revised up to 0.4 per cent and a further recovery is anticipated for 2024 with a growth forecast of 0.8 per cent.

World oil demand — World oil demand is expected to grow by 2.4 mb/d in 2023, following an upward revision of about 100,00 b/d from last month's assessment, mainly due to higher demand seen in China in 2Q23. OECD Americas is revised up slightly to account for a better-than-expected performance in the US in 2Q23. Similarly, OECD Europe is revised up slightly in 1Q23. In the non-OECD, demand was also revised upward to account for bullish oil demand seen in China in 2Q23 and a slight improvement in Latin America over the same period. For 2024, world oil demand is forecast to grow by a healthy 2.2 mb/d, reaching about 104.25 mb/d. The OECD is anticipated to expand by 0.26 mb/d, with OECD Americas contributing the largest increase. The non-OECD is set to drive growth, increasing by almost 2.0 mb/d, with China, the Middle East and other Asia accounting for the bulk of this growth, with further support from India, Latin America, and Africa.

World oil supply — Non-OPEC liquids supply is expected to expand by 1.4 mb/d in 2023, broadly unchanged from the previous month's assessment. The main drivers of liquids supply growth for 2023 are expected to be the US, Brazil, Norway, Canada, Kazakhstan and Guyana, while the decline is expected mainly in Russia. There remain uncertainties related to US shale oil output potential and unplanned maintenance in 2023. For 2024, non-OPEC liquids production is expected to grow by 1.4 mb/d. The main drivers for liquids supply growth are expected to be the US, Canada, Guyana, Brazil, Norway and Kazakhstan, while the largest declines are expected in Mexico and Azerbaijan. OPEC NGLs and non-conventional liquids are forecast to grow by 50 thousand barrels per day (tb/d) in 2023 to an average of 5.44 mb/d and by another 65 tb/d to an average of 5.51 mb/d in 2024. OPEC-13 crude oil production in June increased by 91 tb/d m-o-m to an average 28.19 mb/d, according to available secondary sources.

Product markets and refining operations — Refinery margins rose in June to show solid gains across regions. In the US Gulf Coast (USGC), margins recovered from the previous months' losses to reach a three-month high. Gains were seen across the barrel, particularly for gasoline, as firm-driving activities supported product markets. In Rotterdam, refining margins were mostly supported by a strong performance at the middle and bottom sections of the barrel, while temporary unplanned outages led to a contraction of product balances in Northwest Europe and this weighed on ARA key product inventories. In Singapore, margin gains were more limited, as the strength in transport fuels was partly offset by negative performance in naphtha and high sulphur fuel oil (HSFO) markets. Global refinery intake in June continued to trend upwards and was 953 tb/d higher m-o-m at 81.9 mb/d, according to preliminary estimates. In the coming months, refinery intakes are expected to continue to be supported by seasonal fuel consumption.

Tanker market — Dirty freight rates continued to show mixed movement in June. Very large crude carriers (VLCCs) partially recovered from the previous month's decline, with Middle East-to-East spot freight rates up 27 per cent m-o-m, amid increased flows to the East. A pickup in Atlantic basin activity and on eastward routes helped to firm sentiment in the larger vessel class, supporting rates. Suezmax rates returned some of the previous month's gains, with rates on the USGC-to-Europe route declining 20 per cent, amid more limited activity. Aframax spot freight rates fell across the board, with rates on the Caribbean-to-US East Coast route dropping back from the very strong levels seen in May, down by 34 per cent. Clean freight rates experienced declines across all reported routes in June, as West of Suez rates softened again and momentum in the East of Suez market dissipated further. Rates on the Middle East-to-East route fell by 16 per cent m-o-m, while rates on the Singapore-to-East route fell 23 per cent m-o-m.

Crude and refined products trade — Preliminary data show US crude imports continued to pick up seasonally in June to average 6.5 mb/d. US crude exports recovered to an average of 4.1 mb/d, a three-month high. The latest data for China shows crude imports rebounding in May to average around 12.1 mb/d. The high level was driven by new capacity coming on-stream and a return of refineries from maintenance. China's product imports increased for the fourth consecutive month, reaching a record high of just under 2.5 mb/d. Gains were driven largely by outflows of LPG and fuel oil. India's crude imports in May declined for the third month in a row, averaging 4.7 mb/d. In contrast, both India's product imports and exports recovered from losses in the previous month m-o-m. Japan's crude imports averaged 2.5 mb/d in May, a drop of 400,000 b/d, or almost 15 per cent, m-o-m. Japan's product imports fell for the second consecutive month, driven primarily by a decline in naphtha inflows, which offset gains in gasoline and gasoil. Preliminary estimates show OECD Europe crude imports above March levels, amid increased flows to the Netherlands and France, although these were lower than in the same month last year. Product imports into the region are expected to move seasonally higher, supported by inflows to Turkey, remaining close to year-ago levels in May and June.

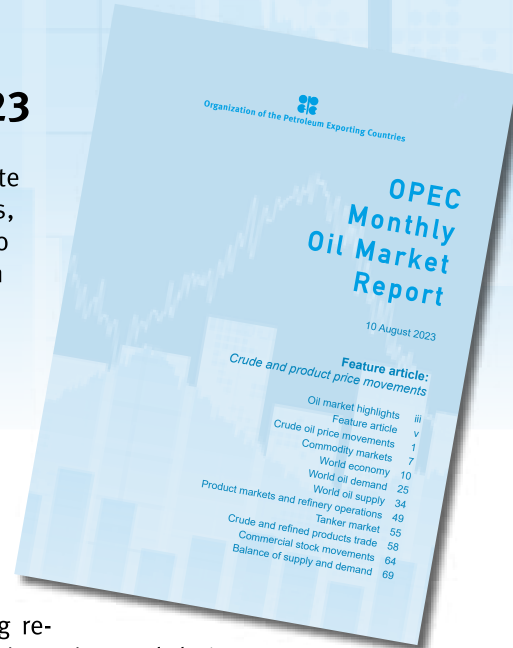
Commercial stock movements — Preliminary May 2023 data sees total OECD commercial oil stocks up m-o-m by 20.2 mb. At 2,815 mb, they were 101 mb lower than the latest five-year average and 140 mb below the 2015–19 average. Within the components, crude and products stocks rose by 4.1 mb and 16.1 mb, respectively. OECD commercial crude stocks stood at 1,401 mb in May. This was 34 mb below the latest five-year average and 84 mb lower than the 2015–19 average. Total product inventories stood at 1,414 mb, which was 67 mb lower than the latest five-year average and 56 mb below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.4 days to stand at 60.2 days. This is 3.5 days lower than the latest five-year average and 1.8 days less than the 2015–19 average.

Balance of supply and demand — Demand for OPEC crude in 2023 is revised up by 100,000 b/d from the previous month's assessment to stand at 29.4 mb/d. This is around 1.0 mb/d higher than in 2022. Based on the initial world oil demand and non-OPEC supply forecast for 2024, demand for OPEC crude is expected to reach 30.2 mb/d, 800,000 b/d higher than the 2023 level.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for July 2023. Published by the Secretariat's Petroleum Studies Department, the publication may be downloaded in PDF format from our Website (www.opec.org), provided OPEC is credited as the source for any usage. The additional graphs and tables on the following pages reflect the latest data on the OPEC Reference Basket and crude and oil product prices in general.

Crude and product price movements

August 2023



In 1H23, negative sentiment dominated the oil futures markets, amid macroeconomic uncertainties and concerns about considerable interest rate hikes from major central banks, including the US Federal Reserve (Fed) and the European Central Bank (ECB), as they attempt to reduce high inflation levels. Moreover, investors remained cautious due to the temporary turmoil in the banking system earlier in the year and data showing slower manufacturing activity in major economies, in particular the US, Europe and China.

On a monthly basis, between January and June, ICE Brent and NYMEX WTI declined by \$8.93 and \$7.89, or 10.6 per cent and 10.1 per cent, respectively, to an average of \$74.98/b and \$70.27/b. However, market liquidity continued to recover from low levels seen in 2H22, as the actions of OPEC and countries participating in the 'Declaration of Cooperation' continue to contribute to market stability, reduce volatility and provide long-term guidance to the market.

In July, the outlook for oil market fundamentals improved further, which was reflected in the strengthening of the market structure as all major oil futures prices turned to a firm backwardation structure. For the month, ICE Brent increased by \$5.18, or 6.9 per cent, m-o-m, to stand at \$80.16/b, and the NYMEX WTI front-month contract increased by \$5.76, or 8.2 per cent m-o-m, to an average of \$76.03/b.

On the product side, fuel prices, in general, have eased from the record-high levels witnessed in the previous year across all regions, on greater product availability.

In the US Gulf Coast, gasoline prices are once again supported by peak summer demand to average \$129.29/b in July, however, this is considerably lower than the same time last year. Jet/kerosene prices have also retracted to follow a more usual seasonal pattern, while gasoil prices are gradually recovering from a multi-year low of \$57.56/b in May, to average \$71.68/b in July.

In Rotterdam, despite firm gasoline exports, gasoil stock draws led to a significant contraction of the gasoline-middle distillate price differential of \$24.85/b in July, compared to \$31.21/b seen in May.

In Singapore, middle distillates prices trended lower on improved availability amid rising refinery runs in the Atlantic Basin. Naphtha's prices' overall performance remains weak, as firm supplies from the Middle East and Russia caused the discount to Dubai to widen from \$8.23/b in January to \$17.90/b in July. In July, transportation fuel prices rebounded on the back of trans-Atlantic product exports and residual fuel prices responded positively to demand from the Middle East for power generation. These transatlantic product exports could further benefit from a slower-than-expected economic recovery in China, the impact of the Monsoon season on oil demand in the region, and soft demand from the petrochemical sector.

Despite the current elevated level of global refinery runs, gasoline and middle distillate stocks remain well below the latest five-year averages in the US and Europe. Looking forward, refinery maintenance and potential production outages during the US hurricane season could potentially tighten the Atlantic Basin market, hence prompting stronger economic incentives for East-to-West product flows. Similarly, prospects for healthy oil fundamentals in the second half of the year, along with the preemptive, proactive and precautious approach of OPEC and non-OPEC producing countries to assess market conditions and take necessary measures at any time and as needed, will ensure stability of the global oil market.

MOMR ... oil market highlights

August 2023

Crude oil price movements — The OPEC Reference Basket (ORB) rose by $5.87, or 7.8 per cent, m-o-m to an average of $81.06/b in July. The ICE Brent front-month contract increased by $5.18, or 6.9 per cent, m-o-m to $80.16/b, and NYMEX WTI front-month contract rose by $5.76, or 8.2 per cent, m-o-m to average $76.03/b. The DME Oman front-month contract rose by $6.25, or 8.3 per cent, m-o-m to settle at $81.16/b. The front-month ICE Brent/NYMEX WTI spread narrowed in July m-o-m by 58¢ to average $4.13/b. The futures forward curves of ICE Brent, NYMEX WTI and DME Oman steepened in backwardation during the month on improving oil market fundamental outlooks, and money managers including hedge funds raised bullish positions in ICE Brent and NYMEX WTI.

World economy — World economic growth is revised up slightly for both 2023 and 2024 to stand at 2.7 per cent and 2.6 per cent, respectively. US GDP growth for 2023 is revised up to stand at 1.8 per cent, followed by 0.7 per cent growth in 2024. Euro-zone economic growth for 2023 is revised down to stand at 0.6 per cent, while growth in 2024 remains at 0.8 per cent. Japan's GDP growth in 2023 remains at 1.1 per cent, followed by growth of one per cent in 2024. China's GDP growth remains at 5.2 per cent in 2023 and 4.8 per cent in 2024. India's GDP growth remains at 5.6 per cent for 2023 and 5.9 per cent for 2024. Brazil's GDP growth is revised up to 1.7 per cent and is expected to increase by 1.2 per cent in 2024. For Russia, both the 2023 and 2024 GDP growth forecasts are revised up to stand at 0.6 per cent and one per cent, respectively.

World oil demand — World oil demand in 2023 is expected to grow by 2.4 mb/d, unchanged from the last month's assessment. Upward revisions to the 1Q23 based on actual data received for OECD America and OECD Europe were completely offset by downward revisions to 2Q23, mainly in Europe and Other Asia. In the OECD region, oil demand in 2023 is anticipated to rise by 74 tb/d, to an average of 46.0 mb/d, while in the non-OECD region, total oil demand is anticipated to rise by nearly 2.4 mb/d, to average 56.0 mb/d.

For 2024, world oil demand is forecast to grow by a healthy 2.2 mb/d, unchanged from the previous assessment. The OECD is anticipated to expand by about 300,00 b/d, with OECD Americas contributing the largest increase. The non-OECD is set to drive growth, increasing by around 2.0 mb/d, with China, the Middle East and Other Asia contributing the largest share, with further support from India, Latin America and Africa.

World oil supply — Non-OPEC liquids supply is expected to expand by 1.5 mb/d in 2023, a slight upward revision from the previous assessment. The main drivers of liquids supply growth for 2023 are expected to be the US, Brazil, Norway, Kazakhstan Guyana and China, while the largest decline is expected from Russia. There remain uncertainties associated with US shale oil output potential and unplanned maintenance in 2023. For 2024, non-OPEC liquids production is projected to grow by 1.4 mb/d, unchanged from the previous assessment. For 2024, the main drivers for liquids supply growth are expected to be the US, Canada, Guyana, Brazil, Norway and Kazakhstan, mainly due to existing project ramp-ups. The largest declines are expected from Mexico and Azerbaijan. OPEC NGLs and non-conventional liquids are forecast to grow by 46 tb/d in 2023 to an average of 5.4 mb/d and by another 65 tb/d to an average of 5.5 mb/d in 2024. In July, OPEC-13 crude oil production decreased by 836 tb/d m-o-m to an average of 27.31 mb/d, according to available secondary sources.

Product markets and refining operations — Refinery margins in July continued to rise, with solid gains across all regions. In the US Gulf Coast, margins increased for the second consecutive month, mainly driven by the robust performance of transport fuels, particularly gasoline. In Rotterdam, product markets were boosted by firm product exports to the US and high middle distillate requirements in the region. In Singapore, margin gains were driven by sizeable stock draws and healthy regional product demand, with notable strength registered at the middle and bottom sections of the barrel. Global refinery intake in July continued to trend upwards, moving 793 tb/d higher m-o-m to average 81.9 mb/d, according to preliminary estimates. In the coming months, refinery intakes are expected to be supported by seasonal fuel consumption levels during the summer season.

Tanker market — The tanker market drifted lower in July, with Aframax and Suezmax spot freight rates approaching the lowest levels seen so far this year amid slowing of activities in the Atlantic basin for these vessels. Aframax spot freight rates on the Mediterranean-to-Northwest Europe route declined 22 per cent, while Suezmax rates on the US Gulf Coast-to-Europe route fell 11 per cent. VLCC rates experienced less of a decline as a pick-up in long-haul demand out of the Atlantic basin offset reduced activities out of the Middle East. Spot freight rates on the Middle East-to-East route declined 15 per cent m-o-m. However, freight rates overall remain at elevated levels amid trade shifts supporting tonne-mile growth. Clean rates were mixed, with activities in the Atlantic basin supporting the West of Suez routes, while the return of Asian refineries from maintenance weighed on East of Suez flows. Clean freight rates on the intra-Med route rose 23 per cent m-o-m, while rates on the Middle East-to-East route declined 15 per cent.

Crude and refined products trade — Preliminary data show US crude imports remained at strong levels in July, averaging 6.5 mb/d, while US crude exports fell below 4 mb/d amid reduced flows to Asia. China crude imports jumped to the second-highest on record in June, averaging 12.7 mb/d, although preliminary customs data shows crude inflows dropped to 10.3 mb/d in July, as the previous month's arrivals dampened crude needs for the month. China's product imports were broadly steady near the previous month's high levels, averaging 2.4 mb/d, while product exports declined, led by sharp falls in gasoline and diesel outflows. India's crude imports declined for the fourth month in a row in June to average 4.7 mb/d, as the country moved towards the lower-demand monsoon season. Japan's crude imports declined for the second-consecutive month to reach a 12-month low of 2.3 mb/d in June. Preliminary estimates indicate OECD Europe crude imports picked up at the start of 3Q23. Product imports into the region were seen down slightly as a decline in gasoline inflows outpaced an increase in diesel imports.

Commercial stock movements — Preliminary data for June 2023 sees total OECD commercial oil stocks up m-o-m by 4.2 mb. At 2,828 mb, they were 74 mb lower than the latest five-year average and 119 mb below the 2015–19 average. Within the components, crude stocks fell by 5.1 mb, m-o-m, while product stocks rose by 9.3 mb. OECD commercial crude stocks stood at 1,395 mb in June. This is 18 mb below the latest five-year average and 70 mb lower than the 2015–19 average. Total product inventories rose by 9.3 mb in June to stand at 1,433 mb. This is 55 mb lower than the latest five-year average and 49 mb below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.1 days to stand at 60.4 days in June. This is 2.7 days lower than the latest five-year average and 1.4 days below the 2015–19 average.

Balance of supply and demand — Demand for OPEC crude in 2023 is revised down by 100,000 b/d from the previous month's assessment to stand at 29.3 mb/d. This is around 900,000 b/d higher than in 2022. Demand for OPEC crude in 2024 is also revised down by 100,000 b/d from the previous month's assessment to stand at 30.1 mb/d. This is around 800,000 b/d higher than in 2023.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for August 2023. Published by the Secretariat's Petroleum Studies Department, the publication may be downloaded in PDF format from our Website (www.opec.org), provided OPEC is credited as the source for any usage. The additional graphs and tables on the following pages reflect the latest data on the OPEC Reference Basket and crude and oil product prices in general.

Table 1: OPEC Reference Basket spot crude prices $/b

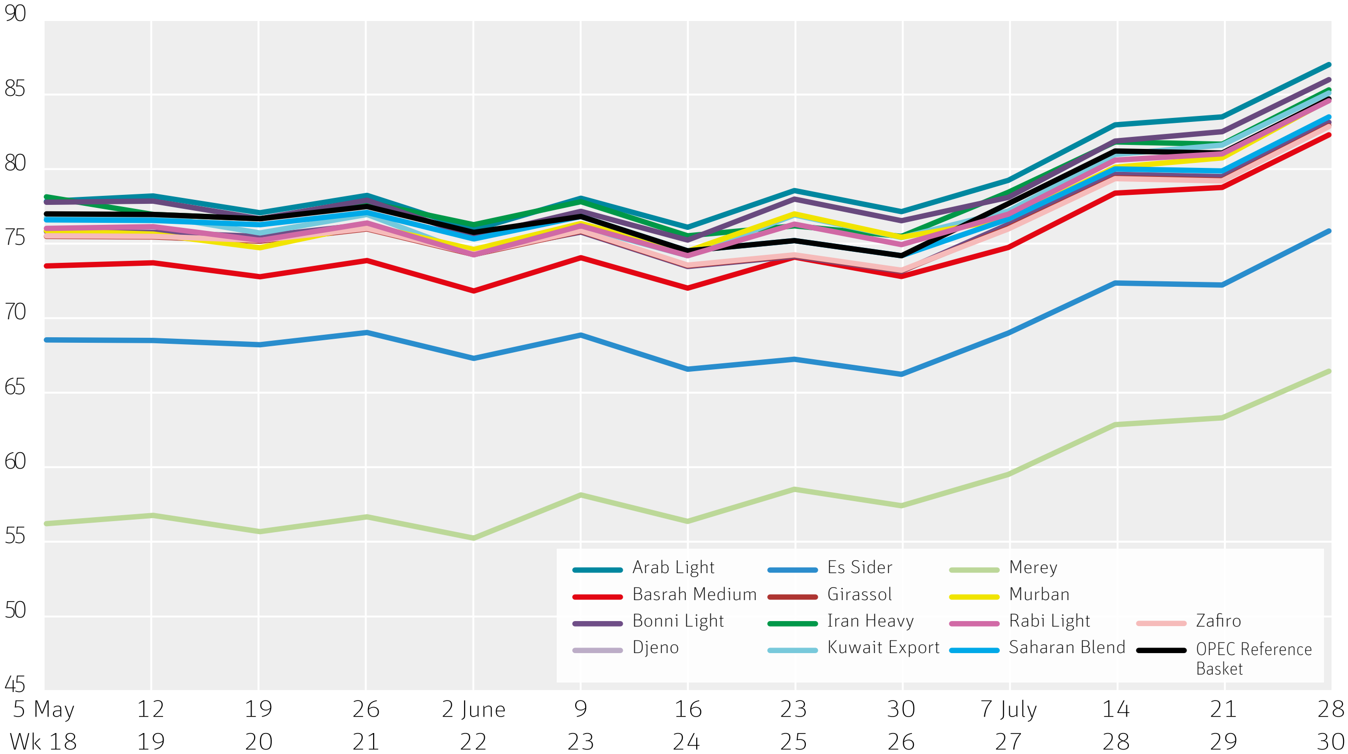
	2022						2023							Weeks 26–30/2023 (week ending)				
Crude/Member Country	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**30 Jun**	**07 Jul**	**14 Jul**	**21 Jul**	**28 Jul**
Arab Light — Saudi Arabia	108.98	104.89	99.33	96.20	91.58	82.44	83.80	83.56	80.26	85.65	77.72	77.18	83.45	77.15	79.25	82.96	83.50	87.00
Basrah Medium — Iraq	105.36	97.66	91.16	89.45	85.66	76.07	77.82	78.33	75.33	81.75	73.32	73.03	78.82	72.79	74.74	78.38	78.77	82.30
Bonny Light — Nigeria	117.58	106.08	95.73	95.02	92.84	80.69	82.36	82.88	79.24	85.94	75.63	74.18	79.92	73.13	76.28	79.64	79.50	83.13
Djeno — Congo	105.18	92.17	82.37	85.66	83.65	72.93	75.41	75.05	70.84	77.45	68.37	67.28	72.64	66.23	69.00	72.36	72.22	75.85
Es Sider — Libya	114.03	101.17	90.47	93.91	91.25	77.53	81.01	81.45	77.39	84.00	75.32	74.23	79.69	73.18	76.05	79.41	79.27	82.90
Girassol — Angola	119.15	105.99	92.26	95.61	92.76	78.69	82.05	84.06	80.31	87.01	77.20	76.30	82.09	75.48	78.45	81.81	81.67	85.30
Iran Heavy — IR Iran	107.63	102.24	97.18	93.21	88.73	79.11	81.56	81.88	78.80	84.58	76.47	75.33	81.48	75.40	77.18	80.97	81.60	85.10
Kuwait Export — Kuwait	109.19	103.82	98.69	94.72	90.13	80.46	82.94	83.19	79.86	85.49	77.44	76.44	82.39	76.54	78.09	81.87	82.50	86.00
Merey — Venezuela	84.72	80.03	73.70	71.56	66.94	58.17	61.74	61.95	57.25	62.58	56.22	57.37	63.28	57.42	59.52	62.86	63.32	66.44
Murban — UAE	105.97	98.04	92.45	93.54	90.90	80.17	82.53	83.36	79.55	84.11	75.66	75.52	80.78	75.42	76.64	80.12	80.75	84.64
Rabi Light — Gabon	112.17	99.16	89.36	92.65	90.64	79.92	82.40	82.04	77.83	84.44	75.36	74.27	79.63	73.22	75.99	79.35	79.21	82.84
Saharan Blend — Algeria	115.83	104.22	92.72	95.66	93.60	83.03	83.76	84.05	80.29	85.40	76.42	75.23	80.29	74.18	76.65	80.01	79.87	83.50
Zafiro — Equatorial Guinea	116.60	103.50	90.72	93.61	92.12	80.28	81.29	82.24	79.29	85.90	76.82	75.28	81.45	74.18	77.67	81.21	81.07	84.70
OPEC Reference Basket	**113.87**	**117.72**	**108.55**	**101.90**	**95.32**	**93.62**	**89.73**	**79.68**	**81.62**	**81.88**	**78.45**	**84.13**	**75.82**	**74.93**	**76.98**	**80.60**	**81.02**	**84.58**

Table 2: Selected spot crude prices $/b

	2022						2023							Weeks 26–30/2023 (week ending)				
Crude/country	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**30 Jun**	**07 Jul**	**14 Jul**	**21 Jul**	**28 Jul**
Arab Heavy — Saudi Arabia	107.84	101.95	96.89	93.12	88.58	78.51	79.56	79.89	76.71	84.09	76.27	75.03	81.24	75.11	76.94	80.72	81.35	84.85
Brega — Libya	114.53	101.52	90.52	93.81	91.50	77.93	81.41	81.65	77.44	83.75	74.77	73.58	78.94	72.53	75.30	78.66	78.52	82.15
Brent Dtd — North Sea	112.63	99.62	89.82	93.11	91.10	80.38	82.86	82.50	78.29	84.90	75.82	74.73	80.09	73.68	76.45	79.81	79.67	83.30
Dubai — UAE	102.87	96.33	90.98	91.04	86.12	77.09	80.75	82.05	78.42	83.40	75.13	74.70	80.33	74.86	76.00	79.81	80.50	83.94
Ekofisk — North Sea	120.37	105.29	93.02	96.02	94.32	83.22	85.67	85.67	80.40	87.31	77.49	76.21	81.83	75.03	77.90	81.59	81.52	85.15
Iran Light — IR Iran	106.76	92.07	82.45	86.95	85.71	73.42	76.79	78.68	75.64	82.75	74.19	73.46	80.75	72.80	76.33	80.79	80.50	84.18
Isthmus — Mexico	100.47	89.09	81.44	83.57	79.26	67.48	68.82	68.27	65.13	72.61	65.78	66.31	72.56	65.52	68.72	72.19	72.24	75.98
Oman — Oman	103.22	96.97	90.80	90.80	86.15	77.43	80.87	82.23	78.49	83.28	74.91	74.65	80.54	74.65	76.27	80.02	80.60	84.16
Suez Mix — Egypt	106.63	91.94	82.32	86.82	85.58	73.29	76.66	78.55	75.51	82.62	74.06	73.33	80.62	72.67	76.20	80.66	80.37	84.05
Minas — Indonesia	103.01	95.39	88.91	91.06	89.21	79.14	81.57	81.53	77.10	81.36	73.72	72.58	77.47	71.52	73.63	77.29	77.21	80.67
Urals — Russia	85.32	77.34	68.63	70.54	67.98	52.23	52.21	51.91	49.74	59.97	55.22	56.64	65.12	56.84	59.89	63.88	64.97	70.22
WTI — North America	100.25	91.57	84.00	87.26	84.15	76.50	78.19	76.81	73.37	79.44	71.64	70.31	75.85	69.43	71.75	75.18	75.61	79.66

Notes:
Brent for dated cargoes; Urals cif Mediterranean. All others fob loading port.
Sources: Argus; Secretariat's assessments.

Graph 1: Evolution of the OPEC Reference Basket spot crude prices, 2023 $/b



Graph 2: Evolution of selected spot crude prices, 2023 $/b

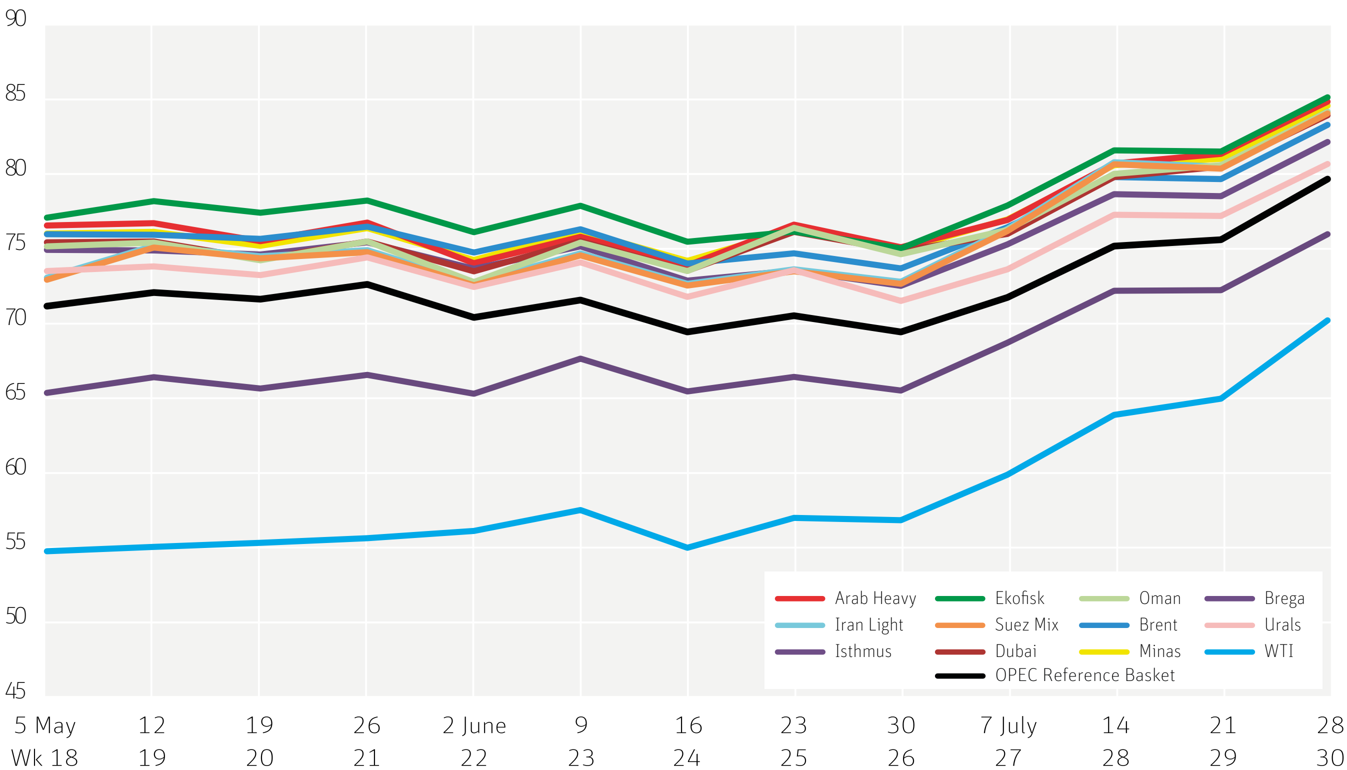


Table and Graph 3: North European market — spot barges, fob Rotterdam $/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2022	July	84.65	158.02	147.64	153.29	89.26	70.77
	August	72.98	137.45	143.04	143.00	90.31	75.00
	September	69.03	124.73	135.02	139.42	82.58	62.10
	October	74.30	137.02	139.35	162.90	82.06	59.29
	November	73.87	127.89	132.26	134.93	74.32	60.78
	December	65.57	110.33	121.12	120.72	64.77	55.92
	January	76.21	123.20	129.05	124.90	68.38	59.39
	February	79.41	122.15	112.55	110.03	72.28	59.68
2023	March	74.61	120.69	103.94	107.12	65.94	59.66
	April	74.88	129.47	100.51	101.11	72.58	69.21
	May	64.70	122.85	91.46	91.64	67.86	62.98
	June	60.68	123.91	94.49	96.47	69.94	68.60
	July	63.22	131.12	106.27	105.39	75.02	72.49

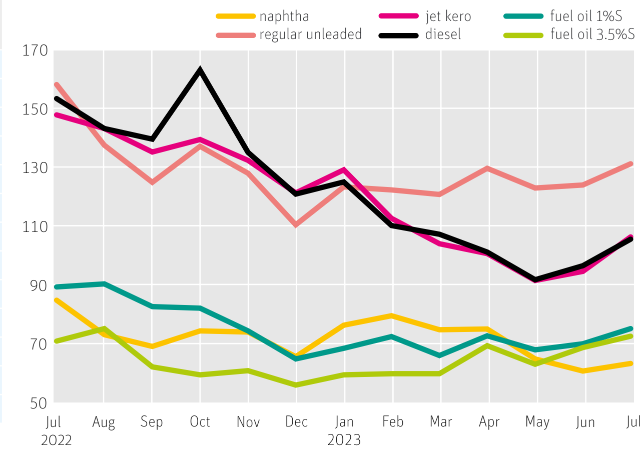


Table and Graph 4: South European market — spot cargoes, fob Italy $/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2022	July	82.14	141.78	145.03	95.58	70.58
	August	70.39	114.86	135.92	96.88	71.03
	September	67.00	101.21	134.05	89.44	51.18
	October	71.14	111.60	151.41	89.45	56.62
	November	70.34	115.35	133.06	80.64	57.73
	December	60.68	93.46	116.22	71.36	52.97
	January	73.95	102.57	126.21	74.50	54.67
	February	76.70	102.34	110.96	76.71	55.16
2023	March	70.23	104.28	107.97	70.91	58.18
	April	71.54	107.49	102.24	77.13	67.38
	May	63.28	95.96	92.25	72.46	62.35
	June	59.28	99.62	96.83	74.14	63.22
	July	61.32	107.81	106.23	78.65	73.28

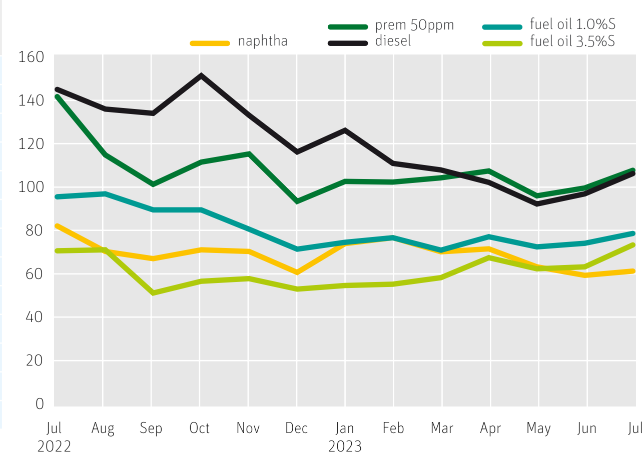
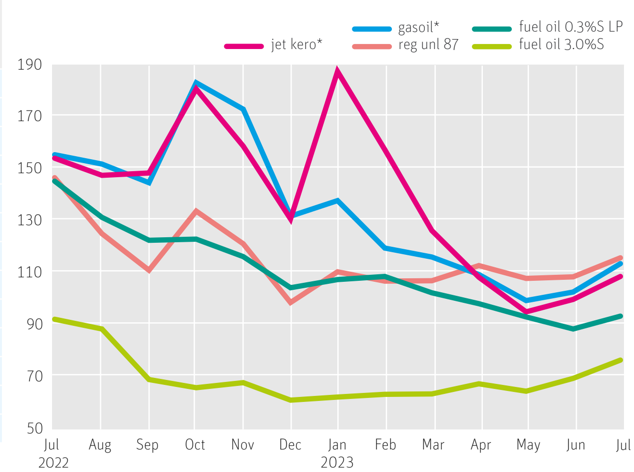


Table and Graph 5: US East Coast market — spot cargoes, New York $/b, duties and fees included

		regular gasoline unleaded 87	gasoil*	jet kero*	fuel oil 0.3 per cent S	fuel oil 3.0 per cent S
2022	July	145.90	154.69	153.38	144.45	91.34
	August	124.36	151.06	146.74	130.55	87.69
	September	110.22	143.93	147.65	121.67	68.18
	October	132.91	182.33	179.98	122.15	65.00
	November	120.38	172.17	157.91	115.52	67.01
	December	97.78	130.99	129.90	103.45	60.24
	January	109.67	136.95	186.70	106.68	61.47
	February	106.11	118.74	156.57	107.83	62.51
2023	March	106.26	115.37	125.55	101.52	62.71
	April	111.95	108.59	107.56	97.31	66.55
	May	107.12	98.56	94.23	92.24	63.65
	June	107.61	101.91	98.95	87.60	68.69
	July	115.04	112.69	107.77	92.54	75.62



* *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
2022	July	82.70	121.56	116.35	136.82	136.22	134.90	72.69
	August	72.64	110.57	107.25	134.09	133.62	132.39	73.78
	September	68.09	97.45	93.79	124.87	124.55	120.92	59.20
	October	71.86	94.78	91.16	134.61	133.96	123.40	56.57
	November	74.22	98.27	93.11	125.91	125.41	121.01	60.78
	December	66.41	89.40	85.36	112.41	110.54	110.54	55.56
	January	72.52	98.83	95.49	113.98	111.94	115.07	57.98
	February	76.98	99.36	95.86	103.71	101.05	106.77	61.18
2023	March	73.19	98.59	94.25	98.85	95.33	98.86	64.39
	April	71.54	100.14	96.52	96.91	92.91	96.78	71.74
	May	62.25	90.29	85.69	88.51	86.37	88.59	65.98
	June	57.01	92.30	87.43	91.52	90.45	90.06	65.25
	July	62.43	98.60	93.13	101.02	99.55	98.85	73.39

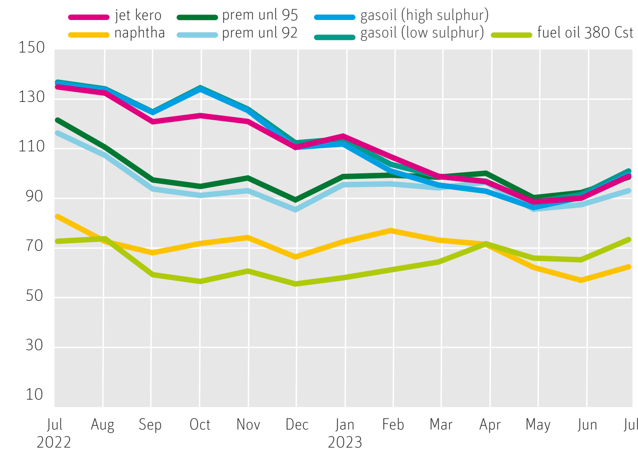
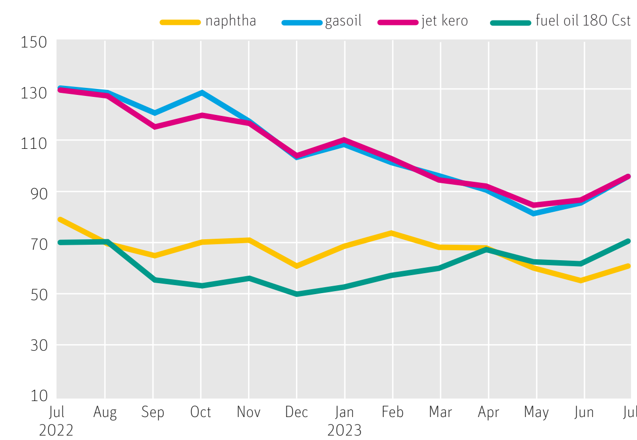


Table and Graph 7: Middle East Gulf market — spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2022	July	79.01	130.25	129.49	70.09
	August	69.59	128.58	127.26	70.31
	September	64.83	120.62	115.16	55.41
	October	70.20	128.57	119.73	53.12
	November	70.93	117.34	116.48	56.07
	December	60.88	103.25	103.86	49.80
	January	68.47	108.38	110.11	52.57
	February	73.67	101.25	102.71	57.12
2023	March	68.19	96.07	94.37	59.94
	April	67.91	90.53	92.00	67.28
	May	60.05	81.31	84.52	62.44
	June	55.11	85.50	86.61	61.67
	July	60.85	95.82	95.87	70.51

Source: Argus. Prices are average of available days.

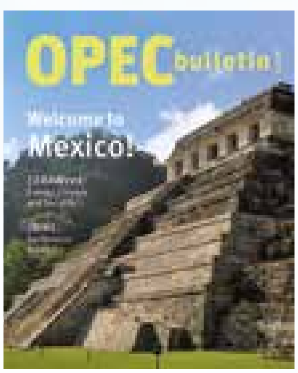


OPEC offers a range of publications that reflect its activities. Copies can be obtained by contacting this Department, which regular readers should also notify in the event of a change of address:

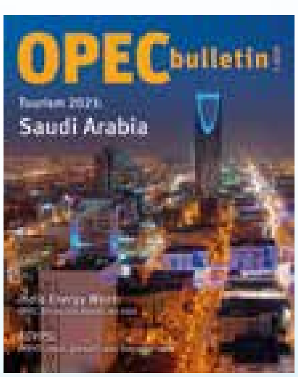
PR & Information Department, OPEC Secretariat
Helferstorferstrasse 17, A-1010 Vienna, Austria
Tel: +43 1 211 12-0; fax: +43 1 216 4320; e-mail: prid@opec.org

OPEC Bulletin
(free of charge)

May/June 2023

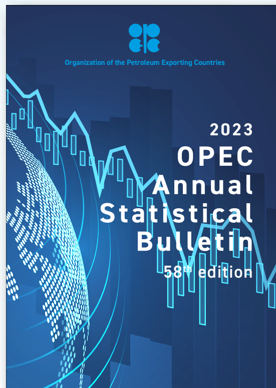


March/April 2023



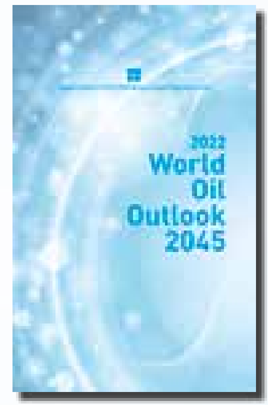
January/February 2023

Annual Statistical Bulletin 2022

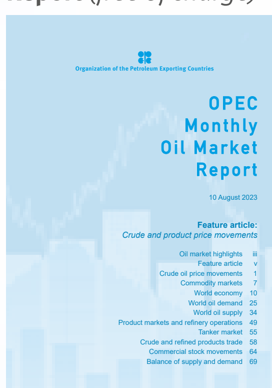


92-page book
Interactive version available at http://asb.opec.org/

World Oil Outlook 2022
(free of charge)

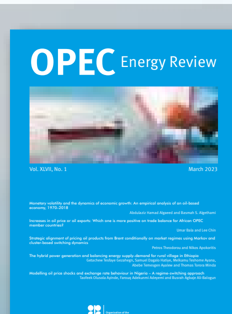


OPEC Monthly Oil Market Report *(free of charge)*



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

Annual Report 2022
(free of charge)



OPEC Energy Review

Contains research papers by international experts on energy, the oil market, economic development and the environment. Available quarterly only from the commercial publisher. Annual subscription rates for 2023:

	Print & Online	Online	Print
Europe €	947	843	880
UK £	747	665	694
USA $	1,252	1,114	1,162
Rest of world $	1,458	1,298	1,354

Canadian residents, please add five per cent for GST.

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

www.opec.org