OPEC bulletin

5–6/24

St Petersburg
hosts annual international forum

Back to Baku
Energy Week in Azerbaijan

OPEC

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Inspiration in the oil industry's heritage

Industrial heritage has much to teach us about humanity's shared history. It encompasses many components: economic change; engineering discovery; cultural heritage; regional identity and scientific progress. Fascinating as a field of study in its own right, industrial heritage can inform policymakers and make a valuable contribution to discussion on future energy pathways. The oil industry constitutes an important field of study within the concept of industrial heritage.

Preserving the history of the oil industry is a responsibility many countries across the globe take seriously, and several OPEC Member Countries are leaders in this regard. To name but a few examples, IR Iran's Petroleum Museums and Documents Centre seeks to collect and display old oil industry equipment and pass this valuable heritage on to the next generation. The Centre had an exhibition recently at the Iran International Oil, Gas, Refining and Petrochemical Exhibition, an event which features in this edition of the OPEC Bulletin. In Kuwait, the Ahmad Al-Jaber Oil and Gas Exhibition plays an important role for the Kuwait Oil Company by telling the story of oil, both in the state of Kuwait and throughout the world.

Yet, the history of the oil industry pertains to almost every country on earth and forthcoming editions of the OPEC Bulletin will feature profiles of museums and institutions that preserve the history of the oil industry across Europe. This is part of an ongoing series that explores the oil museums of the world, which has been a theme in previous OPEC Bulletins, including articles on oil museums in Poland and Romania.

These institutions underscore the sheer universality of oil industry heritage, with a multitude of locations and cities having deep and rich roots linked to the production and consumption of oil. This was also in evidence when OPEC Secretary General, Haitham Al Ghais, attended Baku Energy Week in Declaration of Cooperation participant Azerbaijan at the beginning of June.

Baku is a city that has played an extremely important and unique role, as a birthplace of oil drilled for commercial purposes. It is the cradle of the industry, a city of 'firsts': the site of the first oil well drilled in 1846; the first wooden oil derrick, which was built in 1871; the first distillery completedin 1876 and the world's first oil tanker ship, the Zoroaster, was built there in 1877.

The city has also many museums and visitor attractions that chronicle this history. Baku's Villa Petrolea is the former mansion of the Nobel family and contains a museum of the oil industry. 'Branobel', the Nobel brothers oil company, was one of the largest oil companies in the world and pioneered many of the oil industry innovations associated with Baku. Since 2008, the mansion that housed the company has been open to the public.

As already noted, Azerbaijan played a significant role in the history of oil tankers. The 'Suraxani' or 'Surakhani' is a former oil tanker bedecked with a ship museum. Moored on the Caspian Sea, it can be located alongside the Baku Boulevard in the Sabayil area, south-east of the city of Baku. Visitors can practice manouevring a ship, tying rope knots and even dabble in Morse code.

Having played an important role in the history of the energy industry, Azerbaijan is poised to play a vital role in its future, with Baku set to host the UN's Conference of the Parties at its 29th session, between 11 and 22 November 2024. Mukhtar Babayev, Minister of Ecology and Natural Resources of Azerbaijan and President-Designate for COP29, outlined the incoming President's strategy for a successful COP when he visited the OPEC Secretariat on 22 May.

This highlights that a broad range of areas from the oil industry's past reverbevate in recent OPEC activities. The Organization is committed to promoting the industry's heritage and this is a theme in many of our publications and communications. It is a past we need to remember, as we look to build the industry's future.

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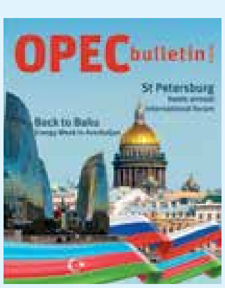

Cover
This month's cover highlights St Petersburg and Baku (see stories on pages 16 and 24).

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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 is 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 12 Members: its five Founding Members and Libya (1962); United Arab Emirates (Abu Dhabi, 1967); Algeria (1969); Nigeria (1971); Gabon (1975, suspended its membership in 1995 and reactivated it in 2016); Equatorial Guinea (2017); and Republic of the Congo (2018).

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Contributions

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

Editorial policy

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.

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Ministerial Meetings reaffirm proactive, pre-emptive and precautionary approach

On 2 June 2024, the **54th Meeting of the Joint Ministerial Monitoring Committee (JMMC)**, *the* ***188th Meeting of the OPEC Conference****, and the* ***37th OPEC and non-OPEC Ministerial Meeting (ONOMM)****, took place in a hybrid format, with videoconferencing and in-person gathering. The* OPEC Bulletin *reports on the main outcomes.*

High-ranking OPEC and DoC officials meeting in Riyadh.

The 37[th] ONOMM reaffirmed Participating Countries' commitment to achieving and sustaining a stable oil market, providing long-term guidance and transparency, and adhering to a precautious, proactive and pre-emptive approach. At the Meeting, Participating Countries decided to:

1. Reaffirm the Framework of the Declaration of Cooperation (DoC), signed on 10 December 2016, and further endorsed in subsequent meetings; as well as the Charter of Cooperation, signed on 2 July 2019.

2. Extend the level of overall crude oil production for OPEC and non-OPEC Participating Countries in the DoC starting 1 January 2025 until 31 December 2025. (For associated production table, see: https://www.opec.org/opec_web/en/press_room/7337.htm)

OPEC officials participated in the event via videoconference.

3. Extend the assessment period by the three independent sources to the end of November 2025, to be used as guidance for 2026 reference production levels.

4. Reaffirm the mandate of the JMMC to closely review global oil market conditions, oil production levels, and the level of conformity with the DoC, assisted by the Joint Technical Committee (JTC) and the OPEC Secretariat. The JMMC meeting is to be held every two months.

5. Hold the ONOMM every six months in accordance with the ordinary OPEC scheduled conference.

6. Grant the JMMC the authority to hold additional meetings, or to request an ONOMM at any time to address market developments, whenever deemed necessary.

7. Reaffirm that the DoC conformity is to be monitored considering crude oil production, using the average of the approved seven secondary sources, and according to the methodology applied for OPEC Member Countries.

8. Reiterate the critical importance of adhering to full conformity and the compensation mechanism.

Riyadh hosted a number of OPEC and DoC ministers on 2 June.

Ministers in Riyadh

Participating Countries that had announced additional voluntary adjustments in April 2023 and November 2023, namely, Saudi Arabia, Russia, Iraq, the United Arab Emirates (UAE), Kuwait, Kazakhstan, Algeria and Oman held a meeting in-person in Riyadh. These countries decided, in addition to the decisions of the 37th ONOMM above, to extend the additional voluntary adjustments of 1.65 million barrels a day (mb/d) that were announced in April 2023, until the end of December 2025.

These countries also extended their additional voluntary adjustments of 2.2 mb/d, that were announced in November 2023, until the end of September 2024 and then the 2.2 mb/d adjustment is set to be gradually phased out on a monthly basis until the end of September 2025 to support market stability. It was noted, however, that this monthly increase can be paused or reversed subject to market conditions.

In the spirit of transparency and collaboration, the Meeting also welcomed the pledges made by Iraq, Russia and Kazakhstan to achieve full conformity and resubmit their updated compensation schedule to the OPEC Secretariat for overproduced volumes since January 2024 (before the end of June 2024), as agreed at the 52nd JMMC.

The 38th ONOMM is set to be held on 1 December 2024.

In memoriam: Dr Ebrahim Raisi, President of the Islamic Republic of Iran

*The sad passing of **His Excellency Ayatollah Dr Ebrahim Raisi** — the eighth President of the Islamic Republic (IR) of Iran — Foreign Minister Hossein Amir-Abdollahian and members of their delegation was keenly felt across the region and beyond.*

"It was with great sadness and regret that I received the bitter news of the martyrdom-like demise of the diligent scholar, the competent and hard-working President, Imam Reza's (PBUH) servant, Mr Haj Seyyed Ebrahim Raisi and his dear companions," said Supreme Leader Ayatollah Ali Khamenei in a message of condolence on 20 May, "In this tragic incident, the Iranian nation lost a sincere and valuable servant."

On behalf of OPEC, Secretary General Haitham Al Ghais said: "It is with great sadness and deep sorrow that we have learned of the tragic passing of Ayatollah Dr Ebrahim Raisi, President of the Islamic Republic of Iran, and other senior government officials. In these difficult times, on behalf of myself and all the staff at the OPEC Secretariat, I extend my condolences and sympathy to the esteemed leadership and people of the Islamic Republic of Iran and the families of President Raisi and other officials."

Secretary General Al Ghais met President Raisi in May 2023 in Tehran during his first official visit as OPEC Secretary General to IR Iran. The meeting focused on IR Iran's role in the global oil and energy markets, and the outlook for investments in the country's oil industry, important topics which President Raisi firmly believed in.

Prior to becoming President of IR Iran on 5 August 2021, Dr Raisi dedicated over four decades of his life to judicial and political service, including as First Deputy Chief Justice, Member of the Assembly of Experts, Prosecutor General, Member of the Expediency Discernment Council, Chief Justice and Attorney-General of IR Iran.

World condolences

The high regard that Dr Raisi was held in around the world was reflected in the messages of condolence sent by foreign leaders and officials, including many from OPEC Member Countries.

The President of Algeria, Abdelmadjid Tebboune, stated that President Raisi's loss meant that he had "personally lost my brother and partner in serving the ties of brotherhood, cooperation, and solidarity between [our] two countries and two brotherly nations".

The President of the Republic of the Congo, Denis Sassou Nguesso, extended his deep condolences on behalf of his government and country to the acting President of IR Iran, Mohammad Mokhber, the Iranian people, and President Raisi's grieving family.

In a gesture of sympathy and solidarity, the Permanent Mission of the Republic of Equatorial Guinea before the United Nations in New York expressed its deepest condolences on "such an irreparable loss".

The Prime Minister of Iraq, Mohammed Shia Al-Sudani, expressed "solidarity with the brotherly Iranian people and the officials of the Islamic Republic during this painful tragedy."

His Highness the Amir of Kuwait, Sheikh Meshal Al-Ahmad Al-Jaber Al-Sabah, sent a cable of condolences to acting President Mokhber, while Minister of Foreign Affairs Abdullah Al-Yahya also travelled to Tehran to offer condolences.

His Excellency Ayatollah Dr Ebrahim Raisi — the late eighth President of the Islamic Republic of Iran.

The President of the Presidential Council of Libya, Mohamed Al-Manfi, offered sincere condolences to IR Iran, its leadership and people on the death of President Raisi and his delegation.

The President of Nigeria, Bola Tinubu, expressed his profound grief and described President Raisi "as a leader who was passionately committed to the development of Iran".

The Custodian of the Two Holy Mosques, King Salman bin Abdulaziz, and the Saudi Crown Prince and Prime Minister, Mohammed bin Salman bin Abdulaziz, sent separate cables of condolences to Iran's acting President Mokhber. "We extend to you and to the people of the Islamic Republic of Iran our deepest sympathy asking Allah almighty to bestow the deceased with his mercy and forgiveness", King Salman said in his cable.

United Arab Emirates (UAE) President Sheikh Mohammad bin Zayed Al Nahyan extended his "deepest condolences to the Iranian government and people over the passing of President Raisi, Foreign Minister Hossein Amir-Abdollahian, and those accompanying them" and stated that "The UAE stands in solidarity with IR Iran at this difficult time."

The President of Venezuela, Nicolás Maduro, said that he was "overwhelmed by great sadness at having to bid farewell to an exemplary person, [and] an extraordinary world leader".

Reuters

HRH Prince Abdulaziz bin Salman Al-Saud, Minister of Energy of Saudi Arabia.

Riyadh hosts WEF special meeting

In late April, Riyadh played host to a special meeting of the World Economic Forum (WEF) to help provide some fresh perspectives on a number of the world's major development issues and growth opportunities. Over a thousand global leaders convened for the two-day meeting in the Saudi Arabian capital, including OPEC Secretary General, ***Haitham Al Ghais****. The* OPEC Bulletin *reports.*

The Special Meeting on Global Collaboration, Growth and Energy for Development brought together leaders from all sectors and industries. It also recorded the highest number of participants for a WEF event held outside its annual venue in Davos Klosters, Switzerland.

Held under the under the patronage of HRH Prince Mohammed bin Salman bin Abdulaziz Al-Saud, Crown Prince and Prime Minister of the Kingdom of Saudi Arabia, the event was held on 28–29 April. The meeting focused on three central themes: Global Collaboration, Growth, and Energy for Development.

The choice of Riyadh as the host of the WEF Special Meeting was a further sign of Saudi Arabia's increasing global role in fostering international cooperation and collaboration. Since the launch of Saudi Vision 2030,

His Highness Sheikh Meshal Al-Ahmad Al-Jaber Al-Sabah, Amir of the State of Kuwait (r), and Haitham Al Ghais, OPEC Secretary General.

the country has emerged as a global platform for thought leadership and action, innovation and solutions that deliver a worldwide impact.

The comprehensive dialogues between participants aimed to leverage advancements in global cooperation for economic development, shape a more equitable and resilient global economy, promote global energy futures for all, and enable further technological advancements. It was an opportunity to share opinions and thoughts, with some commentary on energy issues highlighted below.

Energy for all

The challenges and opportunities surrounding a global energy future for all were covered by a number of speakers. This touched upon the various energies available, and what each energy can offer in terms of delivering energy security, energy availability and reducing emissions. If there was an overall theme on show it was inclusivity and collaboration, to enable what OPEC has described as an all-energies,

Riyadh skyline at night.

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Reuters

Faisal Alibrahim, Minister of Economy and Planning, Saudi Arabia.

Saad bin Sherida Al-Kaabi, Minister of State for Energy Affairs, Qatar.

all-technologies and all-peoples approach to energy futures.

In a public session, HRH Prince Abdulaziz bin Salman Al-Saud, Minister of Energy of Saudi Arabia, spoke about the need to advance an equitable and financially viable energy transition. He also stressed the need for a global and universal approach so that no one gets left behind — especially those in developing economies. "The climate change issue and sustainability is a global issue," he said. "It cannot be attended to in regional scopes or as a smaller territorial thing. It has to be global."

The importance of taking on board all solutions was highlighted by Amani Abou-Zeid, Commissioner for Infrastructure, Energy and Digitalization, African Union Commission. Abou-Zeid spoke about the need for universal energy access, especially in emerging markets in Africa. "We cannot afford to disregard any solution," she said. "All solutions out there must be harnessed by the continent."

The important role of oil and gas to the global energy future was also highlighted. Saad bin Sherida Al-Kaabi, Minister of State for Energy Affairs, Qatar, spoke about the need for energy security for future generations and the importance of advancing a "responsible" energy transition. Al-Kaabi added that the oil and gas industry still supplies a great deal of the global energy supply, noting that, "demand is going to be there for a very, very long time."

Collaboration a key

International collaboration also featured high on the agenda at the Meeting, and Faisal Alibrahim, Minister of Economy and Planning in Saudi Arabia, said it has "never been more important than it is today."

He said: "We are working to ensure that progress for one part of the world does not come at the expense of another. Eight years into Vision 2030, we have demonstrated our willingness to lead the way towards a model of transformative growth that is innovative, inclusive and sustainable."

He added that given the current global landscape's challenges and opportunities, there was a need for global engagement for an inclusive world economy.

Collaboration was not only on display during the sessions of the WEF Special Meeting in Riyadh, but also in the numerous bilateral and side meetings that took place at the event.

OPEC Secretary General

OPEC Secretary General, Haitham Al Ghais, held a number of bilateral meetings during his time in Riyadh, underscoring many of the key themes around energy and collaboration at the WEF Special Meeting.

This included with HH Sheikh Meshal Al-Ahmad Al-Jaber Al-Sabah, Amir of the State of Kuwait, with the

Haitham Al Ghais, OPEC Secretary General (r), and Sen. Heineken Lokpobiri, Nigeria's Minister of State for Petroleum Resources (oil).

Amir emphasizing Kuwait's unwavering commitment to OPEC and the Declaration of Cooperation (DoC), as well as the efforts made to promote stability in the global oil market, in the interests of producing and consuming countries and the world economy at large.

The Secretary General highlighted that Kuwait is a Founder Member of OPEC and has played an instrumental role in the Organization's affairs since OPEC was established in September 1960. "Your Highness, at OPEC, we are immensely grateful for your wise leadership and valuable counsel. Kuwait's significant contributions to the Organization and the DoC are truly evident under your sage guidance," Al Ghais said.

The Secretary General also held a meeting with Sen. Heineken Lokpobiri, Nigeria's Minister of State for Petroleum Resources (Oil), with Al Ghais thanking the Minister for Nigeria's unwavering commitment to OPEC over many decades and its continuous efforts to support oil market stability. They also discussed developments in the global energy and oil markets, as well as key issues related to the energy industry, including energy security.

A further ministerial meeting was held with Almassadam Satkaliyev, Minister of Energy of Kazakhstan, where discussions focused on oil and energy market developments, the role of the DoC, and possible avenues to strengthen cooperation between OPEC and Kazakhstan.

Amani Abou-Zeid, Commissioner for Infrastructure, Energy and Digitalization, African Union Commission.

Haitham Al Ghais, OPEC Secretary General (l), and Almassadam Satkaliyev, Minister of Energy of Kazakhstan.

Haitham Al Ghais, OPEC Secretary General (l), and Jasem Mohamed AlBudaiwi, Secretary General of the Gulf Cooperation Council.

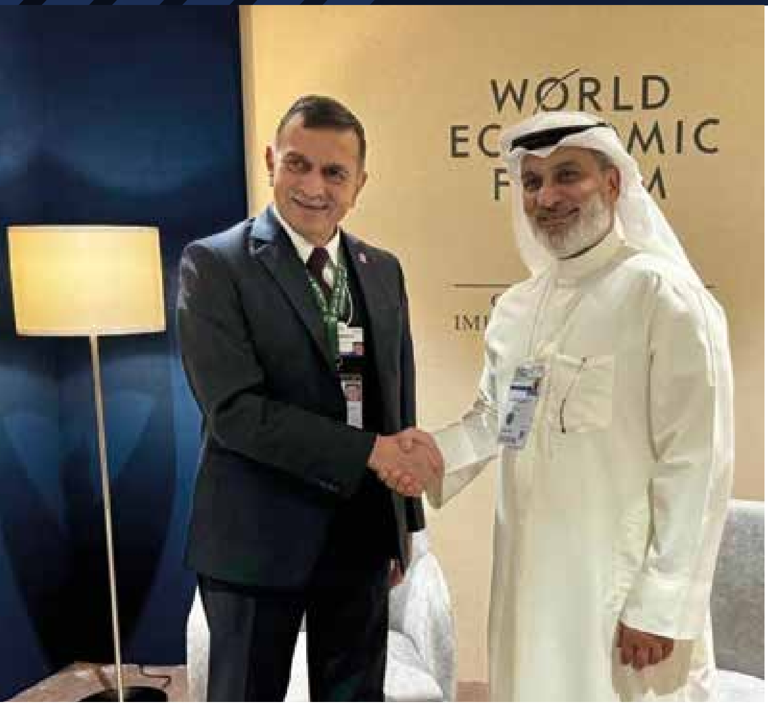
Other meetings were held with Jasem Mohamed AlBudaiwi, Secretary General of the Gulf Cooperation Council; Awang Haji Mohamad Azmi bin Haji Mohd Hanifah, Deputy Minister (Energy) at the Prime Minister's Office of Brunei Darussalam; Deemah AlYahya, Secretary-General of the Digital Cooperation Organization; Shrikant Madhav Vaidya, Chairman of Indian Oil; and Pietro Mendes, Secretary for Oil, Natural Gas and Biofuels of the Federative Republic of Brazil.

Both the Secretary General and Mendes underscored the importance of Brazil's participation in the OPEC and non-OPEC Charter of Cooperation, which aims to address major global energy-related challenges and placed special emphasis on promoting timely investments towards securing sustainable oil and energy markets stability for years and decades to come, the eradication of energy poverty and reducing emissions.

On the theme of collaboration, Al Ghais also reiterated OPEC and its Member Countries' readiness to actively support Brazil in achieving its objectives during the country's G20 Presidency in 2024 and as host country of COP30 in 2025.

Haitham Al Ghais, OPEC Secretary General (r), and Awang Haji Mohamad Azmi bin Haji Mohd Hanifah, Deputy Minister (Energy) at the Prime Minister's Office of Brunei Darussalam.

Haitham Al Ghais, OPEC Secretary General (l), and Deemah AlYahya, Secretary-General of the Digital Cooperation Organization.



Haitham Al Ghais, OPEC Secretary General (r), and Shrikant Madhav Vaidya, Chairman of Indian Oil.

Haitham Al Ghais, OPEC Secretary General (l), and Pietro Mendes, Secretary for Oil, Natural Gas and Biofuels of the Federative Republic of Brazil.

Saudi Arabia to launch Centre for Space Futures with WEF

The Saudi Space Agency and the World Economic Forum have signed an agreement to establish a Centre for the Fourth Industrial Revolution (C4IR) focused on space. The agreement was signed during a Special Meeting of the WEF.

The Centre for Space Futures, set to open in autumn 2024, will be hosted by the Saudi Space Agency, with the aim of facilitating public-private discussions on space collaboration, incorporating best practices from the Forum and its communities into the global space sector, and generating forward-looking contributions to accelerate space technologies.

"The Centre is committed to fostering a vibrant, prosperous, and sustainable space economy globally. By developing principles, expanding knowledge, refining models and cultivating partnerships, we aim to responsibly harness the vast opportunities of space," said the CEO of the Saudi Space Agency, Dr Mohammed Altamimi.

"From monitoring the effects of climate change to increasing human connectivity via satellites, the impact of the global space sector on Earth cannot be overstated," Jeremy Jurgens, Managing Director of the World Economic Forum said. "The addition of the Centre for Space Futures into the C4IR Network recognizes the importance of addressing various topics such as space technological innovation, policies and regulatory, as well as sustainability."

The Centre for Space Futures is the first centre in the network of Fourth Industrial Revolution Centres to focus exclusively on space, and will work alongside the existing national centre in the Kingdom (C4IR Saudi Arabia) to advance Saudi Vision 2030, the country's roadmap for economic diversification, global engagement, and enhanced quality of life.

Dr Mohammed Altamimi, CEO of the Saudi Space Agency.

Jeremy Jurgens, Managing Director of the World Economic Forum.

St Petersburg hosts annual international forum

The St Petersburg International Economic Forum (SPIEF) has been held since 1997 and in the period since, it has become a leading global platform for members of the business community to meet and discuss key economic issues. This year's event was held from 5–8 June, and the OPEC Bulletin *provides an overview of a key energy session that hosted a number of OPEC and Declaration of Cooperation (DoC) ministers, as well as the OPEC Secretary General.*

The 27th SPIEF gathering was held under the auspices of the President of the Russian Federation, Vladimir Putin. The event saw stakeholders from across the world come together to discuss pressing issues of economic development, as well as a wide range of international challenges and opportunities.

A key session on energy was first on the agenda of the second day and brought together OPEC Ministers, HRH Prince Abdulaziz bin Salman Al-Saud, Saudi Arabia's Minister of Energy and Suhail Mohamed Al Mazrouei, the United Arab Emirate's (UAE) Minister of Energy and Infrastructure, alongside OPEC Secretary General, Haitham Al Ghais and Alexander Novak, Deputy Prime Minister of the Russian Federation. Jose Felix Rivas Alvarado, Sectoral Vice President of Economy, Minister of the People's Power for Industries and National Production of the Bolivarian Republic of Venezuela, was also on the panel.

The session was moderated by Sergey Brilev, President, The Global Energy Association, and focused on 'The Future of the Oil and Gas Market: Outlook for Global Demand and Producer Plans'.

It was an opportunity to not only talk about the future of oil and gas, but also to reflect upon recent developments related to the DoC and its focus on helping enable oil market stability.

The session 'The Future of the Oil and Gas Market: Oulook for Global Demand and Producer Plans' in progress.

HRH Prince Abdulaziz bin Salman Al-Saud, Saudi Arabia's Minister of Energy.

Alexander Novak, Deputy Prime Minister of the Russian Federation and Co-chair of the OPEC and non-OPEC Ministerial Meeting.

2 June meeting

Prince Abdulaziz was asked about the 37th OPEC and non-OPEC Meeting (ONOMM), as well as the in-person gathering in Riyadh between Saudi Arabia, Russia, Iraq, the UAE, Kuwait, Kazakhstan, Algeria and Oman on the sidelines of the ONOMM which had taken place only a few days previous.

He stressed that the historic agreements taken on 2 June had done a "proper job" and not succumbed to any outside intimidation. He voiced disapproval of speculative practices by some analysts and media, stating that this can distort the market's expectations ahead of crucial DoC meetings.

Prince Abdulaziz said: "Be it increasing of capacity or export capacity over the years, you need a clear path on how you will produce these volumes." He said that the agreements covered a period of one year and a half, included all possible details and scenarios, and noted that they had also taken into consideration various possible future market developments.

Prince Abdulaziz also stated that he had spent an hour so after the meeting briefing media and analysts to address every question and topic so as to ensure the decisions taken were fully understood.

What was evident in Prince Abdulaziz's comments was that the group remains fully cohesive, and

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

Haitham Al Ghais, OPEC Secretary General.

Haitham Al Ghais (l), with Jose Felix Rivas Alvarado, Sectoral Vice President of Economy, Minister of the People's Power for Industries and National Production of the Bolivarian Republic of Venezuela.

Roscongress Foundation/Sergey Kulakov

Sergey Brilev, President, The Global Energy Association.

as the 2 June statements highlight, will continue to hold regular meetings. The Joint Ministerial Monitoring Committee has the authority to hold additional meetings, or to request an OPEC and non-OPEC Ministerial Meeting at any time to address market developments, whenever deemed necessary.

The commitment of the DoC group was also highlighted by Al Mazrouei. He said: "Year-on-year. I think our responsibility and I would say even the sacrifices that I would call them with the adjustments, and the additional voluntary ones, shows the commitment." He added: "We have been committed to this group, committed to the consumers and committed to the stability of the market."

Al Mazrouei also thanked the Kingdom of Saudi Arabia and the Russian Federation for their distinguished leadership throughout the DoC process.

Novak additionally thanked participating countries in the DoC for taking recent key decisions at the 37th ONOMM, as well as the decision taken by the group of eight OPEC and non-OPEC countries related to additional voluntary adjustments.

He said that over the last several years "we have been working very cohesively and that has brought about very good results", which, he added is "in the interest of consumers and producers."

Secretary General

The OPEC Secretary General also congratulated DoC countries on the important decisions taken at the ONOMM on 2 June that aim to support stability in the global oil market.

In referencing the comments made by Prince Abdulaziz, Al Ghais said that we have been hearing for

Haitham Al Ghais (l), with Suhail Mohamed Al Mazrouei, UAE's Minister of Energy and Infrastructure, on the sidelines of SPIEF 2024.

Haitham Al Ghais (r) meeting with Alexander Novak (l), on the sidelines of SPIEF 2024.

a while "the requirement for a clear roadmap of how these production adjustments are going to be phased out or tapered out."

He added, however, that when it is delivered, some see it as negative. "It is really hard to understand these people who are pushing for a certain narrative," he said.

He stressed it is important to "remain focused on the fundamentals. This is what really drives our decisions." In this regard, he highlighted that oil demand is resilient, and OPEC sees it expanding in the short, medium and long terms.

Looking long term, he highlighted the importance of oil for the global economy, and stated that the Organization sees the global economy doubling in size by 2045, with the population expanding to 9.5 billion, and urbanization levels growing.

In terms of oil demand growth going forward, he underlined that it will come from non-OECD developing countries. In this region, he said, populations also consume much less energy per capita today than in the developed world. He added: "Let us imagine what it means when people start to travel more, when people want to fly out more, when people want to have their own car."

To support this, Al Ghais added, it is important to recognize the critical issue of investment, noting that certain ideologies have contributed to the severity of the issue. He said: "We need all sources of energy. We should not discriminate against any source of energy."

"Be it increasing of capacity or export capacity over the years, you need a clear path on how you will produce these volumes."

— HRH Prince Abdulaziz bin Salman Al-Saud, Saudi Arabia's Minister of Energy.

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View of St Petersburg.

St Petersburg: majestic and magnificent

While St Petersburg is a relatively young city, with just over 300 years of history, it is one steeped in great sagas and splendour. A vision of coloured spires and gilded domes, of pastel palaces and otherworldly cathedrals, the city can transport one through some dramatic moments in Russia's history.

The city was founded in May 1703, by order of the Russian Emperor, Peter the Great. For the first ten years of its history, it developed as a fortress and sea port, but as trade developed the city quickly transformed into a centre of economic prosperity and industry.

In 1710 the royal family relocated to the city from Moscow, making St Petersburg the capital of the Russian Empire. For a short time during the rule of Peter II (1727–30), the capital moved back to Moscow, but the city regained its capital status three years later.

During the long reign of Catherine II 'The Great' (1729–96) people began calling the city 'Magnificent Petersburg'. The Winter Palace, the Admiralty, Nevsky Prospect, the granite embankments along the rivers and canals, and the Bronze Horseman, among others, were all built while Catherine II was on the throne.

The city changed name on a number of occasions and by 1941 it was called Leningrad, in honour of Vladimir Lenin, the Russian revolutionary and politician, who died in 1924.

Church of the Saviour on Spilled Blood (Cathedral of the Resurrection of Christ) in St Petersburg.

St Petersburg skyline.

In 1941, the Siege of Leningrad began. The siege lasted 900 days, during which time the city was cut off from the rest of the world. While the city was left in ruins, its resurrection and restoration over the next ten years is viewed as a remarkable achievement.

Rising from the ashes, it once again became a treasure of world architecture and culture. The city reverted to its original name, St Petersburg, in 1991, and is today a world-renowned and much-revered city of beauty, culture, literature, music and science.

The majesty and magnificence of the city can be seen in a host of landmarks, with the OPEC Bulletin highlighting a number below.

State Hermitage Museum (Winter Palace)

The State Hermitage is one of the world's largest art and history museums. The museum was founded in 1764. It boasts a huge collection of approximately three million objects and artefacts from around the world. The bulk of the Hermitage collection is housed in the Winter Palace, formerly the official residence of the Romanov Tsars, and it has several annexes.

The Hermitage collection is said to be so vast and diverse that a visitor needs at least five hours just to walk through all the rooms of the museum. It is a must-see attraction, and one that may need more than one day, or several visits.

State Hermitage Museum (Winter Palace).

Summer Garden.

The Summer Garden

The Summer Garden was planted in 1704 by decree of Peter the Great. It is viewed as St Petersburg's first monument to landscape design. The Summer Garden also contains Peter the Great's Summer Palace, exact replicas of some of the rarest examples of park and garden sculpture, and reconstructed fountains from the early 18th century, as well as a monument to fabulist Ivan Krylov.

Peter and Paul Fortress

Founded in 1703, the Peter and Paul Fortress is the place from which the city of St Petersburg grew. While the central visitor attraction is undoubtedly the Saints Peter and Paul Cathedral, one of the city's most striking buildings and containing the tombs of the Romanov Dynasty, there are plenty of other attractions within the walls of the fortress.

St Isaac's Cathedral

St Petersburg's largest Orthodox cathedral, St Isaac's is a unique heritage asset erected in 1858 by the architect Auguste de Montferrand. The cathedral is 101.5 metres high. The walkway encircling the cathedral's dome is open to the public, offering a panoramic view of the historic city centre.

Church of the Saviour on Spilled Blood

The Church of the Saviour on Spilled Blood is a Russian Orthodox church. It was built to memorialize Alexander II following his assassination in 1881. The design is seen

Peter and Paul Fortress.

View of St Isaac's Cathedral and Moyka River.

as an architectural wonder, with Italian pink marble floors and numerous mosaics modeled after 16th and 17th century churches.

Interior of the Church of the Saviour on Spilled Blood.

The Catherine Palace

The Catherine Palace (Tsarskoye Selo State Museum Preserve) forms the historic and compositional centrepiece of the palace and park complex at Tsarskoe Selo, a splendid example of Russian baroque architectural style. The Tsarskoe Selo imperial residence was one of the Russian monarchs' most beloved places. The Amber Room, often viewed as the gem of the Catherine Palace, is a chamber decorated in amber panels backed with gold leaf and mirrors.

All pictures are courtesy of Shutterstock.

The Catherine Palace.

Back to Baku

*In early June, Baku Energy Week played host to high-level energy industry stakeholders from across the world. Combining three events: the **29th International Caspian Oil & Gas Exhibition**, the **12th Caspian International Power and Green Energy Exhibition**, and the **29th Baku Energy Forum**, this constituted a major occasion for Azerbaijan's and the region's energy sector. The* OPEC Bulletin *reports.*

Situated in the southern part of the Absheron Peninsula, Baku has always been a 'gateway' between Asia and Europe. During many centuries, the trade routes of the Great Silk Road passed through Azerbaijan and today the city is increasingly becoming a meeting place for dialogues and conferences.

This was evidently demonstrated when Baku Energy Week kicked off on 4 June at the Baku Expo Centre and Baku Convention Centre, with participation from over 300 companies representing 37 countries. It will also be on display when the city plays host to COP29 in November.

In 2024, Baku Energy Week coincided with the 30th anniversary year of the signing of the 'Contract of the Century', a pivotal moment that ushered in a new era in the country's oil history. The 'Contract of the Century' is widely regarded as the bedrock of Azerbaijan's energy strategy and was established under the guidance of former President Heydar Aliyev.

The contract was a production sharing agreement on the joint development of deepwater reserves Azeri, Chirag and Guneshli, and include 13 leading oil companies from eight countries. It is viewed as the impulse that transformed Azerbaijan into an oil exporter.

president.az

Ilham Aliyev, President of Azerbaijan.

Energy security for decades

The oil and gas industries have been central to Azerbaijan's development in the period since, and the importance of this, as well as the event, was highlighted by President of Azerbaijan, Ilham Aliyev, in his remarks to open Baku Energy Week.

View of Baku.

Participants and VIP dignitaries with Preisdent Aliyev.

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"The Caspian Oil and Gas Exhibition started 30 years ago in 1994. This event has played an instrumental role in attracting foreign direct investment into the energy sector of Azerbaijan," he said.

"Since that time, this event has transformed into a bigger event and is now called Baku Energy Week, because it embraces all the major segments of energy policy — oil, gas, upstream, downstream, and of course, green energy," he added.

He also stressed that all the contracts signed during the last 30 years have been completely implemented. "Our word has the same value as our signature," he said.

In further highlighting this, and the importance Azerbaijan places on energy security, President Aliyev noted: "The European Commission names Azerbaijan as a Pan-European gas supplier. And this is true. Six out of eight countries that are recipients of our natural gas are European countries.

"The geography of our supply definitely will grow. We are now in the active phase of negotiations with several more countries, which need Azerbaijani gas in order to provide energy security," he added.

Azerbaijan: a key partner

In highlighting the importance of Azerbaijan's role in helping deliver a balanced and stable oil market, in the interests of producers and consumers, and the wider global economy, OPEC Secretary General, Haitham Al Ghais, said in his opening remarks: "His

> *"Azerbaijan appreciates the value of oil, and what it has helped deliver to the world."*
>
> ***— Haitham Al Ghais, OPEC Secretary General.***

Parviz Shahbazov, Minister of Energy of Azerbaijan.

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Oil platform off the Caspian sea coast near Baku.

Excellency President Aliyev was one of the leaders that helped bring OPEC and non-OPEC producers together back in 2016."

Continuing, he stated that Azerbaijan is a great friend of OPEC and ongoing supporter of the Declaration of Cooperation, before underlining that Parviz Shahbazov, Azerbaijan's Minister of Energy, continues to show tireless dedication to the group's common endeavours.

Going forward this support will continue to be vital, he said, taking the opportunity to quote something "very important" expressed recently by President Aliyev. This was: "As a head of the country, which is rich with fossil fuels, of course, we will defend the right of these countries to continue investments and to continue production."

Al Ghais added that the President called abundant hydrocarbons a 'gift from God.' These are extremely important words, he said, and these precious resources are indeed a 'gift from God'. "They have brought tremendous benefits to the world. Oil and its associated products help power cars, ships and airplanes, light and heat homes, and enable the

“We support Azerbaijan’s constructive engagement for COP29, with a focus on the importance of enhancing international cooperation in climate action to advance the objectives, principles, and goals of the United Nations Framework Convention on Climate Change, and its Paris Agreement.”

— Haitham Al Ghais, OPEC Secretary General.

development of plastics, pharmaceuticals and medical supplies,” he stated.

“This is far from an exhaustive list, but underscores the importance of oil to our everyday lives. It is vital for energy security; it is vital in helping alleviate energy poverty; and it will be vital for sustainable development, given the needs of all peoples around the world,” he added.

COP 29

The OPEC Secretary General also noted the upcoming COP 29 in Baku and welcomed Azerbaijan’s adoption of an inclusive approach to COP29, with all voices heard.

He said: “We support Azerbaijan’s constructive engagement for COP29, with a focus on the importance of enhancing international cooperation in climate action

Haitham Al Ghais, OPEC Secretary General, speaks at the podium in the presence of President Aliyev.

to advance the objectives, principles, and goals of the United Nations Framework Convention on Climate Change and its Paris Agreement.

"We need to allow each country to chart its own path based on its national circumstances, taking into account the principles of equity, and common but differentiated responsibilities and respective capabilities.

"It is important to keep this in mind. It is pathways, not a pathway as some would have us believe. We need to appreciate the different circumstances of nations and peoples across the world.

"Billions of people are still playing energy catch up, billions of people still have no access to modern energy services, and many more billions have never owned a car or travelled outside of their home country."

OPEC playing a role

The Secretary General said that "future energy pathways need to take this on board and emphasize an all-energies and all-technologies approach."

He added: "OPEC fully advocates this, and alongside investing in oil, our Member Countries are also investing in gas, renewables, nuclear, hydrogen, carbon capture utilization and storage facilities, carbon dioxide removal, direct air capture and the circular carbon economy.

"We also welcome Azerbaijan's ambitious plans to produce a diverse portfolio of energy, including oil, gas, and other strategic sectors like offshore wind power and hydrogen. These will all be crucial given that we see global energy demand increasing by 23 per cent by 2045."

A 'gift from God'

"At OPEC, we also believe the planet we all live on is a 'gift from God'," stated Al Ghais. "It is why our Member Countries are so serious about the world taking the best and most just future energy pathways. Ones that provide for energy security, do not impede socioeconomic development, enable necessary investment in all energies and all technologies, and help reduce emissions."

Given President Aliyev's wise words, he added, "I know Azerbaijan understands the importance of this, particularly given that the country and Baku are known as the cradle of the modern oil industry."

On the sidelines of Baku Energy Week, the OPEC Secretary General held a bilateral meeting with Alparslan Bayraktar, Minister of Energy and Natural Resources of the Republic of Türkiye, with talks focused on key oil and energy industry issues, as well as possible avenues of cooperation between OPEC and Türkiye.

Baku: a city of old and new

Baku is a city of contrasts, with the time-worn sandstone walls of the Old City alongside eye-catching new architecture, such as the Heydar Aliyev Centre, the Azerbaijan National Carpet Museum and the evocative Flame Towers.

Baku is host to architectural and archeological wonders. The city's well preserved historical past, and its' recent architectural renaissance, provide a fascinating backdrop when touring the city. The OPEC Bulletin points out two must-see landmarks from the city, one from the past and one from the present.

The Maiden Tower

The Maiden Tower, standing proudly in the heart of Baku, is a captivating testament to the nation's rich history and cultural legacy. It is an iconic structure, one locals are rightly proud of, set against the backdrop of the Caspian Sea. The view from the roof also takes in the view of the Walled City of Baku, with its labyrinthine of alleys and minarets.

The tower, believed to date back to the 12th century, although some historians believe it may be older, has witnessed centuries of transformation and remains an enduring symbol of Azerbaijan's heritage. The tapering 29 metre stone eight-story tower is viewed as Baku's foremost historical icon.

Delving into the mystique of the Maiden Tower reveals a fascinating narrative that intertwines legend and history. Known locally as 'Qız Qalası', it has served various purposes over the years, from a defensive fortress to an astronomical observatory. The museum at the tower provides further details on this, along with the story of the historic evolution of Baku city.

The Flame Towers

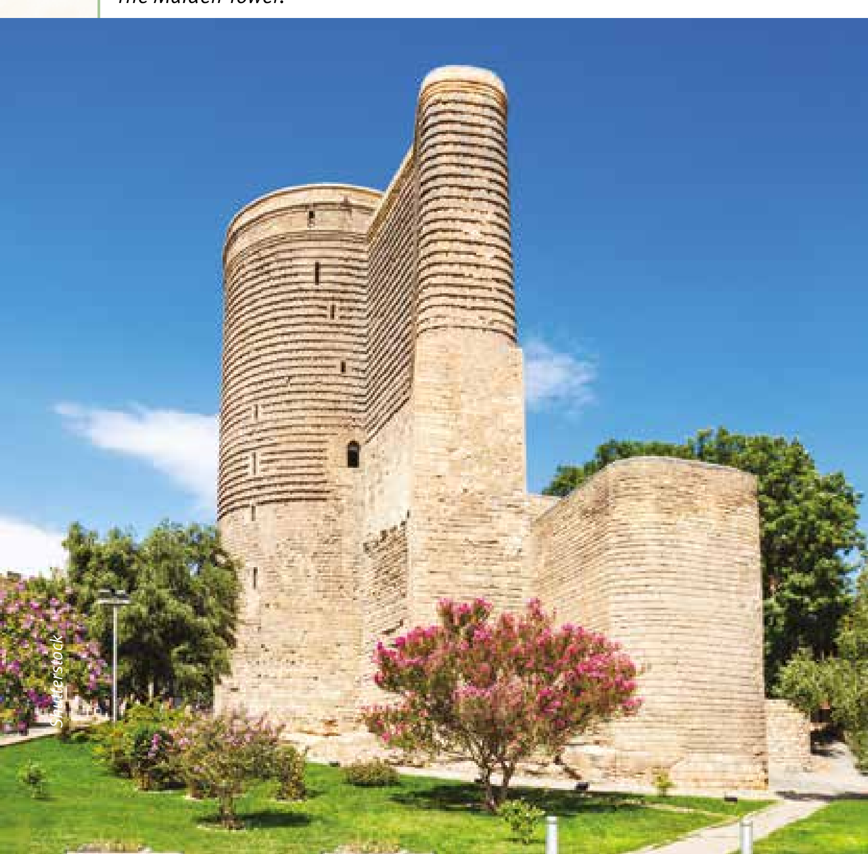
Contrasting this are a plethora of new architectural marvels, with one impossible to miss when visiting the city: the Flame Towers. Towers can be seen peeking out above or in-between buildings.

Located on a hill overlooking the Caspian Sea and Baku's old city centre, the Flame Towers are a group of three skyscrapers that have transformed the city's skyline. Construction started in 2007 and took five years to finish, with the towers varying in height from 140 m to 182 m.

The towers pay tribute to Azerbaijan's adopted 'Land of Fire' motto, which is fully on display at night. The towers are completely covered with LED screens that display light show transitions including giant flames, the Azerbaijani flag and giant tanks of water being filled.

This stunning spectacle turns the buildings into what can be described as three giant torches. The towers and the illuminations are said to be best viewed from the observation area of Dagustu Park.

The Maiden Tower.



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The Flame Towers.

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COP29-OPEC High-level Energy Dialogue takes place at OPEC Secretariat

*On an historic occasion, **Mukhtar Babayev**, Minister of Ecology and Natural Resources of the Republic of Azerbaijan and President-Designate for the Conference of the Parties at its 29th session, visited the OPEC Secretariat on 22 May 2024. It is a great privilege for a President-Designate of the COP to visit the OPEC Secretariat and underscored the flourishing of OPEC's relations with its partner under the Charter of Cooperation (CoC). The* OPEC Bulletin *reports on this COP29-OPEC High-level Energy Dialogue.*

Historic First

The Dialogue — which was co-chaired by the COP29 President-Designate and Haitham Al Ghais, OPEC Secretary General — brought together high-ranking officials from CoC Participating Countries and provided a unique opportunity for both sides to engage in a constructive and inclusive exchange of views.

The Secretary General began his remarks with a moment's silence, to honour Ayatollah Dr Ebrahim Raisi, President of the Islamic Republic of Iran, and Hossein Amir-Abdollahian, Minister of Foreign Affairs of the IR Iran, as well as other high-level officials who tragically lost their lives in an accident a few days before the meeting took place.

Al Ghais then welcomed the President Designate, as well as Chief Executive Officer of COP29, Elnur Soltanov, Deputy Minister of Energy of Azerbaijan; and Rovshan Sadigbayli, Ambassador Extraordinary and Plenipotentiary of Azerbaijan to the Republic of Austria. OPEC offers full support to the COP29 Presidency, said Al Ghais.

The Secretary General stated, "We are living through a golden era in OPEC's relations with Azerbaijan. The clearest manifestation of this is our ongoing cooperation under the Declaration of Cooperation, whereby we seek to take collective action in the interest of oil market stability, for the benefit of producers, consumers and the global economy."

Al Ghais emphasized OPEC's full and unwavering support for Azerbaijan as it undertakes the challenge of leading the COP, stating, "OPEC offers its support to you and your team as you undertake your work, along with our best wishes for a successful COP 29. At our meeting today, we are joined by climate change experts and top negotiators from our Member Countries and I have no doubt they will support you in all your endeavours."

The Secretary General noted the compatibility of OPEC's own messaging on the role of the oil and gas industry in the energy future with remarks made by President of Azerbaijan, Ilham Aliyev, who described oil and gas as 'gifts from God.' President Aliyev also stated, "As the head of a country that is rich with fossil fuels, of course we will defend the right of these countries to continue investments and to continue production."

Al Ghais stated that, "These are extremely important words, as continued investment in the oil and gas industry will be vital to help strike a balance between energy security, energy affordability and reducing emissions." He added that, "Azerbaijan's approach is

Haitham Al Ghais, OPEC Secretary General (l), welcomed Mukhtar Babayev, Azerbaijan's Minister of Ecology and Natural Resources and COP29 President-Designate, to the OPEC Secretariat.

sensibly based on the understanding that the world will need all forms of energy to meet future demand."

Unique oil industry history

The Secretary General also emphasized that, "one of the most gratifying things about Azerbaijan holding the COP Presidency is the unique role Azerbaijan has played in the birth of the oil sector." The city of Baku in particular has a deep association with the earliest days of the industry. It is truly a city of firsts: the site of the first oil well being drilled in 1846; the first wooden oil derrick in 1871 and the first distillery in 1876.

Baku is a city where careers began and ingenuity, creativity and entrepreneurial spirit flourish. The city played a special role in the careers of some of the most important personalities that the oil industry has ever known: Robert and Ludwig Noble; the financiers Rothschild Freres; Marcus and Samuel Samuel, founders of the Shell Transport and Trading Company; and the Russian chemist Dimitry

The world's first industrially drilled oil well from 1846 located in Baku, Azerbaijan.

(L–r): Haitham Al Ghais, OPEC Secretary General; Mukhtar Babayev, Azerbaijan's Minister of Ecology and Natural Resources and COP29 President-Designate; and Rovshan Sadigbayli, Ambassador Extraordinary and Plenipotentiary of Azerbaijan to the Republic of Austria.

Elnur Soltanov, Deputy Minister of Energy of Azerbaijan and Chief Executive Officer of COP29.

Mendeleyev, who invented the periodic table; to name but a few.

Innovations which shaped the oil industry as we know it today were pioneered in Baku. Technologies that revolutionized pipeline engineering, refining and pressure cracking, transportation and shipping all hail from Baku. The world's first oil tanker ship, the Zoroatser, was built here in 1877. All of these pioneering acts came into being because of the diligence and dedication of hard-working Azerbaijanis over the decades.

President-Designate remarks and concrete outcomes

During the dialogue, Babayev said that "Azerbaijan, like other countries rich in natural resources, should be at the forefront of addressing climate change. I am grateful for OPEC's support for the COP29 Presidency's plan to enhance ambition and enable action and for the opportunity to include all parties as we build fair and shared solutions. Success will require action from everyone, so we are intensifying our political engagements as we seek to go further and faster to invest today to save tomorrow."

Following a productive exchange of views, both sides:

- Agreed to cooperate with the aim of achieving successful ambitions and comprehensive outcomes at COP29.
- Emphasized the importance of enhancing international cooperation in climate action to advance the objectives, principles and goals of the United Nations Framework Convention on Climate Change and its Paris Agreement, allowing each country to chart its own path based on its national circumstances and approaches through a variety of measures that they can contribute to.
- Share common concerns and aspirations regarding ambitious yet balanced and inclusive climate action

A commemorative group picture of the attendees to the COP29-OPEC High-level Dialogue.

that takes into account the principles of equity, and common but differentiated responsibilities and respective capabilities, in light of national circumstances.

- Outlined commitment to advance all viable solutions and technologies that will enable all nations to contribute to global climate action in a nationally determined manner, while taking into consideration the different national circumstances, pathways, and approaches of each country.
- Emphasized that COP29 presents an opportunity to underscore the imperative of economic diversification in a manner that aligns with the needs, priorities and resources of all nations, particularly in the context of promoting sustainable development and poverty eradication and ensuring energy security.

Intensive work for a successful COP

The dialogue was an extremely productive opportunity for the President Designate to share his plan for a successful COP29. It underscored how Azerbaijan and OPEC, working together, can be catalysts for meaningful climate action. Inclusive and constructive dialogue of this nature will be vital in the lead-up to COP29.

The venue for COP29.

Haitham Al Ghais, OPEC Secretary General.

OPEC-Africa relations shine strong at Invest in Africa Energy

OPEC's powerful connection to Africa was emphasized at the Invest in Africa Energy Forum, held in Paris, France on 14 to 15 May. This was underscored by the large OPEC delegation in attendance, a reflection of some of the African stars and brightest minds working at the Secretariat. The event was organized by the African Energy Chamber.

The OPEC Secretary General, Haitham Al Ghais, delivered a keynote speech at the opening ceremony of the event on behalf of the Organization under the title 'Building Economic Growth in Africa's Energy Sector.'

The SG noted that, "OPEC is an integral part of Africa and Africa is an integral part of OPEC."

Al Ghais informed the audience that OPEC was initially conceived in Africa, in Cairo, Egypt, to be exact, in early 1959, under the visionary leadership of the five Founder Fathers of the Organization.

"The unstoppable force of this historic gathering led to the foundation of OPEC in Baghdad on 14 September 1960," he said.

He added that the relationship between OPEC and Africa has continued to grow and strengthen over time, emphasizing that, "In more recent years, it has reached a new level, notably with the formalization of the OPEC-Africa Energy Dialogue in June 2021."

Al Ghais stated that OPEC had determined long before this event that there was much to be gained at both the technical and high levels through a formalized partnership with the African Energy Chamber, in particular regarding exchanges on oil and gas outlooks and views on topics, including the eradication of energy poverty, along with climate change and energy transitions.

"Allow me to say that investment in Africa is a topic close to our heart at OPEC. Half of OPEC's Members are from this great continent: Algeria, Congo, Equatorial Guinea, Gabon, Libya and Nigeria," continued Al Ghais. In addition, Sudan and South Sudan are part of the historic Declaration of Cooperation.

He added that OPEC is proud of its African members, which have brought so much to the Organization and continue to contribute in countless ways to its success. With an African President of the Conference this year, eyes are turned even more intensely on the continent's oil industry.

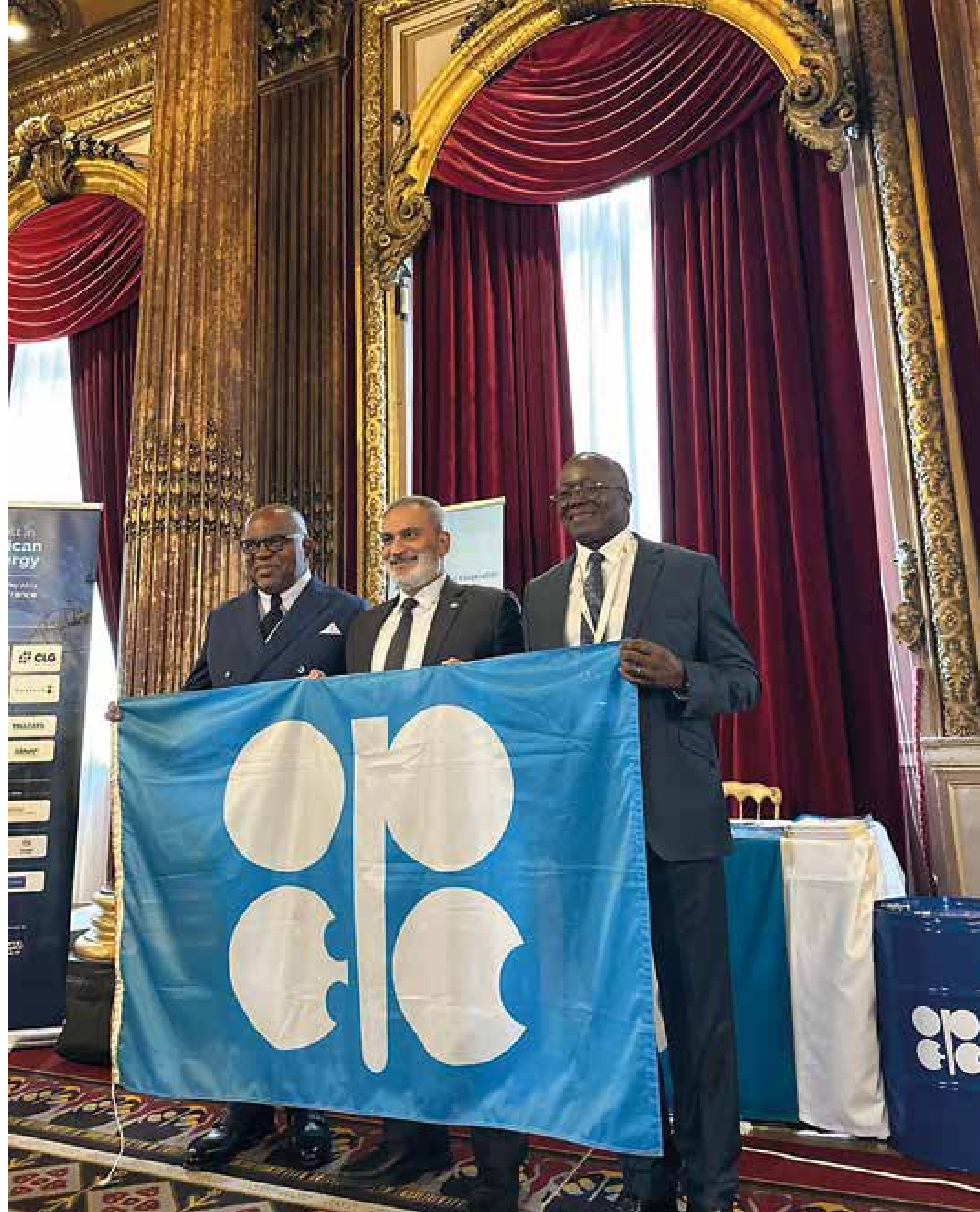
The SG stated he was happy to see two OPEC Ministers speaking at the event: Bruno Jean-Richard Itoua, Minister of Hydrocarbons from Congo, and the President of the OPEC Conference in 2024 and Minister of Petroleum of Gabon, Marcel Abeke. He had the opportunity to meet with both Ministers at the event.

Their Excellencies commended the OPEC Secretariat for its active participation with a high-level delegation headed by the SG, signifying OPEC's unwavering support of Africa and commitment to its oil and energy future.

Minister Abeke delivered a keynote speech on "Building economic growth in Africa's energy sector", stressing the importance of holding the Forum, as the global energy industry suffers from underinvestment. Abeke added that more needs to be done by various industry stakeholders to help ensure energy security for future generations to come.

In his keynote speech at the Forum, Itoua highlighted that "we cannot undervalue the significance of international collaboration", adding "this collaboration is essential for developing innovative technologies, cleaner production methods, and ensuring the equitable distribution of benefits generated by our natural resources".

The Secretariat's delegates participated in a special



(L–r): Bruno Jean-Richard Itoua, Minister of Hydrocarbons of Congo (Brazzaville); Haitham Al Ghais, OPEC Secretary General; and Marcel Abeke, Gabon's Minister of Petroleum and President of the OPEC Conference 2024.

> *"We are proud of our African Members, who have brought so much to OPEC and continue to contribute in countless ways to the success of our Organization."*
>
> ***— Haitham Al Ghais, OPEC Secretary General.***

Bruno Jean-Richard Itoua, Minister of Hydrocarbons of Congo (Brazzaville).

Marcel Abeke, Gabon's Minister of Petroleum and President of the OPEC Conference 2024.

> *"The future of this exciting and beautiful continent is brighter than ever before, and OPEC is excited to be a partner on this journey with Africa, through years of history and into the future ahead."*
>
> ***— Haitham Al Ghais, OPEC Secretary General.***

discussion session on OPEC's perspective regarding the short-, medium- and long-term global oil and energy markets. The panel was headed by Director of the Research Division, Ayed Al-Qahtani.

It also included Behrooz Baikalizadeh, Head of Petroleum Studies Department; Tona Ndamba, Chief Refinery and Products Analyst; Irene Etiobhio, Chief Petroleum Industry Analyst; Angel Edjang Memba, Senior Financial Analyst; and Yacine Sariahmed, Chief Oil Price Analyst.

The session focused on the key findings of the latest editions of OPEC's Monthly Oil Market Report and World Oil Outlook (WOO), which provide a thorough analysis of various factors affecting global oil and energy industries.

OPEC Member Countries highlighted

In an article published by the African Energy Chamber, Al Ghais emphasized the fact that OPEC takes great pride in its strong and enduring African connections, heritage and identity.

"Our Organization's past is imbued with African character. Looking throughout our 63-year history, many significant meetings took place in African cities. From the Ninth Meeting of the OPEC Conference in Tripoli in 1965, critical meetings and conferences have been held in Algiers (including our first ever Summit), Oran, Lagos, Abuja, Luanda and Libreville," the SG wrote.

The continent is a centre of the future for the oil industry, as demand is expected to nearly double by 2045 from 4.4 million barrels per day (mb/d) currently to 8.2 mb/d. A great deal of this demand will be linked to increased mobility in populations.

"The continent also offers a vast horizon of undeveloped oil resources that will be needed to help meet future world energy needs. Our most recent Annual Statistical Bulletin shows the continent is home to 120

Dr Ayed S Al-Qahtani, Director of OPEC's Research Division (c), speaks at the discussion panel. He is seated next to Behrooz Baikalizadeh, Head of Petroleum Studies Department (l), and Yacine Sariahmed, Chief Oil Price Analyst.

The 1st OPEC Heads of State Summit was held in African Member Country, Algeria, in 1975.

Chemical oil products tanker in Lagos, Nigeria.

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Group photograph including OPEC delegates.

billion barrels of the world's proven crude oil reserves," Al Ghais wrote.

In addition, its refining industry will expand greatly, adding 3.2 mb/d of capacity by 2045.

With energy demand expected to increase by 23 per cent by 2045, and oil continuing to hold the largest share of the energy mix, all sources of energy will be required.

"The continent's industry produced about 5.9 mb/d of oil in 2022. With new discoveries and projects being announced all the time, we believe that African countries have great potential to help meet future global oil demand growth," the article stated.

The SG added in his article: "Having played a pivotal role in shaping our past, we have no doubt Africa will be instrumental in OPEC's future and the future of the oil industry. This is a dominant theme in OPEC's WOO 2045."

He said that since assuming the office of Secretary General nearly two years ago, he has visited every African OPEC Member Country, along with several other African countries, adding that, "Every visit has reaffirmed my firm conviction that the future is bright for Africa and that the oil industry can play a constructive role in that future. Our Organization stands ready to offer any support it can to help this great continent realize its awesome potential."

Future energy pathways

Regarding climate change and energy transitions, the Secretary General stressed that developing countries around the world, including those in Africa, continue to balance priorities between the dire need to support the development of their national economies, while also adapting to ever-shifting dynamics related to climate change.

He stated that, "oil consumption in African nations is often less than one barrel per person per year, compared to nine in the EU and 22 in the US. Millions of people in Africa are playing energy catch-up...For these millions, energy availability and energy affordability are key."

> *The continent is home to five of the top 30 oil producing countries …This will be crucial to meet the growing global demand for oil, which is expected to rise to 116 mb/d by 2045.*
>
> ***— Haitham Al Ghais, OPEC Secretary General.***

The SG highlighted in his article that although the continent of Africa is home to 17 per cent of the world's population, it is responsible for under four per cent of global CO_2 emissions, with many African countries contributing virtually nothing to global emissions.

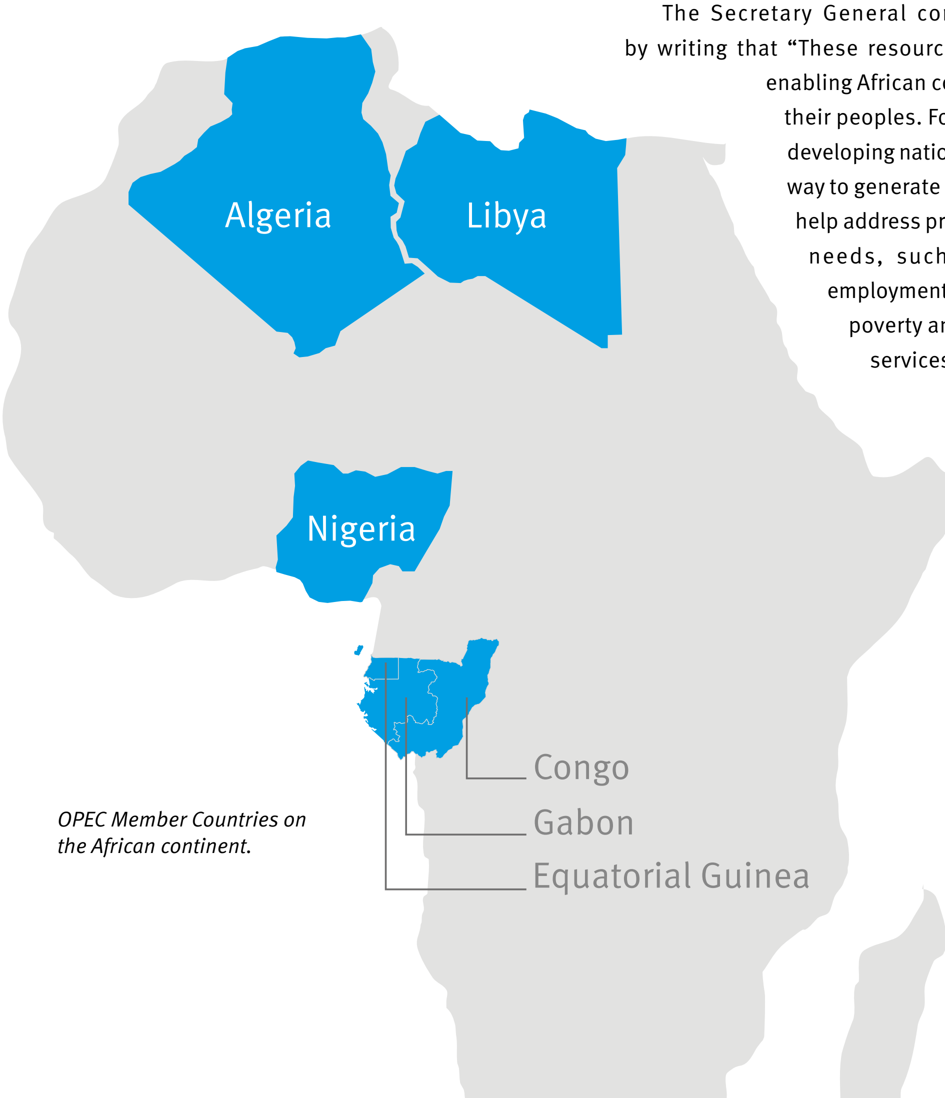
When historic cumulative CO_2 emissions are taken into account, the G7 has contributed over 43 per cent of the total alone since 1850, while OPEC Member Countries account for only four per cent, he continued.

He wrote that, "These statistics reflect the fact that there is no 'one-size-fits-all' solution to addressing climate change and national circumstances need to be taken into account. We need an all-peoples, all technologies and all-energies approach. Technological innovation is a key focus for our Organization."

The SG added in his article that OPEC supports efforts that lead to a reduction in greenhouse gas emissions, but wants this to be achieved in a manner that strikes a fine balance between energy security and sustainable development, ensuring that nobody is left behind. In addition, the principle of common but differentiated responsibilities and respective capabilities should always be observed.

"We anticipate a bright future for Africa's oil industry with substantial opportunities for growth. The continent is home to five of the top 30 oil-producing countries … This will be crucial to meet the growing global demand for oil, which is expected to rise to 116 mb/d by 2045," wrote Al Ghais.

The Secretary General concluded his article by writing that "These resources will be crucial in enabling African countries to deliver for their peoples. For many oil producing developing nations, oil production is a way to generate revenue streams that help address pressing and legitimate needs, such as development, employment, education, reducing poverty and investing in public services."



OPEC Member Countries on the African continent.

The Turkmen Energy Investment Forum (TEIF-2024): Investing in reliable, sustainable and green energy

TEIF-2024 opened its doors to more than 300 delegates on 24–25 April in Paris, marking a significant milestone in the Central Asian nation's pursuit of economic development and prosperity.

Over the course of an intense two-day programme, delegates were given the opportunity to deliberate on topics such as hydrocarbon investment opportunities through the prism of energy transitions, innovations in measuring emissions, the role of financial institutions in promoting clean energy technologies and modern infrastructure, and the expansion of investment opportunities in construction, petrochemicals, transport and communications.

A highlight of the event was the signing of multiple Memoranda of Understanding between Turkmen entities and foreign investors. These agreements aim to facilitate joint ventures and collaborative projects that promise to boost the country's energy production and export capacity. Notably, there was significant interest in developing pipeline infrastructure to improve regional connectivity and market access.

A veritable who's who of speakers

The Forum opened with an introductory message from Turkmenistan's President, Serdar Berdimuhamedov, delivered on his behalf by his advisor on oil and gas issues — Ashyrguly Begliev.

The head of state underscored the country's aspirations to harness the immense potential of its natural resource base not only in the interest of its citizens, but other regions around the world. "We are undertaking targeted and constructive measures in this

Serdar Berdimuhamedov, President of Turkmenistan.

Ashyrguly Begliev, Advisor to the President on Oil and Gas issues.

Haitham Al Ghais, OPEC Secretary General, delivers remarks in a pre-recorded message.

Dr Ayed S Al-Qahtani, Director of OPEC's Research Division, speaking at a panel session.

regard, which this International Forum is intended to expand on", he noted.

The President mentioned that the country's priority energy goals include, "the scale-up of mutually beneficial cooperation with international partners on the development of on and offshore oil and gas fields in the Turkmen section of the Caspian Sea, development of the Galkynysh gas storage facility and the construction of the Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline, which could provide significant support to regional energy security".

"In this context, we pay special attention to full compliance with the most recent and relevant international standards in the field of production digitalization, the introduction of next-generation technologies, economic industrialization and environmental protection", he added.

In expressing his certainty in the productive and constructive nature of the event, the President left delegates with one final message before 'cutting the Forum's ribbon' — "the country must continue to take comprehensive measures to extract, export and process hydrocarbons while reducing methane emissions from industrial enterprises… and Turkmenistan joining the Global Methane Pledge during COP28 is a significant milestone in this regard."

OPEC Secretary General, Haitham Al Ghais, pre-recorded a message that was played during the plenary session, which shone a spotlight on

Panelists for the session, 'Reducing methane and CO_2 emissions in hydrocarbon production and alternative energy sources'.

View of the airport in Ashgabat, the capital of Turkmenistan.

Turkmenistan's role in the future of the global energy landscape.

In his remarks, Al Ghais called Turkmenistan a "global energy player", which is "well positioned to become an increasingly diversified energy hub" given its advantageous geographic position and proximity to the expanding energy demand region of Asia, as well as Europe to the west.

Stressing the timelines of such conferences, the Secretary General referenced the Organization's flagship *World Oil Outlook*, stating that OPEC sees "energy demand increasing by 23 per cent by 2045" on the back of increased demographic and economic growth, accelerated urbanization and concerted efforts to alleviate energy poverty.

A large section of the Secretary General's address was devoted to the twin challenge of ensuring energy security and reducing emissions. "It is important to act with determination to ensure that emissions are reduced, and people have access to the energy products and services they require to live a comfortable life", Al Ghais stressed. He named carbon capture utilization and storage, direct air capture, carbon dioxide removal and clean hydrogen as technologies which could help on the road to achieving this ambitious goal. The Secretary General also echoed President Berdimuhamedov's closing message, citing Turkmenistan's commitment to the Global Methane Pledge as a viable way of addressing this complex issue.

Turning to the issue of investment, the Secretary General underscored the crucial nature of events such as TIEF-2024 for producers, consumers and the global economy at large, as the Secretariat projects "oil industry investment requirements totaling $14 trillion, or around $610 billion per year" on the 2045 horizon.

In closing, Al Ghais expressed OPEC's appreciation for its evolving dialogue with Turkmenistan, one that, hopefully, could facilitate the proliferation of pathways "that focus on an inclusive 'all-peoples, all-fuels and all-technologies' approach".

The plenary session also included interventions from Batyr Amanov, Vice-Chairman of the Cabinet of Ministers of Turkmenistan; Maksat Babayev, State Minister of Turkmenistan — Chairman of the Turkmengas State Corporation; and Tatiana Molcean, Executive Secretary of the United Nations Economic Commission for Europe, among others.

On behalf of the OPEC Secretariat, Dr Ayed Al-Qahtani, Director of the Research Division, participated in a panel session entitled 'Reducing methane and CO_2 emissions in hydrocarbon production and alternative energy sources'. In his remarks, Dr Al-Qahtani underscored the significant emissions' reduction potential of existing technologies, such as Carbon Capture, Utilization, and Storage, Direct Air Capture and hydrogen, as well as such concepts as the circular carbon economy. He also dedicated special attention to the remarkable strides made by OPEC Member Countries in deploying renewables, increasing energy efficiency, as well as reducing methane emissions and minimizing gas flaring.

Celebrating a profound cultural heritage

Alongside TEIF-2024, Turkmenistan's Ministry of Culture, in collaboration with its Embassy in France and permanent delegation to UNESCO, hosted a cultural event honouring the legacy of poet

Magtymguly Fragi and celebrating the wordsmith's 300th anniversary at the UNESCO headquarters on 24 April.

The programme included a concert by the Turkmenistan State Symphony Orchestra, the Kushtdepdi rite of song and dance, as well as astonishing performances of poetic musical storytelling known as bakhshi. An exhibition dedicated to Magtymguly's life also ran from 22 to 26 April.

Monument of Magtymguly Fragi, Turkmen spiritual leader and philosophical poet , in Ashgabat, Turkmenistan.

A pillar of Turkmen culture

Magtymguly Fragi, often referred to as the "father of Turkmen poetry", is a seminal figure in the nation's history. Having profoundly impacted Turkmen society through his evocative poetry and philosophical insights, his literary works became a beacon of Turkmen identity, unity, and moral integrity, deeply influencing the cultural landscape of his people in the 18th century — a time of significant social and political upheaval.

Magtymguly's poetry, characterized by vivid imagery and profound emotional depth, played a crucial role in shaping and preserving the Turkmen language. The commitment to write in his mother tongue at a time when Persian and Arabic were the dominant regional literary languages could be described as both a cultural assertion and a means of ensuring that his messages resonated directly with his compatriots.

Central to Magtymguly's poetry was his call for solidarity among the fragmented Turkmen tribes, with his poignant appeals eclipsing political divisions and striking at the emotional heart of his audience. The philosopher's works are imbued with ethical teachings and reflections on such human virtues as honesty, courage, justice, and compassion. Oftentimes he meditated on themes of love, nature and the human condition. Through his poetry, Magtymguly imparted moral lessons that shaped the ethical framework of the Turkmen society we see today.

If the turnout in Paris at the end of April is anything to go by, his ability to articulate the collective aspirations of his people endowed his poetry with an enduring quality, ensuring it transcends the sands of time.

Turkmenistan is located by the Caspian Sea.

WEC marks 100 years in Rotterdam

The origins of the World Energy Congress (WEC) date back to 1924, with the very first event, then known as the World Power Conference, held in London. One hundred years later, the 26th WEC took place in Rotterdam, the Netherlands. Under the theme 'Redesigning energy for people and planet', this year's WEC looked to bridge "sectors, geographies, generations and systems to make faster, fairer and more far-reaching energy transitions happen". The OPEC Bulletin *reports on the city of Rotterdam, the event itself, and the Secretariat's presence.*

Rotterdam's history can be traced back to the mid-13th century when a dam was constructed in the river Rotte on the site of present day Hoogstraat. Rotterdam received municipal (city) rights in 1340 by William IV, Count of Holland, and over the centuries the city grew from a fishing village into an international centre of trade, transport, industry and distribution.

Today, the city hosts the largest port in Europe, and the 10th largest in the world, with an extensive distribution system of rail, road and waterway access through the Rhine, Meuse and Scheldt. It is an easily accessible city, a place of connections, including the Erasmus Bridge (see page 47) that links the northern and southern parts of city, and it has been labelled the Gateway to Europe.

It also plays a vital role in the throughput, storage and distribution of crude oil in Northwest Europe. According to the Port of Rotterdam, "the crude oil in Rotterdam comes mainly from the Middle East and the North Sea region ... the 95 to 100 million tonnes (m t) of crude oil annually entering Rotterdam are almost entirely destined for refineries in the port itself and in the Netherlands, Belgium and Germany."

The port has five oil refineries itself, which form the core of the petrochemical cluster in the area. The Port of Rotterdam says that half of the crude oil arriving there "is transported to BP, ExxonMobil, Shell and Vitol refineries in the port. The other half is transported to refineries in Vlissingen, Antwerp and Germany."

At the refineries, the crude oil is processed into various oil products, such as gasoline, diesel, liquified petroleum gas, fuel oil, naphtha, heating oil and feedstock for the chemical industry.

Porthos project

The Port of Rotterdam aims to be a CO_2-neutral port by 2050, and one of the projects pushing this goal is Porthos, which is focused on capturing and storing CO_2. The project is looking to transport CO_2 from industrial companies in the port of Rotterdam and store it in empty gas fields under the North Sea.

According to the Port of Rotterdam, “Thanks to Porthos, some 2.5 m t of CO_2 will be captured annually and stored permanently.” On land, the project aims to build some 30 kilometres of pipeline into the ground, and in the North Sea, there is set to be another pipeline up to 20 kilometres off the coast.

The Porthos system is expected to be operational in 2026.

World Energy Council

Dr Angela Wilkinson, Secretary General and CEO, WEC.

WEC in 2024

Rotterdam’s past and present and its role in the energy industry made the city an ideal location for the 26th WEC and 100th anniversary of the event. The inclusive and immersive conference and exhibition, which brought together a plethora of energy industry professionals to discuss both the challenges and opportunities for energy systems in the years and decades ahead.

Dr Angela Wilkinson, Secretary General and CEO, World Energy Council said: “It is important to develop a shared and deeper understanding of the role of increasingly diverse energy systems in enabling a safe operating space for humanity. It is urgent to involve more people and communities and identify leading practices in inclusive implementation. The best way forward is to support diverse regions in leading with and learning from each other and appreciate the diversity of place-based, clean and just energy transitions.”

With an impact-focused content programme of 60+ sessions, and with 4,000 international energy stakeholders present, the four-day event enabled the highest levels of government-to-government dialogue and united businesses and communities of all shapes and sizes.

Overall, the Congress covered a wide range of topics related to the ongoing discussion about the direction of travel for the global energy system. Speakers at the Congress again emphasized the importance of the energy trilemma, and that all its components, energy

Exhibition booths at WEC.

World Energy Council

Dr Ayed S Al-Qahtani, Director of OPEC's Research Division, delivering a presentation on OPEC's World Oil Outlook at WEC.

security, accessibility and affordability, must develop simultaneously.

In this respect, as future energy demand will shift to developing countries, participants were vocal about the urgent need to support the Global South in improving energy accessibility and eradicating energy poverty. During the CEO Leadership Dialogue, Amin H Nasser, President and CEO of Aramco, argued that the world needs to search for solutions that are affordable for the Global South, where accessibility comes first, and then talk about sustainability.

OPEC at the WEC

OPEC organized a side event at the WEC, where the main findings of the World Oil Outlook (WOO) 2023 were presented by Dr Ayed S Al-Qahtani, Director of OPEC's Research Division. He highlighted that demand for energy, oil in particular, will continue to grow for decades to come, given the expected expansion in the global economy, population and urbanization.

Dr Al-Qahtani also emphasized that the oil industry requires investments of more than $14 trillion by 2045 to meet the growing demand for oil and ensure energy security. "These investments are critical to provide the world with the oil supplies it requires for development and prosperity," he stressed.

Senior Research Analysts, Dr Jan Ban and Dr Haris Aliefendic, also joined the discussions, elaborating on the costs of integrating renewables and higher interest rates on capital-intensive projects.

The OPEC Secretariat hosted a stand at the WEC, which attracted visitors from across the globe, including many young professionals. On the sidelines, Hasan AlHamadi, then Officer-in-Charge of OPEC's Public Relations and Information Department, led a session

Former OiC PRID, Hassan AlHamadi, at the OPEC booth.

Connecting Rotterdam

The Erasmus Bridge is viewed as Rotterdam's most iconic landmark and is featured in the city's logo. The 802 metre long bridge is the connection between the northern and southern parts of Rotterdam and was completed in 1996.

The bridge traverses the New Meuse and was designed by Ben van Berkel. The cable-stayed bridge system has a single 139-metre-high asymmetrical pale blue pylon with an eye-catching horizontal base, earning the bridge its nickname 'The Swan'. The bridge's weight is said to be the equivalent to 1,700 adult elephants (approximately 6,800 tonnes).

The southernmost span of the bridge has an 89-metre-long (292 ft) bascule bridge for ships that cannot pass under the bridge. The bascule bridge is the largest and heaviest in Western Europe and has the largest panel of its type in the world.

The bridge got its name from philosopher Desiderius Erasmus, a Rotterdam native, and it is said that it can hold up to 10,000 people on deck at the same time.

Its fame can also be seen in films and sporting events. The bridge featured in the 1998 Jackie Chan film *Who Am I?*, planes flew underneath it as part of the 'Red Bull Air Race' in 2005, and it has been ridden over in both the 2010 and 2015 editions of the Tour de France.

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of informal discussions with young professionals from the energy industry.

During the session, he highlighted that oil will continue to play a critical role in the global energy landscape, noting that in OPEC's research forecasts, global demand for energy and oil are expected to grow significantly by 2045. "Even renewables require petroleum-based products," he added.

AlHamadi also pointed out that the oil industry is dynamic and multidisciplinary, and requires diverse skill sets and education in science, technology, engineering and other fields. He added that the oil industry provides the youth with an opportunity to make an impactful change and meaningful contributions to their countries and the international community.

Visitors to the OPEC booth with Secretariat staff.

Reimagine Resource-Rich Namibia: Turning Possibilities into Prosperity

The 6th Namibian International Energy Conference

The 6th iteration of the Namibian International Energy Conference took place on 23–25 April in Windhoek. The event provided attendees with opportunities to engage with a wide variety of industry stakeholders and reflect on the history and potential of Namibia as a blossoming energy producer.

The comprehensive three-day programme encompassing a wide variety of high-level fireside chats and laser-focused technical panel sessions made sure to leave no stone unturned in addressing some of the most pressing issues on the African continent's energy agenda. Topics for discussion included green industrialization, the optimization potential of large-scale hydrogen production, the Namibian energy sector's M&A landscape, empowering local entrepreneurial spirit, the role of renewables in the Namibian energy mix, and the country's potential in becoming a leading energy infrastructure hub.

Setting the scene for an intense programme

OPEC Secretary General Haitham Al Ghais pre-recorded a message that was played following the opening

Haitham Al Ghais, OPEC Secretary General, speaks to the event's attendees in a pre-recorded message.

NIEC 2024 / Oye Creative Studio

ceremony, which included interventions from the Conference's organizers, partners and sponsors — RichAfrica Consultancy, Namibia's National Petroleum Corporation, Chevron International Exploration & Production, the African Energy Chamber, Rand Merchant Bank and Shell Namibia.

In his remarks, Al Ghais lauded Namibia as "the next frontier" of the oil industry, stressing that "recent discoveries, particularly those in the deepwater Orange Basin, have been some of the most exciting global finds this century… [however], these potential new fields only scratch the surface of Namibia's hydrocarbon basin." The Secretary General commended the Namibian Government for its "determination to accelerate the development of these discoveries and utilize every energy resource available to the country to benefit Namibian citizens", as is the country's sovereign right.

Al Ghais expressed OPEC's steadfast support for the continued development of Namibia's energy sector, especially considering the complex nature of the global energy landscape and the vast experience accumulated by the Organization and its Member Countries over the course of the six decades since its establishment. "We would be happy to intensify cooperation with Namibia across a broad range of fronts", highlighted Al Ghais.

Referencing OPEC's flagship World Oil Outlook, Al Ghais stressed that given the intense global demographic and economic dynamics projected for the first half of this century, as well as the decisive role that oil will continue to play in the global energy mix, "Namibian oil will be vital in meeting the future demand needs of consumers."

A large section of the Secretary General's address was devoted to the great challenge of energy poverty. He noted that "of the 675 million people worldwide lacking access to electricity, four out of five of them live in Sub-Saharan Africa. Around 2.3 billion people still rely on inefficient and polluting cooking systems, endangering their health, restricting their life opportunities, and causing environmental degradation." Al Ghais stated that the act of balancing concerns regarding emissions reductions, energy security and sustainable development can be realized through various pathways which must be "adjusted to national and local circumstances." He added that technological innovation will play a key role in this process, and that OPEC Member Countries are actively exploring investment opportunities in such areas as hydrogen, carbon capture, utilization and storage, direct air capture and the circular carbon economy.

In conclusion, the Secretary General reiterated OPEC's determination to ensure a worldwide investment-friendly climate, expressed the Organization's positivity regarding the vast potential of the OPEC-Namibia dialogue going forward and encouraged investors to "look at Namibia and the abundance of possibilities [therein]."

"Namibia constitutes the oil industry's next frontier."

— Haitham Al Ghais, OPEC Secretary General.

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Hon. Tom Alweendo, Minister of Mines and Energy, Republic of Namibia, during the opening address.

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> “ … in time, partners will understand that investing in a developing country like Namibia provides a much greater return on investment as it assists in transforming the economy into a more complex and dynamic one.”
>
> — ***Hon. Tom Alweendo, Minister of Mines and Energy, Republic of Namibia.***

The strong voice of a burgeoning industry

An opening address from the Hon. Tom Alweendo, Minister of Mines and Energy, Republic of Namibia, followed.

Minister Alweendo began by elaborating on the transformative impact that recent oil discoveries in the country’s Orange Basin, potentially the largest in Sub-Saharan Africa, could have on the Namibian economy, stressing the key role that private sector investment should play in such developments, especially considering the untapped potential and “immense promise” of the mostly unexplored Walvis, Lüderitz and Namibe Basins. He noted that “in time, partners will understand that investing in a developing country like Namibia provides a much greater return on investment as it assists in transforming the economy into a more complex and dynamic one.”

The Minister stressed that the issue of “local content” constitutes a priority for the African nation, with policies requiring a percentage of goods and services to be sourced locally and jobs filled by Namibians. He underscored the necessity of learning from past mistakes and adopting best practices from successful petroleum economies to create sustainable economic impact and develop local skills in energy-related professions.

Minister Alweendo took the time to direct concrete messages to specific groups of stakeholders. Speaking to investors, he called for collaboration and the development of strategies tailored to the development of Namibia’s oil and gas potential. Addressing local entrepreneurs, he urged for collaboration and competitiveness, emphasizing the need to proactively seek out and acquire industry know-how: “Oil and gas is a new industry for us, and this should embolden us to acquire as much industry knowledge, training and insight as possible.” Alweendo implored policymakers, oil companies and NGOs to promote transparency and good governance in order to maintain Namibia's attractiveness as an investment destination.

The message Alweendo chose to close with was perhaps the most poignant of all. Echoing the OPEC Secretary General's point regarding "national circumstances" he called for a pragmatic approach to Namibia's energy transition pathway: "Naturally, we share the goal of reaching net zero. However, we must do so in a manner that does not impede Namibian development or exacerbate local energy poverty. Namibia, like our fellow African nations, deserves a transition that is not hurried or forced according to others' timetables. We deserve a transition that factors in our goals, concerns and priorities. We need an energy strategy that promotes and protects the well-being of our citizens and our economy. We deserve an energy transition that takes a pragmatic approach to resolving energy poverty by ensuring that our own natural resources are a part of that solution."

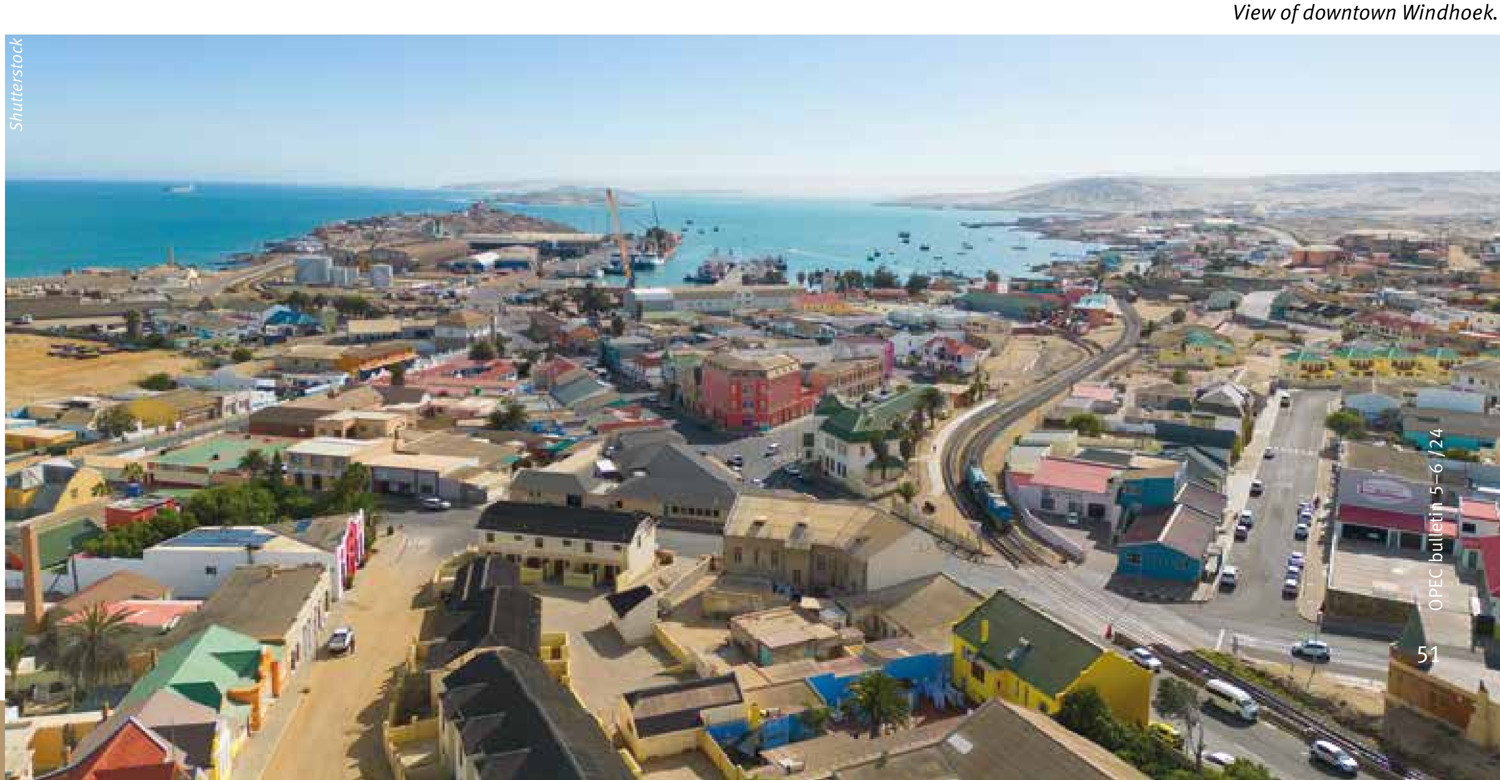
In conclusion, Minister Alweendo thanked the conference attendees and invited them to explore Namibia's diverse investment opportunities beyond oil and gas, encouraging broader engagement with the country's vast economic potential.

Dr Abderrezak Benyoucef, Head of OPEC's Energy Studies Department, shared key messages from OPEC's World Oil Outlook.

An expanded dialogue

OPEC was also given the opportunity to headline a key element of the programme and present its World Oil Outlook, with Dr Abderrezak Benyoucef, Head of the Secretariat's Energy Studies Department, covering the main findings of the flagship publication's most recent iteration. Furthermore, Dr Benyoucef also took part in a panel session moderated by NJ Ayuk, Executive Chairman of the African Energy Chamber, which endeavoured to assess the current state and vast potential of Namibia's upstream oil and gas industry. Other panelists included representatives of Namibia's National Petroleum Corporation, ExxonMobil, Chevron, Galp Energies and Woodside Energy.

View of downtown Windhoek.



Technical meeting convenes to discuss non-OPEC supply prospects

On 29 May 2024, the OPEC Secretariat hosted the 15th OPEC-non-OPEC Technical Meeting under the framework of the Charter of Cooperation. Delegates from OPEC and non-OPEC countries joined together with industry experts to discuss recent developments and consider outlooks related to non-OPEC supply. The OPEC Bulletin*'s* ***Scott Laury*** *reports.*

The meeting, now in its 15th iteration, began with a series of presentations from leading oil and gas industry experts and was followed by a question and answer session.

Discussions centered on current and near-term non-OPEC supply outlooks, as well as on growth potential in key producing regions and the key issue of industry investment.

In his opening remarks, OPEC Secretary General Haitham Al Ghais welcomed attendees to the OPEC Secretariat and emphasized the importance of ongoing OPEC-non-OPEC collaboration at the technical level.

"This meeting, now in its 15th iteration, was borne out of the landmark Declaration of Cooperation (DoC) and over the years has become a highly valuable meeting and an integral part of the ongoing Charter of Cooperation (CoC) framework," he said. "These technical meetings have proven to be a highly effective means for OPEC and its non-OPEC partners to exchange views on key energy issues while also deepening ties between our delegations. This will be vital in the years and decades ahead as the world looks to chart sustainable energy pathways for all."

Charter of Cooperation

The CoC was established in 2019 as a permanent platform for dialogue and the exchange of outlooks on key global energy themes, from supply and demand trends to innovation and technology to climate change and energy security.

The collaborative framework continues to provide valuable opportunities for enhanced cooperation on many fronts.

In this regard, the Secretary General highlighted the fact that two Charter Members will be hosting the upcoming UN climate conferences.

"We welcomed the success of COP28 last year in the United Arab Emirates (UAE), and we offer our full support to Charter members Azerbaijan and Brazil, which will respectively host COP29 and COP30," he stated. "OPEC, the DoC and the CoC are all vital components of our global energy future."

Non-OPEC supply outlooks

The event's theme focused on near-term non-OPEC supply outlooks and examined challenges and opportunities for supply growth in key producing regions. Additionally, delegates discussed the crucial issue of industry investment, particularly in relation to ensuring future supplies are sufficient to meet rising demand.

To set the stage of discussions, Secretary General Al Ghais shared OPEC's analysis on non-OPEC supply and industry investment.

"This year and in 2025, we expect the main non-OPEC liquids supply growth to come from the US, Canada, Brazil and Norway. The US is expected to expand by just under 1 million barrels a day (mb/d) over the two years combined, followed by Canada at 0.4 mb/d and Brazil at 0.3 mb/d," he explained. "According to the latest numbers, in terms of investment, we forecast non-OPEC upstream oil and gas investment to grow by just two per cent in 2024 to reach $507 billion ($ bn), while in 2025, it is expected to decline by an estimated four per cent to $487 bn."

Industry investment crucial

The Secretary General emphasized that this declining trend in non-OPEC upstream investment is of concern, and should be

The technical meeting in session.

considered a wake-up call for the global industry in relation to long-term investment.

"Here, it is important to underline that in the longer term, the global industry will need to ramp-up investment significantly in order to meet rapidly rising demand," he said. "To illustrate this, our latest World Oil Outlook puts cumulative oil-related investment requirements from now until 2045 at approximately $14 trillion, or around $610 bn on average per year. This massive spending will be required given the forecasted rise in oil demand, which is expected to reach 116 mb/d by 2045."

He urged energy leaders to make this issue a top priority for the future of the industry.

"Investment must be an industry priority if we hope to maintain security of supply and avoid unwanted volatility in the years ahead," he stated. "All industry stakeholders need to work together to ensure a long-term investment-friendly climate, with sufficient finance available. One that works for producers and consumers, as well as developed and developing countries."

Discussion on outlooks

OPEC's perspectives purveyed by the Secretary General set the stage for the day's discussions, which were held under Chatham House Rule.

A few key points made during the meeting include:

- Non-OPEC supply, particularly in South America, is poised to experience significant growth during 2025, with Brazil being one of the dominant producers.
- Production in the US continues to lead non-OPEC supply growth until 2026, particularly in terms of tight oil, however, supply in the US is forecast to plateau in 2027/2028 and steadily decline thereafter.
- In the medium term, non-OPEC supply growth will be concentrated offshore, and the industry will continue to see enhanced efficiencies.
- Exploration and production (E&P) business models in the US have fundamentally changed from a focus on growth to returns.
- E&P reinvestment rates have dropped substantially as companies focus on returns.
- Industry investment continues to be a major issue in terms of ensuring that there is adequate supply to meet rising future demand.
- A slower energy transition could result in an increased call on OPEC and non-OPEC oil later in the decade.

New insights

In closing the event, the Secretary General remarked on the productive and interactive nature of the event, which, he added, brought new understanding and insights to the topic at hand.

"In addition to the excellent presentations, I was pleased to see the enthusiastic discussions that took place as part of our question and answer session," he said. "Indeed, this is a key reason the CoC was established — to provide a forum for this type of dialogue and cooperation."

And, finally, regarding the issues at hand, he emphasized, "the issues we discussed today are pivotal to our industry's future, and we indeed have gained a deeper understanding of their complexities through the outlooks and insights shared."

Climate Change meeting addresses myriad of issues

The 25th Coordination Meeting on Climate Change, held on 22 May, on the heels of a meeting with the President-Designate from Azerbaijan for the 29th session of the Conference of the Parties (COP29), covered a number of evolving issues that are currently taking center stage in climate change negotiations.

Mukhtar Babayev, Minister of Ecology and Natural Resources of the Republic of Azerbaijan and COP President-Designate for COP29, shared his views and hopes of inclusive and balanced outcomes the Presidency aims to achieve at this year's COP, while OPEC offered its full support for a successful outcome.

Following this high-level dialogue, in his opening remarks for the Coordination Meeting, OPEC Secretary General Haitham Al Ghais congratulated OPEC Member Country the United Arab Emirates (UAE) for holding a successful and historical COP at the end of 2023. He called COP28, set in Dubai, a "game-changer", saying, "It is very significant that the COP was held in an OPEC Member Country. The event also saw the unprecedented attendance of 100,000 delegates, approximately a three-fold increase over the previous COP. The UAE managed the situation beyond expectations given the broad agenda of priorities, including smooth running of the many high-level events."

He added that OPEC had a pavilion at a COP for the first time — highlighting efforts by OPEC Member Countries to contribute to global efforts to reduce emissions — which was well-attended.

He further honored the Declaration of Cooperation (DoC) countries for collaborating effectively and remaining fully involved in the United Nations Framework Convention on Climate Change (UNFCCC) processes.

"We appreciate you being with us. It gives us more weight at climate discussions," Al Ghais added.

Al Ghais summarized what was accomplished at COP28, including noting that for the first time an outcome of the global stocktake (GST) under the Paris Agreement was agreed, which incorporates different mitigation options for enhancing climate ambition in the light of national circumstances.

"A key element is the reference to transitioning away from fossil fuels in a just, orderly and equitable manner," the SG stated,

The GST outcome is a long document, and talks about the need to support developing countries, including through finance, technology transfer and capacity building. It also notes the importance of energy security and promoting different technologies within the energy system.

"It is meant to be considered by Parties in its entirety. A cherry-picking approach of selecting individual elements of the decision should not be supported," stated Al Ghais.

OPEC Secretary General added that it is vital to ensure that Parties' contributions to the aspirational goals for reducing global greenhouse gas emissions abide by the principles of equity and common but differentiated responsibilities and respective capabilities, in the context of sustainable development and poverty eradication.

Al Ghais additionally referred to an important initiative by oil and gas companies, launched in Dubai by the COP28 Presidency and Saudi Arabia. He said, "This is the Oil and Gas Decarbonization Charter, which was signed by 52 companies, including OPEC national

OPEC Secretary General, Haitham Al Ghais (c), addresses delegates.

oil companies. It shows that the oil and gas industry is willing and able to play a strong role in reducing energy-related emissions."

The meeting went on to examine issues under discussion in the climate change discourse, including the latest developments in UN climate negotiations; negotiations on plastics pollution, which are slated to wrap up by the end of this year with an expected binding instrument; key elements of the first GST outcome; an introduction to the 7th cycle of the Intergovernmental Panel on Climate Change; and climate finance issues in the run-up to COP29.

On the latter, the SG urged countries to be involved at the upcoming COP29 in Azerbaijan, Baku, a DoC country, as Parties are expected to agree on a new collective quantified goal on climate finance.

The Secretary General assured all at the meeting that the Secretariat will continue to support countries at all upcoming UN climate sessions and discussions and facilitate countries' engagement, enhancing understanding to ensure inclusive and balanced outcomes.

The OPEC Pavillion at COP28.

Baku Stadium in Azerbeijan will be the venue for COP29.

2024 MDTC draws enthusiastic crowd

The 2024 Multi-Disciplinary Training Course (MDTC), held via teleconference and in person, drew a large number of participants, with 35 attending in person, and another 23 online. The inter-disciplinary event was first inaugurated in 1999 and will reach its 25th anniversary next year.

OPEC Secretary General, Haitham Al Ghais, delivered welcoming remarks to an enthusiastic group, emphasizing that the MDTC is one of the most rewarding events of the year for OPEC.

The young professionals received deep insights into OPEC and the world oil market over an intensive, three-day span, along with the opportunity to meet with OPEC experts and analysts.

"The oil industry has been largely responsible for the development of society in recent decades. We would not be able to sit on the chairs we use, wear the glasses that enable us to focus, work on computers, surf on cell phones, use any form of transportation, have food at our fingertips in grocery stores, offer our sick loved ones breakthrough medications and medical devices, without oil and its associated products," said Al Ghais.

"We are generally not conscious of the every day effect oil has on our lives, which is why I want to draw your attention to it now. I want you to be proud to be part of this industry, which has graced humankind with its versatility and omnipresent support of development."

He added that oil will be vital to the future of the planet as well, enabling energy security to allow people to maintain healthy, productive lifestyles and in helping bring millions more out of poverty.

OPEC's most recent World Oil Outlook states that oil is set to remain the main global energy source to 2045.

Overall, we see demand rising to 116 million barrels a day (mb/d) by 2045.

Al Ghais added that there is enough supply to meet growing demand and that this can be done while reducing emissions.

"The oil industry is also taking huge strides to reduce emissions. The industry, with OPEC Member Countries playing an important role, is already investing heavily in hydrogen projects, carbon capture utilization and storage facilities, carbon dioxide removal, direct air capture and the circular carbon economy," he said.

Participants had the opportunity to learn about all the offices and departments at OPEC, including: The Office of the Secretary General, Legal Office, Research Division under which the Petroleum Studies Department and Energy Studies Department, along with the recently formed Environmental Matters Department co-exist. Presentations also covered the Data Services Department and Support Services Division, including Finance and HR, the Public Relations and Information Department, along with Administration and IT.

> *"... I want you to be proud to be part of this industry, which has graced humankind with its versatility and omnipresent support of development."*
>
> ***— Haitham Al Ghais, OPEC Secretary General.***

> *We must listen to all voices, including those who are currently struggling with energy poverty and are more concerned with having food on the table and lighting their homes.*
>
> ***— Haitham Al Ghais, OPEC Secretary General.***

"None of these offices or experts work in isolation. We are all part of a collaborative team, supporting each other. Indeed, our hard-working, knowledgeable staff are the backbone of OPEC. We are a multicultural and multitalented group of 134 staff from 42 nations. The dedication of this group is incomparable and I am proud to be a part of this amazing Organization," said Al Ghais. He encouraged participants to take advantage of all the opportunities the MDTC brings, including networking with OPEC experts and each other.

In closing the event, Al Ghais expressed gratitude to participants and their respective OPEC Member Countries for providing them with the opportunity to attend, and noted that the Secretariat deeply appreciates their enthusiasm for the course, which was interactive, informative and enjoyable.

Al Ghais said, "Your role, as the industry's leaders of tomorrow, is to find a path through this change that ensures prosperity for all, balanced with environmental concerns. It is a challenging task, but one that is necessary and which I believe you are prepared for. It can also be viewed as an exciting, positive opportunity; a chance to bring constructive solutions to the world."

He added that it is important to keep the industry stable, productive and forward-thinking, including focusing on short-, medium- and long-term oil market dynamics, as well as strengthening and deepening cooperation with all energy market participants. In addition, a focus on technological developments that will help fulfil climate change and other goals is crucial.

Al Ghais further stated: "We must listen to all voices, including those who are currently struggling with energy poverty and are more concerned with having food on the table and lighting their homes than any talk of energy transitions. Today, 675 million people still lack electricity access globally, most of who are located in least-developed countries. At the same time, 2.3 billion people still use unsuitable cooking fuels that jeopardize their health."

Delegates with certificates at the 2024 MDTC.

Secretariat hosts 23rd Annual Statistical Meeting

In early June, the OPEC Secretariat hosted the 23rd Annual Statistical Meeting (ASM) with attendees from Member Countries. The three-day meeting facilitates the exchange of data and information between OPEC and its Member Countries, as well as countries participating in the Charter of Cooperation (CoC). This supports the Organization's ongoing efforts to enhance data transparency and provide richer insights into the industry.

From 3–5 June, Member Country delegates and staff from OPEC's Research Division, in particular those from the Data Services Department (DSD), met to discuss issues related to data flows and data collection methods.

Speaking on behalf of Haitham Al Ghais, OPEC Secretary General, the Director of OPEC's Research Division, Dr Ayed S Al-Qahtani, underscored how the meeting has been a vital one for the Secretariat and Member Countries for three decades.

Noting that the ASM is now in its third year of including non-OPEC partners in the CoC, Al-Qahtani said that the event continues to "greatly contribute to enhanced data transparency, accuracy and timeliness."

Importance of data

He added that this is critical, "given that the accurate and timely provision of data supports physical and financial markets and corresponding investment decisions. Indeed, it is not an exaggeration to state that this data sets the stage for current and future developments in our industry."

Dr Ayed S Al-Qahtani, the Director of OPEC's Research Division, delivers opening remarks on behalf of Haitham Al Ghais, OPEC Secretary General.

Delegates at the OPEC Secretariat for the 23rd Annual Statistical Meeting.

In addition, he noted, "this data plays a crucial role in supporting CoC countries' commitment to strengthen their cooperation through a dynamic and transparent framework, including regular monitoring and joint analyses and outlooks for sustainable market stability in the medium to long term, for the benefit of producers and consumers."

Since the ASM's inception, a great deal of progress has been made given the open lines of communication and positive and proactive collaboration between the Secretariat, Member Countries, and more recently with the non-OPEC countries in the CoC.

The three days saw delegates assess data submissions, engage in interactive discussions on data collection practices and explore avenues for improving the quality of data. The interactive sessions were moderated by Huda Ali Hamadi Almwasawy, Head of DSD.

Links to the ASB

It is also worth noting that the ASM meeting is directly linked to the production of the Annual Statistical Bulletin, or ASB, one of the Secretariat's flagship publications.

First published in 1965, the ASB offers a wide range of data on the industry worldwide, as well as key economic indicators, serving as a leading source of reliable and accurate information for policymakers, industry professionals, research analysts and academics.

The 59th edition of the ASB is scheduled to be launched in early July.

Iran Oil Show 2024:

Joining businesses to cooperate in the oil, gas, petrochemicals and refining industries

The 28th Iran International Oil, Gas, Refining and Petrochemical Exhibition took place in Tehran, from 8 to 11 May 2024.

The exhibition (also known as the Iran Oil Show) is regarded as one of the biggest industrial and commercial events in the region. The event is held every year at Tehran's permanent exhibition center, located in the north of Tehran, with a total area of about 850,000 square metres, and showcases exhibitors representing local and international industry-related companies. The exhibition center also has about 22 hectares of green space that create a pleasant environment for participants and visitors.

As one of the leading exhibitions in the Middle East and the fifth-largest in the world in terms of size and number of participants, the event attracts domestic and foreign businesses from the oil, gas, petrochemicals, and refining industries. Products, technologies, future projects and various other contributions that support growth in the oil and gas industry are displayed. More than 1,500 Iranian firms and 250 companies from 12 countries took part in this year's exhibition, held under the motto, "Petroleum industry, production leap and technological optimization".

OPEC is proud to be associated with this prestigious event and participated in this year's edition with a booth displaying its flagship publications, while raising awareness about its Member Countries, goals and objectives through a variety of interactive activities.

The opening ceremony

The event was officially opened on 8 May 2024, with a ceremony that was attended by IR Iran's Minister of Petroleum, Eng. Javad Owji; Eng. Mohsen

Eng. Javad Owji, IR Iran's Minister of Petroleum, speaks at the podium.

Shana Photo / Ali Ahmadvand

Opening of the exhibition.

Khojastehmehr, Deputy Minister and CEO of the National Iranian Oil Company (NIOC); Dr Ahmad Asadzadeh, Deputy Minister for International Affairs and Trade; Eng. Morteza Shahmirzaie, Deputy Minister and Managing Director of the National Petrochemical Company of Iran (NPC); Eng. Majid Chegeni, Deputy Minister and CEO of the National Iranian Gas Company (NIGC); Eng. Jalil Salari, Deputy Minister and CEO of the National Iranian Oil Refining and Distribution Company (NIORDC); Eng. Mohamed Hamel, GECF Secretary General, as well as other members of the Iranian Parliament, several Ambassadors to IR Iran and other officials and senior oil industry directors.

Speaking at the inauguration ceremony, Owji emphasized the important role of domestic companies in implementing large projects.

In his opening speech, he said, "Last year we signed a number of contracts for the implementation of some large projects. These projects will be carried out by relying on domestic companies' capabilities that we can see [through] their active presence at [this exhibition]."

In outlining the Ministry of Petroleum's plan for the current Iranian year, Owji said, "By the end of the last

The Tehran International Permanent Fairground was the venue for the 28th Iran International Oil, Gas, Refining and Petrochemical Exhibition.

Dr Ahmad Asadzadeh, IR Iran's Deputy Minister of Petroleum for International Affairs and Trade, was accompanied by delegates from the Ministry of Petroleum and visited OPEC's booth at the exhibition.

Iranian year (19 March 2024), we completed about 132 unfinished projects worth $28.5 billion ($ bn), and at the same time started the implementation of 50 projects worth $47.5 bn."

Several announcements were made during and on the sidelines of the event, reflecting the important role IR Iran plays in the industry, its advanced research capabilities and strategic planning, as well as national oil and gas capacities. For example, Shahmirzaie announced IR Iran's intention to launch 15 petrochemical projects by the end of the current Iranian calendar year.

SHANA also reported that IR Iran's natural gas production capacity increased by 60 million cubic meters per day in last Iranian calendar year (ended 19 March 2024) quoting the NIGC CEO Chegeni.

OPEC booth

OPEC had a prominent booth at the exhibition, located next to IR Iran's Ministry of Petroleum, IR Iran's National Oil Company, as well as the Museums and Documentation Center of IR Iran's oil industry.

The OPEC booth was well attended and attracted many visitors who were interested in knowing more about the Organization's goals and objectives. Representatives from the OPEC Secretariat working at the booth familiarized the public with OPEC's history, flagship publications, Member Country initiatives and technologies in reducing greenhouse gas emissions and the Declaration of Cooperation's role in supporting stability in the oil market.

The presence of the next generation was prominent during the exhibition, with a special event marking IR Iran Girls' National Day on 10 May. A group of young female students from the Amir Kabir University visited the OPEC booth. In an interactive and informative session, the students were briefed on the Organization's various opportunities for young professionals, including internships and research-related programmes.

Students from Amir Kabir University visited the OPEC booth during the exhibition's special event marking IR Iran Girls' National Day on 10 May.

The same day marked a special visit by Asadzadeh, accompanied by delegates from the Ministry of Petroleum, to OPEC's booth. Asadzadeh welcomed Secretariat representatives at the event and commended the Organization, under the leadership of Haitham Al Ghais, OPEC Secretary General, on its excellent work.

The Petroleum Museums And Documents Centre had a very impressive booth, displaying various objects, documents and artefacts in an attempt to preserve the Iranian oil industry's history and heritage and to "recover, repair, and display objects and equipment left behind by a century", as stated on the Museum's website.

OPEC representatives welcomed colleagues from IR Iran to their booth.

The exhibition attracted many attendees, offering a variety of information on the oil, gas, refining and petrochemical industry.

Upstream blue hydrogen: Going back to the source

Upstream blue hydrogen production can be a more efficient and cost-friendly addition to green hydrogen production and regular (downstream) blue hydrogen production. According to leaders in the field, OPEC Member Countries could be forerunners in this circular process, which has great potential to reduce greenhouse gases (GHGs) stemming from natural gas production, building reformed gas (hydrogen) into the energy mix for the long term. ***Maureen MacNeill*** *tells the story.*

Belinda Perriman and Alex Weber have put years of thought into upstream blue hydrogen, from when they were both employed in regular international oil companies, before deciding to develop a company called Convert Well, to encourage oil and gas companies to produce hydrogen on-site at their gas fields.

Weber worked nearly 30 years for Shell and the idea of upstream blue hydrogen came to him ten years ago while working for the IOC. Perriman had a similar epiphany when leading the Peterhead Carbon Capture and Storage (CCS) Project for Shell UK.

Today, they work with others to mature the idea. Last year they joined the first cohort in Berlin of the Cambridge University Carbon 13 (C13) programme. Applications were highly competitive, with everyone required to have a 10 million tonne/year carbon dioxide (CO_2) equivalent reduction potential in their sights.

"Converting gas fields to low-carbon hydrogen producers meant that the annual target is a credible one. It was a great programme, it gave us a lot of structure. I've been involved in several company startups before, but within a corporate environment. Still, I really appreciated the C13 programme. It made us stand up there, present and receive feedback on what we are so passionate about," says Perriman.

"We did pretty detailed calculations of what net carbon savings could be delivered … within the structure of C13," adds Weber, stating the programme finished near the end of last year, just before Perriman attended COP28 in Dubai, the United Arab Emirates (UAE), as an observer with the CCS Association.

Alex Weber, Convert Well.

Belinda Perriman, Convert Well.

Perriman notes, "There was a lot of positive reaction to the concept of going back to the source and decarbonizing there, to be able to sell low-carbon hydrogen; especially I would say amongst OPEC Member Country pavilions.

"OPEC Members are well-placed to be leaders in upstream blue hydrogen," she adds. "The ones that have, or are developing

a hydrogen strategy and are major gas resource holders … they know their gas fields, they appreciate their fields and they want to invest in their fields to give them a low-carbon future. As countries, they will be future-proofing their gas fields for many decades to come."

> *"We're essentially bringing together two existing technologies — hydrogen production and carbon capture, utilization and storage — to deliver clean hydrogen production from a familiar site, which is today producing natural gas. It is an energy-efficient, optimized solution."*
>
> *— Alex Weber, Convert Well.*

Blending the old and new

The technology puts a new spin on well-proven ideas. The upstream blue hydrogen system takes existing upstream onshore gas operations and adds hydrogen production to them using the most common current technology, namely the steam methane reformer (SMR).

Wherever gas is produced and processed, a modular SMR could be installed to produce hydrogen on site. A clean fuel would be sold, since the CO_2 by-product from hydrogen production would be injected into the edges of the producing gas field.

"We're essentially bringing together two existing technologies — hydrogen production and carbon capture, utilization and storage (CCUS) — to deliver clean hydrogen production from a familiar site which is today producing natural gas. It is an energy-efficient, optimized solution," states Weber.

Hydrogen made this way has a lower cost per kilogramme (kg) compared with other types of hydrogen production, according to Perriman, because it implements CCUS — using the left-over CO_2 to help maintain pressure in the gas reservoir. This not only increases gas production, but it also extends a reservoir's lifetime.

CCS is a vital technology and collects CO_2 at the point where natural gas is burned, but storage is a pure cost. With upstream blue hydrogen, there are multiple benefits to injecting the produced CO_2 and all the installations are in close proximity.

Green hydrogen is currently around double the cost of blue hydrogen, continues Perriman, and is weather

> *Blue hydrogen is reliable (not weather dependent) and comes in at around $3–$5/kg, possibly less in OPEC Member Countries.*
>
> ***— Belinda Perriman, Convert Well.***

dependent, necessitating the need for over-capacity and storage.

"Blue hydrogen is reliable (not weather dependent) and comes in at around $3–$5/kg, possibly less in OPEC Member Countries," she states. Upstream blue hydrogen comes in even lower, typically requiring a hydrogen price of $1–3/kg to break even on the required investment.

"We are alerting oil and gas companies that they can bring large volumes of low-carbon hydrogen to the market at a lower price point," says Weber, adding they are already in discussion with a number of OPEC and Declaration of Cooperation (DoC) countries.

"There's a logic in why it is lower priced…there is energy efficiency when gas processing, hydrogen production and carbon capture are done at one location. And you are not having to take CO_2 hundreds of kilometres away to store it; it is stored, along with the benefits, in a couple of minutes under your feet."

A (particular) gas field is already by definition at a good geological storage site, because gas has been stored there for millions of years and the production wells are already demonstrating themselves to be safe wells.

"The store has been pre-proven," adds Perriman. "Whilst monitoring is an aspect of any CCS project, the risks are lower than using an aquifer store that has not been used before," she says.

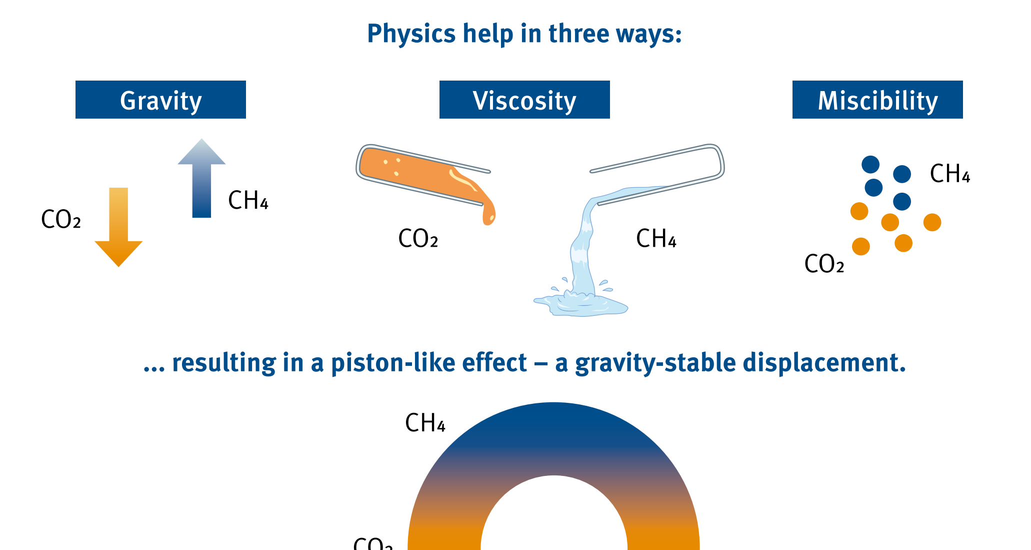
Best practices would be used to make sure wells remain safe, and in time they would be abandoned using normal best practices, she says.

Furthermore, having CO_2 injected and stored at the same gas reservoir saves a lot of expense and headache getting planning permissions, which would be required to move it across someone's land, through built-up areas, or offshore to a distant CO_2 store.

There are lots of technical options to transport the low-carbon product — hydrogen — via pipeline to some of the same customers who buy natural gas today. Some natural gas pipelines can be reused because they are already hydrogen-ready, adds Perriman.

For example, in Germany and the UK, assessments have already been made about which gas lines are hydrogen-ready. In some countries, pipelines may have to be relined with yellow plastic, or a relatively short new line could be built to join up with in-country hydrogen pipelines. "Hydrogen could also be blended at some lines and unblended at the other end for customers who want pure hydrogen," says Perriman.

Low risk of early CO_2 breakthrough



Source: Convert Well

"All of this would take place in countries that already have a hydrogen strategy," she adds. "We are offering them the possibility to look at the effectiveness of the lower-cost contribution to hydrogen volumes in a country that can come from upstream blue hydrogen. It is deliberately not called another color, it is just a more efficient way of producing blue hydrogen."

Hydrogen strategies

Several countries, including many OPEC Member Countries and countries in the DoC, already have hydrogen strategies. Some of them, like Saudi Arabia and the UAE, are already starting to build on those plans.

Meanwhile, some green projects are being delayed because they are double the cost of blue hydrogen projects and must be massive to capture economy of scale. Perriman says that such projects may be struggling to close financing. With cheaper blue hydrogen, gas fields can be converted one at a time, at a speed comfortable for a country.

Converting one gas field at a time allows for more control, because it can be done within one's own oil and gas planning and financing. It is not business as usual (BAU), but it is also not a complete unknown; many countries are looking at blue hydrogen anyway.

"It's also closer to home in terms of the workforce you are using. Member Countries are already producing hydrogen from fossil fuels — 'grey' hydrogen. They are likely to already have SMRs in country, so people in the current workforce understand how to operate them," she says.

"You do not have to install a full-scale SMR; you can buy one that's the right size for your gas field, and because its modular, you could in theory expand it or move it to another gas field. Modular is part of our recommendation.

"The newer piece of technology is the modular carbon capture unit. But again, many OPEC Member Countries are absolutely supportive of CCS, they have got it in their plans, or they're already doing carbon capture and are already leaders in carbon capture," adds Perriman.

Capturing methane

Upstream blue hydrogen technology can also take care of fugitive methane emissions, which are a real issue in climate change, as methane's GHG potential is 86 times as much as CO_2 measured over a 20-year period, according to the Intergovernmental Panel on Climate Change.

"OPEC Member Countries have full recognition and appreciation of the climate impact of methane emissions from gas fields, and are actively addressing this issue, with major announcements made at COP28," she says.

With upstream blue hydrogen conversion, a field gets a lot of attention and thus fugitive methane emissions will be reduced because these will be monitored and measured. Furthermore, today's fugitive methane can be used to make more hydrogen in the future.

"This could be economically attractive, but companies haven't necessarily had the time to do the optimization; even planning for an upstream blue hydrogen project will provide the impetus and incentive to grant that extra attention," says Perriman.

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Oil field close to Dubai, UAE.

The benefits of producing upstream blue hydrogen at gas-processing sites could additionally extend out to a country's oil-producing fields, she continues.

"If a country is still flaring associated gas from some of its oil fields, upstream blue hydrogen projects can provide another push to collect that gas in order to once again make more hydrogen. The extra CO_2 by-product would then be usefully injected to better maintain the pressure of a gas field, further extending its life. It is a win-win situation," says Perriman.

She adds that the additional hydrogen could be produced at very low cost because companies can get carbon credits to cover the costs of running a gas pipeline to upstream blue hydrogen facilities, thereby taking flares out. Therefore, it improves economics, as well as reducing damage from gas flaring at oil field facilities.

COP28 did not come to a global agreement on a standardized method for emissions trading schemes and carbon markets are thus currently voluntary.

"In OPEC and OPEC+ you have membership bodies already gathered in which members could potentially help one another implement these conversions using the Voluntary Carbon Market. Members understand gas fields, as well as being able to scrutinize this way to decarbonize them," states Perriman, adding they are also working on an insurance product to facilitate external financing of conversions.

"CO_2 has been used for enhanced oil recovery for decades," she says, including in some OPEC Member Countries. "It is an oil and gas industry process. Now it is time to use CO_2 for enhanced gas recovery (EGR), as bp is developing for the Tangguh gas fields, which have high naturally occurring CO_2 content. Regrettably regarding the speedy development of the hydrogen economy, CCUS and hydrogen are often treated under separate legislation," says Perriman.

"Hydrogen has hydrogen legislation and a hydrogen strategy. CCS, involving CO_2 injection, is often treated and legislated separately. Both CCS and hydrogen legislation and strategies are quite recent; hydrogen strategies only go back five to eight years. It's all quite new and upstream blue hydrogen could help the two converge."

Enhanced gas recovery

"EGR improves gas recovery by keeping pressure up or helping gas out of a reservoir," says Weber. Gas reservoirs do not suffer from the same recovery problem as oil wells because gas is expandable, but a typical, fairly sizeable field onshore Europe would see an 8–10 per cent improvement in gas recovery with this technology.

"The benefit would be you recover more gas but also…keep infrastructure up and running for quite a bit longer, so you would move out abandonment costs. It

Gas drilling site in Saudi Arabia.

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very much uses existing skills, existing project development and project management processes," Weber adds.

He said that each gas reservoir onshore or offshore has independent lithology and thus its own challenges, so ongoing production and injection monitoring would be important and CO_2 must be injected in the right part of the reservoir.

"But by and large physics works for you here. You are injecting CO_2, which is a heavier molecule than methane, at the bottom or edge of the reservoir, so gravity is working for you," Weber states.

He says globally the real low-hanging fruit are big and simple conventional gas reservoirs. Simple sandstone reservoirs that have a certain size, so it is already known that a lot of CO_2 would accumulate pretty easily at the bottom.

Once lessons learned are acquired from simple reservoirs, the technology could extend out to include more and more geologically complex reservoirs, Weber adds. This could add sour gas reservoirs, of which there are many, especially in the Middle East, or gas-condensate reservoirs.

Condensate is a highly sought-after by-product of some gas production, is seen a lot in countries with typically high oil output, and "would be a very welcome additive to existing oil production because it keeps quality stable or even improved."

It is estimated that some 25 per cent of reservoirs would be highly suitable to convert to hydrogen production. Both Weber and Perriman have worked in DoC participating country Oman, for example, where, like the UAE, there are some sour gas fields. If sour gas reservoirs were added, then 25–50 per cent of the gas reservoirs in Oman would be immediately suitable for the technology.

"It's not a small, niche technology we are proposing, this is scalable because we are… addressing a substantial chunk of the reservoirs in a country," states Weber.

Alternatives

Upstream blue hydrogen will help build the volumes of hydrogen required to rapidly grow the hydrogen economy, an important part of the energy transition.

Producing blue hydrogen upstream retains and even increases the value of gas assets, whilst reducing oil & gas company Scope 3 emissions.

	Upstream Blue Hydrogen	Green Hydrogen	Blue Hydrogen
Lower unit cost per kg			
Higher energy efficiency of production			
Reliability of supply			
Utilization of existing infrastructure and skills			
Reduction of methane emissions from existing gas plants			
Potential solution for gas flaring at oil fields			

Source: Convert Well

Meeting nationally determined contributions

An interesting challenge they face is inertia, though not from OPEC Member Countries, states Perriman. BAU selling of gas is straightforward and profitable. In a developed field, gas wells flow and keep flowing for 20–30 years, she says. It is a major project to install a modular hydrogen production unit on site, collect CO_2, compress and inject it.

"The idea of doing a major project today on a revenue-generating asset, in order to decarbonize and make a lot of money tomorrow, means that it a bit tempting to say, 'It looks fascinating but no thanks,'" she says. She adds it is very important for ministries to understand the approach, so they can encourage companies to consider the option, in order to help countries meet their nationally determined contributions (NDCs).

NDCs are countries' self-defined national climate pledges under the Paris Agreement that each Party is required to develop, detailing what they will do to help meet the global goal to pursue 1.5°C, adapt to climate

> *"In OPEC and OPEC+ you have membership bodies already gathered in which members could potentially help one another implement these conversions using the Voluntary Carbon Market."*
>
> ***— Belinda Perriman, Convert Well.***

impacts and ensure sufficient finance to support these efforts. They represent politically backed commitments by countries.

NDCs represent short- to medium-term targets and typically include measures for both adaptation and mitigation action and are required to be updated every five years. Each update is required to be more "ambitious", thus having more stringent targets and helping the world get closer to 1.5°C.

When they talk to potential clients, Weber and Perriman offer a one-week screening exercise for gas fields, identifying early candidate fields and using proprietary software to screen them for their suitability and for the potential economics of converting them to hydrogen production. They encourage clients to do this short exercise to examine the potential for fields before they invest a lot of time to dive more deeply into data and develop a project towards maturation.

After the theoretical potential, technical surface and subsurface considerations regarding a particular gas field are assessed, they are potentially modelled using reservoir simulation and a review of materials used in current gas development, including options around repurposing sales pipelines. This would take some months, with the whole process from review to a field's hydrogen development plan taking around two years.

"Some are really surprised when they see the results of the screening exercise for their particular gas field, having thought it would cost so much money in the long run," she says.

The team can provide potential clients with the hydrogen price necessary to make investment worthwhile, she adds, according to the client's input on discount rate, projected gas price that they will no longer receive, etc. They can explain the increment and how much investment will be required for the conversion, she says.

"Especially in cases where additional condensate will be produced because of the benefits of CO_2 injection, the breakeven price is very low."

Building for the future

The company is looking to build a consortium of companies that would progress and implement such conversion projects, including providers of modular hydrogen production units, modular carbon capture units, compressor companies and well-known drilling

Carbon Reduction Potential

8,200 MT CO_2/year

Total Available Carbon (TAC)

All Global Natural Gas Producers

6,300 MT CO_2/year

Serviceable Available Carbon (SAC)

Major gas resource holders with a National H2 strategy in place (› 20 countries)

300 MT CO_2/yr

Serviceable Obtainable Carbon (SOC) for Convert Well Products

- Countries with significant Gas Reserves and advanced CCUS & Hydrogen Regulations.
- The SOC will grow over time due to advancing regulations.
- Initial target countries: US, Canada, Australia and within MENA & Asia.

Source: Convert Well

companies with experience drilling CO_2 injection wells.

"Also, on the monitoring, measuring and equipment side, one could go to very well-known names in the oil and gas industry who do instrumentation and monitoring, but…we are developing a Memorandum of Understanding with a company that is already working with a number of OPEC Member Countries to provide a lower-cost alternative, that also comes with superior deep-learning capabilities.

"We are looking to offer value for money in implementation from a consortium for those who would like to take it that far, within normal tendering processes," says Perriman.

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Meanwhile, the Global Carbon Council is keen to hear from parties interested in screening their gas fields for conversion at site into hydrogen producers, so that specific fields might be considered as they develop their overall low-carbon hydrogen methodology.

Because their system would use many of the existing assets, skills and processes in making conversions, such conversions could one day become a "natural" evolution for the industry.

"Just as the energy system evolved historically. We used to run a lot of processes on coal, now we run them on gas, and in the future we will run them on hydrogen… Every gas field converted means less climate effect," says Perriman.

"People can also measure very clearly their impact of making a conversion to hydrogen at a particular gas site, because it moves from producing 100 per cent natural gas to 100 per cent hydrogen, which when you burn it has no CO_2 emissions," she says.

Weber adds that theoretically if one looks at all producing gas reservoirs today, there is nothing to stop them from all being converted to hydrogen production. For practical purposes there would be some limits, including economics and impracticability, which would be encountered.

"But by and large, starting modular with the easier fields and climbing the learning curve, as we have done for gas production over the last 120 years, we could decarbonize and reap benefits from already existing gas fields.

"It's about how quickly you get going, how ready you are to scale up and then taking some more daring steps to branch out into more complex reservoirs," he adds.

There has been a historically long learning curve to producing gas from more and more complex reservoirs and the same would happen with upstream blue hydrogen, but it is required at an accelerated pace, she says, "because we do not have 120 years to get to net zero and in addition all required technological ingredients are already readily available.

"Having said that, offshore fields would be a bit more complicated to convert than onshore fields, because the natural gas would first be sent onshore for conversion to hydrogen," says Perriman. The CO_2 would then go back into the offshore producing reservoirs via pipeline and into offshore CO_2 injection wells.

"You would be using the existing gas pipeline to send gas in and would need a smaller line to send the CO_2 by-product of making hydrogen back out. This might be a relatively short spur line from an offshore CO_2 disposal project, a CCS project."

Irrespective of the setting of a particular project (onshore or offshore), all ingredients are technologically mature and individually in operation for decades globally. Traditionally, the oil and gas industry has been constructing infrastructure and operating fields to the highest health and safety standards, which have been adopted globally.

In this respect, upstream blue hydrogen has a solid basis to rapidly become a clean and safe product at scale.

Secretary General visits the Federation of Austrian Industries

*On 30 April, OPEC Secretary General **Haitham Al Ghais** conducted a visit to the Federation of Austrian Industries in Vienna to meet with its leadership and address a meeting of the Austro-Arab Chamber of Commerce. The* OPEC Bulletin*'s **Scott Laury** reports.*

In a short ride across town from the OPEC Secretariat, the Secretary General visited the opulent headquarters of the Federation of Austrian Industries in Vienna's historic central district.

The Secretary General met with the Federation's President, Georg Knill and had the opportunity to address members of the Austro-Arab Chamber of Commerce and the Arab Ambassadors Council.

In his remarks, the Secretary General began by noting the rich history of the landmark building, which was inaugurated by the Emperor of the Austro-Hungarian Empire.

"In preparing for this meeting, I was fascinated to learn that this historic building, aptly called the "House of Industry", was designed by renowned architect Karl König and inaugurated by Emperor Franz Joseph on 25 March 1911," he said. "This splendid edifice is truly an historical landmark and just one more example of what makes Vienna such a magnificent and culturally rich city."

He then recognized the leaders who were instrumental in organizing the event, including Former Minister Dr Werner Fasslabend, President of the Austro-Arab Chamber of Commerce; Mouddar Khouja, Secretary General of the Austro-Arab Chamber of Commerce; Georg Knill, President of the Federation of Austrian Industries; and Abdullah Tolah, President of the Arab Ambassadors Council and Ambassador of the Kingdom of Saudi Arabia to Austria.

"I am pleased to see so many esteemed Ambassadors representing OPEC Member Countries, as well as non-OPEC countries of the Declaration of Cooperation, in addition to the Director General of the OPEC Fund for International Development, Abdulhamid Alkhalifa," he stated.

Federation of Austrian Industries

Since 1946, the Federation of Austrian Industries has been dedicated to promoting Austrian industry both within Austria and throughout Europe.

Today, its 4,500 members make up more than 80 per cent of domestic manufacturing companies, including Austria's important energy sector.

"I was very impressed to learn that the "producing sector", which includes manufacturing, mining, energy and water supply, as well as construction, comprises 67,000 Austrian companies, employs about one million people and generates nearly 29 per cent of the domestic GDP," the Secretary General said. "These numbers make it clear that industry, and particularly the energy sector, continue to play a crucial role within the wider Austrian economy."

OPEC's energy outlook

He then shared OPEC's perspectives on the future for oil and gas, which he said were promising.

"From a global perspective, OPEC sees a bright future ahead for energy with robust long-term growth expected for oil and gas," he added.

According to OPEC's World Oil Outlook, energy demand is expected to rise by an estimated 23 per cent by 2045, reaching close to 359 million barrels of oil equivalent per day in 2045.

This growth in demand will be fueled by a world economy that is expected to double in size, growing from $138 trillion ($ tn) last year to $270 tn in 2045.

The outlook for oil is also promising, retaining a share of the energy mix of almost 30 per cent in 2045 as world demand for oil soars to an estimated 116 million barrels per day by that time.

In terms of demographics, OPEC sees the world population rising rapidly and surpassing 9.5 billion people by 2045, with most growth seen in non-OECD developing countries.

Another trend noted by the Secretary General was in relation to urbanization. OPEC expects more than a half a billion people around the world to move to cities by 2030.

"These are the realities we see based on our data and research, and it means that the world will require all forms of

OPEC Secretary General Haitham Al Ghais visits the Federation of Austrian Industries in Vienna.

energy to meet rapidly growing energy needs over the long term," he said.

He noted that renewables will expand at a faster rate in the decades to come, but oil and gas will still be the predominant fuels in the energy mix.

"To meet this level of demand, the industry will need to significantly ramp up investment," he said. "According to our research, cumulative oil-related investment requirements from now until 2045 will amount to approximately $14 tn or around $610 billion on average per year."

Securing this vital funding, he added, will be essential if we hope to maintain security of supply and avoid unwanted volatility in the years ahead.

A realistic approach to climate change

On the climate change issue, Secretary General Al Ghais explained that recent predictions for peak demand by 2030 and calls for a discontinuation of investment in hydrocarbons were simply premature and unrealistic.

"These voices are unfortunately not in touch with reality, and their views are not based on robust research and data," he said. "Right here in Europe and across the world, we are seeing large corporations and governments re-evaluating and re-calibrating their transition strategies and timelines based on the realities I have just described. Indeed, the rush to adopt "Net-Zero" strategies was misguided and simply not realistic."

He added that, recently, automakers have been scaling back or delaying their production of electric vehicles, with some even declaring bankruptcy. Moreover, the European Automobile Manufacturers' Association reported that sales of battery-powered cars had dropped by 11.3 per cent in Europe during March due to a decrease in demand.

"Policymakers are also coming to terms with the significant challenges related to electricity grids, battery manufacturing capacity, critical minerals and rising costs due to high inflation," he stated. "These realities are resulting in some renewables projects being delayed or even discontinued due to rising costs and supply chain constraints."

The Secretary General said that OPEC supports the need to reduce emissions and address climate change, but this cannot come at the cost of energy security, and it will not happen overnight.

"Energy transitions in the past have taken decades to evolve, and have typically added energies to the mix, not taken them away, as advocated in some circles today," he explained.

He lauded the success of COP28, which was hosted by OPEC Member Country the United Arab Emirates, and emphasized how the event was an important forum for OPEC to communicate its key messages and objectives.

"OPEC's Member Countries made their voices heard in advocating for a balanced, equitable and inclusive approach to addressing climate change — one that is realistic, pragmatic and one that considers the unique capacities and circumstances of developing countries," he stated. "After all, there is no "one-size-fits-all solution" — there are multiple pathways to achieving the same objective."

In closing, the Secretary General said the future will be full of opportunities for the energy industry, and the path to success would hinge on stakeholder cooperation and dialogue.

"To sum it up, OPEC is advocating for a holistic approach to our energy future," he said. "It will be an approach that leverages all energies, employs all technologies and respects the circumstances of all people. It is an approach that is balanced and inclusive — benefiting energy producers, consumers and the global economy. Indeed, this energy future we envision will offer hope, opportunity and prosperity for the generations to come."

OPEC: paving the way for generations to come!

In its 64 years of existence, the Organization of the Petroleum Exporting Countries, OPEC, has played a pivotal role in ensuring the stabilization of the oil markets, and excelled in its countless initiatives to build bridges between industry stakeholders through cooperation and dialogue.

Hind Zaher, PR Specialist at OPEC, in an interactive session with students at the OPEC Stand.

In support to its Member Countries, as well as the global community at large, the OPEC Secretariat and its employees undertake different programmes that aim at raising awareness about the Organization's goals and objectives, its Member Country initiatives, as well as the importance of the industry in shaping the future of humankind and paving the way for generations to come.

One of these initiatives is a long-standing outreach programme that aims at supporting global and local communities with educational and charitable outreach activities.

The outreach programme is executed and coordinated by the Public Relations and Information Department.

Together, hand in hand, for climate solutions

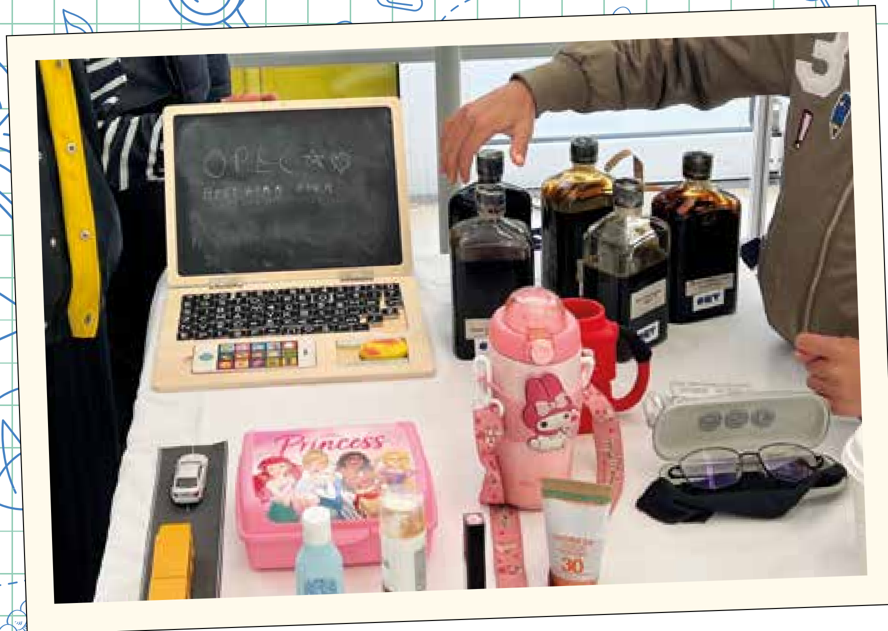
As part of its outreach programme, OPEC once again sponsored the annual Vienna International Science and Engineering Fair.

The Fair is organized for middle and high school students of international schools in Austria, Germany, Czechia, Slovakia and Bulgaria. The Fair took place on 20 April, 2024, under the theme, "Climate Solutions", at the Lycée Français de Vienne.

More than 110 talented students, representing 12 international schools, came together with over 64 projects to display and present the results of their research. The Fair was also open to the public for viewing.

The projects were divided into Junior (Grade 6–8) and Senior (Grade 9–12) Divisions. The Junior Division projects covered environmental science, health and human behavior, social science, engineering and technology, earth and space science, computer science

Luis Walsch (third l) won with his Climate Solutions project and received a special prize from OPEC, which was presented by Hasan AlHamadi, former Officer-in-Charge of OPEC's PR & Information Department (second l).



Everyday items on display at the OPEC table. Petroleum is necessary for the production of each one of them.

and mathematics, biological science, chemistry and physics. The Senior Division was also categorized into computer science and mathematics, earth and space science, environmental science, health science, human behavior, life science, animals and plants, social science, machines and technology, as well as physical principles.

The Fair was first initiated by the Vienna Chapter of the American Nuclear Society in the mid-1980s. In 2010 the Vienna Chapter of the Institute for Nuclear Materials Management (INMM) became the main organizer. Since 2020, Women in Nuclear (International Atomic Energy Agency Chapter) has assumed the responsibility for organizing the Fair, with the assistance of the INMM and the United Nations-Nuclear Young Generation (UN-NYG).

As the theme of this year's Fair was "Climate Solutions", students were encouraged to tackle issues related to renewable energy, carbon footprint reduction, waste reduction, ecosystem preservation, climate modeling, green technology, climate sequestration, climate resilient infrastructure, sustainable agriculture, as well as climate education.

OPEC as part of the solution

In an attempt to raise awareness and enhance knowledge about the Organization in general and Member Countries' climate change initiatives in particular, participating students and visitors were invited to take part in a wide range of interactive activities, quizzes, and illustrations, as well as discussions on how we can all, collectively, work hand in hand for the future of our planet, prosperity and sustainable development, thereby realizing achievable and realistic solutions that take an all-energies, all-peoples and all-technologies approach.

As young and passionate future researchers and scientists, students were also encouraged to look at the bigger picture and imagine how the world would look without oil.

OPEC's stand was well attended by students, teachers, parents, judges and staff members from the International Atomic Energy Agency (IAEA). The visitors took the opportunity to ask questions about the Organization's history and its headquarters in Vienna, showing great interest in its Environmental Matters Department, wanting to know more about its environmental studies, Member Countries climate change initiatives and technological innovation. Visitors were also impressed by the different samples of crude oil displayed at the OPEC's stand, expressing a great interest in the industry and the importance of petroleum products in achieving sustainable development. Participating schools were additionally invited to visit the OPEC Secretariat in Vienna for a general briefing.

Forty-eight judges volunteered their time to be part of the Science Fair judging process. The judges included technical staff of UN organizations and various Austrian companies.

Most of the judges come back year after year because they find the science fair process so enjoyable and satisfying, according to Bernd Weiss, Former IAEA staff member and Vienna Science Fair organizer since the 1990s.

According to Weiss, the heart of the Science Fair is when the students meet and discuss their projects with world-class scientists and engineers.

Luis Walsch shows his winning Climate Solutions project.

After a thorough assessment, the event concluded with an Awards Reception where each student received a participation certificate and a ribbon designating their project's grading (Superior, Excellent and Honorable Mention). Many of the exceptional projects were also given special awards and prizes for each category and division, and three OPEC special awards for outstanding merit, as well as a special project on Carbon Capture, Utilisation and Storage (CCUS).

The organizers thanked OPEC for its generous contribution and for being part of the climate change solution, commending the Organization on its role in supporting the next generation of scientist and engineers.

They further stated that sponsors are crucial to maintaining science fairs because they provide essential financial support, enhance the quality and reach of these events by funding prizes, and educational resources, thereby fostering innovation, encouraging scientific inquiry, and inspiring the next generation of scientists and engineers.

"Without sponsors, the continuity and impact of science fairs would be significantly diminished, undermining opportunities for students to engage in meaningful scientific exploration," said Weiss.

Students pose at the OPEC table.

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.*

2 May: OPEC Secretary General Al Ghais (r) met with Baker Fattah Hussen (m), Ambassador and Permanent Representative of the Republic of Iraq to Austria, and other distinguished members of the Diplomatic Corps accredited in Vienna, while attending the celebration of the International Day of Nowruz at the Vienna International Centre.

11 June: OPEC Secretary General Al Ghais (r) held a bilateral meeting with Joseph McMonigle, Secretary General of the International Energy Forum, at the OPEC Secretariat in Vienna.

Visits to the Secretariat

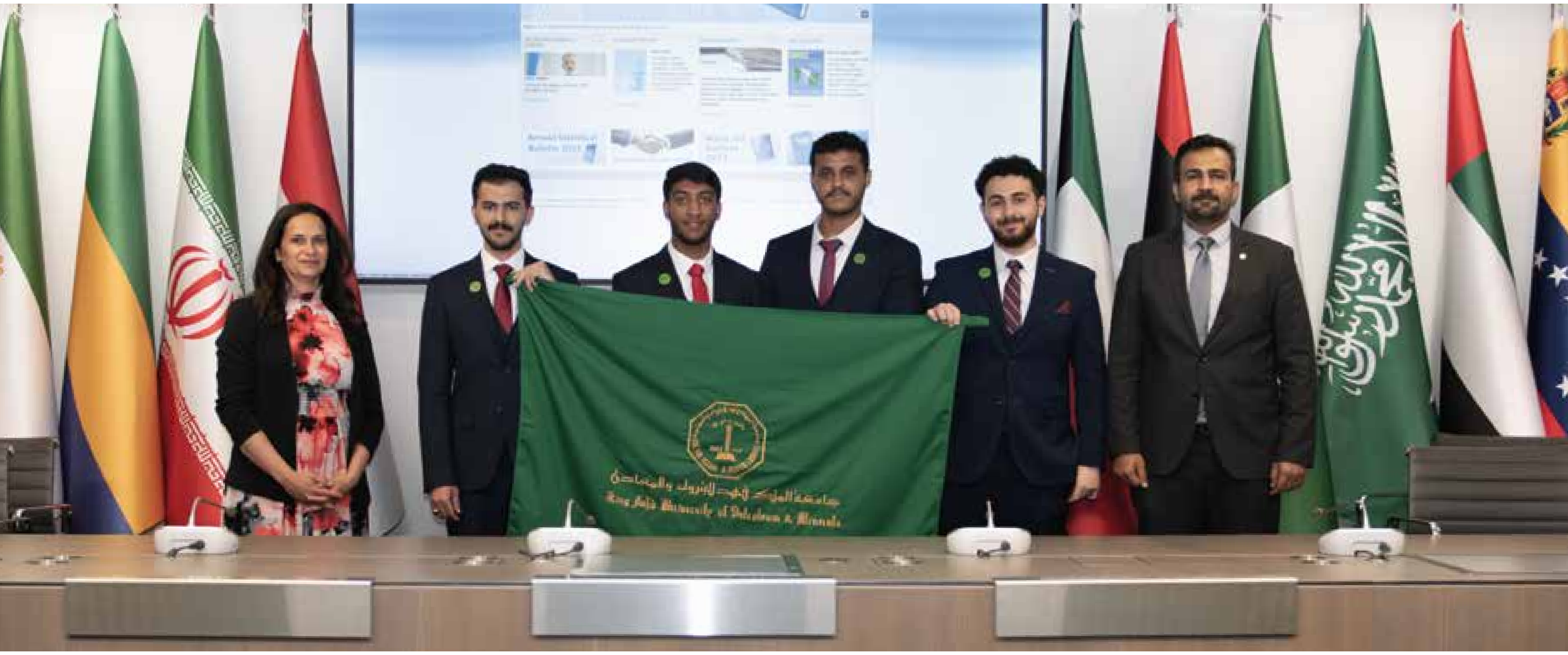
Students and professional groups wanting to know more about OPEC visit the Secretariat regularly in order to receive briefings from the Public Relations and Information Department (PRID). PRID also visits schools under the Secretariat's outreach programme to present on the Organization and the oil industry. Here we feature some snapshots of such visits.

6 May Students from the Hochschule Coburg, Coburg, Germany.

13 May Students from the University of Connecticut, USA.

14 May Arbeitsgemeinschaft Staat und Gesellschaft e.V., Duderstadt, Germany.

6 June Students from the University of Illinois, USA.



10 June Visitors from King Abdallah University of Petroleum, Saudi Arabia.

10 June Students from Montanuniversität, Leoben, Austria.

A mission to the Pearl of Africa

Mission to Uganda

OPEC Fund *President* ***Abdulhamid Alkhalifa*** *and his delegation strengthen cooperation with Uganda.*

Located in the east of the continent and richly endowed with natural beauty Uganda has earned itself the moniker the "Pearl of Africa". But the country not only boasts spectacular landscapes and thriving wildlife, it is also making serious efforts to strengthen its economy and accelerate development. The OPEC Fund has been a long-standing partner and a visit by President Abdulhamid Alkhalifa in February provided a welcome opportunity to reaffirm support and deepen cooperation.

Uganda's economy is dominated by agriculture, industry and services. It has bounced back from recent external shocks and recorded 5.3 per cent growth in 2023 compared to 4.7 per cent the year before, according to the World Bank. Strong economic growth is needed to sustain a rapidly growing population and reduce poverty.

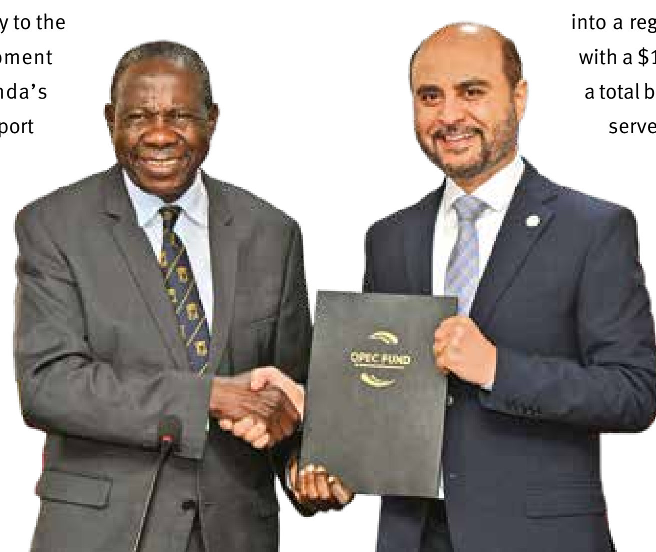
The OPEC Fund approved its first loan for Uganda in its first year of operations in 1976 and to date has financed 21 projects for almost US$290 million ($ m). Aligned with the country's needs they include, for example, support for infrastructure development, the financial sector, agriculture, education and healthcare.

The visit of the OPEC Fund delegation was crowned by the signing of a $30 m loan financing the upgrade of the Katine-Ochero road, a key infrastructure project. "Better, faster and safer transport connections will contribute significantly to the socio-economic development and integration of Uganda's center-east region and support your efforts to boost prosperity," President Alkhalifa said.

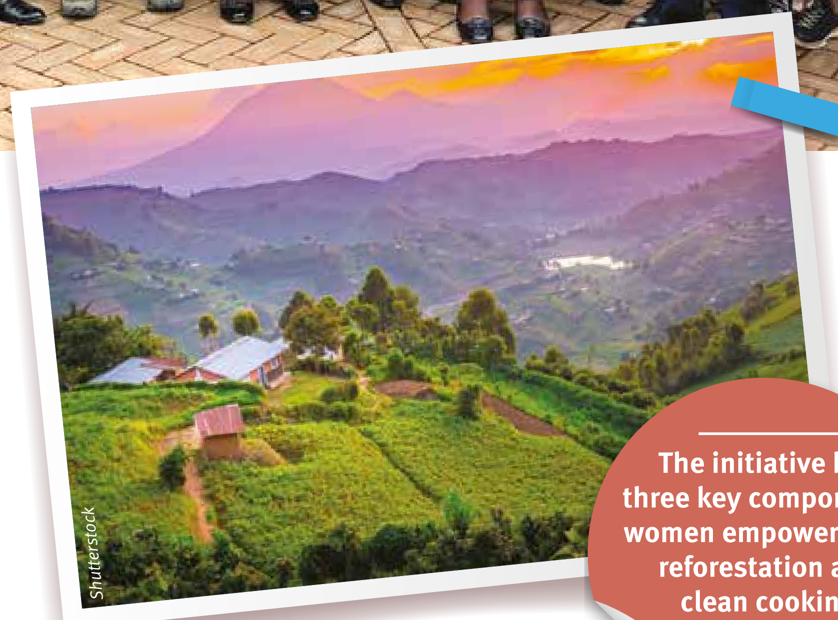
The OPEC Fund is co-financing the construction of a 69.3 kilometre two-lane road, including earth works, pavement and drainage works together with the Islamic Development Bank. The road connects rural areas in the east of Uganda and crosses pasture and woodland. The upgrade of the existing gravel road will contribute significantly to the economic prosperity of the region, assist better administration, and lower travel and transportation costs by reducing vehicle operating costs.

Touching on another key part of the OPEC Fund's activities in Uganda, the delegation which also included Regional Director Khaled Al-Zayer and Senior Country Manager Hatem El-Bakkali, also visited the Kayunga General Hospital. Located in the northeast of the country the facility was rehabilitated and upgraded into a regional referral hospital with a $15 m loan. Today it has a total bed capacity of 300 and serves five districts with a population of more than 2.5 million.

A meeting with



Abdulhamid Alkhalifa, OPEC Fund President (r), and Matia Kasaija, Minister of Finance of Uganda.



the Minister of Energy and Mineral Development, Ruth Nankabirwa Ssentamu, provided the opportunity to discuss opportunities for rolling out the OPEC Fund's Clean Cooking Initiative in Uganda. The use of hazardous and polluting cooking methods results in 3.7 million deaths annually worldwide and has grave consequences for the environment. Together with partner organizations the OPEC Fund is offering programs to provide access to clean cooking. The initiative, launched in 2022, has three key components:

- Clean cooking seeks to introduce healthy and affordable alternatives for preparing meals.
- Reforestation aims to remedy the ecological damage caused by polluting fuels.
- Women empowerment addresses the massive household burdens often placed on women's shoulders.

The initiative has three key components: women empowerment, reforestation and clean cooking

A first pilot project is under implementation in Madagascar, while Uganda — together with a group of neighboring African countries — is seen as a key country for clean cooking given the continent's needs and the urgency of the issue.

Forthcoming events

Nigeria Oil and Gas, 30 June–4 July 2024, Abuja, Nigeria. 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.nogenergyweek.com.

Global Energy Transition Congress and Exhibition, 1–3 July 2024, Milan, Italy. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 203 615 5902; e-mail: conferencemarketing@dmgevents.com; website: www.getcongress.com.

Petrochemicals and Climate Change Conference, 1–3 July 2024, Cambridge, UK. Details: University of Cambridge, e-mail: petrochem-conf@eng.cam.ac.uk; website: https://www.petrochemicalsconference.com.

Green Hydrogen Summit UK and Ireland, 2–3 July 2024, London, UK. Details: Solar Media, 2nd Floor, 123 Buckingham Palace Rd, London SW1W 9SH, UK. Tel: +44 20 78 71 01 22; e-mail: pcollinson@solarmedia.co.uk; website: https://greenhydrogenukire.solarenergyevents.com.

Mozambique Energy and Industry Summit, 2–4 July 2024, Maputo, Mozambique. Details: Global Event Partners, Suite 1, 3rd Floor, 11, 12 St James's Square, St. James's, London SW1Y 4LB, UK. Tel: +971 58 969 54 48; e-mail: fchowdhury@gep-events.com; website: https://mozambique-ei.com.

8th Annual Conference on Flue Gas Desulphurisation Systems, 3–4 July 2024, New Delhi, India. Details: India Infrastructure Publishing, B-17 Qutub Institutional Area, New Delhi 110016, India. E-mail: monish.grover@indiainfrastructure.com; website: https://web.cvent.com/event/dd99661b-80e7-4ef9-9694-74edde3f41a7/summary.

11th Africa Oil and Gas Kenya, 3–5 July 2024, Nairobi, Kenya. Details: Expogroup, Int'l Marketing Level 25, Monarch Office Tower, One Sheikh Zayed Road, Dubai, UAE. Tel: +971 4 30 50 755; e-mail: feedback@expogr.com; website: https://www.expogr.com/kenyaoil.

World Gas Summit, 4–5 July 2024, Greater Noida, India. Details: Indian Exhibition Services, C-322, 3rd Floor, Tower C, Noida One IT Park, Sushil Marg, Sector 62, Noida, Uttar Pradesh 201309, India. Tel: +91 98 10 82 50 90; e-mail: ashish@gasindiaexpo.com; website: https://gasindiaexpo.com/conference.html.

Thailand Oil and Gas Roadshow 2024, 11–12 July 2024, Rayong, Thailand. Details: Fireworks Trade Media Pte Ltd, 1 Scotts Road, #24–10, Shaw Centre, 228208, Singapore. E-mail: info@fireworksthai.com; website: www.oilgasroadshow.com.

Oil, Gas and Petroleum 2024, 15–16 July 2024, London, UK. Details: CIENCIE Meetings Group, 75 Shelton Street, London WC2H 9JQ, UK. Tel: +44 741 83 42 651; e-mail: info@cienciemeetings.com; website: https://cienciemeetings.com/ogp-energy.

Xinjiang International Petroleum and Petrochemical Technology and Equipment Exhibition, 18–20 July 2024, Xinjiang, China. Details: Beijing Zhenwei Exhibition Co.,Ltd., Zhenwei Exhibition Building, Building III13, International Enterprise Avenue, Yard 1, Jinghai 5th Road, Tongzhou District, Beijing, China. E-mail: cippe@zhenweiexpo.com; website: http://xj.cippe.com.cn/en.

6th International Congress and Exhibition Colombia Oil and Gas, 24–25 July 2024, Bogota, Colombia. Details: Vostock Capital, Toronto House Surrey Quays Road, London SE16 7AJ, UK. Tel: +44 20 73 94 30 90; fax: +44 207 231 1600; e-mail: events@vostockcapital.com; website: https://colombiaoilandgas.co.

International Congress and Exhibition Colombia Oil and Gas, 24–25 July 2024, Bogotá, Colombia. Details: Vostock Capital, Toronto House Surrey Quays Road, London SE16 7AJ, UK. Tel: +44 20 73 94 30 90; fax: +44 207 231 1600; e-mail: events@vostockcapital.com; website: https://colombiaoilandgas.co.

China Energy Summit and Exhibition, 31 July–2 August 2024, Beijing, China. 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.chinaenergysummit.com.

International Conference on Gas, Oil and Petroleum Engineering, 20–21 August 2024, Auckland, New Zealand. Details: Association For Scientific And Academic Research (ASAR). Tel:+91 87 54 92 91 72; e-mail: info@asar.net.in; website: www.allconferencealert.com/event/1173129.

Namibia Oil and Gas Conference, 20–22 August 2024, Windhoek, Namibia. Details: Global Event Partners; Suite 1, 7th Floor, 50 Broadway, London SW1H 0DB, UK. E-mail: contact@gep-events.com; website: www.namibiaoilandgasconf.com.

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Non-Declaration of Cooperation (Non-DoC) oil supply developments

May 2024

In 2023, non-DoC liquids output is estimated to have risen by 2.4 mb/d, year-on-year (y-o-y), to average 51.7 million barrels per day (mb/d). US liquids production increased by 1.6 mb/d, mainly on the back of light tight oil production and increased natural gas liquids (NGLs) output from non-conventional basins. US shale oil production increased by 600,000 b/d, mainly from the Permian, where output increased by 400,000 b/d, supported by improvements in drilling and completion. At the same time, output in the Bakken and Eagle Ford basins rose by 125,000 b/d and 36,000 b/d, y-o-y, respectively. Liquids supply in Brazil rose by around 500,000 b/d on the back of several offshore start-ups last year. Norway and China also contributed to production growth in 2023. These developments were partially offset by supply declines, mainly from the UK.

In 2023, upstream companies in the US experienced mixed dynamics. Shale firms acknowledged that higher costs and falling prices forced some of them to cut back drilling and completion activities, especially during the first half of last year. However, improvements in well productivity, rig performance and operational efficiencies supported strong production levels throughout the year, leading to the growth of 2.4 mb/d, y-o-y, in December 2023 over December 2022.

Capital spending for oil and gas exploration and production (E&P) in non-OPEC countries increased by US$ 51 billion ($ bn), y-o-y, reaching $ 496 bn in 2023. It is expected to rise by two per cent, y-o-y, in 2024. However, a decline of about four per cent, y-o-y, is expected in 2025 to $487 bn. Upstream E&P investment in the US is estimated to rise by 17 per cent, y-o-y, in 2023 to $173 bn. However, it is expected to drop by around seven per cent, y-o-y, both in 2024 and 2025.

For 2024, non-DoC liquids supply is expected to grow by 1.2 mb/d in 2024, averaging 53.0 mb/d. Liquids output in the OECD (excluding Mexico) is expected to increase by 700,000 b/d, y-o-y, in 2024, mainly on the back of production increases in the US, Canada and Norway. US crude oil and condensate production is anticipated to grow by 300,000 b/d, with NGLs and biofuel production also expected to rise. Canadian oil production, particularly Alberta's oil sands, is forecast to grow by 200,000 b/d, y-o-y, in 2024. Production growth in the North Sea is also projected at around 100,000 b/d. In the non-OECD region (excluding DoC countries), Latin America is forecast to be the major driver for liquids supply. Output in the region is set to increase by 400,000 b/d, y-o-y, in 2024, mainly due to several offshore ramp-ups and start-ups in key countries.

In 2025, the non-DoC liquids supply is forecast to grow by 1.1 mb/d, y-o-y, to average 54.1 mb/d. OECD (excluding Mexico) liquids production is expected to rise by 800,000 b/d, y-o-y, supported by growth of 500,000 b/d and 200,000 b/d, y-o-y, in the US and Canada, respectively. US crude and condensate output is expected to rise by 300,000 b/d, y-o-y, in 2025, while NGLs production is forecast to rise by 200,000 b/d, assuming a higher gas price environment. At the same time, Latin America is forecast to be the main driver of production in the non-OECD region in 2025, adding 300,000 b/d to the region's liquids growth.

The forecast continues to face significant uncertainties, particularly in light of the ongoing geopolitical developments across several regions. Moreover, the anticipated trajectory and pace of inflation's decline, particularly within the services sector, are poised to influence crude oil production costs going forward. The potential influence of the present limited investment commitment in upstream E&P projected for 2024 and 2025 on production levels remains uncertain amid an ongoing drive for efficiency and enhanced productivity throughout the industry.

MOMR … oil market highlights

May ***2024***

Crude oil price movements — In April, the OPEC Reference Basket (ORB) value rose by $4.90, or 5.8 per cent, month-on-month (m-o-m), to average $89.12/b. Oil futures prices averaged higher, with the ICE Brent front-month contract increasing by $4.33, or 5.1 per cent, m-o-m, to average $89.00/b, and the NYMEX WTI front-month contract rising by $3.98, or 4.9 per cent, to average $84.39/b. The DME Oman front-month contract rose by $5.12, or 6.1 per cent, m-o-m, to average $89.37/b. The front-month ICE Brent/NYMEX WTI spread widened by 35¢ to average $4.61/b. The market structure of oil futures prices strengthened and money managers remained increasingly bullish about oil. The premium of light sweet to medium sour crudes narrowed across all major trading hubs on lower light distillate margins.

World economy — The world economic growth forecasts for 2024 and 2025 remain unchanged at 2.8 per cent and 2.9 per cent, respectively. In the United States, economic growth for 2024 and 2025 are revised up slightly to 2.2 per cent and 1.9 per cent, respectively. The economic growth forecast for the Eurozone remains at 0.5 per cent for 2024 and 1.2 per cent for 2025. Japan's economic growth forecast is also unchanged at 0.8 per cent in 2024 and one per cent in 2025. China's economic growth forecast remains at 4.8 per cent in 2024 and 4.6 per cent in 2025. India's economic growth forecast is unchanged at 6.6% for 2024 and 6.3 per cent for 2025. Brazil's economic growth forecast remains at 1.6 per cent for 2024, and 1.9 per cent for 2025. Russia's economic growth for 2024 is revised up slightly to 2.3 per cent, while the forecast for 2025 remains at 1.4 per cent.

World oil demand — The global oil demand growth forecast for 2024 remains broadly unchanged from last month's assessment at 2.2 mb/d. There were some minor upward adjustments to 1Q24 data, including a slight upward adjustment in OECD Americas and Chinese data due to better-than-expected performance in oil demand in 1Q24. However, this increase was offset by a downward revision to the Middle East in 2Q24 and 3Q24 due to an anticipated slight decline in these two quarters. Accordingly, the OECD is projected to expand by nearly 300,000 b/d, while the non-OECD is forecast to grow by about 2.0 mb/d. Global oil demand growth in 2025 is expected to remain robust at 1.8 mb/d, y-o-y, unchanged from the previous month's assessment. The OECD is expected to grow by 100,000 b/d, y-o-y, while demand in the non-OECD is forecast to increase by 1.7 mb/d.

World oil supply — The non-DoC liquids supply (i.e. liquids supply from countries not participating in the Declaration of Cooperation) is expected to grow by 1.2 mb/d in 2024, unchanged from the previous month's assessment. The main drivers for growth are expected to be the US, Canada, Brazil and Norway. In 2025, non-DoC liquids supply growth is expected at 1.1 mb/d, broadly unchanged from the previous month's assessment. Again, growth is mainly driven by the US, Brazil, Canada and Norway.

Separately, DoC NGLs and non-conventional liquids are forecast to grow by about 100,000 b/d to average 8.3 mb/d in 2024, followed by a minor decline of about 10,000 b/d to average 8.3 mb/d in 2025. The DoC crude oil production in April decreased by 246 tb/d, m-o-m, averaging 41.02 mb/d, as reported by available secondary sources.

Product markets and refining operations — In April, refinery margins continued to trend downward as the recovery in refinery processing rates and stronger product output weighed on product markets. Most of the weakness stemmed from falling naphtha and diesel crack spreads due to slightly lower demand, which led to a lengthening balance for corresponding products, particularly in the Atlantic Basin. In Singapore, high middle distillate imports from India contributed to downward pressure on Southeast Asian refining profitability despite limited fuel oil crack spread gains and healthy regional gasoline requirements. Global refinery intake increased by 170,000 b/d in April to average 80.0 mb/d compared with 79.8 mb/d in the previous month, but was 1.1 mb/d lower, y-o-y.

Tanker market — Dirty freight rates showed divergent trends in April. Very large crude carrier (VLCC) spot freight rates were softer, with the Middle East-to-East route falling 11 per cent, m-o-m. In contrast, Suezmax spot freight rates improved, with the US Gulf Coast-to-Europe route seeing a three per cent m-o-m increase. The Aframax market also improved, with intra-Med rates up 15 per cent, although East of Suez rates declined. Rates for clean tankers declined on all reported routes, with East of Suez rates down ten per cent and West of Suez rates falling 20 per cent.

Crude and refined products trade — Preliminary data shows that US crude imports averaged 6.5 mb/d in April, representing an increase of four per cent, m-o-m. US crude exports also moved higher, gaining six per cent, m-o-m, to average 4.2 mb/d. US product imports rose by more than three per cent to 6.5 mb/d in April, led by gains in gasoline inflows, while product exports were up by almost three per cent supported mainly by outflows of propane/propylene, distillate fuel and jet fuel. The latest data for China shows crude imports continuing to climb, averaging 11.6 mb/d in March, representing an increase of four per cent, m-o-m. Product imports into China jumped by over 26 per cent, m-o-m, led by inflows of liquefied petroleum gas (LPG) and fuel oil, while product exports increased by around 33 per cent, due to rising outflows of diesel oil, gasoline and jet fuel. India's crude imports in March recovered much of the previous month's decline, averaging 4.9 mb/d for a gain of eight per cent. India's product imports fell 13 per cent on lower inflows of LPG. In Japan, crude imports remained relatively flat in March, averaging 2.4 mb/d for a decline of two per cent. Japan's product exports increased by more than 18 per cent, m-o-m, on support from most major products, except LPG. Preliminary estimates indicate OECD Europe crude imports remained relatively steady in April. Product imports into the region were slightly lower, amid a decline in jet fuel imports.

Commercial stock movements — Preliminary March 2024 data shows total OECD commercial oil stocks rose by 20.2 mb, m-o-m. At 2,793 mb, they were 121 mb below the 2015–19 average. Within the components, crude and product stocks were up by 6.8 mb and 13.5 mb, m-o-m, respectively. OECD commercial crude stocks stood at 1,369 mb in March, which is 93 mb less than the 2015–19 average. OECD total product stocks in March stood at 1,424 mb. This is 27 mb below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks increased in March by 0.2 days, m-o-m, to stand at 60.8 days. This is 1.7 days less than the 2015–19 average.

Balance of supply and demand — Demand for DoC crude (i.e. crude from countries participating in the DoC) remains unchanged from the previous month's assessment to stand at about 43.2 mb/d in 2024, which is around 900,000 b/d higher than the estimated level for 2023. Demand for DoC crude in 2025 remains unchanged from the previous month's assessment to stand at 44.0 mb/d, around 800,000 b/d higher than the level estimated for 2024.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for May 2024. 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.

World oil market prospects for the second half of 2024

June 2024

Despite some economic activities' weakness in few key economies in 1Q24, (i.e. US and Japan), the steady global economic growth has continued in 1H24. Growth in non-OECD economies has held up quite well, and even better-than-expected in the BRIC economies. Should growth in major OECD economies accelerate in 2H24, with non-OECD economies maintaining the momentum of 1H24, then economic growth for the year could potentially improve further. At present, the global economic growth forecast stands at 2.8 per cent for 2024 and 2.9 per cent for 2025, unchanged from last month's assessment.

An expected shift towards more accommodative monetary policies from major central banks in 2H24, notably the US, the Eurozone and the UK, will depend on growth dynamics and inflationary developments in the various economies.

From a sectorial perspective, improvements in the industrial sector have been noticeable in non-OECD economies, while industrial production in OECD economies is forecast to only gradually pick-up in 2H24 from the weak levels experienced since the beginning of the year. Globally, the services sector maintains a stable momentum. It is projected to be the main contributor to the economic growth dynamic in 2H24, particularly supported by travel and tourism, with a consequent positive impact on oil demand.

With this, global oil demand is forecast to grow by an average of 2.3 million barrels per day (mb/d), year-on-year (y-o-y), in 2H24. For the year 2024, it is forecast to expand by 2.2 mb/d.

In the OECD, oil demand is estimated to increase by 250,000 b/d, y-o-y, in 2H24. This is driven mostly by the US. OECD Europe and OECD Asia Pacific are expected to expand only slightly. In terms of products, jet kerosene and gasoline are anticipated to be the main regional oil demand drivers, on the back of the summer driving season and continued healthy air travel activity. Diesel requirements, however, are anticipated to be subdued by softer economic and manufacturing activity. Moreover, demand for naphtha may be pressured by declining petrochemical margins.

In the non-OECD, China is expected to be the primary oil demand driver, with other countries in the region providing support. The ongoing air travel recovery, healthy driving levels, as well as improvements in manufacturing sector activities are projected to support jet/kerosene, gasoline, and distillate demand in the region. Non-OECD oil demand is forecast to grow on average by 2.1 mb/d, y-o-y, in 2H24. In terms of the main products, gasoline and jet fuel are set to lead regional oil demand growth, followed by diesel, LPG and naphtha. Overall, non-OECD oil demand is projected to average 2.1 mb/d in 2024.

Following y-o-y estimated growth of 1.8 mb/d in 1H24, non-DoC liquids supply is forecast to expand by 70,000 b/d, y-o-y, in 2H24. For the entire year, non-DoC liquids supply in 2024 is anticipated to grow by 1.2 mb/d, y-o-y. On a regional basis, OECD liquids supply (excluding Mexico) is set to rise by 40,000 b/d in 2H24, y-o-y, driven by the US, Canada and Norway. At the same time, liquids supply from the non-OECD region (excluding DoC participating countries) is forecast to rise by 20,000 b/d in 2H24, y-o-y. Latin America is forecast to be the main driver of production growth in the non-OECD, with an expansion of 30,000 b/d in 2H24, y-o-y, while supply output in Other Asia is expected to decline.

MOMR … oil market highlights

June ***2024***

Crude oil price movements — In May, the OPEC Reference Basket (ORB) declined by $5.53, or 6.2 per cent, m-o-m, to average $83.59/b. Oil futures prices declined, with the ICE Brent front-month contract falling by $6.00, or 6.7 per cent, m-o-m, to average $83.00/b, and the NYMEX WTI front-month contract falling $5.77, or 6.8 per cent, to average $78.62/b. The DME Oman front-month contract fell by $5.63, or 6.3 per cent, m-o-m, to average $83.74/b. The front-month ICE Brent/NYMEX WTI spread narrowed by 23¢ to average $4.38/b. The price structure of ICE Brent and NYMEX WTI weakened and money managers were bearish amid heavy selling. The premium of light sweet to medium sour crudes narrowed further across all major trading hubs on a weaker light sweet market.

World economy — The world economic growth forecasts for 2024 and 2025 remained unchanged at 2.8 per cent and 2.9 per cent, respectively. For US, the economic growth forecasts for 2024 and 2025 remained unchanged at 2.2 per cent and 1.9 per cent, respectively. The economic growth forecast for the Eurozone remained unchanged at 0.5 per cent for 2024 and 1.2 per cent for 2025. Japan's economic growth forecasts are revised down to 0.3 per cent in 2024 and 0.9 per cent in 2025. China's economic growth forecasts remained at 4.8 per cent in 2024 and 4.6 per cent in 2025. India's economic growth forecasts remained unchanged at 6.6 per cent for 2024 and 6.3 per cent for 2025. Brazil's economic growth forecast is revised up to 1.8 per cent for 2024 but remained unchanged at 1.9 per cent for 2025. Russia's economic growth for 2024 is revised up to 2.9 per cent, while the forecast for 2025 remained unchanged at 1.4 per cent.

World oil demand — The global oil demand growth forecast for 2024 remained unchanged from last month's estimates at 2.2 mb/d. There were some minor downward adjustments for 1Q24 due to actual data from the OECD, more specifically Europe and Asia Pacific. This was offset by a better-than-expected performance in the non-OECD in 1Q24. Accordingly, OECD oil demand is now expected to grow by 20,000 b/d while the non-OECD forecast remains at 2.0 mb/d. In 2025, global oil demand is expected to see robust growth of 1.8 mb/d, y-o-y, unchanged from the previous month's assessment. The OECD is expected to grow by 10,000 b/d, y-o-y, while demand in the non-OECD is forecast to increase by 1.7 mb/d.

World oil supply — The non-Declaration of Cooperation (DoC) liquids supply (i.e., liquids supply from countries not participating in the DoC) is expected to grow by 1.2 mb/d in 2024, unchanged from the previous month's assessment. The main drivers for growth are expected to be the US, Canada, Brazil and Norway. In 2025, non-DoC liquids supply growth is expected at 1.1 mb/d, unchanged from the previous month's assessment. The growth is expected to be mainly driven by the US, Brazil, Canada and Norway. Separately, DoC natural gas liquids (NGLs) and non-conventional liquids are forecast to grow by about 100,000 b/d to average 8.3 mb/d this year, followed by an increase of 20 tb/d to average 8.3 mb/d in 2025. The DoC-22 crude oil production in May dropped by 123 tb/d, m-o-m, averaging 40.92 mb/d, as reported by available secondary sources.

Product markets and refining operations — In May, refinery margins eased further in all main trading hubs for the third consecutive month, as an ongoing recovery in refinery processing rates led to product stock builds. Gasoline was the main driver of weakness across the barrel in all regions, with ample availability amid heightened production following the conclusion of heavy maintenance and the start of the summer season. Softening economic incentives for East-to-West flows due to weakening export margins and strong gasoline imports from the Middle East weighed on Asian product markets despite strengthening Asian naphtha and fuel oil crack spreads. Global refinery intake increased by 490 tb/d in May to average 80.5 mb/d, compared with 80.0 mb/d the previous month, and was 106 tb/d higher, y-o-y.

Tanker market — Dirty spot freight rates showed mixed movement in May, with VLCCs and Aframax generally improving while Suezmax experienced a decline m-o-m. VLCC spot freight rates on the Middle East-to-East route rose by 10 per cent, m-o-m, while the West Africa-to-East route rose by 11 per cent. Aframax rates around the Mediterranean rose by 10 per cent in May, while the Indonesia-to-East route was up 6 per cent. In contrast, Suezmax spot freight rates declined, dropping by 8 per cent, m-o-m, on the US Gulf-to-Europe route. Rates for clean tankers were higher across all monitored routes in May, with East of Suez rates up by 10 per cent and West of Suez rates gaining 3 per cent.

Crude and refined products trade — US crude imports rose to a six-month high in May, averaging almost 6.8 mb/d ahead of the summer driving season, according to preliminary data. US crude exports also increased during the month to average 4.4 mb/d, representing a y-o-y gain of over 15 per cent. Meanwhile, US product imports declined by 2 per cent to average 2.1 mb/d, while product exports also fell by about 2 per cent to average 6.5 mb/d, although this still represents an 11 per cent y-o-y gain. The latest complete data for China shows crude imports in April with a seasonal decline of almost 6 per cent to average 10.9 mb/d, while product imports reached a record high of 2.5 mb/d, supported by higher inflows of fuel oil. India's crude imports in April hit a two-year high of 5.2 mb/d, while product imports were the highest in six months at just under 1.3 mb/d. This was ahead of national elections, which were seen boosting transportation demand. In Japan, crude imports partly recovered from the weak performance in 1Q24 to average 2.6 mb/d, while product inflows also recovered. Preliminary estimates indicate OECD Europe crude imports were slightly lower in May, as higher inflows from North America were outpaced by declines from other key regions.

Commercial stock movements — Preliminary April 2024 data shows total OECD commercial oil stocks were up by 16.6 mb, m-o-m. At 2,773 mb, they were 154 mb below the 2015–19 average. Within the components, crude stocks rose by 19.5 mb, while product stocks fell by 2.9 mb, m-o-m, respectively. OECD commercial crude stocks stood at 1,376 mb, which is 96 mb less than the 2015–19 average. OECD total product stocks in April stood at 1,396 mb. This is 58 mb lower than the 2015–19 average. In terms of days of forward cover, OECD commercial stocks increased in April by 0.1 days, m-o-m, to stand at 60.1 days. This is 2.2 days lower than the 2015–19 average.

Balance of supply and demand — Demand for DoC crude (i.e., crude from countries participating in the DoC) remains unchanged from the previous month's assessment to stand at about 43.2 mb/d in 2024, which is around 0.9 mb/d higher than the estimated level for 2023. Demand for DoC crude in 2025 remains unchanged from the previous month's assessment to stand at 43.9 mb/d, around 70,000 b/d higher than the estimate for 2024.

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Table 1: OPEC Reference Basket spot crude prices $/b

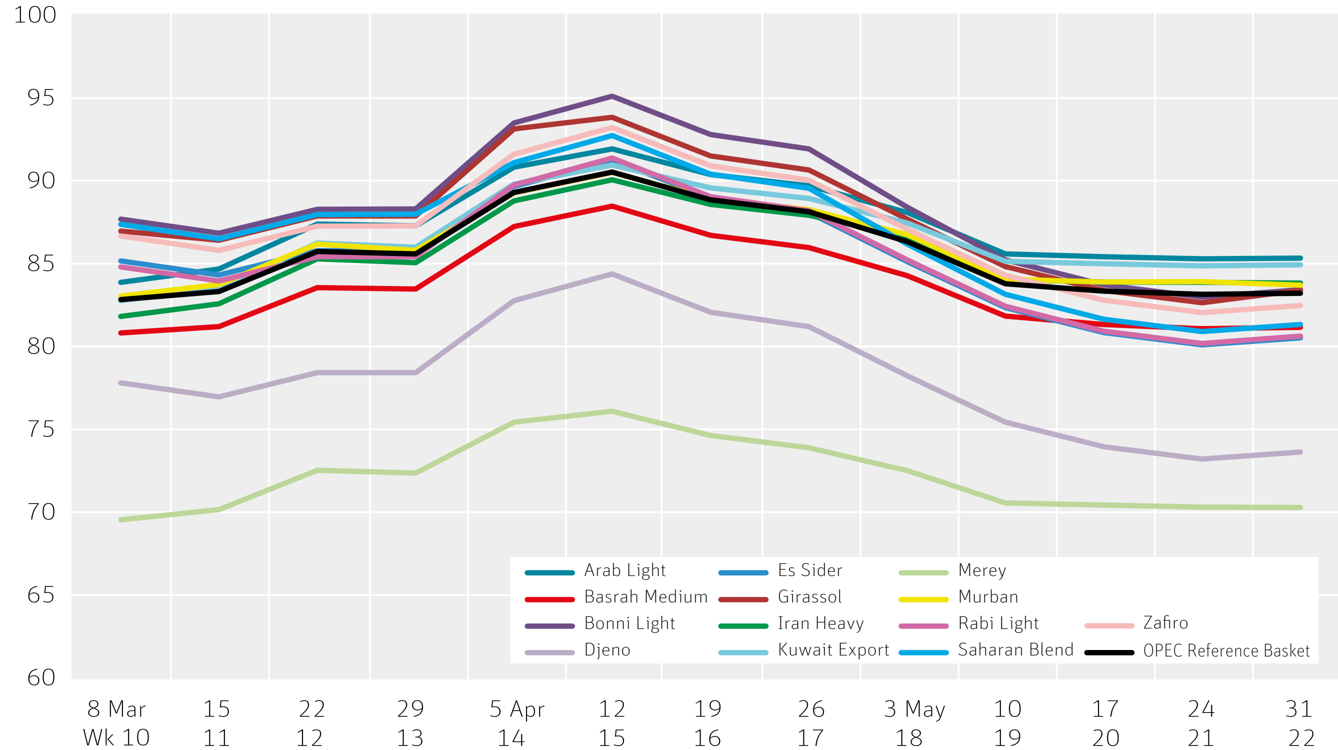
	2023								2024					Weeks 18–22/2024 (week ending)				
Crude/Member Country	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**03 May**	**10 May**	**17 May**	**24 May**	**31 May**
Arab Light — Saudi Arabia	77.72	77.18	83.45	89.55	96.51	93.39	87.30	81.27	82.14	82.30	85.61	90.64	85.60	88.10	85.59	85.42	85.30	85.34
Basrah Medium — Iraq	73.32	73.03	78.82	85.38	93.14	90.19	83.80	77.64	78.21	79.35	82.13	87.01	81.58	84.27	81.84	81.32	81.07	81.16
Bonny Light — Nigeria	75.63	74.18	79.92	86.52	95.53	94.03	86.18	79.81	80.84	85.65	87.86	93.17	84.16	88.40	85.23	83.73	82.99	83.42
Djeno — Congo	68.37	67.28	72.64	78.69	86.51	83.67	75.60	70.53	72.90	76.45	77.99	82.44	74.37	78.23	75.44	73.94	73.20	73.63
Es Sider — Libya	75.32	74.23	79.69	86.39	94.31	92.12	83.35	77.78	79.66	83.95	85.34	89.34	81.27	85.13	82.34	80.84	80.10	80.53
Girassol — Angola	77.20	76.30	82.09	89.05	97.46	95.72	83.22	78.88	81.60	85.40	87.34	92.05	83.85	87.68	84.83	83.39	82.65	83.40
Iran Heavy — IR Iran	76.47	75.33	81.48	87.58	94.63	91.55	85.00	79.06	80.14	80.34	83.48	88.79	84.13	86.65	84.05	83.90	83.87	83.83
Kuwait Export — Kuwait	77.44	76.44	82.39	88.77	95.70	92.85	86.30	80.11	80.84	81.09	84.43	89.76	85.15	87.45	85.15	85.00	84.86	84.93
Merey — Venezuela	56.22	57.37	63.28	68.48	75.51	72.54	70.74	65.23	66.50	67.27	70.98	74.91	70.55	72.51	70.55	70.43	70.31	70.28
Murban — UAE	75.66	75.52	80.78	87.24	93.86	91.00	83.33	77.68	79.06	80.99	84.52	89.19	84.10	86.75	84.06	83.90	83.92	83.70
Rabi Light — Gabon	75.36	74.27	79.63	85.68	93.50	90.66	82.59	77.52	79.89	83.44	84.98	89.43	81.36	85.22	82.43	80.93	80.19	80.62
Saharan Blend — Algeria	76.42	75.23	80.29	86.69	95.21	93.27	84.80	78.83	81.36	86.00	87.54	90.79	82.07	86.19	83.14	81.64	80.90	81.33
Zafiro — Equatorial Guinea	76.82	75.28	81.45	87.54	95.36	92.52	84.45	79.38	81.66	85.30	86.84	91.29	83.22	87.08	84.29	82.79	82.05	82.48
OPEC Reference Basket	**75.82**	**75.19**	**81.06**	**87.33**	**94.60**	**91.78**	**84.92**	**79.00**	**80.04**	**81.23**	**84.22**	**89.12**	**83.59**	**86.34**	**83.78**	**83.35**	**83.14**	**83.21**

Table 2: Selected spot crude prices $/b

	2023								2024					Weeks 18–22/2024 (week ending)				
Crude/country	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**03 May**	**10 May**	**17 May**	**24 May**	**31 May**
Arab Heavy — Saudi Arabia	76.27	75.03	81.24	87.48	94.43	91.50	84.95	79.26	80.44	80.54	83.88	89.24	84.58	87.10	84.50	84.35	84.32	84.28
Brega — Libya	74.77	73.58	78.94	85.29	93.26	90.82	82.55	77.28	79.36	83.40	85.09	89.19	81.02	84.92	82.09	80.59	79.85	80.28
Brent Dtd — North Sea	75.82	74.73	80.09	86.14	93.96	91.12	83.05	77.98	80.26	83.90	85.44	89.89	81.82	85.68	82.89	81.39	80.65	81.08
Dubai — UAE	75.13	74.70	80.33	86.46	92.93	89.81	83.33	77.31	78.73	80.82	84.21	89.12	84.11	86.88	83.92	83.79	83.77	84.04
Ekofisk — North Sea	77.49	76.21	81.83	88.44	96.84	95.67	86.12	80.21	82.98	87.06	87.99	91.92	83.34	87.53	84.68	83.08	82.02	82.15
Iran Light — IR Iran	74.19	73.46	80.75	87.29	93.92	91.83	82.07	74.13	76.37	80.94	82.36	88.24	81.65	84.51	82.56	81.66	80.53	81.28
Isthmus — Mexico	65.78	66.31	72.56	79.56	87.24	84.04	76.76	70.67	72.34	75.77	78.72	82.92	77.38	78.90	77.52	77.41	77.20	77.09
Oman — Oman	74.91	74.65	80.54	86.49	92.73	89.79	83.17	77.21	78.75	80.86	84.14	89.35	84.06	86.72	84.09	83.90	83.86	83.52
Suez Mix — Egypt	74.06	73.33	80.62	87.16	93.79	91.70	81.94	74.00	76.24	80.81	82.23	88.11	81.52	84.38	82.43	81.53	80.40	81.15
Minas — Indonesia	73.72	72.58	77.47	84.97	91.12	88.25	81.16	76.69	78.06	83.67	90.74	96.43	89.27	95.01	91.03	89.66	87.67	86.12
Urals — Russia	50.73	52.56	61.40	71.34	81.16	78.97	69.00	59.97	62.36	66.45	68.24	73.02	65.43	68.98	66.19	64.69	64.49	65.28
WTI — North America	71.64	70.31	75.85	81.41	89.38	85.57	77.37	72.08	73.87	76.89	80.49	84.59	78.73	80.12	78.67	79.01	78.73	78.54

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, 2024 $/b



Graph 2: Evolution of selected spot crude prices, 2024 $/b

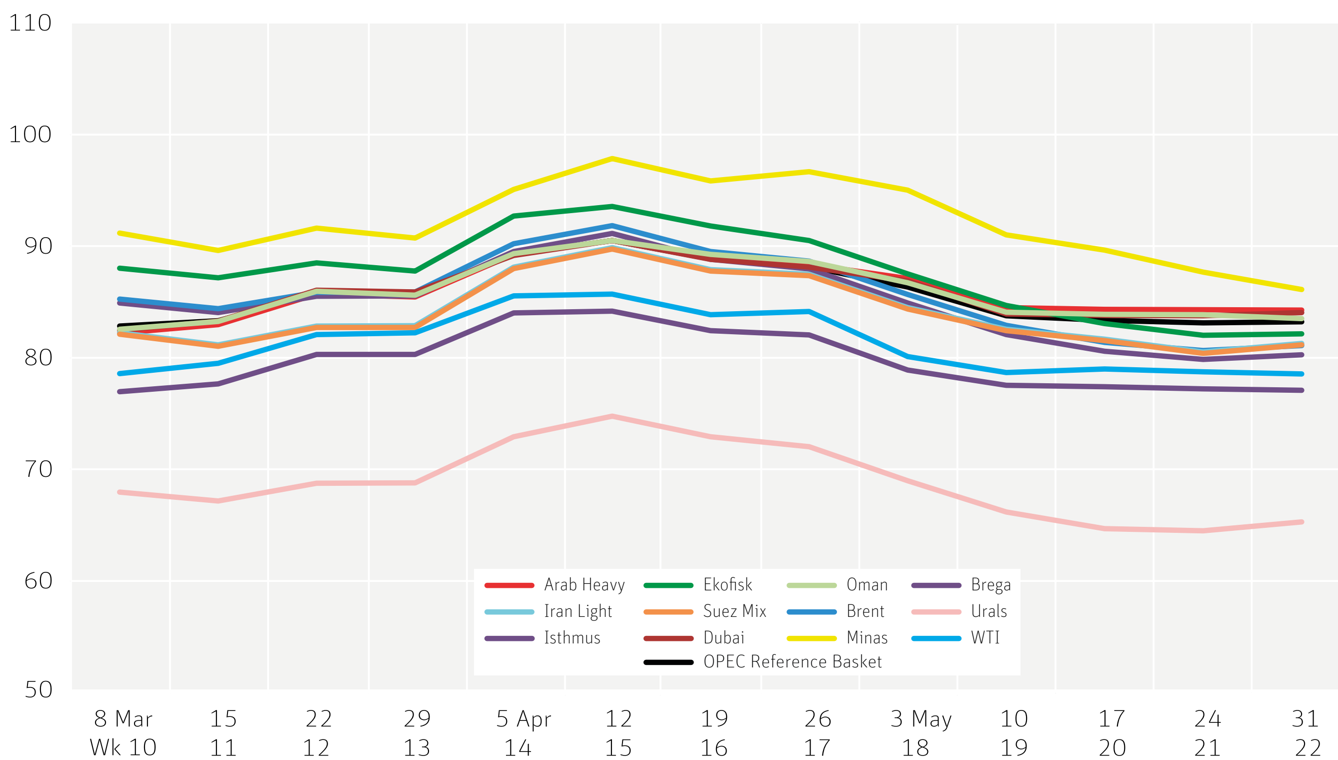


Table and Graph 3: North European market — spot barges, fob Rotterdam $/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2023	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
	August	70.90	142.60	124.12	122.68	83.81	83.88
	September	77.27	140.69	131.21	131.91	88.83	87.55
	October	71.27	123.01	123.34	122.44	80.64	74.96
	November	69.35	119.33	116.72	114.99	75.29	68.93
	December	70.27	112.50	107.26	105.62	70.95	66.05
2024	January	70.61	115.51	110.89	107.60	72.54	65.99
	February	73.32	123.05	114.18	116.23	72.80	69.22
	March	78.43	128.49	109.34	112.12	78.70	71.75
	April	76.24	126.39	108.07	109.15	78.14	74.45
	May	73.05	109.74	102.60	100.68	73.14	72.29

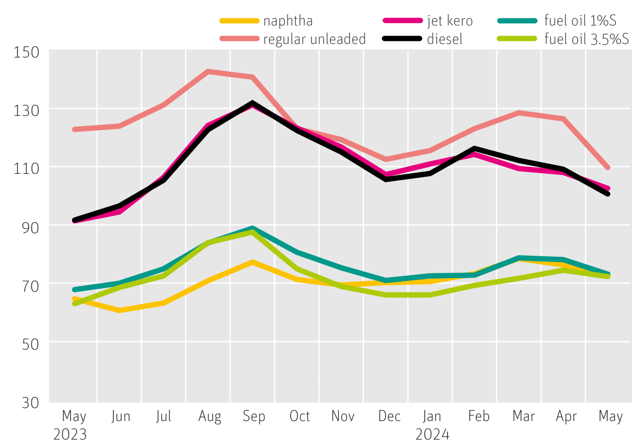


Table and Graph 4: South European market — spot cargoes, fob Italy $/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2023	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
	August	68.74	117.34	123.03	87.46	80.86
	September	74.24	119.75	131.60	92.29	85.03
	October	69.13	99.59	122.33	85.02	72.85
	November	68.60	98.25	112.32	78.59	65.00
	December	66.91	92.39	105.78	76.45	60.70
2024	January	68.02	94.91	108.66	74.57	64.79
	February	70.10	102.78	116.35	78.55	69.29
	March	74.58	108.77	112.33	84.16	70.33
	April	73.53	113.81	109.99	83.05	74.80
	May	70.21	105.11	102.04	77.64	69.94

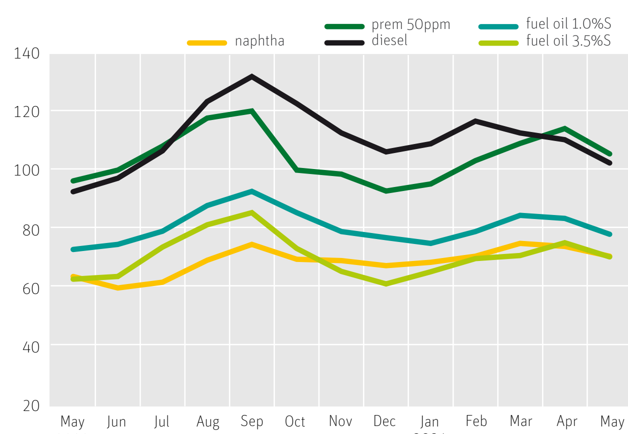


Table and Graph 5: US East Coast market — spot cargoes, New York $/b, duties and fees included

		regular gasoline unleaded 87	gasoil*	jet kero*	fuel oil 0.3 per cent S	fuel oil 3.0 per cent S
2023	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
	August	121.08	130.65	129.26	98.63	83.47
	September	121.76	139.20	134.55	104.00	86.78
	October	102.14	130.11	122.80	98.06	78.27
	November	96.61	121.92	125.19	92.25	75.16
	December	91.58	110.27	108.70	87.98	76.36
2024	January	94.54	112.48	113.07	93.91	70.47
	February	99.18	116.32	115.14	96.99	69.52
	March	104.85	112.36	114.06	100.44	75.05
	April	114.95	110.05	113.05	100.35	77.96
	May	105.01	101.93	103.35	92.55	75.75

* *FOB barge spot prices.*

Source: Argus. Prices are average of available days.

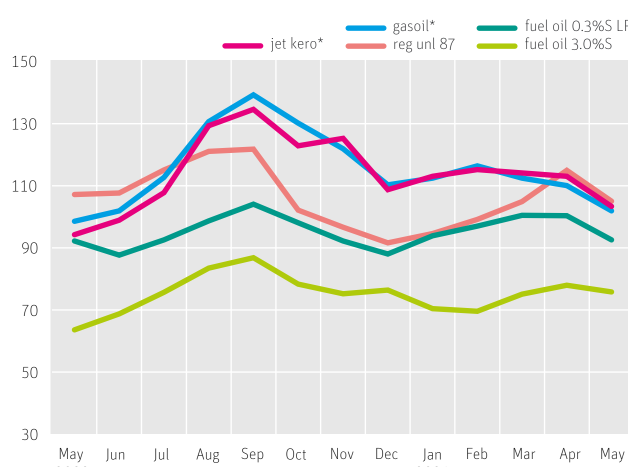


Table and Graph 6: Singapore market — spot cargoes, fob $/b

		naphtha	premium gasoline unl 95	premium gasoline unl 92	gasoil	jet kero	fuel oil 180 Cst	fuel oil 380 Cst
2023	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
	August	70.70	107.23	101.84	117.15	116.01	116.59	82.48
	September	74.73	109.92	104.47	122.44	121.42	122.77	81.18
	October	70.80	98.91	93.71	113.48	112.78	113.58	71.86
	November	69.57	98.00	92.36	103.21	103.06	106.63	68.43
	December	72.69	91.27	87.27	97.38	97.31	101.65	66.95
2024	January	73.03	95.94	91.18	101.16	100.74	101.58	66.95
	February	72.48	100.07	95.58	104.87	103.97	103.26	65.92
	March	76.45	101.52	97.09	102.76	101.43	102.54	71.28
	April	75.58	106.33	102.07	103.50	101.36	102.76	76.70
	May	72.29	95.38	91.10	95.67	94.13	95.45	78.02

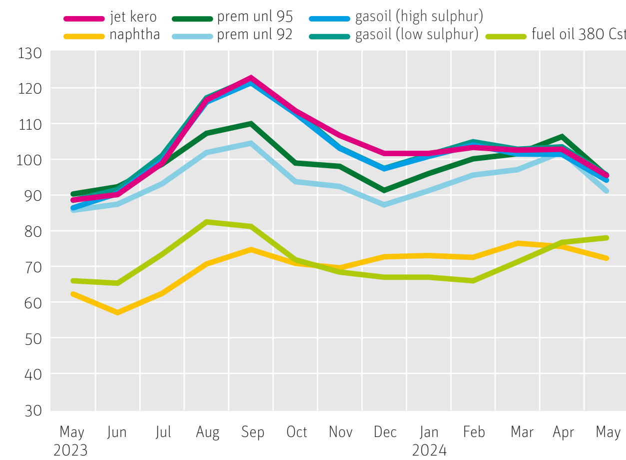
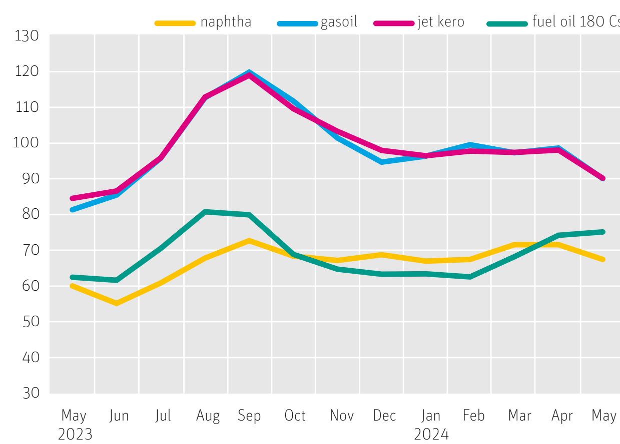


Table and Graph 7: Middle East Gulf market — spot cargoes, fob $/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2023	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
	August	67.79	112.71	112.89	80.75
	September	72.70	119.81	119.02	79.94
	October	68.37	111.78	109.63	68.86
	November	67.13	101.44	103.27	64.77
	December	68.78	94.69	97.95	63.28
2024	January	66.98	96.33	96.48	63.42
	February	67.43	99.55	97.77	62.58
	March	71.54	97.27	97.39	68.18
	April	71.57	98.57	98.05	74.17
	May	67.49	90.04	90.17	75.17

Source: Argus. Prices are average of available days.



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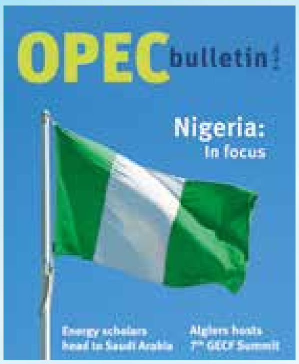

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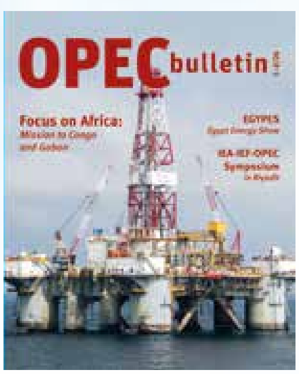

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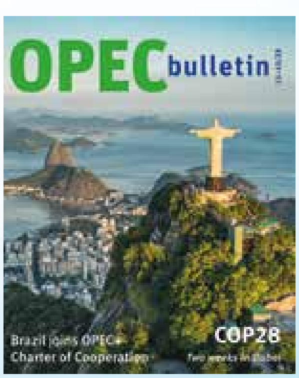

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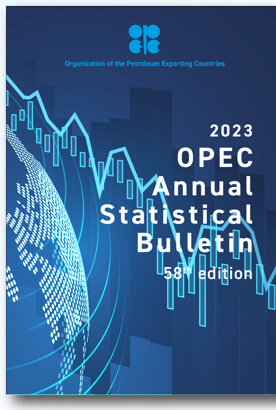

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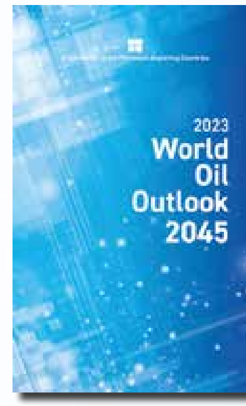

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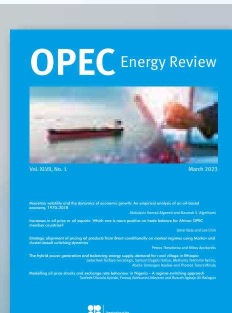

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