OPEC bulletin

8/22

New Secretary General

Haitham Al Ghais

OPEC

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Building on 62 years of success

This edition of the *OPEC Bulletin* sees the handover of the OPEC Secretariat to new Secretary General, Haitham Al Ghais. Al Ghais has been a devoted veteran of OPEC for many years, with a distinguished record serving as Kuwait's representative on the OPEC Board of Governors from 2017 to 2021. He was also the first Chairman of the Joint Technical Committee (JTC) under the 'Declaration of Cooperation' (DoC) during its inaugural year in 2017. He remained on the JTC as a Member until June of last year.

While still recovering from the immutable blow of losing the dearly departed Mohammad Sanusi Barkindo, who passed away on July 5 of this year, shortly before completing his second term as OPEC Secretary General, the Secretariat moves steadily forward. Barkindo's boundless and indelible legacy and impact on OPEC and the oil and energy industry as a whole will certainly be carried on. His torch will continue to burn bright in the DoC and 'Charter of Cooperation' (CoC), which he was instrumental in creating.

Barkindo warmly congratulated Al Ghais on receiving the appointment as Secretary General, which began on August 1. Overall support for Al Ghais has been clear and unanimous, as he was appointed by acclamation by Heads of Delegation at a special meeting of the OPEC Conference held via videoconference on January 3, 2022.

Al Ghais brings his own type of diplomacy and style to the new position, backed by his long career as an oil industry technocrat. He joined Kuwait Petroleum Corporation (KPC) in 1993, holding key positions worldwide and has advised six Kuwaiti oil ministers on the global oil market and its developments. Prior to taking the position as OPEC Secretary General, he was Deputy Managing Director for International Marketing at KPC. He is also being celebrated as the first member of the Gulf Cooperation Council (GCC) to hold the post since 2005.

Kuwait has played a very important role in the founding and development of OPEC and Al Ghais is not the first Kuwaiti to hold the Secretary General position.

The third Secretary General of OPEC — Ashraf T Lutfi — was from Kuwait and held the office from May 1, 1965, until December 31, 1966. The next Secretary General from Kuwait was Sheikh Ahmad Fahad Al-Ahmad Al-Sabah, who held office from January 1, 2005, until December 31, 2005. Dr Adnan Shihab-Eldin was Acting Secretary General on his behalf and also served as Director, Research Division. Shihab-Eldin received the second Abdullah Bin-Hamad Al-Attiyah International Energy Award — *Lifetime Achievement for the Advancement of the Organization of the Petroleum Exporting Countries* in 2014 in recognition of his work at OPEC.

Kuwait's roots go even further back — to the beginning. It was one of the five Founder Members of OPEC 62 years ago, the others being IR Iran, Iraq, Saudi Arabia and Venezuela.

OPEC was formed against a background of general discontent that was fomenting among oil-producing countries at their ill treatment by international oil majors. Moves by the majors to unilaterally reduce the price of oil per barrel triggered an outrage that eventually led to OPEC in 1960.

The seed for OPEC was first planted at the Maadi Yacht Club, where a secret meeting was held on the sidelines of the First Arab Petroleum Congress in April 1959. Among those present was Ahmed Sayed Omar of Kuwait. In the end an agreement called the 'Maadi Pact' was signed, an extraordinary move at the time, as it proposed a Petroleum Consultation Commission made up of the countries present.

On September 14, 1960, in Baghdad, Iraq, the five nations met at Al-Shaab Hall to birth OPEC in an attempt to defend their legitimate interests in the world oil industry.

Fast forward nearly 60 years to a sharp global inventory build between 2014–16, which led to a severe market crash, with its massive itinerant effect on the world economy. With the OPEC Reference Basket price plunging an extraordinary 80 per cent in this time, investments dropped by a massive 27 per cent in both 2015 and 2016. Oil and gas companies laid off almost half a million people and many bankruptcies were filed, around 200 in the US alone.

This led to the adoption of the DoC on December 10, 2016, after a long and challenging consultation process, and later — in 2019 — the CoC. The DoC (with at that time 14 OPEC Members and 10 non-OPEC participating countries) decided upon historic production adjustments to support the rebalancing of the market.

Two non-OPEC countries, the Russian Federation and the Sultanate of Oman, along with three OPEC Member Countries, Algeria, Kuwait and Venezuela, were chosen to monitor the voluntary commitments under a new body called the Joint Ministerial Monitoring Committee (JMMC). Kuwait was chosen to chair the body (under Kuwait's Minister of Oil, Issam A Almarzooq), along with an alternate chair from the Russian Federation.

The then OPEC Secretary General said that choosing Kuwait as the Chair of the JMMC reflected on both the country's respected position and status as a leading player in helping bring about the market stability both producers and consumers desire.

When Barkindo met in 2017 with Anas Khaled Al-Saleh, Kuwait's Deputy Prime Minister and Minister of Finance, who was Kuwait's Acting Minister of Oil at the time, he thanked him for his country's efforts to build consensus, his commitment to overcome the situation of excess oil supply and his unwavering dedication to the goals of the Organization.

When the JTC was formed to support the JMMC, with the assistance of the Secretariat, Al Ghais was its first head. The DoC went on to prove itself through a massive downturn that started in 2020 with the COVID-19 pandemic.

Al Ghais has accompanied the DoC process the whole way. We can rest assured that OPEC is in safe and knowledgeable hands.

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Cover
This month's cover shows the new OPEC Secretary General, Haitham Al Ghais (see story on page 4).

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

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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.

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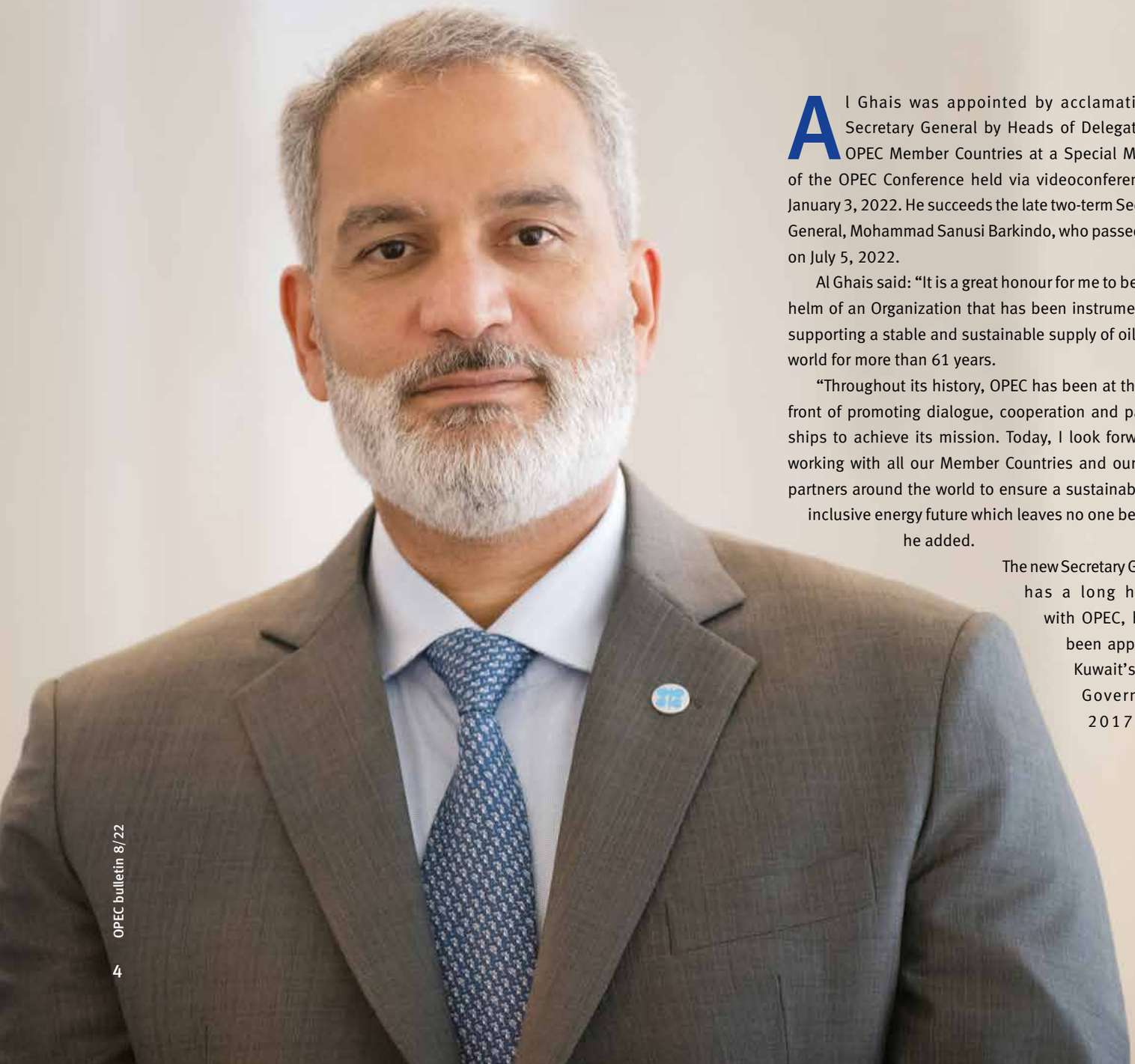
Haitham Al Ghais

takes the helm as new OPEC Secretary General

*Incoming OPEC Secretary General, **Haitham Al Ghais**, a known veteran and diplomat of the oil industry with over three decades of experience, started his appointment in Vienna at the Secretariat on August 1, 2022.*



Al Ghais was appointed by acclamation as Secretary General by Heads of Delegation of OPEC Member Countries at a Special Meeting of the OPEC Conference held via videoconference on January 3, 2022. He succeeds the late two-term Secretary General, Mohammad Sanusi Barkindo, who passed away on July 5, 2022.

Al Ghais said: "It is a great honour for me to be at the helm of an Organization that has been instrumental in supporting a stable and sustainable supply of oil to the world for more than 61 years.

"Throughout its history, OPEC has been at the forefront of promoting dialogue, cooperation and partnerships to achieve its mission. Today, I look forward to working with all our Member Countries and our many partners around the world to ensure a sustainable and inclusive energy future which leaves no one behind," he added.

The new Secretary General has a long history with OPEC, having been appointed Kuwait's OPEC Governor in 2017 and

Haitham Al Ghais with members of the OPEC Management.

retaining the position until 2021. He was the first Chairman of the Joint Technical Committee (JTC) under the 'Declaration of Cooperation' (DoC), managing the Committee with great distinction from its inception in January 2017 for its first year and subsequently serving as a Member until June 2021.

He was also a leading member of Kuwait's Delegation to the meetings of OPEC and the DoC between OPEC Member Countries and non-OPEC oil-producing countries.

The Secretary General also played a key role in drafting and developing the landmark 'Charter of Cooperation' (CoC). The CoC was endorsed by OPEC Member Countries and several non-OPEC producing countries in July 2019 at the 6th OPEC and non-OPEC Ministerial Meeting.

In addition, he was a Member of the Organization's Internal Audit Committee, which he later skillfully chaired.

Background

The OPEC Secretary General has extensive experience in his home country of Kuwait, having advised six Kuwaiti Oil Ministers on the global oil market and its developments over the past years. Al Ghais was a veteran of the Kuwait Petroleum Corporation (KPC), starting in 1993 and holding key positions worldwide.

Al Ghais first headed the regional offices of KPC in Beijing (2005–07) as responsible for advertising and marketing and undertaking growth in China, then in London (2008–13), where he headed the European buying, selling, advertising and marketing actions. In 2014, he moved to the Market Analysis Division. Prior to taking the position of Secretary General of OPEC, he held the title of Deputy Managing Director for International Marketing for KPC.

The new Secretary General received a bachelor's degree in political science from the University of San Francisco in 1990 and is fluent in six languages: English, German, Portuguese, Spanish, French and Chinese.

In his first meeting with OPEC Staff on August 1, Al Ghais spoke of the deep loss of Barkindo, as a friend, an industry titan and a colleague, and asked for a moment of silence in his honour.

Barkindo congratulates Al Ghais

The late Secretary General Barkindo had congratulated Al Ghais in a January 3, 2022, letter, stating: "I am very pleased to extend to you my warmest congratulations on your recent appointment as OPEC Secretary General designate ... It is fully deserved and recognition of your extremely positive standing within the OPEC community as a committed, knowledgeable and extremely able technocrat who can lead the Organization in years to come.

"... There is an English saying, 'standing on the shoulders of giants'. We follow in a long great line of past Secretaries General, and I have no doubt that you will build your own legacy when you walk through the doors of the Secretariat to become the next OPEC Secretary General."

Challenging start

Al Ghais takes over the Secretary General role when OPEC and its partners under the DoC are still trying to navigate a delicate recovery from the pandemic.

In a recent media interview, Al Ghais said the oil market is going through a phase of short, medium and long-term challenges, and the Organization is expecting the global demand for oil to return to pre-pandemic levels by the end of 2022. Oil supply is expected to remain limited, he said.

Al Ghais added that his first priority is to work on the unity and continuity of the joint DoC, with the aim of maintaining the stability and balance of the oil markets.

"This trust that people have put into me, that

OPEC Secretariat staff gather after welcoming the newly appointed Secretary General, Haitham Al Ghais.

countries, governments have placed into me, is something that is really, really important for me," Al Ghais told the media in January of this year in his first public statement following his appointment.

In a recent tweet, he stated: "Barkindo has led the Organization during extremely turbulent times for the global oil market, and his remarkable role and valuable contributions, along with our Organization's long history of dialogue and cooperation, put us in a strong position to continue supporting stability and balance in the global oil market."

"He knows OPEC inside and out," said Johannes Benigni, Chairman of JBC Energy Group in Vienna, of Al Ghais. "At the same time, he knows the ins and outs of the market. He is very smart and a good analyst."

"The advantage that Al Ghais has is that he was there when DoC formed from the start," said Ali al-Riyami who was previously part of Oman's non-OPEC Delegation and is now an independent analyst for the industry. "So understanding the DoC will be easy for him and Barkindo wanted to set up a strong foundation, which Haitham (Al Ghais) will have no trouble continuing," he added.

Giving producers a say in the contentious climate debate will also be a priority, Al Ghais told *Energy Intelligence* in an interview shortly after he was appointed to his new position.

A key objective for the medium to long term will be to ensure that OPEC and oil producers have a "louder voice" in the global climate debate, especially at upcoming UN climate conferences in Egypt and the United Arab Emirates this year and next, Al Ghais said during the January interview.

New OPEC Secretary General discusses plans and direction

*On August 1, 2022, **Haitham Al Ghais** of Kuwait took the office of OPEC Secretary General, building on the Organization's long-standing history of 62 years. The* OPEC Bulletin *took a few moments of the new Secretary General's busy schedule on August 9 to ask about the assumption of office, the challenges ahead and the importance of OPEC's efforts in stabilizing the global oil market.*

Question: Congratulations, Your Excellency, on taking the office of OPEC Secretary General. You are no stranger to OPEC, as you have been part of the Organization for many years. How do you intend to start your tenure at the OPEC Secretariat, and what are your immediate priorities?

Answer: First of all, I firmly believe that the people who work in this Organization are our biggest asset, therefore, one of my key priorities is to meet with all the able staff at the Secretariat, who have been doing such a great job over many, many years. I will introduce myself and make sure we establish a rapport from the beginning, so that I can communicate clearly to the staff what my expectations are and listen to them, to see what their challenges are and what their requirements are. This is number one. Number two, of course I will be in contact with all the Member Countries to express my thanks and appreciation for all the faith and trust they have placed in me.

It's no secret to anybody the market is facing severe challenges, whether they are geopolitical, or potential economic headwinds. We have to stay more focused than ever on the 'Declaration of Cooperation' (DoC) and the collaboration that we have cemented with our partners from the non-OPEC producing countries in the DoC. We are just coming out of the COVID-19 pandemic and its implications, and now possibly facing issues with economic recovery and inflation globally. There are a lot of concerns about the state of the world economy and I think OPEC and OPEC+ cohesion is critical for us as we confront such challenges. This is key to ensuring the stability of the market. This is my immediate priority.

I have also been holding many bilateral meetings with ambassadors of Member Countries, whom I have been to visit. Not only Member Countries, but countries with which we have important dialogues, like China, India, the director of our sister organization the OPEC Fund for International Development (OPEC Fund), United Nations Industrial Development Organization (UNIDO) and other international agencies in Vienna. These are all scheduled for me in the next ten days. I will have a lot of interaction with the Member Countries and be listening to the President of the Conference and taking direction from him. I am also planning a few trips to some of the Member Countries, starting with Congo to see the current President, hopefully within the next month.

We must also prepare for one of the most important events that we host every three years, which is supposed to take place next year and hopefully we won't have to postpone it again — the OPEC Seminar. It's an event I attended back in 2015 for the first time and I was really impressed by the level of participation, the interaction with people who have so much knowledge about various parts of the energy value chain, whether it's oil or gas; you name it. My colleagues have already been preparing and working on it. We have a team in place, a steering committee internally, a technical committee and an

organizational committee. There's already a lot of work in progress so I'm going to focus on getting that done to the highest standard next year.

Q: How did your prior experience with OPEC prepare you for this position?

OPEC has been a game changer for me since I started getting involved with OPEC affairs back in 2015–16. I was always involved in the short-term, day-to-day trading and marketing when I was in my role at Kuwait Petroleum Corporation (KPC). I had worked in regional offices in China and London. It's mostly a different kind of day-to-day activity, dealing with clients and customers. However, in 2015 I started to attend some of the OPEC meetings in my previous role as Head of Research at KPC, so I started to see the broader picture of what OPEC does and how OPEC really plays a major role in the wider global market. That was very interesting, because it took me back to a macro level from the micro level. I also found it very thought-provoking because it complemented what I was doing in research at KPC, which was more strategic-oriented. Then I was appointed as Chairman of the Joint Technical Committee (JTC, under the DoC) in 2017, because again I had a lot of access to information and the experience that was required for the technical work. The JTC set up the

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foundation of how the DoC really operates today. We set up the groundwork for the monitoring mechanisms and the reporting that we do to the Joint Ministerial Monitoring Committee (JMMC) and OPEC and non-OPEC Ministerial Meetings (ONOMM), which I'm glad to say is still held firmly in place. Of course my colleagues that took over after me have improved things and that's more than welcome and appreciated. But that has definitely helped me. I have been a member of the Board of Governors and witnessed how the budgeting is done, how the planning is done and how the work is distributed regarding the affairs of management of this Organization. Being on the Board for five years helped me to know most of the ins and outs of the Organization. I worked on the Audit Committee as well for two years, which focused on the administrative and financial aspects of how the Organization is run. It seems now in retrospect that (becoming Secretary General) was potentially a natural course of direction. I was (unintentionally) being groomed for this position. It's always a learning process. I believe you never come fully prepared, I believe you learn more and more in the field and on the job. It's a continuous learning process.

"The staff are the most valuable asset. I met with the research team ... during the brainstorming session for 4.5 hours and I was impressed by the quality of the research staff we have. They are our most powerful asset."

How important is the Secretariat and its staff, particularly through its research and outreach, to the work that OPEC does?

The staff are the most valuable asset. I met with the research team yesterday during the brainstorming session for 4.5 hours and I was impressed by the quality of the research staff we have. They are our most powerful asset. All of them are very competent, very thorough, very deep, and able to critically analyze all aspects of the oil market in a way that I've never really seen, even through my previous interactions, most of them at the JTC and the ministerial meetings, so it was really nice. I believe there is always room for improvement, but the team that is around is amazing.

Outreach is also very, very important. I met with our Public Relations and Information Department today and I'm happy to say that my staff on the team understand there should be clear outreach by OPEC to all stakeholders about our message, our role and our future. We share a common view on this, which is great to know. Outreach comes in different forms and ways and there is always more we can do. It is a critical part of what I will do as well — messaging through my speeches and through participation at international events. Outreach to the youth is also very important. I am a firm believer in that. Whether it's school students or university students, we should go directly to them and talk to them about our business, our role and objectives and put a face to the name.

Your Excellency, the global oil market is currently undergoing a period of volatility following the COVID-19 pandemic, along with recent industry and geopolitical developments. What are your main concerns at this time?

I don't want to use the word concerns, but rather call them moving targets. There are a lot of moving targets we have to keep our radar focused on all the time. Definitely maintaining market balance is key. Geopolitics, economic news about potential headwinds, a slowdown in the economy, some are saying there may be a recession. I caution against using the word recession. When you look at the global GDP today, it's at around three per cent. If you compare that to historical averages it's about the same. It think it's just that we are bouncing back from exaggerated growth levels that were forecast in the past, so it looks like a slowdown or recession potentially. That's why I don't like to use the word recession. We have to remember that we're not fully out of the woods in terms of COVID. We see places like China still having lockdowns, travel and jet fuel demand haven't fully recovered. It's an action-packed time. But that's not new to OPEC, it's not new to me. We've been through many crisis before. We are well equipped. We have a great research team, we have a great alliance that harnesses the whole thing together — the DoC — and 23 countries working together so smoothly and so nicely and we have a very lean and very flexible arrangement with monthly meetings, the JMMC, the ability to interact, to act when necessary. All of this makes me confident. Yes, there are worries or concerns but there's a very good level of confidence that we

can be proactive and reactive if necessary. We only have to look back to April-May 2020 and what happened, the historic cuts that happened effective May 2020 of nearly ten million barrels/day (m b/d) following unprecedented demand destruction after the onset of the pandemic.

You have mentioned spare capacity as an issue going forward. How serious could this issue become and what can be done about it?

You may have noticed in the press release of our last OPEC+ meeting, spare capacity was mentioned maybe for the first time. I think this is testament to how serious this issue is, and not just in OPEC. We have preached this message in OPEC for years. We have spoken about the importance of investment and required investment to ensure energy security for many, many years. I can remember all the previous Secretaries General making this a point on every occasion possible. Unfortunately, it's not just an issue in OPEC Member Countries, it's in non-OPEC DoC countries also, as well as many parts of the world. The COVID pandemic additionally has implications for the financial sector, also in part environmental, social and governance (ESG) standards, which have pushed people to divest in the energy sector and the oil value chain.

We see spare capacity as tight, not only in the upstream sector but also in the downstream. I can't even remember the last time a new refinery was built in Western Europe or the US. Today with the energy crisis that everybody is feeling, in Europe particularly, refineries are critical to fueling economic growth, transportation and logistics, and the only areas that have really added refining capacity are China, India and the Middle East. I want to add here that OPEC Member Countries are really pulling their weight — there are a lot of new refinery projects starting in our Member Countries. For example, we have a mega-refinery coming up in Kuwait this year called Al Zour, which will produce 615,000 b/d when it's fully operational; there's the 400,000 b/d Jizan refinery in Saudi Arabia; a new 140,000 b/d refinery is scheduled to come online in Karbala, Iraq, this September; Ruwais in the UAE doubled capacity to 835,000 b/d; and Dangote refinery in Nigeria is being completed this year and will be able to produce 650,000 b/d in refinery products and petrochemicals.

Other than that, the rest of the world keeps shutting down refining capacity. So we have tightness in refining capacity and we have tightness in oil production capacity. This all comes down to a lack of investment. This is a serious issue going forward. The only way to solve this is to invest. We believe at OPEC, and this is borne out in our *World Oil Outlook (WOO)* which we're going to launch soon, that oil demand will continue to grow. Oil will continue to form the largest part of the energy mix to 2045, therefore we believe investment is critical. In fact, the world needs about $12.1 trillion from now to 2045 to be invested in the oil sector.

"... we have tightness in refining capacity and we have tightness in oil production capacity. This all comes down to a lack of investment."

The 'Declaration of Cooperation' has played a key role in supporting oil market stability and balance during the last five years. You played a particularly instrumental role during its inaugural year as the Chair of the Joint Technical Committee and were a member until 2021. How crucial is the framework in your opinion to date and going forward?

"The concept of multilateralism, inclusiveness and dialogue is absolutely important for OPEC — not only between oil producing nations and countries, but also between producers and consumers."

I believe the JTC and the JMMC are critical elements of success for the OPEC, non-OPEC cooperation. I was honoured to be the first Chairman of the JTC. We played a critical role in 2017 during the first downturn of the market. We established the mechanisms the methodology for monitoring conformity by countries who had signed the agreement and it was a lot of hard work. We stayed up many late hours, many late nights. A lot of effort was put in by members of the JTC and JMMC. And I think it paid off in the end with good results. When we say balance in the market, it doesn't only benefit oil-producing countries, but it's also in the interest of oil-consuming countries and the wider global economy, as well as the oil industry at large, not just the industry of oil-producing countries or OPEC producing countries. We must not forget that this industry is a source of employment, a source of funding, a source of investment and a source of energy supply to the world.

How important is multilateralism in addressing market challenges?

The concept of multilateralism, inclusiveness and dialogue is absolutely important for OPEC — not only between oil producing nations and countries, but also between producers and consumers. This is one of the key areas that we are going to focus on developing. OPEC has been very forthcoming in its approach and developed many dialogues, for example with Russia, China, the EU, Africa and India. These are key, because OPEC is all about inclusiveness, dialogue and multilateralism on all fronts, whether it is producers or key consumers. I have thoughts on how to take these dialogues to a higher level, the next level, especially in view of the challenges that we are facing now in the global energy markets. I think it's ever-more critical that we engage in ever-more multilateralism and ever-more dialogue to face the coming challenges and overcome them.

The world is facing a number of pressing long-term issues, including energy poverty, climate change and the energy transition. How will you incorporate these matters into your agenda as Secretary General of OPEC? And more broadly, what measures can the oil industry take to help push a low-carbon future?

This includes again dialogue, multilateralism and inclusiveness. When we have discussions with key stakeholders, when we discuss climate change, the energy

transition and energy poverty, I explain that they are different sides of the same coin. You can't talk about one without focusing on the other. When we talk about energy poverty, this is a key concern facing many people around the world. Advances in *Sustainable Development Goal 7* on energy have been impeded due to the COVID-19 pandemic. Almost 90 million people in Asia and Africa who had access to electricity can no longer pay for their basic energy needs. The share of the population without electricity in sub-Saharan Africa has increased from 71 per cent in 2017 to 77 per cent in 2020, meaning 733 million people are without access to electricity worldwide, about 80 per cent of whom are located in Africa. It should further be noted that 2.4 billion people on our planet still lack access to clean cooking fuels. You can't just impose policies about the energy transition and the environment without considering this situation. All voices must be heard.

Climate change is very important for OPEC and OPEC Member Countries and some of our countries are world leaders in alternative energy initiatives. The United Arab Emirates has developed 2.6 GW of wind and solar power, hopes to capture 25 per cent of the global hydrogen fuel market by 2030 and is installing nuclear power plants to meet its electricity demands. Countries belonging to the Gulf Cooperation Council, which is made up primarily of OPEC and non-OPEC DoC countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the UAE), generate 500 to 600 Watts per square metre of solar energy on every square of their land per year, equivalent to 1.5m b/d. Algeria is also launching projects to deploy 1 GW of solar capacity. The Saudi Green Initiative was launched in 2021 with more than 60 enterprises to build a sustainable future. Both the UAE and Saudi Arabia have and are planning carbon capture and storage projects. The Middle East region has five planned or operational blue hydrogen projects. Nigeria reduced its gas flaring by 70 per cent to just 7bn cu m in 2020 and many OPEC Member Countries are endorsers of the World Bank's Zero Routine Flaring by 2030, including Angola, Gabon, Iraq, Nigeria and Saudi Arabia. These are just some examples, there are plenty more. We embrace alternative energies, as we know that the world is going to need to tap into every source of energy to meet future demand.

OPEC is not against preserving the climate, OPEC is all for it, and this goes back to dialogue. We have to be involved in this dialogue. We have to be a key player in this dialogue. As Secretary General, I will do my best to utilize the podiums that will be available to us, including COP27 in Egypt in November and next year COP28 in the UAE, which is a Member Country, to further voice the concerns, the opinions and the ideas that oil-producing countries and OPEC Members have in this respect.

Definitely, there's a lot that can be done with science and technology, and that's where I think a lot of the oil companies, whether they are national oil companies or international oil companies, can be very helpful with the research and technology they have at hand. And I'm sure they can do a lot more with adequate funding and investment to ensure that operations in the oil business can be low carbon and help in the direction of preserving the climate.

"OPEC is not against preserving the climate, OPEC is all for it, and this goes back to dialogue. We have to be involved in this dialogue. We have to be a key player in this dialogue."

Finally, I know that your assuming office as Secretary General has come at a sad time for the OPEC family, following the sad passing of HE Barkindo? How do you remember him?

Barkindo was a friend to me and to all the people at the Secretariat and around the world, actually. I remember the first time I met him, how he received me very warmly and welcomed me in Kuwait. It was just after the DoC had been signed on the 10th of December 2016. He came along to meet Issam A Almarzooq, who was the Kuwaiti Minister of Oil back then and also the Chairman of the JMMC. I was called into that meeting, where I first met Barkindo and the Secretariat's team accompanying him and we hit it off from that day as friends, texting and chatting. A few weeks later, I came in touch with him again when I came to Vienna to head up my first JTC meeting. Our relationship developed very nicely in Kuwait, he visited my house several times and met my family and here in Vienna, I would always meet up with him. Definitely a man that cannot be forgotten. I pray for his family, God help them get through this. It's a big loss not just for Nigeria and Africa but for all of us at OPEC.

New Secretary General meets with officials

*OPEC's new Secretary General, **Haitham Al Ghais**, was busy with official visits in his first few weeks. He met initially with officials of OPEC Member Countries, then 'Declaration of Cooperation' countries, energy dialogue partners and other authorities based in Vienna. Some visits are captured below.*

Ms Faouzia Mebarki (l), Ambassador Extraordinary and Plenipotentiary and Permanent Representative of Algeria to the International Organizations in Vienna.

Ms Teodolinda Rosa Rodrigues Coelho (r), Ambassador and Permanent Representative of Angola to International Organizations in Vienna.

Dr Mohsen Naziri Asl (r), Ambassador and Permanent Representative of IR Iran to the United Nations and International Organizations in Vienna.

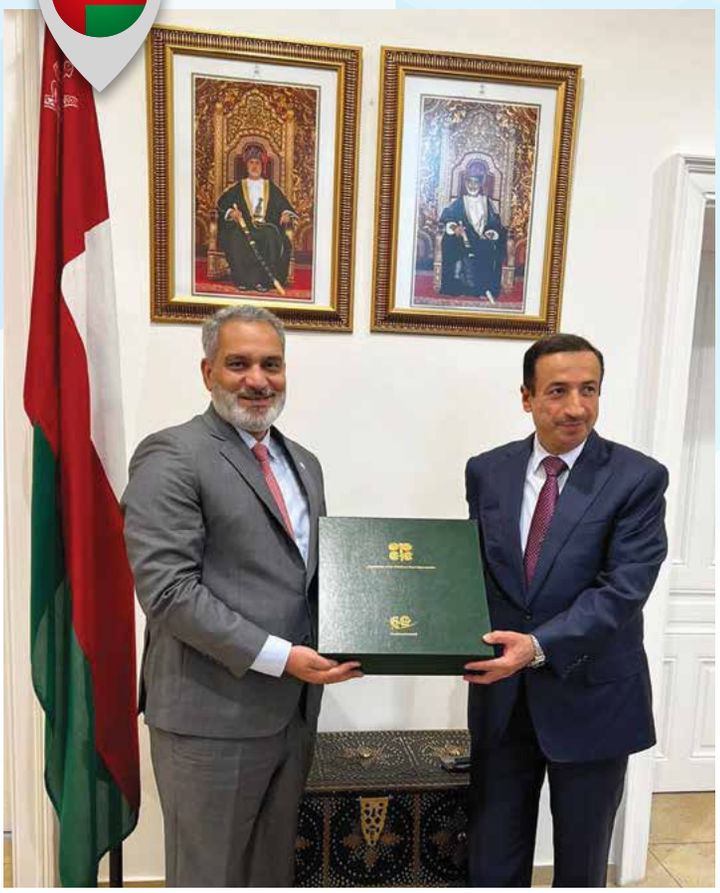
Baker Fattah Hussen Hussen (r), Ambassador and Permanent Representative of Iraq to Austria.

Talal Suleiman Al-Fassam (l), Ambassador of the State of Kuwait to Austria.

Dr Osama Abduljalil A Abdulhadi, Ambassador Extraordinary and Plenipotentiary of Libya to Austria.

HRH Ambassador Bin Khaled Bin Sultan Bin Abdulaziz Al Saud (r), Ambassador and Permanent Representative of Saudi Arabia to the United Nations and other International Organizations in Vienna.

Ambassador Qun Wang (r), Permanent Representative of the People's Republic of China to the United Nations (Vienna) and CTBTO / Resident Representative to IAEA and UNIDO.



Yousuf Ahmed Al Jabri (r), Ambassador of the Sultanate of Oman.

Jaideep Mazumdar (r), Ambassador and Permanent Representative of India.

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

Alexander Schallenberg, Federal Minister for European and International Affairs of the Republic of Austria.

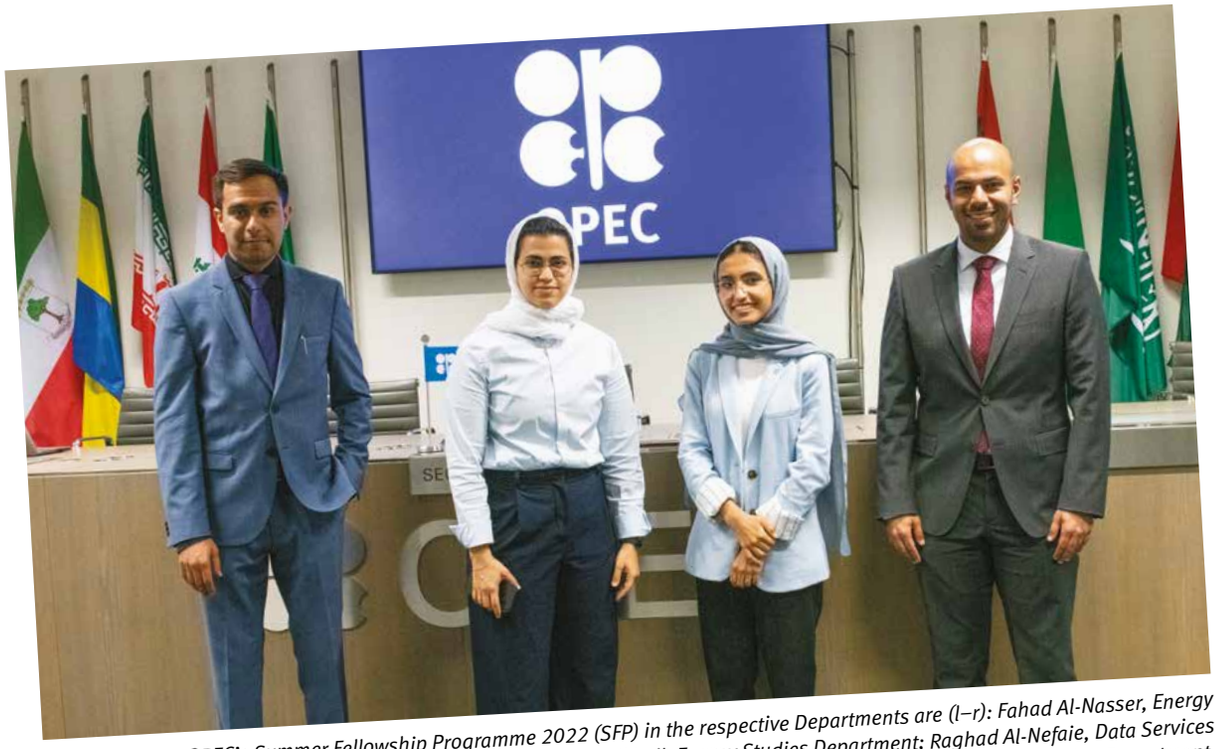
Mohamed Hamdy Mohamed Elmolla, Ambassador of the Arab Republic of Egypt to Austria, Permanent Representative of Egypt to the United Nations Office in Vienna and Other International Organizations.

Dr Götz Volker Carl Schmidt-Bremme (r), Ambassador/Permanent Representative of Germany to the United Nations in Vienna, Austria.

Gerd Müller (l), Director General of the United Nations Industrial Development Organization (UNIDO), based in Vienna, Austria.

Paying tribute to young people

OPEC Secretary General, Haitham Al Ghais *(pictured left)*, delivered a video message to employees of the Kuwait Petroleum Corporation (KPC) on International Youth Day. The Secretary General, a career veteran of the KPC, discussed the key contributions of young employees to the oil industry today and in leading the industry into the future. Al Ghais also discussed the contributions of the OPEC Academy and other Secretariat programmes in providing internships, fellowships and other capacity-building opportunities for students and young professionals from Member Countries. International Youth Day, which is recognized by the United Nations, is celebrated every year on August 12.



Attending OPEC's Summer Fellowship Programme 2022 (SFP) in the respective Departments are (l–r): Fahad Al-Nasser, Energy Studies Department; Muna Abalkhail, Energy Studies Department; Raghad Al-Nefaie, Data Services Departmentl; and Ahmed Al-Oraifan, PR & Information Department.

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Secretary General Al Ghais engages with OPEC Member Countries' press

Following his assumption of the office of OPEC Secretary General, ***Haitham Al Ghais*** *has held interviews and interventions with media from the Organization's Member Countries, thanking the nations for their tireless support of OPEC and the global oil market. The* OPEC Bulletin's ***Ayman Almusallam*** *files this report.*

At the outset of his tenure as OPEC Secretary General, Haitham Al Ghais spoke to press agencies and media outlets from OPEC Member Countries. These engagements touched on a number of key topics, including the key role played by Member Countries to ensure balance in the global oil market.

The Secretary General expressed his deep appreciation to the leaders and people of OPEC Member Countries for their continuous support of the Organization, the historic 'Declaration of Cooperation' (DoC) and the 'Charter of Cooperation' (CoC). He emphasized that all Member Countries, irregardless of the length of their membership in OPEC or their production capacities, have contributed significantly to the Organization's objectives, particularly in regard to security of supply and sustainable oil market stability.

He noted that, "Throughout the Organization's almost 62 years of history, OPEC has continuously strived to support stability and balance in the global oil market," adding, "The historic efforts of DoC participating countries has further supported this endeavour." The framework was established in Vienna, Austria, on December, 10, 2016, at the 1st OPEC and non-OPEC Ministerial Meeting.

Al Ghais emphasized his confidence that OPEC Member Countries will continue to play this positive and influential role for decades to come.

The Secretary General also thanked the Member Countries for their support during the process of his appointment. The OPEC Conference held a special meeting on January 3, 2022, during which Al Ghais was appointed by acclamation as Secretary General of the Organization for a period of three years.

"This is indeed an honour of a lifetime," he stated.

The Secretary General additionally highlighted his eagerness to continue OPEC's journey of achievements and success that the Organization embarked on more than 60 years ago.

"I look forward during the coming three years to hard and constructive work with all OPEC Member Countries and non-OPEC oil-producing countries participating in the DoC," he said. He also underscored the importance of dialogue with all producers, consumers and other industry stakeholders concerned with balance and stability in the global oil market.

"Cooperation and dialogue are among the well-established values that will continue to steer the Organization," Al Ghais highlighted.

The Secretary General pointed out that the world is facing a number of challenges, including the COVID-19 pandemic, which continues to cast uncertainty over the world economy; geopolitical developments, which have contributed to a rise in volatility in many commodities, including oil; and mounting pressure caused by investment policies related to the energy transition.

"As OPEC Secretary General, I will do my best to achieve the goals and vision of the

Organization, which is centred on a stable and balanced global oil market," the Secretary General underlined.

Africa and energy

The Secretary General also noted that seven Member Countries of OPEC are African.

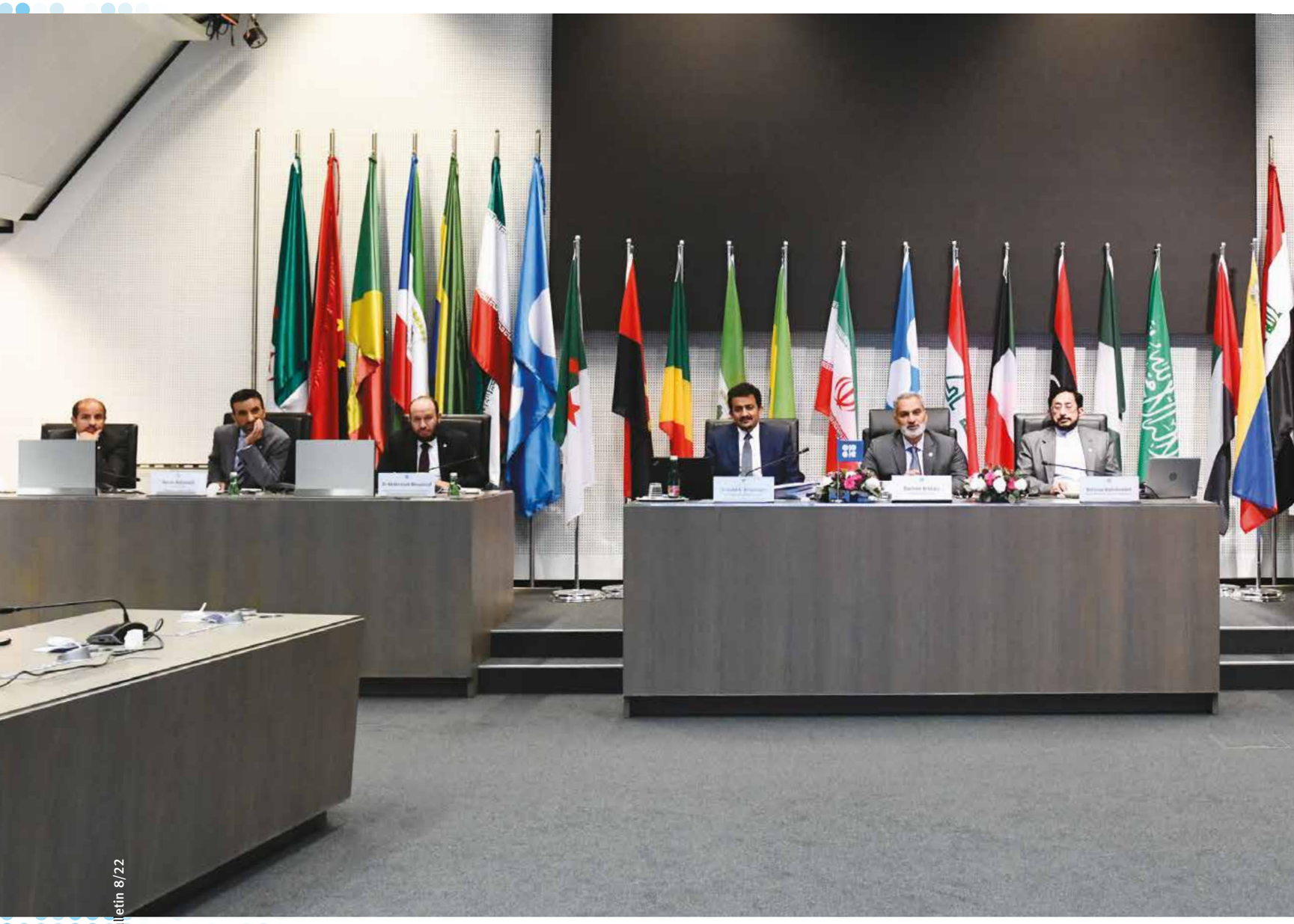
In this context, he highlighted the integral and essential role of the continent of Africa in the oil and gas industry, including long-term efforts to meet the rising energy needs of the world's growing population.

He addressed the scourge of energy poverty, noting that the numbers for Africa in this regard are stark. "About 759 million people worldwide did not have access to electricity in 2019, with around 79 per cent of them located in Africa," he noted, referencing OPEC's *World Oil Outlook 2021*.

He also noted that "around 2.6 billion people lacked access to clean cooking fuels and technologies in 2019," adding, "This includes a massive 70 per cent of Africans who have no access, exposing them to high levels of household air pollution."

DoC Ministers keep an eye on evolving market fundamentals

'Declaration of Cooperation' participants upwardly adjust output, but warn that 'insufficient investment' has affected spare production capacity.



The OPEC Secretariat team at the 31st OPEC and non-OPEC Ministerial Meeting.

Haitham Al Ghais, OPEC Secretary General.

Ministers of OPEC and non-OPEC countries participating in the 'Declaration of Cooperation' (DoC) decided to upwardly adjust production during September as they met for their 31st time on August 3, 2022.

The decision to adjust production by 100,000 barrels/day (b/d) came as Ministers took note of rapidly evolving oil market fundamentals and the need for careful assessment of market conditions, amid limited availability of excess output capacity.

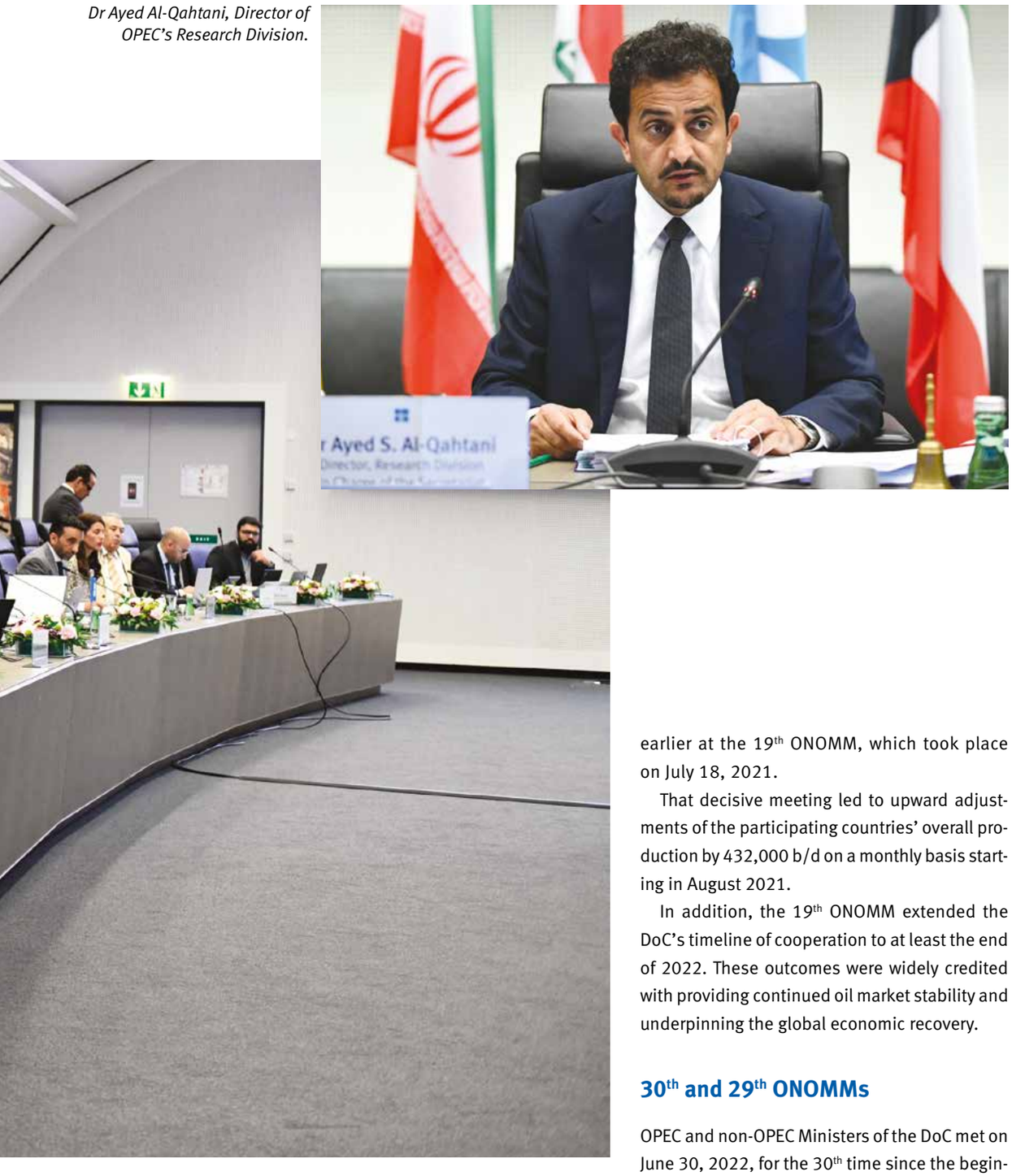
The OPEC and non-OPEC Ministerial Meeting (ONOMM) said in its statement that "chronic underinvestment in the oil sector has reduced

OPEC Secretariat staff at the 184th Meeting of the OPEC Conference.

excess capacities in the upstream, midstream as well as the downstream."

The Ministers further stressed that that "insufficient investment into the upstream sector will impact the availability of adequate supply in a timely manner to meet growing demand beyond 2023 from non-participating non-OPEC oil-producing countries, some OPEC Member Countries and participating non-OPEC oil-producing countries."

The 31st meeting was the inaugural ONOMM for



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

OPEC's new Secretary General, Haitham Al Ghais, who took office on August 1.

In concluding the meeting, the DoC participating countries said the 100,000 b/d adjustment for September does not affect baselines decided a year earlier at the 19th ONOMM, which took place on July 18, 2021.

That decisive meeting led to upward adjustments of the participating countries' overall production by 432,000 b/d on a monthly basis starting in August 2021.

In addition, the 19th ONOMM extended the DoC's timeline of cooperation to at least the end of 2022. These outcomes were widely credited with providing continued oil market stability and underpinning the global economic recovery.

30th and 29th ONOMMs

OPEC and non-OPEC Ministers of the DoC met on June 30, 2022, for the 30th time since the beginning of the process in 2016, and reconfirmed the monthly production adjustment plan mapped out four weeks earlier.

The decision, which upwardly adjusted voluntary production levels by 648,000 b/d for August 2022, marked a key step in the gradual return of oil to the market.

Alternate President of the OPEC Conference, Gabriel Mbaga Obiang Lima, Equatorial Guinea's Minister of Mines and Hydrocarbons.

The 30th ONOMM took place four weeks after the 29th ONOMM. It decided to bring forward production adjustments for September and redistribute them over July and August. That resulted in upward adjustments of 648,000 b/d each month, up from the previous 432,000 b/d.

Leading oil-consuming countries and some market observers welcomed the decision of the 29th ONOMM, held on June 2, amid tightening fundamentals and the start of the summer travel season in the northern hemisphere. Travel industry forecasts showed pent-up demand for holidays following two years of disruptions and uncertainty.

Stable and steady

The careful monitoring of market fundamentals and production adjustments undertaken by the DoC participating countries have contributed to a significant market turnaround from the historic oil demand decline experienced in 2020 at the onset of the COVID-19 pandemic.

COVID-19's breath-taking advance around the world in the first half of 2020 forced many leading economies into lockdowns that endured for weeks at a time, hammering demand for transportation fuels and forcing the global passenger aviation industry into near hibernation.

Vaccination programmes that began in earnest at the start of 2021, and better handling of prevention and treatment, have helped energize economies even as the pandemic persists. The July 2022 edition of OPEC's widely read *Monthly Oil Market Report (MOMR)* shows the global economy rebounding by 3.5 per cent in 2022 and growing by 3.2 per cent next year. This follows robust growth of 5.8 per cent in 2021.

Oil demand is expected to rise by 3.4 million barrels/day in 2022 and by an additional 2.7m b/d in 2023, according to the *MOMR*. Demand is on course to exceed pre-pandemic volumes and average 100.3m b/d this year, lifted by growth expectations in the second half of the year, and rise to around 103m b/d in 2023.

184th Meeting of the OPEC Conference in progress.

However, many analysts have noted that geopolitical tensions, the persistence of COVID-19 and other factors bearing down on the world's economy — including disrupted supply chains and inflationary pressures — could dampen growth in the coming months.

OPEC Conference meets

The 30th ONOMM took place a day after the 184th Meeting of the OPEC Conference. The meeting was held online under the chairmanship of the Conference's Alternate President, Gabriel Mbaga Obiang Lima, Equatorial Guinea's Minister of Mines and Hydrocarbons. In attendance were other OPEC Ministers and Heads of Delegation, and Dr Ayed Al-Qahtani, Director of OPEC's Research Division.

In kicking off the meeting, Lima stressed the important role that OPEC Member Countries have played in supporting oil market stability and the global economic recovery since the beginning of the pandemic. "We must continue to stand united in supporting sustainable oil market stability, which is vital to the energy security and economic resilience of all nations," he said in his opening remarks.

WU EXECUTIVE ACADEMY

OPEC unveils its 2022 Annual Statistical Bulletin

OPEC launched the 2022 edition of its flagship ***Annual Statistical Bulletin*** *(ASB) on June 28, 2022, at a hybrid launch event. A broad range of industry stakeholders were in attendance, participating in person at the OPEC Secretariat or via livestream, hosted on the Organization's website and YouTube account. The* OPEC Bulletin's *Scott Laury reports.*

The event was moderated by Eithne Treanor, who welcomed all participants to the special event and introduced the first speaker, Dr Jakob Müllner, Associate Professor and Academic Director at the WU Executive Academy of the Vienna University of Economics and Business.

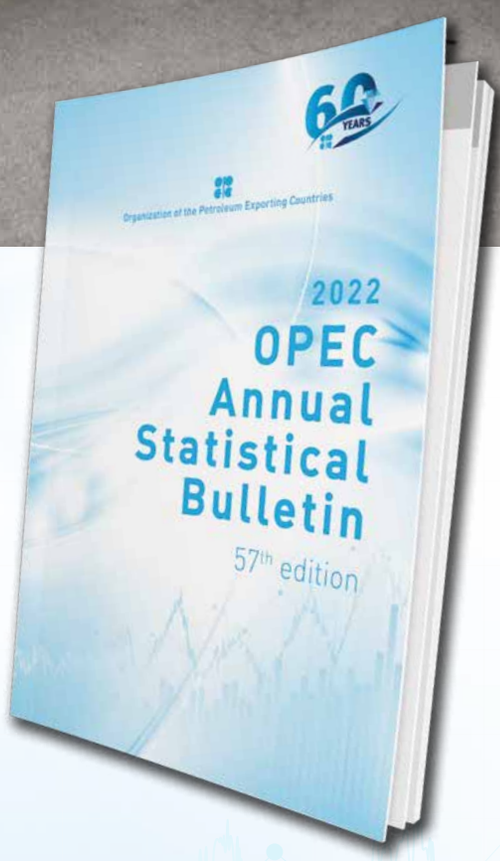
Dr Müllner said in his remarks that it is "an honour for the WU Executive Academy to sponsor the launch of OPEC's Annual Statistical Bulletin 2022," adding, "We are happy to have such a positive relationship" with neighbouring institutions, such as OPEC.

"OPEC has been a valuable partner for our activities in research and teaching," he stated.

Dr Müllner also emphasized the need in this era of uncertainty for robust research and data, saying "as the world experiences more volatile and uncertain terrain, it is more important than ever to put existing knowledge to the test through research." He added that the oil and gas industry continues to play a major role in "economic development and economic productivity."

Dr Ayed Al-Qahtani, Director of the Research Division, also provided welcoming remarks in which he recognized the event's co-sponsor, the WU Executive Academy of the Vienna University of Economics and Business, and its role in helping train future industry leaders.

"This excellent institution of higher education located right here in OPEC's host city of Vienna is providing valuable training to the next generation of energy leaders through its Masters programme in Energy Management," he said. "The work the university is doing through this



Dr Ayed Al-Qahtani, Director of the Research Division and Dr Jakob Müllner, Associate Professor and Academic Director at the WU Executive Academy of the Vienna University of Economics and Business, present the 2022 Annual Statistical Bulletin, together with OPEC staff members.

programme is of high importance, particularly when you see the ongoing need for highly qualified professionals to lead our industry into the coming decades. We thank you for joining us today as a co-sponsor and hope we can continue to collaborate together in the coming years."

A trusted and reliable source

The Director continued with his remarks, commenting on the long history of the ASB as an industry standard-bearer for oil market data and statistics.

"First published in 1965 and now in its 57th edition, the Annual Statistical Bulletin, the ASB, is one of OPEC's flagship publications, alongside the World Oil Outlook," he said. "Through more than five decades

Dr Jakob Müllner, Associate Professor and Academic Director at the WU Executive Academy of the Vienna University of Economics and Business.

Eithne Treanor moderated the event.

of being published, our readers, which include policymakers, heads of industry, energy analysts and academics, have increasingly turned to the ASB as a go-to reference tool for essential data on the global oil and gas industry. What they glean from the pages of the ASB will help them both form their insights and inform their decisions."

The ASB features key statistical data for all of OPEC's Member Countries, as well as valuable data related to non-OPEC oil-producing countries. Readers will also benefit from valuable data on exports, imports, production, refineries and shipping.

Transparency is key

Al-Qahtani underlined OPEC's laser focus on data transparency across all of its activities.

"OPEC is dedicated to enhancing data transparency

Presenting the ASB 2022 (from l–r): Dr Jakob Müllner, Associate Professor and Academic Director at the WU Executive Academy of the Vienna University of Economics and Business; Dr Ayed Al-Qahtani, Director of the Research Division; Mhammed Mouraia, Statistical Systems Coordinator; Roland Kammerer, Senior Applications Specialist; Dr Pantelis Christodoulides, Senior Statistical Research Analyst; Klaus Stoeger, Senior Statistician; Dr Mohammad Sattar, Senior Statistician.

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

The importance of timely, reliable data has also been key to the landmark decisions of the OPEC and non-OPEC producers of the 'Declaration of Cooperation' (DoC).

"Today and moving forward, data will continue to stay at the core of OPEC's ongoing activities in the global energy markets," the Director stated. "OPEC and its non-OPEC partners of the DoC continue to make highly responsible and effective decisions based predominantly on accurate, timely and transparent data and statistics. The Ministerial Meetings could not have achieved the successes they have achieved to date without the steady flow of high-quality, timely data and analysis from the Joint Ministerial Monitoring Committee, the Joint Technical Committee, and, of course, the OPEC Secretariat."

These initiatives, he added, "underpin OPEC's ongoing commitment to 100 per cent transparency in all that we do. Moreover, the Organization's credibility has been enhanced through these highly effective endeavours."

Looking ahead, the Director said that open and transparent exchanges of data and dialogue between stakeholders will remain top priorities.

"My hope is that, going forward, open data exchange and mutually beneficial dialogue between OPEC and its Member Countries, and between OPEC and its non-OPEC partners at the global level will continue to flourish in the years ahead.

This will support our ongoing efforts to promote sustainable stability in the global oil market, in the interests of producers, consumers and the global economy."

Finally, the Director closed his remarks by

Dr Ayed Al-Qahtani, Director of the Research Division.

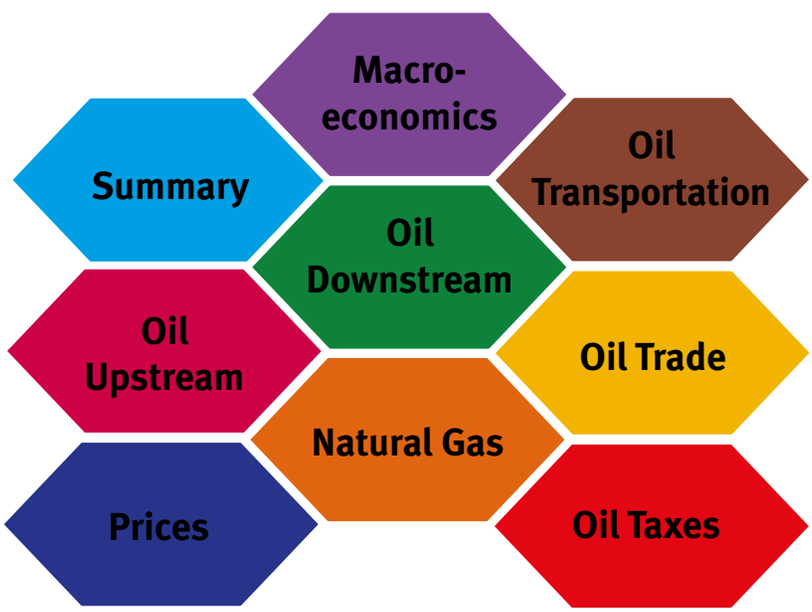
Mhammed Mouraia, Statistical Systems Coordinator, holding his presentation.

commending the OPEC Secretariat team responsible for producing this year's ASB for their many months of dedication to the project, as well as the excellent contributions of the OPEC Member Countries.

"I would like to take a moment to thank our colleagues at the OPEC Secretariat, particularly the Data Services Department for their formidable efforts in collaborating with our Member Countries to develop this excellent publication. You have once again succeeded in producing a product of the highest standards, which will surely be of great benefit to industry stakeholders."

ASB 2022 highlights

- After witnessing an historical drop in 2020 after the outbreak of the COVID-19 pandemic, total world crude oil production increased in 2021 by 520,000 barrels/day (b/d) or 0.8 per cent, compared with 2020, for an average of 69.64 million b/d (m b/d). OPEC crude oil production rose year-on-year by 700,000 b/d, or 2.7 per cent, while crude production by non-OPEC countries fell slightly by 180,000 b/d, or 0.4 per cent.
- With an average of 96.92m b/d in 2021, world oil demand rebounded from the COVID-19 pandemic to grow by 5.74m b/d y-o-y, or 6.3 per cent. Although oil demand grew year-on-year in every region, the largest gains were recorded for OECD Americas, OECD Europe and China. Oil demand in OPEC Member Countries was bullish in 2021, gaining 5.3 per cent y-o-y. Distillates and gasoline accounted for around 55.2 per cent of 2021 world oil demand, with an upward trend. Residual fuel oil requirements were about 6.6 per cent of total oil demand in 2021.
- World refinery capacity gained by 280,000 barrels/calendar day (b/cd) to stand at 101.70m b/cd during 2021. The non-OECD region, particularly the Middle East and China, as well as Africa and India, recorded refining capacity additions. Refinery capacity in the OECD declined for the third consecutive year in 2021. Globally, refinery throughput increased by 5.1 per cent to reach 81.82m b/d in 2021 amid bullish oil demand.
- OPEC Member Countries exported an average of 19.66m b/d of crude oil in 2021, a slight decrease of about 40,000 b/d, or 0.2 per cent, compared with 2020 and remaining below pre-pandemic levels. Following the pattern seen in previous years, the bulk of crude oil from OPEC Member Countries — 14.24m b/d or 72.4 per cent — was exported to Asia. Considerable volumes of crude oil — about 3.27m b/d — were also exported to Europe in 2021, compared with 3.13m b/d recorded in 2020. OECD Americas imported 940,000 b/d of crude oil from OPEC Member Countries, which was about 100,000 b/d, or 11.5 per cent, above 2020 volumes. Exports of petroleum products from OPEC Member Countries averaged 4.03m b/d during 2021, up by around 551,000 b/d, or 15.8 per cent, compared with 2020. Imports of petroleum products by OPEC Member Countries averaged at 1.50m b/d in 2021, roughly 15,000 b/d, or 1.0 per cent, lower than in 2020.
- World proven crude oil reserves stood at 1,545 billion barrels (bn b) at the end of 2021, roughly at 2020 levels. Proven crude oil reserves in OPEC Member Countries declined marginally to 1,242bn b at the end of 2021, following an increase during 2020. At the end of 2021, world proven natural gas reserves fell by 0.5 per cent to approximately 205.9 trillion standard cubic metres (tr s cu m). Proven natural gas reserves in OPEC Member Countries stood at 74.24tr s cu m at the end of 2021, up 0.8 per cent from the level at the end of 2020.
- The OPEC Reference Basket averaged $69.89/b in nominal terms during 2021, up from $41.47/b in 2020, an increase of $28.42/b, or 68.5 per cent.



Shana Photo/Mehran Riazi

Opening the Iran Oil Show are Mohammad Baqer Qalibaf (second r), Iranian Parliamentary Speaker; Javad Owji (second l), IR Iran's Minister of Petroleum; and Fereydoun Hassanvand (r), Chairman of the Energy Commission of the Islamic Consultative Assembly.

Iran exhibition
back on solid ground

For the first time since 2019, the Iran International Oil, Gas, Refining & Petrochemical Exhibition, known as the Iran Oil Show, took place in person at the Tehran International Permanent Fairground earlier this year. Excitement was in the air as participants met in person to swap information and stories and partake in the various activities held at the event. ***Maureen MacNeill*** *reports.*

Shana Photo/Mehran Riazi

Delegates to the opening ceremony at the Iran Oil Show, with Javad Owji (r); Mohammad Baqer Qalibaf (second r); and Fereydoun Hassanvand (third r).

If the feeling at the 26th Iran Oil Show is any indication, IR Iran has bounced strongly back from the COVID-19 pandemic, which knocked the oil industry off its feet over 2020 and 2021.

At the full opening event, attendees were all eyes and ears. The theme of the show for 2022 — 'Knowledge-based oil, Iranian production, global exports' — is very inspiring, Iranian Minister of Petroleum Javad Owji said in his statement.

Over 1,200 domestic and 44 foreign exhibitors or their representatives were present from Italy, Spain, the United Arab Emirates, South Korea, Switzerland, Germany, Ukraine, South Africa, Belgium, Russia, China, Iraq and Azerbaijan.

Attendees included 26 universities and research centres and over 100 knowledge-based companies, startups, technology parks and science and research towns. This shows that the Petroleum Ministry is serious about the motto, says Owji.

The most important part of this slogan is the science-based aspect, says Majid Boujarzadeh, director of the 26th Iran Oil Show.

Parliamentary Speaker, Mohammad Baqer Qalibaf, says he appreciates the motto of the event very much and added the participants in the 26th Iran Oil Show are an indicator of the country's capabilities, self-sufficiency and self-reliance. He added that IR Iran would like to export its domestic products globally.

"This is a mega-event for trade in IR Iran ... we are taking back our power and showing we have unrivalled capabilities to go forward."

The Supreme Leader said the mega industry of IR Iran should be science-based in order to reach its goals, he added. "We are hopeful that this event will be a manifestation of the power and authority of our country. We want to make jobs, play an effective role in creativity and show Iranians that we will export domestic products from our country to the world."

Javad Owji, IR Iran's Minister of Petroleum, at the opening ceremony of the 26th Iran Oil Show.

Majid Boujarzadeh, Head of Public Relations at NIOC and organizer of the Iran Oil Show 2022.

He welcomed all domestic and foreign investors, underlining the need to invest in the country's oil industry.

"It is a main part of the oil industry to make it science-based, to attract attention to Iranian products and make them ready for export ... The slogan is not rhetorical, we are trying to implement it."

Minister Owji discussed three steps being taken to make the slogan a reality:

- The Ministry of Petroleum has its own instructions to create jobs and make the industry science-based. A programme will be approved at the cabinet level to ensure many measures will be taken to ensure production rises and jobs increase. After an official call was made, over 300 companies participated in creating jobs, making wells more efficient, and expanding the value chain. Science-based companies will be assisted to initiate startups, as will those making Iranian products.
- The Ministry prioritizes investment and growth in the oil sector, because without investment science-based firms will not flourish. Supplying too few financial resources is a threat to the energy security of IR Iran and growth of the oil and gas sector. Thus a priority is revitalizing the oil sector. In its first nine months, the 13th administration of IR Iran utilized oil and gas holdings, as well as banks, and negotiated with international companies to increase capabilities. More than 50 contracts worth $11.6 billion were signed to expand and develop joint petrochemical fields, manage gas flares, make the value chain more efficient and expand refineries. The Ministry also invested in the country's domestic system to complete unfinished projects to the tune of $30bn this year. Twenty-five megaprojects will be kicked off, which will make the industry more resilient. This includes upstream expansion of oil and gas fields, oil pipelines and petrochemicals.
- There are debates on dealing with sanctions and strengthening energy diplomacy; the exhibition underlines this. The country will show that the policy of sanctions will fail and that it couldn't stop Iranian oil production and its oil industry. Initiatives have been used to increase production in response to the measures. Robust diplomacy on the international scene has been attracting international capital and investment, especially from countries friendly to IR Iran, and agreements have been signed. Friendly countries are invited to invest, understanding there is an energy crisis in the world and that investment in the sector has good returns. A focus on new markets for oil and petrochemicals, in particular, sees work being done with countries that have low efficiency and a low capacity for oil, such as those in South America and Latin America.

"For the first time it is our wish to have intraregional

Mohammad Baqer Qalibaf, Iranian Parliamentary Speaker.

Mohamed Hamel, Secretary General of the Gas Exporting Countries Forum (GECF).

refineries and open the market to oil, gas and petrochemicals. We have had good achievements and used the capacity of the industry," says Owji.

"I seek assistance of the Iranian parliament to pave the way for investment. It will help all Iranian people. When the oil sector is activated, all other sectors are activated and jobs are created for young Iranians."

The parliamentary speaker says that he is working hard to support industry in IR Iran, especially the oil industry. "I can see the young generation in IR Iran joining hands, working together to increase power and dignity ...," says Qalibaf. "I am your servant and I will take steps to regulate the process of developing the oil industry. The Parliament is at your service in this way.

Qalibaf made four points:

- Preserving the capital of the generations is important. Oil and gas and mines are the wealth of all generations and the parliament always underlines this fact. The country is facing challenges and difficulties. Whenever there is a direct transfer of money to the cycle of production, the country is facilitated. Further, oil money injected directly into the government leads to inflation. All politicians now believe that underground resources don't belong to one administration or the other, but to all generations. "We should preserve the capital and wealth derived from oil, not the oil."
- Wells should be better preserved, developed and exploited. A fund is now in place to preserve capital gained and use it for productivity and expansion. "We in positions of power should pay attention and should have good reforms."
- Efficient production means better balanced production and consumption. Energy subsidies should be targeted, and unbalanced budget and energy policy must be addressed. "We produce more than 5 million barrels/day (m b/d) of oil which is a great number. We are over-users, harmed by the system and underdeveloped industry; it is wasted by heating houses." Some people consume 20 times more energy than others. An amount of $160 million has been directed to the right sectors and investors in IR Iran. If subsidies are targeted, another $20bn could be raised. "We have the people and the capability. These capabilities are in our hand, we are misusing and mismanaging them, waiting for formalities."
- Downstream gas and condensate development should be able to use public and private sector capital; the parliament is trying to reform the law to allow for more private sector capital. There is opportunism in the sector which should be stopped, and liquidity should be guided in the right production direction. "I am looking forward to a revision of the law. We are on the verge of adjusting the 7th development plan and need to put

Mohsen Khojastehmehr, CEO of the National Iranian Oil Company.

it into practice. This platform should clearly set out the two or three main propellers of the country and should focus on and prioritize these." This includes oil and gas development in the up and downstream, he says. "The petroleum and industry ministers should sit down, create a detailed plan and put it forward."

"We have young, strong staff and after 40 years of embargoes we are skilled enough now, we don't need trial and error anymore," says Qalibaf. "I believe today is the time to take a decision, close together, join ranks."

Today the energy trade focus is on crude oil, not natural gas, he says, and the country is facing sanctions. "We have to revise our approach, put more effort into natural gas exports, which are more sustainable. Gas can overcome the pressure of sanctions.

"We want to tap more into bilateral/commercial

Mohsen Khojastehmehr (second l), CEO of the National Iranian Oil Company.

Jalil Salari, Managing Director of the National Iranian Oil Refining and Distribution Company (NIORDC) and Deputy Minister of Oil.

relations (trade), not bartering. We want to enter contracts aligned with our country ... This can create big opportunities," adds Qalibaf.

"Development takes place with risky opportunity. That's the chance we have today. We can't overlook the impact of energy trade or we will be damaged. There are good developments in the regions. This year we are feeling buoyant in both the exhibition and the Ministry of Petroleum."

Mohamed Hamel of the Gas Exporting Countries Forum (GECF) also spoke at the opening ceremony, stating that his first trip to Tehran came when he worked at OPEC almost 20 years ago and two decades later he's back.

"For more than a quarter of a century, this event has placed IR Iran as one of the best and most resilient in the world ... IR Iran is one of the first countries to have sovereignty over its natural resources. It is a founder of OPEC and possesses one of the biggest natural gas resources in the world."

He adds that Iranians are included at all levels of GECF secretariat staffing, and constitute the largest national GECF group.

"Global GDP will double by 2050, and the need for energy is continuing to rise," says Hamel, adding that the needs are huge for developing countries to feed development. An estimated $8 trillion of capital investment into natural gas is required by 2050 to meet this need. The industry is very capital intensive with long lead times and payback, he adds.

National Iranian Oil Company (NIOC)

In an exclusive interview with the *OPEC Bulletin*, Mohsen Khojastehmehr, CEO of NIOC said that the company's short-term plans in the oil production sector include achieving over 4m b/d of crude oil production capacity and over 1 billion cubic metres (bcm) of gas.

Long-term plans to 2030 include increasing production to 5.7m b/d and 1.5 bcm of gas. The country will invest about $160bn in order to reach these two goals, he says.

In the implementation of this investment, knowledge-based companies are an important focus of the Ministry, adds Khojastehmehr, stating that the government is considering a technology annex for each contract with knowledge-based companies.

"... a number of knowledge-based companies will be involved in the execution of that technology ... if the investment is foreign and the technology is due to be transferred to Iranian companies through foreign investors, these (local) knowledge-based companies will receive the technologies, to be later institutionalized."

Additionally, all development projects must be green

Majid Daftari Besheli, Managing Director and Vice-Chairman of the Board of the Petrochemical Research and Technology Company, a subsidiary of the National Petrochemical Company (NPC).

Morteza Shahmirzaei, Deputy Minister and CEO of the National Petrochemical Company.

— done in a way that produces the least amount of pollution, including no flaring, he says.

"In addition to domestic investment, we want to benefit from foreign investors in the implementation of these projects. We think if the financial resources of these projects are realized, we can achieve our goals."

Regarding sanctions, Khojastehmehr says that the United States is not the whole world.

"We think that today the international community is moving in the direction of pursuing its own interests and not depriving itself of rich income from the implementation of projects in IR Iran. There are many countries that do not pay attention to the US. They are ready to cooperate with us."

At the same time, he adds, domestic power is being used to the maximum to overcome sanctions, "although we don't want sanctions to exist and we want to have a logical and win-win cooperation with all countries around the world."

NIORDC

Jalil Salari, Managing Director of the National Iranian Oil Refining and Distribution Company (NIORDC) and Deputy Minister of Oil states that today's refining conditions are very different from the past.

NIORDC was established by the Iranian Ministry of Petroleum in March 1991, based on the principle of separating upstream from downstream activities. The company's official activities began in 1992.

As one of the four main companies under the Ministry, it manages and supervises the activities of its subsidiaries.

NIORDC monitors the activities of ten refining companies and carries out its missions by exploiting the services of over 2,000 skilled and experienced personnel, with approximately 1.51m b/d nominal capacity at ten refineries and 1.47m b/d of actual performance, says Salari.

"There is a debate in the world today that we are ... adding value ... and this added value is realized when we complete the product value chain," he says.

Salari told the *OPEC Bulletin* that there is a need to change the refinery process pattern to add complexity factors, and in proportion to that, create petrochemical chains.

"Naturally, in our refineries, part of the product goes into petrochemicals," he says, adding this currently amounts to about 40 per cent of refinery products.

"Liquid feed for the petrochemical industry is largely complementary to petrochemical chains, meaning that gas-based petrochemicals are developing. The production of propylene and downstream chains of this complex is underway."

These developments are expected to be integrated into existing refineries in the future, he adds. "We studied

Three Memorandums of Understanding (MoUs) and one contract for compounds are signed at an NPC press conference.

a refinery of 300,000 barrels, and 35–40 per cent of its products could become basic petrochemical products that can continue on the value chain of development ... this provides employment and prevents the sale of crude."

Salari is referring to a new refinery under construction called the Persian Gulf Star, which is slated to start soon.

A change in pattern of the refining palette has to do somewhat with addressing pollution, he states. "We have to do our best in gas stations to adhere to international environmental standards."

National Petrochemical Company

Majid Daftari Besheli, Managing Director and Vice-Chairman of the Board of the Petrochemical Research and Technology Company, a subsidiary of the National Petrochemical Company (NPC) accompanies Morteza Shahmirzaei, Deputy Minister and CEO of the National Petrochemical Company, during a vigorous press conference.

An announcement was made that production capacity will increase over ten years from ten kilotons to 200 kilotons. This will not be in the form of raw material, but rather finished products, which is better for IR Iran, says Besheli.

The announcement covers many licensees, products and catalysts, and can increase the growth of scientific companies to encourage more manufacturing of equipment inside the country, stated Shahmirzaei.

Three Memorandums of Understanding (MoUs) and one contract for compounds were signed at the press conference. Two of the MoUs were between companies, the oil institute and the oil university, while the third was with a manufacturer in IR Iran called Machine Sazi Arak, a corporation established in 1967 that helps meet the industrial needs of the country.

The MOUs are to support basic research, in order to achieve practical pilot projects and demo plants, and finally licensing, states Besheli.

"But the needs of IR Iran come first. Maybe 40 per cent of our products are exported to other countries," he says.

"There's a lot of emphasis on local products and technology. We invite Iranian institutes and universities and the research community to join us to develop know-how and licensing for new products," he continues.

"There is more emphasis now. This is the year the leader emphasized that science-based production is most important in the country to make jobs for people.

At the OPEC stand are (l–r): Dr Afshin Javan, IR Iran's OPEC National Representative; Mahid Al-Saigh, Senior PR Assistant in OPEC's Public Relations and Information Department (PRID); Behrooz Baikalizadeh, OPEC's Head, Petroleum Studies Department; Maureen MacNeill, Editor/Speechwriter in OPEC's PRID; and Ehsan Jenabi, IR Iran's Ministry of Petroleum.

At the moment this strategy is growing very fast because it has the support of the new government."

He says they are developing new products with lower energy consumption, considering environmental issues. "We have more of a focus on producing 'greener' products. It's a lot of work. We upgrade our refineries to upgrade our products."

Sanctions are affecting some parts of the business, says Besheli, but Iranians are doing their best to solve problems using local research and technology and produce local results.

"We succeed a lot. We have six licenses for products and in terms of catalysts in petrochemicals, we don't need any support from foreign countries. We produce most catalysts locally with know-how from science-based companies. We started with this strategy 10–15 years ago."

The 26th Iran Oil Show was held May 13–16, 2022.

The OPEC booth at the Iran Oil Show.

Dr Afshin Javan, IR Iran's OPEC National Representative, speaking at OPEC's special session at the Iran Oil Show 2022.

OPEC discusses state of affairs at the Iran Oil Show

An OPEC delegation in attendance at the 2022 Iran Oil Show explained the supply-demand balance, overhang situation, impact of the conflict between Ukraine and Russia, inflation, lack of investment, energy transition and more to a local audience using slide shows, followed by a Q&A.

During the Q&A session, Behrooz Baikalizadeh, Head of the Petroleum Studies Department at OPEC, explained the measurements OPEC uses to determine balance, primarily the five-year average.

"We are bringing the market to a level place. This is the result of our efforts," he says.

The impact of geopolitics was discussed, with Baikalizadeh explaining that political unrest shows up in the oil price, adding uncertainty. He adds that OPEC predicts a rise of 3.4m b/d in demand in 2022, which will support prices. Spare capacity is becoming a global issue, he says, stemming from a shortage of investment over the past eight to nine years, from 2014 on.

"It is showing itself now. There is less excess (spare) capacity in producing countries."

Behrooz Baikalizadeh, OPEC's Head, Petroleum Studies Department, speaks at OPEC's special session.

Afshin Javan, the Ministry of Petroleum's National Representative to OPEC, states that spare capacity is a strategic tool. "Nobody knows if data on spare capacity are real or not. Secondary sources also don't know. OPEC only uses formal data," he adds. "We agree it is important to study the reality of the market."

There is no winner from the current geopolitical situation except the USA, though some countries are seeing greater losses than others, states Javan. In the short term, China and/or India may see some win as Russia sells them discounted oil, but the EU is experiencing more loss.

Mahid Al-Saigh (l), Senior PR Assistant in OPEC's PRID, also speaks at OPEC's special session; with Afshin Javan (centre), IR Iran's OPEC National Representative; and Behrooz Baikalizadeh, OPEC's Head, Petroleum Studies Department.

Participants at OPEC's special session at the Iran Oil Show.

"Everyone is a loser in this. The US may also have losses long term," he adds. "Gas prices are up and there is upward pressure (on prices) during the (summer) driving season."

On a question regarding decoupling of investment and production, Javan answers that this is the starting point for the energy transition.

"Some part of investment will go to other resources (such as gas or renewables). This gap increase and decoupling are a sign of the energy transition."

Participants discuss the current and future market situation after the special OPEC session.

The NIOC booth at the Iran Oil Show 2022.

Iranian companies hopeful

The* OPEC Bulletin's *Maureen MacNeill* had the opportunity to wander around the four-day exhibition and talk to some participants about their views, their products and the exhibition itself.

A young go-getter, Vahid Khajezadeh, Sales and Marketing Manager with Petro Premium Company approaches and talks about his job. He attended Sharif University and studied in the field of oil and petroleum and works exporting petrochemicals primarily to neighbouring countries, including Turkey, Iraq, the Commonwealth of Independent States (CIS countries) which are former post-Soviet nations, as well as India and Eastern and Southern European countries.

The main products are urea and sulphur in huge quantities, along with bitumen, polymer grades, fertilizers, LPG, acids, ammonia and chemicals. He adds there are 180 grades sold by the company.

"We want customers," he states clearly, adding a

Abbas Taghipournia (r), Business Development Manager at Petropars Ltd, with his colleague Ali Kolahdouz (l), Head of E&P Business Development for Petropars.

letter of payment is impossible so 100 per cent cash in advance is needed, due to sanctions. Customers must agree on this issue, he adds. His company is targeting Southern Europe, including Spain and Italy, as well as African companies. "If they can work with this point it can work well. We have no problem with transportation.

"This exhibition is important and has been very good," he says, adding he is an agent for European and Turkish customers. "This is a huge opportunity for us. We are just focused on finding new customers. We have lots of meetings focusing on Brazil, Kazakhstan, Russia and Syria."

Khajezadeh says his company wants to introduce IR Iran and petrochemical companies to potential buyers. There are 70 government petrochemical companies with which he can consult, and he sources what is needed, including information.

Petropars

Abbas Taghipournia, Business Development Manager at Petropars Ltd says his company is one of IR Iran's biggest exploration and production (E&P) companies, and acts as an affiliate to the National Iranian Oil Company (NIOC). It develops mainly upstream projects, including some megaprojects like South Pars. Currently the company is working on the development of South Pars Gas Field Phase 11. It has had projects on South Pars Gas Field Phases 1, 4&5, 6, 7&8, 12 and 19.

It has had/has contracts for various oil and gas fields, including South Azadegan, North Azedegan, Farzad, Belal, Foroozan, Cheshmeh Khosh and Farzad-B. "We are now ranked number one in E&P, and are trusted with challenging and megaprojects, mainly upstream," says Taghipournia.

The latest records Petropars has broken include total gas and condensate values of $16bn/year and 269,000 total metres of wells drilled, according to a company brochure. It also says that Petropars is the only Iranian company that has been capable of financing megaprojects inside the country.

"We have some international experience on projects but could do more," he adds. Through OPEC, the company formed a basis of cooperation with OPEC Member Angola, where it is an E&P partner in development of the North Cabinda Exploration Block. It has also conducted reservoir studies with OPEC Member Venezuela's national oil company PDVSA in the past.

"We both face sanctions (IR Iran and Venezuela), and both countries need to invest internally. That is the main problem ... it is challenging finding funding," he adds.

"The ideal scenario is to have partner countries eager to invest in developing fields, investors like Total," says his colleague Ali Kolahdouz, head of E&P Business Development for Petropars.

Iranian oil and gas projects are attractive for most international oil companies (IOCs), but sanctions remain an issue. "There is a lot of Iranian capability, contractors, service providers, etc, but megaprojects need

View of the Iranol exhibition stand.

Ali Goudarzi, Export Sales Expert from Iranol Co.

investment, a lot of money. Now it is crucial to have finance from outside in investment contracts," he adds.

"Technical transfer — especially all technologies used to increase recovery, such as enhanced oil recovery (EOR) and improved oil recovery (IOR) technologies, and new drilling processes for gas and oil — is important. Recovery in IR Iran is for example less than in Norway," states Taghipournia.

"It depends on the field, but on average in IR Iran we have a rate of 15–20 per cent — this could increase to 30–40 per cent. Each per cent makes a lot of money, and there are huge reserves. Instead of drilling new wells, we can increase production at a lower cost."

The Ministry of Petroleum has big research institutes, says Taghipournia, adding that the technology used by companies is so far quite different from that achieved in the universities. "We started with joint operations and cooperation with Total, Italy, Statoil, but project by project our capabilities have risen and phase 12 (of South Pars) is only Iranian.

"Some parts still need to be purchased from outside, but little by little we are being localized."

However, Kolahdouz adds that production levels have been decreasing year by year and to maintain pressure they need new technology. "For conventional jobs we have no problem. But for difficult jobs we have a problem."

Meanwhile, he says, there are lots of new projects under development or in planning, and other ways to increase optimization are being examined. "The kind of technology we are looking for is that which decreases the costs of operations, increases efficiency and reduces days of drilling and the cost of production," he says.

Regarding the energy transition, Kolahdouz says that oil use may start to decrease by 2040 or 2050, but IR Iran is the second-largest reservoir holder in the world, which still needs gas, even with a fast-growing renewables sector.

The country would like to do more to reduce greenhouse gas (GHG) emissions, he says, but sanctions are standing in the way of the country obtaining the finance and technology it needs. For example, a lot of flaring takes place in IR Iran both onshore and offshore, states Taghipournia, "We have tried many times to develop flare gas recovery projects to use and reuse it, but we need finance and technology. Sanctions are a barrier to their development and that makes us quite slow."

The country has, however, been increasing green energy in its basket through solar fields, he adds. "The limitations under sanctions changes Iranian priorities. If they were gone, we may develop more green energy, but with the limitations we focus on oil and gas because we need to run the country."

Export Sales Expert from Iranol Co, Ail Goudarzi, states that his company produces oil products, wax products, greases and finished oil products, such as engine oil. They have two refineries — Tehran and Abadan — and are the only producer of 'bright stock' products in IR Iran. This refers to lube-based oils of high viscosity produced

Reza Ebadzadeh, CEO and Vice-Chairman of the Persian Gulf Petrochemical Industry Commercial Co (PGPICC).

Maryam Alizadeh reports and writes speeches for OPEX.

using atmospheric distillation and vacuum distillation, then extracting and dewaxing solvents from residual oils, finally using hydro finishing.

The refineries founded the company about 50 years ago, and its name changed to Iran Oil more than 20 years ago, says Goudarzi. He states they sell products to Iraq, China, Turkey, Pakistan, the UAE, Afghanistan, and other destinations, though these are the most important currently.

"There are lots of problems with sanctions. We can't export to European and many other neighboring countries and there are many problems with payments.

"We are selling most products domestically for some but not much profit, but it supports the company and meets domestic needs. We accept losses to support domestic companies."

The company is not directly under the Ministry, nor is it completely private, he adds, but has an in-between status.

"In our company we don't have enough innovative plans for the future, especially regarding the environment," says Goudarzi. "Now we are doing a project to make products cleaner than before, but we don't have as much support as other countries. Refineries produce a lot of emissions.

"My concern is that environmental issues are not as high on the agenda. We can do better. We improve, but at a low scale."

The company is under new management, thus there are new knowledge-based projects in the company, he says. "We have to be hopeful."

PGPICC

Reza Ebadzadeh, CEO and Vice-Chairman of the Persian Gulf Petrochemical Industry Commercial Co. (PGPICC) states that his company is a holding of mother company (PGPIC), which has 40–46 companies beneath it.

NPC was the owner and regulator of petrochemicals, then privatization came into play and PGPIC was formed in 2010. PGPICCC has been around since 2015, says Ebadzadeh. "It's private legally speaking but publicly traded," though it is under the control of the Ministry of Petroleum.

The company exclusively sells products manufactured by the group, he says, though natural gas is one commodity that is not much exported, he adds, but is rather used locally as much as possible due to its clean and cheap properties.

"The group produces products they want to export and they give them to me. I have an exclusive export market representing about 37 per cent of products."

For the time being, with sanctions, he is required to do so in a concentrated way, he says, selling in a basket, which has advantages over selling single items. China is the main customer he says, then Gulf countries, India, Turkey and the CIS, along with other smaller markets in Africa and Europe and recently Brazil.

"The sanctions didn't stop us. They gave us no problems," he reports, adding his company is Number 1 on

The stand of RIPI at the Iran Oil Show 2022.

the Tehran Stock Exchange and Number 2 in the Middle East, ranking 37th in the world. After sanctions came into effect, the company also managed to take care of logistics itself, he says.

He adds that his company has received much more interest this year than in 2019, and the booth has been crowded all day.

Ebadzadeh adds the company is deprived of banking instruments and has to sell in cash, which means a loss of two to five per cent of profit. "As long as we can be connected, we can have new markets. Africa is an untapped market with unused potential."

OPEX

The Iranian Oil, Gas and Petrochemical Products Exporters' Union (OPEX) had only a few members 15 years ago, and now it has about 360 members. It represents large, medium and small businesses active in various subsectors of the industry.

"The union functions as a headquarters to resolve problems of producers and exporters of oil, gas and petrochemical products," says Maryam Alizadeh, who reports and writes speeches for OPEX.

Members are organized into seven committees: lubricants and oils; bitumen; paraffin and wax; petrochemical products; gas and chemical products and swap; transit and bunkering; as well as a newly established merchant's committee. The committees meet one time a month and are led by an elected management team.

"All over the world, when companies want to be with each other they form a union," says Alizadeh. "We need and have to be powerful to have our voice heard. Especially in IR Iran, the differences between the government and private sector are very large and the Iranian government is very powerful."

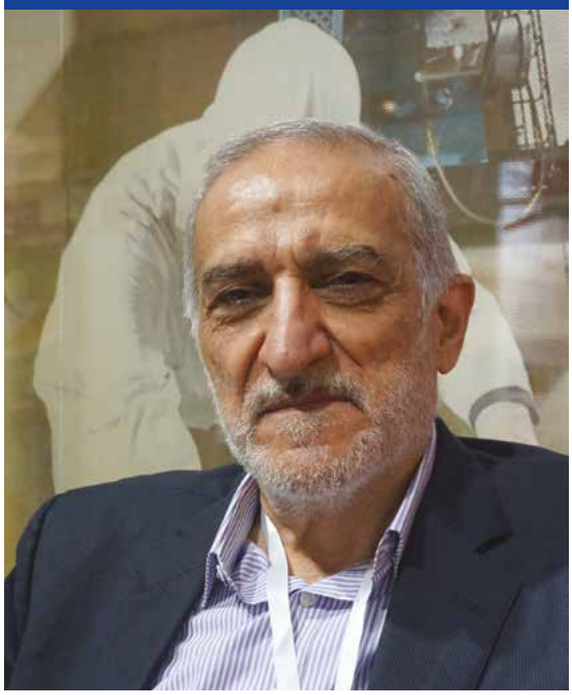
The OPEX union is the biggest and most famous, she continues, covering the most important petrochemical companies in the private sector.

"The most important issue between us and the government is to minimize our differences. When most exporters gather to say something to the government, we have more benefit than when we do it alone.

"Until now, we have found lots of solutions for problems. Last year, there was an issue with a smuggler and the government thought it was coming from our union, but after many meetings the government understood it was not coming from us and it was good. Lots of issues like this are making big problems. When we can solve them, it's good for us and good for the government."

Research and development

The President of the Research Institute of Petroleum Industry (RIPI), Jafar Towfighi, says that the organization established an innovation centre two years ago dealing



Jafar Towfighi, President of the Research Institute of Petroleum Industry (RIPI).

Hamed Jalili (r), Head of Due Diligence and Admission at the Petroleum Industry Innotech Park; and Alireza Nobakht (l), Managing Director of Niroo Farayand, the first company hosted by Innotech Park.

with knowledge-based firms. It primarily hosts local startups and accelerators. The institute has been around for seven years.

"At the innovation centre, we deal with challenges in the oil industry and get familiar with technical challenges. We give these problems to startups and knowledge-based firms. The output is a solution for these challenges," says Towfighi, who used to be a minister for higher education and has personally started science and technology parks.

"I believe in open innovation. RIPI alone can't handle the technical challenges of the oil industry. We need additional entrepreneurs. We need to collaborate and host entrepreneurs. It is added value for RIPI."

The Ministry supports these efforts through loans and funding to equip laboratories, he says, and input comes directly from the industry. Some startups also have their own ideas, he adds, stating these are checked to see if they are related to the industry and can be supported.

Last year, more than 20 startups and companies joined, with many currently located at RIPI and using its labs. Mentoring services are being provided to those startups and accelerators, states Towfighi. "We support and guide them."

There is a long-term increase in the number of companies and entrepreneurs being supported and funded, he says. Many of those involved are university graduates or PhD students that are hosted from universities and are doing their dissertation/research for our purposes. There is a network with Sharif and Tehran universities and some private sector companies, he adds.

When going commercial, support from the private sector is needed, he says. "For example, some chemicals that are developed need companies to produce them on a larger scale."

An example of one of the new projects is a membrane that degases water or water mixtures, while another works on corrosion inhibitors, which is a very big problem in the industry, especially at sea, states Towfighi.

"These projects are in the elementary stage. They are introducing technology to the industry and marketing, then they will commercialize. I hope this year we can commercialize some of the products."

RIPI has been commercializing a lot of technology over its seven years, he says, with many new inventions already in practical use.

Innovation Park

The Petroleum Industry Innotech Park, which was also in attendance at the Iran Oil Show, is one example of a successful innovation park.

Hamed Jalili, Head of Due Diligence and Admission, clarifies that there has been an historical gap between universities and industry and the technology chain. More

The Demco stand at the exhibition.

than 30–40 years ago, this gap started to be filled by high tech parks, with the idea originating from silicon valley in the US.

The first park was founded in France, he adds. The parks are in place to incubate the results of research and develop them further for use in the industry. After growing an idea or project, it can come onto the market.

The first such park was founded in IR Iran about 20 years ago near Tehran, he continues. Since then, many have been founded in different provinces.

"Our park specifically focuses on the oil industry branch. Petroleum, gas, refineries, petrochemicals and chemicals. All products belonging to the Ministry are under its development. We focus on these products."

The Petroleum Industry Innotech Park is very new, having just started last year. At the moment, it hosts about five companies, and is continuing to vet new applications, states Jalili, who adds they plan to have more companies admitted shortly.

The first company the Park hosted is Niroo Farayand. It focuses on recycling amine contaminated with sulphur, which is not good for the environment, states the company's Managing Director, Alireza Nobakht, sitting with Jalili. The components can be separated and distilled to desulfurize the amine, which is a big benefit to gas refineries.

He adds his company's solution results in 20–30 per cent less fuel consumption, which is also very interesting for Germany, where he has spent a great deal of time. Nobakht says his company is also cooperating with international companies, for example in Germany, to clean dirty air.

"It's technology transfer. All equipment is manufactured here in IR Iran. We also export our knowhow to Germany, like additive heat transfer."

Other companies in the park or under consideration are, for example, dealing with electronics, chemicals, bearings, rotary machines, says Jalili.

Companies accepted at the park must meet stringent requirements, he states. Aside from being focused on a branch related to petroleum, companies must develop or have a product produced for the first time in IR Iran. Finally, companies have to develop a product to a minimally viable stage. If a product is only at the benchmark or laboratory scale it won't be accepted.

"There is an expression in innovation called the technology rate level (TRL)," says Jalili. "A product starts with studying university books and ends with something used in real conditions."

There are nine levels of development, he adds, and the park only accepts companies with a level higher than four. "They are more promising, they have passed certain milestones. The company has a sample and the conditions to develop it in the industry."

Once they reach level nine and are ready for production companies exit the park and go elsewhere to find

Many industry facilities are on display at the Iran Oil Show.

Karim Salashoor, Chancellor and Full Professor at the Petroleum University of Technology.

a production line, he clarifies. "We won't have Niroo Farayand in ten years," he confirms.

The park is currently under construction and will have about 32,000 sq m of area, which will include the headquarters and space to develop products; it is funded by NIOC. Eventually, the facility will be able to house a maximum of 80 to 100 companies, Jalili says, which will rotate in and out to give other companies a chance to start up.

"The other advantage to companies that enter the park is that they will have a network of other companies around so they can be inspired. It is a good reason to stay — for the cost-effectiveness and networking.

"If it is a cooperative environment, there are no restrictions and sanctions are softer, thus we are able to collaborate," he adds.

The Petroleum University of Technology

The Petroleum University of Technology also belongs to the Ministry of Petroleum, says Karim Salashoor, Chancellor and Full Professor at the university, from his place in the university's booth. A main focus is petroleum engineering in different fields, he adds, stating that his is the only university in IR Iran that is focused exclusively on the oil and gas industry.

"All the courses we offer are related to the oil industry," he continues. Students are trained to work in the oil industry in education and research or other subjects related to the industry.

"We have vocational centres where students work on different problems; they might be vocational or technical. We have collaboration with different national and international universities.

"The university is 83 years old — as old as the industry!"

The first oil well was founded in Masjed Soleyman, in the province of Kuhzestan. When oil was first found, both the university and Abadan Refinery were started. At that time, the university was called the Abadan Institute of Technology, states Salashoor, and its purpose was to educate people to work in the refinery. Most of the graduates were general engineers, because that is what the refinery needed.

Fifty years later the name was changed to the Petroleum University of Technology. The university has four faculties, in Abadan, Tehran, Mahmoud Abad and Ahvaz, with a total of approximately 1,800 students at all campuses. Nowadays, more specialty engineering is needed, he says.

"We try to adapt ourselves to the necessities of the oil industry, so it's a dynamic system," clarifies Salashoor. "We are obliged to concentrate on what the oil ministry needs at the time."

This means a strong focus on health, safety and environment (HSE) and inspections, along with drilling.

Zhipeng Zou (r), Salesman for Dalian Deep Blue Pump Company Ltd, being interviewed by OPEC's Maureen MacNeill.

Behzad Eibpoosh, Marketing Manager for Swiss company Metrohm, being interviewed by the OPEC Bulletin.

Climate change is a concern and the university is attempting incubator innovation activities that address this, including energy consumption and optimization.

"One aim is to have less pollution in the industry and the first thing to do is have better efficiency, and decrease consumption. Then we will have less pollution."

Students are excited to attend and want to be part of the university, he says, adding that the facility is different from other universities in that the students are not obliged to work anywhere. "Other people are trained with the goal to meet certain needs. They know where they will work. Some of our students go on to foreign countries for further studies, some come back and work in different international corporations."

Although the university is designed to fulfil oil industry needs in IR Iran, courses are international, so students can work and study abroad. Salashoor states that energy is an international subject. "We have well-educated, well-known people from our university working in foreign universities and well-known international corporations.

"Technology and innovation are needed for the future ... to meet the different problems of the industry. Two decades ago this activity began, and now we are in a good situation."

The university has four incubators and is working on expanding them, he says, adding it gets the top pick of available students from the national exam. The best of those then go on to work in the oil ministry.

"The industry gives us problems and challenges, and our professors work on them. Some are given to students as a final project. The outcome may start another project to be pursued in the incubation centres ... It is well-organized now. We know the problems of the industry and what to do."

Foreign companies

Salesman for Dalian Deep Blue Pump Company Ltd, Zhipeng Zou, states that the company mainly produces centrifugal pumps used in the petrochemical and oil and gas industries. With its headquarters in China, the company was established in 1988.

"We focus on the Middle East, though with our many other groups we almost cover the world," says Zou. It is his first time to the Iran Oil Show, but the company has attended for at least five or six years.

"It's difficult with the localization policy ... and sanctions," he states, adding he would like to see sales increase and promote the company's products in the Iranian market. "The Iranian market is a huge market. There is a huge amount of oil and gas. It is very resource-rich."

Behzad Eibpoosh, Marketing Manager for Swiss company Metrohm states that their product is used in the

Michael Thomas, Business Unit Manager of the German company Flamonitec.

Industry equipment on display at the Iran Oil Show.

oil, gas and petrochemical sectors in the area of quality control. Their R&D laboratory was used to create an ion analyzer.

"An ion analyzer is an instrument used in the oil industry to determine pollution in the environment."

Eibpoosh states that his company covers a large market internationally and has an exclusive agent and offices in IR Iran, though the mother company is in Switzerland. "We've been 50 years in IR Iran," he adds.

The Business Unit Manager of German company Flamonitec, Michael Thomas, states that the company attended the fair from 2016–18 and is back again this year post-COVID. Flamonitec produces safety devices that monitor flames so that burners can be operated safely. Flames of up to one to two metres are common, as very much oil and gas is burned, he states.

"If the flame goes out, but the fuel is still running, the source needs to be closed quickly, within one second."

The company's website states that BFI Automation has been used to equip power plants with flame monitoring systems since 1973. Since then, all well-known boiler and burner manufacturers in Germany and many abroad are among the company's valued clientele. UV semiconductor sensors have revolutionized extraneous light safety, a feature that is particularly required in multi-burner systems, such as utility steam generators, it says.

Thomas adds that the system is used in gas turbines, many which have come from Siemens over the years. Iranian company MAPNA has also developed a new gas turbine, he adds, though Fortis is their partner in IR Iran. They have been active in the market since 2016, he states.

There has been a lot of interest in the company's product at the exhibition, Thomas adds, stating he has met with a big row of people with inquiries from morning until evening. This is in part because the company sent out 500 invitations prior to the event. Interest has been high since 2018, he continues.

"We tell the clients they can buy and use (our product), and when something happens the insurance comes and checks everything. If there is no certificate, there is no insurance."

There is a safety risk, he adds, but some companies are told they must only buy products made in IR Iran. "I understand that IR Iran wants to be independent, but there is a limit."

When potential clients see the German flag, "they know our products are made in Germany, and have a good reputation in IR Iran. To be here now means a lot," he adds.

"Legally we have no problem here and there are no problems to do business here. We are happy with the market," says Thomas.

Iran Petroleum Museums and Documents expands

The Iran Petroleum Museums and Documents has been expanding to include more and more locations in IR Iran. At least 25 are now in existence, according to the organization's website.

Shadi Marefati, who works in PR at the Iran Petroleum Museums and Documents, explains an old gas pump.

At the 2022 Iran Oil Show, the museum held a place of prominence in the same building as NIOC. The intriguing entrance design was based on the entrance design for the Kermanshah city museum consulate of the British, says Shadi Marefati, who works in PR for the museums.

The petrol industry museums project was initiated in 2013 with direct support from the previous Minister of Petroleum, Bijan Namdar Zangeneh, and is now being focused on as the largest cultural initiative of the country's oil industry.

Dr Akbar Nematollahi was the first to begin converting some monuments from the oil industry into a museum, Marefati says.

"He started projects in 2014 one after the other and it's still growing, says Giti Khameneh, museum curator. Nematollahi says on the Iran Petroleum Museum website that "... for each oil museum in any part of the country in accordance with the conditions of the region and the ability of the oil industry in that region, a theme has been defined.

"They are exploited with issues related to that region, for example at Masjed Soleiman, the origin of oil exploration in the Middle East, the museum of 'oil exploration, drilling and production' is defined, and in Abadan we are dealing with the refining of petroleum products and education."

One of the first projects was in Masjed Soleiman, which is where the first oil field in the country was located says Khameneh. This includes some historical objects, including burners and tools and an historic distribution centre.

The museum in Tehran boasts one of the oldest gas stations in the country — Darvazeh Dowlat. During its launch in June 2019 Tehran's mayor, Pirouz Hanachi, declared the location one of the valuable sites in the City of Tehran, reminiscent of a certain period in the country's history.

Left, lighting for phaetons, made in Germany, and right, an ancient kerosene-fueled iron made by Pantent Feldmeyer/UK.

Shadi Marefati (l), with colleague, Giti Khameneh, Museum Curator, showing a picture of the original museum the booth was designed after.

Kerman and Khuzestan provinces had new oil museums by the end of 2020; Kerman now has the only kerosene museum in the world. The Kerman Petroleum Museum and first phase of the Masjed Soleiman Museum of Exploration, Drilling and Production were in operation by the end of the same year.

An original gas station from 1927 — Sabzevar station — has been preserved in Abadan, while another museum in the town hosts an oil industry artisan school for skilled petroleum workers.

"It's how people were trained when the industry started," says Marefati. After 1933, there was a contract between IR Iran and Britain, and the training school was built. Britain played a large role in the country's early oil industry.

"Some important OPEC documents were found — an old archive of OPEC documents from the 1960s — and these have been preserved," says Marefati.

"It is important to us. Our heritage is related to the oil industry and our culture, because IR Iran was the most important country in the world for energy," adds Marefati.

Future plans include exhibitions in Shiraz, Ahwaz, Haftgel and Tehran.

Nematollahi states on the website that: "So far, over 25 million historical documents related to the formation of the oil industry have been collected, which is expected to increase to 50 million. They can be exposed to the public in this museum and be a centre for study and research ..."

Ancient kerosene-fueled radio made by Philips/Netherlands.

Algeria announces major boost to Hassi R'Mel gas reserves


Reuters

View of Algeria's Sonatrach's Hassi R'Mel gas field.

Algeria's Sonatrach has announced a large new gas condensate reservoir at its giant workhorse Hassi R'Mel gas field. This will be developed under a fast-track model adding output of 10 million cubic metres per day (3.65bn cu m/yr) from November 2022, Sonatrach says — just in time for winter's demand season.

The discovery should help sustain Algeria's sales gas production at record levels of more than 100bn cu m/yr — something the country achieved for the first time ever last year. The announcement is also welcome news for Algeria's gas customers, which are overwhelmingly located in Europe. The continent has been scrambling to secure alternative sources of both gas and other petroleum products since the Ukraine crisis started in February.

"These volumes constitute one of the largest revaluations of reserves to have occurred during the last 20 years," the firm said in a June 27 statement.

As well as being Algeria's top producing field for decades, Hassi R'Mel acts as a massive processing hub for other fields deep in the Sahara, which provide the bulk of the country's domestic consumption as well as its exports. Hassi R'Mel's existing infrastructure should lower the barriers to development of the new reserves.

Aramco takes over Valvoline's global products business for $2.65 billion

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Saudi Aramco signed an equity purchase agreement to acquire Valvoline Inc's global products business, Valvoline Global Products (VGP), for $2.65 billion.

Valvoline Global Products is a leading worldwide independent producer and distributor of premium branded automotive, commercial and industrial lubricants, and automotive chemicals, according to a press release.

Commenting on the deal, Aramco Senior Vice President of Downstream, Mohammed Y Al Qahtani, said: "Valvoline's global products business fits perfectly with Aramco's growth strategy for lubricants as it will leverage our global base oils production, contribute to our R&D capabilities and strengthen our existing relationships with OEMs."

Moreover, Valvoline CEO, Sam Mitchell, said: "The sale of Global Products represents the successful outcome of our strategy to unlock the full, long-term value of our strong but differentiated Retail Services and Global Products businesses."

It is worth stating that completion of the transaction will be subject to customary closing conditions, including the receipt of regulatory approvals.

Algeria has ambitious solar targets for 2023

Smail Mougari, director of Algerian state renewable energy firm Shaems, says he expects the first 50MW solar PV project from the country's flagship 1GW solar PV programme to start up "towards end of 2023, or at the very latest in early 2024."

However, if the target is to be met, the firm must pick up the pace. More than 40 investors could be in the running, he said in a July 10 interview with state news agency, APS.

The government is now considering this request, after which a new deadline will be announced. New legislation has already opened the door to foreign financing, but a positive decision would represent yet another milestone in Algeria's economic liberalization efforts.

The projects, which range from 50MW to 300MW and spread across five locations, are estimated to cost $1 billion in total and are part of the government's target of adding 15GW of renewable capacity by 2035. This in turn is projected to cost $15bn, a sum "difficult to support locally," Mougari says.

The company is also looking to launch a bid round for a second 1GW solar PV programme before the end of the year, while further stages "of 2GW and up to 4GW" are under consideration.

Algeria relies on gas-fired power capacity for 99 per cent of its electricity generation. Current renewables capacity consists of 448MW of mostly off-grid solar PV, 10MW of wind, and 228MW of hydro according to international renewables agency Irena.


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Eni announces completion of negotiations for new gas consortium in Angola

Eni and its Partners in the New Gas Consortium (NGC), Chevron's affiliate in Angola Cabinda Gulf Oil Company Limited (CABGOC), Sonangol P&P, BP and TotalEnergies, together with Angola's National Agency for Oil, Gas and Biofuels (ANPG), are pleased to announce that a final investment decision (FID) for the development of the Quiluma and Maboqueiro (Q&M) fields has now been taken by the Consortium. This is Angola's first non-associated gas development project.

The project includes two offshore wellhead platforms, an onshore gas processing plant and a connection to the Angola LNG (ALNG) plant for the marketing of condensates and gas via LNG cargoes. Project execution activities will start in 2022 with first gas planned in 2026 and expected production of 330 mmscf/day at plateau (approximately four billion cubic metres/year).

The sanctioning of the Q&M project is an important milestone towards unlocking new undeveloped sources of energy, sustaining a reliable supply of gas to the Angola LNG plant, and fostering the continued economic and social development of Angola.

The project was facilitated by legislation in 2017, which sought to open up the gas sector and extend the life of Angola's ageing oil fields. A legal and fiscal regime applicable to the upstream activities and sale of natural gas in Angola was a key enabler for the project.

Eni has been taking various actions to help Russia-dependent Italy secure gas supplies amid the Ukraine crisis. ALNG has been performing below its capacity of 5.2 million tons a year due to a shortage of feedstock, which reduced output to 3.77m t/y in 2021 according to Kpler.


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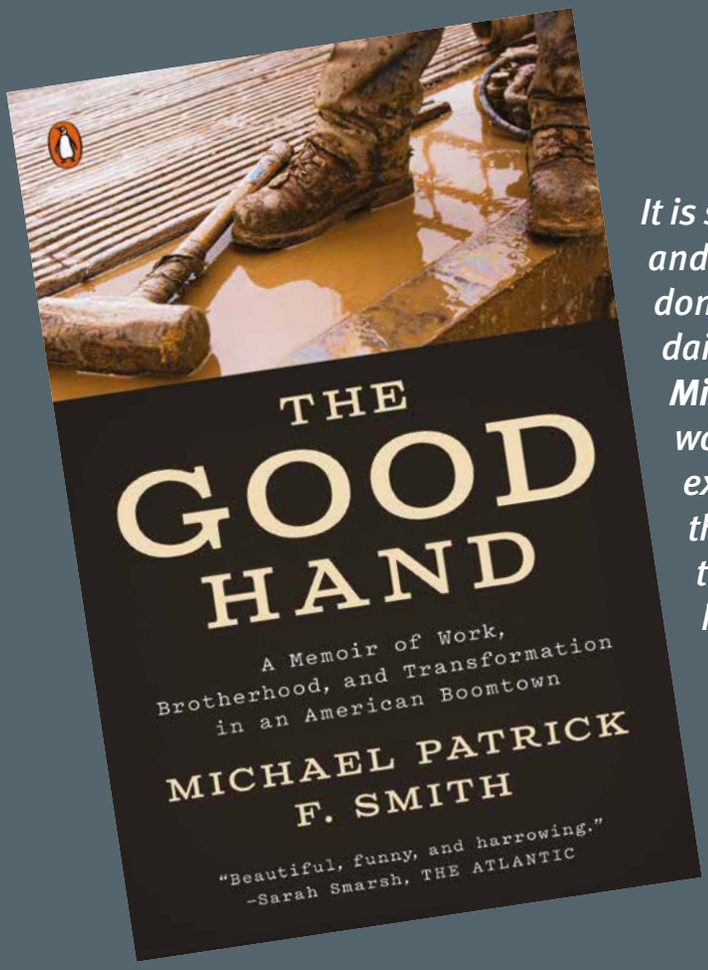
"We must treat petroleum with the respect it deserves"

— *Michael Patrick Smith, author of the 'The Good Hand'*



It is safe to say that the majority of us take petroleum and the products derived from it for granted. We don't think of the countless ways they impact our daily lives. The author, playwright and folk singer, ***Michael Patrick Smith****, shared such views before he worked in the oil fields of North Dakota. However, his experience and the comradery he developed with the other workers gave him a new appreciation for the commodity. He reflected on his experience in his memoir, 'The Good Hand: A Memoir of Work, Brotherhood, and Transformation in an American Boomtown'. The* OPEC Bulletin's ***Mathew Quinn*** *reviews the book, as well as some of the salient points Smith has raised about oil in his other writings.*

Boomtown

For oil market observers, the writings of Michael Patrick Smith are likely to make you stop and think. Those who monitor the market — be they analyst, journalist or academic — can sometimes be removed from the sheer grinding physical labour that goes into the production of oil. Exploring the nature of this back-breaking work makes *'The Good Hand'* such a refreshing read.

Smith, who had multiple jobs prior to working in North Dakota, moved to Williston at the height of the state's oil boom. He describes it the following way, "It is May of 2013, and I am joining what some say will be the biggest oil boom in American history." At that time, in 2013, the United States Geological Survey (USGS) estimated the amount of recoverable oil from the Bakken to be 7.4 billion barrels.

It was an interesting moment in American history. The oil and gas industries were doing well, in contrast to many other sectors of the economy, which continued to be battered by the ramifications of the 2008 Great

Recession. Job seekers flocked *en masse* to North Dakota to take advantage of the job opportunities that the industry offered. As Smith described it, "Desperate for bodies to work the rigs, North Dakota's oil field companies gained a reputation for offering good pay, benefits, signing bonuses, per diems, and housing to any dude who could make the trek to town and swing a hammer when he got there."

What ensues for the remainder of the book is a riveting account of working as an 'oil hand' in the Bakken. Smith meets and befriends a range of characters and personalities through his work and he provides fascinating insights into the nature of the tasks and the labour itself. He also describes his personal background and trauma within his own family. It is a gripping and deeply moving story.


© Michael Patrick Smith

THE GOOD HAND is Michael Patrick Smith

As a musician, Smith has shared the stage with folk luminaries such as Ramblin' Jack Elliott, as well as several prominent indie rock bands. His first book, *The Good Hand,* a memoir about working the rigs during North Dakota's Bakken oil boom, was released on Viking Press, a division of Penguin Random House, in February of 2021. The audio book edition contains recordings of seven original songs, as well as incidental music composed by Smith. Several plays he has written, including *Woody Guthrie Dreams* and *Ain't No Sin,* have been staged in Baltimore and New York. Smith has worked as an actor, a bartender, junk hauler, furniture mover, book store clerk, contractor, guitar player, receptionist, event producer, driver, office temp, stage hand, waiter, security guard, set fabricator, legal assistant, grocer, oil field hand, and writer.

Source: https://www.thegoodhand.org/bio

Reflecting on oil

What is striking is how Smith's experience gave him a new appreciation of the importance of oil in his daily life. There are two particularly memorable passages in this regard. Early in the book, there is a quote that calls on all of us to reflect on the manner in which we depend on oil. It is worth reproducing here, as it goes to the heart of the work that everyone involved in the oil industry can relate to.

It is strange to think of industry containing magic, but even in our current age of reason, it is hard not to think of oil as containing properties, that ... can only be described as utterly fantastic. Oil, refined into gasoline, diesel and jet fuel, makes cars drive, planes fly, and ships sail. It powers submarines and spacecraft, sends shellfish to Colorado, medicine to Liberia, and soldiers and supplies to war zones around the world. It powers our school buses and gunships, ambulances and tanks. But it does more than transport us. It heats our homes. It illuminates our nights. We eat off it. Petroleum is contained in the glaze of our china, the finish of our tables, the linoleum on our counters, the tiles on our floors. It wraps around us in the fabric that clothes our naked bodies, in the jewelry that adorns our necks and hands and fingers, in the balm that soothes our cracked lips, in the makeup that defines the contours of our faces. And it is inside of us. The syringes and the pills that deliver medicine into our systems are made from petroleum. Synthetic ammonia, derived from a process using refined oil, is an essential ingredient in fertilizer. Without it, farming on an industrial scale would not be possible. It is in our food. We eat it. Oil is so prevalent in every aspect of our existence that it has become all but invisible to the vast majority of people who need it simply to live.

Later in the book, following a break in his work in North Dakota, Smith enjoys a night out in New York. This

amounts to an epiphany moment for Smith, for there, in the great world metropolis, he can truly see the fruits of his labour. He vividly describes how a place like New York benefits from oil:

Cabs burning fuel stream past. Electric streetlamps flicker through the coil of synthetic rubber wiring. The giant screens of Times Square advertise the world's riches: cotton polyester blends, food wrapped in plastic, music delivered through plastic earbuds. We escape the lights down into the subway, board and ride through the petroleum tube, back to the street and into a crowded bar. I notice the tabletop varnish made from petroleum derivatives, our glasses forged in oil, the fake leather seats petrol-made. We scan the laminated menus and order seafood caught on diesel-powered boats, stored in freezers, shipped in trucks and brought to our table by waitresses in slinky clothes.

The Haber-Bosch process and medicinal uses of oil

In contemplating oil's many uses, Smith particularly focuses on its use in food production. He describes how in 1918, Fritz Haber won the Nobel Prize in chemistry for devising a method, incorporating methane, that converted nitrogen — taken directly from the air — into ammonia. As Smith states, "ammonia extracted in this method has made possible the widespread use of nitrogen fertilizers. This is arguably the most significant scientific breakthrough in the history of mankind." The ballooning of the world's population to 7.7 billion would not have been possible without the food resources produced by the Haber-Bosch process.

In an article published in *The New York Times* in January 2021, in the midst of the COVID-19 pandemic, Smith also draws attention to the role of petroleum in healthcare. He wrote,

Delivery agents such as gel caps, balms, salves and gelatin pills contain petroleum. More important, as a 2011 study titled 'Petroleum and Healthcare' points out, "nearly 99 per cent of pharmaceutical feedstocks and reagents are derived from petrochemicals." Acetylsalicylic acid, the active ingredient in aspirin, for instance, is created by a chemical reaction involving petrochemicals. Oil doesn't simply transport medicine into our systems. It isn't too far off base to say that much of medicine is oil.

© Michael Patrick Smith

The climate challenge

Smith in no way shies away from the climate challenge that comes from using oil. However, he treats the issue with a clear-headed rationalism. As he wrote in *The New York Times* article:

As we accept our responsibility to address this

After the Great Recession in the US, workers flocked to Williston for jobs.

awesome generational obligation, and as we work to put in place policies that balance our need for bold action with the more modest day-to-day needs of working people, it would behoove us to keep in mind the story of this precious resource, to consider how it connects us each to the other.

Essential reading for policy makers

Smith provides an insightful, thought-provoking synthesis of all of the factors affecting the energy industry. His experience as a roughneck in the field, in some of the toughest working environments on earth, lends his policy suggestions a credence that are worth reflecting on. He concludes his article in *The New York Times* with the following point:

As citizens of the world, we must begin to treat petroleum with the respect it deserves. We must value it, like our very lives, as a precious, almost magical, but certainly finite resource. Then we can begin to do the meaningful work that nurtures our planet, nurtures our friendships, and creates lives of joy.

For more details visit: https://www.thegoodhand.org/

A holistic perspective on the oil industry:

An interview with Michael Patrick Smith, author of 'The Good Hand'

OPEC has often argued that all voices need to be heard in discussions on the energy transition. ***Michael Patrick Smith****, author of 'The Good Hand', provides a perspective that is often overlooked: that of the worker on a rig, who courageously braved difficult circumstances to extract oil. The* OPEC Bulletin's ***Mathew Quinn*** *discussed with him his reflections on writing a book that balances a personal memoir with insightful analysis of energy policy.*

Firstly, congratulations on the success of 'The Good Hand'. You've produced an extremely moving and thought-provoking book. Prior to your experience as a 'Good Hand', did you think much about petroleum or petroleum products and how they are used in everyday life?

Thank you for the kind words! Prior to working in the oil patch, I didn't think about oil much at all. When I did, I thought of it as a political issue. And politics have a way of flattening ideas, making them black and white. So, I vaguely thought of oil and fracking as bad stuff that needed to be replaced by renewable energy sources. It wasn't until I dug into the science and history that I understood how much petroleum has transformed the planet, changing everything from how we live to what we eat to the medicine we take.

Your book incorporates your own personal experience with reflections on the history of the oil industry, including when Edwin Drake struck oil in 1859, and other facts about the industry. How did you go about researching the industry and how did you achieve the balance between personal memoir and interesting insights on energy policy and history?

I love reading history, and there are a handful of good contemporary books written about boom towns and the history of oil. I also scoured the Internet for original source material, books like 1867's *'The History of Pithole'* written by a Civil War veteran who worked as a reporter in one of the boomtowns that popped up after Drake's discovery. Another was *'Sketches in Crude-Oil'*, which came out in 1898. These books aren't necessarily as accurate as what we would expect from modern historians, but they've got songs and jokes in them, they've got grudges and affections, and there's a vitality in them that comes from actually having been there. I found that fed the style I used to write about that history.

Balancing the history and reporting with memoir was a process. One of the things I'm most grateful for when it comes to this book is that I had the support from my agent and editor to do it exactly how I wanted to do it. Many publishers weren't sure what to do with this book. They wanted me to pare down the personal stuff or cut out the historical stuff. But I wanted to create a book like a Bertolt Brecht play. Something episodic, funny and mean, personal and political by default, stuffed with historical detours, thoughts on music and the value of labour. The team I was working with got it and encouraged me. I haven't

"It wasn't until I dug into the science and history that I understood how much petroleum has transformed the planet, changing everything from how we live to what we eat to the medicine we take."

Aerial view of Williston in the Bakken oil fields of North Dakota.

ever read a memoir like the one I wrote, so I'm very proud of how the book came together.

You describe vividly the circumstances surrounding your move to Williston, North Dakota, at the height of the boom. Many prospective workers were flocking there at that time. Did you have a sense then that this was a unique moment in North Dakota's history? Would you like to comment more on that particular zeitgeist?

It seemed to me like an incredibly vivid moment in America's history. For about a year before I moved to North Dakota, I followed the story from afar, reading news reports, listening to radio spots and watching YouTube videos. One reason I felt compelled to write this book was because I felt that so much of the news reports I came across were only skimming the surface. It is a huge problem in American media that the prominent news organizations are located on the coasts and in big cities. Much of the narratives that come through these organizations get screwed up, not because reporters are bad people, but because they don't understand working people. And working people, at that time, were out of work.

The housing market had crashed in 2008, and we were still clawing our way out of the Great Recession. People from all over the country, some who'd never considered doing oil field work were packing up their trucks and driving to North Dakota because that's where the jobs were. I knew I could write this story because I was one of the people living it. I had never written a book, but I knew that if I took the work ethic I'd learned in the oil patch and applied it to my writing, that I'd be able to write as well as anybody. I felt driven to do it because I didn't think anybody else was doing the story justice.

Have you been back to North Dakota recently? Do you still have contact with the friends and colleagues you made there?

I was just back in North Dakota last April. I've lost two of the friends who were closest to me when I worked in the patch. My best friend died from an opioid overdose, another friend was lost to a blood disease. But I got to see some of my oil field buddies and their families this past spring. And it was beautiful. Those relationships are incredibly important to me. There is a comradery I have with those guys that I'll never have with anybody else. You hear a lot about people losing friendships over writing memoirs. That has not been my experience at all. If anything, it has made me tighter with people I wrote about.

"I had never written a book, but I knew that if I took the work ethic I'd learned in the oil patch and applied it to my writing, that I'd be able to write as well as anybody."

Michael Patrick Smith.

You have many strings to your bow. It was very interesting in the book to read about how you straddle the worlds of both performing arts — theatre and folk music — and the oil industry. There was a sense your friends in the performing arts were fascinated by your work in the oil fields. Did you find these worlds far removed from each other? Do they understand each other?

Mostly, they don't understand each other at all. Everybody watches too much TV and reads too much news. I've lived a lucky life because I didn't have any financial success through artistic means until I was in my forties. I've worked blue collar jobs while also playing music, writing and making theatre, and I've lived in many different places. So I know lots of people who the news lumps into groups who are inclined to hate each other. But I know them as individuals, and when you get individuals together it is much easier to get along than argue about the president. A lot of my motivation with writing this book was to try to get people to see each other more clearly. It's a slow process, but I do believe it happens.

"There's no way to transition to other forms of energy without continued investment in oil extraction."

You have two beautiful passages in the book about the various uses of petroleum and petroleum products in daily life, from transportation to its use in food production, to medical supplies. In particular, you had a night out in New York and you describe all the petroleum products you encountered at that moment. Does it concern you that many people take oil for granted or are unaware of how integral it is for daily life?

Yes. Denialism is a threat to healthy living, to getting things done, to staying sane and to creating a common narrative. Denying that oil is absolutely intrinsic to our way of life is incredibly dangerous. I also think that denying that man-made global warming is an existential threat is crazy. Denialism is one reason why people on both sides of the issue feel like they are losing, feel like they are under siege and lash out so much.

Public discourse on the energy transition is extremely emotive and topical. What are your views on the role of oil in the energy transition?

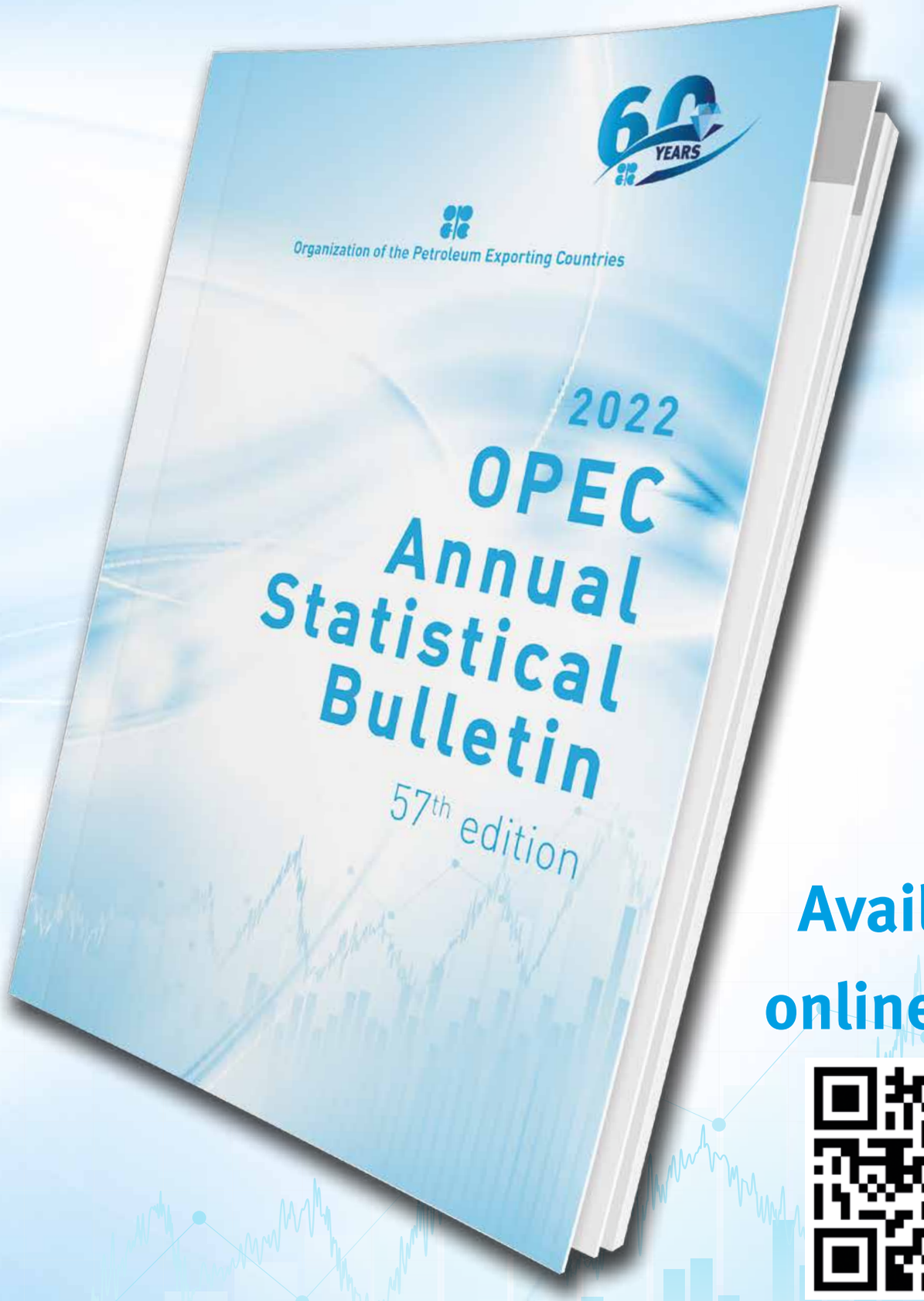
There's no way to transition to other forms of energy without continued investment in oil extraction. That said, I think oil companies would be wise to start thinking of themselves as energy companies first and to use this time to diversify by shifting their focus toward greener sources of energy or carbon capture technology. There is money there, and it is better for our future.

That said, we are always going to need petroleum. I think the loudest environmental activists that I know of, groups like the Sunrise Movement, are either delusional, uneducated, or else they find the clout they get from being self-righteous on the internet is more important than doing the hard work needed to aid a transition. Consistently, these groups deny the reality of the issue, and they do so with a 'politics first' approach that further divides the electorate, denies them obvious allies such as hunters and fisherman and, frankly, makes support for a greener transition much thinner.

Would you like to continue writing about the energy industry? What will your next book be about?

I'm conflicted when it comes to writing about the energy industry. In general, my interest is in writing about people. Writing about oil always means you are making somebody mad. I caught hell from liberals for one thing I wrote and from conservatives for a different thing I wrote. I don't particularly like getting hate mail from anybody, but it can be fun to mix it up, too. I haven't found many people who write about energy from my perspective so that does motivate me to do it. But depending on the day you ask I might say yes or no.

My next book is still in its beginning stages. Right now, I'll say that it has to do with the reclaimed wood industry, the prison system and the roots and branches of Appalachian music. I've spent my life doing manual labour jobs and dreamt of spending my days writing or doing something creative. But I've learned now that it is the combination of physical labour with a rich creative life that is best for my soul. So, I was out today tearing down a barn in the Kentucky sun. Doing that and then trying to capture that experience with words on a page brings me a certain joy.



OPEC Fund supports infrastructure development in Papua New Guinea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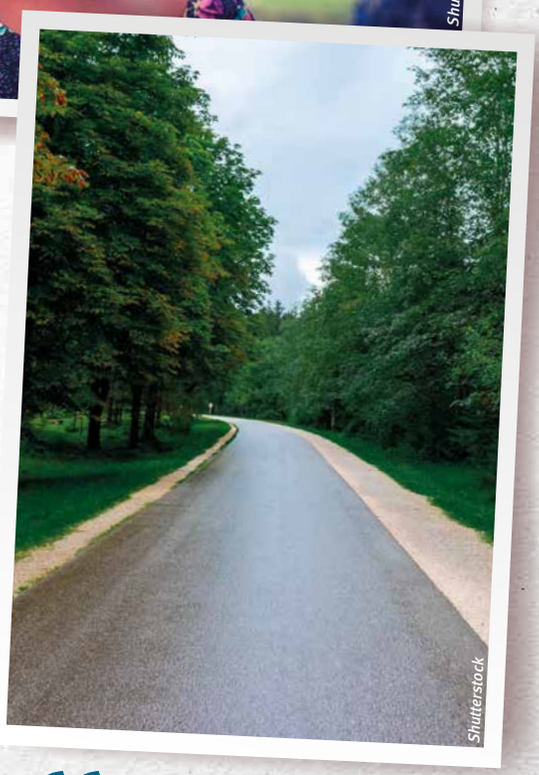
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Tranche 2 of the Sustainable Highlands Highway Investment Programme aims at facilitating trade and improving access to jobs, markets and social services for three million people.

The programme is designed to rehabilitate and upgrade 430 kilometres of Papua New Guinea's Highlands Highway. It includes improving road safety, supporting the establishment of logistics platforms and services for agricultural production, and enhancing sector governance through reforms and institutional development.

Tranche 2, which the OPEC Fund is co-financing with a $50 million loan, will include the construction or rehabilitation of 71 bridges and related infrastructure along the national Highlands Highway, comprising 41 two-lane and 30 single-lane bridges between Lae Nadzab airport to Kagamuga airport in Mount Hagen.

OPEC Fund Director-General Dr Abdulhamid Alkhalifa said: "This ambitious investment programme will rehabilitate and upgrade a road which is a lifeline for the population of Papua New Guinea. It traverses the highlands region with seven landlocked, densely populated provinces where the key economic activity is agriculture. Developing a safe and integrated transport network will make a vital contribution to the region's sustainable growth."

The project, which the government has accorded top priority status under its Development Strategic Plan 2010–30, stands to deliver multiple benefits: Vehicle operating costs and travel time will improve significantly.

Better connectivity will support the integration of rural communities. Increased mobility will encourage farmers to shift from subsistence to market-based, high-volume agriculture. Women in local communities will be particularly encouraged to participate in the project.

> "Developing a safe and integrated transport network will make a vital contribution to the region's sustainable growth."
>
> Dr Abdulhamid Alkhalifa, OPEC Fund Director-General


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Strengthening food security and improving health in Sierra Leone

The government of Sierra Leone is receiving two OPEC Fund loans totaling $35 million to boost food security and livelihoods and improve health and living conditions for more than 1.4 million people.

A $15 million loan will support the Agricultural Value Chain Development Project created by the government of Sierra Leone in partnership with the International Fund for Agricultural Development. An estimated 260,000 people are expected to benefit across 16 districts in western Sierra Leone that are highly vulnerable to recurring food crises.

The OPEC Fund's contribution will finance the construction and rehabilitation of climate-resilient infrastructure including 800 km of rural roads, 20 warehouses and water supply and sanitation facilities. The creation of multi-stakeholder platforms such as agribusiness centres and farmers' organizations will support better integration and the strengthening of skills across the value chain.

A second loan of $20m aims to improve socioeconomic and environmental conditions and reduce waterborne diseases for around 1.4m people in the capital Freetown under the WASH and Aquatic Environment Revamping Project.

The OPEC Fund's loan will finance the construction of water supply infrastructure including treatment plants, reservoirs, transmission and distribution networks as well as the installation of 38,000 metred water service connections. The project will also include flood mapping and tree planting to promote watershed regeneration.

OPEC Fund Director-General Dr Abdulhamid Alkhalifa said: "These projects are well-aligned with the government of Sierra Leone's National Development Plan and New Direction Agenda. Additionally, both projects will place a strong emphasis on promoting gender equality and participation of women and youth in the economy, a high priority for the OPEC Fund as inclusiveness is a key factor in alleviating poverty."

An estimated **260,000** people are expected to benefit from the development project


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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.

Visits to the Secretariat

June 2 Officials from the Konrad Adenauer Foundation, Stuttgart, Germany.

June 7 Students from the University of Illinois at Urbana-Champaign, Urbana, Illinois, US.

June 8 Officials from ASG e.V., Duderstadt, Germany.

June 28 Students from the Konrad Lorenz Institute, Klosterneuburg, Austria.

July 1 Officials from the Society of Petroleum Engineers, Vienna, Austria.

Forthcoming events

GASTECH exhibition and conference, September 5–8, 2022, Fiera Milano, Italy. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 36 15 28 73; fax: +44 20 36 15 06 79; e-mail: conferencemarketing@dmgevents.com; website: www.gastechevent.com.

Americas petroleum coke summit, September 7–9, 2022, Seattle, Washington DC, US. Argus Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/americas-petroleum-coke.

8th IoT in oil and gas conference, September 12–13, 2022, Houston, TX, US. Details: Energy Conference Network, Tel: +1 855 869 4260; e-mail: info@energyconferencenetwork.com; website: https://iotinoilandgas.energyconferencenetwork.com.

Argus North American biofuels, LCFS and carbon markets summit, September 12–14, 2022, Monterey, CA, US. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/biofuels-and-lcfs-markets.

Latin American refining technology conference, September 12–14, 2022, Buenos Aires, Argentina. Details: The World Refining Association, Bedford House, Fulham Green, 69–79 Fulham High Street, London SW6 3JW, UK. Tel: +44 207 38 48 013; fax: +44 207 38 47 843; e-mail: enquiry@wraconferences.co.uk; website: https://worldrefiningassociation.com/event-events/lartc.

Papua New Guinea energy summit, September 13–15, 2022, Port Moresby, Papua New Guinea. Details: dmg :: events, 6th floor, Northcliffe House, 2 Derry Street, London W8 5TT, UK. Tel: +44 20 36 15 28 73; fax: +44 20 36 15 06 79; e-mail: conferencemarketing@dmgevents.com; website: www.pngenergysummit.com.

Operational excellence in power and utilities, September 14, 2022, Online. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 36 89 300; fax: +44 207 36 89 301; e-mail: enquire@iqpc.co.uk; www.oilandgasiq.com/events-opex-in-power-and-utilities?utm_medium=portal&mac=IQPCCORP.

6th Blockchain in oil and gas conference, September 14–15, 2022, Houston, TX, US. Details: Energy Conference Network, Tel: +1 855 869 4260; e-mail: info@energyconferencenetwork.com; website: https://blockchain-oilandgas.energyconferencenetwork.com.

Onshore wellsite facilities congress, September 20–22, 2022, Houston, TX, US. Details: American Business Conferences, City Centre One, 800 Town & Country Blvd, Suite 300, Houston, Texas 77024, USA. Tel: +1 800 72 13 915; fax: +1 800 71 41 359; e-mail: info@american-business-conferences.com; website: www.facilities-design-onshore.com.

APPEC 2022, September 26–28, 2022, Singapore. Details: S&P Platts, 20 Canada Square, Canary Wharf, London E14 5LH, UK. Tel: +44 207 17 66 142; fax: +44 207 17 68 512; e-mail: cynthia_rugg@platts.com; website: www.events.platts.com.

Digital refining and petrochemicals summit 2022, September 28–29, 2022, London, UK. Details: Active Communications International, 5–13 Great Suffolk Street, 4th Floor, London SE1 0NS, UK. Tel: +44 207 981 98 00; fax: +44 207 593 00 71; e-mail: claire@acieu.net; website: www.wplgroup.com/aci/event/digital-refining-summit.

International downstream week, September 29–30, 2022, Dubrovnik, Croatia. Details: Euro Petroleum Consultants Ltd, 44 Oxford Drive, Bermondsey Street, London SE1 2FB, UK. Tel: +44 207 35 78 394; fax: +44 207 35 78 395; e-mail: enquiries@europetro.com; website: https://europetro.com/event/422.

SPE ATCE, October 3–5, 2022, Houston, TX, USA. Details: Society of Petroleum Engineers, PO Box 833836, Richardson, TX 75083-3836, USA. Tel: +1 972 95 23 93; fax: +1 972 95 29 435; e-mail: spedal@spe.org; website: www.atce.org.

Africa oil week, October 3–7, 2022, Cape Town, South Africa. Details: Hyve Group PLC, Details: Hyve Group plc, 2 Kingdom Street, The Studios, London W2 6JG, UK. https://africa-oilweek.com/Home.

Argus European crude conference, October 4–5, 2022, Geneva, Switzerland. Details: Argus Media, Lacon House, 84 Theobald's Road, London WC1X 8NL, UK. Tel: +44 20 77 80 42 00; e-mail: london@argusmedia.com; website: www.argusmedia.com/en/conferences-events-listing/european-crude-geneva.

Guyana basins summit and exhibition, October 4–6, 2022, Georgetown, Guyana. Details: Euro Petroleum Consultants Ltd, 44 Oxford Drive, Bermondsey Street, London SE1 2FB, UK. Tel: +44 207 35 78 394; fax: +44 207 35 78 395; e-mail: enquiries@europetro.com; website: https://guyanabasinsummit.com/en.

Refining India 2022, October 10–11, 2022, New Delhi, India. Details: EMAP, 10th floor, Southern House, Wellesley Gove, Croydon CR0 1XG, UK. Website: https://refiningindia.com/refiningindia2022/en/page/home.

2nd hydrogen Americas summit, October 10–11, 2022, Washington, DC, USA. Details: Sustainable Energy Conferences Ltd, 55 Lombard Road, London SW11 3RX, UK. Tel: +44 207 97 80 00 0; website: www.hydrogen-americas-summit.com.

Decarbonizing oil and gas, October 10–12, 2022, London, UK. Details: IQPC Ltd, Anchor House, 15–19 Britten Street, London SW3 3QL, UK. Tel: +44 207 36 89 300; fax: +44 207 36 89 301; e-mail: enquire@iqpc.co.uk; website: www.oilandgasiq.com/events-decarbonizing-oil-gas-europe?utm_medium=portal&mac=IQPCCORP.

Legal Advisor, International Matters

Within the OPEC Secretariat, the Legal Office contributes to the conduct of the affairs of the Organization by promoting the rule of law within the Organization and in its relation with governments, organizations, enterprises and individuals and by maintaining and defending the legal claims and interests of the Organization. The office participates in the drafting and negotiations of contracts and agreements with external entities. It provides legal support and proposes amendments in respect of the Organization's organs, statutes and programmes, as well as of financial and staff regulations. It monitors developments of relevant legal aspects pertaining to the energy sector, nationally and internationally, conducts research and publishes up to date legal articles on recent and emergent trends. It protects and advances the interests of the Organization and its Member Countries in international forums.

Objective of position

Under the overall supervision of the General Legal Counsel, the Legal Advisor, International Matters, provides legal advice to the Secretary General and to senior management regarding the Organization's relation with external entities. He/she addresses and defends international legal claims and interests of the Organization within the scope of its Statute and follows, analyses and advises on issues of national and international legal policies of relevance to OPEC and its Member Countries.

Main responsibilities

- Identifies international legal issues of significance to OPEC, examines, studies and analyses these with a view to protecting and promoting the Organization's interests, goals and claims.
- Reports on emerging international legal issues of significance to OPEC, draws conclusions regarding possible implications for OPEC and its Member Countries and advises on appropriate responses.
- Conducts research into multilateral agreements relating to the WTO, global climate change, competition, energy and environment in collaboration with OPEC's Research Division.
- In close collaboration with the Environmental Matters Unit, monitors international legal developments at the multilateral level (ICN, WTO, UNCTAD, etc) and in international legal professional associations with a view to protecting and promoting the interest of the Organization.
- Examines, studies and analyses relevant national legal systems, policies and practices in the energy sector that may impact on OPEC.
- Provides legal advice and interpretation on legal aspects of the Organization's relations with other entities, including contractual relations, questions of liability, arbitration and claims against the Organization.
- Follows up relevant decisions of the Governing Bodies of the Organization, in particular regarding legal studies and other international legal issues of significance to OPEC.
- Carries out any other tasks assigned by the relevant superiors as pertain to his/her background, qualifications and position.

Required competencies and qualifications

Education: University degree in International Law (Masters)
Work experience: *University degree:* eight years with a minimum of three years at the international level. *Advanced degree:* six years with a minimum of three years at the international level.
Training specializations: A combination of two or more of the following specializations: Public International Law; Competition Law and Policy; International Environmental Law and Policy; International Petroleum Law and Policy; Comparative Energy Law; The Institutional Law of International Organizations; International Law on Foreign Investments; and other relevant specializations in international law.
Competencies: Communication and analytical skills; presentation and interpersonal skills; customer service orientation; initiative and integrity.
Language: English

Status and benefits

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

The post is at grade E reporting to the General Legal Counsel. The compensation package, including expatriate benefits, is commensurate with the level of the post.

Applications:
Applicants must be nationals of Member Countries of OPEC and should not be older than 58 years.
Applicants are requested to fill in a resume and an application form which can be received from their Country's Governor for OPEC.
In order for applications to be considered, they must reach the OPEC Secretariat through the relevant Governor not later than **October 15, 2022,** quoting the job code: **1.1.02** *(see www.opec.org — Employment).*

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World oil market prospects for the second half of 2022

June 2022


Organization of the Petroleum Exporting Countries

OPEC Monthly Oil Market Report

14 June 2022

Feature article:
World oil market prospects for the second half of 2022

The global economy in 2022 continues to be fraught with uncertainty. The first quarter of the year showed a weakening growth trend amid strongly rising commodity prices and a surging Omicron wave, both of which dampened the economic dynamic, particularly in the advanced economies and China. Nevertheless, economic growth is forecast to pick up towards the end of 2Q22.

Recently, economic momentum has been building, especially in the contact-intensive services sector, which includes travel and transportation, leisure and hospitality. This renewed activity is expected to lead into the summer holiday season of the northern hemisphere, supported by still-sufficient savings in advanced economies to be spent on pent-up demand. A similar seasonal dynamic was observed during the summer months of pandemic years 2020 and 2021. However, once the summer holidays are over, it will remain to be seen to what extent inflation, ie the rising cost of living, financial tightening and rising geopolitical uncertainty, dampen the growth dynamic towards the end of the year.

Turning to the oil market, global oil demand is anticipated to average 101.8 million barrels/day (m b/d) in 2H22, up from 98.7m b/d on average seen in 1H22. For the year, world oil demand is forecast to grow by 3.4m b/d. Improving mobility in major economies, as well as seasonal containment of the pandemic is projected to support gasoline and distillate demand. Oil demand growth in the OECD is forecast to average 1.2m b/d y-o-y in 2H22, with OECD Americas remaining the largest contributor to oil demand growth. In terms of main products, gasoline is expected to lead oil demand growth in the region, closely followed by LPG, middle distillates and naphtha. In the non-OECD, oil demand is estimated to increase by 1.6m b/d in 2H22 y-o-y, driven mostly by China, India, Other Asia and the Middle East. The rapid containment of COVID-19 in China is expected to support a healthy rebound in economic momentum in the region. In terms of products, middle distillates are projected to be the main contributor to growth, followed by gasoline, LPG and naphtha.

Following estimated growth of 2.2m b/d y-o-y in 1H22, non-OPEC liquids supply is forecast to grow by 2.1m b/d y-o-y in 2H22. For the entire year, non-OPEC liquids supply is projected to grow by 2.1m b/d y-o-y.

On a regional basis, OECD liquids supply is expected to grow by 1.7m b/d y-o-y in 2H22, mainly in the US, with a projected increase of 1.2m b/d, and additional incremental production coming from Canada and Norway. However, liquids supply from the non-OECD region is forecast to increase by only 300,000 b/d y-o-y in 2H22. Lower production from Russia is forecast to be offset by higher output in other regions like Latin America. However, the second half of the year remains highly uncertain due to geopolitical developments in Eastern Europe.

Looking ahead, current geopolitical developments and the uncertain roll-out of the pandemic toward the end of the second half of the year continue to pose a considerable risk to the forecast recovery to pre-pandemic levels. Inflationary pressures are likely to persist and it remains highly uncertain as to when geopolitical issues may be resolved. Nevertheless, oil demand is forecast at healthy levels in the second half of this year. In order to meet this incremental demand, the countries participating in the 'Declaration of Cooperation' (DoC) decided in their 29th Ministerial Meeting held on June 2, 2022, to advance the planned production adjustments of September 2022 in an ongoing endeavour to ensure market stability.

MOMR ... oil market highlights

June **2022**

Crude oil price movements — Crude oil spot prices recorded solid gains in May, buoyed by strong physical crude market fundamentals. Tight oil product markets and high refining margins have prompted refineries to increase throughputs, boosting crude demand, specifically for light sweet crude. Planned and unplanned oil supply disruptions in several regions contributed to tightening fundamentals. The OPEC Reference Basket increased $8.23, or 7.8 per cent, to settle at $113.87/b. Oil futures prices rallied in May, driven by tightening oil product markets, near-term global oil supply risks amid continued geopolitical tensions in Europe, as well as the prospect of a firm recovery in demand after Chinese authorities started to gradually ease COVID-19-related lockdown measures. The start of the summer driving season in the northern hemisphere provided further support. The ICE Brent front-month contract rose $6.04, or 5.7 per cent, in May to average $111.96/b and NYMEX WTI increased by $7.62, or 7.5 per cent, to average $109.26/b. As a result, the Brent/WTI futures spread narrowed by $1.58 to average $2.70/b. Backwardation in the Brent, WTI and Dubai futures markets strengthened significantly in May and the near-month contract spreads moved into deep backwardation, as the outlook for oil market fundamentals tightened. Hedge funds and other money managers turned bullish on crude prices in May, raising their total futures and options net-long positions in ICE Brent and NYMEX WTI by 18.2 per cent.

World economy — World economic growth in 2022 remains broadly unchanged at 3.5 per cent, following growth of 5.8 per cent in 2021. US GDP growth for 2022 is revised down to 3.0 per cent from 3.2 per cent, after growth was reported at 5.7 per cent for 2021. Euro-zone economic growth for 2022 is revised down to 3.0 per cent from 3.1 per cent, following growth of 5.4 per cent in 2021. Japan's economic growth for 2022 is revised down to 1.6 per cent from 1.8 per cent, after growth of 1.7 per cent in 2021. China's 2022 growth remains unchanged at 5.1 per cent, after growth of 8.1 per cent in 2021. India's 2022 GDP growth remains at 7.1 per cent, after 2021 growth of 8.3 per cent. Brazil's economic growth forecast for 2022 is revised up to 1.2 per cent from 0.7 per cent in the previous assessment, following growth of 4.6 per cent in 2021. For Russia, the 2022 GDP growth forecast is unchanged, showing a contraction of 6.0 per cent, following reported growth of 4.7 per cent in 2021. Consumption remains robust, especially in the advanced economies, with an expected continued recovery particularly evident in the contact-intensive services sector, which includes travel and transportation activity, leisure and hospitality. However, significant downside risks prevail, stemming from ongoing geopolitical tensions, the continued pandemic, rising inflation, aggravated supply chain issues, high sovereign debt levels in many regions, and expected monetary tightening by central banks in the US, the UK, Japan and the Euro-zone.

World oil demand — World oil demand growth in 2021 remained unchanged at 5.7m b/d. Oil demand in the OECD increased by 2.6m b/d in 2021, while the non-OECD showed growth of 3.1m b/d. For 2022, world oil demand growth is broadly unchanged to stand at 3.4m b/d. Within the quarters, the 2Q22 is revised down, reflecting the lockdown in some parts of China leading to lower-than-expected demand, while 2H22 demand is revised up on expectations of higher demand during the summer holiday and driving season. Oil demand growth in 2022 is forecast at 1.8m b/d in the OECD and 1.6m b/d in the non-OECD.

World oil supply — The estimate for non-OPEC liquids supply growth in 2021 remains broadly unchanged at 600,000 b/d. Total US liquids production is estimated to have increased by 100,000 b/d y-o-y in 2021. The forecast for non-OPEC supply growth in 2022 is revised down by 250,000 b/d to 2.1m b/d. Russia's liquids production for 2022 is revised down by 250,000 b/d. The US liquids supply growth forecast for 2022 remains marginally unchanged at 1.3m b/d. The main drivers of liquids supply growth in 2022 are expected to be the US, Brazil, Canada, Kazakhstan, Guyana and China, while declines are expected mainly in Russia, Indonesia and Thailand. OPEC NGLs and non-conventional liquids production in 2021 is revised up by 20,000 b/d from last month's assessment, representing growth of 100,000 b/d y-o-y to average 5.3m b/d. Growth of 100,000 b/d is also expected for 2022. In May, OPEC-13 crude oil production decreased by 239,000 b/d m-o-m to average 28.47m b/d, according to available secondary sources.

Product markets and refining operations — Refinery margins on all main trading hubs continued to increase in May, albeit at a considerably lower rate than in the previous months. With the conclusion of the peak turnaround season, rising product output started to limit the contraction in global product balances. In the western hemisphere, gasoline was the sole positive performer and margin driver across the barrel. Gasoline inventories declined in the US, while gasoil stocks showed some recovery. In Asia, all product markets strengthened, with the exception of naphtha and fuel oil, as regional transport fuel consumption improved amid the roll back of COVID-19 lockdown measures in China. Going forward, refinery intakes are expected to rise further to accommodate a seasonal pickup in fuel consumption and replenish stocks.

Tanker market — Dirty tanker spot freight rates fell back from the sharp gains seen the previous month. Suezmax rates declined 37 per cent m-o-m and Aframax fell 22 per cent over the same period, as ample availability overwhelmed the upward pressure caused by trade dislocations. VLCC rates declined 20 per cent, with losses both East and West of Suez. In contrast, clean rates continued to surge, up 37 per cent on average amid tight product markets. Dirty spot freight rates are likely to remain capped by ample tanker supply, while clean rates could continue to benefit from trade shifts necessitating higher vessel demand in the summer driving season in the northern hemisphere.

Crude and refined products trade — Preliminary data shows US crude imports averaged 6.4m b/d in May, a gain of six per cent m-o-m, while crude exports set a new record high of 3.7m b/d in May. US product imports remained steady, averaging 2.2m b/d, supported by an increase in gasoline flows ahead of the driving season. China's crude imports averaged 10.5m b/d in April and preliminary data shows May imports at 10.8m b/d, as inflows continued to pick up from the weak performance in February despite lower refinery throughputs. China's product exports edged lower in April, averaging 1.0m b/d, as declines in gasoline, diesel and fuel oil exports offset increased jet fuel outflows. The anticipated lifting of lockdown measures should support China's crude imports in June, although this could be offset by refiners drawing from existing inventories. India's crude imports jumped 13 per cent to a new record high of 5.1m b/d in April, as refineries maximized run rates and snapped up discounted Russian crude. Japan's crude imports saw the fourth-consecutive m-o-m gain in April, edging up to average 2.9m b/d amid expectations of improving product demand. Japan's product imports, including LPG, were broadly flat, while product exports fell 30 per cent m-o-m, with declines across most major products amid lower flows to China. OECD Europe trade flows remain a key uncertainty due to sanctions and the challenges of sourcing crude and refined products from other suppliers.

Commercial stock movements — Preliminary April data sees total OECD commercial oil stocks up 1.8m b m-o-m. At 2,628m b, inventories were 287m b less than in the same period a year ago, 332m b lower than the latest five-year average, and 299m b below the 2015–19 average. Within components, crude stocks rose m-o-m by 9.3m b, while product inventories fell m-o-m by 7.5m b. At 1,293m b, OECD crude stocks were 129m b lower than the same time a year ago, 180m b lower than the latest five-year average, and 179m b below the 2015–19 average. OECD product stocks stood at 1,335m b, representing a deficit of 158m b compared to the same time a year ago, 152m b lower than the latest five-year average, and 120m b below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks fell m-o-m by 0.6 days in April to stand at 57.4 days. This is 7.6 days below April 2021 levels, 8.0 days less than the latest five-year average and 4.8 days lower than the 2015–19 average.

Balance of supply and demand — Demand for OPEC crude in 2021 is revised down by 200,000 b/d from the previous month's assessment to stand at 28.0m b/d, which is around 5.0m b/d higher than in 2020. Demand for OPEC crude in 2022 is revised up by 100,000 b/d from the previous month's assessment to stand at 29.2m b/d, which is around 1.1m b/d higher than in 2021.

The feature article and oil market highlights are taken from OPEC's Monthly Oil Market Report (MOMR) for June 2022. 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.

The outlook for the oil market in 2023

July 2022


Organization of the Petroleum Exporting Countries

OPEC Monthly Oil Market Report

12 July 2022

Feature article:
The outlook for the oil market in 2023

World GDP growth in 2023 is forecast at 3.2 per cent. This assumes that the ramifications of the pandemic, geopolitical developments in Eastern Europe and global financial tightening amid rising inflation do not negatively impact the 2023 growth dynamic to a major degree. It also assumes that major economies revert back towards their growth potentials. However, downside risk exists. Global inflation continues to be a major concern, along with the consequence of further monetary tightening measures by key central banks. The continuation of the pandemic into 2023 is another risk that could curb growth depending on the extent of measures taken to reduce contagion. While labour markets are forecast to remain tight, supply chain bottlenecks may not be resolved in the short term and high debt levels across the globe may persist. In the OECD, GDP growth is expected at 2.1 per cent in 2023, from 2.9 per cent in 2022. In the non-OECD, 2023 GDP growth is forecast at 4.2 per cent, compared with 3.9 per cent in 2022.

Better-than-expected containment of COVID-19 and expected firm global economic growth are projected to support global oil demand in 2023, which is forecast to grow by 2.7 million barrels/day (m b/d) y-o-y. Within the regions, OECD oil demand is forecast to rise by 600,000 b/d and non-OECD oil demand is projected to show an increase of 2.1m b/d, mostly in China and India. This is supported by a recovery in transportation fuels and firm industrial fuel demand, including petrochemical feedstock.

In terms of fuels, gasoline and diesel are expected to lead oil demand growth in 2023, on increasing mobility in major consuming countries, such as the US, China and India. Both on-road diesel, including trucking, as well as increasing industrial, construction and agricultural activities in OECD America, Europe and China will support diesel demand. Light distillates will be supported by capacity additions — NGL plants in the US, propane dehydrogenation (PDH) plants in China, and steady petrochemical margins. Jet fuel will continue to recover, as domestic and international air travel pick up, but business travel is expected to continue to lag. Uncertainties remain, including COVID-19-related challenges, particularly in China, as well as geopolitical uncertainties and their impact on oil demand.

The non-OPEC oil supply is forecast to grow by 1.7m b/d y-o-y in 2023, supported by stronger demand. Upstream investment in non-OPEC countries is expected at around $415 billion, broadly the same level as in 2022 and 18 per cent more than in 2021. However, this level is still only half of the $755bn seen in 2014. New production by projects sanctioned up to 2023 is forecast at around 19.7m b/d, up by ten per cent compared with the 17.8m b/d seen in 2022. Liquids production growth in the US is forecast at 1.1m b/d, mainly from US Permian crude and non-conventional NGLs, as well as from the Gulf of Mexico. Oil production in Norway, Brazil, Guyana, Kazakhstan, and Argentina is forecast to increase through new field start-ups and ramp-ups of existing projects. Moreover, non-OPEC processing gains and OPEC NGLs are forecast to grow by 70,000 b/d and 50,000 b/d, respectively, y-o-y.

Looking ahead to 2023, strong world oil demand growth, along with the increase in non-OPEC supply, are forecast to lead to demand for OPEC crude to increase by 900,000 b/d y-o-y to average 30.1m b/d. Nevertheless, uncertainty to the forecast remains to the downside, with much depending on the course of the pandemic and related measures, global financial tightening in light of growing inflation, and the resolution of ongoing geopolitical issues in Eastern Europe.

MOMR ... oil market highlights

July **2022**

Crude oil price movements — Crude oil spot prices rose in June, extending the previous month's increase. Higher futures prices and strong physical crude market fundamentals drove the increase, amid higher crude demand from refiners and several supply disruptions. The OPEC Reference Basket rose $3.85, or 3.4 per cent, to settle at $117.72/barrel. The ICE Brent front month increased by $5.54, or 4.9 per cent, in June to average $117.50/b and NYMEX WTI rose by $5.08, or 4.6 per cent, to average $114.34/b. The Brent/WTI futures spread widened by 46¢ to an average of $3.16/b. The market structure of all three major crude benchmarks — ICE Brent, NYMEX WTI and DME Oman — strengthened further in June and prompt time spreads moved into deeper backwardation. Hedge funds and other money managers cut net long positions by nearly 11 per cent in the two major futures contracts.

World economy — World economic growth in 2022 remains broadly unchanged at 3.5 per cent, while the initial forecast for 2023 expects global growth of 3.2 per cent. US GDP growth for 2022 remains unchanged at 3.0 per cent, followed by 2.1 per cent growth in 2023. Euro-zone economic growth for 2022 is unchanged at 3.0 per cent, while growth in 2023 is forecast at two per cent. Japan is expected to grow by 1.7 per cent in 2023, following growth of 1.6 per cent in 2022, unchanged from the previous report. China's 2022 growth remains at 5.1 per cent and GDP growth in 2023 is seen slightly lower at five per cent. India's GDP growth remains at 7.1 per cent in 2022 and is expected to rise by six per cent in 2023. Brazil's economic growth forecast for 2022 remains unchanged at 1.2 per cent, increasing to 1.5 per cent in 2023. For Russia, the 2022 GDP growth forecast is unchanged, showing a contraction of 6.0 per cent, while growth is anticipated to recover to 1.2 per cent in 2023. Consumption remains robust, especially in the advanced economies, with an expected continued recovery, particularly in the contact-intensive services sector, which includes travel and transportation activity, leisure and hospitality. However, significant downside risks exist, stemming from ongoing geopolitical tensions, the continued pandemic, rising inflation, aggravated supply chain issues, high sovereign debt levels in many regions, and expected monetary tightening by central banks in the US, the UK, Japan and the Euro-zone.

World oil demand — World oil demand growth in 2022 remains unchanged from the previous month's assessment at 3.4 million barrels/day (m b/d). Oil demand in the OECD is estimated to increase by 1.8m b/d, while non-OECD is seen growing by 1.6m b/d. Total oil demand is projected to average 100.3m b/d. The first quarter of this year was revised higher, amid better-than-anticipated oil demand in the main OECD consuming countries. However, with the resurgence of COVID-19 in China and ongoing geopolitical uncertainties, oil demand in 2Q22 is revised lower. For 2023, world oil demand growth is expected to reach 2.7m b/d to average 103.0m b/d, with the OECD growing by 600,000 b/d and non-OECD growth forecast at 2.1m b/d. Oil demand in 2023 is expected to be supported by ongoing solid economic performance in major consuming countries, as well as improved geopolitical developments and containment of COVID-19 in China.

World oil supply — Non-OPEC liquids supply growth in 2022 remains broadly unchanged from the previous month's assessment, despite upward revisions to China and Canada, and is now expected to grow by 2.1m b/d to average 65.7m b/d. The main drivers of liquids supply growth for the year are expected to be the US, Canada, Brazil, China, Kazakhstan and Guyana, while production is expected to decline mainly in Russia, Indonesia and Thailand. In 2023, non-OPEC liquids production is projected to grow by 1.7m b/d to average 67.4m b/d. Liquids supply in the OECD is forecast to increase by 1.4m b/d in 2023, while non-OECD is seen growing by 200,000 b/d. The main drivers for 2023 are expected to be the US, with growth of 1.1m b/d, followed by Norway, Brazil, Canada and Guyana. However, uncertainty regarding the operational aspects of US production and from ongoing geopolitical developments remains high. OPEC NGLs and non-conventional liquids are forecast to grow by 100,000 b/d in 2022 to average 5.39m b/d and by 50,000 b/d to average 5.44m b/d in 2023. OPEC-13 crude oil production in June increased by 234,000 b/d m-o-m to average 28.72m b/d, according to available secondary sources.

Product markets and refining operations — Refinery margins at all main trading hubs continued to increase in June, supported by stronger product fundamentals despite rising product output levels, as refiners continued to increase processing rates following peak maintenance season. Rising transport fuel requirements in line with seasonal trends led to robust gains at the top and middle sections of the barrel. Meanwhile, naphtha and fuel oil came under pressure due to subdued demand and unfavourable economics. Going forward, refinery intakes are expected to rise further to accommodate a seasonal pick up in fuel consumption and allow a much-needed stock build.

Tanker market — Dirty tanker spot freight rates in June recovered some of the losses seen the previous month. The tanker market continued to improve following poor performance in 2021, although gains varied across sectors. Suezmax and Aframax markets have benefited from the rerouting of longstanding trade patterns resulting in longer voyages, while VLCCs have seen less momentum from these shifts, with lower flows on longer haul routes such as from the Americas to Asia. Suezmax rates rose 20 per cent m-o-m and Aframax rates increased 11 per cent, while VLCC rates were up eight per cent on average. Clean rates continued to see strong m-o-m growth, up 21 per cent on average amid tight product markets and increased demand for longer haul routes.

Crude and refined products trade — US crude imports remained broadly unchanged in June at 6.4m b/d, while US crude exports slipped from the high levels seen the month before to average 3.4m b/d. China's crude imports averaged 10.8m b/d in May, continuing to increase from the weak performance seen in February, with flows heading to inventories as refineries continued to cut runs. India's crude imports fell back from an exceptional high the month before to average 4.6m b/d in May, despite a surge in Russian inflows. Tanker tracking data shows India's crude imports and product exports moving higher in June. Japan's crude imports fell back from the previous month's highs, averaging 2.6m b/d in May. Recent estimates show OECD Europe's imports strengthening in May and June, with increased y-o-y inflows from West Africa and the Middle East, partially offset by declines in North Africa.

Commercial stock movements — Preliminary May data sees total OECD commercial oil stocks up 10.5m b m-o-m. At 2,680m b, inventories were 253m b less than the same time a year ago, 312m b lower than the latest five-year average, and 276m b below the 2015–19 average. Within components, crude stocks fell by 10.1m b m-o-m, while product stocks rose 20.6m b over the same period. At 1,307m b, OECD crude stocks were 103m b below the same time a year ago, 176m b lower than the latest five-year average, and 177m b below the 2015–19 average. OECD product stocks stood at 1,373m b, representing a deficit of 150m b with the same time a year ago, 136m b lower than the latest five-year average, and 97m b below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks fell 0.7 days m-o-m in May to stand at 57.3 days. This is 7.0 days below May 2021 levels, 7.6 days less than the latest five-year average and 4.6 days lower than the 2015–19 average.

Balance of supply and demand — Demand for OPEC crude in 2022 remains unchanged from the previous month's assessment to stand at 29.2m b/d, which is around 1.1m b/d higher than in 2021. Based on initial forecasts for world oil demand and non-OPEC supply in 2023, demand for OPEC crude is expected to reach 30.1m b/d, 900,000 b/d higher than in 2022.

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Crude and product price movements

August 2022


Organization of the Petroleum Exporting Countries

OPEC Monthly Oil Market Report

11 August 2022

Feature article:
Crude and product price movements

Global oil market fundamentals continued their strong recovery to pre-COVID-19 levels for most of the first half of 2022, albeit signs of slowing growth in the world economy. Global oil supply rose steadily this year, including from countries participating in the 'Declaration of Cooperation' (DoC), amid their continuing efforts to stabilize the oil market. However, ongoing low overall investment in the upstream and capital discipline are limiting non-OPEC oil supply growth potential.

The oil market has been dominated by elevated price volatility since March 2022, fuelled by intensifying geopolitical concerns in Eastern Europe. Sanctions on Russian oil by some major oil-consuming countries have sharply raised the risk premium in oil prices, particularly for Brent. Moreover, this has resulted in major changes in inter-regional trade flows, exacerbating concerns about physical oil supply at the onset of the summer holiday season. Consequently, pressure increased on oil market in some regions, specifically Europe, resulting in crude differentials soaring to record-high levels in 2Q22, along with steepening backwardation structures. Tight oil product markets, specifically for diesel and gasoline, have also pushed up crude oil prices.

While physical oil market fundamentals remained strong, volatility in futures markets remained fuelled by expectations of lower GDP growth, amid rising global inflation, which prompted key central banks to begin raising interest rates. The US dollar's value strengthened further against a basket of major currencies, which also added concern. Moreover, price volatility contributed to reduced market liquidity, as seen in declining open interest. Combined futures and options open interest in ICE Brent and NYMEX WTI dropped in July 2022 to the lowest point since June 2015.

On the product side, fuel prices surged in the first half of the year due to lower supplies amid COVID-19-related refinery closures and a heavy refinery turnaround season. In addition, stronger fuel consumption at the onset of the summer season, as COVID-19-related mobility restrictions were lifted in most regions, and product flow adjustments linked to the geopolitical developments in Eastern Europe, further aggravated product tightness, which ultimately pushed product prices to record highs in June. At the same time, jet fuel, the second-strongest performer in the US product market, saw its price benefit from improving international air travel activity, leading to notable jet fuel margin gains.

Fuel prices peaked in June with US gasoline prices reaching $193.06/b, up by $97.79/b, or 103 per cent, y-o-y. However, rising refinery run rates in July alleviated some of the tightness, mostly in the USGC, where product prices across the barrel declined by $26.83/b on average. In Europe, average prices declined the least by $20.24/b, m-o-m.

Looking ahead, refined product markets in 2H22 are likely to continue to see seasonal support from transport fuels in the coming months, while fuel sales could benefit from moderating product prices — if the recent trend continues. At the same time, available refinery capacity will be supported by the ongoing operational ramp-up of at least two large capacity additions last year, mainly in the Middle East.

The countries participating in the DoC will continue to closely monitor ongoing market developments and encourage investment in the upstream sector to ensure adequate levels of capacity along the value chain, in their efforts to maintain a stable oil market balance in the interest of producers and consumers alike.

MOMR ... oil market highlights

August 2022

Crude oil price movements — The OPEC Reference Basket fell $9.17, or 7.8 per cent, m-o-m in July to average $108.55/b. Oil futures prices remained highly volatile in July, amid a sharp drop in liquidity. The ICE Brent front month declined $12.38, or 10.5 per cent, in July to average $105.12/b and the NYMEX WTI declined by $14.96, or 13.1 per cent, to average $99.38/b. The Brent/WTI futures spread widened further by $2.58 to average $5.74/b. The market structure of all three major crude benchmarks — ICE Brent, NYMEX WTI and DME Oman — remained in strong backwardation, particularly Brent. This was despite a sharp decline in front-month prices, as fundamental outlooks remained strong. However, the backwardation structure flattened in the first week of August. Hedge funds and other money managers extended heavy selloffs in July, cutting combined futures and options net long positions in ICE Brent and NYMEX WTI to their lowest level since April 2020.

World economy — World economic growth is revised down to stand at 3.1 per cent for 2022 and 2023. This is a result of weaker 2Q22 growth in the major economies and an observed soft trend in some key economies. For the US, GDP growth for 2022 is revised down to 1.8 per cent, and to 1.7 per cent for 2023. Euro-zone economic growth for 2022 is expected at 3.2 per cent, while growth in 2023 is revised down to 1.7 per cent. Japan's economic growth for 2022 is revised down to stand at 1.4 per cent, to be followed by growth of 1.6 per cent in 2023. China's 2022 growth forecast is revised down to 4.5 per cent, while the 2023 forecast remains unchanged at 5.0 per cent. The forecast for India remains unchanged at 7.1 per cent in 2022 and 6.0 per cent in 2023. Brazil's economic growth forecasts remain at 1.2 per cent in 2022 and 1.5 per cent in 2023. The 2022 forecast for Russia is unchanged, showing a contraction of 6.0 per cent, followed by growth of 1.2 per cent in 2023. Downside risks remain, stemming from ongoing geopolitical tensions, the continued pandemic, ongoing supply chain issues, rising inflation, high sovereign debt levels in many regions, and expected monetary tightening by central banks in the US, the UK, Japan and the Euro-zone.

World oil demand — World oil demand growth in 2022 is revised downwards from the previous month's assessment but still shows healthy growth of 3.1m b/d, including the recently observed trend of burning more crude in power generation. Oil demand in the OECD is estimated to grow by 1.6m b/d, while the non-OECD is expected to grow by 1.5m b/d. Total oil demand is expected to average around 100m b/d in 2022. The first half of this year is revised higher, amid better-than-anticipated oil demand in the main OECD consuming countries. However, oil demand in 2H22 is revised lower, amid expectations of a resurgence of COVID-19 restrictions and ongoing geopolitical uncertainties. For 2023, the forecast for world oil demand growth remains unchanged at 2.7m b/d, with total oil demand averaging 102.7m b/d. The OECD is expected to grow by 600,000 b/d and the non-OECD by 2.1m b/d. Oil demand in 2023 is expected to be supported by still-solid economic performance in major consuming countries, as well as improving geopolitical developments and improvements in the COVID-19 situation in all regions.

World oil supply — Non-OPEC liquids supply growth in 2022 is forecast at 2.1m b/d to average 65.8m b/d, broadly unchanged from the previous assessment. An upward revision to Russia is offset by downward revisions to the US, Norway and Kazakhstan. The main drivers of liquids supply growth for 2022 are expected to be the US, Canada, Brazil, China and Guyana, while production is expected to decline mainly in Indonesia and Thailand. In 2023, growth in non-OPEC liquids production remains unchanged at 1.7m b/d to average 67.5m b/d. The main drivers for growth in 2023 are expected to be the US, Norway, Brazil, Canada and Guyana. However, uncertainty regarding the operational and financial aspects of US production, as well as the geopolitical situation in Eastern Europe remains high. OPEC NGLs and non-conventional liquids are forecast to grow by 0.1m b/d in 2022 to average 5.4m b/d and by 50,000 b/d to average 5.4m b/d in 2023. OPEC-13 crude oil production in July increased by 216,000 b/d m-o-m to average 28.90m b/d, according to available secondary sources.

Product markets and refining operations — Refinery margins in all main trading hubs reversed trend in July, falling back from the multi-year record highs registered in June. A counter-seasonal downturn in US product demand and rising refinery processing rates in Europe and in Asia led to product stock builds, providing partial relief to the product tightness witnessed over the past months. At the same time, concerns over a weakening global economy and a softer product market outlook likely further contributed to the downturn in refining economics globally. This weakness manifested across the barrel in all regions as product prices retreated from the record-breaking highs witnessed in June. Going forward, transport fuel requirements should remain supportive, in line with seasonal trends. Refinery intakes are expected to remain well-sustained to fulfil seasonal fuel consumption and allow continued restocking of product inventories.

Tanker market — Dirty tanker spot freight rates in July have fully recovered from the decline seen earlier in May, as trade dislocations boosted activities in longer-haul routes. VLCC rates on the Middle East-to-East route rose by 26 per cent, while flows West were up 30 per cent. The wide Brent/WTI spread also made US crude more competitive in Asia, supporting VLCC demand. Aframax rates on the Mediterranean to north-west Europe route increased 38 per cent m-o-m on average, while Suezmax rates from the US Gulf to Europe rose by 23 per cent, amid strengthening demand for longer haul flows to Europe. Clean rates came down after gaining steadily over the past months, with declines particularly strong in the Med, as trade dislocations generated volatility.

Crude and refined products trade — Preliminary data shows US crude imports reached a three-year high of 6.7m b/d in July, amid higher flows from OPEC Member Countries and Brazil. US crude exports jumped to a record high of 3.7m b/d based on preliminary weekly data, as the wide Brent/WTI spread stimulated a return of Asian buying. China's crude imports fell to an almost four-year low of 8.7m b/d in June and are expected to remain at low levels, as lockdown measures earlier in the year and a spike in buying triggered by geopolitical developments in February left inventories at ample levels. India's crude imports edged higher, averaging 4.7m b/d in June, with Russia flows up 900,000 b/d y-o-y according to secondary sources. India's crude imports are likely to remain close to current levels in July, with Russian inflows remaining above 1.0m b/d but with slightly lower flows from elsewhere. Japan's crude imports dropped to an 11-month low in June, averaging 2.3m b/d, although they still managed an increase y-o-y. Japan's crude imports are expected to recover with the return of refineries from maintenance in July. Preliminary figures show OECD Europe crude imports remaining at high levels in recent months, while crude exports fell to seven-year lows in April.

Commercial stock movements — Preliminary June data indicates total OECD commercial oil stocks rose 20.9m b m-o-m. At 2,712m b, inventories were 163m b below the same period a year ago, 261m b lower than the latest five-year average, and 236m b below the 2015–19 average. Within components, crude and product stocks increased by 6.4m b and 14.5m b, respectively, m-o-m. At 1,330m b, OECD crude stocks were 54m b lower y-o-y, 125m b lower than the latest five-year average, and 135m b below the 2015–19 average. OECD product stocks stood at 1,381m b, representing a deficit of 109m b compared with the same month last year, 136m b lower than the latest five-year average and 100m b below the 2015–19 average. In terms of days of forward cover, OECD commercial stocks rose m-o-m in June by 0.1 to stand at 58.9 days. This is 3.7 days below June 2021 levels, 5.3 days less than the latest five-year average, and 2.9 days lower than the 2015–19 average.

Balance of supply and demand — Demand for OPEC crude in 2022 is revised down by 300,000 b/d from the previous month's assessment to stand at 28.8m b/d, which is around 900,000 b/d higher than in 2021. Similarly, demand for OPEC crude in 2023 is revised down by 300,000 b/d from the previous month's assessment to stand at 29.8m b/d, around 900,000 b/d higher than the 2022 level.

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Table 1: OPEC Reference Basket spot crude prices

$/b

Crude/Member Country	2021 Jul	Aug	Sep	Oct	Nov	Dec	2022 Jan	Feb	Mar	Apr	May	Jun	Jul	Weeks 27–31/2022 (week ending) Jul 1	Jul 8	Jul 15	Jul 22	Jul 29
Arab Light – Saudi Arabia	74.15	71.36	75.01	82.77	80.81	75.49	86.15	93.82	112.99	107.24	116.44	117.27	108.98	115.00	110.10	105.65	109.28	110.16
Basrah Medium – Iraq	72.41	69.40	72.64	80.45	78.55	72.81	83.80	92.44	112.21	104.63	111.91	115.56	105.36	113.18	106.99	102.22	105.55	105.70
Bonny Light – Nigeria	75.37	71.23	74.09	82.90	80.73	74.43	86.85	98.76	120.68	106.39	115.07	125.22	117.58	124.20	120.52	114.80	117.40	115.80
Djeno – Congo	67.54	63.35	66.95	76.09	73.92	66.66	79.16	90.56	111.30	96.92	105.68	116.11	105.18	114.44	108.12	102.40	105.00	103.40
Es Sider – Libya	73.64	69.45	72.75	81.59	80.32	73.35	86.16	98.06	117.90	104.42	113.18	124.96	114.03	123.29	116.97	111.25	113.85	112.25
Girassol – Angola	75.45	70.93	74.76	84.47	82.29	75.16	88.28	100.78	121.58	105.28	113.95	127.03	119.15	126.71	121.37	115.90	119.16	118.55
Iran Heavy – IR Iran	72.98	70.34	74.08	82.14	80.50	74.68	85.59	93.04	112.40	106.28	115.48	115.85	107.63	113.66	108.67	104.26	107.93	109.05
Kuwait Export – Kuwait	73.80	71.06	74.92	82.74	81.13	75.38	86.28	93.84	113.28	107.46	116.82	117.26	109.19	115.10	110.23	105.81	109.49	110.61
Merey – Venezuela	54.49	51.76	54.96	62.72	61.21	54.89	63.58	71.02	88.12	83.40	88.07	92.25	84.72	90.16	85.72	81.76	85.02	85.76
Murban – UAE	73.64	69.89	73.41	82.73	82.06	74.57	85.11	94.18	112.48	104.48	109.97	117.53	105.97	117.02	107.77	103.18	106.49	105.71
Rabi Light – Gabon	74.53	70.34	73.94	83.08	80.91	73.65	86.15	97.55	118.29	103.91	112.67	123.10	112.17	121.43	115.11	109.39	111.99	110.39
Saharan Blend – Algeria	75.34	71.05	73.85	83.54	81.97	75.50	88.21	100.71	121.80	109.37	115.28	128.31	115.83	126.33	118.77	113.05	115.65	114.05
Zafiro – Equatorial Guinea	75.66	70.41	74.03	84.12	82.25	74.35	87.28	99.51	120.50	105.71	115.25	127.10	116.60	124.89	119.05	114.05	116.65	115.05
OPEC Reference Basket	**73.53**	**70.33**	**73.88**	**82.11**	**80.37**	**74.38**	**85.24**	**93.95**	**113.48**	**105.64**	**113.87**	**117.72**	**108.55**	**115.76**	**110.09**	**105.38**	**108.77**	**109.04**

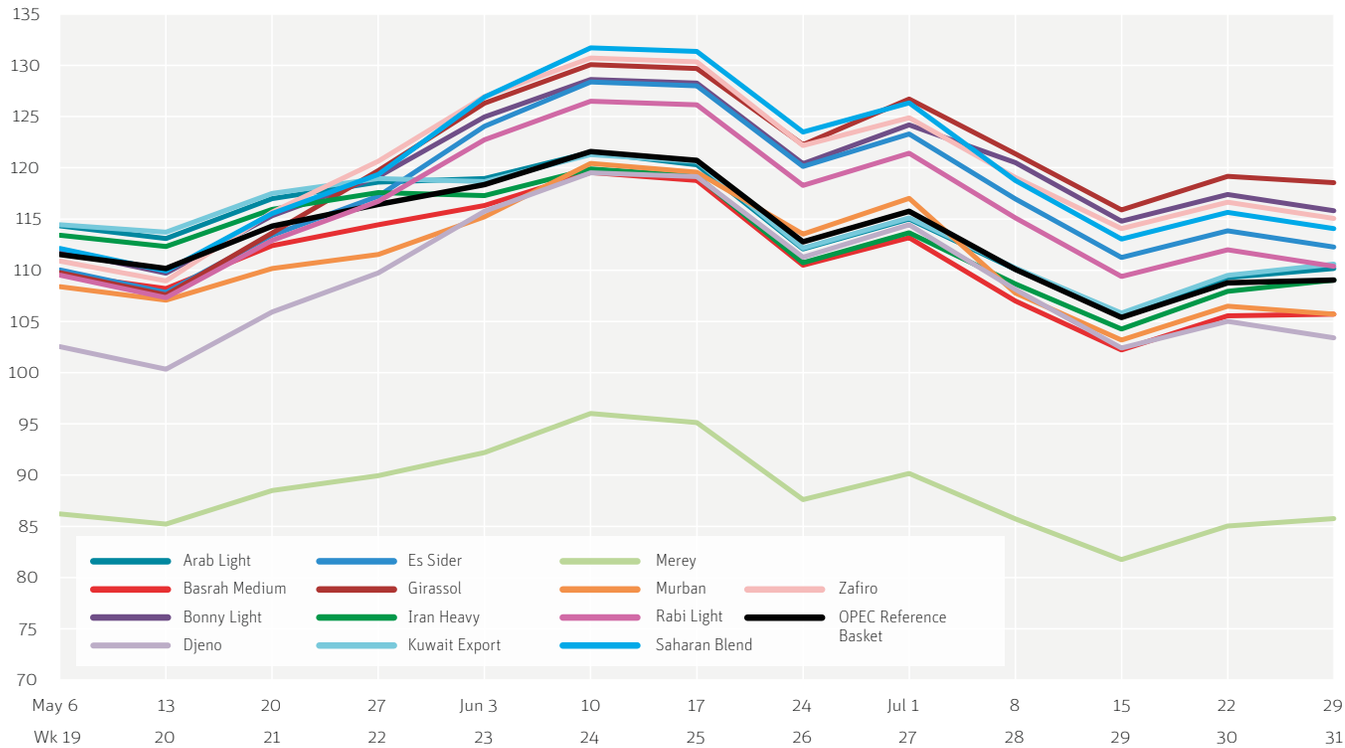
Table 2: Selected spot crude prices

$/b

Crude/country	2021 Jul	Aug	Sep	Oct	Nov	Dec	2022 Jan	Feb	Mar	Apr	May	Jun	Jul	Weeks 27–31/2022 (week ending) Jul 1	Jul 8	Jul 15	Jul 22	Jul 29
Arab Heavy – Saudi Arabia	73.25	70.65	74.07	81.92	80.19	74.27	85.28	92.78	112.13	106.21	115.53	115.91	107.84	113.75	108.88	104.47	108.14	109.26
Brega – Libya	73.74	69.35	72.80	81.69	80.22	73.35	86.26	98.31	118.15	105.27	114.03	125.96	114.53	124.19	117.47	111.75	114.35	112.75
Brent Dtd – North Sea	74.99	70.80	74.40	83.54	81.37	74.10	86.61	98.01	118.75	104.37	113.13	123.56	112.63	121.89	115.57	109.85	112.45	110.85
Dubai – UAE	72.83	69.37	72.57	81.46	80.29	73.31	83.34	92.11	110.49	102.91	107.83	112.89	102.87	110.89	103.80	99.41	103.24	104.43
Ekofisk – North Sea	76.24	71.85	74.74	84.24	82.75	75.30	89.37	101.34	123.27	107.22	117.46	130.39	120.37	129.18	123.62	117.90	120.21	117.90
Iran Light – IR Iran	71.52	66.51	71.08	80.36	78.51	71.50	85.19	95.38	117.33	102.40	107.82	118.61	106.76	116.77	110.05	103.85	106.48	104.72
Isthmus – Mexico	69.61	65.25	68.82	78.20	75.50	68.50	79.55	89.68	107.42	100.40	108.32	113.85	100.47	109.51	102.99	98.09	101.52	97.66
Oman – Oman	72.87	69.54	72.78	81.58	80.29	73.22	83.62	92.03	110.96	102.40	107.32	112.93	103.22	109.88	104.36	99.92	103.45	104.50
Suez Mix – Egypt	71.39	66.38	70.95	80.23	78.38	71.37	85.06	95.25	117.20	102.27	107.69	118.48	106.63	116.64	109.92	103.72	106.35	104.59
Minas – Indonesia	72.24	68.45	72.62	81.34	79.35	72.44	82.96	92.25	111.23	103.44	109.79	115.06	103.01	112.42	105.04	99.54	102.52	104.10
Urals – Russia	73.09	68.14	72.65	81.93	80.08	73.14	86.23	94.94	92.59	72.55	81.18	91.61	85.32	89.94	83.62	77.90	90.47	88.45
WTI – North America	72.58	67.73	71.46	81.36	79.11	71.87	83.16	91.70	108.52	101.77	109.86	114.36	100.25	109.06	102.80	97.92	101.26	97.38

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, 2022 $/b



Graph 2: Evolution of selected spot crude prices, 2022 $/b

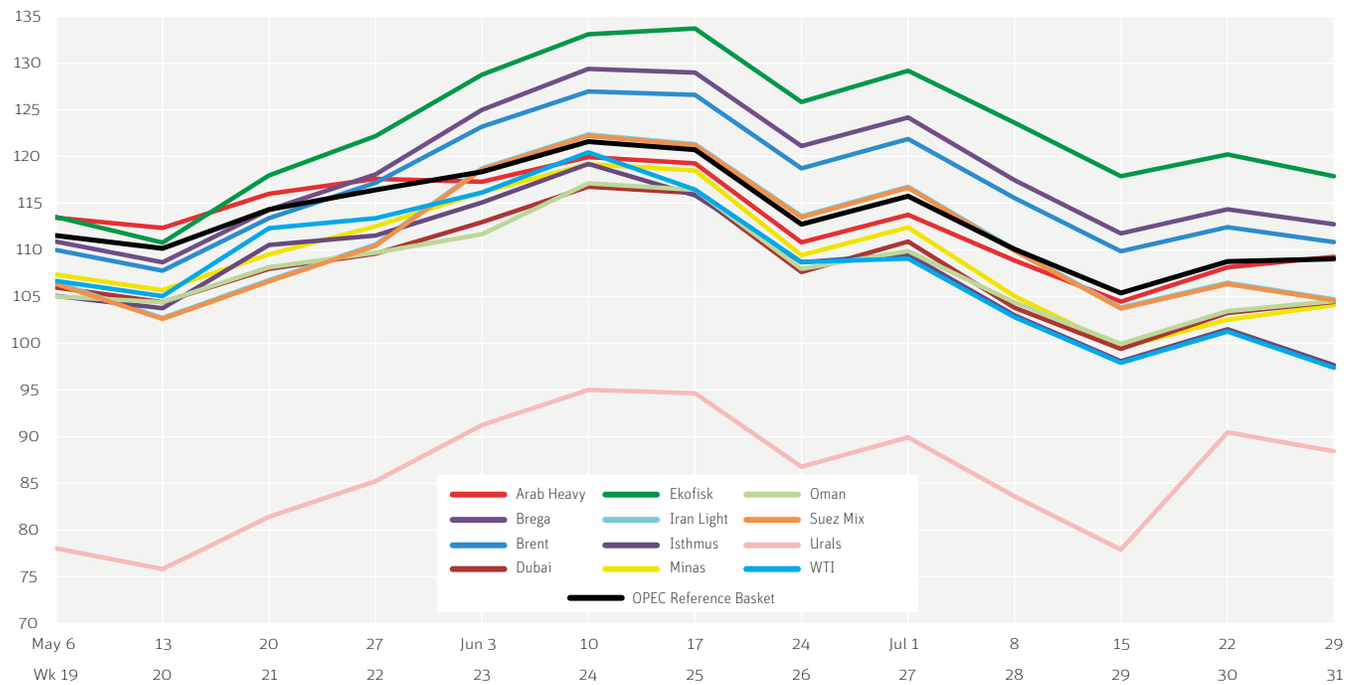


Table and Graph 3: North European market — spot barges, fob Rotterdam

$/b

		naphtha	regular gasoline unleaded	diesel ultra light	jet kero	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2021	July	74.43	91.10	79.27	80.29	71.11	62.09
	August	71.63	90.74	76.59	77.67	68.47	59.88
	September	75.19	93.89	82.87	84.35	73.93	64.09
	October	84.42	103.48	95.73	96.92	81.72	72.06
	November	81.41	100.77	91.26	92.83	77.65	65.40
	December	77.40	90.49	86.20	86.38	73.64	62.52
2022	January	85.91	102.47	101.51	101.18	82.97	73.18
	February	95.37	114.12	110.60	112.77	90.83	78.59
	March	111.98	134.95	152.33	156.48	109.70	95.07
	April	100.31	133.44	156.07	151.46	97.60	89.20
	May	98.23	166.14	160.81	152.37	100.66	95.41
	June	88.76	188.54	178.57	179.29	100.23	89.69
	July	84.65	158.02	147.64	153.29	89.26	70.77

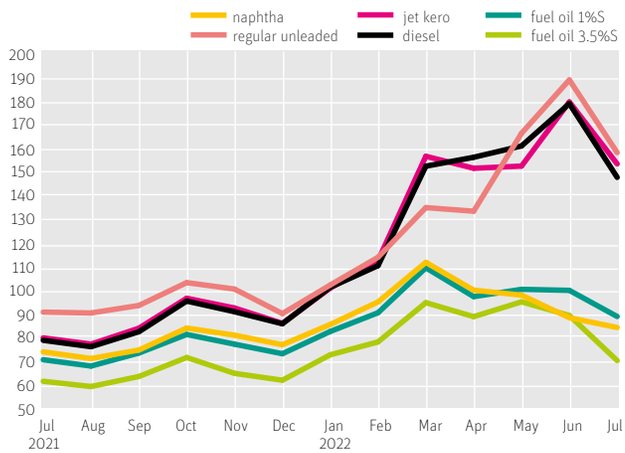


Table and Graph 4: South European market — spot cargoes, fob Italy

$/b

		naphtha	premium gasoline 50ppm	diesel ultra light	fuel oil 1 per cent S	fuel oil 3.5 per cent S
2021	July	74.03	87.81	81.16	72.11	60.93
	August	71.28	85.79	78.50	70.01	58.97
	September	74.92	88.58	85.00	75.26	63.76
	October	83.83	97.74	97.63	83.38	71.40
	November	80.76	92.83	93.15	79.64	64.50
	December	75.50	86.82	87.05	75.70	61.24
2022	January	84.89	98.09	101.29	85.58	72.09
	February	93.90	109.76	112.16	92.31	77.06
	March	110.29	130.57	155.32	114.69	93.45
	April	97.78	128.46	150.56	104.14	87.17
	May	94.86	151.69	151.88	106.96	91.99
	June	83.67	173.11	177.45	107.04	85.70
	July	82.14	141.78	145.03	95.58	70.58

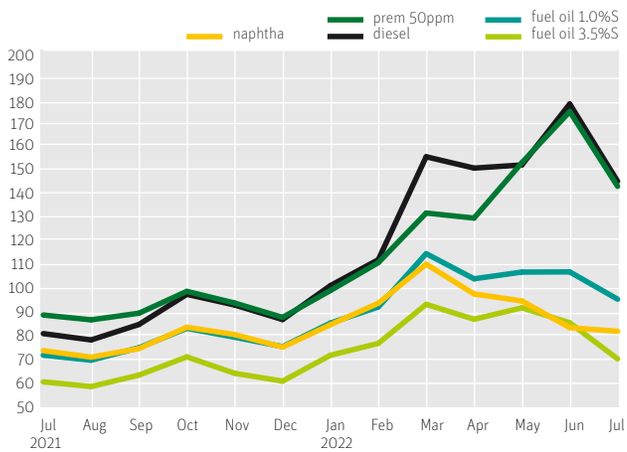
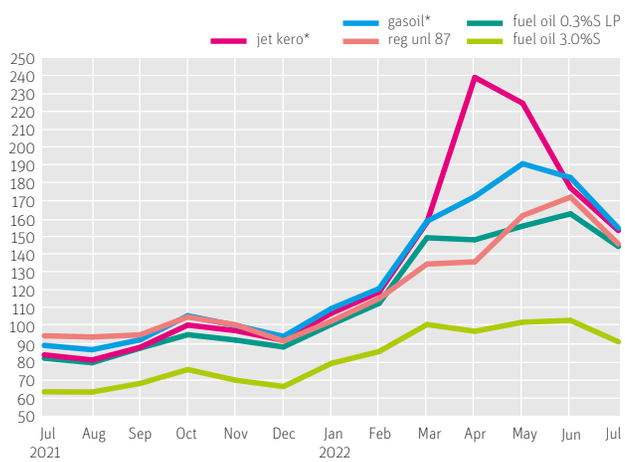


Table and Graph 5: US East Coast market — spot cargoes, New York

$/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
2021	July	94.66	89.31	84.05	82.19	63.44
	August	94.02	86.91	81.17	79.64	63.31
	September	95.18	92.40	88.21	87.76	68.08
	October	105.17	105.85	100.64	95.27	75.86
	November	100.78	100.43	97.55	92.28	69.91
	December	91.80	94.33	92.12	88.45	66.37
2022	January	102.81	109.86	107.23	101.02	79.27
	February	115.43	121.00	119.03	112.79	85.91
	March	134.68	158.55	158.01	149.32	100.95
	April	135.92	172.32	238.78	148.24	97.19
	May	161.70	190.63	224.38	155.83	102.26
	June	172.02	182.90	177.23	162.70	103.26
	July	145.90	154.69	153.38	144.45	91.34



* *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
2021	July	75.57	85.14	83.08	77.93	77.72	77.25	63.53
	August	71.01	81.13	78.94	73.77	73.55	74.05	62.33
	September	75.15	84.06	82.05	79.66	79.46	79.88	69.18
	October	84.45	98.48	95.71	93.38	93.10	93.09	74.81
	November	84.21	95.01	92.15	90.84	90.65	89.09	68.76
	December	77.82	87.92	85.79	84.94	84.50	83.47	63.75
2022	January	84.56	98.04	96.18	97.84	97.43	95.78	72.97
	February	95.75	110.72	108.26	109.91	109.24	106.17	79.78
	March	111.42	131.07	127.47	138.51	136.25	134.32	97.61
	April	97.75	126.73	123.45	139.18	137.21	134.35	102.47
	May	95.76	146.88	140.99	145.08	143.96	142.90	96.91
	June	85.72	155.10	148.86	168.61	168.56	164.40	91.26
	July	82.70	121.56	116.35	136.82	136.22	134.90	72.69

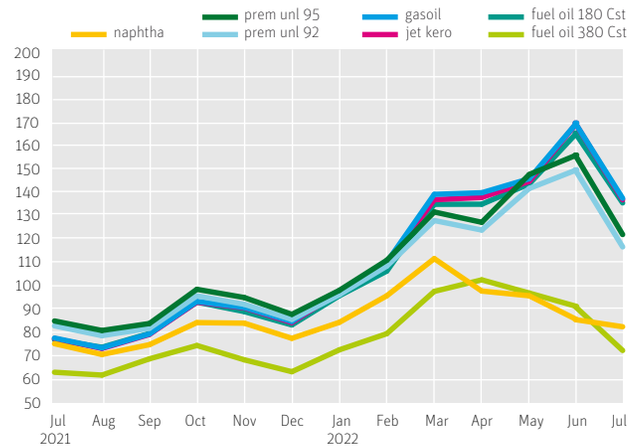
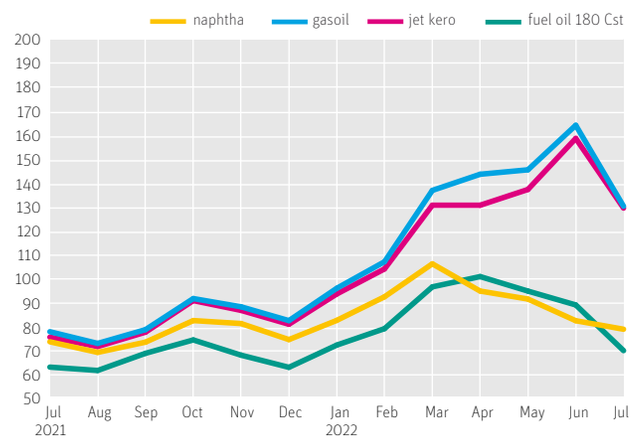


Table and Graph 7: Middle East Gulf market – spot cargoes, fob

$/b

		naphtha	gasoil	jet kero	fuel oil 180 Cst
2021	July	73.78	77.98	75.70	63.22
	August	69.36	73.10	71.82	61.82
	September	73.62	78.84	77.78	68.97
	October	82.62	91.80	90.95	74.55
	November	81.38	88.36	86.86	68.20
	December	74.69	82.60	81.08	63.13
2022	January	82.69	96.06	93.69	72.39
	February	92.53	107.14	104.15	79.25
	March	106.28	136.88	130.70	96.67
	April	94.92	143.61	130.70	100.96
	May	91.59	145.46	137.27	94.91
	June	82.56	164.03	158.55	89.14
	July	79.01	130.25	129.49	70.09



Source: Argus. Prices are average of available days.

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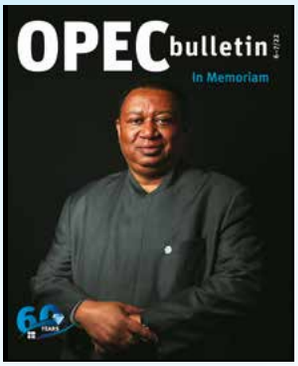

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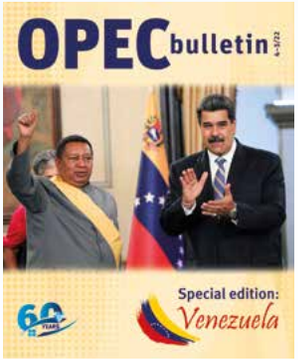

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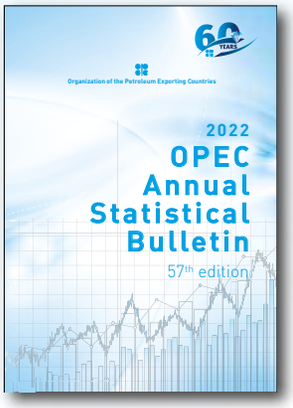

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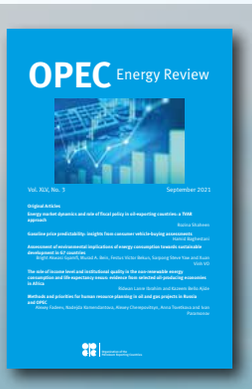

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