ORGANIZATION OF ARAB
PETROLEUM EXPORTING
COUNTRIES (OAPEC)

EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

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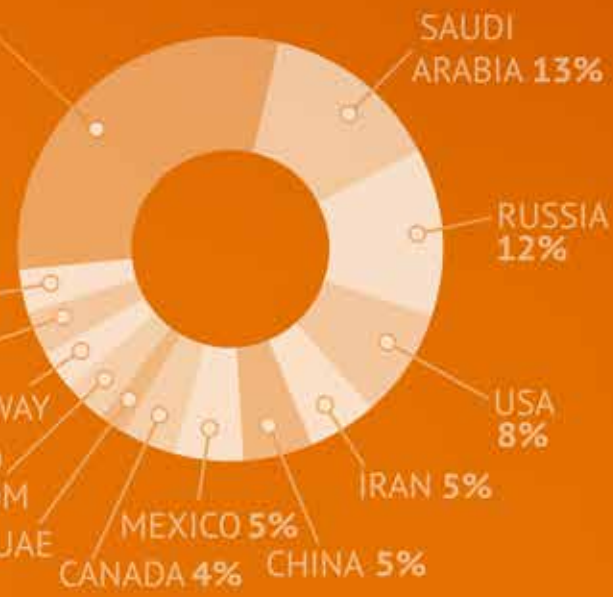
TION

OIL PRODUCTION IN THE

29,6 %	NEA
22, 1 %	EUR
18,2 %	NOR
10,8 %	AFR
10,2 %	ASIA
9,2 %	LATI



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PETROLEUM EXPORTING
COUNTRIES (OAPEC)

EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

CONTENTS

ORGANIZATION OF ARAB
PETROLEUM EXPORTING
COUNTRIES (OAPEC)

ORGANIZATION OF ARAB
PETROLEUM EXPORTING
COUNTRIES (OAPEC)

EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT

52

Introduction

Introduction

I am pleased to present to specialists and those interested in the oil, gas and energy industry, at the Arab and international levels, the fifty-second edition of the Secretary-General's Annual Report for 2025, which highlights the most important developments in the global energy sector, and the significant transformations witnessed by the oil and gas sectors during the year. This report, through its data and analyses, provides a clear picture of the pivotal position held by the member countries of the Organization of Arab Petroleum Exporting Countries (OAPEC) within the global energy landscape.

The 2025 report comes amid a complex interplay of a number of factors affecting the global oil market, including geopolitical tensions, changes in economic conditions, disruptions to US trade policy, and shifts in demand patterns. Escalating tensions in the Middle East, and the accompanying concerns about security of supply, have supported the geopolitical risk premium, while the fallout from the Russian-Ukrainian crisis and its impact on global energy flows continued. Global oil demand also slowed for the second year in a row as a result of weak manufacturing activity, particularly in China, coinciding with escalating trade disputes and rising levels of electric vehicle adoption.

On the positive side, oil demand received relative support as a result of the continued decline in inflation rates compared to their peak in previous years, along with the weak performance of the US dollar. The decision by eight countries of the OPEC+ alliance – Saudi Arabia, Kuwait, the UAE, Iraq, Algeria, Oman, Russia, and Kazakhstan – to gradually roll back part of their voluntary cuts of 2.2 million barrels per day, while maintaining flexibility to adjust, has also contributed to strengthening the stability and

balance of the oil market during 2025, continuing the proactive approach that has proven successful.

The report addressed the efforts of member countries in developing their petroleum industries through the implementation of strategic projects in various stages of the industry, and the announcement of new oil and gas discoveries, which confirms their leadership and strong presence in the future of the oil and gas industry.

The first part of the report also reviews the most prominent developments in the energy sector, both regionally and internationally, and their economic implications. It analyzes supply and demand factors, inventory levels, and changes in renewable energy markets, in addition to the latest developments in exploration and production activities, developments in the refining, petrochemical and gas industries, and developments related to environmental issues and climate change.

In conclusion, we hope that this edition of the Secretary General's annual report will provide added knowledge value to researchers, decision-makers and those interested in the energy sector, and that it will continue its role as a reliable scientific reference that reflects OAPEC's status and role in supporting the sustainability and development of the petroleum industry in its member countries. We are confident that the analyses and insights contained in this report will contribute to a deeper understanding of the challenges and opportunities facing energy markets, and enhance our ability to anticipate their future trends, thus serving the path of sustainable development in our member countries.

Secretary General
Eng. Khalid Al-Otaibi

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PETROLEUM EXPORTING
COUNTRIES (OAPEC)

ORGANIZATION OF ARAB
PETROLEUM EXPORTING
COUNTRIES (OAPEC)

EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

Chapter 1

GLOBAL OIL MARKET DEVELOPMENTS & THEIR IMPLICATIONS FOR OAPEC MEMBER COUNTRIES

GLOBAL OIL MARKET DEVELOPMENTS & THEIR IMPLICATIONS FOR OAPEC MEMBER COUNTRIES

- **Preface**

The dynamics of the global oil market during 2025 were affected by the interaction of a range of factors including geopolitical tensions, developments in economic conditions, disruptions to US tariff policies, and changes in demand patterns. Escalating tensions in the Middle East and related concerns about energy security have contributed to the geopolitical risk premium, and the fallout from the Russian-Ukrainian crisis continued, including tightened sanctions and targeting of energy infrastructure in Russia, which continued to redirect its oil exports. Global oil demand growth slowed for the second year in a row, coinciding with a slowdown in manufacturing activity in some major economies – particularly during the first half of the year, including China, the world's largest oil importer – amid escalating trade tensions with the United States, which imposed its largest import tariffs in decades on all its trading partners, who in turn took a range of countermeasures, and a decline in fuel demand affected by record sales of electric vehicles.

On the positive side, oil demand received relative support from inflation rates continuing their downward trend, as well as the weakness of the US dollar, which recorded its worst annual performance since 2017. The decision by OPEC+ countries (Saudi Arabia, Kuwait, the UAE, Iraq, Algeria, Oman, Russia and Kazakhstan) to gradually return to the voluntary production cuts of 2.2 million bpd, while maintaining full flexibility to stop or reverse those adjustments, played a key role in supporting the stability and balance of the global oil market during 2025, which is in line with the successful approach of taking proactive and precautionary measures. In this context, it is worth mentioning that OPEC countries' supplies of crude oil and unconventional oils increased in 2025 by about 1.1 million barrels per day compared to 2024, reaching about 33.5 million barrels per day, and supplies from non-OPEC producing countries increased by about 1.1 million barrels per day, reaching about 71.3 million barrels per day.

Overall, preliminary data for the global crude oil supply and demand balance in 2025 show a deficit of about 381,000 barrels per day, a low level compared to the deficit recorded in 2024 of about 1.2 million barrels per day.

Global crude oil prices declined in 2025 compared to the previous year, with the average price of the OPEC basket of crudes reaching $69.6 per barrel. Oil futures prices experienced significant volatility, primarily influenced by geopolitical risk premiums, protectionist trade policies, US oil inventory movements, and weather-related disruptions.

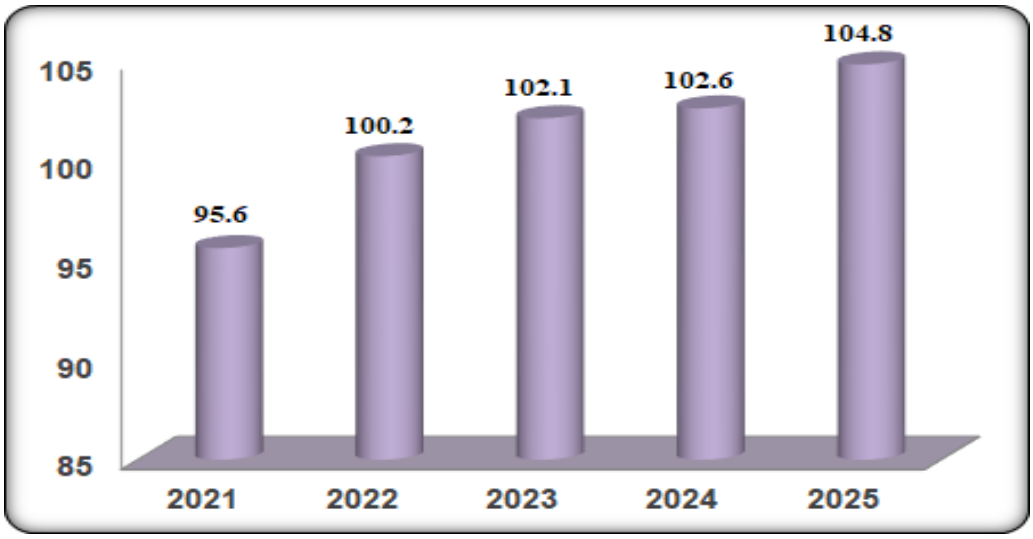
Main Developments in the Global Oil Market for 2025 and Influencing Factors:

- **Oil Supplies**

The total global oil supply (crude oil and natural gas liquids) in 2025 saw a remarkable increase of about 2.2 million barrels/day, or 2.1%, compared to the previous year, reaching a new record high of about 104.8 million barrels/day.

global supply of crude oil and natural gas liquids, 2021 – 2025

(million barrels/day)



Source: Organization of Petroleum Exporting Countries (OPEC).

- **OPEC Supplies**

OPEC's oil supplies (crude oil and natural gas liquids) increased during 2025 by about 1.1 million barrels/day or 3.4% compared to the previous year, reaching about 33.5 million barrels/day, thus increasing its share of total global oil supplies from 31.5% in 2024 to 32% in 2025.

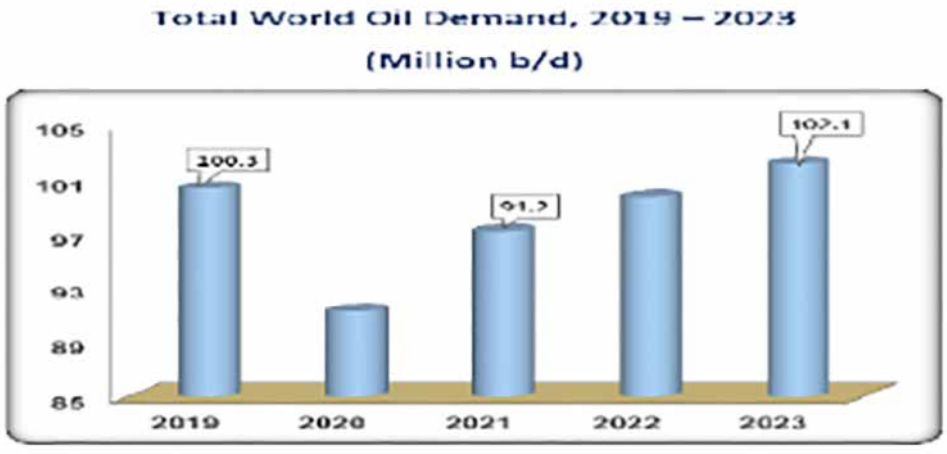
It is worth noting that OPEC's crude oil supplies increased from about 26.6 million barrels/day in 2024 to about 27.6 million barrels/day in 2025, and OPEC's supplies of natural gas liquids and unconventional oils increased by about 130 thousand barrels/day to reach about 5.9 million barrels/day in 2025.

OPEC member countries have made intensive efforts to maintain balance and stability in the global oil market, especially in light of escalating geopolitical tensions and US trade policy turmoil, which have played a major role in OPEC lowering its forecasts for global oil demand growth.

- **Non-OPEC Supplies**

Total oil supplies from non-OPEC producing countries in 2025 amounted to about 71.3 million barrels/day, an increase of 1.1 million barrels/day, or 1.5%, compared to 2024. This increase is mainly attributed to increased oil supplies from the United States, Brazil, Canada, and Argentina. US oil supplies rose by about 460,000 barrels/day compared to 2024, reaching a record high of about 22.2 million barrels/day, supported by the strong performance of the Permian field, which continued to record rising production levels thanks to improved horizontal drilling and hydraulic fracturing techniques that raised the productivity of new wells to unprecedented levels. This is in addition to the increased production from new wells in the Eagle Ford field in Texas is a result of the adoption of precise technologies and the lengthening of horizontal wells to improve flows in older wells, as well as increased production from offshore platforms driven by operational developments and new investments in offshore infrastructure. It is worth noting that the US president declared a national energy emergency, replenished strategic oil reserves to their peak, and rolled back environmental restrictions on energy infrastructure as part of plans to boost crude oil production.

Oil supplies in Brazil also increased, with crude oil production in October rising to an all-time high of around 4 million barrels per day, supported by the start-up of new floating production, storage and offloading vessels around deep-sea crude oil resources, as well as increased production on a number of offshore platforms. Canada's oil supplies rose, supported by the expansion of oil sands projects, improved production, the commissioning of additional well rigs at several facilities, as well as new export opportunities following the start of operations at the Trans Mountain pipeline expansion, with crude oil production hitting a record high of 4.4 million barrels per day in November. Argentina's oil supplies have risen, driven by the continued expansion of unconventional oil production from the Vaca Muerta formation, one of the world's largest shale oil reservoirs outside North America, along



Source: OPEC, Monthly Oil Market Report (various issues).

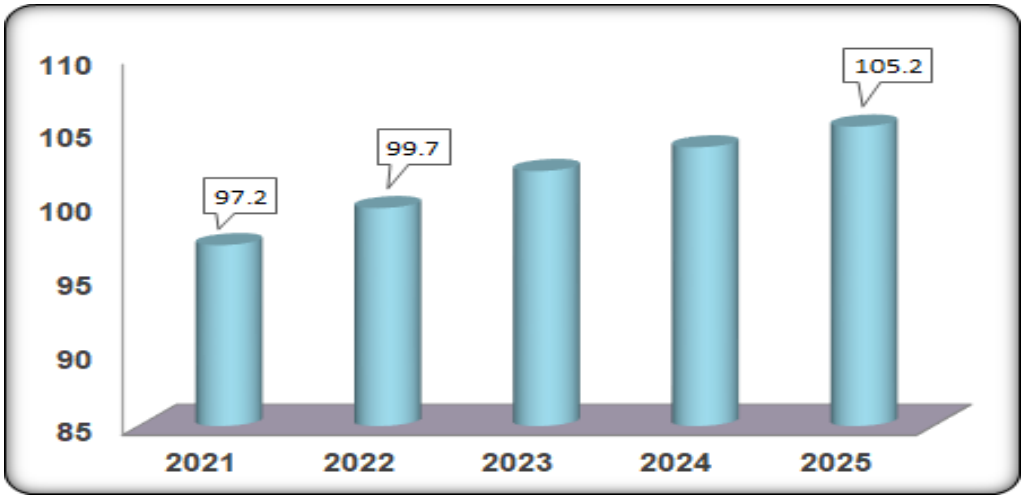
with intensified drilling and hydraulic fracturing activities, an increase in the number of new wells connected to production, expansion of crude oil transportation infrastructure, and investments in shale oil field development, bringing crude oil production to a new record high of 859.5 thousand barrels per day in October. Russian crude oil supplies have decreased, affected by the tightening of sanctions imposed on the energy sector amid continued geopolitical tensions in Eastern Europe, including the decision by EU countries to lower the ceiling on the price of Russian crude oil, and the imposition of US sanctions on Rosneft and Lukoil.

- **Global Oil Demand**

Global oil demand saw an increase of approximately 1.3 million barrels per day during 2025, representing a growth rate of 1.3%, reaching a new record high of approximately 105.2 million barrels per day.

global oil demand, 2021 – 2025

(million barrels/day)



Source: Organization of Petroleum Exporting Countries (OPEC).

According to major international groups, oil demand rose slightly in the OECD countries, with a growth rate of only about 0.2%. Other countries worldwide also saw an increase in oil demand, registering growth of 2.1%, a lower rate than the 2.5% growth projected for 2024. The variation in the rate of growth of oil demand among international groups is mainly attributed to uneven growth and the associated variation in developments at the level of individual global economies.

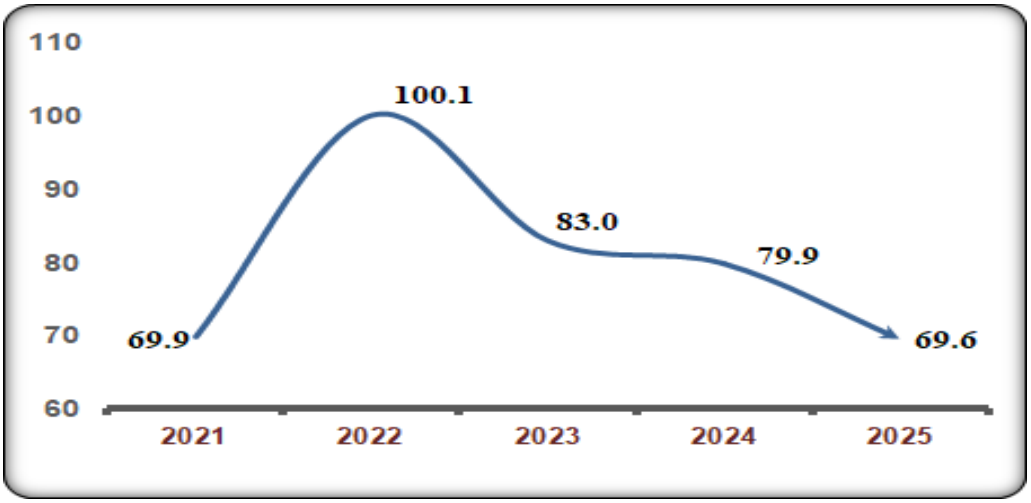
- **Crude Oil Prices**

Global crude oil prices declined during 2025, recording their third

consecutive annual losses, with the average spot price of the OPEC basket of crudes reaching about $69.6 per barrel, its lowest level since the COVID19 pandemic in 2020, affected by the noticeable fluctuations in its trends, driven by a combination of the divergence in the level of the geopolitical risk premium, concerns about weak global economic growth and oil demand due to disruptions in US trade policies, as well as decisions of OPEC+ countries, and the movement of oil inventories in the United States. The monthly average price of the OPEC basket of crude oils fluctuated within a wide range between $61.7 and $79.4/barrel. The annual average of the basket recorded a decrease of $10.3/barrel, equivalent to a decline of 12.9% compared to 2024.

OPEC basket annual average, 2021 – 2025

(million barrels/day)



Source: Organization of Petroleum Exporting Countries (OPEC).

In light of the aforementioned developments, 2025 witnessed an expansion in the differences between the maximum and minimum prices of the monthly OPEC basket during the year, which reached about $17.7/barrel, compared to the differences of the previous year, which amounted to about $16.1/barrel.

The development in prices and the pattern of their movement differences during 2025 was reflected in the spot price levels of various Arab crudes in general, which followed the same path, as they witnessed a decrease compared to the previous year and to varying degrees. Arab Light crude fell by $10.3/barrel to about $71.2/barrel during 2025, a decrease of 12.6% compared to the previous year. Algerian Saharan Blend crude, UAE Murban crude, and Kuwait Export crude also fell by $12, $9.9, and $10.3/barrel to $69.7, $69.8, and $70.4/barrel, a decrease of about 14.7%, 12.4%, and 12.7% respectively. As for other Arab crudes, Libyan Es Sider crude fell by $11.2/barrel, or 14.1%, to about $68.5/barrel, Iraqi Basra crude fell by $9.3/barrel,

or 11.8%, to about $69.1/barrel, and Qatari Marine crude fell by $9.1/barrel, or 11.4%, to about $71/barrel.

Crude oil futures prices in 2025 recorded annual losses of about 14.6% for Brent crude contracts and West Texas Intermediate (WTI) crude contracts.

- **Spot Prices of Oil Products**

The decline in crude oil prices was reflected in the annual average prices of various petroleum products during 2025, which also witnessed a decline in all major markets in the world, at varying rates depending on the market and the type of product.

The average price of premium gasoline in the US Gulf market reached $93/barrel in 2025, in the Rotterdam market the average price reached $90.1/barrel, in the Mediterranean market the average price reached about $84.2/barrel in 2025, and as for the Singapore market the average price reached about $80.7/barrel.

In 2025, the average annual price of gasoil generally declined across all major markets compared to the previous year, with the exception of the US Gulf of Mexico market. The Rotterdam market recorded the highest gasoil prices at approximately $92/barrel, followed by the Mediterranean market at around $90.9/barrel, then Singapore at approximately $87.4/barrel, and finally the US Gulf of Mexico market at the lowest price of $84.7/barrel.

Fuel oil prices declined across all markets in 2025, averaging $86/barrel in Singapore, $72.7/barrel in the Mediterranean market, and $68.9/barrel in Rotterdam. In the US market, the average price was around $62.3/barrel.

- **Oil Freight Rates**

Crude oil freight rates saw mixed developments during 2025, stabilizing during the first nine months at relatively moderate levels, reflecting the balance between demand for crude oil shipping and the availability of tankers in the spot market. Except for the period of heightened geopolitical tensions in the Middle East during June 2025, which saw a significant increase in the benchmark price of Very Large Crude Carriers (VLCCs) transporting oil from the Middle East to China, as well as the prices of VLCCs from the Arabian Gulf to Asia and the Pacific, reflecting the increased risk premium charged by tanker owners for crossing the Strait of Hormuz. During the last quarter, crude oil tanker freight rates saw a significant increase, reaching multi-year highs. The surge in crude oil production in the Arabian Gulf, driven by increased supplies from OPEC, played a key role in lowering prices and boosting demand for crude oil from countries in the region. Increased demand for oil in the Mediterranean and Europe also contributed to higher tanker rates from the US Gulf Coast.

The average freight rate for crude oil shipments from Middle Eastern ports to the East (for Very Large Crude Carriers (VLCCs) with a capacity of 230,000-280,000 deadweight tons) rose to approximately $17.2/ton in 2025. Similarly, the average freight rate for crude oil shipments from the Middle East to the West (270,000-285,000 deadweight tons) increased to approximately $13.7/ton.

As for freight rates within the Mediterranean region for small or medium-sized vessels (80,000-85,000 deadweight tons), the average has increased to about $12.5/ton

- **Oil Inventories**

The year 2025 witnessed an increase in global oil inventories as the eight OPEC+ countries, which had previously announced additional cuts during April and November 2023, adjusted their production levels upwards, and supplies from non-OPEC+ countries increased, in addition to the slowdown in global oil demand growth, bringing total inventories to about 9.611 billion barrels at the end of 2025, representing an increase of about 211 million barrels, or 2.2% on an annual basis.

It is worth noting that oil stocks at sea reached 1.546 billion barrels at the end of 2025, an increase of 173 million barrels on an annual basis, as the increase in transit oil stocks in ports was due to a decrease in refinery activity reflecting seasonal maintenance, which led to an accumulation of crude oil in the transportation and distribution phase during the first quarter, increased exports from the Middle East region during the second quarter, and geopolitical factors related to sanctions imposed on Russian oil exports during the third and fourth quarters. This contributed to those stockpiles rising to their highest level since the COVID19 pandemic in 2020. Floating oil stocks near key consumption areas also increased, supported by the expansion of the shadow tanker fleet loaded with sanctioned barrels of oil from Russia, Iran and Venezuela.

Commercial inventories in OECD countries amounted to approximately 2.844 billion barrels at the end of the fourth quarter 2025. It is worth noting that the adequacy of commercial stocks in those countries at the end of 2025 amounted to 62.8 days of consumption.

Strategic inventories at the end of 2025 remained at the same level recorded at the end of previous year, which was 1.566 billion barrels.

The US strategic crude oil inventories rose by about 19 million barrels year-on-year at the end of 2025, reaching approximately 413 million barrels, coinciding with the move to replenish the Strategic Petroleum Reserve, which has a full capacity of 700 million barrels, following the withdrawal of 180 million barrels in 2022 due to the Russian-Ukrainian crisis, which

resulted in costs of approximately $280 million, delayed maintenance of vital infrastructure, and unprecedented deterioration of storage and injection facilities. This prompted the US Department of Energy to announce a rescheduling of deliveries to the end of the second quarter of 2025, as the completion of planned strategic oil purchases was postponed until the end of the year due to maintenance work at storage sites.

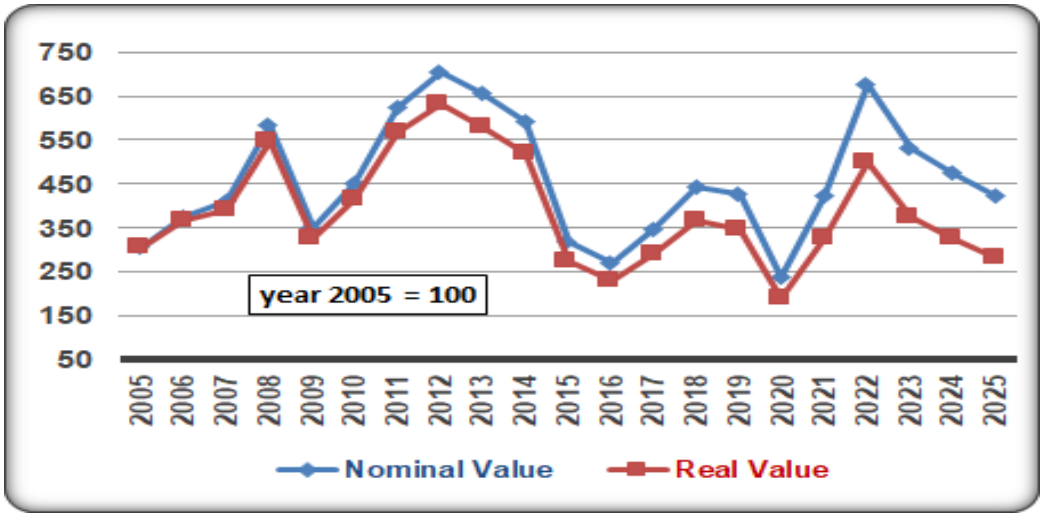
Value of Oil Exports in OAPEC Members Countries

Crude oil prices during 2025, domestic demand levels, and OPEC+ group decisions (including six member countries) regarding production levels were reflected in the value of oil exports, which are the main driver of economic and social development in the OAPEC member countries, the main supporter of their central banks' foreign currency reserves, and the main booster of their budget surpluses.

It is noteworthy that the value of crude oil exports at current prices for OAPEC member countries decreased from about $476.6 billion in 2024 to about $424.4 billion in 2025, mainly due to decrease in crude oil prices, representing a decrease of $52.2 billion, or 11% year-on-year.

Nominal and real value of crude oil exports from member countries, 2021 – 2025

(billion-dollar, 2005 real prices)



Source: OAPEC, and IMF April 2026.

ORGANIZATION OF ARAB PETROLEUM EXPORTING COUNTRIES (OAPEC)

EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

Chapter 2

ENERGY CONSUMPTION DEVELOPMENTS IN THE MEMBER COUNTRIES

ENERGY CONSUMPTION DEVELOPMENTS IN THE MEMBER COUNTRIES

- **Preface**

Energy consumption in OAPEC member countries witnessed a continuous increase during (2021-2025), following the sharp decline it experienced due to the Corona pandemic, as it rose from about 12.2 million barrels of oil equivalent per day (beod) in 2021, to about 13.8 million beod in 2025, which is an annual growth rate of 3.4% during that period.

Saudi Arabia, Egypt, the UAE, Algeria, Iraq, and Qatar accounted for approximately 86% of total consumption. Average per capita energy consumption in member countries also increased from 16.2 boe in 2021 to 16.9 boe in 2025, although variations exist between countries.

The member countries rely almost entirely on oil and natural gas to meet their energy needs, with these two sources accounting for 99% of total consumption in 2025, with 54.3% for natural gas and 44.7% for oil. Natural gas consumption in member countries rose to 7.50 million barrels per day (mb/d) in 2025, while consumption of crude oil and petroleum products increased to approximately 6.17 mb/d. Hydropower consumption rose to approximately 37.6 thousand boe. Meanwhile, coal consumption remained stable at the same level as the previous year, at approximately 94.5 thousand boe/d.

Energy consumption mix in OAPEC countries, thousand boe/d)

	2021	2022	2023	2024	*2025	change % ((2025/2024
Natural Gas	6672.7	6836.1	7066.4	7259.4	7504.1	**3.4**
oil	5357.3	5848.4	5968.1	5899.2	6171.9	**4.6**
Hydroelectric	39.5	36.4	36.5	35.3	37.6	**6.3**
Coal	86.0	79.5	82.1	94.5	94.5	**–**
Total	**12155.5**	**12800.4**	**13153.1**	**13288.4**	**13808.1**	**3.9**

Source: OAPEC, data bank.

In the renewable energy sector, the member countries saw their installed capacity grow by 35.9% in 2025, reaching 39.2 GW and accounting for 0.8% of the global total. Solar power dominated, representing 72.3% of the installed capacity, followed by hydropower at approximately 16.9%. Energy intensity in member countries also improved, reaching 0.57 boe per thousand US dollars of GDP in 2025.

Global investments in energy transition technologies reached a record $2.3 trillion in 2025. The electric transportation sector led the way, followed by renewable energy, particularly solar power, and then electricity transmission and distribution networks.

The global hydrogen sector is undergoing major transformations as countries strive to achieve their climate goals, enhance energy security and adopt sustainable practices. The potential for low-cost renewable energy generation from solar and wind power, as well as large-scale natural gas production, puts member countries well-positioned to be a source of low-carbon hydrogen.

- **Energy Mix and Per Capita Consumption**

Natural gas accounts for the largest share of total energy consumption at 54.3%, followed by oil at 44.7%. Coal and hydropower each contribute only 0.7% and 0.3%, respectively.

The average per capita energy consumption in member countries increased slightly from 16.2 boe in 2021 to 16.9 boe in 2025.

- **Energy Consumption by Source**

Natural gas consumption in member countries increased by 3.4% in 2025, reaching 7.50 million b/d. It is worth noting that natural gas consumption occurs primarily in five countries: Saudi Arabia, the United Arab Emirates, Egypt, Algeria, and Qatar. Consumption of petroleum products and crude oil in member countries in 2025 increased by 4.6% to reach approximately 6.17 million barrels per day. Three member countries—Saudi Arabia, Egypt, and Iraq—are significant consumers of petroleum products and crude oil. Hydropower consumption in member countries also increased in 2025 by 6.3% to reach approximately 37.6 thousand b/d. Coal consumption in member countries remained stable at the same level as the previous year, at 94.5 thousand b/d.

- **Domestic Prices**

Several member countries adjusted the prices of some petroleum products in their domestic markets in 2025, by varying percentages compared to the previous year. Meanwhile, petroleum product prices in the domestic markets of the remaining member countries remained stable in 2025 at the same level as in 2024. In this context, it is worth noting that some member countries have liberalized fuel prices in recent years by linking them to global prices, where fuel price standards are determined according to the average global prices of crude oil, whether rising or falling, which has had a positive impact on the economic side of these countries.

Oil Market: Short-term Outlook

- **Global Oil Supplies**

The latest forecast from the Organization of the Petroleum Exporting Countries (OPEC), issued in April 2026, indicates that total oil supplies from non-Declaration of Cooperation countries will increase in 2026 by 1.2% compared to the previous year, reaching 54.8 million b/d, with the main drivers of this increase being Brazil, the United States, Canada, and Argentina.

The US Energy Information Administration's forecasts indicate that oil supply growth from non-OPEC countries will increase in 2026 of approximately 1.2 million barrels per day (b/d). Meanwhile, OPEC supplies are projected to decline sharply by about 2.4 million b/d, due to the negative impact on Middle Eastern oil production caused by the attacks on the region's energy infrastructure, and the near-total halt to oil flows of the Strait of Hormuz.

- **Global Oil Demand**

OPEC forecasts that total global oil demand will grow by 1.3% in 2026 compared to 2025 levels, reaching a new record of approximately 106.5 million barrels per day (mb/d). Demand from OECD countries is expected to rise by only 0.3%, reaching around 46.1 mb/d. Demand from non-OECD countries is also expected to rise by 2.1% to 60.5 million barrels per day – with Asian countries – including China and India – accounting for the bulk of the expected growth.

As for the U.S. Energy Information Administration's forecasts, it indicated that global oil demand is projected to increase by approximately 590 thousand barrels per day in 2026, driven almost entirely by demand from non-OECD countries.

It should be noted that the outlook remains subject to uncertainty due to several doubts and concerns, most notably: concerns about the continued escalating geopolitical tensions in the Middle East, and the associated attacks on energy infrastructure and disruption of global energy trade through the Strait of Hormuz.

- **Global Investments**

Based on OPEC's reference scenario, which projects global oil demand growth of approximately 18.2 million barrels per day (mb/d) during the period 2024–2050 and considering the natural decline in production from aging oil fields, the cumulative investment requirements needed to meet global oil demand during the period 2025–2050 amount to approximately $18.2 trillion. This includes $14.9 trillion in upstream exploration and production activities, $2 trillion in midstream storage and transportation activities, and $1.3 trillion in downstream refining, distribution, and export activities. Meeting these investment requirements is a formidable challenge, and any shortfall in meeting these needs could affect market stability and energy security.

ORGANIZATION OF ARAB
PETROLEUM EXPORTING
COUNTRIES (OAPEC)

EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

Chapter 3

ARAB & INTERNATIONAL ENERGY EXPLORATION & PRODUCTION DEVELOPMENTS ENERGY RESOURCES RESERVES & PRODUCTION

ARAB & INTERNATIONAL ENERGY EXPLORATION & PRODUCTION DEVELOPMENTS

ENERGY RESOURCES RESERVES & PRODUCTION

I. OIL & GAS

Overview on Exploration & Production in Arab Countries & the World

Developments in 2025 indicated that the world currently stands at a crossroads between achieving climate goals and ensuring energy security, with the International Energy Agency stressing the need to invest about $540 billion annually in the exploration and production sector to maintain current levels until 2050. This represents a significant shift in global discourse, which has moved away from the 2030 peak demand narrative to anticipate reaching 113 million barrels per day by mid-century under current policy scenarios. With conventional oil discoveries globally dwindling to record lows, industry leaders, including the CEO of Saudi Aramco, have warned of a severe supply shortage due to declining investment and the anticipated stabilization and subsequent decline of US shale oil production, which had previously fuelled much of the global production growth. This has prompted major companies like Shell, ExxonMobil, and Total to intensify their exploration efforts to fill the supply gap.

South American countries stand out in this landscape as a pivotal pillar of global energy growth, with Brazil, Argentina and Guyana expected to lead around 60% of new development projects, with Brazil's production reaching record levels and targeting five million barrels per day by 2030, supported by competitively costing "subsalt" fields. The Arab World witnessed intensive strategic activity embodied in giant discoveries in the State of Kuwait such as the "Al-Nokhetha" field, which contains 3.2 billion barrels of oil equivalent, and ADNOC's major expansions in the Upper Zakum field in the UAE, and Saudi Aramco's billion-dollar agreements with American companies to develop gas and digital technologies.

Algeria also stood out with major gas contracts aimed at exporting 5.5 billion cubic meters annually to Italy. Whereas Iraq signed historic agreements to develop the Kirkuk fields and invest in flared gas in the Artawi field to convert it into electricity to power thousands of homes. In Egypt, the momentum continued with plans to drill hundreds of wells in the Mediterranean and the Delta to boost domestic production, while Libya saw new exploration moves aimed at restoring its position in the global energy market. These field efforts are complemented by a technological revolution led by artificial intelligence and supercomputing, adopted by global companies to identify oil reservoirs with unprecedented accuracy, thus establishing a new reality that balances the need for sustainable investment with the challenges of energy transition.

Exploratory and Developmental Drilling

The year 2025 saw an increase in the number of drilling rigs operating worldwide of approximately 5%, as shown in Table 1.

Global trends in the number of active drilling rigs, 2021-2025

	2021	2022	2023	2024	2025
Middle East	265	308	332	342	518
Africa	69	82	102	107	100
Europe	103	97	118	119	123
Asia Pacific	182	196	217	223	208
USA	475	721	689	600	574
Canada	131	176	177	190	171
Latin America	137	168	178	160	135
Total World	**1362**	**1748**	**1813**	**1742**	**1828**

As a result of exploration activities, Arab countries made at least 32 new oil and gas discoveries in 2025.

The Secretariat tracked the achievement of more than 110 new oil and gas discoveries worldwide in 2025, noting that 60% of them were oil discoveries and the remainder were gas discoveries.

Oil and Natural Gas Reserves

3- 1 Oil Reserves

The world's oil reserves in 2025 were estimated at about 1345 billion barrels, a slight increase (0.9%) from the 2024 estimates of 1333 billion barrels.

3-1-1 Oil reserves in OAPEC member countries and other Arab countries:

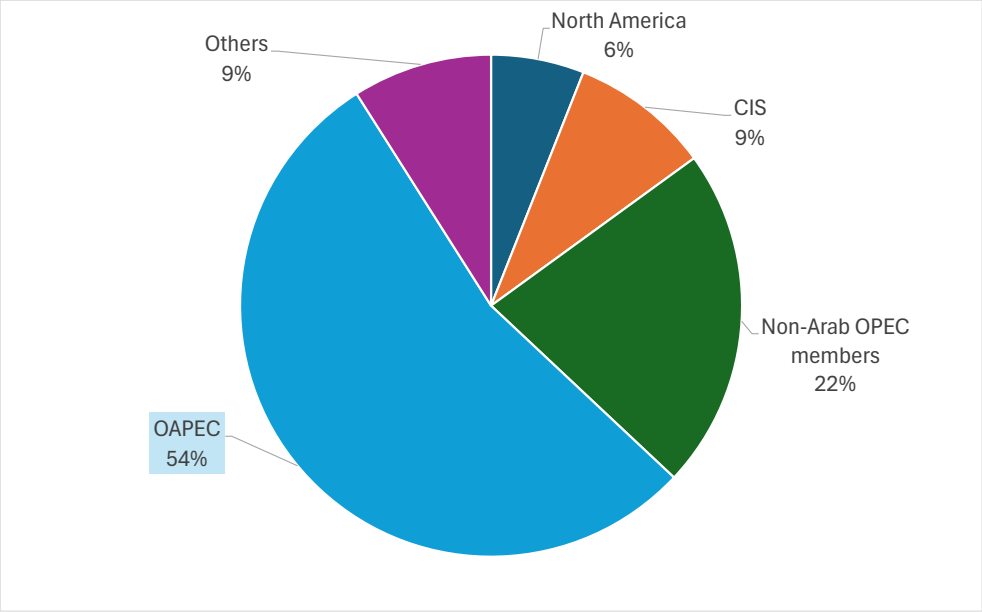
Oil reserves in OAPEC member countries were estimated at approximately 725.2 billion barrels, representing 54% of total global oil reserves. This reflects an increase of about 1% compared to the 2024 estimate of 718.4 billion barrels. Combined reserves of Arab countries were estimated at approximately 734.2 billion barrels in 2025, representing roughly 55% of total global oil reserves.

3-1-2 Oil reserves in the rest of the world

Estimates of reserves varied in 2025, with China leading the world in terms of growth rate at 22.3% to reach 34.5 billion barrels, followed by Brazil at 5.9%. Meanwhile, Norway and the United Kingdom recorded sharp declines of -14.2% and -13.3% respectively. Oil reserves in non-Arab OPEC countries

were estimated at 292.8 billion barrels, a slight decrease from 2024 due to lower reserve estimates in Nigeria. OPEC countries as a whole were estimated to hold approximately 987.1 billion barrels, representing about 73% of the world's total.

Distribution of oil reserves by international groupings, 2025



3-2 Natural Gas Reserves

Estimates indicate a slight increase in the world's natural gas reserves from 211.2 trillion cubic meters in 2024 to approximately 213.2 trillion cubic meters in 2025.

3-2-1 Natural gas reserves in OAPEC member countries and other Arab countries:

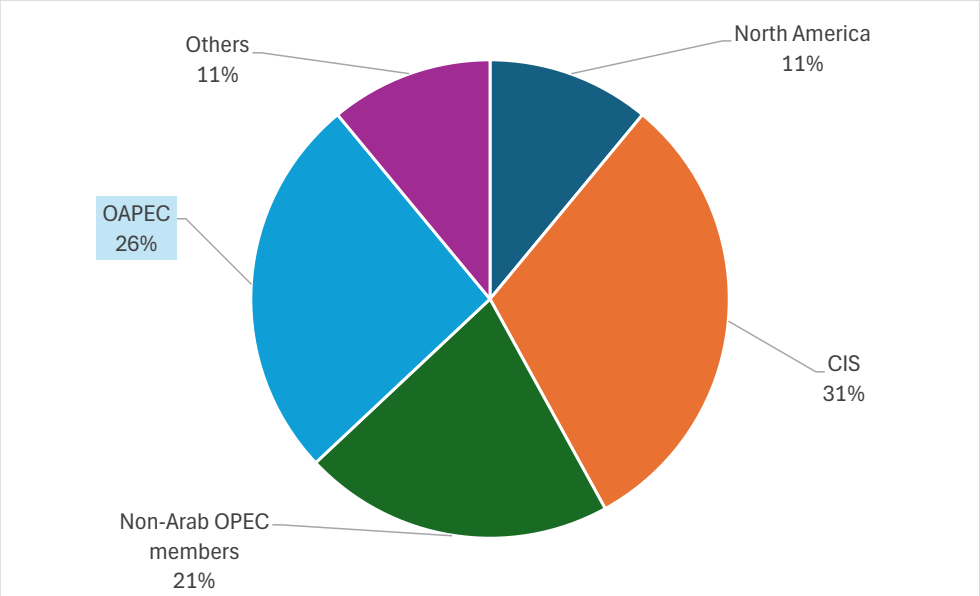
Natural gas reserves in member countries were estimated in 2025 at about 55.1 trillion cubic meters, representing about 26% of total world reserves, and an increase of about 0.4% compared to the 2024 estimates. This increase came mainly from higher reserve estimates in the United Arab Emirates, as indicated on the official website of ADNOC. The combined reserves of Arab countries represented about 26.4% of the world's total reserves, estimated at about 56.3 trillion cubic meters in 2025 compared to 55.9 trillion cubic meters in 2024.

3-2-2 Natural gas reserves in the rest of the world

Estimates of gas reserves in non-Arab OPEC countries declined very slightly due to a decrease in reserve estimates for Equatorial Guinea. However, for all

OPEC countries combined, estimated reserves rose by 0.4% to approximately 74.6 trillion cubic meters. A decrease in gas reserve estimates was also observed in Brazil, while estimates increased in the United Kingdom, Norway, and the United States.

Distribution of natural gas reserves by international groupings, 2025



Available data indicate that average production reached more than 103.7 million b/d in 2025, an increase of approximately 2.4% over the 2024 production rates of approximately 101.3 million b/d. Production of OAPEC member countries was estimated at approximately 26 million barrels per day (mb/d) of liquid hydrocarbons in 2025, a 5.6% increase from their 2024 production of 24.7 mb/d. Arab countries as a whole produced an average of nearly 27 mb/d in 2025, representing a 5.4% increase from their 2024 production of 25.7 mb/d.

4-1 Crude Oil Production

Global crude oil production rose by 2.4% to about 89.5 million barrels per day in 2025, compared to about 87.4 million barrels per day in 2024.

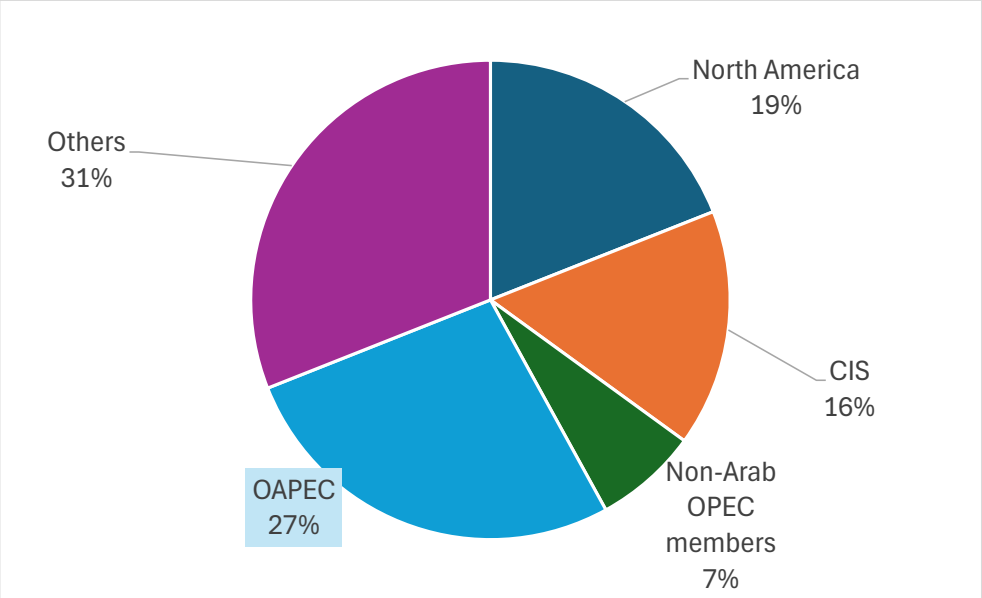
4-1-1 Crude Oil Production in OAPEC and Other Arab Countries

Estimates indicate that crude oil production rates in OAPEC member countries increased by approximately 4.9%, from 21.5 million barrels per day (b/d) in 2024 to about 22.6 million b/d in 2025. Crude oil production in all Arab countries combined is estimated at about 23.4 million b/d, compared to about 22.3 million b/d in 2024.

1-2 Crude oil production in the rest of the world

OPEC crude oil production is estimated to have increased by approximately 4.9% between 2024 and 2025, from about 26.2 million b/d in 2024 to 27.5 million b/d in 2025. Increased production was also observed in Brazil, the United Kingdom, Norway and Canada.

Distribution of crude oil production by international groupings, 2025



2 NGL Production

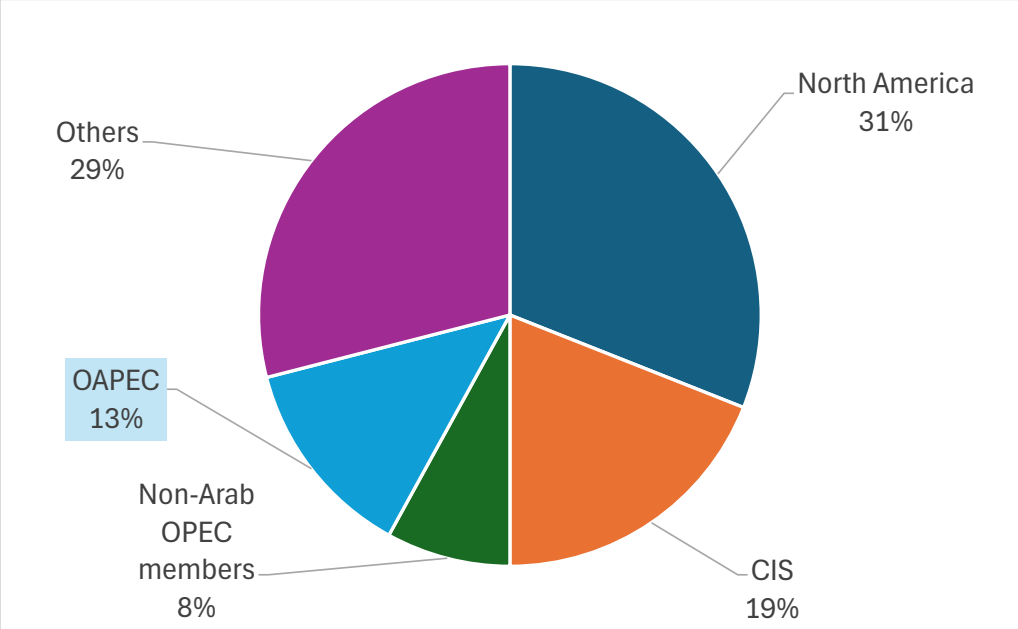
Global natural gas liquids (NGLs) production increased by approximately 2.9% between 2024 and 2025, rising from about 13.9 million barrels per day (mb/d) to approximately 14.3 mb/d. Estimates indicate that NGL production in Arab countries combined increased from 3.7 mb/d in 2024 to approximately 3.8 mb/d in 2025. NGL production in OAPEC member countries accounted for approximately 25% of total global production.

OAPEC has been monitoring data on 21 new fields and projects that were put into production in 2024, including five projects in China and two in Egypt.

Marketed Natural Gas

The volume of natural gas marketed globally increased by approximately 1.4% between 2023 and 2024, from 4181 billion cubic meters in 2023 to about 4242 billion cubic meters in 2024. The share of marketed gas in OAPEC member countries and in Arab countries combined reached 13% and 14% of the world total, respectively.

Distribution of marketed natural gas by international groupings, 2025



II. COAL

Reserves

Global coal reserves are estimated at approximately 1,074 billion tons, primarily concentrated in Asia-Pacific countries, followed by Europe and Eurasian countries. It has been noted that the main sources tracking global coal reserves worldwide have ceased updating their figures in this area for the past two years.

Production

It is estimated that coal production increased in 2025 by 0.5% to more than 9.1 billion tons, compared to 9.07 billion tons in 2024.

III. NUCLEAR ENERGY

Reserves

It was noted that the identified global conventional and recoverable uranium resources in the cost category of less than $260/kg saw very little change between 1 January 2021 and 1 January 2023, an increase of only 0.2% compared to 2021. In contrast, the overall picture across all other cost categories shows a decline in specific conventional resources. The largest relative decline was in the lowest cost category (less than $40/kg) at 14%,

and it was less pronounced in the cost categories less than $80/kg and less than $130/kg, with declines of 6% and 3%, respectively.

These declines, along with less severe declines resulting from mining depletion in Australia and Canada, and from an updated estimate for the Mutanga project in Zambia, were partially offset in the sub-$130/kg uranium cost category by increases from China, Namibia, Niger, Turkey, and to a lesser extent the United States, which resulted mainly from ongoing exploration activities.

Furthermore, in the under-$260/kg cost category, the increased resources resulting mainly from the addition of new or previously unincluded resources in Bulgaria, Cameroon, Egypt, India, Pakistan and Saudi Arabia, were partially offset by declines related to new estimates for the Imouraren reservoir in Niger and the Bakouma reservoir in the Central African Republic.

Nuclear Reactors Worldwide

The number of operating nuclear reactors worldwide reached 417 in 2024. Notably, 85% of the world's operating nuclear reactor capacity is concentrated in just 10 countries, with the remainder distributed across 22 other countries.

The combined generating capacity of these reactors exceeded 375 gigawatts, producing over 2,560 terawatt-hour of electricity in 2023.

As for the reactors under construction in the world, there were 64 reactors, including 30 reactors in China and 7 reactors in India, meaning that 57% of the reactors under construction in the world are concentrated in these two countries. The capacity of the reactors under construction in the world reaches 71.3 gigawatts. The World Nuclear Association (WNA) estimates that the amount of uranium needed to operate nuclear reactors in 2024 exceeds 67,500 tons. Furthermore, more than 220 research reactors are located in 50 countries worldwide.

Nuclear Energy Projections and Uranium Requirements

Projections for nuclear capacity and uranium requirements for reactors are based on official responses from member countries to questionnaires distributed by the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) to members of the Uranium Group. Given the uncertainty surrounding nuclear programs from 2022 onward, these agencies provide high- and low-spec scenarios (or so-called optimistic and pessimistic projections).

The low-case scenario assumes that current market and technology trends will continue, with few additional changes to policies and regulations affecting nuclear power. This scenario also includes the implementation of

policies to phase out or reduce nuclear power generation, if such policies exist.

The high-case scenario assumes that current rates of economic growth and electricity demand growth will continue. It also assumes policy changes by countries aimed at mitigating the effects of climate change and recognizing nuclear energy as a significant contributor to decarbonization strategies.

In the low-case scenario, there will be an increase of 180.4 GW (45.8%) over 2022, reflecting the continuation of current trends and the replacement of old reactors, with relatively limited growth. In the high-case scenario, there could be an increase of 505.7 GW (128.4%) over 2022. This reflects the energy transition scenario, where global nuclear capacity could nearly double by mid-century as a result of ambitious climate change policies.

IV. RENEWABLE ENERGY

The contribution of renewable energy sources to electricity generation was estimated at about 17.3% in 2024, with the world generating about 31,255.9 terawatt-hour of electricity, of which 5,415.2 terawatt-hour came from renewable energy sources. Most of the electricity generated using renewable energy sources was concentrated in Asia-Pacific countries.

As for the installed capacities from various renewable energy sources worldwide, solar energy leads these capacities at 59%, followed by wind at 36%, while the remainder is distributed among bioenergy, geothermal energy and ocean energy.

The renewable energy sector in the Arab World witnessed intensive strategic activity during 2025, as the United Arab Emirates achieved a historic step by completing the first ship supply operation with biofuel in the port of Fujairah in support of the Climate Neutrality 2050 strategy, while Algeria moved towards localizing solar energy technology through talks with the Chinese company "LONGi" to establish a local production line for photovoltaic panels in support of the plan to produce 15,000 megawatts by 2035. In a massive investment shift, Syria signed agreements with a consortium led by Qatar's UCC Holding for $7 billion in investments to develop combined cycle and solar power plants with a total capacity of up to 5,000 megawatts, in parallel with Saudi Arabia's ACWA Power announcing the allocation of $8.3 billion to develop seven giant wind and solar projects with a capacity of 15 gigawatts.

Qatar has also doubled its solar energy production capacity with the opening of the Ras Laffan and Mesaieed stations, reaching 1,675 megawatts, with ambitions to raise its contribution to peak national demand to 30% by 2029. Morocco regained its energy momentum by restarting the Noor

Ouarzazate III power plant after a technical shutdown, thus strengthening its position in thermal energy storage. Tunisia simultaneously boosted its capabilities through a long-term power purchase agreement for the 120 MW Sidi Bouzid II power plant, reflecting a comprehensive regional commitment to diversifying energy sources and reducing carbon emissions in accordance with international standards.

1- Wind Energy

- **Worldwide**

The total installed capacity of wind power in the world rose to 1132.8 gigawatts in 2024, compared to about 1019 gigawatts in 2023, with more than 52% of this total capacity concentrated in Asian countries.

- **Arab World**

The total installed capacity of wind power in Arab countries reached 5783.3 MW in 2024. Egypt tops the region in wind power, benefiting from giant projects in areas such as the Gulf of Suez, while Morocco ranks second by a small margin. These two countries account for more than 74% of the total installed wind capacity in the Arab region. However, the total installed wind capacity in Arab countries represents only a very small percentage (approximately 0.51%) of the global total.

2- Solar Energy

- **Worldwide**

The total installed solar power capacity in the world reached more than 1856.5 gigawatts in 2024, with more than 64% of it concentrated in Asian countries.

- **Arab World**

The installed solar power capacity in Arab countries increased from 17 gigawatts in 2023 to approximately 22 gigawatts in 2024, representing about 1.2% of the world's total installed capacity. The United Arab Emirates leads the Arab countries in terms of installed solar power capacity.

3- Hydropower

- **Worldwide**

The world's installed hydropower capacity rose from 1268 gigawatts in 2023 to about 1283 gigawatts in 2024, with most of it concentrated in a group of Asian countries.

- **Arab World**

The installed hydropower capacity in Arab countries reached approximately 9.1 gigawatts, representing only about 0.7% of the total global hydropower capacity. Egypt leads the Arab countries with more than 2.8 gigawatts.

4 Biomass Energy

- **Worldwide**

The installed capacity of biomass energy worldwide reached 150.7 gigawatts in 2024, 73% of which concentrated in Asia and Europe.

- **Arab World**

The installed capacity of biomass energy in Arab countries reached about 409 megawatts in 2024, equivalent to less than 0.3% of the total installed capacity in the world, with Sudan leading the way in this field.

5 Ocean Energy

The world's total installed ocean capacity in 2024 was approximately 493 megawatts, with about 95% of it concentrated in two countries (51.6% in South Korea and 43% in France). This type of energy has not yet been used in Arab countries.

6 Geothermal Energy

The world's installed geothermal energy capacity reached 15.4 gigawatts in 2024, with about 45% of this capacity concentrated in a group of Asian countries.

This type of energy has not yet been used in Arab countries.

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EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

Chapter 4

WORLD & ARAB DEVELOPMENTS IN PETROLEUM DOWNSTREAM INDUSTRIES

I. REFINING INDUSTRY

1. World Developments

The world's refining capacity at the end of 2025 recorded a decrease of 1,294,000 barrels per day (bpd), or 1.36%, reaching 94.949 million bpd, compared to 96.233 million bpd at the end of 2024. The number of operating oil refineries worldwide also decreased from 639 to 631.

The decline in total refining capacity during 2025 came as a result of the closure of eight refineries, three of which were in the United States of America with a total refining capacity of 553,000 barrels per day, four refineries in Western Europe with a total refining capacity of 478,000 barrels per day, and one refinery in China with a refining capacity of 410,000 barrels per day. In contrast, the refining capacity of two refineries was increased: the first, the Daxie refinery in China, by 120,000 barrels per day, and the second, the Mina Abdullah refinery in Kuwait, by 36,000 barrels per day.

Figure 4-1 shows the distribution of refining capacities in the world's regions at the end of 2025. **Table 4-1** also shows a comparison between the total refining capacities in the world's regions at the end of 2024 and 2025.

Figure 4-1 : Distribution of global refining capacity by region, End of 2025

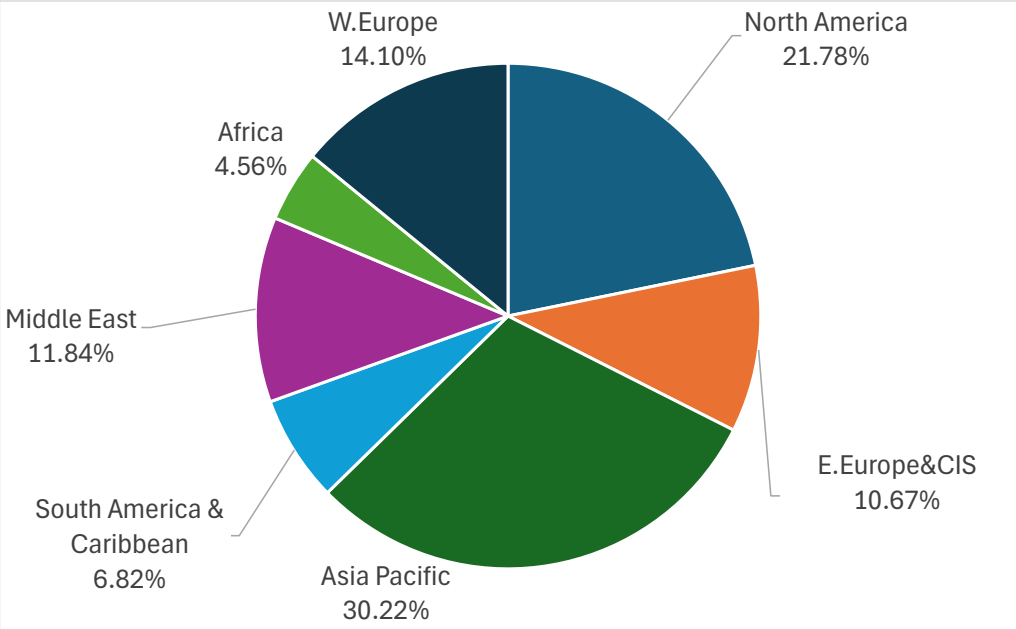

Table 4-1 :Total global refining capacity by region, 2024 and 2025
(MBD)

	2024	2025
North America	21.24	20.68
E.Europe&CIS	10.14	10.14
Asia Pacific	28.98	28.69
South America &Caribbean	6.48	6.48
Middle East	11.20	11.24
Africa	4.33	4.33
W.Europe	13.88	13.39
Total World	**96.243**	**94.949**

The global refining sector is experiencing a wave of strategic and operational shutdowns, reflecting changing market dynamics, regulatory pressures, and corporate programs to transition to a low-carbon environment, particularly in US and European refineries.

Sustainable aviation fuel (SAF) production also increased in 2025 to 1.9 million tons (2.4 billion litres), double the 1 million tons produced in 2024. However, growth in SAF production is expected to slow to 2.4 million tons in 2026 due to insufficient government support to fully utilize available SAF production capacity. Sustainable jet fuel prices are more than double those of fossil jet fuel, and up to five times higher in some markets where governments do not provide adequate support to producing companies.

As for the secondary processing capacity (conversion, hydrotreating, and octane number improvement) expected to be added in the next five years worldwide, it amounts to about 3.8 million b/d for conversion processes, 4.4 million b/d for hydrotreating processes, and 1.41 million b/d for octane number improvement processes. Most of these projects were concentrated in Asia, the Middle East, and Africa. **Table 4-2** shows the distribution of secondary processing capacity expected to be added globally during 2025-2030.

Table 4-2 :Estimation of secondary process additions by world regions, 2024-2024 conversion
(MBD)

	Conversion	Hydrotreating	Octane number enhancement
North America	0.011	0.086	0.037
E.Europe&CIS	0.536	0.300	0.079
Asia Pacific	2.053	2.085	0.726
South America	0.191	0.179	0.057
Middle East	0.551	1.047	0.19
Africa	0.478	0.640	0.302
W.Europe	0.0	0.041	0.016
Total World	**3.8**	**94.949**	**1.41**

2. Developments in the Arab World

Developments in the refining industry in Arab countries during 2025 focused on projects to develop and improve the operational performance of existing refineries, and to enhance integration with petrochemical production units with the aim of improving added value, enabling them to produce petroleum products with specifications that comply with international standards, thereby enhancing their exports of petroleum products to global markets, and improving their commitment to the requirements of legislation related to reducing carbon emissions.

In addition to completing the Sitra refinery development project in the Kingdom of Bahrain, the State of Kuwait is studying how to add gasoline and petrochemicals production capacity to the Al-Zour refinery, which has a capacity of 615,000 barrels per day. The partners in the Duqm Refinery joint venture (KPC 50% and OQ 50%), which has a capacity of 255,000 barrels per day in the Sultanate of Oman, are also planning to evaluate a feasibility study for the establishment of petrochemical facilities.

In another vein, OAPEC member countries are seeking to improve the flexibility of refineries to process cheap heavy crude oils produced locally and to supply light types to the world markets to take advantage of the price difference, such as the Ruwais refinery development project in the United Arab Emirates with a capacity of 417,000 barrels per day, the Jizan refinery in the Kingdom of Saudi Arabia with a capacity of 400,000 barrels per day, and the Al-Zour refinery in the State of Kuwait with a capacity of 615,000 barrels per day.

Total refining capacity in Arab countries recorded a slight increase of 36,000 barrels per day in 2025, as a result of the addition of 36,000 barrels per day at the Mina Abdullah refinery in Kuwait.

The total refining capacity of the 54 oil refineries in the OAPEC member countries accounted for 10.507 million barrels per day, representing 90.62% of the total refining capacity of oil refineries in the Arab countries, which amounted to 11.591 million barrels per day. The total refining capacity of the 12 oil refineries in the non-OAPEC Arab countries accounted for the remaining share of 1.084 million barrels per day, or 9.38%.

shows the development of refining capacity in existing oil refineries in the member countries and other Arab countries during the period 2021-2025. **Table 4-3** also shows the development of refining capacity in Arab countries during the period 2021-2025, and the number of refineries operating in 2025.

Table 4-3 : Evolution of refining capacity in existing oil refineries in Arab countries, 2021 and 2025 (Thousand BD)

	Number of Refineries	2021	2025
UAE	5	1272	1234.5
Bahrain	1	267	360
Tunisia	1	34	34
Algeria	6	669.9	663.5
Saudi Arabia	9	3127	3291
Syria	2	240.1	240.1
Iraq	12	824	1336
Qatar	2	433	433
Kuwait	3	800	1451
Libya	5	380	634
Egypt	8	784.8	829.8
OAPEC	**54**	**8831.8**	**10506.9**
Jordan	1	90.4	90.4
Sudan	3	140	140
Oman	3	304	534
Morrocco	2	154.7	154.7
Mauritania	1	25	25
Yemen	2	140	140
Total Other Arab Countries	**12**	**854.1**	**1084.1**
Total Arab countries	**66**	**9685.9**	**11591**

Source: OAPEC DataBank.

The following are the most important developments that took place in 2025 in OAPEC member countries and other non-OAPEC Arab countries.

2-1 The People's Democratic Republic of Algeria

Sonatrach, in collaboration with Sinopec and the Spanish company Tecnicas Reunidas, has begun work on a new refinery project in Hassi Messaoud with a production capacity of 110,000 barrels per day, at an investment cost of $4.45 billion. The project, which is being implemented in two phases, is expected to begin initial diesel production in October 2027.

2-2 The Syrian Arab Republic

The Ministry of Energy of the Syrian Arab Republic announced its intention to establish a new crude oil refinery with a refining capacity of 150,000 barrels per day, with the aim of meeting the growing domestic demand for petroleum products. The Ministry did not provide detailed information regarding the location or completion timeline of the refinery.

2-3 Kingdom of Saudi Arabia

ExxonMobil, Saudi Aramco, and SAMREF Refinery signed an agreement to evaluate a comprehensive development project for SAMREF Refinery in Yanbu, expanding it into an integrated petrochemical complex, producing high-quality products that contribute to reducing emissions, in addition to high-performance chemicals.

The SAMREF refinery processes up to 400,000 barrels per day of Arabian Light crude oil, and although it is over 40 years old, its fuel oil production is relatively low, at around 20%. Gasoline and diesel make up the bulk of its products, along with significant quantities of jet fuel. SAMREF was established to export petroleum products to Europe, North America, and Asia. In late 2014, its Clean Fuels Development Program was completed, reducing sulphur levels in gasoline and diesel by more than 98% to 10 parts per million.

Aramco and Sinopec also signed a framework agreement aimed at a major expansion in the petrochemicals sector at their joint Yasref refinery, which has a production capacity of 430,000 barrels per day (Aramco 62.5%, Sinopec 37.5%), which may include a mixed cracking unit with a capacity of 1.8 million tons per year, and an aromatics complex with a capacity of 1.5 million tons per year.

Another potential development concerns the SASREF refinery, wholly owned by Aramco, which has a production capacity of 305,000 barrels per day, where Aramco is in talks with China's Rongsheng about selling a 50% stake. The two companies signed a framework agreement in November that "paves the way for an expansion project at SASREF, aimed at enhancing the refinery's refining and petrochemical capabilities." Unlike SATORP, SAMREF, and YASREF refineries, SASREF features a higher fuel oil recovery rate of 24%. With Saudi Arabia planning to eliminate fuel oil burning at power plants by 2030, there is a clear incentive to modernize refineries and reduce fuel oil recovery rates by the end of the decade.

As for Petro Rabigh refinery, despite the financial difficulties it faces, it has continued to invest in growth and has a number of projects underway. These include upgrading the efficiency of the ethane cracking unit and the

High-Olefins Fluid Catalytic Cracking unit (HOFCC) to increase ethylene and propylene production capacity by 27% and 15% respectively by the end of the year, as well as expanding the naphtha hydrotreating unit by 38% to increase gasoline production by the third quarter of 2026.

The company also signed a memorandum of understanding with Honeywell UOP to study improving crude oil-to-chemicals conversion. The memorandum of understanding includes licensing and demonstrating Honeywell UOP's naphtha-to-ethane and naphtha-to-propane conversion technology, which

the US company says "efficiently converts light naphtha and butane into ethane and propane, providing a cost-effective and sustainable solution for producing ethylene and propylene," while reducing carbon emissions.

On the other hand, Luberef, a subsidiary of Saudi Aramco specializing in base oils, announced a new allocation of crude materials for its Jeddah plant, which has a production capacity of 275,000 tons per year and will continue to operate until 31 December 2030. The plant was scheduled to close in mid-2026, but it will now be able to continue operating for at least another five years.

2-4 Republic of Iraq

The Iraqi Ministry of Oil laid the foundation stone for the expansion project of the Maysan Refinery, which currently has a refining capacity of 40,000 barrels per day. The expansion will add a distillation unit with a capacity of 70,000 barrels per day, bringing the refinery's total refining capacity to 110,000 barrels per day. A contract was also signed for the addition of a new 70,000-barrel-per-day distillation unit to the Diwaniyah Refinery, which currently has a refining capacity of 20,000 barrels per day.

The Iraqi Ministry of Oil announced that Iraq had raised its oil refineries' refining capacity to 1.33 million barrels per day, which was 1.1 million barrels per day during the past few years. Iraq seeks to reach a refining capacity of 1.65 million barrels per day.

2-5 State of Kuwait

The State of Kuwait has increased its domestic refining capacity to 1.45 million barrels per day, by adding 36,000 barrels per day to the atmospheric distillation unit at the Mina Abdullah refinery, bringing its refining capacity to 300,000 barrels per day, while the total capacity of the refinery reaches 490,000 barrels per day. This increase was achieved through a pilot project to increase productivity implemented by the Kuwait National Petroleum Company (KNPC) in the distillation unit.

2-6 State of Libya

The National Oil Corporation announced a project to modernize the Zawiya refinery, owned by ZORC, which has a production capacity of 120,000 barrels per day. The results of a feasibility study conducted by Honeywell UOP showed the technical and economic pathways for modernizing the refinery's refining units. The project will help meet a large part of Libya's gasoline needs and reduce the country's annual import expenses.

The upgrade will include a 24-25% increase in production capacity. In addition to installing new units, which may include a continuous catalytic

reforming (CCR) unit, and hydrotreating units for naphtha and gas oil, as well as improving the efficiency of the existing refining units at the refinery, the timeline for the proposed refinery project has not yet been disclosed.

On the other hand, Zallaf Oil and Gas Company, affiliated with the Libyan National Oil Corporation, launched the second phase of the South Refinery project, as part of ambitious plans to develop the refining sector. After completing the initial technical and design phase of the refinery, which has a production capacity of 30,000 barrels per day and is located near Ubari in the Murzuq Basin in the southwest of the country, the company moved to the second phase, which includes building the main components of the refinery.

2-7 Arab Republic of Egypt

The Egyptian government announced the signing of a contract with Qatar's Al Mana Holding Company for an initial investment of $200 million to produce sustainable jet fuel from used cooking oils in the Suez Canal Economic Zone in Ain Sokhna on the Red Sea coast. The project will be developed in three phases, with the first phase having a production capacity of 200,000 tons per year.

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THE SECRETARY GENERAL'S ANNUAL REPORT 52

Chapter 5

NATURAL GAS CONSUMPTION, TRADE & PROCESSING

NATURAL GAS CONSUMPTION, TRADE & PROCESSING

1- World Developments

1-1 Natural Gas Consumption

Global demand for natural gas rose in 2024 to approximately 4,127.8 billion cubic meters, compared to 4,015.1 billion cubic meters in 2023, representing an annual growth rate of 2.8%. Meanwhile, natural gas accounted for approximately 25.1% of total global primary energy consumption in 2024, compared to 24.9% in 2023.

Most regions across the world maintained high shares of natural gas in their primary energy balance in 2024. The Middle East accounted for approximately 51.5%, compared to 51.6% in 2023, the highest percentage globally. North America's share was around 36.4% in 2024, up from 36.1% in 2023. Europe and Eurasia saw their share reach approximately 34.6% in 2024, compared to 34.2% in 2023.

Meanwhile, the contribution of gas to the energy balance in Central and South America rose to 23.4% in 2024, compared to 22.7% in 2023. The contribution of natural gas to the energy balance in the Asia-Pacific region rose to 12.5% in 2024, compared to 12.3% in 2023. This is the lowest share compared to other parts of the world, where coal remains dominant. Meanwhile, the contribution of natural gas to the energy balance in Africa declined in 2024, registering 30.5% compared to 31.1% in 2023.

1-2 Natural Gas Trade

Global natural gas trade experienced a notable decline in 2024, amounting to 7.2%, with total global natural gas exports reaching approximately 1137.4 billion cubic meters, compared to about 1226.2 billion cubic meters in 2023. Global trade includes both quantities exported via pipelines and in the form of liquefied natural gas via tankers.

Natural gas trade, whether via pipelines or liquefied, constituted about 27.55% of total global natural gas consumption, while the remainder was consumed locally in its production areas.

The total volume of natural gas exported via pipelines during 2024 amounted to about 593.3 billion cubic meters, compared to about 677 billion cubic meters in 2023, a decrease of 12.4%, as gas trade via pipelines witnessed a significant decline in the European market with the decline in the role of Russian gas after the Russian-Ukrainian crisis. The liquefied natural gas (LNG) trade did not achieve any growth in 2024. This was due to the entry of a limited number of new liquefaction projects with small

production capacities, the delay in the operation of a number of projects that were planned to be operational in 2024, in addition to Western sanctions targeting the Arctic 2 LNG terminal in Russia, which caused the global market to lose about 6 million tons. Overall, liquefied natural gas exports totalled approximately 544.1 billion cubic meters, compared to approximately 549.2 billion cubic meters in 2023.

Overall, the share of liquefied natural gas exports in total global gas exports rose in 2024 to about 47.84%, compared to 44.79% in 2023, while the share of natural gas exports via pipelines reached about 52.16%, a decrease from the 2023 share of 55.21%.

1-3 Global Natural Gas Prices

Global natural gas prices, whether transported via pipelines or liquefied natural gas, witnessed a significant decline in all global markets during 2024, compared to their rates in 2023, after the European market overcame the peak of the gas supply shortage crisis following the disruption of Russian gas. In the United States, the price of natural gas has fallen by 11.1% according to Henry Hub, with the annual average in 2024 reaching $2.25/Million British Thermal Units (Btu). Natural gas prices in EU markets, according to the TTF index in the Netherlands, fell by 15.4%, bringing the annual average for 2024 to $10.89/Million Btu, and in UK markets (NBP) by 13.1%, bringing the 2024 average to $10.69/Million Btu. According to the JKM index, liquefied natural gas prices in Japan fell by 13.5% in 2024, reaching $11.91/million British thermal units.

1-4 Nominal Capacity for LNG Exporting & Receiving Terminals

The total nominal production capacity of liquefied natural gas (LNG) worldwide reached 533.1 million tons per year (MT/year) at the end of 2025, an increase of 46.5 MT/year compared to 2024, as a result of the commissioning of several new and expansion projects in North America and Africa. In the United States, three liquefaction units in the third (CCL3) expansion phase at the Corpus Christi terminal, with a capacity of 4.5 MT/year, were commissioned. The first and second phases of the Plaquemines LNG project, which includes 36 typical liquefaction units, with a capacity of 0.626 million tons/year per unit, have also been commissioned, bringing the total capacity of the project to 22.5 million tons/year. In Canada, the first phase of the Canada LNG project, comprising two liquefaction units with a total capacity of 14 million tons per year, has commenced operations. In Mauritania, the first phase of the Greater Tortue-Ahmeyim project has also become operational, with a capacity of 2.3 million tons per year. At the level of exporting countries, the United States of America tops the list with a total capacity of 119.5 million tons/year (excluding the Alaska liquefaction plant

that has been out of service for years) and a share of 22.4%. Australia follows with a total of 87.2 million tons/year, representing 16.4% of global production capacity, then Qatar with a total capacity of 77 million tons/year and a share of 14.4%. Thus, the three countries together accounted for about 53.2% of the total global liquefied natural gas production capacity by the end of 2025.

The total design capacity of LNG receiving terminals reached approximately 1,192.7 million tons per year by the end of 2024, more than double the nominal global LNG production capacity. The number of LNG importing countries rose to 49, with Germany, Hong Kong, the Philippines, and Vietnam recently joining the ranks of importers.

2- Arab World Developments

On the Arab level, the total nominal production capacity of liquefied natural gas in Arab countries rose to 140.8 million tons/year by the end of 2025, after Mauritania joined the group of Arab countries exporting liquefied natural gas, with a share of 26.4% of global production capacity. At the level of Arab countries, the State of Qatar ranks first with a share of 54.7% of the total production capacity in the Arab countries, followed by the Republic of Algeria in second place with 18%, then the Arab Republic of Egypt in third place with 8.7%, then the Sultanate of Oman with 8.2%, then Yemen with 4.8%, the United Arab Emirates with 4.1%, and finally Mauritania with 1.6%.

In the **United Arab Emirates**, 2025 saw significant progress on the Ruwais LNG project, with the awarding of $2.1 billion in infrastructure contracts, enhancing the project's readiness to reach a capacity of 9.6 million tons per year. The project is pivotal to doubling the UAE's LNG production capacity by 2029.

ADNOC has also entered into several long-term sales agreements with Asian companies, reflecting the UAE's strategy to strengthen its presence in Asian markets and secure stable marketing contracts for the Ruwais project when commercial operations begin in 2028/2029.

In the **Kingdom of Bahrain**, the first actual season for importing liquefied natural gas (LNG) began in 2025 via the floating terminal in the Al-Hidd area, to meet summer electricity demand. This development marks a significant shift after years of halting imports due to an abundance of domestic gas. The project features integrated infrastructure including a storage and regasification unit and nitrogen production facilities. The port also offers the potential for future capacity expansion, enhancing Bahrain's flexibility in securing gas supplies.

In the People's Democratic Republic of Algeria, the national oil company Sonatrach has boosted gas production through contracts to develop the facilities of the Rhourd Nouss field and extensive cooperation with the Italian company Eni, with production expected to increase by about 5.5 billion cubic

meters/year by 2028. Sonatrach has also invested in upgrading the local gas transmission network to increase operational efficiency.

On the export front, Sonatrach extended its gas supply contract with the Czech Republic, reinforcing Algeria's role as a major gas supplier to Europe via pipelines crossing Italy.

In the **Kingdom of Saudi Arabia**, Saudi Aramco has made strategic progress on the Jafurah project through an $11 billion investment agreement, to support the goal of increasing gas production by 60% by 2030 and enhancing domestic energy security.

Aramco has also expanded its global investments in liquefied natural gas (LNG) by signing memoranda of understanding and long-term purchase deals in the United States, as part of a strategy to diversify supplies and strengthen its position in the global gas value chain.

In the **Syrian Arab Republic**, 2025 witnessed significant developments in gas imports through agreements with Qatar and Azerbaijan to supply power plants, aiming to ease the electricity crisis and improve daily power supply hours. These steps reflect Syria's move towards diversifying its gas sources and enhancing energy security through regional pipelines, given the inadequacy of domestic production.

In the **Republic of Iraq**, the Ministry of Oil focused on investing in associated gas and developing free gas fields, particularly the Akkas field, in addition to expanding gas processing projects in Basra. This contributed to reducing gas flaring and increasing domestic production. Furthermore, 2025 saw the signing of an agreement to establish the first floating liquefied natural gas (LNG) import terminal, a strategic step to diversify supply sources and reduce reliance on pipeline gas imports.

In the **State of Qatar**, Qatar Energy continued to implement the North Field expansion project with a commitment to increase production capacity to 126 million tons/year by 2027, with plans to implement a third expansion phase to reach 142 million tons/year before 2030. The company also signed long-term sales agreements to strengthen its presence in the Indian market, reflecting Qatar's strategy to consolidate its global leadership in the liquefied natural gas trade.

In the **State of Kuwait**, significant offshore discoveries have been made, most notably the offshore "Jazza" field, which represents a shift in the non-associated gas strategy and enhances national energy security, and includes initial reserves of 1 trillion cubic feet, and about 120 million barrels of condensates. As part of its 2040 vision, Kuwait seeks to significantly increase its non-associated gas production, in addition to developing the shared "Durra" field to enhance future supplies.

In **Libya**, the National Oil Corporation continued developing gas projects with Eni, including projects to increase pressure, recover flared gas, and

develop new offshore fields, which will boost production and reduce emissions. These new projects are expected to add up to 750 million cubic feet per day of gas production, supporting domestic gas production and improving gas exports.

In the **Arab Republic of Egypt**, the Ministry of Petroleum and Mineral Resources has worked to enhance Egypt's role as a regional gas hub by signing agreements to transport gas from the Cypriot "Kronos" field to its infrastructure, in addition to exporting shipments of liquefied natural gas from the Idku complex to European markets.

Egypt also expanded its imports of liquefied natural gas to meet domestic demand, continued its program to deliver gas to homes and convert vehicles to run on gas, in support of environmental goals and reducing imports of liquid fuel.

In the **Hashemite Kingdom of Jordan**, supply security was enhanced through the arrival of a floating storage and regasification unit (FSRU) in cooperation with Egypt to meet electricity needs until the completion of the permanent import terminal in Aqaba. The use of gas also began in the transportation sector with the opening of the first compressed natural gas (CNG) terminal, a first step towards expanding gas use in the domestic market.

In **Oman**, the Marsa project was launched to provide ships with low-emission liquefied natural gas (LNG), making it the first regional port of its kind and enhancing the Sultanate's role in clean marine fuel. Plans for the fourth liquefaction unit in Qalhat have also progressed, which will increase liquefaction capacity and boost Oman's LNG exports by 2029.

In the **Kingdom of Morocco**, practical steps have begun to establish the first liquefied natural gas (LNG) import terminal at the port of Nador, with plans to connect it to existing infrastructure and the Morocco-Europe gas pipeline. The project aims to support the electricity and industrial sectors and reduce reliance on coal, as part of the national energy transition strategy.

In the **Islamic Republic of Mauritania**, the country has entered the era of liquefied natural gas (LNG) production with the export of the first shipment from the initial phase of the massive Tortue-Ahmeyim project, marking a historic shift in the national energy sector. This first phase is expected to pave the way for significant expansions and attract new investments to develop Mauritania's vast gas resources, thereby strengthening its role in the global gas trade in the future.

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EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT

52

Chapter 6

PETROCHEMICALS INDUSTRY

PETROCHEMICALS INDUSTRY – 2025

The global petrochemicals industry experienced a highly complex phase during 2025, in which economic and geopolitical pressures intersected with a slowdown in industrial demand growth, rising operating and energy costs, along with escalating trade restrictions and changing feedstock availability patterns. This has directly impacted profit margins and prompted many companies, particularly in Asia and Europe, to reassess their operational strategies and expansion plans, leading to reduced production capacities or the closure of less efficient units. In contrast, Middle Eastern countries, particularly the Arab member countries of OAPEC, continued to implement long-term expansion strategies, based on an abundance of low-cost feedstock, a stable investment environment, and clear government visions aimed at maximizing the added value of hydrocarbon resources and enhancing integration between refining and petrochemical activities. The 2025 report reflects a pivotal transitional phase in the trajectory of the global petrochemical industry, where short-term market pressures intersect with long-term structural shifts related to oil demand patterns, sustainability requirements, and the growing role of the circular economy. In this context, the Arab countries, particularly OAPEC members, stand out as one of the main drivers of future industrial growth, relying on their competitive resources and integrated investment strategies.

First: Regional and global developments in the petrochemical industry

1- United States of America

The United States has strengthened its position as a major global supplier of ethane, benefiting from the continued expansion of shale oil production rich in associated gas. However, regulatory restrictions imposed on ethane exports to China during 2025 caused a significant disruption to trade flows, contributing to increased domestic surplus and higher storage costs, with shipments being redirected towards alternative Asian markets. On the financial level, US petrochemicals companies faced increasing pressure as a result of the global oversupply and declining demand in Europe and Asia, leading to a clear decrease in profit margins.

2- Asia

Asia emerged as a major hub for market imbalances during 2025, as a result of the large expansion in production capacities compared to the growth in demand.

- **China**

China continued to expand its production capacity at a pace that outpaced domestic consumption growth, resulting in a record surplus in ethylene

capacity. US restrictions on ethane also forced China to increase its reliance on imported naphtha, pushing its imports to record levels.

- **South Korea:**

The sector has entered a phase of deep restructuring, which has included the closure or shutdown of a number of naphtha-dependent cracking units, in an attempt to address structural losses and declining margins.

- **Japan:**

Companies have turned to studying unconventional alternatives to naphtha, such as ethanol, to enhance operational flexibility and reduce sensitivity to price fluctuations.

- **Thailand and India:**

Strategic plans to secure ethane imported from the United States in the medium and long term have accelerated, through the development of specialized logistics infrastructure and integrated maritime supply chains.

- **Indonesia:**

Progress was made in the commissioning of one of the largest petrochemical complexes in Southeast Asia, reflecting continued long-term investments despite market volatility.

Tariffs and slowing final demand in Asia have put severe pressure on the profit margins of naphtha-based polymers, and reduced operating rates in a number of countries to levels close to the economic minimum.

3. Europe

The European petrochemical industry continued its downward trend during 2025, as a result of rising energy and labour costs, and declining competitiveness against low-cost production areas. The year saw a series of announcements regarding the closure of steam cracking units and the restructuring of key assets, despite the emergence of a limited number of exceptional new projects that did not change the overall trend of the sector.

4. Caribbean region

Developments were concentrated in Trinidad and Tobago, where continued limited natural gas supplies and the cancellation of some US licenses for joint gas projects led to ammonia and methanol plants operating below their design capacities, raising regional concerns about the stability of supplies and prices.

Second: Petrochemicals as a major driver of oil demand growth

With the rapid expansion of electric vehicles and the slowing growth in demand for traditional transportation fuels, petrochemicals have emerged as a key driver of global oil demand growth. Estimates indicate that petrochemicals accounted for approximately 16% of global oil demand in

2024–2025, with projections indicating further increases in the coming years, thus reinforcing the sector's importance within the strategies of major energy companies.

Third: Plastic Waste Recycling Projects and the Circular Economy

The year 2025 witnessed a significant increase in regulatory and investment initiatives related to plastic recycling. International negotiations on a global treaty on plastic pollution coincided with stricter European legislation and financial incentives to support mechanical and chemical recycling.

In Asia and North America, new industrial projects have emerged, supported by commercial and regulatory tools, while major petrochemical companies have prioritized circular economy projects instead of expanding into traditional energy sources.

Fourth: Carbon Capture, Methanol Production, and Sustainable Aviation Fuel

Investment in carbon capture and utilization projects accelerated during 2025, particularly in the production of e-methanol and sustainable aviation fuel. The year saw some projects move from the planning stage to commercial operation, supported by incentive policies in Europe and the UK, reflecting a qualitative shift in the sector's response to emissions reduction requirements and a reshaping of production models.

Fifth: Key Developments in the Petrochemicals Industry in Arab Countries

Despite global challenges, Arab countries have continued a clear expansion path:

- United Arab Emirates: Announcing a global merger in the polymers sector, and major methanol projects within integrated industrial complexes.
- Algeria: Launched a large-scale investment program to develop refining and petrochemicals and enhance the utilization of naphtha.
- Saudi Arabia: A pivotal year that saw the announcement of integrated petrochemical complexes and major expansions, with a focus on industrial integration and efficiency enhancement.
- Iraq: Integrating petrochemicals into oil field development projects, in a clear move towards maximizing local added value.
- Kuwait: Strategic expansion into Asia, alongside plans for new olefins projects domestically.
- Egypt: An investment boom that included major petrochemical complexes, silicon and soda ash projects, and the production of sustainable aviation fuel, with tangible progress in the areas of sustainability and digital transformation.

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EXECUTIVE SUMMERY OF

THE SECRETARY GENERAL'S ANNUAL REPORT 52

Chapter 7

ENVIRONMENTAL AFFAIRS AND CLIMATE CHANGE DEVELOPMENTS

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Chapter Seven: Environmental Affairs and Climate Change Developments

The year 2025 witnessed growing momentum in global climate action, with increasing global pressure to accelerate the transition to low-carbon economies amid escalating environmental and climate challenges. Climate change has become a tangible reality, driven by record-breaking global temperatures, an increasing frequency of extreme weather events, and a growing global awareness of the need to move from pledges to concrete implementation of climate action. In this context, a range of initiatives and agreements have been adopted at international conferences aimed at bolstering climate ambition.

In this context, a number of new issues have emerged, reflecting the complex relationship between climate, energy, and economic development. Global reports have shown that climate change is beginning to directly affect the performance of renewable energy sources themselves, due to fluctuations in wind, rainfall, and temperature patterns, thus necessitating a deeper integration of climate data into energy system planning. The importance of modern technologies, especially artificial intelligence, has also emerged as a promising tool to support climate mitigation and adaptation efforts, by improving energy efficiency, enhancing early warning systems for climate disasters, and analyzing environmental data on a large scale.

Meanwhile, the effects of climate change are becoming increasingly evident in several vital sectors, including the rapidly growing global cooling industry, which is experiencing a surge in demand due to rising temperatures. International reports have warned that the growing demand for cooling could lead to a significant increase in energy consumption and emissions if a shift to sustainable and highly efficient cooling systems is not undertaken.

At the regional level, the member countries have taken advanced measures towards strengthening environmental governance, through the implementation of regional initiatives such as the "Green Middle East Initiative" and the "Saudi Green Initiative," as efforts have accelerated to expand green spaces, adapt to climate change, and increase reliance on renewable energy sources, in light of the direct impacts that now threaten sustainable development in the region. The role of the member countries in global forums has also emerged as key players in shaping a more sustainable future, while strengthening their position as investors in the low-carbon economy.

These efforts culminated in the United Nations Climate Change Conference (COP30), a pivotal moment in global climate action. The conference saw the launch of numerous initiatives related to expanding investments in clean energy, enhancing energy efficiency, and supporting low-emission industries. Progress was also made on issues of climate finance and loss and damage, although some disagreements persisted regarding carbon markets and financing mechanisms.