

2025 | 74th edition

Statistical Review of World Energy

In collaboration with

KEARNEY

KPMG

The Energy Institute (EI) is the professional membership body for the world of energy. The EI Statistical Review of World Energy™ analyses data on world energy markets from the prior year. It has been providing timely, comprehensive and objective data to the energy community since 1952.

Explore the report online

The full 2025 Statistical Review of World Energy is available to view at:



www.energyinst.org/statistical-review

Explore the data online

All the tables and charts found in the printed edition are available at energyinst.org/statistical-review alongside a number of extras, including:

- The energy charting tool – view predetermined reports or chart-specific data according to energy type, region, country and year.
- Historical data from 1965 for many sectors. Additional country and regional coverage for all consumption tables.
- An Excel workbook and database format of the data.

Download the app

You can also explore the world of energy from your tablet or smartphone, online and offline, by downloading the Energy Statistical Review app.



Apple App Store



Google Play Store

Join the Energy Institute

The EI is creating a better energy future – in three important interconnected ways.

Convening expertise and evidence to inform energy decision-making

The Statistical Review is central to the EI's work to provide the guidance and expertise needed by governments and businesses to navigate the energy transition. Our related events programme culminates each year in London with International Energy Week.

Attracting and developing a diverse future energy workforce

The EI is the professional home for people working across the world of energy – from engineers to environmentalists, technicians to analysts, academics to innovators. We provide the training, publications, mentoring, networking and chartered titles essential to skilled, rewarding careers.

Enabling industry to make energy safer, more efficient and lower carbon

The EI brings together companies from all parts of the industry, from conventional to renewable, to work in collaboration with regulators, academia and others to solve shared technical challenges. With over 60 industry standards and good practice documents published annually, we are relied on by industry worldwide as the independent custodian of technical and innovation expertise.



Become an individual Member



Become a Technical Partner

Contents

Introduction

- 2 Foreword
- 4 2024 Key highlights
- 6 Regional overview

Total energy supply and carbon

- 12 Foreword
- 13 Supply
- 14 Supply by fuel
- 15 Supply per capita

Carbon

- 16 Carbon dioxide emissions from energy
- 17 Carbon dioxide emissions from natural gas flaring
- 18 Carbon dioxide equivalent emissions
- 19 Carbon capture, usage and storage (CCUS)
- 19 Prices

Oil

- 20 Foreword
- 21 Production
- 25 Consumption
- 30 Prices
- 31 Refining
- 33 Trade movements

Natural gas

- 36 Foreword
- 37 Production
- 39 Consumption
- 41 Prices
- 41 Hydrogen production capacity
- 42 Trade movements

Coal

- 46 Foreword
- 47 Production
- 49 Trade movements
- 50 Prices
- 51 Consumption

Electricity, renewables and nuclear energy

- 52 Foreword

Electricity

- 53 Generation
- 54 Generation by fuel
- 54 Grid-scale battery energy storage capacity

Hydroelectricity

- 55 Hydroelectricity generation

Renewables

- 56 Combined supply
- 57 Combined supply (including hydro)
- 58 Solar installed
- 59 Wind installed
- 60 Solar installed by type
- 61 Wind installed by type
- 62 Generation by source
- 63 Biofuels production
- 64 Biofuels consumption

Nuclear

- 65 Nuclear energy generation

Key minerals

- 66 Foreword
- 67 Production and reserves
- 68 Prices

Methodology

- 69 More detail on the methodology

Appendices

- 71 Approximate conversion factors
- 72 Definitions
More information

Foreword

The 74th edition of the Statistical Review of World Energy marks the third year under the custodianship of the Energy Institute (EI). This year's data captures a global energy sector in flux, navigating deepening climate impacts, intensifying geopolitical disruption and an increasingly complex energy transition.

Global average air temperatures in the last two years have regularly exceeded 1.5°C of warming from the pre-industrial age. Extreme weather events underscored this reality: tropical storms in Southeast Asia, and devastating floods in South America and Europe. Widespread droughts in Africa and Brazil, as well as increasing wildfires and heat-related deaths, underscore the need for urgent action.

Geopolitical tensions further complicate the energy outlook. From evolving US energy policy to the dramatic impact on Europe of Russia's invasion of Ukraine. Energy security and affordability remain central concerns competing with the need for climate action. These global disruptions are also contributing to a growing bifurcation in energy markets, with divergent regional strategies emerging; some doubling down on fossil fuel consumption and others accelerating decarbonisation pathways.

Amid this turbulence, energy remains indispensable to human activity and development. Yet the patterns of demand and supply are shifting. In 2024, global energy demand continued to grow alongside every major constituent part of the energy system. We are living in a time of energy addition, sustained by an increasingly disorderly transition. The rebound in natural gas consumption, particularly in Asia and Europe is notable. Encouragingly, renewables are also growing at a much higher rate.

China continues to play a disproportionate role in shaping the energy landscape. Its coal demand exceeds that of the rest of the world combined, but so does its rate of renewable energy deployment and electric vehicle sales. This duality exemplifies the broader global picture: rapid advances in clean energy coexist with ongoing fossil fuel dependencies, with coal, oil and gas, as well as renewables, all reaching record highs.

Energy security and affordability remain central concerns competing with the need for climate action

What remains clear is, to decarbonise the energy system, we will need to electrify. The record growth in electricity demand is an encouraging sign of this trend, with much of this growth satisfied by renewables.

Reflecting these dynamics, this year's Statistical Review introduces an updated metric: Total Energy Supply, aligned with the United Nations' guidelines. This harmonises the dataset with reporting from the IEA, Eurostat, and the EIA, offering a more complete picture of global energy flows as the world moves, unevenly but decisively, towards a new energy future.

The Energy Institute is proud to steward the Statistical Review of World Energy, a cornerstone resource for understanding and navigating global energy trends. As the chartered professional membership body for energy professionals worldwide, our mission is to provide a rigorous, independent, and accessible evidence base for decision-makers in governments, industry, academia and civil society.

We are deeply grateful to our co-authors Kearney and KPMG, S&P Global Commodity Insights and bp for their support, and to Heriot-Watt University for its data compilation. Together, we ensure that the Statistical Review continues to serve as the definitive reference for the global energy community.



Andy Brown
OBE FEI
President, Energy Institute



Dr Nick Wayth
CEng FEI FIMechE
CEO, Energy Institute



In collaboration with

Kearney

2024 marked a strategic inflection point for the global energy sector. Unlike the post-COVID rebound, this shift was fueled by escalating geopolitical tensions. In this new landscape, national priorities – such as energy security and technological sovereignty – are increasingly overshadowing climate objectives.

Amid these evolutions, companies began recalibrating their strategies in response to new market realities. Most oil and gas majors launched fundamental resets, refocusing on traditional core businesses, or adopted dual strategies. Power utilities doubled down on renewables and grid modernisation, particularly in their domestic markets, still with contrasted trends across geographies.

Overall, a new corporate strategy mindset has taken shape:

- Prioritise short-term profitability, with a sharper focus on portfolio optimisation and operational efficiency, including the use of AI-driven workflows.
- Delay non-core investments, awaiting clearer market signals and policy direction, and scale back immature renewable technology investments or high-risk energy ventures, redirecting focus towards proven technologies.
- Forge strategic alliances to bolster procurement strength and market positioning, enhancing overall corporate resilience.
- Refine or re-sequence ESG strategies considering uncertainties.

These changes point to an increasingly fragmented and volatile energy landscape. 2024 may well be seen as the beginning of a paradigm shift – where the energy transition is now tempered by a renewed focus on resilience and risk hedging in a world marked by growing uncertainty.

In this context, accurate and timely energy data is more vital than ever. Kearney is proud to have contributed to the Energy Institute Statistical Review of World Energy, supporting informed decision-making in a complex global environment.



Dr Romain Debarre

Partner and Managing Director,
Energy Transition Institute, Kearney

KPMG

Global energy demand is continuing to rise. The 2025 Statistical Review of World Energy reveals a global energy system being pulled in competing directions – electrifying at speed, yet still expanding fossil fuels; scaling renewables rapidly, yet falling short of climate targets; innovating in some regions, while stalling in others.

Nowhere is this clearer than in the renewables sector. Europe has faced a sharp reality check: rising interest rates and supply chain costs have combined to slow deployment. The US saw strong growth in 2024, but future momentum is uncertain as IRA subsidies face rollback. In contrast, China and many emerging markets continue to drive renewable growth at scale, quietly redefining the centre of gravity in the transition.

Leaders are now seeking to navigate a disorderly energy transition, one shaped by diverging regional trends, infrastructure constraints, and policy fragmentation. Key questions every business leader should consider, include:

- What does it mean for your strategy when the energy mix is shifting, but not in the way many expected, with gas, oil and coal continuing to play significant roles?
- How do you respond when electricity demand surges, renewables can't keep up everywhere, and energy systems are already straining under the pressure?
- Are your strategies focused where progress is happening – not just where it's expected?
- How are you preparing for a market where trade flows are shifting, policy signals are mixed, and volatility is here to stay?
- Can your business thrive in a world where complexity, fragmentation, and disruption are now the norm?

KPMG is proud to be working in collaboration with the Energy Institute on this review. In today's environment, leaders should have access to data, not just headlines, to help them make bold, forward-looking decisions.



Wafa Jafri

Lead of Energy and Natural Resources
Strategy and Partner, KPMG in the UK

2024 Key highlights

Global emissions from energy grew 1% in 2024, setting record levels for the fourth consecutive year. Simultaneously, the world saw a 2% annual rise in total energy demand, reaching a new high of 592 EJ.

Although wind and solar grew nearly nine times faster than total energy demand, fossil fuels also grew (just over 1%) in 2024. Whilst global natural gas demand rose 2.5%, consumption of crude oil remained flat in OECD countries after a fall of 0.7% the previous year. It rose 1% in non-OECD countries. All contributing factors to an energy transition that continues but is increasingly disorderly.

Energy developments

- At 4%, electricity demand growth continued to outpace total energy demand growth, an indicator that the world's energy system continues to electrify.
- Wind and solar continued to be the fastest-growing areas of the energy system increasing by 16% in 2024. China was responsible for 57% of new additions with solar almost doubling in just two years.
- Over the past decade China has nearly doubled its electricity supply adding 405 TWh more than Europe's entire 2024 electricity generation.
- In 2024 alone, across all forms of renewable energy, China added twice the amount of the US, Europe, and India's combined additions. Deployment of renewables in non-OECD countries has grown at twice the rate of OECD countries over the past decade.
- The Asia Pacific region has been at the forefront of realising the benefits of diversifying its energy mix. It accounted for 50% of the avoided fossil fuel use in 2024 followed by Europe at 22%. Excluding hydro, China was responsible for 57% of total global renewable power supply additions in 2024.

Energy-related carbon emissions

- Carbon emissions increased around 1% in 2024 exceeding the record level set the previous year to reach 40.8 GtCO₂e.
- Since 2010 renewables and nuclear have avoided emitting around 109 gigatonnes of energy-related greenhouse gas emissions, around 2.5 times the total amount emitted globally in 2024.
- China remains the world's largest single emitter of greenhouse gases, accounting for around a third of global emissions. Along with India, it contributed 62% of the increase in global emissions last year.
- For the second year in succession the US witnessed a drop in emissions with a fall of 36 MtCO₂e, 0.7% below its 2023 levels but below its ten-year average decline rate of 1% per annum.
- Adjusting for COVID, European emissions fell for the sixth consecutive year and are nearly 16% below where they were a decade ago and are now three times lower than China's.

Oil

- The US was the world's largest oil producer, accounting for a fifth of global production in 2024. Its production is now broadly equal to the combined output of Saudi Arabia and the Russian Federation.
- Oil remains the largest source of energy meeting 34% of total global demand in 2024. Although slowing, global demand increased by 0.7% to breach the 101 Mbbbl/d level for the first time ever.
- Having initially rebounded following COVID, all regions exhibited either a slowing down or a plateauing in oil demand in 2024. OECD demand remained flat at 45 Mbbbl/d whilst non-OECD demand grew by 0.7 Mbbbl/d. Africa and the Middle East were the fastest-growing regions at 2.5% and 1.6% respectively.
- China displayed signs of oil demand peaking in 2023 registering a 1.2% drop in demand in 2024.
- Global demand for fuel oil and diesel/gasoil fell -2% and -0.5% respectively. This was largely driven by China with an increase in LNG-fuelled trucks reducing demand for diesel. Globally, demand increased for jet/kerosene (0.4 Mbbbl/d), ethane and LPG (0.4 Mbbbl/d), and gasoline (0.3 Mbbbl/d).
- Oil prices continued to fall from their 2023 levels following Russia's invasion of Ukraine. Though, on average, they fell by -3%, they remain 27% above their 2019 pre-COVID levels.

Natural gas

- Global natural gas production rose to 4,124 bcm with the largest producers being the US, Russia, Iran, and China who, together, accounted for 53% of total global production. Over the last ten years, China has gone from being the world's sixth-largest gas producer to its fourth. Its domestic production now meets 56% of its domestic demand.
- Global natural gas demand returned to growth in 2024 rising 101 bcm (2.5%). Its share of global fossil fuels stood at 29% and it met a quarter of total global energy demand.
- All regions bar Africa saw gas demand rise in 2024. Asia Pacific saw the largest increase, a rise of 42 bcm, of which China represented two-thirds. The Commonwealth of Independent States (CIS) and North America witnessed rises of 22 bcm and 15 bcm respectively, whilst Europe experienced a modest increase of 6 bcm.

Coal

- For the past three years coal production in the Asia Pacific region has exceeded its demand. The surplus in 2024 was a record with production at over 6% of demand.
- Although coal reached a global record level of demand at 165 EJ, 83% of this was centred in the Asia Pacific region, 67% of which was attributable to China.
- Despite continuing record levels of investment in renewables, coal still dominates China's electricity sector generating 58% of its output in 2024. In Europe, coal consumption fell 7%.

For the first time ever, the contribution of coal to meeting Europe's total energy demand fell below that of nuclear.

- India's demand for coal rose 4% in 2024 and now equals that of the CIS, South and Central America, North America, and Europe combined. Conversely, demand across OECD countries, which have been in decline since 2007, fell by 4% in 2024 against an average decline rate of 6% per annum over the past 10 years.
- On average, coal prices around the world continued to fall, dropping by around 11% in 2024 and by 52% against their record highs in 2023.

Nuclear

- In 2024, nuclear rose 3% to meet just over 5% of total global energy demand. Around two-thirds of the increase in output were in France and Japan who both continued to return plants to service after prolonged outages.

Electricity

- Over the past 10 years, global electricity generation has grown on average at around 2.6% per annum, broadly twice the rate of total energy demand.
- Asia Pacific demand reached 52% of global electricity production in 2024, increasing around 5% to 16,132 TWh. North America and Europe rose by 2.2% and 1.5% respectively to reach a collective 9,514 TWh, 30% of global generation.
- With the exception of oil, generation from all sources increased globally in 2024. Wind and solar met 53% of the global increase in generation. Generation from renewables, including hydro, met 32% of global electricity supply last year.
- Of the global fossil fuel fleet, gas saw the biggest increase in generation, growing 2.5%, (172 TWh). Coal grew by 1.2% to reach 10,613 TWh to remain the largest source of generation globally.
- Over the past ten years coal's share of China's generation fleet has fallen from 70% to 58%. In India, its share has remained fixed at around 75%.
- In 2024 grid-scale battery electricity storage system (BESS) capacity more than doubled, rising 113% to reach 126 GW. China led the way in its deployment adding 67% of the increase. It now hosts 60% of total installed BESS capacity followed by the US at 20% and the UK at around 5%.

Wind and solar

- Generation from wind and solar increased its share of total global generation from 13% to 15% in 2024. The past ten years have witnessed a fourfold increase in their combined output with wind broadly responsible for 55% and solar 45% of their joint output.
- The biggest increase in wind and solar output was in the Asia Pacific region at 399 TWh. China was responsible for 91% of the region's growth and 57% of total global growth. of total global growth.

- Capacity additions of solar outpaced that of wind by 4-to-1 in 2024 with solar reaching a total global installed capacity of 1,865 GW compared to wind's 1,135 GW. China was host to 47% of the world's total installed solar and windfarms in 2024 at nearly twice the installed capacity of wind and solar in the US and Europe combined.
- Wind and solar supplied 28% of the European Union's electricity generation with solar surpassing coal for the first time.

Hydroelectricity

- Despite falls in North America, and South and Central America, hydro saw its biggest global annual increase (180 TWh) since 2010 when China's Three Gorges dam reached full capacity. Overall, hydro remains the largest source of renewable generation contributing 14% of total global electricity generation and 45% of total renewable generation in 2024.

Biofuels

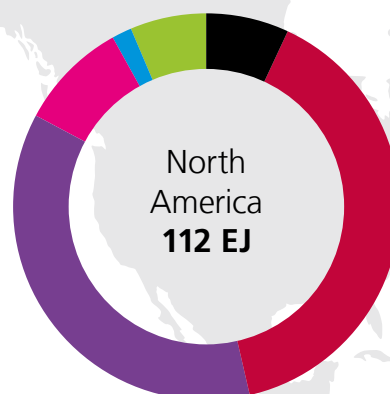
- Global demand for biofuels rose 3% in 2024 to reach a record level of 2.2 Mbbloe/d. Asia Pacific region grew the largest at 47 kbbloe/d followed by North America at 42 kbbloe/d.
- India and Indonesia jointly accounted for 63% of Asia Pacific's biofuel demand in 2024 with India growing 38%. At 194 kbbloe/d, Indonesia is the world's third-largest consumer of biofuels behind the US (899 kbbloe/d) and Brazil (432 kbbloe/d).
- Demand for biofuels in the EU fell by 11%, centred on biodiesel (-15%) with conventional diesel/gasoil registering a similar fall.

Key minerals

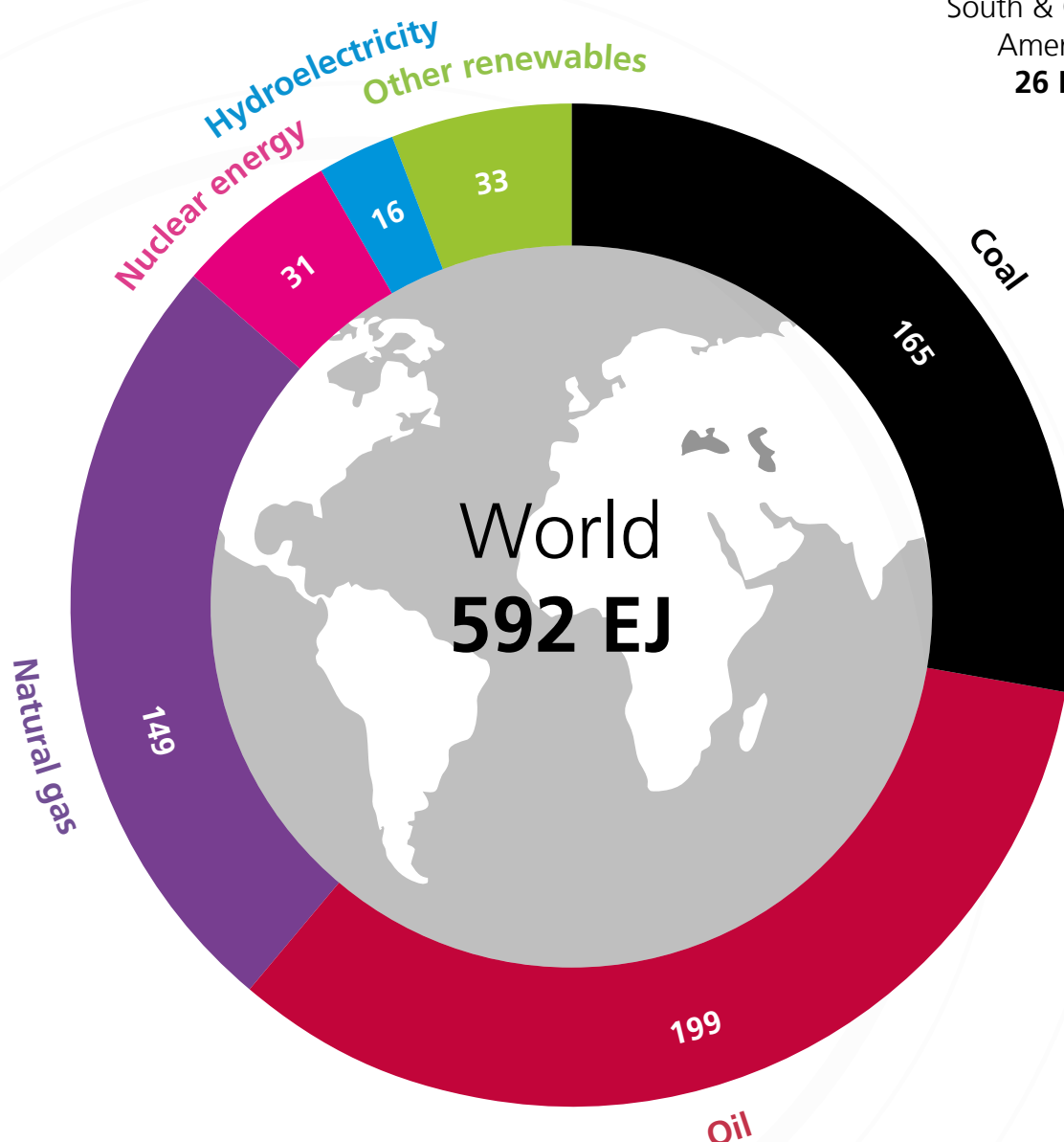
- Global rare earth metals mining increased by 3.2% in 2024 reaching 0.4 million tonnes. China maintained its dominance accounting for 71% of global production and 48% of worldwide reserves.
- Global production of lithium increased by 16%. Chile continued to be the second-largest lithium producer with a 23% share of global output. Its production grew by 18%, whilst Argentina saw a significant increase of 109%.
- On average, key mineral prices fell globally by 16% in 2024 with the biggest falls in lithium carbonate (-69%), natural graphite (-26%), and cobalt (-23%).

2024 Regional overview – access to energy and sustainability

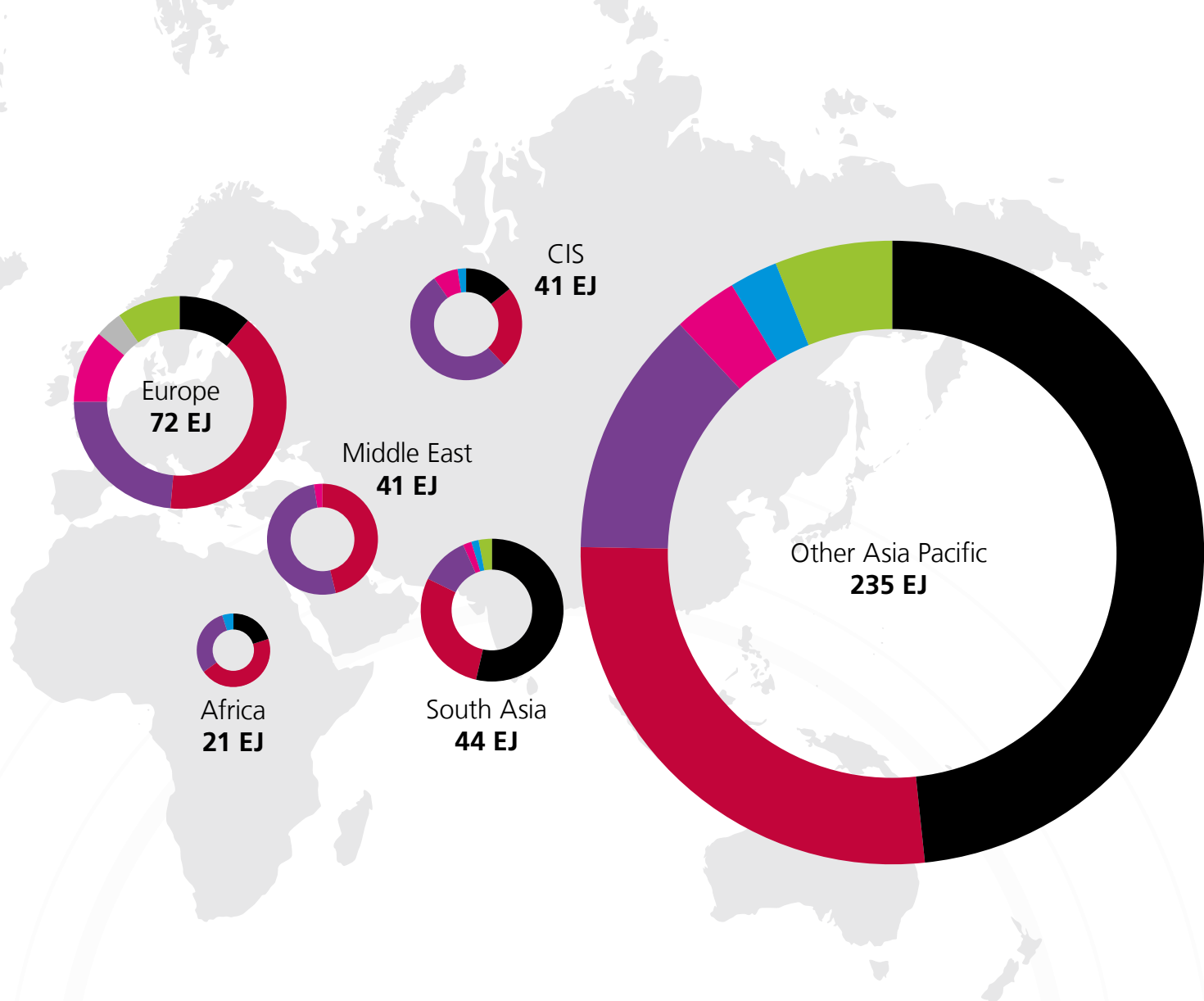
Global energy demand increased 2% in 2024 with non-OECD countries dominating both the share of absolute demand and annual growth rates. Fossil fuels continue to underpin the energy system accounting for 87% of the energy mix.



South & Central America
26 EJ



Note: energy sources in the charts are ordered according to their carbon intensity.



Total energy demand increased across all regions, but the growth was far from evenly distributed, reflecting stark regional variations shaped by economic development, climate conditions, and energy policy. North America and Europe exhibited the slowest growth rates at 0.4% and 0.7%, respectively. However, in absolute terms, Africa had the smallest increase in energy demand, at 0.2 EJ its increase in demand was less than half of Europe's increased energy demand (0.5 EJ). The Asia Pacific region drove 68% of the total global energy demand increase and was responsible for 47% of total global energy demand. Total renewable energy demand increased by 7%, of which China alone was responsible for more than the rest of the world combined (at 56%). Global growth in electricity demand continues to outpace growth in total energy demand. All regions experienced significant growth in electricity demand in this new age of electricity, with Asia Pacific and the Middle East registering the greatest growth in electricity generation at 5.4% and 5.3%, respectively.

2024 Benefits from investing in low and zero-carbon energy

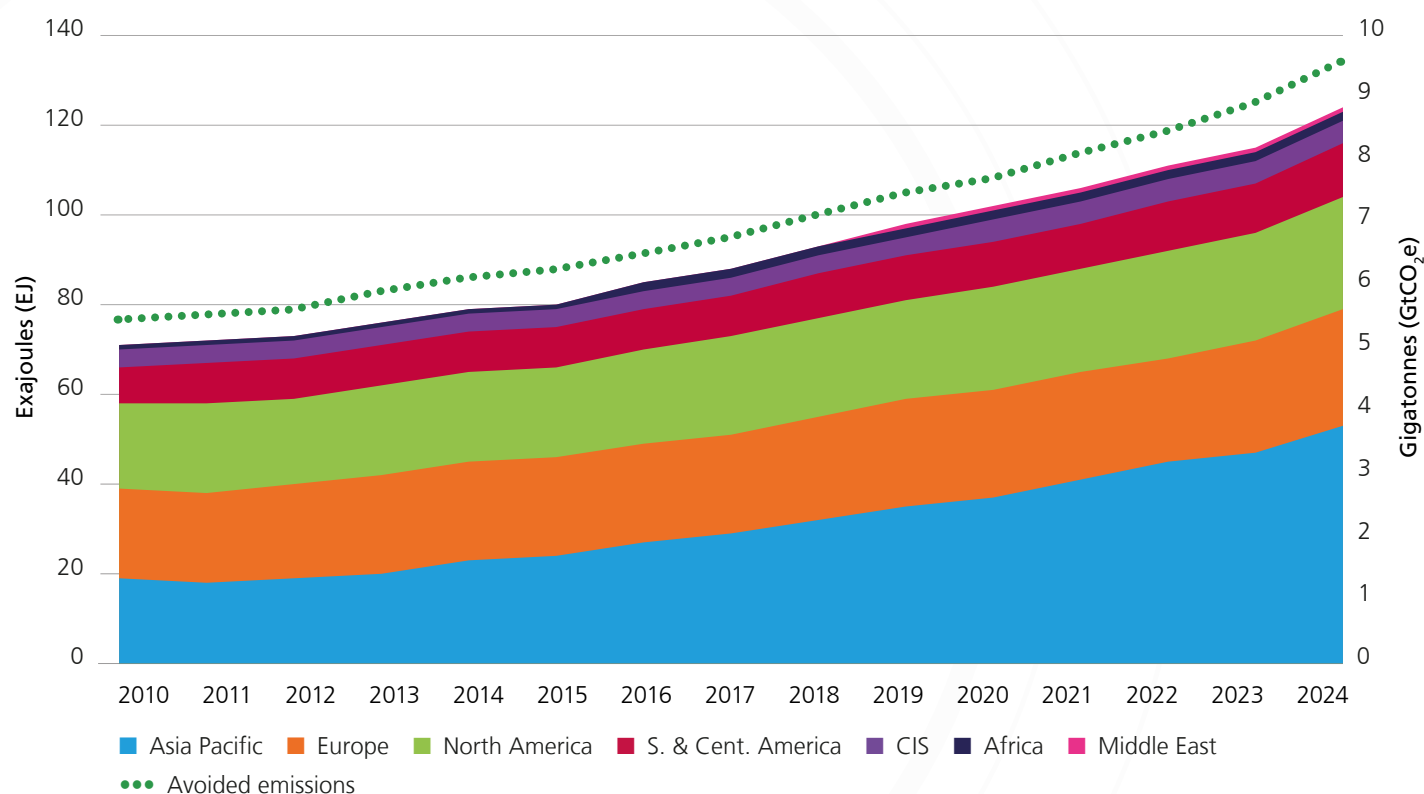
Since 2010 the world has avoided using 1,371 EJ of fossil fuels and emitting 110 gigatonnes of greenhouse gas emissions through renewables and nuclear

Back in 1990, renewables represented just 3% of the total global energy mix. Since then, the energy landscape has changed significantly as nations have sought to decarbonise their energy systems to tackle the effects of climate change. Since 2000, the annual growth rate of renewable energy has consistently been above that of all other forms of energy. Since 2006 their growth rate has averaged around four times that of the annual average growth rate of total global energy demand. Over the past five years, this has increased to over five times that rate. As consequence and in recognition of the increasing contribution that renewables make to our everyday lives, starting in 2025, the way in which we measure total energy demand has changed. The previous fossil-fuel equivalent (or substitution) method used

to calculate Primary Energy Consumption made sense in a world fuelled almost entirely by oil, gas and coal but is no longer relevant to today's energy system.

In this year's edition, we have adopted the Physical Energy Content method to create a view of Total Energy Supply, a measure of the total amount of energy that a country needs to supply in order to meet its final end-use demand. It reflects the energy that is either produced domestically or imported, minus what is exported or stored. Some energy sources are consumed directly whilst others may be converted into fuels or electricity for final consumption with transmission, distribution, and efficiency losses impacting throughout the system.

Avoided emissions and fossil fuel use by region

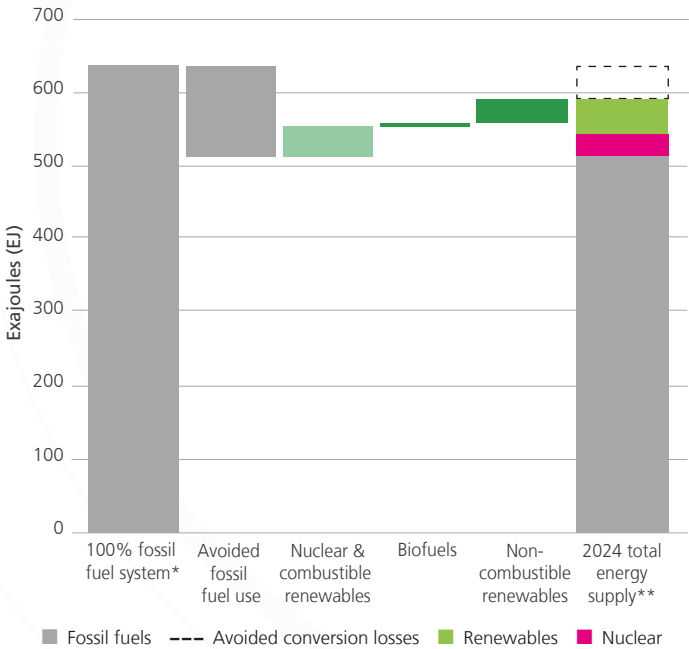


The new approach has the advantage of quantifying the benefits that low and zero-carbon energy have delivered in terms of reducing reliance on fossil fuels, avoiding greenhouse gas emissions, and improving the overall efficiency of the energy system. For instance, to undertake the same amount of work as fossil fuels, technologies such as wind, solar, and hydro enable us to supply significantly less clean electricity. Consequently, in 2024, the global energy system was effectively 7% more efficient in terms of the total amount of energy that it needed to supply to meet end-use demand.

Since 2010, renewables and nuclear have avoided the use of 1,371 EJ of fossil fuels, nearly two and a half times the entire energy supplied globally in 2024. In addition to avoiding

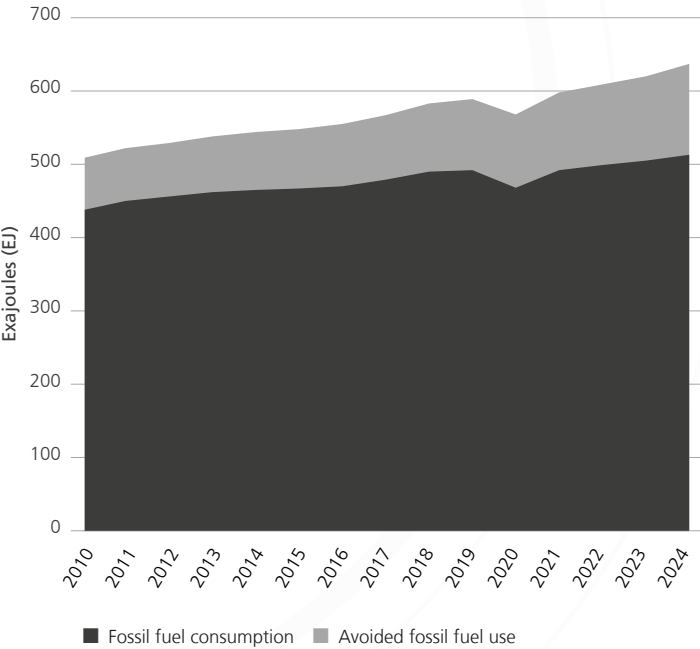
the need to explore for and produce fossil fuels, around 109 gigatonnes of energy-related greenhouse gas emissions have been avoided over this same period, 170% more than were emitted in 2024. The Asia Pacific region, underpinned by China which was responsible for nearly 60% of the renewable power supply additions in 2024, has been at the forefront of realising the benefits of transitioning from fossil fuels. It was responsible for 43% of avoided fossil fuel use in 2024 followed by Europe and North America at 21% and 20% respectively.

Renewables and nuclear reduce fossil fuel dependency and increase energy system efficiency in 2024



* Calculated using fossil fuel equivalent method
** Calculated using physical energy content method

Avoided fossil fuels use by renewables and nuclear



2024 Regional overview – energy security

Investing in the energy transition delivers energy security through reduced reliance on energy imports. This remains an untapped opportunity.

Over the past five years, the global energy system and international energy markets have been rocked by a series of seismic events causing supply chain disruption, energy supply shortages, record energy prices, and increased volatility across international markets. From COVID, conflict in Ukraine, heatwaves, droughts and floods intensified by climate change, to renewed tensions in the Middle East, vulnerabilities across every aspect of the energy system have been exposed. Where the energy transition initially focused on tackling climate change, these events have highlighted the need for resilient, decentralized, and clean energy systems. 2024 may well become seen as a beginning of a paradigm shift where the energy transition becomes increasingly associated with a need to deliver energy security through energy independence to protect countries from the types of shocks and uncertainty that such events bring.

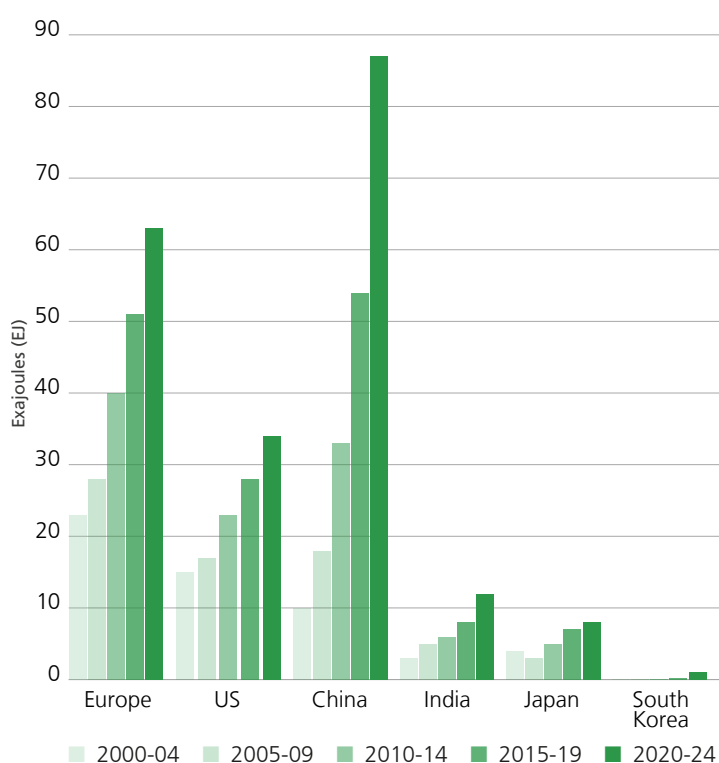
Investment in renewables in particular is increasingly being seen as a cornerstone of energy security, enabling countries to disconnect their energy systems from global fuel markets and geopolitical tensions. Technologies such as wind, solar, hydro, and geothermal that draw on homegrown resources reduce the need to import energy from abroad. In addition, once built, they have low and predictable operating costs that shield economies from volatile international fossil fuel prices and bring stability to national budgets and household bills. Resilience is also improved through diversifying away from one or a

limited number of energy sources or suppliers. As the world's leading investor in renewable energy, China is at the forefront of realising such benefits. Whilst it is still heavily reliant on energy imports, they met around 25% of its total energy demand in 2024, renewables have helped it avoid importing around 87 EJ over the past five years, more than Europe's total energy demand in 2024. Europe itself, along with the US, has also avoided the need to import significant volumes of energy over this same period, 63 EJ and 34 EJ respectively. In sharp contrast, Japan and South Korea, economies with significant energy-intensive manufacturing bases and each reliant on energy imports for meeting over 90% of their total energy demand, have collectively only managed to avoid importing just under 10 EJ over the same five-year period. Whilst renewables were responsible for generating a third of the world's electricity supply in 2024, they only met just over 8% of total global energy demand. Their potential to simultaneously deliver clean and independent energy systems for nations remains a vast, untapped opportunity.

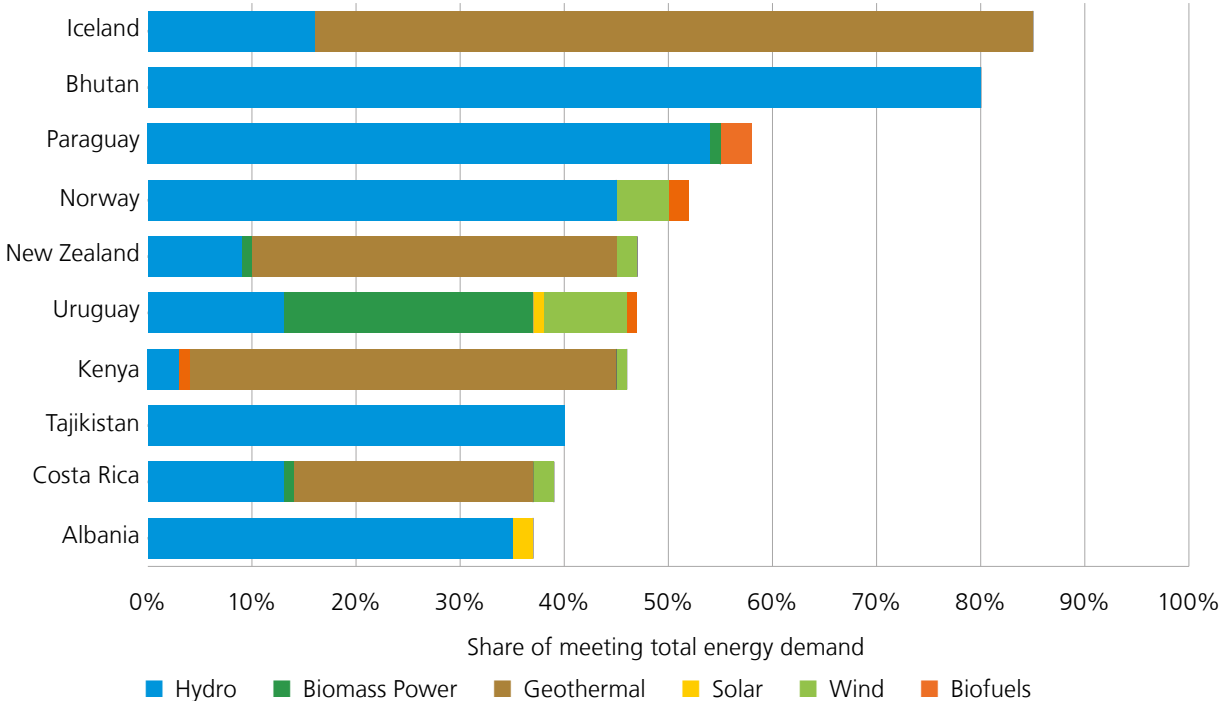
In much the same way that renewables deliver energy security through energy independence, energy efficiency and demand reduction can have the same effect. In the wake of Russia's invasion of Ukraine, gas pipeline supplies to Europe were severely disrupted. In response to shortages, record high gas prices, and demand response mechanisms that encouraged (and often paid) end-users to reduce their consumption, particularly of electricity where gas-fired power generation often sets wholesale electricity prices, gas demand in Europe fell 13% in 2022, completely reversing the 2021 post-COVID rebound gains and bringing demand back down to its 2015 level.

However, whilst renewables can make a significant contribution to strengthening energy security, their deployment, particularly less dependable wind and solar, can, in turn, raise issues around electricity grid stability. Without careful strategic planning, energy security could be achieved at the expense of system stability. Countries such as Iceland, Bhutan, and Norway have already decarbonised a high proportion of their overall energy systems (85%, 80%, and 52% respectively). Moreover, others, such as Albania, Ethiopia, and Iceland have already achieved power generation fleets that are 100% renewable. The dominant technologies in these instances are dependable forms of renewable generation such as hydro and geothermal. As countries increasingly deploy wind and solar technologies, their integration and expansion will need to be carefully planned to ensure that, when they start to make material contributions, essential ancillary services such as frequency response, voltage control, inertia, and reserve margins are maintained. Pairing them with energy storage, synthetic inertia technologies, smart grids, increased interconnection with other grid networks, and demand response participation offer ways to ensure the continued stability and resilience of electricity grids.

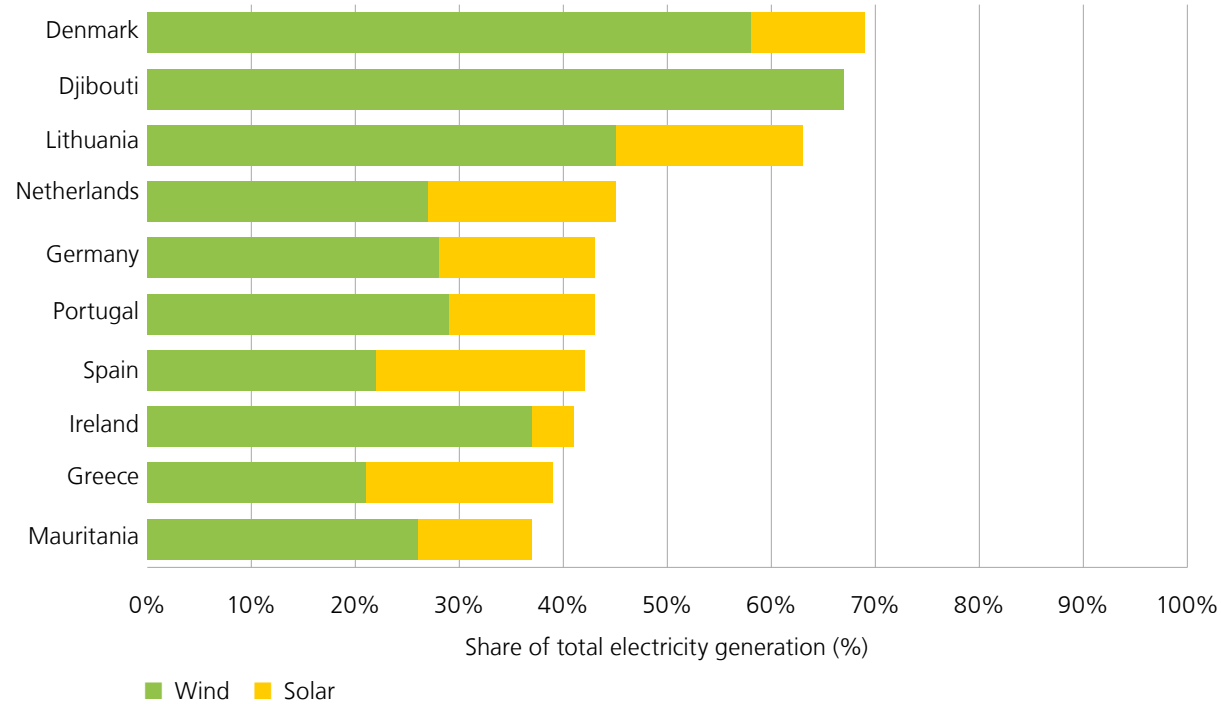
Avoided fuel imports through deployment of renewables



2024 top ten countries by renewable contributions



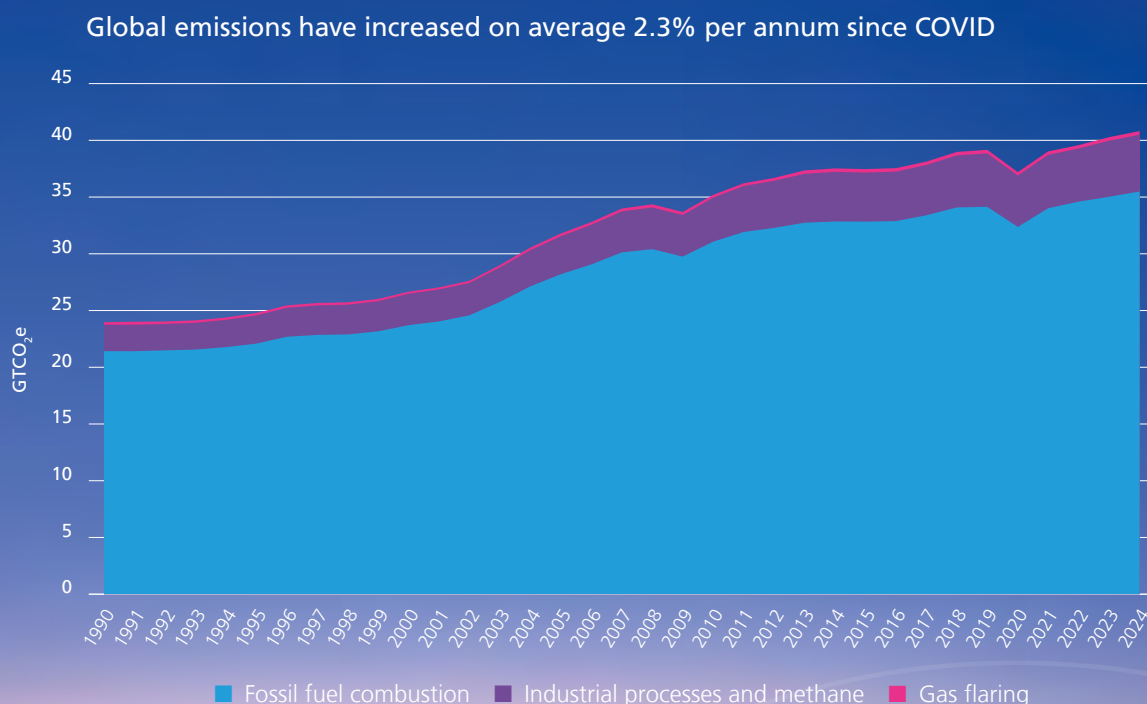
2024 top ten countries wind and solar penetration



Total energy supply and carbon

In 2024, oil, gas, coal, nuclear, hydro and renewable energy all registered increases, that is, all forms of energy saw an increase in demand something that last occurred in 2006. Renewables, excluding hydro, remain the fastest growing energy source with a 9% increase followed by hydro at 4% and nuclear at 3%. In terms of fossil fuels, natural gas saw the greatest increase at 2.5%, followed by coal at 1% and oil only registered a minor increase of 0.6%. Oil remains the dominant energy source meeting 34% of total energy demand.

Carbon emissions increased 1% in 2024 exceeding the record level set the previous year reaching 40.8 GtCO₂e. US emissions dropped 0.7% below its 2023 levels against its ten-year average annual decline rate of 1% per annum. European emissions were nearly 16% below where they were a decade ago. CO₂ emissions from the combustion of fossil fuels are by far the largest source of energy-related greenhouse gas emissions contributing to 87% of the total.



Post-COVID, Europe recorded a decline in energy-related emissions for the third year in a row, North America for the second year in a row



Carbon Carbon dioxide emissions from natural gas flaring

Million tonnes of carbon dioxide												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	4.3	3.9	2.9	2.9	2.9	2.3	2.5	2.5	2.3	2.6	2.4	-9.8%	-5.8%	0.7%
Mexico	11.5	12.1	11.7	9.1	9.2	10.7	13.5	15.8	13.8	14.4	12.8	-11.7%	1.0%	4.0%
US	23.0	24.2	18.3	19.5	28.6	34.9	25.0	19.6	17.7	21.0	24.7	17.0%	0.7%	7.7%
Total North America	38.8	40.2	32.8	31.4	40.6	47.9	41.0	37.9	33.8	38.1	39.8	4.3%	0.3%	12.4%
Argentina	1.7	1.5	1.3	1.2	1.6	2.0	2.3	2.7	2.5	2.4	2.2	-5.6%	2.6%	0.7%
Bolivia	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	-5.0%	-0.2%	†
Brazil	3.4	3.0	3.4	2.6	2.4	2.7	2.3	2.2	2.0	2.7	2.5	-8.0%	-3.2%	0.8%
Colombia	1.7	1.6	1.2	1.1	1.0	1.1	0.8	0.7	0.5	0.7	0.7	0.7%	-8.5%	0.2%
Peru	0.5	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.3	0.2	-12.5%	-6.8%	0.1%
Trinidad & Tobago	0.7	0.6	0.5	0.5	0.5	0.8	0.4	0.3	0.3	0.3	0.5	80.3%	-2.2%	0.2%
Venezuela	21.1	20.0	20.5	16.1	18.7	21.2	18.9	18.5	19.7	19.1	19.2	0.3%	-0.9%	6.0%
Other S. & Cent. America	2.6	2.7	2.9	2.6	2.3	2.3	3.1	3.2	3.4	3.9	3.5	-12.0%	2.9%	1.1%
Total S. & Cent. America	31.8	30.1	30.2	24.4	26.7	30.3	28.2	28.0	28.9	29.4	29.0	-1.9%	-0.9%	9.0%
Denmark	0.2	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	19.6%	-8.5%	†
Germany	0.1	0.1	0.1	^	0.1	^	^	^	^	0.1	0.1	-17.5%	-4.1%	†
Italy	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	12.1%	-5.8%	†
Netherlands	^	0.1	0.1	^	^	^	^	^	0.1	^	0.1	11.4%	2.5%	†
Norway	0.7	0.8	0.8	0.5	0.4	0.3	0.3	0.4	0.3	0.3	0.3	1.9%	-9.1%	0.1%
Poland	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	-28.6%	1.9%	†
Romania	0.1	0.1	0.1	^	^	^	^	0.1	0.1	0.1	0.1	31.2%	-4.1%	†
Ukraine	0.5	0.5	0.5	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	-12.0%	-8.0%	0.1%
United Kingdom	2.7	2.7	2.8	2.8	2.5	2.4	2.2	1.8	1.2	1.4	1.8	27.4%	-4.3%	0.6%
Other Europe	1.0	0.9	0.9	0.6	0.7	0.9	0.8	0.8	0.7	0.7	0.8	7.3%	-2.3%	0.2%
Total Europe	5.6	5.5	5.7	4.7	4.5	4.2	3.9	3.8	2.8	3.0	3.5	13.6%	-4.7%	1.1%
Azerbaijan	0.7	0.4	0.5	0.4	0.5	0.5	0.3	0.3	0.4	0.8	0.6	-19.3%	-0.9%	0.2%
Kazakhstan	7.8	7.3	5.3	4.8	4.1	3.1	2.9	3.0	2.0	2.0	1.9	-4.6%	-13.0%	0.6%
Russian Federation	39.4	42.5	48.2	42.3	42.9	48.0	50.6	53.3	52.6	59.4	57.8	-2.9%	3.9%	18.0%
Turkmenistan	4.0	3.7	3.6	3.3	3.0	2.7	3.3	2.4	2.2	2.4	2.6	6.5%	-4.3%	0.8%
Uzbekistan	2.6	2.2	2.1	1.7	1.6	1.2	1.1	0.9	0.9	0.8	0.7	-8.1%	-11.9%	0.2%
Other CIS	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.3	0.2	-36.3%	4.2%	0.1%
Total CIS	54.5	56.2	59.8	52.6	52.1	55.9	58.4	60.1	58.2	65.7	63.9	-3.0%	1.6%	19.9%
Bahrain	0.1	0.1	0.2	0.3	0.2	0.4	0.5	0.3	0.2	0.2	0.2	-22.3%	6.8%	†
Iran	26.4	25.7	34.4	37.4	36.5	29.6	28.6	37.3	37.1	43.1	41.6	-3.9%	4.7%	13.0%
Iraq	27.9	32.0	35.3	35.4	35.5	35.8	34.7	35.8	35.9	35.6	35.1	-1.6%	2.3%	10.9%
Kuwait	3.1	2.0	2.6	1.8	2.0	1.7	1.8	2.1	1.5	1.6	1.5	-11.1%	-7.4%	0.5%
Oman	5.1	4.8	5.6	5.2	5.2	5.2	5.1	5.2	4.2	3.7	4.4	16.4%	-1.5%	1.4%
Qatar	3.2	2.8	2.8	2.6	2.6	3.3	2.6	2.8	2.6	2.6	2.8	6.9%	-1.2%	0.9%
Saudi Arabia	5.1	5.5	6.3	5.8	5.8	5.2	5.7	5.6	5.1	6.8	5.9	-14.0%	1.5%	1.8%
Syria	0.8	1.1	1.2	2.4	1.4	1.9	2.0	2.1	2.2	2.2	2.2	-1.3%	10.1%	0.7%
United Arab Emirates	2.2	2.3	2.0	2.2	2.6	2.0	2.2	2.0	2.2	2.1	2.1	-0.3%	-0.3%	0.7%
Other Middle East	2.4	1.3	0.7	0.8	0.9	1.4	1.7	1.9	1.4	0.9	1.2	26.5%	-6.7%	0.4%
Total Middle East	76.2	77.5	91.0	93.9	92.7	86.5	84.9	95.0	92.5	99.0	96.8	-2.5%	2.4%	30.2%
Algeria	18.5	19.5	19.5	18.6	19.0	19.6	18.8	16.4	17.3	16.7	16.8	0.2%	-1.0%	5.2%
Egypt	6.0	6.1	6.1	5.1	4.9	5.1	5.1	4.7	4.4	4.4	4.2	-4.1%	-3.5%	1.3%
Libya	5.9	5.4	4.9	8.0	9.4	10.2	5.0	12.0	11.0	13.6	14.6	6.4%	9.5%	4.5%
Nigeria	16.7	15.1	14.6	15.2	14.7	15.7	14.2	13.1	10.7	11.5	13.8	19.5%	-1.9%	4.3%
Other Africa	19.5	21.0	21.0	18.9	17.3	16.5	15.8	15.0	15.9	14.5	16.8	15.7%	-1.5%	5.2%
Total Africa	66.7	67.0	66.2	65.8	65.3	67.2	59.0	61.1	59.2	60.8	66.2	8.6%	-0.1%	20.6%
Australia	2.2	2.2	1.4	1.4	1.7	2.8	2.0	1.6	1.4	1.3	1.9	44.7%	-1.3%	0.6%
Bangladesh	^	0.1	^	^	^	^	^	0.1	^	^	^	-3.7%	2.5%	†
Brunei	0.4	0.4	0.6	0.6	0.4	0.6	0.3	0.4	0.2	0.3	0.2	-19.8%	-6.6%	0.1%
China	5.0	5.0	4.7	3.6	4.0	4.4	5.8	5.4	5.0	4.9	4.8	-2.2%	-0.6%	1.5%
India	4.8	5.4	4.9	4.1	3.7	3.6	4.1	3.8	4.1	4.1	3.9	-6.3%	-2.1%	1.2%
Indonesia	6.4	6.1	5.8	4.9	4.3	4.3	4.0	3.5	3.7	4.2	3.9	-6.8%	-4.8%	1.2%
Malaysia	7.2	7.9	6.9	6.2	5.1	5.5	5.4	4.3	3.5	3.4	3.5	0.7%	-7.0%	1.1%
Myanmar	0.1	0.1	0.1	0.1	0.1	0.1	0.1	^	^	^	^	5.0%	-15.7%	†
Pakistan	0.9	0.9	0.9	0.7	0.6	0.6	0.6	0.5	0.6	0.5	0.5	0.7%	-5.1%	0.2%
Thailand	0.9	0.9	0.9	0.8	0.7	0.7	0.7	0.7	0.5	0.5	0.6	21.5%	-4.4%	0.2%
Vietnam	2.1	2.0	1.8	1.9	1.6	1.6	1.4	1.1	1.2	1.3	1.3	-2.4%	-4.7%	0.4%
Other Asia Pacific	1.7	1.4	1.4	0.9	0.9	0.6	0.6	0.8	0.9	0.8	0.9	20.2%	-6.4%	0.3%
Total Asia Pacific	31.9	32.4	29.5	25.3	23.1	24.8	25.1	22.4	21.1	21.3	21.6	0.7%	-3.9%	6.7%
Total World	305.6	309.0	315.2	298.1	305.0	316.8	300.5	308.3	296.6	317.4	320.7	0.8%	0.5%	100.0%
of which: OECD	48.0	49.3	41.0	38.5	47.8	55.9	47.7	44.0	38.6	43.1	45.9	6.3%	-0.5%	14.3%
Non-OECD	257.6	259.6	274.2	259.6	257.2	260.9	252.8	264.3	258.0	274.3	274.8	-0.1%	0.7%	85.7%
European Union	1.6	1.4	1.4	1.0	1.2	1.2	1.1	1.2	1.0	1.0	1.1	5.7%	-3.5%	0.3%

^ Less than 0.05.

† Less than 0.005%.

Notes: Data from 2013 onward: Made utilising VIIRS Nightfire (VNF) nightly data produced by the Earth Observation Group, Payne Institute for Public Policy, Colorado School of Mines. From 2024, Energy Institute assessment. These data include flaring from upstream, downstream oil and gas.

Emissions have been calculated using flared natural gas volumes based on standard cubic metres (standardised using a Gross Calorific Value (GCV) of 40 MJ/m³) and the standard conversion factor for emissions from the IPCC. Perfect combustion has been assumed.

Annual changes and shares of total are calculated using million tonnes of carbon dioxide figures. Growth rates are adjusted for leap years.



Carbon Carbon capture, usage and storage (CCUS)

Capture capacity Million tonnes per year												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	1.1	2.3	2.3	2.3	2.3	2.3	4.0	4.0	4.0	4.0	4.0	–	14.0%	6.9%
Mexico	–	–	–	–	–	–	–	–	–	–	–	–	–	–
US	19.5	19.5	19.5	21.9	21.9	21.8	21.8	22.0	22.7	23.9	24.1	0.9%	2.2%	41.7%
Total North America	20.5	21.7	21.7	24.1	24.1	24.1	25.8	25.9	26.7	27.9	28.1	0.7%	3.2%	48.7%
Brazil	2.1	2.8	4.1	4.6	6.5	8.9	9.6	10.3	10.5	10.6	11.1	4.7%	18.1%	19.2%
Total S. & Cent. America	2.1	2.8	4.1	4.6	6.5	8.9	9.6	10.3	10.5	10.6	11.1	4.7%	18.1%	19.2%
Norway	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	–	–	2.9%
Other Europe	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.3	0.7	0.7	0.7	9.2%	-5.1%	1.2%
Total Europe	2.9	3.0	3.0	3.0	3.0	3.0	3.0	3.0	2.4	2.4	2.4	2.6%	-1.8%	4.2%
Russian Federation	–	–	–	–	–	–	–	0.4	0.4	0.4	0.4	–	–	0.7%
Total CIS	–	–	–	–	–	–	–	0.4	0.4	0.4	0.4	–	–	0.7%
Qatar	–	0.2	0.2	0.2	0.2	2.3	2.3	2.3	2.3	2.3	2.3	–	–	3.9%
Saudi Arabia	–	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.4	–	–	2.4%
Other Middle East	0.3	0.3	1.1	1.1	1.1	1.1	1.4	1.4	1.4	1.4	1.4	–	16.4%	2.4%
Total Middle East	0.3	1.8	2.6	2.6	2.6	4.7	5.0	5.0	5.0	5.1	5.1	–	32.3%	8.8%
Total Africa	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Australia	–	–	–	–	–	4.0	4.0	4.0	4.0	4.0	5.7	42.5%	–	9.9%
China	0.3	0.4	0.4	0.4	0.7	0.7	0.7	0.9	2.2	3.5	3.6	1.5%	28.6%	6.2%
Other Asia Pacific	–	–	–	–	–	–	–	–	–	–	1.3	–	–	2.3%
Total Asia Pacific	0.3	0.4	0.4	0.4	0.7	4.7	4.7	4.9	6.2	7.5	10.6	40.9%	43.3%	18.4%
Total World	26.1	29.7	31.8	34.7	37.0	45.4	48.1	49.6	51.1	54.0	57.8	7.1%	8.3%	100.0%
of which: OECD	23.1	24.4	24.4	26.9	26.9	30.8	32.7	32.9	33.0	34.3	36.2	5.6%	4.6%	62.6%
Non-OECD	3.0	5.3	7.4	7.8	10.1	14.6	15.4	16.7	18.2	19.7	21.7	9.8%	21.7%	37.4%
European Union	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.1	0.1	0.1	25.0%	-15.8%	0.2%

^ Less than 0.05.

† Less than 0.05%.

Source: Rystad Energy. For further information visit <https://www.rystadenergy.com>



Carbon Prices

	Compliance Markets				Voluntary Markets				
	UK Emissions trading scheme GBP£/MtCO ₂ e	EU Emissions trading scheme EUR€/MtCO ₂ e	California carbon allowance USD\$/MtCO ₂ e	Regional greenhouse gas initiative USD\$/MtCO ₂ e	Platts CORSIA-eligible credits (CEC)	Platts carbon removal credits (CRC)	Platts CAC	Platts technological carbon capture	Platts renewable energy
	USD\$/MtCO ₂ e								
2012	–	6.87	–	–	–	–	–	–	–
2013	–	4.53	–	–	–	–	–	–	–
2014	–	6.01	–	–	–	–	–	–	–
2015	–	7.72	–	–	–	–	–	–	–
2016	–	5.36	–	–	–	–	–	–	–
2017	–	5.84	–	–	–	–	–	–	–
2018	–	15.85	–	–	–	–	–	–	–
2019	–	24.91	–	–	–	–	–	–	–
2020	–	24.83	17.08	6.63	–	–	–	–	–
2021	66.76	53.52	23.43	9.63	4.16	14.53	7.32	112.80	4.53
2022	92.81	81.17	29.53	13.67	4.77	16.00	6.81	138.84	4.90
2023	63.53	85.27	34.08	13.98	1.41	13.36	3.02	129.72	2.41
2024	45.90	66.47	36.19	22.97	14.41	12.50	1.82	124.76	1.43

Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc.

Oil

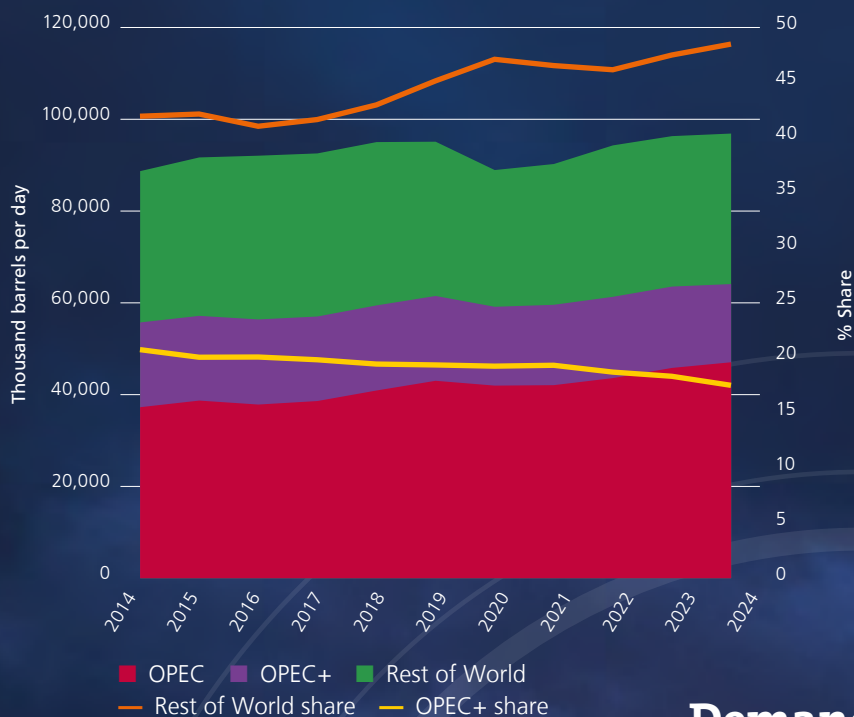
In 2024, global oil production rose 0.6% to 97 million barrels per day, with non-OPEC countries driving growth. The US led this expansion, with output reaching a record level, breaching the 20 Mbpd level for the first time, driven by enhanced shale extraction technologies and operational efficiencies. This surge brought US production close to the combined output of Saudi Arabia and Russia. South American producers, particularly Guyana and Argentina, also registered notable increases.

Demand patterns reflected global economic headwinds, with demand growing 0.7 Mbpd as post-pandemic momentum waned. China's economic slowdown significantly impacted Asia Pacific demand, with oil demand declining amid the country's rapid shift

towards electric vehicles and LNG trucks. However, India and Southeast Asia provided offsetting growth. Kerosene demand rose nearly 8% in non-OECD countries as air travel recovered, whilst diesel softened in advanced economies due to freight weakness and efficiency improvements.

Refining capacity remained stable globally, though utilisation declined to around 80%. Africa's capacity expanded dramatically by 20%, primarily through Nigeria's multi-billion-dollar Dangote refinery commencing operations. China's throughput fell 4% despite capacity growth, reflecting weakened domestic demand. This rebalancing highlighted evolving supply-demand dynamics across regions, with structural shifts reshaping traditional oil market patterns.

Oil production



Demand patterns suggest a shift for oil towards non-fuel and petrochemical products

Thousand barrels daily												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	4271	4388	4464	4813	5244	5371	5128	5414	5575	5648	5888	4.3%	3.3%	6.1%
Mexico	2784	2587	2456	2224	2068	1918	1910	1926	1943	2040	1911	-6.3%	-3.7%	2.0%
US	11796	12774	12359	13143	15329	17138	16498	16733	17925	19433	20135	3.6%	5.5%	20.8%
Total North America	18851	19749	19279	20180	22641	24427	23536	24073	25443	27121	27934	3.0%	4.0%	28.8%
Argentina	638	646	610	590	592	720	721	797	955	1072	1214	13.3%	6.7%	1.3%
Brazil	2341	2525	2607	2731	2691	2890	3030	2991	3112	3499	3466	-1.0%	4.0%	3.6%
Colombia	990	1006	886	854	865	886	781	736	754	779	773	-0.8%	-2.5%	0.8%
Ecuador	557	543	548	531	517	531	479	473	481	475	475	†	-1.6%	0.5%
Guyana	–	–	–	–	–	1	74	117	278	391	616	57.5%	–	0.6%
Peru	175	153	141	136	139	144	131	128	128	123	125	1.0%	-3.3%	0.1%
Trinidad & Tobago	114	109	97	99	87	82	76	77	74	74	74	0.1%	-4.2%	0.1%
Venezuela	2692	2864	2566	2209	1659	1053	676	665	726	843	960	13.9%	-9.8%	1.0%
Other S. & Cent. America	154	146	135	133	128	121	112	114	109	101	96	-5.3%	-4.6%	0.1%
Total S. & Cent. America	7661	7991	7590	7285	6679	6428	6082	6097	6618	7358	7798	6.0%	0.2%	8.0%
Denmark	167	158	142	138	116	103	72	66	65	60	60	0.9%	-9.6%	0.1%
Italy	120	113	78	86	97	89	113	103	94	90	93	3.1%	-2.5%	0.1%
Norway	1894	1953	2004	1982	1863	1750	2017	2037	1907	2024	1833	-9.4%	-0.3%	1.9%
Romania	84	83	79	76	75	75	72	70	66	63	60	-4.1%	-3.3%	0.1%
United Kingdom	854	964	1015	1005	1092	1118	1049	874	809	715	653	-8.6%	-2.6%	0.7%
Other Europe	341	331	312	302	307	302	289	289	271	277	299	8.0%	-1.3%	0.3%
Total Europe	3460	3601	3629	3590	3550	3437	3611	3439	3213	3229	2999	-7.1%	-1.4%	3.1%
Azerbaijan	851	841	828	782	784	763	703	708	669	621	598	-3.7%	-3.5%	0.6%
Kazakhstan	1701	1672	1637	1813	1900	1903	1796	1805	1771	1891	1836	-2.9%	0.8%	1.9%
Russian Federation	10927	11087	11342	11374	11562	11679	10666	11000	11202	11074	10752	-2.9%	-0.2%	11.1%
Turkmenistan	263	271	270	269	259	254	219	206	203	191	188	-1.3%	-3.3%	0.2%
Uzbekistan	63	60	57	61	64	62	44	46	45	43	42	-2.5%	-3.9%	†
Other CIS	35	36	36	37	38	39	39	41	43	44	45	2.4%	2.5%	†
Total CIS	13840	13966	14171	14336	14607	14701	13468	13806	13933	13865	13461	-2.9%	-0.3%	13.9%
Iran	3714	3853	4578	4939	4747	3502	3221	3680	3894	4573	5062	10.7%	3.1%	5.2%
Iraq	3239	3986	4423	4538	4632	4779	4114	4102	4520	4355	4398	1.0%	3.1%	4.5%
Kuwait	3106	3069	3150	3009	3050	2976	2721	2707	3023	2902	2719	-6.3%	-1.3%	2.8%
Oman	943	981	1004	971	978	971	951	971	1064	1049	993	-5.3%	0.5%	1.0%
Qatar	1892	1844	1846	1783	1798	1737	1703	1689	1729	1783	1806	1.2%	-0.5%	1.9%
Saudi Arabia	11519	11998	12406	11892	12261	11832	11039	10954	12140	11261	10856	-3.6%	-0.6%	11.2%
Syria	33	27	25	25	24	34	43	43	43	40	35	-12.7%	0.6%	†
United Arab Emirates	3592	3876	4020	3880	3894	3984	3702	3699	4120	4017	4006	-0.3%	1.1%	4.1%
Yemen	153	54	43	71	94	95	88	83	74	49	47	-5.9%	-11.2%	†
Other Middle East	214	213	214	208	207	214	202	208	209	208	199	-4.4%	-0.7%	0.2%
Total Middle East	28405	29901	31709	31316	31685	30124	27783	28137	30816	30238	30119	-0.4%	0.6%	31.1%
Algeria	1589	1558	1577	1540	1511	1487	1332	1353	1443	1466	1380	-5.8%	-1.4%	1.4%
Angola	1701	1796	1745	1671	1519	1420	1325	1177	1191	1150	1181	2.7%	-3.6%	1.2%
Chad	89	111	117	98	116	127	126	116	124	134	128	-4.4%	3.7%	0.1%
Republic of Congo	253	234	232	270	330	336	307	274	269	278	267	-4.1%	0.5%	0.3%
Egypt	714	726	691	660	674	653	632	608	616	610	637	4.4%	-1.1%	0.7%
Equatorial Guinea	284	260	223	195	176	160	158	131	121	88	97	9.8%	-10.2%	0.1%
Gabon	211	214	221	210	193	218	207	181	191	223	224	0.4%	0.6%	0.2%
Libya	495	412	388	892	1135	1196	423	1253	1109	1237	1188	-3.9%	9.1%	1.2%
Nigeria	2273	2199	1898	1966	2000	2093	1894	1678	1445	1540	1641	6.6%	-3.2%	1.7%
South Sudan	155	148	137	147	144	172	165	153	141	148	86	-41.4%	-5.7%	0.1%
Sudan	120	109	84	70	74	72	63	64	62	57	38	-34.5%	-10.9%	†
Tunisia	63	57	54	45	44	40	37	45	38	37	33	-13.1%	-6.4%	†
Other Africa	247	277	271	319	319	354	338	301	291	289	395	36.6%	4.8%	0.4%
Total Africa	8196	8099	7636	8086	8237	8328	7009	7334	7039	7258	7294	0.5%	-1.2%	7.5%
Australia	420	378	353	322	342	458	454	444	412	381	365	-4.2%	-1.4%	0.4%
Brunei	126	127	121	113	112	121	110	107	92	89	99	11.0%	-2.4%	0.1%
China	4246	4309	3999	3846	3802	3848	3901	3994	4111	4198	4264	1.6%	†	4.4%
India	914	904	896	897	892	851	795	770	740	729	735	0.8%	-2.2%	0.8%
Indonesia	847	838	873	837	808	781	742	692	647	638	613	-3.9%	-3.2%	0.6%
Malaysia	649	696	726	718	713	672	615	571	561	557	535	-3.8%	-1.9%	0.6%
Thailand	464	481	489	486	475	475	421	398	328	324	353	8.9%	-2.7%	0.4%
Vietnam	325	352	317	284	257	236	207	196	194	188	177	-6.1%	-5.9%	0.2%
Other Asia Pacific	292	293	277	269	230	227	204	195	167	157	144	-8.2%	-6.8%	0.1%
Total Asia Pacific	8284	8378	8051	7773	7630	7669	7449	7366	7252	7261	7285	0.3%	-1.3%	7.5%
Total World	88697	91686	92065	92565	95029	95114	88938	90251	94313	96329	96890	0.6%	0.9%	100.0%
of which: OECD	23580	24597	24014	24816	27259	29066	28246	28558	29697	31395	31958	1.8%	3.1%	33.0%
Non-OECD	65117	67089	68051	67749	67769	66048	60692	61693	64616	64934	64932	†	†	67.0%
OPEC	32969	34522	35680	35541	35589	33617	29795	30677	33000	32783	32798	†	-0.1%	33.9%
Non-OPEC	55728	57164	56385	57023	59440	61497	59143	59574	61313	63546	64092	0.9%	1.4%	66.1%
European Union	553	534	468	463	448	414	392	372	344	328	330	0.6%	-5.1%	0.3%

Source: includes data from FGE Iran Service.

* Includes crude oil, shale oil, oil sands, condensates (lease condensate or gas condensates that require further refining) and NGLs (natural gas liquids – ethane, LPG and naphtha separated from the production of natural gas).

Excludes liquid fuels from other sources such as biofuels and synthetic derivatives of coal and natural gas. This also excludes liquid fuel adjustment factors such as refinery processing gain. Excludes oil shales/kerosene extracted in solid form.

† Less than 0.05%.

Note: Annual changes and shares of total are calculated using thousand barrels daily figures.

Million tonnes												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	209.8	216.1	218.8	236.6	257.7	263.4	252.0	266.6	273.9	278	290	4.1%	3.3%	6.4%
Mexico	137.1	127.5	121.4	109.5	102.3	94.9	95.1	96.4	97.6	103	96	-6.3%	-3.5%	2.1%
US	524.1	566.7	542.9	574.3	670.0	751.1	713.5	717.9	766.2	830	858	3.1%	5.1%	18.9%
Total North America	871.0	910.3	883.1	920.4	1030.0	1109.5	1060.6	1081.0	1137.7	1210	1244	2.6%	3.6%	27.4%
Argentina	29.8	30.0	28.6	27.3	27.6	33.8	33.7	37.6	45.4	51	59	14.2%	7.0%	1.3%
Brazil	122.5	132.2	136.7	142.6	140.6	151.2	159.3	156.9	163.2	184	182	-1.1%	4.0%	4.0%
Colombia	52.2	53.0	46.8	45.0	45.6	46.7	41.3	38.8	39.7	41	41	-0.8%	-2.4%	0.9%
Ecuador	29.8	29.1	29.5	28.5	27.7	28.5	25.8	25.3	25.8	25	26	†	-1.5%	0.6%
Guyana	–	–	–	–	–	^	4	6	14	19	31	57.5%	–	0.7%
Peru	7.5	6.5	5.8	5.7	5.9	6.1	5.5	5.3	5.4	5	5	1.0%	-3.6%	0.1%
Trinidad & Tobago	5.1	4.8	4.3	4.4	3.9	3.7	3.4	3.5	3.4	3	3	-1.1%	-3.9%	0.1%
Venezuela	138.5	147.6	132.6	113.6	85.1	53.5	34.4	33.9	37.1	43	50	14.2%	-9.8%	1.1%
Other S. & Cent. America	7.7	7.4	6.8	6.7	6.4	6.1	5.7	5.8	5.6	5	5	-4.9%	-4.4%	0.1%
Total S. & Cent. America	393.1	410.7	391.2	373.8	342.8	329.6	312.9	312.9	339.4	378	401	5.8%	0.2%	8.8%
Denmark	8.1	7.7	6.9	6.7	5.6	5.0	3.5	3.2	3.2	3	3	0.9%	-9.6%	0.1%
Italy	5.8	5.5	3.8	4.1	4.7	4.3	5.4	4.9	4.5	4	4	3.0%	-2.5%	0.1%
Norway	85.4	88.0	90.7	89.4	83.9	79.2	92.6	94.3	89.2	95	86	-9.7%	0.1%	1.9%
Romania	4.1	4.0	3.8	3.6	3.6	3.6	3.5	3.3	3.1	3	3	-4.2%	-3.4%	0.1%
United Kingdom	39.9	45.3	47.4	46.6	50.9	51.8	49.0	40.9	37.8	33	30	-9.4%	-2.7%	0.7%
Other Europe	17.0	16.5	15.6	15.0	15.2	15.0	14.4	14.3	13.5	14	15	8.3%	-1.3%	0.3%
Total Europe	160.2	166.9	168.2	165.5	163.9	158.8	168.4	161.0	151.3	152	142	-7.3%	-1.2%	3.1%
Azerbaijan	42.1	41.7	41.1	38.7	38.8	37.6	34.6	34.6	32.7	30	29	-3.9%	-3.6%	0.6%
Kazakhstan	80.8	79.5	78.0	86.2	90.4	90.6	85.7	85.9	84.2	90	88	-3.0%	0.8%	1.9%
Russian Federation	537.4	544.6	558.5	558.5	567.9	573.4	524.4	538.8	548.5	542	526	-3.1%	-0.2%	11.6%
Turkmenistan	12.9	13.2	13.2	13.1	12.5	12.2	10.4	9.8	9.6	9	9	-1.0%	-3.5%	0.2%
Uzbekistan	2.9	2.7	2.6	2.8	2.9	2.8	2.0	2.1	2.1	2	2	-2.8%	-3.9%	†
Other CIS	1.8	1.8	1.8	1.8	1.9	1.9	2.0	2.0	2.1	2	2	2.4%	2.6%	†
Total CIS	677.9	683.4	695.2	701.1	714.3	718.5	659.1	673.2	679.2	675	656	-3.1%	-0.3%	14.4%
Iran	174.0	180.2	216.1	234.5	223.4	161.5	147.4	169.3	178.3	211	234	10.7%	3.0%	5.2%
Iraq	158.8	195.6	217.6	222.4	227.0	234.2	202.0	200.8	221.3	213	216	0.9%	3.1%	4.7%
Kuwait	150.2	148.2	152.7	145.0	146.8	143.4	131.2	130.0	145.5	140	131	-6.5%	-1.4%	2.9%
Oman	46.2	48.0	49.3	47.6	47.8	47.3	46.1	46.8	51.4	51	48	-5.5%	0.4%	1.1%
Qatar	79.9	77.4	77.6	74.8	75.1	72.3	71.6	70.4	72.0	74	75	1.3%	-0.6%	1.7%
Saudi Arabia	543.8	568.0	586.7	559.3	576.8	556.6	519.6	515.0	573.1	529	510	-3.8%	-0.6%	11.2%
Syria	1.5	1.2	1.1	1.1	1.1	1.5	2.0	2.0	2.0	2	2	-13.1%	1.3%	†
United Arab Emirates	162.9	175.1	181.6	174.9	176.0	179.9	166.9	166.0	185.5	180	180	-0.5%	1.0%	4.0%
Yemen	6.9	2.2	1.6	3.0	4.1	4.1	3.8	3.5	3.1	2	2	-7.2%	-12.7%	†
Other Middle East	10.5	10.5	10.6	10.2	10.2	10.4	9.9	10.2	10.2	10	10	-4.4%	-0.8%	0.2%
Total Middle East	1334.8	1406.5	1495.0	1472.8	1488.3	1411.2	1300.4	1314.0	1442.4	1412	1407	-0.6%	0.5%	31.0%
Algeria	68.8	67.2	68.4	66.6	65.3	64.3	57.6	58.2	62.1	63	59	-6.2%	-1.5%	1.3%
Angola	83.3	88.2	85.8	81.6	74.1	69.1	64.6	57.1	57.8	56	57	2.6%	-3.7%	1.3%
Chad	4.7	5.8	6.1	5.2	6.1	6.7	6.6	6.1	6.5	7	7	-4.4%	3.8%	0.1%
Republic of Congo	12.9	11.9	11.9	13.8	16.9	17.2	15.8	14.0	13.7	14	14	-4.1%	0.6%	0.3%
Egypt	35.1	35.4	33.8	32.2	32.8	31.8	31.1	29.6	30.0	30	31	4.5%	-1.2%	0.7%
Equatorial Guinea	13.3	12.1	10.3	9.0	8.1	7.4	7.4	6.1	5.6	4	4	7.3%	-10.6%	0.1%
Gabon	10.5	10.7	11.0	10.5	9.7	10.9	10.4	9.0	9.5	11	11	0.4%	0.6%	0.2%
Libya	23.2	19.4	18.2	42.1	53.4	56.1	19.6	58.8	51.9	58	56	-4.1%	9.2%	1.2%
Nigeria	109.2	105.7	91.3	94.4	96.2	100.9	91.4	80.7	69.3	74	79	6.5%	-3.2%	1.7%
South Sudan	7.7	7.3	6.8	7.3	7.1	8.4	8.1	7.5	6.9	7	4	-41.4%	-5.7%	0.1%
Sudan	5.9	5.4	4.2	3.4	3.7	3.6	3.1	3.2	3.1	3	2	-34.5%	-10.9%	†
Tunisia	2.9	2.6	2.4	2.1	2.0	1.8	1.7	2.1	1.8	2	1	-13.1%	-6.5%	†
Other Africa	12.3	13.7	13.5	15.7	15.7	17.4	16.7	14.8	14.3	14	19	37.2%	4.7%	0.4%
Total Africa	389.7	385.4	363.7	383.8	391.1	395.6	334.0	347.1	332.4	343	345	0.5%	-1.2%	7.6%
Australia	18.6	16.8	15.4	13.9	14.6	19.3	19.1	18.4	17.1	16	15	-4.7%	-2.2%	0.3%
Brunei	6.2	6.2	5.9	5.5	5.4	5.9	5.4	5.2	4.5	4	5	11.2%	-2.4%	0.1%
China	211.4	214.6	199.7	191.5	189.3	191.6	194.8	198.9	204.7	209	213	1.6%	0.1%	4.7%
India	41.6	41.2	40.6	40.4	39.5	37.5	35.1	34.0	33.0	33	33	0.7%	-2.3%	0.7%
Indonesia	41.0	40.6	42.6	40.9	39.5	38.1	36.3	33.7	31.5	31	30	-4.0%	-3.1%	0.7%
Malaysia	29.8	32.2	33.3	32.9	32.5	30.6	28.0	25.9	25.3	25	24	-4.2%	-2.1%	0.5%
Thailand	16.9	17.6	18.1	17.6	17.0	16.9	15.1	13.9	11.5	11	12	10.3%	-3.0%	0.3%
Vietnam	15.9	17.2	15.5	13.9	12.4	11.4	10.0	9.5	9.3	9	9	-6.2%	-6.0%	0.2%
Other Asia Pacific	13.0	13.1	12.4	12.0	10.3	10.1	9.2	8.7	7.5	7	7	-8.0%	-6.7%	0.1%
Total Asia Pacific	394.4	399.4	383.5	368.5	360.6	361.5	353.1	348.2	344.4	345	347	0.3%	-1.3%	7.6%
Total World	4221.0	4362.4	4379.9	4385.9	4490.9	4484.7	4188.4	4237.4	4426.7	4514	4543	0.4%	0.7%	100.0%
of which: OECD	1094.9	1140.1	1106.8	1138.4	1247.3	1327.3	1282.7	1292.7	1339.8	1413	1436	1.3%	2.7%	31.6%
Non-OECD	3126.1	3222.4	3273.1	3247.5	3243.6	3157.4	2905.8	2944.7	3087.0	3101	3107	-0.1%	-0.1%	68.4%
OPEC	1566.2	1641.8	1698.5	1686.2	1684.8	1585.9	1403.7	1441.7	1552.8	1540	1543	-0.1%	-0.1%	34.0%
Non-OPEC	2654.8	2720.6	2681.3	2699.7	2806.1	2898.8	2784.7	2795.6	2873.9	2974	2999	0.6%	1.2%	66.0%
European Union	27.0	26.1	22.9	22.6	21.9	20.2	19.2	18.1	16.8	16	16	0.5%	-5.1%	0.4%

Source: includes data from FGE Iran Service.

* Includes crude oil, shale oil, oil sands, condensates (lease condensate or gas condensates that require further refining) and NGLs (natural gas liquids – ethane, LPG and naphtha separated from the production of natural gas).

Excludes liquid fuels from other sources such as biofuels and synthetic derivatives of coal and natural gas. This also excludes liquid fuel adjustment factors such as refinery processing gain.

Excludes oil shales/kerogen extracted in solid form.

^ Less than 0.05.

† Less than 0.05%.

Note: Annual changes and shares of total are calculated using million tonnes figures. Growth rates are adjusted for leap years.



Oil Crude oil and condensate production in thousands of barrels per day*

Thousand barrels daily												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014-24	2024
Canada	3758	3863	3868	4216	4596	4690	4469	4745	4866	4935	5135	4.1%	3.2%	6.2%
Mexico	2429	2267	2154	1948	1833	1701	1705	1756	1785	1875	1759	-6.2%	-3.2%	2.1%
US	8781	9432	8850	9360	10959	12314	11323	11308	11992	12935	13194	2.0%	4.2%	15.9%
Total North America	14968	15562	14872	15524	17389	18705	17497	17810	18643	19745	20088	1.7%	3.0%	24.3%
Argentina	532	532	511	480	490	608	601	682	832	946	1096	15.8%	7.5%	1.3%
Brazil	2255	2437	2510	2622	2587	2788	2940	2905	3022	3402	3358	-1.3%	4.1%	4.1%
Colombia	990	1006	886	854	865	886	781	736	754	779	773	-0.8%	-2.5%	0.9%
Ecuador	557	543	548	531	517	531	479	473	481	475	475	†	-1.6%	0.6%
Guyana	–	–	–	–	–	1	74	117	278	391	616	57.5%	–	0.7%
Peru	121	104	91	88	92	95	84	82	86	80	80	-0.3%	-4.1%	0.1%
Trinidad & Tobago	81	79	71	72	63	59	57	60	58	60	58	-3.3%	-3.3%	0.1%
Venezuela	2578	2747	2461	2105	1571	974	624	616	679	798	914	14.4%	-9.9%	1.1%
Other S. & Cent. America	139	133	123	119	114	108	100	101	97	90	85	-5.0%	-4.8%	0.1%
Total S. & Cent. America	7254	7581	7200	6871	6299	6050	5740	5772	6287	7022	7455	6.2%	0.3%	9.0%
Denmark	167	158	142	138	116	103	72	66	65	60	60	0.9%	-9.6%	0.1%
Italy	120	113	78	86	97	89	112	100	92	88	91	2.9%	-2.7%	0.1%
Norway	1570	1614	1655	1629	1527	1449	1724	1784	1709	1818	1641	-9.7%	0.4%	2.0%
Romania	82	80	76	73	72	71	68	66	62	59	57	-4.6%	-3.6%	0.1%
United Kingdom	791	903	933	913	1002	1019	961	807	742	659	592	-10.2%	-2.9%	0.7%
Other Europe	327	317	297	284	289	285	274	273	256	262	284	8.4%	-1.4%	0.3%
Total Europe	3056	3186	3180	3124	3103	3016	3210	3096	2927	2946	2725	-7.5%	-1.1%	3.3%
Azerbaijan	849	840	826	781	783	762	702	707	667	618	595	-3.7%	-3.5%	0.7%
Kazakhstan	1701	1672	1637	1813	1900	1903	1796	1805	1771	1891	1836	-2.9%	0.8%	2.2%
Russian Federation	10479	10617	10863	10898	11083	11186	10192	10455	10669	10554	10222	-3.1%	-0.2%	12.3%
Turkmenistan	246	254	250	248	236	228	189	179	173	166	165	-0.7%	-3.9%	0.2%
Uzbekistan	63	60	57	61	64	62	44	46	45	43	42	-2.5%	-3.9%	0.1%
Other CIS	35	36	36	37	38	39	39	41	43	44	45	2.4%	2.5%	0.1%
Total CIS	13373	13478	13670	13839	14104	14180	12963	13233	13368	13316	12905	-3.1%	-0.4%	15.6%
Iran	3273	3392	4090	4491	4241	3023	2734	3184	3312	3940	4340	10.2%	2.9%	5.2%
Iraq	3198	3945	4375	4473	4568	4712	4049	4032	4446	4271	4308	0.9%	3.0%	5.2%
Kuwait	2830	2782	2860	2704	2737	2678	2438	2415	2707	2590	2411	-6.9%	-1.6%	2.9%
Oman	943	981	1004	971	978	971	951	971	1064	1049	993	-5.3%	0.5%	1.2%
Qatar	1426	1374	1373	1333	1328	1266	1276	1248	1267	1307	1321	1.0%	-0.8%	1.6%
Saudi Arabia	9941	10420	10688	10175	10533	10145	9430	9394	10509	9609	9203	-4.2%	-0.8%	11.1%
Syria	23	19	17	17	16	25	33	33	33	30	26	-15.7%	1.1%	†
United Arab Emirates	3053	3262	3366	3250	3293	3345	3094	3074	3464	3346	3316	-0.9%	0.8%	4.0%
Yemen	128	28	16	44	67	67	60	55	46	22	19	-13.0%	-17.4%	†
Other Middle East	204	203	204	198	196	196	184	193	193	193	184	-4.6%	-1.0%	0.2%
Total Middle East	25020	26407	27994	27656	27956	26427	24250	24600	27041	26357	26120	-0.9%	0.4%	31.6%
Algeria	1329	1290	1316	1287	1259	1239	1099	1105	1178	1193	1109	-7.1%	-1.8%	1.3%
Angola	1672	1780	1722	1632	1479	1373	1278	1130	1144	1103	1130	2.4%	-3.8%	1.4%
Chad	89	111	117	98	116	127	126	116	124	134	128	-4.4%	3.7%	0.2%
Republic of Congo	245	227	225	263	323	329	300	267	262	271	260	-4.2%	0.6%	0.3%
Egypt	667	662	631	603	617	597	587	561	571	565	592	4.8%	-1.2%	0.7%
Equatorial Guinea	266	242	204	174	157	144	143	119	108	78	79	0.9%	-11.4%	0.1%
Gabon	211	214	221	210	193	218	207	181	191	223	224	0.4%	0.6%	0.3%
Libya	480	402	377	879	1108	1160	389	1207	1060	1188	1136	-4.4%	9.0%	1.4%
Nigeria	2188	2119	1822	1890	1922	2014	1833	1620	1378	1471	1557	5.9%	-3.3%	1.9%
South Sudan	155	148	137	147	144	172	165	153	141	148	86	-41.4%	-5.7%	0.1%
Sudan	120	109	84	70	74	72	63	64	62	57	38	-34.5%	-10.9%	†
Tunisia	58	52	46	39	38	36	33	41	35	33	29	-13.1%	-6.8%	†
Other Africa	247	277	271	319	319	353	337	300	290	288	394	36.8%	4.8%	0.5%
Total Africa	7726	7632	7171	7611	7749	7834	6561	6863	6542	6752	6760	0.1%	-1.3%	8.2%
Australia	353	322	290	263	282	361	351	335	311	280	266	-5.3%	-2.8%	0.3%
Brunei	114	115	109	101	100	110	100	98	83	81	91	12.2%	-2.3%	0.1%
China	4246	4309	3999	3846	3802	3848	3901	3994	4111	4198	4264	1.6%	†	5.2%
India	778	772	752	744	719	677	636	620	609	605	609	0.6%	-2.4%	0.7%
Indonesia	789	786	829	801	772	745	708	659	612	606	580	-4.2%	-3.0%	0.7%
Malaysia	610	662	667	660	653	610	556	511	502	499	479	-4.2%	-2.4%	0.6%
Thailand	233	248	258	240	228	228	202	177	143	136	153	12.6%	-4.1%	0.2%
Vietnam	315	342	308	275	243	225	195	185	182	175	164	-6.5%	-6.3%	0.2%
Other Asia Pacific	257	260	246	237	204	202	184	177	151	143	132	-7.9%	-6.5%	0.2%
Total Asia Pacific	7695	7816	7457	7167	7004	7006	6834	6755	6706	6724	6736	0.2%	-1.3%	8.1%
Total World	79091	81661	81545	81792	83605	83218	77054	78130	81515	82863	82788	-0.1%	0.5%	100.0%
of which: OECD	19223	19938	19098	19639	21506	22833	21710	21851	22517	23642	23745	0.4%	2.1%	28.7%
Non-OECD	59868	61723	62447	62153	62099	60385	55345	56279	58998	59220	59043	-0.3%	-0.1%	71.3%
OPEC	29592	31042	32004	31901	31905	29980	26341	27213	29292	28980	28856	-0.4%	-0.3%	34.9%
Non-OPEC	49499	50619	49541	49891	51700	53238	50713	50917	52222	53883	53933	0.1%	0.9%	65.1%
European Union	542	522	456	450	436	402	382	359	333	316	318	0.4%	-5.2%	0.4%

Source: includes data from FGE Iran Service.

* Includes crude oil, shale/tight oil, oil sands, lease condensate or gas condensates that require further refining. Excludes liquid fuels from other sources such as biomass and synthetic derivatives of coal and natural gas.

† Less than 0.05%.

Note: Annual changes and shares of total are calculated using thousand barrels daily figures.



Oil Natural gas liquids production in thousands of barrels per day*

Thousand barrels daily												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014-24	2024
Canada	513	525	595	597	647	680	660	669	708	713	753	5.6%	3.9%	5.3%
Mexico	355	320	302	276	235	217	205	170	158	164	152	-7.6%	-8.2%	1.1%
US	3015	3342	3509	3783	4369	4824	5175	5425	5933	6499	6941	6.8%	8.7%	49.2%
Total North America	3883	4187	4407	4656	5252	5722	6039	6263	6800	7376	7846	6.4%	7.3%	55.6%
Argentina	105	114	99	110	102	112	120	114	123	126	118	-5.9%	1.1%	0.8%
Brazil	87	88	97	110	104	102	90	86	91	98	108	10.4%	2.2%	0.8%
Colombia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecuador	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Guyana	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peru	54	49	50	48	47	49	48	46	43	43	45	3.3%	-1.8%	0.3%
Trinidad & Tobago	33	30	25	27	24	23	20	17	15	14	16	14.7%	-6.9%	0.1%
Venezuela	114	117	105	104	88	80	52	49	47	44	47	5.0%	-8.6%	0.3%
Other S. & Cent. America	14	13	12	15	14	13	13	13	12	11	10	-8.2%	-3.4%	0.1%
Total S. & Cent. America	407	411	389	414	379	378	342	325	331	336	343	2.2%	-1.7%	2.4%
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	1	2	2	2	3	11.2%	-	†
Norway	324	338	349	352	335	301	293	253	199	206	192	-6.9%	-5.1%	1.4%
Romania	3	3	4	3	3	4	4	4	4	3	3	4.5%	2.0%	†
United Kingdom	62	60	82	92	90	99	88	67	67	56	61	10.1%	-0.2%	0.4%
Other Europe	14	13	15	18	18	17	15	16	15	15	15	2.1%	0.8%	0.1%
Total Europe	404	415	449	466	446	420	401	342	286	283	275	-2.8%	-3.8%	1.9%
Azerbaijan	2	1	1	1	1	1	1	1	1	3	3	-5.3%	4.5%	†
Kazakhstan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation	448	470	479	476	479	493	474	544	533	521	529	1.7%	1.7%	3.8%
Turkmenistan	17	17	20	21	23	27	30	27	30	24	23	-5.1%	3.2%	0.2%
Uzbekistan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other CIS	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total CIS	467	488	500	497	503	521	505	573	565	549	556	1.3%	1.8%	3.9%
Iran	441	461	488	448	506	479	487	496	582	633	722	14.1%	5.0%	5.1%
Iraq	40	41	48	64	64	68	64	70	74	84	90	7.5%	8.4%	0.6%
Kuwait	276	288	290	305	313	299	283	292	316	312	308	-1.5%	1.1%	2.2%
Oman	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Qatar	466	470	473	450	471	470	427	441	462	476	485	1.8%	0.4%	3.4%
Saudi Arabia	1577	1578	1718	1717	1728	1687	1609	1560	1631	1652	1653	†	0.5%	11.7%
Syria	10	8	8	8	8	9	10	10	10	10	9	-3.0%	-0.8%	0.1%
United Arab Emirates	539	614	654	630	600	639	608	625	656	671	690	2.9%	2.5%	4.9%
Yemen	25	26	26	27	28	28	28	28	28	28	28	-0.3%	0.9%	0.2%
Other Middle East	10	10	10	10	11	19	18	15	16	16	15	-0.9%	4.2%	0.1%
Total Middle East	3386	3494	3715	3659	3730	3697	3534	3536	3775	3881	3999	3.1%	1.7%	28.4%
Algeria	260	268	261	254	252	247	233	248	265	272	272	-0.3%	0.4%	1.9%
Angola	30	16	23	39	40	47	47	47	47	47	51	9.1%	5.6%	0.4%
Chad	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Republic of Congo	8	7	7	7	7	7	7	7	7	7	7	-	-1.3%	†
Egypt	47	64	60	57	58	56	44	47	45	45	44	-1.2%	-0.6%	0.3%
Equatorial Guinea	19	17	19	21	19	17	15	12	13	10	18	78.7%	-0.3%	0.1%
Gabon	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Libya	15	11	11	14	27	36	34	46	49	49	52	6.7%	13.2%	0.4%
Nigeria	86	80	76	77	79	79	61	59	67	69	84	21.4%	-0.2%	0.6%
South Sudan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sudan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tunisia	5	5	7	6	5	4	4	5	3	5	4	-12.9%	-2.7%	†
Other Africa	-	-	-	-	1	1	1	1	1	1	1	-10.6%	-	†
Total Africa	470	468	465	475	487	495	447	471	496	506	534	5.6%	1.3%	3.8%
Australia	67	56	64	59	60	97	103	109	101	101	99	-1.3%	4.0%	0.7%
Brunei	12	11	12	13	12	12	10	8	9	9	9	-0.3%	-3.4%	0.1%
China	-	-	-	-	-	-	-	-	-	-	-	-	-	-
India	136	133	144	153	173	174	159	151	131	124	126	1.7%	-0.8%	0.9%
Indonesia	58	52	44	36	36	35	34	33	34	32	33	1.7%	-5.6%	0.2%
Malaysia	39	35	59	58	60	62	59	60	59	57	57	-1.0%	3.9%	0.4%
Thailand	231	233	231	247	247	246	219	221	185	188	199	6.1%	-1.5%	1.4%
Vietnam	10	9	10	9	13	12	12	11	11	13	13	0.7%	2.8%	0.1%
Other Asia Pacific	36	33	31	32	26	26	21	17	16	15	13	-11.3%	-9.6%	0.1%
Total Asia Pacific	588	562	594	606	626	664	615	610	545	538	548	2.0%	-0.7%	3.9%
Total World	9605	10025	10520	10773	11423	11896	11883	12121	12798	13467	14101	4.7%	3.9%	100.0%
of which: OECD	4356	4659	4916	5177	5753	6233	6536	6707	7180	7753	8213	5.9%	6.5%	58.2%
Non-OECD	5249	5366	5604	5596	5670	5663	5347	5414	5619	5714	5889	3.1%	1.2%	41.8%
OPEC	3376	3480	3676	3641	3684	3637	3454	3464	3707	3804	3942	3.6%	1.6%	28.0%
Non-OPEC	6229	6545	6843	7132	7739	8259	8430	8657	9091	9663	10159	5.1%	5.0%	72.0%
European Union	12	12	12	13	12	11	11	13	11	11	12	6.7%	0.2%	0.1%

Source: Includes data from FGE, FGE Iran Service, and ICIS.

* Includes ethane, LPG and naphtha separated from the production of natural gas. Excludes condensates.

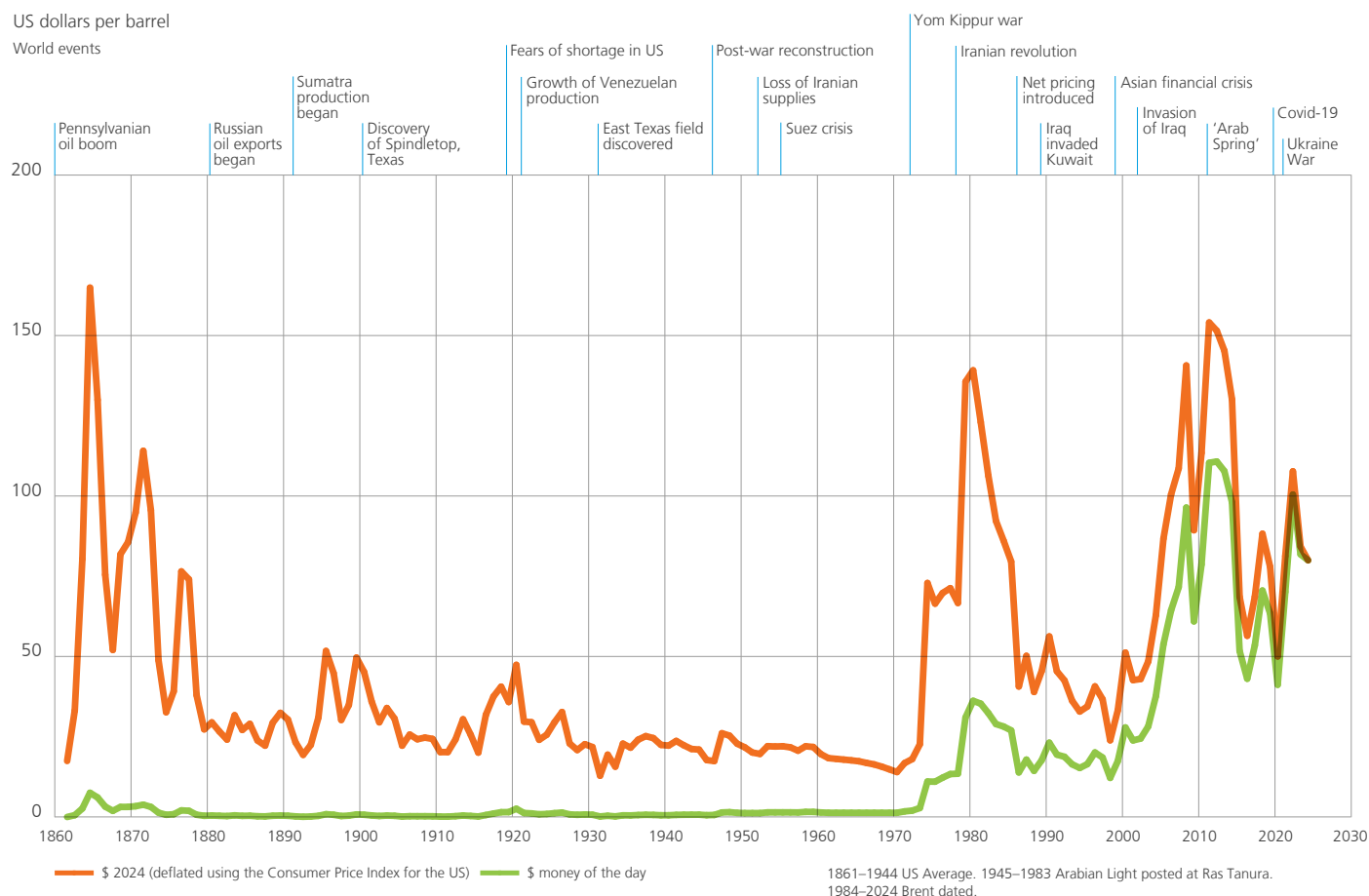
† Less than 0.05%.

Note: Annual changes and shares of total are calculated using thousand barrels daily figures.

US dollars per barrel	Dubai \$/bbl ¹	Brent \$/bbl ²	Nigerian Forcados \$/bbl ³	West Texas Intermediate \$/bbl ⁴
1972	1.90	—	—	—
1973	2.83	—	—	—
1974	10.41	—	—	—
1975	10.70	—	—	—
1976	11.63	12.80	12.87	12.23
1977	12.38	13.92	14.21	14.22
1978	13.03	14.02	13.65	14.55
1979	29.75	31.61	29.25	25.08
1980	35.69	36.83	36.98	37.96
1981	34.32	35.93	36.18	36.08
1982	31.80	32.97	33.29	33.65
1983	28.78	29.55	29.54	30.30
1984	28.06	28.78	28.14	29.39
1985	27.53	27.56	27.75	27.98
1986	13.10	14.43	14.46	15.05
1987	16.95	18.44	18.39	19.19
1988	13.18	14.92	15.00	15.98
1989	15.59	18.23	18.30	19.67
1990	20.21	23.73	23.85	24.46
1991	16.70	20.00	20.11	21.53
1992	17.18	19.32	19.61	20.57
1993	14.99	16.97	17.41	18.45
1994	14.69	15.82	16.25	17.21
1995	16.08	17.02	17.26	18.42
1996	19.26	20.67	21.16	22.16
1997	18.31	19.09	19.33	20.61
1998	12.30	12.72	12.63	14.39
1999	16.90	17.97	17.98	19.31
2000	26.27	28.50	28.42	30.37
2001	22.78	24.44	24.23	25.93
2002	23.60	25.02	25.04	26.16
2003	26.75	28.83	28.68	31.06
2004	33.51	38.27	38.13	41.49
2005	46.78	54.52	55.69	56.59
2006	61.48	65.14	67.07	66.04
2007	67.92	72.39	74.48	72.20
2008	94.28	97.26	101.43	100.06
2009	61.14	61.67	63.35	61.92
2010	77.78	79.50	81.05	79.45
2011	105.93	111.26	113.65	95.04
2012	109.06	111.67	114.21	94.13
2013	105.47	108.66	111.95	97.99
2014	97.02	98.95	101.35	93.28
2015	51.22	52.39	54.41	48.71
2016	41.02	43.73	44.54	43.34
2017	53.02	54.19	54.31	50.79
2018	70.15	71.31	72.47	65.20
2019	63.71	64.21	64.95	57.03
2020	42.41	41.84	42.31	39.25
2021	68.91	70.91	69.76	68.10
2022	96.38	101.32	101.40	94.58
2023	82.09	82.64	83.60	78.88
2024	79.61	80.76	81.75	75.87

Source: S&P Global Commodity Insights, ©2025 by S&P Global Inc
¹ 1972–1985 Arabian Light, 1986–2024 Dubai dated.
² 1976–1983 Forties, 1984–2024 Brent dated.
³ Forcados FOB Nigeria.
⁴ 1976–1983 Posted WTI prices, 1984–2023 Spot WTI (Cushing) prices.

Crude oil prices 1861–2024



												Growth rate per annum		Share
Thousand barrels daily	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Imports														
US	9241	9451	10056	10147	9927	9141	7866	8475	8343	8556	8429	-1.5%	-0.9%	12.1%
Europe	12957	14005	14337	14966	14312	14179	12684	12824	14262	13494	13824	2.4%	0.7%	19.9%
China	7398	8333	9215	10241	10854	11603	12331	12498	12234	13889	13400	-3.5%	6.1%	19.3%
India	4155	4396	4945	4920	5196	5370	4898	5302	5753	5762	5980	3.8%	3.7%	8.6%
Japan	4383	4332	4180	4142	3940	3774	3305	3350	3465	3332	3100	-7.0%	-3.4%	4.5%
Rest of World	21193	22915	28421	25623	25578	25364	23484	24021	24056	24356	24705	1.4%	1.5%	35.6%
Total World	59328	63431	71154	70039	69807	69431	64567	66471	68113	69388	69438	0.1%	1.6%	100.0%
Exports														
Canada	3536	3837	3889	4233	4496	4656	4388	4632	4702	4896	5135	4.9%	3.8%	7.4%
Mexico	1293	1321	1405	1283	1302	1244	1242	1211	1167	1271	1027	-19.2%	-2.3%	1.5%
US	4033	4562	5082	5881	7039	8010	8136	7956	8806	9292	9877	6.3%	9.4%	14.2%
S. & Cent. America	3939	4103	5736	3989	3718	3473	3487	2992	3075	3683	4319	17.3%	0.9%	6.2%
Europe	2467	3065	4834	3384	3349	3188	3580	2799	2611	2396	2123	-11.4%	-1.5%	3.1%
Russian Federation	7792	8434	8811	8981	8024	8058	7357	7811	7631	6821	7043	3.3%	-1.0%	10.1%
Other CIS	2092	2045	2097	2232	2052	2064	2043	2047	1916	2182	2122	-2.8%	0.1%	3.1%
Saudi Arabia	7911	8008	8729	8352	8462	8323	7981	7662	8604	8164	7654	-6.3%	-0.3%	11.0%
Middle East (ex Saudi Arabia)	12699	13977	15905	16205	16034	14825	13612	15110	15949	16318	16601	1.7%	2.7%	23.9%
North Africa	1743	1747	1736	2594	2770	2738	1746	2268	2105	2223	2151	-3.2%	2.1%	3.1%
West Africa	4849	4889	4458	4492	4495	4602	4133	3790	3509	3434	3465	0.9%	-3.3%	5.0%
Asia Pacific (ex Japan)	6450	5895	6348	6549	6257	6305	5419	6001	5800	6381	5757	-9.8%	-1.1%	8.3%
Rest of World	524	1549	2124	1863	1809	1943	1442	2190	2239	2326	2163	-7.0%	15.2%	3.1%
Total World	59328	63431	71154	70039	69807	69431	64567	66471	68113	69388	69438	0.1%	1.6%	100.0%

Source: includes data from FGE Iran Service.

Notes: Unless otherwise stated, this table shows inter-regional trade based on the regional classification in the table 'Oil trade in 2022 and 2023'.

Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded.

Annual changes and shares of total are calculated using thousand barrels daily figures.

oil Trade in 2023 and 2024

Million tonnes	2023				2024			
	Crude imports	Product imports	Crude exports	Product exports	Crude imports	Product imports	Crude exports	Product exports
Canada	25.6	22.6	209.4	33.0	25.1	22.4	219.4	35.6
Mexico	†	58.6	53.8	9.2	-	57.7	41.7	9.2
US	324.3	97.7	194.1	258.0	329.0	88.3	198.3	283.3
S. & Cent. America	20.3	106.7	154.4	27.9	20.7	110.1	184.1	30.3
Europe	457.3	206.2	12.3	102.8	463.4	218.0	12.4	89.9
Russian Federation	†	1.5	239.2	96.5	†	1.2	243.1	104.3
Other CIS	15.4	8.3	91.6	16.4	16.1	16.3	90.6	14.8
Iraq	†	6.8	186.1	19.0	†	5.3	179.6	25.1
Kuwait	†	0.2	81.1	37.7	-	0.3	60.1	42.9
Saudi Arabia	2.1	17.4	346.4	57.8	7.8	12.6	320.6	59.2
United Arab Emirates	5.1	27.9	168.8	93.9	5.4	31.6	182.7	95.3
Other Middle East	22.0	22.4	154.3	62.8	20.5	18.0	163.6	70.1
North Africa	3.9	35.9	78.2	31.2	2.2	37.6	73.1	32.9
West Africa	1.4	53.9	165.4	5.3	2.8	45.5	164.8	7.9
East & S. Africa	7.4	51.6	2.6	1.9	10.3	50.9	2.0	1.6
Australasia	8.4	58.6	10.0	4.9	7.8	53.9	9.1	5.1
China	572.5	114.4	0.8	61.1	554.1	110.5	0.9	56.7
India	230.6	54.0	0.1	94.4	238.6	57.6	0.1	90.2
Japan	125.5	38.8	†	12.5	115.0	38.3	0.1	9.9
Singapore	42.3	72.1	1.9	80.0	43.5	87.2	†	72.5
Other Asia Pacific	299.0	185.4	12.7	134.9	295.4	194.8	11.7	121.0
Total World	2163.1	1241.3	2163.1	1241.3	2157.8	1257.9	2157.8	1257.9

Thousand barrels daily	2023				2024			
	Crude imports	Product imports	Crude exports	Product exports	Crude imports	Product imports	Crude exports	Product exports
Canada	514	471	4206	690	504	467	4393	742
Mexico	†	1225	1080	192	-	1202	835	192
US	6512	2043	3897	5394	6589	1841	3971	5906
S. & Cent. America	408	2231	3101	583	416	2296	3686	633
Europe	9183	4311	247	2149	9281	4544	249	1875
Russian Federation	1	32	4804	2018	1	25	4868	2175
Other CIS	310	173	1839	343	323	340	1814	308
Iraq	†	141	3738	398	†	111	3597	523
Kuwait	†	5	1629	788	-	6	1203	895
Saudi Arabia	42	364	6956	1209	156	263	6420	1233
United Arab Emirates	102	583	3389	1964	107	658	3658	1986
Other Middle East	442	469	3099	1312	410	375	3276	1462
North Africa	78	751	1570	653	44	783	1464	687
West Africa	28	1128	3322	112	56	948	3301	165
East & S. Africa	148	1078	52	39	206	1062	40	34
Australasia	168	1226	202	103	156	1123	182	106
China	11497	2391	15	1276	11097	2303	18	1182
India	4632	1130	1	1974	4779	1201	1	1881
Japan	2521	811	†	261	2302	798	2	205
Singapore	849	1507	38	1673	871	1819	†	1512
Other Asia Pacific	6006	3877	254	2820	5917	4060	235	2522
Total World	43440	25948	43440	25948	43215	26223	43215	26223

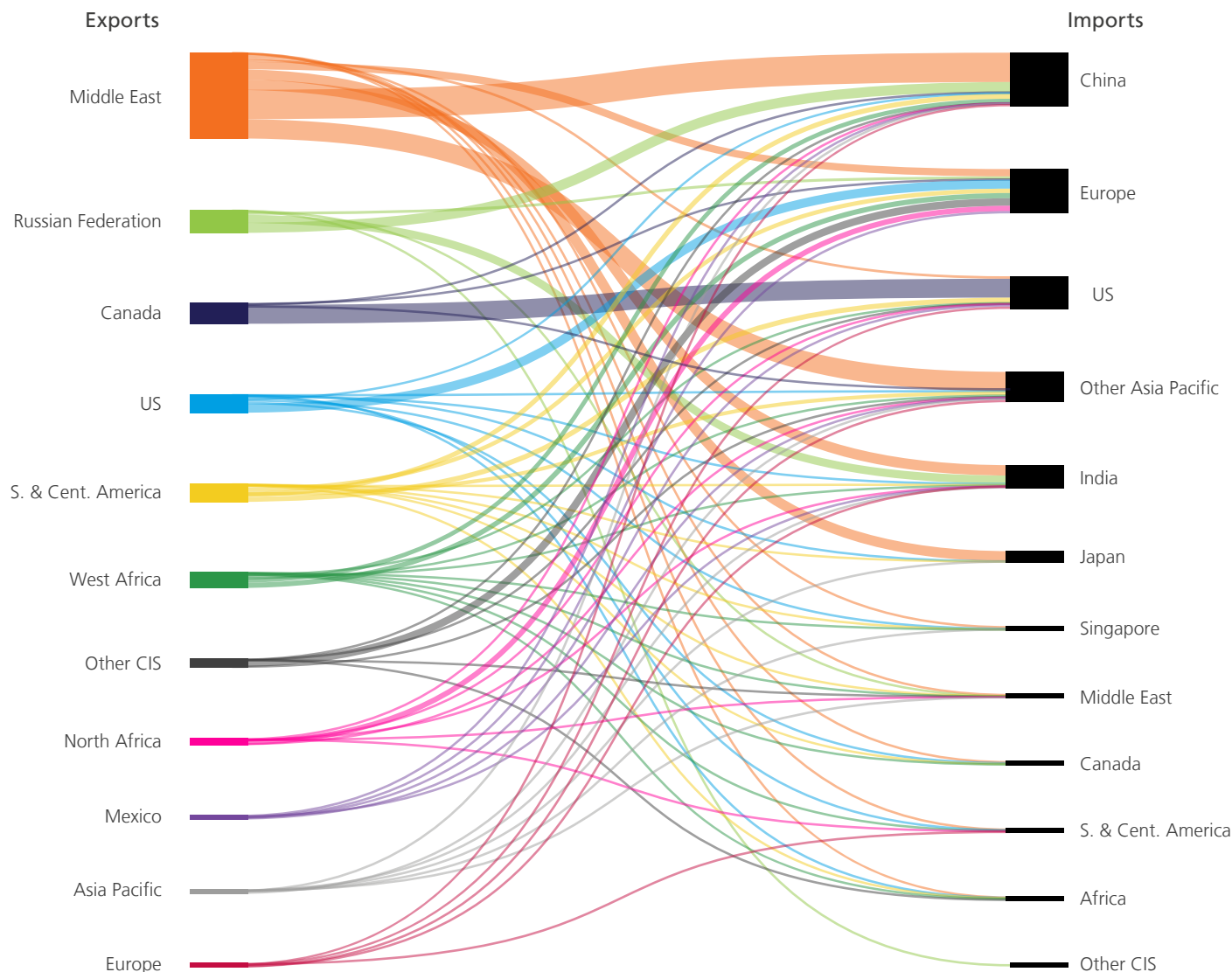
Source: includes data from FGE Iran Service.

† Less than 0.05.

‡ Less than 0.5.

Notes: Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded.

Crude imports and exports include condensates.



In 2024, international trade of crude oil was 2.2 billion tonnes, a modest rise of 1% over 2023. The Middle East remains the largest exporter, accounting for 40% of all exports. Saudia Arabia continues to be the largest single exporter, with the Russian Federation second and maintaining its 11% of global crude exports from 2023. Canada increased its exports by 4% in 2024 and is the world's third largest exporter.

For imports of crude oil, China remained the single largest importer at 0.6 billion tonnes accounting for 26% of total global trade in 2024. Europe had the second highest share of imports at 22%, followed by the US at 15%. Both Europe and the US decreased their imports of crude oil in 2024.

Oil Inter-area movements 2024 crude trade

Crude (million tonnes)

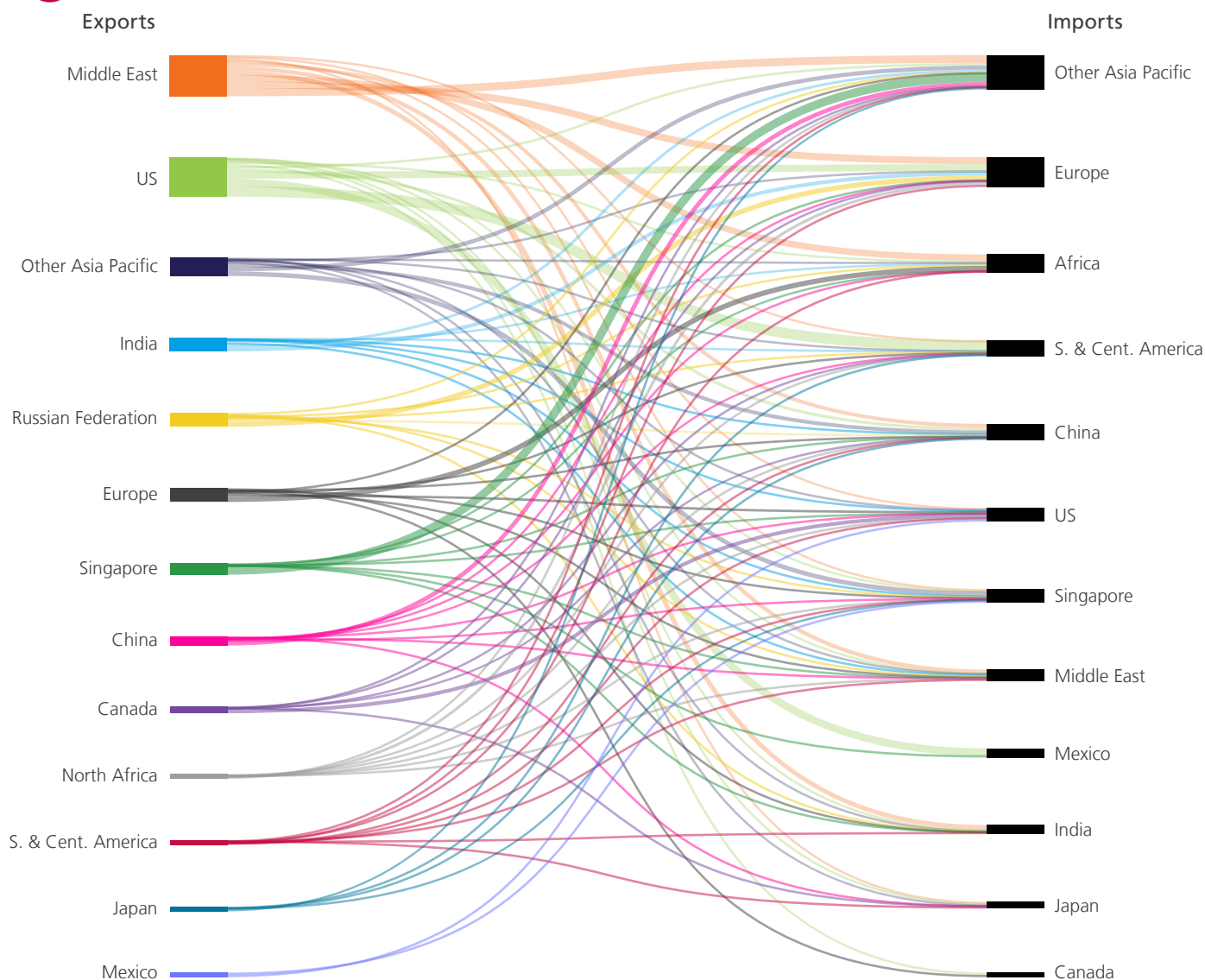
To

From	Canada	Mexico	US	S. & Cent. America	Europe	Russian Federation	Other CIS	Middle East	Africa	Australasia	China	India	Japan	Singapore	Other Asia Pacific	Total
Canada	–	–	203.1	†	5.9	–	–	†	†	–	9.2	0.4	†	–	0.8	219.4
Mexico	0.1	–	23.2	†	10.5	–	–	–	–	–	1.0	3.1	0.1	–	3.8	41.7
US	17.7	–	–	9.0	95.8	–	–	†	2.8	0.7	9.6	7.9	2.8	11.3	40.5	198.3
S. & Cent. America	0.9	–	53.6	–	47.2	–	–	1.6	2.6	0.1	52.6	8.9	1.7	3.4	11.5	184.1
Europe	†	–	3.7	0.6	–	–	†	†	0.1	–	4.1	2.3	–	0.5	1.2	12.4
Russian Federation	–	–	–	0.1	29.6	–	16.1	0.5	0.4	–	108.5	87.5	–	–	0.4	243.1
Other CIS	–	–	1.9	0.3	80.9	†	–	1.7	0.5	0.1	2.0	–	–	–	3.1	90.6
Iraq	–	–	9.9	–	38.2	–	†	0.5	0.1	–	63.8	50.1	–	1.5	15.5	179.6
Kuwait	–	–	1.1	–	0.3	–	–	2.8	†	–	16.0	6.0	8.1	†	25.8	60.1
Saudi Arabia	2.5	–	13.6	3.2	38.6	–	–	12.5	2.6	–	78.6	31.0	46.4	3.5	87.9	320.6
UAE	†	–	1.9	†	1.7	†	–	†	0.1	0.5	35.5	21.7	49.5	12.6	59.2	182.7
Other Middle East	†	–	–	†	0.6	–	†	8.9	†	–	121.5	3.4	5.3	5.2	18.7	163.6
North Africa	–	–	4.8	1.1	57.8	–	–	2.0	0.1	0.4	1.8	1.8	–	0.1	3.4	73.1
West Africa	3.9	–	12.2	6.4	55.7	–	–	2.6	5.9	0.3	46.6	13.2	–	1.6	16.4	164.8
East & S. Africa	–	–	–	†	0.5	–	–	†	†	–	0.5	–	†	0.3	0.6	2.0
Australasia	†	–	–	–	†	–	–	0.6	†	–	0.6	†	0.4	1.6	5.9	9.1
China	†	–	–	–	–	–	–	–	–	–	–	–	–	0.1	0.8	0.9
India	†	–	–	†	†	–	–	0.1	†	†	†	–	–	–	†	0.1
Japan	†	–	–	†	†	–	–	†	†	–	–	–	–	†	0.1	0.1
Singapore	†	–	–	–	†	–	–	–	†	–	–	–	–	–	†	†
Other Asia Pacific	†	–	†	†	0.1	–	–	†	†	5.7	2.1	1.4	0.6	1.8	–	11.7
Total imports	25.1	–	329.0	20.7	463.4	†	16.1	33.6	15.3	7.8	554.1	238.6	115.0	43.5	295.4	2157.8

Source: includes data from FGE Iran Service. † Less than 0.05.

Notes: Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded. Crude imports and exports include condensates.

Oil Inter-area movements 2024 – Refined product



At 1.3 billion tonnes, international trade of refined product was around 58% that of crude oil trade in terms of tonnage and similar to 2023 levels. Between them, the Middle East and the US accounted for 46% of the total exports at 0.29 and 0.28 billion tonnes, respectively.

The Asia Pacific region accounted for 43% of total imports, with China accounting for 20% of the regions' total. Europe was the second-largest importer of refined products at 0.22 billion tonnes, a 13% increase on its 2023 imports.

Oil Inter-area movements 2024 refined product

Product (million tonnes)	To															
From	Canada	Mexico	US	S. & Cent. America	Europe	Russian Federation	Other CIS	Middle East	Africa	Australasia	China	India	Japan	Singapore	Other Asia Pacific	Total
Canada	–	†	27.7	2.9	0.7	–	†	†	†	†	1.0	†	2.4	0.1	0.8	35.6
Mexico	†	–	7.8	0.2	0.3	–	†	†	0.1	†	†	0.1	–	0.7	0.1	9.2
US	18.0	56.1	–	77.6	51.8	†	†	1.5	14.2	0.9	22.4	9.9	10.5	2.4	17.8	283.3
S. & Cent. America	†	0.1	8.0	–	3.7	†	†	0.8	3.0	†	5.6	2.1	0.8	4.9	1.2	30.3
Europe	3.4	†	18.0	8.4	–	0.1	2.2	8.8	37.7	0.4	1.4	1.0	†	4.3	4.1	89.9
Russian Federation	–	–	–	9.4	36.6	–	13.2	4.0	6.7	–	17.4	5.1	–	8.1	3.9	104.3
Other CIS	†	–	0.2	0.1	11.5	0.6	–	0.3	0.3	†	0.6	†	–	0.4	0.9	14.8
Iraq	–	–	3.0	†	7.5	–	†	4.9	0.2	–	2.6	2.2	†	1.3	3.4	25.1
Kuwait	0.1	–	1.5	0.8	14.3	–	†	2.9	4.3	†	2.0	3.7	3.7	1.5	8.2	42.9
Saudi Arabia	–	†	3.0	0.5	14.5	–	†	5.3	14.1	†	3.2	7.1	0.5	3.8	7.1	59.2
UAE	†	†	0.6	0.7	8.1	0.2	0.1	9.6	17.6	0.6	12.4	13.6	4.9	6.1	20.7	95.3
Other Middle East	0.1	†	1.1	0.8	7.2	†	0.5	7.6	11.3	0.2	7.1	8.4	3.3	3.7	18.8	70.1
North Africa	†	–	2.6	0.9	21.3	†	0.1	0.8	0.3	†	1.4	0.2	0.1	0.6	4.7	32.9
West Africa	†	–	1.1	0.6	1.7	†	†	†	0.5	†	0.8	†	–	1.4	1.8	7.9
East & S. Africa	†	†	†	0.1	0.2	†	–	0.1	1.1	†	†	†	†	0.1	†	1.6
Australasia	†	–	†	†	0.8	–	†	†	†	–	0.7	†	1.3	1.1	1.1	5.1
China	0.2	0.4	0.8	3.8	5.6	0.2	0.1	1.7	4.0	3.4	–	0.3	1.3	6.5	28.5	56.7
India	0.2	†	3.5	1.1	27.7	†	†	15.8	14.2	5.5	0.6	–	0.2	5.9	15.4	90.2
Japan	†	†	0.4	0.6	†	†	†	†	†	2.0	0.9	†	–	1.7	4.1	9.9
Singapore	†	0.6	1.3	0.1	0.7	†	†	0.5	1.2	11.1	3.2	1.3	0.3	–	52.1	72.5
Other Asia Pacific	0.4	0.3	7.7	1.6	3.7	0.1	0.1	3.2	3.0	29.7	27.1	2.4	8.9	32.7	–	121.0
Total imports	22.4	57.7	88.3	110.1	218.0	1.2	16.3	67.8	134.0	53.9	110.5	57.6	38.3	87.2	194.8	1257.9

Source: includes data from FGE Iran Service. † Less than 0.05.

Notes: Does not include biofuels trade. Bunker fuel use is not included as exports. Intra-area movements (for example, between countries within Europe) are excluded. Crude imports and exports include condensates.

Natural gas

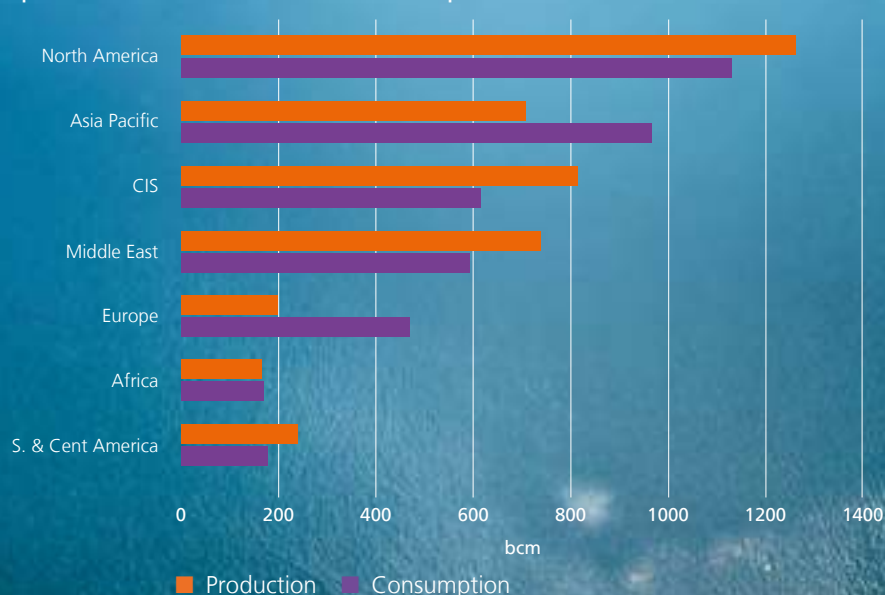
In 2024, global gas production increased by 1.2% to 4,124 bcm. The four largest producers were the US, Russia, Iran, and China who, together, accounted for 53% of total global production. European production continued its structural decline, falling by 3.4% from 2023, primarily due to decreases in Norway, the UK, and the Netherlands.

Global gas demand returned to growth in 2024 rising by 2.5% (101 bcm). Half of the demand growth was driven by the Asia Pacific region, led by China, Japan,

and India. Meanwhile, Europe experienced a modest rebound, with demand increasing by 6 bcm to reach 469 bcm, marking its first rise since 2021.

Total LNG trade remained steady, with the US maintaining its position as the largest exporter, reaching 115 bcm. US LNG exports to Europe fell by 16 bcm from 2023, with most redirected to the Asia Pacific region. Total pipeline trade rose by 43 bcm, driven by Russia's increased exports, up 6 bcm to Europe, 8 bcm to neighbouring CIS countries, and 5 bcm to China.

The US alone accounted for 25% of global natural gas production and 22% of its consumption.



Half of gas growth was driven by the Asia Pacific region



Natural gas Production in billion cubic metres*

												Growth rate per annum		Share
Billion cubic metres	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	159.0	160.8	165.0	171.3	176.8	169.6	165.6	172.3	184.8	189.8	194.2	2.0%	2.0%	4.7%
Mexico	51.3	47.9	45.9	41.9	39.8	38.6	36.1	34.3	36.1	38.5	35.8	-7.4%	-3.5%	0.9%
US	704.7	740.3	727.4	747.1	840.9	928.1	924.8	944.5	990.7	1033.0	1033.0	-0.3%	3.9%	25.0%
Total North America	915.0	949.0	938.3	960.3	1057.5	1136.3	1126.5	1151.1	1211.6	1261.4	1262.9	-0.2%	3.3%	30.6%
Argentina	34.5	35.5	37.3	37.1	39.4	41.6	38.3	38.6	41.7	41.6	44.1	5.8%	2.5%	1.1%
Bolivia	20.4	20.1	18.9	18.6	17.3	15.1	14.7	15.1	13.6	11.8	11.9	0.6%	-5.3%	0.3%
Brazil	23.3	23.8	24.1	27.2	25.2	25.7	24.2	24.3	23.0	23.4	22.8	-2.8%	-0.2%	0.6%
Colombia	12.3	11.6	12.0	11.8	12.4	12.6	12.5	12.6	12.4	12.1	11.1	-8.3%	-1.1%	0.3%
Peru	13.1	12.7	14.0	13.0	12.8	13.5	13.2	12.4	15.0	15.4	16.0	3.2%	2.0%	0.4%
Trinidad & Tobago	38.1	36.0	31.3	31.9	34.0	34.6	29.5	24.7	26.0	25.0	24.4	-2.6%	-4.3%	0.6%
Venezuela	31.8	36.1	37.2	38.6	31.6	25.6	21.6	28.1	29.1	29.7	31.7	6.6%	†	0.8%
Other S. & Cent. America	2.6	2.9	3.1	3.1	3.1	3.3	2.7	2.6	2.8	2.9	3.1	4.7%	1.6%	0.1%
Total S. & Cent. America	176.2	178.6	178.0	181.3	175.8	172.0	156.6	158.5	163.5	161.9	165.1	1.7%	-0.6%	4.0%
Denmark	4.8	4.8	4.7	5.1	4.3	3.2	1.4	1.5	1.5	1.4	1.8	35.9%	-9.1%	†
Germany	8.1	7.5	6.9	6.4	5.5	5.3	4.5	4.5	4.3	3.8	3.7	-4.1%	-7.6%	0.1%
Italy	6.8	6.4	5.5	5.3	5.2	4.6	3.9	3.2	3.2	2.8	2.8	-1.9%	-8.5%	0.1%
Netherlands	60.4	45.9	44.3	37.9	32.5	27.7	20.1	18.0	15.0	9.9	8.1	-18.4%	-18.2%	0.2%
Norway	106.5	115.0	114.7	122.4	120.0	113.2	110.3	113.3	122.9	116.1	113.2	-2.8%	0.6%	2.7%
Poland	4.3	4.3	4.1	4.0	4.0	4.0	3.9	3.9	3.8	3.7	3.6	-2.7%	-1.9%	0.1%
Romania	10.2	10.2	9.1	10.0	10.0	9.6	8.6	8.6	8.8	8.9	9.0	0.7%	-1.3%	0.2%
Ukraine	20.2	18.8	19.0	19.4	19.7	19.4	19.1	18.7	17.5	17.7	18.1	2.0%	-1.1%	0.4%
United Kingdom	37.4	40.7	41.7	41.9	40.6	39.3	39.6	32.8	38.1	34.5	30.7	-11.2%	-2.0%	0.7%
Other Europe	6.3	6.1	8.7	9.0	8.4	7.4	6.3	5.4	5.1	5.2	6.6	27.2%	0.4%	0.2%
Total Europe	265.1	259.7	258.8	261.4	250.1	233.8	217.7	209.9	220.2	203.9	197.5	-3.4%	-2.9%	4.8%
Azerbaijan	18.4	18.8	18.3	17.8	18.8	23.9	25.9	31.8	34.1	35.6	37.8	5.9%	7.5%	0.9%
Kazakhstan	32.8	27.1	30.9	36.4	39.2	33.5	30.6	26.7	27.6	29.5	29.7	0.4%	-1.0%	0.7%
Russian Federation	591.2	584.4	589.3	635.6	669.1	679.0	638.4	702.1	618.4	586.4	629.9	7.1%	0.6%	15.3%
Turkmenistan	63.5	65.9	63.2	58.7	61.5	63.2	66.0	79.3	78.3	76.3	73.5	-4.0%	1.5%	1.8%
Uzbekistan	56.3	53.6	53.1	53.6	58.3	57.5	47.1	50.9	48.9	44.2	42.2	-4.8%	-2.8%	1.0%
Other CIS	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	3.1%	-1.2%	†
Total CIS	762.4	750.2	755.1	802.3	847.2	857.4	808.4	891.2	807.6	772.3	813.3	5.0%	0.6%	19.7%
Bahrain	14.7	14.6	14.4	14.5	14.6	16.3	16.4	16.6	15.8	15.8	16.6	4.9%	1.2%	0.4%
Iran	175.5	183.5	199.3	213.9	220.1	228.3	235.8	242.8	247.7	259.7	262.9	0.9%	4.1%	6.4%
Iraq	7.5	7.3	9.9	10.1	10.6	11.0	7.0	9.1	9.3	10.4	11.9	14.2%	4.7%	0.3%
Israel	7.1	7.9	8.8	9.3	9.9	10.0	14.7	18.3	20.8	19.8	21.4	7.9%	11.6%	0.5%
Kuwait	14.3	16.1	16.4	16.2	16.9	13.3	12.2	12.1	13.2	14.8	14.9	0.7%	0.4%	0.4%
Oman	29.3	30.7	31.5	32.3	36.3	36.7	36.9	40.3	42.1	43.2	45.3	4.7%	4.4%	1.1%
Qatar	169.4	175.9	174.8	170.5	175.2	177.2	174.9	177.0	178.5	181.0	179.5	-1.1%	0.6%	4.4%
Saudi Arabia	97.3	99.2	105.3	109.3	112.1	111.2	113.1	114.5	116.7	117.4	121.5	3.2%	2.2%	2.9%
Syria	4.6	4.1	3.5	3.5	3.5	3.3	2.9	3.1	2.5	2.6	2.7	4.5%	-5.1%	0.1%
United Arab Emirates	52.9	58.6	59.5	52.7	46.4	53.7	53.7	53.1	54.2	55.3	61.4	10.8%	1.5%	1.5%
Other Middle East	9.9	3.0	0.6	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	55.2%	-29.3%	†
Total Middle East	582.5	600.8	624.2	632.5	645.8	660.9	667.8	687.1	701.0	720.0	738.4	2.3%	2.4%	17.9%
Algeria	80.2	81.4	91.4	93.0	93.8	87.0	81.4	101.1	97.6	101.5	94.7	-7.0%	1.7%	2.3%
Egypt	47.0	42.6	40.3	48.8	58.6	64.9	58.5	67.8	64.5	57.1	47.5	-17.0%	0.1%	1.2%
Libya	11.8	12.9	12.7	14.2	14.0	16.0	12.7	15.3	14.6	14.8	14.3	-4.1%	1.9%	0.3%
Nigeria	40.0	47.6	42.6	47.2	48.3	49.3	49.4	52.4	47.1	44.4	46.8	5.3%	1.6%	1.1%
Other Africa	20.6	21.7	22.8	27.0	28.0	28.4	29.9	30.1	32.6	35.8	36.2	0.8%	5.8%	0.9%
Total Africa	199.5	206.2	209.8	230.1	242.6	245.6	231.9	266.7	256.4	253.6	239.6	-5.8%	1.8%	5.8%
Australia	65.3	74.3	94.1	110.3	127.4	146.1	145.7	147.9	154.2	150.7	150.1	-0.7%	8.7%	3.6%
Bangladesh	23.0	25.9	26.5	26.6	26.6	25.3	23.7	23.6	22.5	21.1	19.7	-6.8%	-1.5%	0.5%
Brunei	12.7	13.3	12.9	12.9	12.6	13.0	12.6	11.5	10.6	10.0	10.4	3.6%	-2.0%	0.3%
China	131.2	135.7	137.9	149.2	161.4	176.7	194.0	209.2	221.8	234.3	248.4	5.7%	6.6%	6.0%
India	29.4	28.1	26.6	27.7	27.5	26.9	23.8	28.5	29.8	31.6	32.4	2.2%	1.0%	0.8%
Indonesia	87.2	86.6	85.3	83.2	83.0	75.6	66.4	66.5	65.5	68.1	71.4	4.5%	-2.0%	1.7%
Malaysia	72.2	76.8	76.7	79.6	76.1	77.5	73.1	79.0	83.0	78.0	80.4	2.7%	1.1%	1.9%
Myanmar	16.5	19.2	18.3	17.8	17.0	18.5	17.5	17.2	16.8	15.2	14.8	-2.8%	-1.1%	0.4%
Pakistan	35.0	35.0	34.7	34.7	34.2	32.7	30.6	32.7	28.6	27.7	26.1	-6.2%	-2.9%	0.6%
Thailand	39.1	37.5	37.3	35.9	34.7	35.8	32.7	31.5	25.3	25.7	28.5	10.9%	-3.1%	0.7%
Vietnam	9.9	10.3	10.2	9.5	9.7	9.8	8.8	7.2	7.8	7.2	6.1	-15.6%	-4.7%	0.1%
Other Asia Pacific	23.1	27.9	29.0	29.2	26.9	28.7	29.0	27.2	23.9	21.5	19.3	-10.6%	-1.8%	0.5%
Total Asia Pacific	544.4	570.7	589.4	616.5	637.0	666.5	658.0	682.1	690.0	691.1	707.5	2.1%	2.7%	17.2%
Total World	3445.1	3515.2	3553.6	3684.3	3856.0	3972.5	3867.0	4046.6	4050.4	4064.2	4124.5	1.2%	1.8%	100.0%
of which: OECD	1241.4	1279.9	1290.8	1331.3	1434.9	1517.7	1496.5	1519.0	1599.1	1627.9	1621.8	-0.6%	2.7%	39.3%
Non-OECD	2203.8	2235.3	2262.8	2353.0	2421.0	2454.9	2370.4	2527.5	2451.2	2436.3	2502.6	2.4%	1.3%	60.7%
European Union	99.9	84.3	82.4	76.8	69.0	61.0	47.9	44.3	40.8	34.5	33.0	-4.5%	-10.5%	0.8%

Source: Includes data from Cedigaz. FGE MENA gas service.

* Excludes gas flared or recycled. Includes natural gas produced for Gas-to-Liquids transformation.

† Less than 0.05%.

Notes: As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar); as they are derived directly from measures of energy content using an average conversion factor and have been standardised using a Gross Calorific Value (GCV) of 40 MJ/m³, they do not necessarily equate with gas volumes expressed in specific national terms.

Annual changes and shares of total are calculated using billion cubic metres figures. Growth rates are adjusted for leap years.

Exajoules												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	5.72	5.79	5.94	6.17	6.36	6.11	5.96	6.20	6.65	6.83	6.99	2.0%	2.0%	4.7%
Mexico	1.85	1.73	1.65	1.51	1.43	1.39	1.30	1.24	1.30	1.39	1.29	-7.4%	-3.5%	0.9%
US	25.37	26.65	26.18	26.90	30.27	33.41	33.29	34.00	35.67	37.19	37.19	-0.3%	3.9%	25.0%
Total North America	32.94	34.16	33.78	34.57	38.07	40.91	40.56	41.44	43.62	45.41	45.47	-0.2%	3.3%	30.6%
Argentina	1.24	1.28	1.34	1.34	1.42	1.50	1.38	1.39	1.50	1.50	1.59	5.8%	2.5%	1.1%
Bolivia	0.74	0.72	0.68	0.67	0.62	0.54	0.53	0.55	0.49	0.43	0.43	0.6%	-5.3%	0.3%
Brazil	0.84	0.86	0.87	0.98	0.91	0.93	0.87	0.88	0.83	0.84	0.82	-2.8%	-0.2%	0.6%
Colombia	0.44	0.42	0.43	0.42	0.45	0.45	0.45	0.45	0.45	0.43	0.40	-8.3%	-1.1%	0.3%
Peru	0.47	0.46	0.50	0.47	0.46	0.49	0.48	0.45	0.54	0.56	0.57	3.2%	2.0%	0.4%
Trinidad & Tobago	1.37	1.29	1.13	1.15	1.22	1.24	1.06	0.89	0.94	0.90	0.88	-2.6%	-4.3%	0.6%
Venezuela	1.14	1.30	1.34	1.39	1.14	0.92	0.78	1.01	1.05	1.07	1.14	6.6%	†	0.8%
Other S. & Cent. America	0.09	0.10	0.11	0.11	0.11	0.12	0.10	0.09	0.10	0.11	0.11	4.7%	1.6%	0.1%
Total S. & Cent. America	6.34	6.43	6.41	6.53	6.33	6.19	5.64	5.71	5.89	5.83	5.94	1.7%	-0.6%	4.0%
Denmark	0.17	0.17	0.17	0.18	0.15	0.12	0.05	0.05	0.05	0.05	0.07	35.9%	-9.1%	†
Germany	0.29	0.27	0.25	0.23	0.20	0.19	0.16	0.16	0.15	0.14	0.13	-4.1%	-7.6%	0.1%
Italy	0.25	0.23	0.20	0.19	0.19	0.17	0.14	0.11	0.11	0.10	0.10	-1.9%	-8.5%	0.1%
Netherlands	2.17	1.65	1.59	1.37	1.17	1.00	0.72	0.65	0.54	0.35	0.29	-18.4%	-18.2%	0.2%
Norway	3.83	4.14	4.13	4.41	4.32	4.08	3.97	4.08	4.43	4.18	4.08	-2.8%	0.6%	2.7%
Poland	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.13	0.13	-2.7%	-1.9%	0.1%
Romania	0.37	0.37	0.33	0.36	0.36	0.35	0.31	0.31	0.32	0.32	0.32	0.7%	-1.3%	0.2%
Ukraine	0.73	0.68	0.68	0.70	0.71	0.70	0.69	0.67	0.63	0.64	0.65	2.0%	-1.1%	0.4%
United Kingdom	1.35	1.46	1.50	1.51	1.46	1.41	1.42	1.18	1.37	1.24	1.11	-11.2%	-2.0%	0.7%
Other Europe	0.23	0.22	0.31	0.32	0.30	0.27	0.23	0.19	0.18	0.19	0.24	27.2%	0.4%	0.2%
Total Europe	9.54	9.35	9.32	9.41	9.00	8.42	7.84	7.56	7.93	7.34	7.11	-3.4%	-2.9%	4.8%
Azerbaijan	0.66	0.68	0.66	0.64	0.68	0.86	0.93	1.15	1.23	1.28	1.36	5.9%	7.5%	0.9%
Kazakhstan	1.18	0.98	1.11	1.31	1.41	1.21	1.10	0.96	0.99	1.06	1.07	0.4%	-1.0%	0.7%
Russian Federation	21.28	21.04	21.21	22.88	24.09	24.44	22.98	25.28	22.26	21.11	22.68	7.1%	0.6%	15.3%
Turkmenistan	2.29	2.37	2.28	2.11	2.21	2.27	2.38	2.85	2.82	2.75	2.64	-4.0%	1.5%	1.8%
Uzbekistan	2.03	1.93	1.91	1.93	2.10	2.07	1.70	1.83	1.76	1.59	1.52	-4.8%	-2.8%	1.0%
Other CIS	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	3.1%	-1.2%	†
Total CIS	27.45	27.01	27.19	28.88	30.50	30.87	29.10	32.08	29.07	27.80	29.28	5.0%	0.6%	19.7%
Bahrain	0.53	0.53	0.52	0.52	0.53	0.59	0.59	0.60	0.57	0.57	0.60	4.9%	1.2%	0.4%
Iran	6.32	6.61	7.18	7.70	7.92	8.22	8.49	8.74	8.92	9.35	9.46	0.9%	4.1%	6.4%
Iraq	0.27	0.26	0.36	0.36	0.38	0.39	0.25	0.33	0.33	0.37	0.43	14.2%	4.7%	0.3%
Israel	0.26	0.28	0.32	0.34	0.36	0.36	0.53	0.66	0.75	0.71	0.77	7.9%	11.6%	0.5%
Kuwait	0.51	0.58	0.59	0.58	0.61	0.48	0.44	0.44	0.47	0.53	0.54	0.7%	0.4%	0.4%
Oman	1.06	1.11	1.13	1.16	1.31	1.32	1.33	1.45	1.52	1.55	1.63	4.7%	4.4%	1.1%
Qatar	6.10	6.33	6.29	6.14	6.31	6.38	6.30	6.37	6.43	6.52	6.46	-1.1%	0.6%	4.4%
Saudi Arabia	3.50	3.57	3.79	3.93	4.04	4.00	4.07	4.12	4.20	4.22	4.37	3.2%	2.2%	2.9%
Syria	0.17	0.15	0.13	0.13	0.12	0.12	0.11	0.11	0.09	0.09	0.10	4.5%	-5.1%	0.1%
United Arab Emirates	1.90	2.11	2.14	1.90	1.67	1.93	1.93	1.91	1.95	1.99	2.21	10.8%	1.5%	1.5%
Other Middle East	0.36	0.11	0.02	^	^	^	0.01	0.01	0.01	0.01	0.01	55.2%	-29.3%	†
Total Middle East	20.97	21.63	22.47	22.77	23.25	23.79	24.04	24.74	25.24	25.92	26.58	2.3%	2.4%	17.9%
Algeria	2.89	2.93	3.29	3.35	3.38	3.13	2.93	3.64	3.51	3.65	3.41	-7.0%	1.7%	2.3%
Egypt	1.69	1.53	1.45	1.76	2.11	2.34	2.10	2.44	2.32	2.06	1.71	-17.0%	0.1%	1.2%
Libya	0.43	0.46	0.46	0.51	0.50	0.58	0.46	0.55	0.52	0.53	0.51	-4.1%	1.9%	0.3%
Nigeria	1.44	1.71	1.53	1.70	1.74	1.77	1.78	1.89	1.70	1.60	1.69	5.3%	1.6%	1.1%
Other Africa	0.74	0.78	0.82	0.97	1.01	1.02	1.08	1.08	1.17	1.29	1.30	0.8%	5.8%	0.9%
Total Africa	7.18	7.42	7.55	8.28	8.73	8.84	8.35	9.60	9.23	9.13	8.62	-5.8%	1.8%	5.8%
Australia	2.35	2.67	3.39	3.97	4.59	5.26	5.25	5.33	5.55	5.43	5.41	-0.7%	8.7%	3.6%
Bangladesh	0.83	0.93	0.95	0.96	0.96	0.91	0.85	0.85	0.81	0.76	0.71	-6.8%	-1.5%	0.5%
Brunei	0.46	0.48	0.47	0.46	0.45	0.47	0.46	0.42	0.38	0.36	0.37	3.6%	-2.0%	0.3%
China	4.72	4.88	4.97	5.37	5.81	6.36	6.98	7.53	7.99	8.43	8.94	5.7%	6.6%	6.0%
India	1.06	1.01	0.96	1.00	0.99	0.97	0.86	1.03	1.07	1.14	1.16	2.2%	1.0%	0.8%
Indonesia	3.14	3.12	3.07	2.99	2.99	2.72	2.39	2.40	2.36	2.45	2.57	4.5%	-2.0%	1.7%
Malaysia	2.60	2.77	2.76	2.86	2.74	2.79	2.63	2.84	2.99	2.81	2.89	2.7%	1.1%	1.9%
Myanmar	0.60	0.69	0.66	0.64	0.61	0.67	0.63	0.62	0.61	0.55	0.53	-2.8%	-1.1%	0.4%
Pakistan	1.26	1.26	1.25	1.25	1.23	1.18	1.10	1.18	1.03	1.00	0.94	-6.2%	-2.9%	0.6%
Thailand	1.41	1.35	1.34	1.29	1.25	1.29	1.18	1.13	0.91	0.92	1.03	10.9%	-3.1%	0.7%
Vietnam	0.35	0.37	0.37	0.34	0.35	0.35	0.32	0.26	0.28	0.26	0.22	-15.6%	-4.7%	0.1%
Other Asia Pacific	0.83	1.01	1.04	1.05	0.97	1.03	1.04	0.98	0.86	0.78	0.69	-10.6%	-1.8%	0.5%
Total Asia Pacific	19.60	20.55	21.22	22.19	22.93	23.99	23.69	24.56	24.84	24.88	25.47	2.1%	2.7%	17.2%
Total World	124.03	126.55	127.93	132.64	138.81	143.01	139.21	145.68	145.81	146.31	148.48	1.2%	1.8%	100.0%
of which: OECD	44.69	46.08	46.47	47.93	51.66	54.64	53.88	54.69	57.57	58.61	58.39	-0.6%	2.7%	39.3%
Non-OECD	79.34	80.47	81.46	84.71	87.16	88.38	85.34	90.99	88.24	87.71	90.10	2.4%	1.3%	60.7%
European Union	3.60	3.03	2.96	2.76	2.48	2.19	1.72	1.60	1.47	1.24	1.19	-4.5%	-10.5%	0.8%

Source: Includes data from Cedigaz. FGE MENA gas service.

* Excludes gas flared or recycled. Includes natural gas produced for Gas-to-Liquids transformation.

^ Less than 0.005.

† Less than 0.05%.

Notes: Annual changes and shares of total are calculated using exajoules figures.

Growth rates are adjusted for leap years.

Natural gas LNG imports

Billion cubic metres	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Growth rate per annum		Share
												2024	2014–24	2024
Canada	0.5	0.6	0.3	0.4	0.6	0.5	0.8	0.7	0.3	0.2	0.4	64.7%	-3.0%	0.1%
Mexico	9.3	6.8	5.6	6.6	6.9	6.6	2.5	0.9	0.6	0.9	1.0	4.8%	-20.3%	0.2%
US	1.7	2.5	2.4	2.2	2.1	1.5	1.3	0.6	0.7	0.5	0.5	0.1%	-11.6%	0.1%
Total North America	11.5	10.0	8.3	9.2	9.6	8.6	4.6	2.2	1.6	1.6	1.8	12.0%	-16.8%	0.3%
Argentina	6.2	5.6	5.1	4.6	3.6	1.8	1.8	3.7	2.4	2.7	1.7	-38.5%	-12.3%	0.3%
Brazil	7.1	6.8	2.6	1.7	2.9	3.2	3.3	10.1	2.3	1.3	3.0	128.8%	-8.3%	0.5%
Chile	3.5	3.7	4.5	4.4	4.3	3.3	3.7	4.5	3.3	3.6	3.0	-16.3%	-1.6%	0.6%
Other S. & Cent. America	2.8	2.8	3.0	2.8	3.7	4.8	5.1	6.0	6.2	8.2	9.5	15.3%	13.1%	1.7%
Total S. & Cent. America	19.6	18.9	15.2	13.5	14.5	13.1	13.9	24.3	14.2	15.8	17.2	8.2%	-1.3%	3.2%
Belgium	2.9	3.6	2.4	1.3	3.3	7.3	6.4	5.4	12.5	11.8	7.7	-34.5%	10.5%	1.4%
France	6.9	6.4	9.1	10.9	12.7	23.2	19.0	17.6	35.4	29.4	25.7	-12.7%	14.0%	4.7%
Italy	4.5	5.9	5.9	8.3	8.2	13.5	12.5	9.5	14.7	16.3	14.6	-11.0%	12.5%	2.7%
Spain	16.2	13.7	13.8	16.6	15.0	22.0	20.9	20.4	28.8	24.9	18.4	-26.3%	1.3%	3.4%
Türkiye	7.1	7.5	7.6	10.9	11.4	12.9	14.8	13.9	15.1	14.8	12.0	-19.1%	5.4%	2.2%
United Kingdom	11.2	13.7	10.7	6.6	7.2	17.1	18.6	15.0	26.1	19.4	9.7	-50.1%	-1.4%	1.8%
Other European Union	3.3	5.2	6.9	10.2	13.4	23.5	23.8	25.5	39.4	51.0	45.3	-11.5%	29.8%	8.3%
Rest of Europe	^	-	^	0.1	^	^	0.1	0.1	0.1	0.2	0.1	-26.2%	26.7%	†
Total Europe	52.1	56.0	56.4	64.8	71.2	119.4	116.1	107.5	172.0	167.7	133.5	-20.6%	9.9%	24.5%
Egypt	-	3.9	10.7	8.3	3.2	-	-	-	-	^	3.9	55621.6%	-	0.7%
Kuwait	3.6	4.3	4.7	4.8	4.3	5.1	5.7	7.7	8.5	8.9	9.7	8.7%	10.5%	1.8%
United Arab Emirates	1.6	2.9	4.2	3.0	1.0	1.6	1.5	1.7	0.9	1.1	1.2	12.4%	-2.9%	0.2%
Other Middle East & Africa	0.1	2.7	4.8	5.3	4.0	2.7	1.9	0.2	0.1	0.2	1.3	642.0%	25.1%	0.2%
Total Middle East & Africa	5.3	13.7	24.5	21.4	12.5	9.4	9.1	9.6	9.5	10.2	16.1	58.2%	11.7%	3.0%
China	27.3	27.0	36.8	52.9	73.5	84.7	94.0	110.1	87.0	97.8	105.2	7.2%	14.5%	19.3%
India	19.1	20.0	24.3	26.0	30.5	32.4	36.6	33.8	28.4	30.4	37.9	24.2%	7.1%	7.0%
Japan	121.8	115.9	113.6	113.9	113.0	105.5	101.7	100.4	97.3	89.5	89.0	-0.9%	-3.1%	16.4%
Malaysia	2.2	2.2	1.5	2.0	1.8	3.3	3.6	2.3	3.9	3.2	4.2	29.4%	6.6%	0.8%
Pakistan	-	1.5	4.0	6.1	9.4	11.8	10.6	12.2	9.5	10.1	11.0	8.6%	-	2.0%
Singapore	2.6	3.0	3.2	4.1	4.5	5.0	5.7	5.0	5.3	6.8	8.4	22.6%	12.6%	1.5%
South Korea	51.8	45.8	46.3	51.4	60.2	55.6	55.4	64.1	63.8	60.7	63.6	4.4%	2.1%	11.7%
Taiwan	18.6	19.6	20.4	22.7	22.9	22.8	24.3	26.7	27.5	27.4	29.1	5.9%	4.6%	5.3%
Thailand	1.9	3.6	3.9	5.2	6.0	6.7	7.5	9.2	11.5	16.1	15.8	-2.1%	23.9%	2.9%
Other Asia Pacific	-	-	-	-	0.8	5.7	6.6	7.6	6.9	9.2	11.4	24.7%	-	2.1%
Total Asia Pacific	245.2	238.5	253.9	284.5	322.6	333.6	346.2	371.6	341.3	351.2	375.5	6.6%	4.4%	69.0%
Total World	333.6	337.1	358.3	393.3	430.4	484.2	489.9	515.2	538.5	546.6	544.1	-0.7%	5.0%	100.0%

Source: Includes GILGNL, S&P Global Commodity Insights.

Gross LNG trade.

^ Less than 0.05.

† Less than 0.05%.

Notes: Annual changes and share of totals are calculated using billion cubic metres figures.

Growth rates are adjusted for leap years.

Natural gas LNG exports

Billion cubic metres	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Growth rate per annum		Share
												2024	2014–24	2024
US	0.4	0.7	4.0	17.1	28.6	47.4	61.3	94.5	104.5	114.5	115.2	0.4%	75.1%	21.2%
Peru	5.7	5.0	5.5	5.5	4.8	5.3	5.0	3.5	5.1	5.4	4.7	-13.7%	-2.0%	0.9%
Trinidad & Tobago	17.6	16.4	14.3	13.5	16.6	17.1	14.3	9.1	10.5	10.5	10.3	-1.5%	-5.2%	1.9%
Other Americas*	0.2	†	0.6	0.3	0.1	0.1	0.5	0.7	0.8	1.0	0.4	-64.0%	7.3%	0.1%
Total Americas	23.9	22.1	24.5	36.5	50.1	69.9	81.2	107.8	121.0	131.3	130.6	-0.9%	18.5%	24.0%
Russian Federation	13.6	14.6	14.6	15.4	24.9	39.1	41.8	39.5	43.4	42.1	44.3	5.1%	12.5%	8.1%
Norway	4.6	5.6	6.1	5.4	6.8	6.9	4.3	0.2	3.7	5.5	6.4	17.3%	3.3%	1.2%
Other Europe*	8.4	5.4	4.5	2.5	5.0	1.9	2.7	4.1	4.2	3.8	1.9	-49.0%	-13.7%	0.4%
Total Europe & CIS	26.6	25.6	25.3	23.4	36.7	47.9	48.8	43.7	51.3	51.3	52.7	2.4%	7.1%	9.7%
Oman	10.6	10.2	11.0	11.4	13.6	14.1	13.2	14.1	15.3	15.3	16.0	3.9%	4.2%	2.9%
Qatar	103.6	105.6	107.3	103.6	104.9	105.8	106.5	106.8	110.5	108.4	106.9	-1.6%	0.3%	19.6%
United Arab Emirates	8.6	7.6	7.7	7.3	7.4	7.7	7.6	8.8	7.5	7.7	8.6	11.9%	0.1%	1.6%
Yemen	9.4	1.9	-	-	-	-	-	-	-	-	-	-	-100.0%	†
Total Middle East	132.2	125.4	126.0	122.3	125.9	127.5	127.3	129.6	133.3	131.4	131.5	-0.2%	-0.1%	24.2%
Algeria	17.4	16.6	15.5	16.4	13.1	16.8	14.5	15.6	14.3	17.8	16.0	-10.4%	-0.9%	2.9%
Angola	0.4	-	0.9	5.0	5.2	5.8	6.1	4.7	4.2	4.9	4.9	-0.7%	27.3%	0.9%
Egypt	0.4	-	0.8	1.2	2.0	4.7	1.8	9.1	9.2	4.9	0.9	-81.8%	7.1%	0.2%
Nigeria	26.1	26.9	24.6	28.3	27.8	28.8	28.4	23.4	20.0	17.6	18.4	4.5%	-3.4%	3.4%
Other Africa	5.0	5.0	4.4	4.8	5.4	5.6	5.1	5.4	6.3	9.2	11.0	19.6%	8.3%	2.0%
Total Africa	49.5	48.5	46.2	55.7	53.5	61.6	55.9	58.1	54.0	54.4	51.2	-6.0%	0.4%	9.4%
Australia	32.0	39.9	60.4	76.6	91.8	104.7	106.0	108.5	107.4	107.4	106.8	-0.8%	12.8%	19.6%
Brunei	8.6	8.7	8.6	9.1	8.5	8.8	8.4	7.5	6.5	6.2	6.4	4.2%	-2.9%	1.2%
Indonesia	21.7	21.6	22.4	21.7	20.8	16.5	16.8	14.6	15.6	16.1	16.5	2.0%	-2.7%	3.0%
Malaysia	34.0	34.3	33.6	36.1	33.0	35.2	32.5	32.9	36.6	35.5	36.0	1.3%	0.6%	6.6%
Papua New Guinea	5.0	10.1	10.9	11.1	9.5	11.6	11.5	11.5	11.5	11.5	11.1	-3.9%	8.3%	2.0%
Other Asia Pacific*	0.2	0.8	0.5	0.8	0.6	0.5	1.4	1.0	1.3	1.5	1.3	-13.3%	23.5%	0.2%
Total Asia Pacific	101.5	115.5	136.4	155.4	164.3	177.3	176.8	176.0	178.9	178.2	178.2	-0.3%	5.8%	32.8%
Total LNG exports	333.6	337.1	358.3	393.3	430.4	484.2	489.9	515.2	538.5	546.6	544.1	-0.7%	5.0%	100.0%

Source: Includes GILGNL, S&P Global Commodity Insights.

Gross LNG trade.

* Largely consists of re-exports.

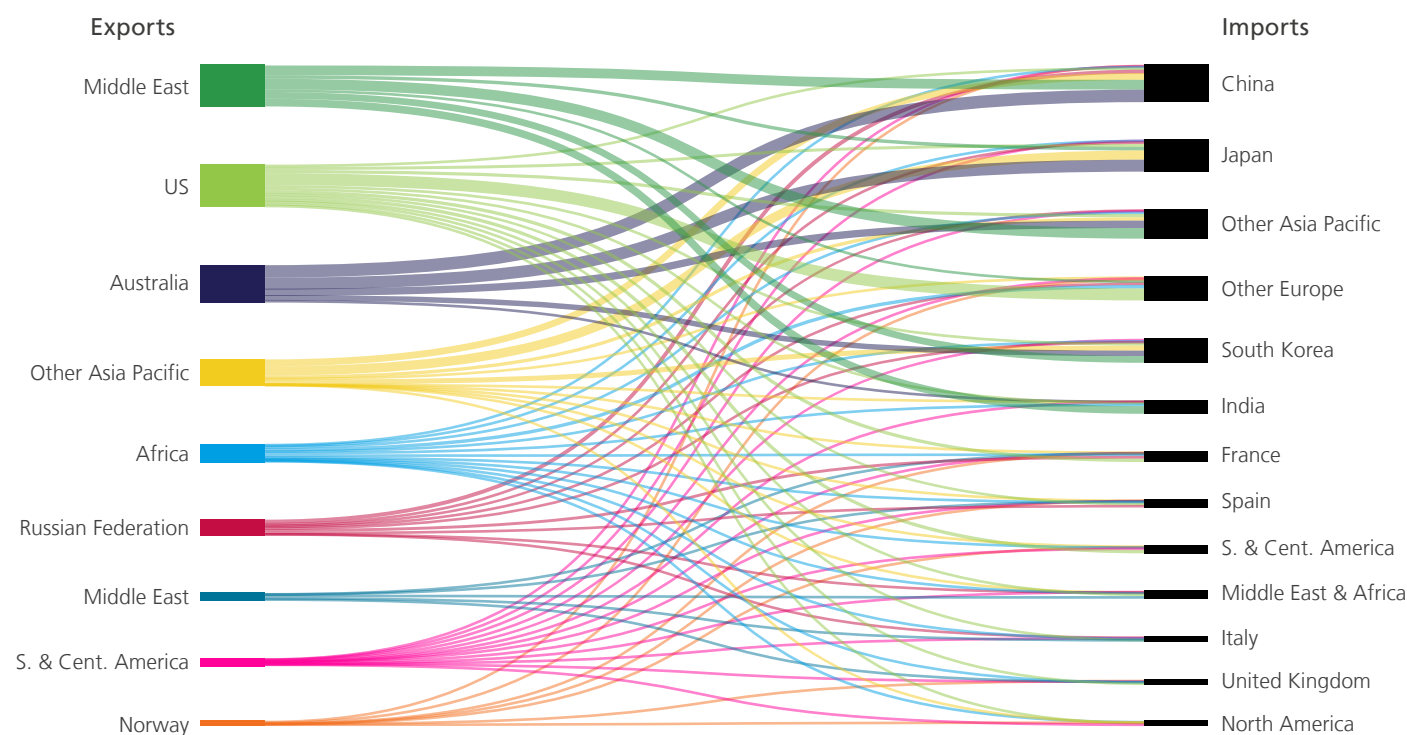
† Less than 0.05%.

Notes: Annual changes and share of totals are calculated using billion cubic metres figures.

Growth rates are adjusted for leap years.



Natural gas Major trade movements 2024 – LNG



Notes: As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) and has been standardised using a gross calorific value (GCV) of 40 MJ/m³.

LNG trade remained relatively flat in 2024, with the US retaining its position as the largest exporter followed closely by Qatar and Australia. Collectively, they accounted for 60% of total global LNG exports. China increased LNG imports by 7% in 2024, to remain the largest importer of LNG, with over one-third of its imports coming from Australia. The Asia Pacific region alone was responsible for 69% of all

LNG imports, with China accounting for one third of these imports. Europe's LNG imports fell 21% in 2024, despite this Europe's LNG imports from the Russian Federation increased marginally to 21.4 bcm. The US remains the largest supplier of LNG to Europe, despite a fall of 16 bcm most of which was redirected to the Asia Pacific.



Natural gas Trade movements 2024 as liquefied natural gas*

Billion cubic metres To	From																			Total imports
	US	Peru	Trinidad & Tobago	Other Americas*	Norway	Other Europe**	Russian Federation	Oman	Qatar	United Arab Emirates	Yemen	Algeria	Angola	Egypt	Nigeria	Other Africa	Australia	Brunei	Indonesia	
Canada	†	0.2	0.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.4
Mexico	0.2	–	0.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.5	1.0
US	–	–	0.3	†	0.1	†	–	–	–	–	–	–	–	–	–	–	–	–	–	0.5
North America	0.2	0.2	0.7	†	0.1	†	–	–	–	–	–	–	–	–	0.1	–	–	0.5	–	1.7
Argentina	1.4	–	0.2	–	–	0.1	–	–	–	–	–	0.1	–	–	–	–	–	–	–	1.7
Brazil	2.9	–	†	–	–	†	–	–	–	–	–	–	–	–	–	–	–	–	–	3.0
Chile	1.2	–	1.7	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	3.0
Other S. & Cent. America	4.6	–	2.8	0.3	0.2	0.1	–	–	–	–	–	–	–	0.1	1.3	†	–	–	0.1	9.5
S. & Cent. America	10.1	–	4.7	0.3	0.2	0.2	–	–	–	–	–	0.1	–	0.1	1.4	0.1	–	–	0.1	17.2
Belgium	1.1	–	–	–	–	–	3.4	–	3.1	–	–	–	–	–	–	–	–	–	–	7.7
France	9.5	0.3	†	–	0.9	0.1	8.4	–	0.4	–	–	4.6	0.2	0.1	1.0	0.1	–	–	–	25.7
Italy	5.0	–	0.2	–	–	0.2	0.1	–	6.6	–	–	2.0	0.3	0.1	–	0.2	–	–	–	14.6
Spain	5.1	0.1	0.2	–	0.2	0.3	6.5	–	1.0	–	–	2.3	0.2	–	2.2	0.3	–	–	†	18.4
Türkiye	4.9	–	0.2	–	0.1	0.3	0.5	–	–	–	–	5.5	–	0.2	0.1	0.3	–	–	–	12.0
United Kingdom	6.8	–	0.7	–	0.2	–	–	–	0.8	–	–	0.5	0.3	0.1	0.2	0.1	–	–	–	9.7
Other European Union	28.4	1.3	1.9	0.1	4.5	0.1	2.5	–	2.5	–	–	0.8	0.4	0.1	2.3	0.1	–	–	–	45.3
Rest of Europe	–	–	–	–	–	0.1	†	–	–	–	–	–	–	–	–	–	–	–	–	0.1
Europe	60.7	1.7	3.3	0.1	6.0	1.1	21.4	–	14.6	–	–	15.6	1.3	0.5	5.8	1.0	–	–	†	133.5
Egypt	3.3	–	†	–	–	0.2	–	–	–	–	–	–	–	–	0.3	0.1	–	–	–	3.9
Kuwait	0.9	–	0.1	–	–	–	0.3	0.3	6.0	–	–	–	0.4	–	1.6	0.2	–	–	–	9.7
United Arab Emirates	0.1	–	–	–	–	–	–	–	1.1	–	–	–	–	–	–	–	–	–	–	1.2
Other Middle East & Africa	1.2	–	–	–	–	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	1.3
Middle East & Africa	5.4	–	0.1	–	–	0.3	0.3	0.3	7.1	–	–	–	0.4	–	1.9	0.3	–	–	–	16.1
China	5.8	0.4	0.3	†	0.1	0.1	11.4	1.5	25.2	1.3	–	†	–	0.2	1.9	1.6	35.8	1.1	4.9	105.2
India	7.3	–	0.5	–	–	0.2	–	2.0	15.3	4.6	–	–	2.5	–	2.0	3.2	0.2	–	0.1	37.9
Japan	8.6	0.6	0.1	†	–	–	7.7	4.6	3.9	1.3	–	0.1	–	–	0.7	0.6	34.2	3.7	4.3	89.0
Malaysia	0.5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0.2	3.4	–	–	4.2
Pakistan	–	–	–	–	–	–	–	–	9.8	–	–	–	–	–	1.0	0.1	–	–	0.1	11.0
Singapore	1.5	–	0.3	–	–	–	–	–	2.3	–	–	–	–	–	†	1.4	2.5	–	0.1	8.4
South Korea	7.8	1.1	†	–	–	0.1	2.9	6.5	12.2	0.6	–	–	–	0.1	1.3	0.9	15.6	0.8	4.2	63.6
Taiwan	2.9	0.5	–	–	–	–	0.6	0.4	7.4	0.6	–	–	–	–	0.4	0.4	11.0	0.5	1.2	29.1
Thailand	2.9	0.1	0.3	–	–	–	–	0.7	3.1	0.2	–	0.1	0.6	–	0.7	0.7	2.8	0.2	0.9	15.8
Other Asia Pacific	1.4	–	–	–	–	–	–	–	6.0	–	–	0.1	0.1	–	1.2	0.5	1.4	0.2	0.3	11.4
Asia Pacific	38.7	2.8	1.6	†	0.1	0.3	22.6	15.7	85.2	8.6	–	0.3	3.2	0.3	9.1	9.6	106.8	6.4	15.9	375.5
Total exports	115.2	4.7	10.3	0.4	6.4	1.9	44.3	16.0	106.9	8.6	–	16.0	4.9	0.9	18.4	11.0	106.8	6.4	16.5	544.1

Source: Includes data from GIIGNL, S&P Global Commodity Insights.

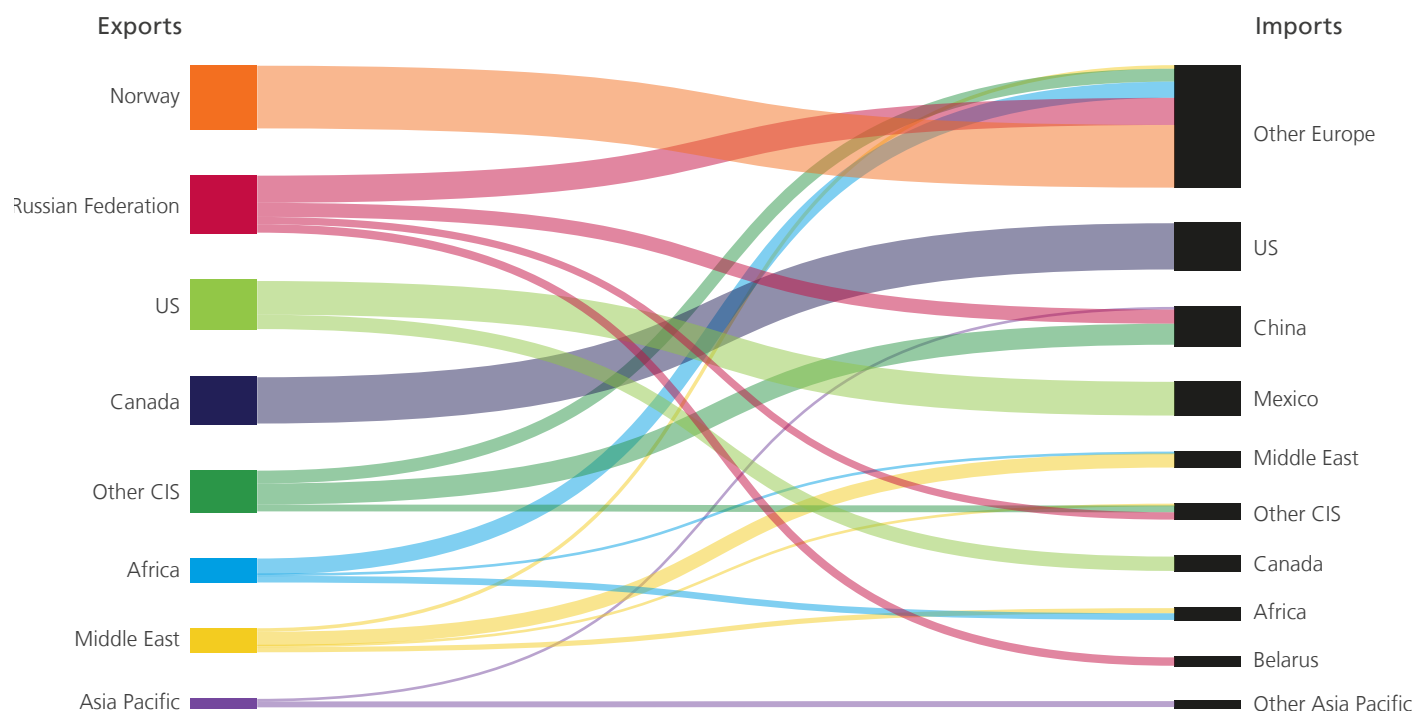
* Includes re-exports.

† Less than 0.05.

Note: As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) and has been standardised using a gross calorific value (GCV) of 40 MJ/m³.



Natural gas Major trade movements 2024 – pipeline



Notes: As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) and has been standardised using a gross calorific value (GCV) of 40 MJ/m³.
Source: Includes data from FGE MENAgas service, IHS.

Total 'inter-regional' pipeline trade increased for the first time since 2021, largely driven by a 22% increase in Russian Federation pipeline exports. It increased exports to Europe by 6 bcm, to neighbouring CIS countries by 8 bcm, and to China by 5 bcm. Europe is the largest player in global pipeline trade, responsible for 40% of global imports and 20% of exports. Norway remains the largest supplier of

pipeline gas to its European counterparts, supplying more than half of Europe's pipeline imports. Significant trade between the North American pipeline network continues, with the US and Canada exporting 91 bcm and 88 bcm, respectively. 70% of US pipeline exports were to Mexico and the remaining 30% to Canada.



Natural gas Trade movements 2024 by pipeline

	From																			
Billion cubic metres To	Canada	Mexico	US	Bolivia	Other S. & Cent. America	Norway	Other Europe	Azerbaijan	Kazakhstan	Russian Federation	Turkmenistan	Uzbekistan	Iran	Qatar	Other Middle East	Algeria	Libya	Other Africa	Indonesia	Myanmar
Canada	–	–	27.2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mexico	–	–	63.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
US	87.6	†	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
North America	87.6	†	91.0	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Argentina	–	–	–	1.1	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Brazil	–	–	–	4.9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other S. & Cent. America	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
S. & Cent. America	–	–	–	6.1	0.1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
European Union	–	–	–	–	–	87.3	–	11.9	–	27.2	–	–	–	–	–	29.3	1.3	–	–	–
Rest of Europe	–	–	–	–	–	31.4	–	12.4	–	24.2	–	–	–	6.8	–	–	–	–	–	–
Europe	–	–	–	–	–	118.7	–	24.4	–	51.4	–	–	–	6.8	–	29.3	1.3	–	–	–
Belarus	–	–	–	–	–	–	–	–	–	15.9	–	–	–	–	–	–	–	–	–	–
Kazakhstan	–	–	–	–	–	–	–	–	–	0.4	0.6	–	–	–	–	–	–	–	–	–
Russian Federation	–	–	–	–	–	–	–	–	–	0.7	4.7	–	–	–	–	–	–	–	–	–
Other CIS	–	–	–	–	–	–	–	–	–	13.7	6.8	0.2	0.4	–	–	–	–	–	–	–
CIS	–	–	–	–	–	–	–	–	–	0.7	29.8	12.1	0.2	0.4	–	–	–	–	–	–
United Arab Emirates	–	–	–	–	–	–	–	–	–	–	–	–	–	–	17.4	–	–	–	–	–
Other Middle East	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Middle East	–	–	–	–	–	–	–	–	–	–	–	–	–	7.8	18.9	–	–	0.5	–	–
South Africa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other Africa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Africa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Australia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
China	–	–	–	–	–	–	–	–	–	4.5	26.7	32.8	2.5	–	–	–	–	–	–	–
Malaysia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Singapore	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Thailand	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Asia Pacific	–	–	–	–	–	–	–	–	–	4.5	26.7	32.8	2.5	–	–	–	–	–	3.9	10.0
Total exports	87.6	†	91.0	6.1	0.1	118.7	0.8	24.4	5.2	108.2	44.9	2.7	15.0	18.9	9.8	32.8	1.3	9.7	3.9	10.0
Total imports	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Source: Includes data from FGE MENA gas service, S&P Global Commodity Insights.

† Less than 0.05.

Note: Intra-region trade is excluded. For example, trade between countries within Other Europe is excluded. Region coverage varies compared to 'inter-regional trade' table, e.g. Norway exports to EU, Non-EU is included above, but part of Europe in 'Inter-regional trade' table.

As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) and has been standardised using a gross calorific value (GCV) of 40 MJ/m³.

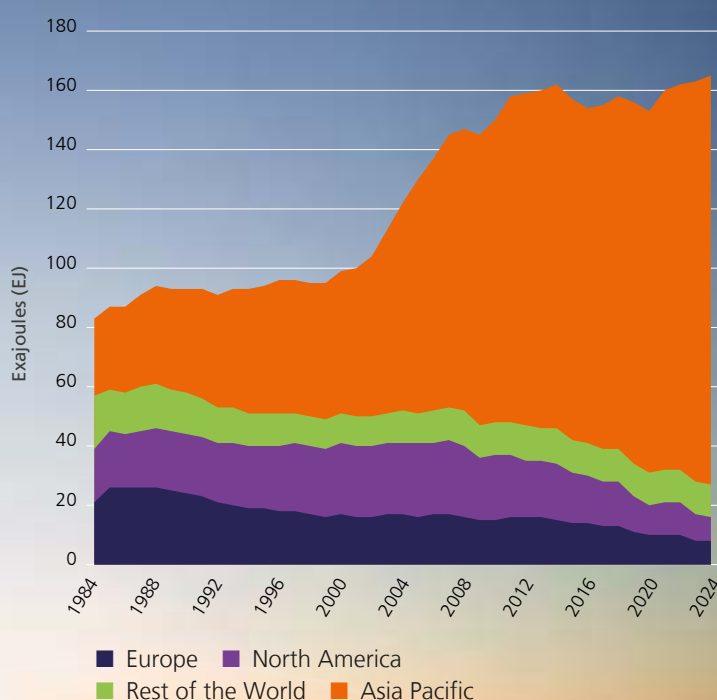
Coal

In 2024, global coal production reached a new record high of 182 EJ, surpassing the previous peak set in 2023, though the pace of growth slowed compared to the past three years. The Asia Pacific region continued to expand, with India and Indonesia recording significant production increases of 7% and 8%, respectively. Yet China remained by far the largest producer globally – India and Indonesia combined produced only 37% of China's total output. Africa remained relatively stable, with production rising by less than 2%. Meanwhile, Europe, South & Central America, and the Commonwealth of Independent States all saw continued declines, and in North

America, production also fell – with the US recording its lowest level for over 44 years.

Global coal demand continued to grow in 2024, rising by 1% to reach 165 EJ. The Commonwealth of Independent States, North America, and South & Central America all saw declines in demand. Europe remained the fastest-declining region globally, with a 7% drop from the previous year. However, these reductions were not enough to offset overall global growth, as the Asia Pacific region – driven by China – continued to expand, with regional demand increasing by around 2%.

Global coal consumption



US coal production reached its lowest level for over 44 years

Million tonnes												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	67.8	61.8	62.4	60.6	55.2	53.2	46.1	47.6	47.6	48.8	42.6	-12.9%	-4.5%	0.5%
Mexico	14.9	12.3	11.4	12.9	11.9	9.8	7.7	5.5	5.5	5.2	5.2	-0.5%	-10.0%	0.1%
US	907.2	813.7	660.8	702.7	686.0	640.8	485.7	523.8	539.0	524.3	464.6	-11.6%	-6.5%	5.0%
Total North America	989.9	887.8	734.5	776.2	753.0	703.7	539.6	577.0	592.2	578.3	512.4	-11.6%	-6.4%	5.5%
Brazil	9.4	8.0	7.5	5.8	6.4	5.8	7.1	8.0	7.6	7.7	7.6	-1.3%	-2.1%	0.1%
Colombia	88.6	86.7	91.5	91.8	87.9	88.5	56.8	63.7	66.8	68.0	52.7	-22.6%	-5.1%	0.6%
Venezuela	0.8	0.8	0.7	0.7	0.7	0.4	0.3	0.2	0.2	0.3	0.3	9.1%	-9.7%	†
Other S. & Cent. America	4.5	3.4	2.8	1.8	1.6	1.1	0.4	0.2	0.3	0.4	0.4	3.4%	-21.6%	†
Total S. & Cent. America	103.2	99.0	102.6	100.2	96.7	95.9	64.6	72.1	74.9	76.3	61.0	-20.3%	-5.1%	0.7%
Bulgaria	31.3	35.9	31.3	34.3	30.6	28.3	22.6	28.4	35.6	21.1	15.1	-28.7%	-7.1%	0.2%
Czech Republic	47.1	46.5	45.5	44.9	43.8	41.0	31.6	31.5	35.1	30.2	25.1	-16.8%	-6.1%	0.3%
Germany	185.8	184.3	175.4	175.1	168.8	131.3	107.4	126.3	130.8	102.3	91.9	-10.4%	-6.8%	1.0%
Greece	50.8	46.2	32.6	37.7	36.5	27.4	14.1	12.4	14.3	10.8	6.5	-39.8%	-18.6%	0.1%
Hungary	9.6	9.3	9.2	8.0	7.9	6.8	6.1	5.0	4.9	4.1	3.9	-4.7%	-8.6%	†
Poland	137.1	135.8	131.0	127.1	122.4	112.4	100.7	107.6	107.8	88.7	85.2	-4.2%	-4.6%	0.9%
Romania	23.6	25.5	23.0	25.8	23.7	21.7	15.0	17.7	18.2	14.8	12.6	-15.0%	-6.1%	0.1%
Serbia	29.8	37.8	38.5	39.8	37.6	38.9	39.7	36.4	35.1	31.9	31.3	-2.4%	0.5%	0.3%
Spain	3.9	3.1	1.7	3.0	2.4	0.1	0.1	0.1	0.1	^	^	-	-36.5%	†
Türkiye	65.2	58.4	73.0	74.1	83.9	87.1	74.7	86.5	95.3	74.2	87.0	16.9%	2.9%	0.9%
Ukraine	45.7	30.4	32.2	24.7	26.8	26.1	24.4	23.8	20.3	19.7	17.4	-11.9%	-9.2%	0.2%
United Kingdom	11.6	8.6	4.2	3.0	2.8	2.6	1.7	1.1	0.7	0.5	0.1	-79.0%	-37.5%	†
Other Europe	67.2	64.5	61.7	65.1	66.3	56.8	50.2	47.6	50.7	45.6	40.7	-11.0%	-4.9%	0.4%
Total Europe	708.8	686.3	659.4	662.6	653.5	580.5	488.3	524.3	548.8	443.9	416.9	-6.3%	-5.2%	4.5%
Kazakhstan	114.0	107.3	103.1	112.3	118.5	115.0	113.4	116.2	117.8	116.4	112.6	-3.6%	-0.1%	1.2%
Russian Federation	357.5	372.5	386.6	411.0	441.3	440.7	398.6	432.6	437.3	430.7	427.2	-1.1%	1.8%	4.6%
Uzbekistan	4.4	3.5	3.9	4.0	4.2	4.0	4.1	5.1	5.4	6.5	7.5	14.5%	5.5%	0.1%
Other CIS	4.1	4.0	4.6	5.7	7.7	7.9	6.3	6.6	8.6	8.5	9.0	5.7%	8.1%	0.1%
Total CIS	480.0	487.3	498.1	533.0	571.6	567.6	522.4	560.5	569.0	562.1	556.2	-1.3%	1.5%	6.0%
Total Middle East	1.5	1.6	1.8	1.8	2.2	2.0	2.1	2.4	4.9	9.2	11.0	18.8%	22.2%	0.1%
South Africa	261.4	252.2	249.7	252.3	250.0	254.4	248.1	233.7	229.9	233.6	235.0	0.3%	-1.1%	2.5%
Zimbabwe	5.8	4.3	2.7	2.9	3.3	2.6	2.7	3.2	3.9	5.0	5.8	15.9%	†	0.1%
Other Africa	9.4	9.7	9.2	16.7	20.3	15.2	13.6	17.8	23.9	24.5	26.2	6.6%	10.8%	0.3%
Total Africa	276.6	266.2	261.7	271.9	273.7	272.3	264.4	254.8	257.8	263.1	267.0	1.2%	-0.4%	2.9%
Australia	505.3	503.7	502.1	487.2	502.0	505.4	467.9	478.8	458.5	460.4	462.9	0.3%	-0.9%	5.0%
China	3873.9	3746.5	3410.6	3523.6	3697.7	3846.3	3901.6	4125.8	4558.6	4723.3	4780.0	0.9%	2.1%	51.7%
India	646.2	674.2	689.8	711.7	760.4	753.9	760.2	812.1	910.8	1011.3	1085.1	7.0%	5.3%	11.7%
Indonesia	458.1	461.6	456.2	461.2	557.8	616.2	563.7	614.0	687.4	775.2	836.1	7.6%	6.2%	9.0%
Japan	1.3	1.2	1.3	1.4	1.0	0.8	0.8	0.7	0.7	0.6	0.5	-18.5%	-8.8%	†
Mongolia	24.4	24.1	35.1	49.5	54.6	57.1	43.1	32.3	39.3	83.2	106.5	27.7%	15.9%	1.2%
New Zealand	4.0	3.4	2.9	2.9	3.2	3.0	2.8	2.9	2.6	2.6	2.5	-3.8%	-4.5%	†
Pakistan	3.4	3.3	4.1	4.2	4.4	7.1	9.6	9.7	12.3	17.4	19.1	9.5%	18.9%	0.2%
South Korea	1.7	1.8	1.7	1.5	1.2	1.1	1.0	0.9	0.8	0.6	0.5	-16.0%	-11.0%	†
Thailand	18.0	15.2	17.0	16.3	14.9	14.1	13.3	14.2	13.6	12.8	12.8	-0.7%	-3.4%	0.1%
Vietnam	41.1	41.7	38.7	38.4	42.4	46.4	44.6	48.3	49.9	47.3	43.8	-7.5%	0.6%	0.5%
Other Asia Pacific	44.2	47.7	64.2	61.6	58.8	64.9	60.8	57.4	64.2	67.2	67.2	-0.3%	4.3%	0.7%
Total Asia Pacific	5621.7	5524.3	5223.8	5359.5	5698.3	5916.3	5869.4	6197.2	6798.8	7202.0	7417.1	2.7%	2.8%	80.3%
Total World	8181.6	7952.4	7481.8	7705.2	8049.0	8138.1	7750.8	8188.3	8846.3	9134.9	9241.5	0.9%	1.2%	100.0%
of which: OECD	2146.4	2016.1	1842.3	1872.4	1856.2	1740.8	1427.3	1514.8	1532.3	1441.0	1347.0	-6.8%	-4.6%	14.6%
Non-OECD	6035.3	5936.3	5639.5	5832.8	6192.9	6397.4	6323.5	6673.5	7314.0	7693.9	7894.6	2.3%	2.7%	85.4%
European Union	527.3	521.3	481.6	492.2	473.4	397.3	318.8	348.9	368.1	291.3	255.7	-12.5%	-7.0%	2.8%

* Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels.

Includes coal produced for Coal-to-Liquids and Coal-to-Gas transformations.

^ Less than 0.005.

† Less than 0.05%.

Notes: Annual changes and shares of total are calculated using million tonnes figures.

Growth rates are adjusted for leap years.

Exajoules												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	1.50	1.35	1.37	1.33	1.23	1.20	1.15	1.21	1.22	1.27	1.14	-10.2%	-2.7%	0.6%
Mexico	0.30	0.29	0.25	0.31	0.28	0.23	0.19	0.14	0.14	0.13	0.13	-0.5%	-8.2%	0.1%
US	20.33	17.99	14.70	15.66	15.40	14.29	10.73	11.62	12.07	11.78	10.61	-10.2%	-6.3%	5.8%
Total North America	22.14	19.63	16.33	17.30	16.90	15.72	12.07	12.97	13.42	13.18	11.88	-10.1%	-6.0%	6.5%
Brazil	0.15	0.12	0.11	0.09	0.10	0.09	0.10	0.12	0.11	0.11	0.11	-1.4%	-3.3%	0.1%
Colombia	2.55	2.49	2.63	2.64	2.53	2.55	1.63	1.83	1.92	1.96	1.52	-22.6%	-5.1%	0.8%
Venezuela	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	^	0.01	0.01	9.1%	-12.2%	†
Other S. & Cent. America	0.12	0.10	0.08	0.05	0.05	0.03	0.01	0.01	0.01	0.01	0.01	2.7%	-21.7%	†
Total S. & Cent. America	2.85	2.74	2.85	2.81	2.69	2.68	1.76	1.96	2.04	2.08	1.64	-21.3%	-5.4%	0.9%
Bulgaria	0.21	0.25	0.21	0.24	0.21	0.20	0.16	0.20	0.25	0.15	0.11	-28.7%	-6.9%	0.1%
Czech Republic	0.71	0.71	0.67	0.64	0.62	0.56	0.43	0.44	0.48	0.41	0.34	-16.2%	-7.0%	0.2%
Germany	1.85	1.79	1.66	1.65	1.58	1.19	0.98	1.15	1.19	0.92	0.82	-10.4%	-7.8%	0.5%
Greece	0.27	0.24	0.17	0.19	0.18	0.13	0.07	0.06	0.07	0.05	0.03	-39.8%	-18.8%	†
Hungary	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.03	0.03	0.03	0.03	-4.7%	-8.8%	†
Poland	2.26	2.22	2.18	2.08	1.98	1.87	1.68	1.76	1.71	1.49	1.39	-6.8%	-4.8%	0.8%
Romania	0.19	0.20	0.18	0.19	0.17	0.16	0.11	0.13	0.12	0.09	0.08	-14.9%	-8.1%	†
Serbia	0.24	0.30	0.30	0.30	0.28	0.29	0.30	0.26	0.25	0.23	0.23	-2.4%	-0.6%	0.1%
Spain	0.07	0.05	0.03	0.05	0.04	^	^	^	^	^	^	†	-35.8%	†
Türkiye	0.68	0.54	0.65	0.63	0.69	0.73	0.66	0.75	0.83	0.64	0.75	15.9%	0.9%	0.4%
Ukraine	1.09	0.72	0.76	0.57	0.61	0.60	0.53	0.52	0.44	0.43	0.38	-11.9%	-10.0%	0.2%
United Kingdom	0.29	0.21	0.11	0.08	0.08	0.07	0.05	0.03	0.02	0.01	^	-79.0%	-36.7%	†
Other Europe	0.64	0.59	0.59	0.60	0.60	0.52	0.46	0.44	0.46	0.42	0.37	-10.9%	-5.3%	0.2%
Total Europe	8.57	7.88	7.58	7.28	7.08	6.36	5.47	5.77	5.84	4.87	4.53	-7.2%	-6.2%	2.5%
Kazakhstan	2.09	1.66	1.75	1.92	1.98	1.88	1.86	1.92	1.95	2.01	1.94	-3.6%	-0.7%	1.1%
Russian Federation	7.39	7.80	8.12	8.62	9.23	9.23	8.41	9.23	9.33	9.20	9.12	-1.1%	2.1%	5.0%
Uzbekistan	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.06	0.06	0.08	0.09	14.5%	5.6%	†
Other CIS	0.06	0.07	0.07	0.09	0.12	0.12	0.11	0.11	0.14	0.14	0.15	9.4%	9.1%	0.1%
Total CIS	9.60	9.57	10.00	10.68	11.37	11.28	10.42	11.33	11.49	11.42	11.30	-1.3%	1.6%	6.2%
Total Middle East	0.03	0.03	0.04	0.04	0.05	0.04	0.04	0.04	0.06	0.07	0.08	10.4%	10.7%	†
South Africa	6.20	5.96	6.01	5.97	6.01	6.02	5.88	5.53	5.44	5.53	5.56	0.3%	-1.1%	3.1%
Zimbabwe	0.16	0.12	0.07	0.08	0.09	0.07	0.07	0.09	0.11	0.13	0.16	15.9%	†	0.1%
Other Africa	0.24	0.25	0.24	0.43	0.53	0.39	0.35	0.46	0.61	0.63	0.67	6.6%	10.8%	0.4%
Total Africa	6.59	6.33	6.32	6.49	6.63	6.48	6.30	6.08	6.16	6.29	6.39	1.3%	-0.3%	3.5%
Australia	12.81	12.80	12.83	12.50	13.09	13.18	12.03	12.25	11.69	11.74	11.82	0.3%	-0.8%	6.5%
China	78.05	76.59	70.82	73.17	76.87	79.76	80.51	83.44	91.32	93.36	94.48	0.9%	1.9%	51.8%
India	11.28	11.77	11.89	11.99	12.80	12.60	12.59	13.38	15.05	16.83	18.05	7.0%	4.8%	9.9%
Indonesia	10.15	10.19	9.87	9.69	11.44	12.84	11.78	12.68	13.95	15.73	16.97	7.6%	5.3%	9.3%
Japan	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.01	-18.5%	-8.5%	†
Mongolia	0.47	0.46	0.67	0.94	1.04	1.09	0.82	0.62	0.75	1.59	2.03	27.7%	15.9%	1.1%
New Zealand	0.10	0.09	0.07	0.07	0.08	0.07	0.07	0.07	0.07	0.07	0.06	-3.9%	-4.8%	†
Pakistan	0.06	0.06	0.08	0.08	0.08	0.13	0.18	0.18	0.23	0.33	0.36	9.5%	18.9%	0.2%
South Korea	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	-16.0%	-10.6%	†
Thailand	0.19	0.16	0.18	0.17	0.16	0.15	0.14	0.15	0.14	0.13	0.13	-0.7%	-3.7%	0.1%
Vietnam	0.96	0.98	0.91	0.90	0.99	1.09	1.05	1.13	1.17	1.11	1.03	-7.5%	0.6%	0.6%
Other Asia Pacific	1.09	1.13	1.40	1.33	1.22	1.38	1.30	1.21	1.36	1.43	1.43	-0.5%	2.7%	0.8%
Total Asia Pacific	115.25	114.27	108.78	110.91	117.82	122.32	120.50	125.15	135.76	142.35	146.39	2.6%	2.4%	80.3%
Total World	165.02	160.44	151.89	155.50	162.54	164.89	156.55	163.29	174.77	180.27	182.23	0.8%	1.0%	100.0%
of which: OECD	44.37	41.31	37.86	38.34	38.24	36.44	29.96	31.58	31.66	30.71	28.82	-6.4%	-4.2%	15.8%
Non-OECD	120.65	119.13	114.03	117.16	124.31	128.45	126.59	131.71	143.12	149.56	153.40	2.3%	2.4%	84.2%
European Union	5.97	5.82	5.47	5.42	5.16	4.42	3.67	3.96	4.04	3.31	2.94	-11.4%	-6.8%	1.6%

* Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Includes coal produced for

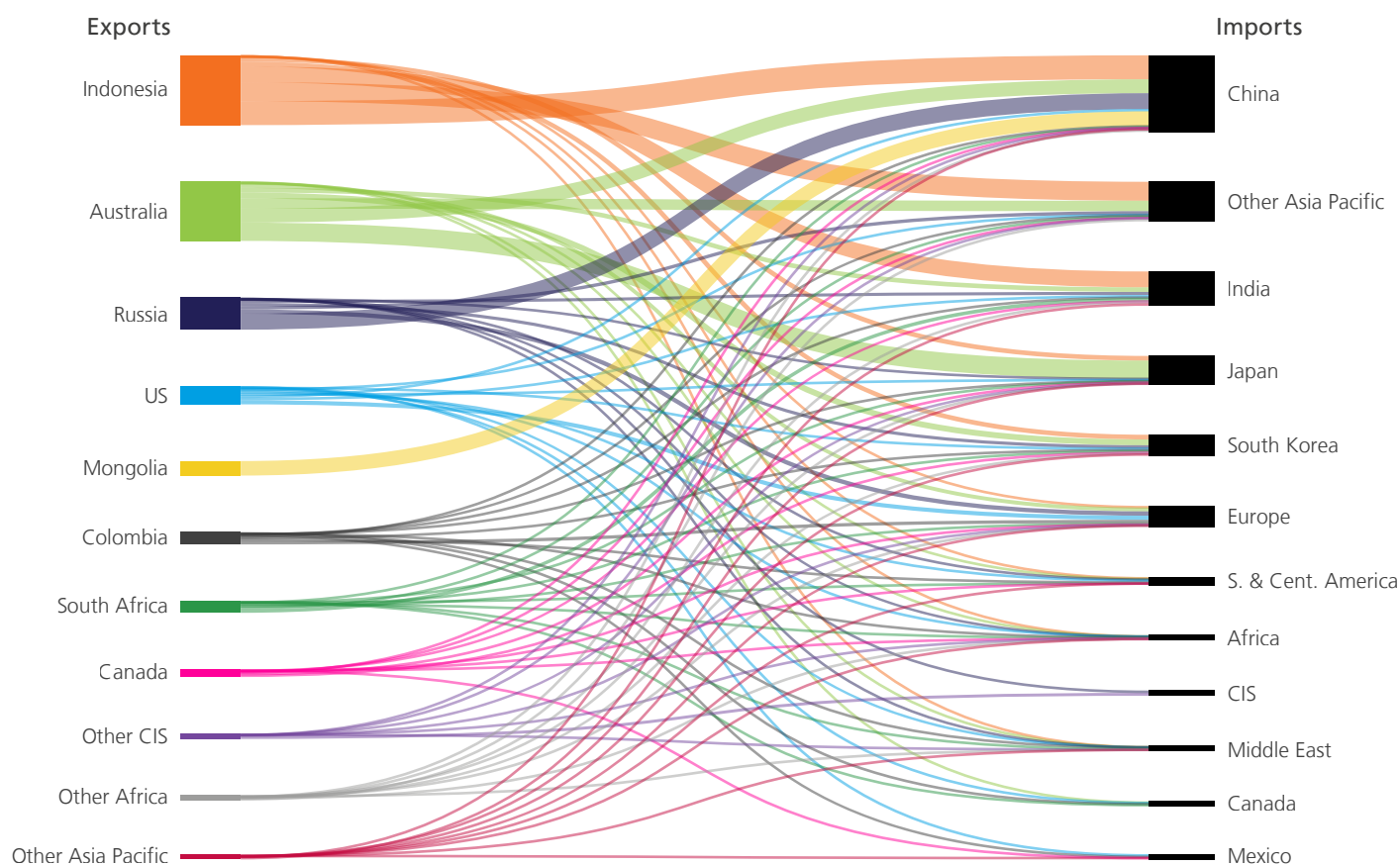
Coal-to-Liquids and Coal-to-Gas transformations.

^ Less than 0.005.

† Less than 0.05%.

Notes: Annual changes and shares of total are calculated using exajoules figures.

Growth rates are adjusted for leap years.



Notes: Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Intra-area movements (for example, between countries in Europe) are excluded.

Overall, international coal trade increased by 1.3% in 2024 to 36 EJ matching the 2018 record high. The Asia Pacific region remains the dominant player in global coal trade, accounting for over 84% of total imports, led by China and India. China's coal imports hit a record 11.6 EJ, up 14% from 2023, retaining its position as a key buyer from Australia, Indonesia and the Russian Federation. Indonesia remained the largest coal exporter, with 11 EJ, a 5% increase over 2023,

while Australia remains the second-largest exporter with a 4% increase.

European imports contracted by 17%, and coal from the Russian Federation to the EU fell by 13% in 2024, deepening the post-2022 shift toward alternative suppliers. Japan and South Korea continued gradual reductions, with coal imports down 1% and 4% respectively, reflecting cleaner energy shifts.

Coal Inter-area movements 2024

From	To													
Exajoules	Canada	Mexico	US	S. & Cent. America	Europe	CIS	Middle East	Africa	China	India	Japan	South Korea	Other Asia Pacific	Total
Canada	—	†	0.02	†	0.06	†	†	†	0.23	0.04	0.25	0.25	0.07	0.92
US	0.13	†	—	0.29	0.64	†	0.01	0.28	0.33	0.40	0.32	0.13	0.13	2.64
Colombia	0.04	0.10	0.02	0.32	0.51	—	0.08	0.04	0.20	0.04	0.04	0.26	0.05	1.73
Europe	†	†	†	0.01	—	†	†	0.02	†	0.07	†	†	0.01	0.12
Russian Federation	—	—	—	0.03	0.67	0.04	0.01	0.05	2.49	0.48	0.03	0.49	0.53	4.81
Other CIS	—	—	†	†	0.13	0.46	0.01	0.01	0.01	†	0.01	†	0.02	0.64
South Africa	†	—	†	0.01	0.19	—	0.09	0.14	0.02	0.57	0.09	0.17	0.35	1.63
Other Africa	—	—	†	—	0.02	—	0.03	0.11	0.03	0.18	†	0.05	0.10	0.54
Australia	†	—	—	0.17	0.61	—	†	0.01	2.17	0.71	2.85	0.91	1.63	9.07
China	†	†	†	0.01	0.04	†	0.02	†	—	0.02	0.03	0.03	0.18	0.34
Indonesia	†	—	†	0.01	0.07	—	†	†	3.74	2.48	0.72	0.73	2.95	10.72
Mongolia	—	—	—	—	†	—	—	—	2.27	—	—	—	—	2.27
Other Asia Pacific	†	†	†	†	0.02	†	0.01	†	0.12	0.24	0.02	0.04	—	0.44
Rest of World	†	†	†	0.01	0.02	†	†	†	†	0.06	†	0.02	†	0.12
Total imports	0.18	0.11	0.05	0.87	2.99	0.50	0.26	0.68	11.62	5.30	4.35	3.07	6.02	35.99

Notes: Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels.

Intra-area movements (for example, between countries in Europe) are excluded.

† Less than 0.05%.

Exajoules												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Imports														
Canada	0.26	0.22	0.19	0.22	0.23	0.21	0.17	0.19	0.18	0.19	0.18	-8.1%	-3.6%	0.5%
Mexico	0.22	0.23	0.21	0.32	0.32	0.25	0.13	0.05	0.05	0.12	0.11	-8.6%	-6.4%	0.3%
US	0.28	0.28	0.25	0.19	0.15	0.17	0.65	0.14	0.16	0.11	0.05	-50.0%	-15.1%	0.2%
S. & Cent. America	1.06	1.00	1.06	1.20	1.18	1.12	1.04	1.25	1.05	0.96	0.87	-10.1%	-2.0%	2.4%
Europe	6.09	6.03	5.40	5.83	6.34	5.08	3.93	4.44	4.94	3.57	2.99	-16.6%	-6.9%	8.3%
CIS	0.56	0.53	0.48	0.60	0.65	0.70	0.66	0.64	0.49	0.49	0.50	1.8%	-1.0%	1.4%
Middle East	0.49	0.38	0.34	0.36	0.37	0.34	0.38	0.34	0.25	0.24	0.26	8.4%	-6.1%	0.7%
Africa	0.37	0.44	0.50	0.63	0.82	0.92	0.52	0.68	0.73	0.76	0.68	-11.1%	6.2%	1.9%
China	6.62	4.69	5.65	5.87	6.00	6.40	6.61	6.68	5.83	10.16	11.62	14.0%	5.8%	32.3%
India	4.65	4.92	6.46	5.25	5.68	4.70	4.74	4.67	4.99	5.35	5.30	-1.3%	1.3%	14.7%
Japan	5.00	5.05	5.01	5.06	5.00	4.90	4.56	4.84	4.82	4.39	4.35	-1.1%	-1.4%	12.1%
South Korea	3.43	3.54	3.53	3.89	3.90	3.73	3.28	3.35	3.36	3.19	3.07	-3.9%	-1.1%	8.5%
Other Asia Pacific	2.73	3.96	4.60	4.90	5.34	5.22	6.36	6.23	5.53	5.89	6.02	1.8%	8.2%	16.7%
Total World	31.76	31.27	33.69	34.32	35.99	33.72	33.03	33.51	32.37	35.43	35.99	1.3%	1.3%	100.0%
Exports														
Canada	1.00	0.86	0.78	0.95	1.03	1.02	0.95	0.96	0.97	0.99	0.92	-7.2%	-0.9%	2.5%
US	2.38	1.89	1.52	2.41	2.89	2.21	1.74	2.18	2.23	2.47	2.64	6.6%	1.1%	7.3%
Colombia	2.27	2.19	2.33	2.48	2.42	2.09	1.82	1.68	1.61	1.62	1.73	6.3%	-2.7%	4.8%
Europe	0.13	0.10	0.13	0.19	0.25	0.24	0.21	0.22	0.15	0.20	0.12	-41.5%	-0.9%	0.3%
Russian Federation	3.78	4.11	4.47	5.09	5.76	5.79	5.66	6.03	5.32	5.46	4.81	-12.0%	2.4%	13.4%
Other CIS	0.51	0.48	0.45	0.50	0.49	0.55	0.63	0.65	0.69	0.66	0.64	-3.3%	2.3%	1.8%
South Africa	2.18	2.30	2.16	2.68	2.95	1.41	1.73	1.62	1.72	1.74	1.63	-6.4%	-2.9%	4.5%
Other Africa	0.18	0.26	2.02	0.66	0.24	0.28	0.74	0.37	0.47	0.56	0.54	-5.1%	11.8%	1.5%
Australia	9.12	9.95	9.87	9.63	9.71	9.60	9.33	9.60	8.21	8.72	9.07	3.7%	-0.1%	25.2%
China	0.36	0.45	0.51	0.40	0.41	0.31	0.18	0.28	0.31	0.31	0.34	9.7%	-0.3%	1.0%
Indonesia	8.42	7.48	7.73	8.01	8.49	8.49	8.79	8.98	9.19	10.15	10.72	5.3%	2.4%	29.8%
Mongolia	0.53	0.41	0.73	0.95	0.99	1.04	0.83	0.49	0.90	1.96	2.27	15.4%	15.6%	6.3%
Other Asia Pacific	0.77	0.65	0.77	0.32	0.29	0.60	0.34	0.36	0.44	0.46	0.44	-4.3%	-5.3%	1.2%
Rest of World	0.14	0.14	0.22	0.06	0.08	0.09	0.08	0.08	0.15	0.13	0.12	-3.1%	-1.0%	0.3%
Total World	31.76	31.27	33.69	34.32	35.99	33.72	33.03	33.51	32.37	35.43	35.99	1.3%	1.3%	100.0%

Notes: Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels.

Intra-area movements (for example between countries in Europe) are excluded.

Annual changes and shares of total are calculated using exajoules figures. Growth rates are adjusted for leap years.

Mined energy resource prices

	Coal \$/te								Uranium \$/lb
	United States ¹	Colombia ²	Northwest Europe ³	South Africa ⁴	Indonesia ⁵	South China ⁶	Japan ⁷	Australia ⁸	Canada ⁹
1987	–	–	31.30	–	–	–	–	–	–
1988	–	–	39.94	–	–	–	–	–	–
1989	–	–	42.08	–	–	–	–	–	–
1990	31.59	–	43.48	–	–	–	–	–	–
1991	29.01	–	42.80	–	–	–	–	–	–
1992	28.53	–	38.53	–	–	–	–	–	–
1993	29.85	–	33.68	–	–	–	–	–	–
1994	31.72	–	37.18	–	–	–	–	–	–
1995	27.01	–	44.50	–	–	–	–	–	–
1996	29.86	–	41.25	–	–	–	–	–	–
1997	29.76	–	38.92	–	–	–	–	–	–
1998	31.00	–	32.00	–	–	–	–	–	–
1999	31.29	–	28.79	–	–	–	–	–	–
2000	29.90	–	35.99	–	–	27.52	–	–	–
2001	50.15	–	39.03	–	–	31.78	37.69	–	–
2002	33.20	–	31.65	–	–	33.19	31.47	–	–
2003	38.52	–	43.60	–	–	31.74	39.61	–	–
2004	64.90	–	72.13	–	–	42.76	74.22	–	–
2005	70.12	–	60.54	–	–	51.34	64.62	–	–
2006	57.82	–	64.11	–	–	53.53	65.22	–	–
2007	49.73	–	88.79	–	–	61.23	95.59	–	–
2008	117.42	–	147.67	–	–	104.97	157.88	–	–
2009	60.73	–	70.39	–	–	87.86	83.59	–	–
2010	67.87	59.21	92.50	–	–	110.08	108.47	–	–
2011	84.75	79.73	121.48	–	–	127.27	126.13	–	–
2012	67.28	65.02	92.50	–	–	111.89	100.30	–	–
2013	69.72	54.18	81.69	–	–	95.42	90.07	–	–
2014	67.08	50.25	75.38	62.80	–	84.12	76.13	–	–
2015	51.57	47.31	56.79	47.48	–	67.53	60.10	–	–
2016	51.45	52.62	60.09	53.04	–	71.35	71.66	–	–
2017	63.83	68.75	84.51	71.59	–	94.72	96.02	–	–
2018	72.84	72.76	91.83	78.03	–	99.45	112.73	71.13	–
2019	57.16	51.26	60.17	55.67	50.53	35.20	73.57	54.24	–
2020	42.77	45.16	50.13	48.30	45.22	30.64	61.03	44.75	30.46
2021	68.54	100.39	122.60	96.49	95.22	124.70	114.59	83.26	35.16
2022	157.57	248.37	291.28	212.99	127.65	177.78	214.57	174.49	49.78
2023	73.59	99.87	129.54	99.66	84.61	120.65	130.25	103.59	60.37
2024	77.67	82.90	112.00	88.41	73.52	102.00	115.39	89.41	86.24

¹ **Source:** S&P Global Commodity Insights, ©2025 by S&P Global Inc. Prices are for CAPP 12,500 Btu, 1.2 SO₂ coal, FOB to 2023. From 2024, NAPP FOB Baltimore 6,900 kcal/kg NAR).

² **Source:** S&P Global Commodity Insights, ©2025 by S&P Global Inc 6,000 kcal/kg NAR FOB.

³ **Source:** IHS Northwest Europe prices for 1990–2000 average monthly marker prices, 2001–2018 average weekly prices. From 2019, monthly average of S&P Global Commodity Insights, ©2025 by S&P Global Inc Thermal Coal CIF ARA 6,000 kcal/kg NAR.

⁴ **Source:** S&P Global Commodity Insights, ©2025 by S&P Global Inc FOB Richards Bay 5500 kcal/kg NAR 7–45 Day \$/mt.

⁵ **Source:** S&P Global Commodity Insights, ©2025 by S&P Global Inc FOB Kalimantan 5,000 kcal/kg GAR.

⁶ South China prices are the average monthly price for 2000–2005, weekly prices 2006–2018, from 2019 monthly average of S&P Global Commodity Insights, ©2025 by S&P Global Inc CFR South China 5,500 kilocalories per kilogram NAR.

⁷ **Source:** 2001–2018 IHS Japan prices basis = 6,000 kilocalories per kilogram NAR CIF. From 2019, monthly average of S&P Global Commodity Insights, ©2025 by S&P Global Inc NEAT 5,750 kcal/kg NAR.

⁸ **Source:** S&P Global Commodity Insights, ©2025 by S&P Global Inc FOB Newcastle High Ash 5500 kcal/kg NAR 7–45 Day \$/mt.

⁹ **Source:** S&P Global Commodity Insights, ©2025 by S&P Global Inc Uranium U3O8 Spot Canada Mo01 \$/lb.

Note: NAPP = North Appalachian, CIF = cost+insurance+freight (average prices); FOB = Free on Board, NAR = Net As Received, CFR = Cost+Freight.

Electricity, renewables and nuclear energy

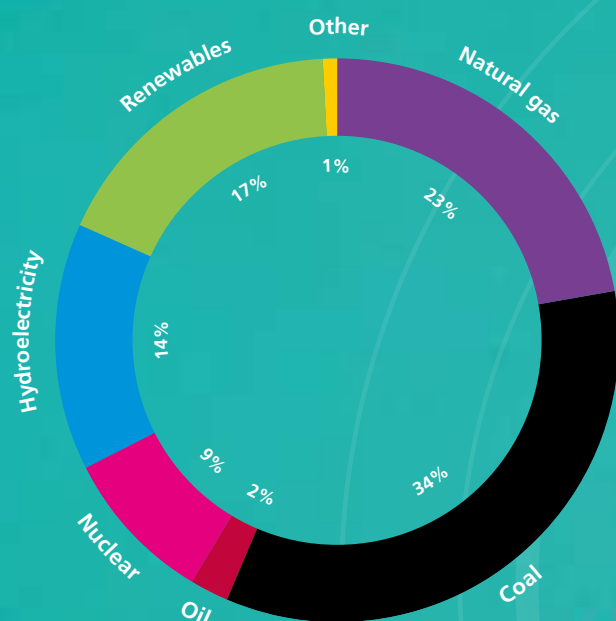
Electricity generation increased by 4% in 2024, to reach a record level of 31,256 TWh. In the last decade, global electricity generation has grown at 2.6% per annum, which is double the annual growth rate of total energy demand over the same period (1.3%). This highlights how the global energy system is electrifying at pace.

With the exception of oil, electricity generation from all sources increased globally in 2024. Amongst fossil fuels, gas saw the biggest increase in generation, growing 2.5% and coal grew by 1.2% to reach 10,613 TWh and remained the largest source of generation. Generation from renewables, excluding hydro, increased by 14% and now accounts for 17% of total generation – when including hydroelectricity, it accounted for 31%. In 2024, total installed solar capacity increased by 32%, and total installed wind capacity increased by 11%.

Global biofuels production grew by over 8%, with the US the largest global producer with a 37% share of global production. Additionally, the US, Brazil, and Europe combined account for around 75% of global biofuels use.

Over the last 10 years, global electricity generation has grown at double the annual growth rate of energy demand

Generation from low and zero-carbon sources surpassed 40% of total electricity generated in 2024





Megawatts												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	2108	2877	3058	3419	3719	4007	4379	5261	5439	5884	6105	3.8%	11.2%	0.3%
Mexico	174	295	606	1072	2770	6247	7158	8927	9356	10910	11992	9.9%	52.7%	0.6%
US	18112	24237	35434	43770	51987	61587	76441	95391	114361	139205	177470	27.5%	25.6%	9.5%
Total North America	20394	27409	39098	48261	58476	71841	87978	109579	129155	155999	195568	25.4%	25.4%	10.5%
Argentina	14	14	14	14	196	446	768	1077	1113	1405	1741	23.9%	62.3%	0.1%
Brazil	24	49	136	1210	2465	4706	8482	14511	25399	37940	53113	40.0%	116.0%	2.8%
Chile	221	576	1125	1724	2298	2720	3288	4712	6902	8885	11054	24.4%	47.9%	0.6%
Honduras	5	396	412	455	515	518	525	529	529	529	554	4.7%	59.6%	†
The Dominican Republic	15	24	71	95	191	335	386	584	735	1077	1423	32.1%	57.9%	0.1%
Other S. & Cent. America	479	863	1044	1661	1986	2460	2800	3473	4049	4973	5946	19.6%	28.6%	0.3%
Total S. & Cent. America	758	1922	2802	5158	7651	11184	16248	24885	38726	54810	73830	34.7%	58.1%	4.0%
Austria	790	940	1100	1272	1457	1703	2037	2771	3757	6331	8481	34.0%	26.8%	0.5%
Belgium	2977	3108	3291	3600	3963	4523	5453	5934	6781	8352	9752	16.8%	12.6%	0.5%
Bulgaria	1029	1028	1030	1031	1033	1044	1100	1275	1737	2908	3908	34.4%	14.3%	0.2%
Czech Republic	2067	2075	2068	2062	2068	2085	2124	2177	2404	3251	4159	27.9%	7.2%	0.2%
Denmark	607	782	851	906	998	1080	1304	1704	3070	3529	3945	11.8%	20.6%	0.2%
France	5861	6820	7319	8100	9032	10013	11133	13446	14722	17399	21528	23.7%	13.9%	1.2%
Germany	37398	38601	39908	41404	44035	47487	51785	57463	61188	74882	89943	20.1%	9.2%	4.8%
Greece	2596	2604	2604	2552	2591	2754	3174	4073	5104	6689	9269	38.6%	13.6%	0.5%
Hungary	89	172	235	344	728	1400	2131	2968	4235	5910	7699	30.3%	56.2%	0.4%
Italy	18441	18742	19116	19504	19916	20625	21359	22286	24560	29356	36013	22.7%	6.9%	1.9%
Lithuania	67	67	68	75	89	130	244	422	738	1324	2567	93.9%	44.1%	0.1%
Netherlands	1007	1526	2135	2911	4608	7228	11110	14823	17356	21275	24048	13.0%	37.3%	1.3%
Poland	26	103	178	277	536	1495	3795	7091	11063	16428	20199	23.0%	94.4%	1.1%
Portugal	417	452	533	619	717	970	1191	1817	2817	4040	5808	43.8%	30.1%	0.3%
Romania	1293	1326	1372	1374	1386	1398	1383	1394	1809	2988	4688	56.9%	13.7%	0.3%
Slovakia	533	533	533	528	471	590	535	537	549	593	867	46.2%	5.0%	†
Slovenia	224	239	232	247	247	278	370	461	626	1031	1309	27.0%	19.3%	0.1%
Spain	7032	7041	7044	7053	7101	11146	12475	16056	26238	31920	38587	20.9%	18.6%	2.1%
Sweden	60	104	153	244	428	714	1107	1606	2388	3993	4963	24.3%	55.5%	0.3%
Switzerland	1043	1360	1617	1860	2117	2425	2875	3515	4528	6094	7794	27.9%	22.3%	0.4%
Türkiye	41	250	834	3422	5064	5996	6668	7817	9426	11293	19883	76.1%	85.6%	1.1%
Ukraine	819	841	955	1200	2003	5936	7331	8062	8062	8062	5500	-31.8%	21.0%	0.3%
United Kingdom	5528	9601	11914	12751	13060	13345	13870	14261	14981	16275	17603	8.2%	12.3%	0.9%
Other Europe	330	403	497	641	826	1207	1719	2428	3748	6763	9613	42.1%	40.1%	0.5%
Total Europe	90275	98717	105585	113977	124472	145572	166274	194387	231889	290686	358128	23.2%	14.8%	19.2%
Russian Federation	306	363	433	538	828	1425	1774	1988	2148	2193	2554	16.5%	23.6%	0.1%
Kazakhstan	5	57	57	59	209	542	912	1038	1146	1306	1196	-8.4%	72.8%	0.1%
Other CIS	8	12	75	114	210	212	250	361	763	1431	3318	131.9%	83.8%	0.2%
Total CIS	319	432	566	711	1247	2178	2935	3387	4057	4930	7069	43.4%	36.3%	0.4%
Israel	656	796	906	1006	1346	2138	2652	3591	4632	5516	5605	1.6%	23.9%	0.3%
Jordan	^	57	311	418	760	971	1541	1811	1966	1990	2077	4.4%	148.0%	0.1%
Saudi Arabia	24	24	24	34	84	109	409	439	440	2585	4340	67.9%	68.0%	0.2%
United Arab Emirates	130	132	135	353	600	1935	2333	3002	3596	5942	6011	1.2%	46.7%	0.3%
Other Middle East	72	145	245	438	744	923	1172	1417	3579	3819	5015	31.3%	52.8%	0.3%
Total Middle East	883	1154	1621	2250	3535	6076	8107	10261	14213	19852	23050	16.1%	38.6%	1.2%
Algeria	28	62	262	355	367	367	367	367	451	462	462	0.0%	32.2%	†
Egypt	35	36	59	180	764	1647	1643	1663	1725	1856	2590	39.5%	53.8%	0.1%
Morocco	40	200	202	204	734	734	774	854	854	934	934	0.0%	37.2%	0.1%
South Africa	1164	1353	2176	3451	4805	4908	5994	6316	6326	6165	6671	8.2%	19.1%	0.4%
Tunisia	17	28	38	47	64	80	95	95	197	506	773	52.8%	46.4%	†
Other Africa	335	436	565	786	1189	1543	1771	2276	3062	3593	3948	9.9%	28.0%	0.2%
Total Africa	1618	2114	3301	5023	7922	9279	10644	11570	12614	13516	15378	13.8%	25.3%	0.8%
Australia	4137	5035	5880	7242	11128	15453	19772	24396	28887	33282	38472	15.6%	25.0%	2.1%
China	28399	43549	77819	130832	175262	204971	253864	306973	393032	609921	887930	45.6%	41.1%	47.6%
India	3776	5697	9982	18257	27485	35250	39705	49950	63390	72859	97384	33.7%	38.4%	5.2%
Japan	23339	34150	42040	49500	56162	63192	71868	78413	85066	89077	91610	2.8%	14.7%	4.9%
Malaysia	171	222	287	331	481	829	1483	1787	2131	2146	2306	7.5%	29.7%	0.1%
Pakistan	165	265	589	655	680	756	855	1078	1244	1243	1395	12.3%	23.8%	0.1%
Philippines	34	182	799	924	937	1009	1089	1413	1667	1802	2971	64.8%	56.4%	0.2%
South Korea	2438	3467	4338	5633	7701	10847	14756	17905	20525	23493	26645	13.4%	27.0%	1.4%
Taiwan	636	884	1245	1768	2738	4150	5817	7700	9724	12418	14281	15.0%	36.5%	0.8%
Thailand	1304	1425	2452	2703	2968	2988	2985	3066	3186	3300	3384	†	10.0%	0.2%
Viet Nam	5	5	5	8	105	4994	16661	16661	16698	18588	18667	0.4%	126.3%	1.0%
Other Asia Pacific	408	607	757	1080	1339	2081	2597	3418	4319	5626	7421	31.9%	33.7%	0.4%
Total Asia Pacific	64812	95489	146193	218933	286986	346522	431453	512760	629869	873756	1192468	36.5%	33.8%	63.9%
Total World	179060	227236	299167	394312	490289	592654	723638	866830	1060522	1413548	1865490	32.0%	26.4%	100.0%

Source: IRENA (2025), Renewable Capacity Statistics 2025, The International Renewable Energy Agency, Abu Dhabi.

* End of year.

† Less than 0.05%.



Renewable energy Wind – Installed wind turbine capacity*

Megawatts												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	9694	11214	11973	12250	12816	13220	13532	13722	15081	16989	18376	8.2%	6.6%	1.6%
Mexico	2569	3271	4051	4180	4180	6541	6995	7469	7634	7318	7318	–	11.0%	0.6%
US	64430	72767	81502	87831	94666	103836	118664	133019	141674	148020	153152	3.5%	9.0%	13.5%
Total North America	76693	87252	97527	104261	111662	123597	139191	154210	164389	172327	178846	3.8%	8.8%	15.8%
Argentina	188	188	188	228	751	1609	2624	3292	3310	3706	4320	16.6%	36.8%	0.4%
Brazil	5030	7682	10322	12451	14514	15457	17217	21002	24196	29113	32959	13.2%	20.7%	2.9%
Chile	736	910	1039	1312	1614	1705	2526	3203	3926	4623	4807	4.0%	20.6%	0.4%
Costa Rica	196	278	319	378	408	411	394	390	390	408	402	-1.3%	7.4%	†
Uruguay	481	857	1212	1518	1518	1524	1524	1524	1524	1524	1524	–	12.2%	0.1%
Other S. & Cent. America	969	1303	1526	1593	1821	2038	2105	2233	2496	3029	3233	6.7%	12.8%	0.3%
Total S. & Cent. America	7601	11219	14606	17479	20627	22744	26389	31645	35842	42403	47246	11.4%	20.0%	4.2%
Austria	2110	2489	2730	2887	3133	3224	3226	3422	3633	3896	4035	3.6%	6.7%	0.4%
Belgium	1933	2181	2334	2779	3305	3864	4673	4948	5303	5454	5599	2.7%	11.2%	0.5%
Bulgaria	699	699	699	698	699	703	703	704	704	704	704	–	0.1%	0.1%
Denmark	4886	5077	5245	5489	6123	6111	6259	7004	7084	7277	7621	4.7%	4.5%	0.7%
Finland	627	1005	1565	2044	2041	2284	2586	3257	5677	6946	8360	20.4%	29.6%	0.7%
France	9201	10298	11567	13499	14900	16427	17535	18551	20835	23132	24592	6.3%	10.3%	2.2%
Germany	38614	44580	49435	55580	58721	60742	62201	63711	66202	69486	72823	4.8%	6.5%	6.4%
Greece	1978	2091	2370	2624	2877	3589	4119	4649	4702	5232	5357	2.4%	10.5%	0.5%
Ireland	2283	2451	2802	3319	3674	4126	4307	4339	4536	4739	4942	4.3%	8.0%	0.4%
Italy	8683	9137	9384	9737	10230	10679	10871	11254	11821	12307	12992	5.6%	4.1%	1.1%
Netherlands	2865	3391	4257	4202	4393	4484	6648	7646	8700	10734	11679	8.8%	15.1%	1.0%
Norway	859	867	883	1207	1710	2914	4030	5049	5062	5064	5152	1.7%	19.6%	0.5%
Poland	3836	4886	5747	5759	5766	5838	6298	6967	8150	9343	10059	7.7%	10.1%	0.9%
Portugal	4857	4937	5124	5124	5172	5223	5122	5427	5538	5538	5583	0.8%	1.4%	0.5%
Romania	3244	3130	3025	3030	3032	3038	3013	3015	3015	3027	3096	2.3%	-0.5%	0.3%
Spain	22925	22943	22990	23124	23405	25590	26819	27908	30114	30868	31811	3.1%	3.3%	2.8%
Sweden	5088	5819	6435	6611	7300	8681	9976	12116	14279	16224	17239	6.3%	13.0%	1.5%
Türkiye	3630	4503	5751	6516	7005	7591	8832	10607	11396	11806	12973	9.9%	13.6%	1.1%
Ukraine	514	514	526	553	621	1258	1402	1761	1761	1901	1921	1.1%	14.1%	0.2%
United Kingdom	13074	14305	16126	19585	21606	23887	24458	25748	28761	30163	30902	2.5%	9.0%	2.7%
Other Europe	1912	2193	2442	2700	3007	3358	3560	3938	4355	5242	6244	19.1%	12.6%	0.6%
Total Europe	133819	147495	161436	177068	188721	203610	216638	232022	251629	269085	283685	5.4%	7.8%	25.0%
Russian Federation	99	103	106	141	196	197	1041	2050	2280	2532	2567	1.4%	38.5%	0.2%
Other CIS	14	33	81	103	162	182	182	181	188	192	689	258.8%	47.3%	†
Total CIS	113	136	186	244	358	379	1222	2231	2468	2725	3256	19.5%	39.9%	0.3%
Iran	149	153	191	259	282	305	308	310	342	365	376	3.1%	9.7%	†
Jordan	1	118	184	198	295	384	529	632	632	631	631	–	84.2%	0.1%
Other Middle East	14	14	34	37	47	97	97	97	608	914	914	–	51.5%	0.1%
Total Middle East	165	286	409	494	623	785	934	1039	1582	1910	1921	0.6%	27.9%	0.2%
Egypt	555	755	755	755	1130	1132	1380	1640	1643	1890	2199	16.3%	14.8%	0.2%
Morocco	797	797	902	1022	1225	1225	1435	1471	1558	1858	2128	14.5%	10.3%	0.2%
South Africa	569	1079	1473	2094	2094	2094	2516	2495	3163	3442	3442	–	19.7%	0.3%
Tunisia	233	240	240	240	245	245	245	245	245	245	245	–	0.5%	†
Other Africa	245	449	461	467	777	832	938	1058	1136	1219	1219	†	17.4%	0.1%
Total Africa	2399	3320	3831	4578	5471	5528	6514	6909	7745	8654	9233	6.7%	14.4%	0.8%
Australia	3797	4318	4683	5407	6409	7881	10207	10555	11966	12908	15288	18.4%	14.9%	1.3%
China	96819	131048	148517	164374	184665	209582	281993	328973	365964	441895	521746	18.1%	18.3%	46.0%
India	22465	25088	28700	32848	35288	37505	38559	40067	41930	44736	48163	7.7%	7.9%	4.2%
Japan	2753	2809	3205	3483	3498	3952	4120	4262	4483	5343	5832	9.2%	7.8%	0.5%
New Zealand	682	689	690	690	690	690	690	913	994	1059	1263	19.3%	6.4%	0.1%
Pakistan	206	308	591	789	1186	1236	1236	1335	1845	1845	1845	0.0%	24.5%	0.2%
Philippines	337	427	427	427	427	443	443	443	443	443	443	0.0%	2.8%	†
South Korea	645	853	1035	1143	1303	1494	1645	1709	1946	2205	2301	4.4%	13.6%	0.2%
Taiwan	637	647	682	692	713	845	937	1094	1581	2677	3890	45.3%	19.8%	0.3%
Thailand	225	234	507	628	1103	1507	1507	1545	1545	1544	1544	0.0%	21.3%	0.1%
Other Asia Pacific	336	450	501	611	847	1160	1556	5427	6818	7984	8254	3.4%	37.7%	0.7%
Total Asia Pacific	128901	166870	189538	211093	236129	266295	342893	396325	439516	522640	610570	16.8%	16.8%	53.8%
Total World	349691	416579	467533	515218	563590	622938	733780	824380	903171	1019743	1134758	11.3%	12.5%	100.0%

Source: IRENA (2025), Renewable Energy Statistics 2025, The International Renewable Energy Agency, Abu Dhabi.

* End of year.

† Less than 0.05%.

Note: Capacity figures in this table include both onshore and offshore wind and are on an AC basis.



Renewable energy Solar – Installed capacity by type*

2023				2024			
Megawatts	Solar PV	CSP	Total	Solar PV	CSP	Total	
Canada	5884	–	5884	6105	–	6105	
Mexico	10893	17	10910	11975	17	11992	
US	137725	1480	139205	175990	1480	177470	
Total North America	154502	1497	155999	194071	1497	195568	
Argentina	1405	–	1405	1741	–	1741	
Brazil	37940	–	37940	53113	–	53113	
Chile	8777	108	8885	10940	114	11054	
Honduras	529	–	529	554	–	554	
The Dominican Republic	1077	–	1077	1423	–	1423	
Other S. & Cent. America	4973	–	4973	5946	–	5946	
Total S. & Cent. America	54701	108	54810	73716	114	73830	
Austria	6331	–	6331	8481	–	8481	
Belgium	8352	–	8352	9752	–	9752	
Bulgaria	2908	–	2908	3908	–	3908	
Czech Republic	3251	–	3251	4159	–	4159	
Denmark	3529	–	3529	3945	–	3945	
France	17399	–	17399	21528	–	21528	
Germany	74882	–	74882	89943	–	89943	
Greece	6689	–	6689	9269	–	9269	
Hungary	5910	–	5910	7699	–	7699	
Italy	29351	5	29356	36008	5	36013	
Lithuania	1324	–	1324	2567	–	2567	
Netherlands	21275	–	21275	24048	–	24048	
Poland	16428	–	16428	20199	–	20199	
Portugal	4040	–	4040	5808	–	5808	
Romania	2988	^	2988	4688	^	4688	
Slovakia	593	–	593	867	–	867	
Slovenia	1031	–	1031	1309	–	1309	
Spain	29616	2304	31920	36285	2302	38587	
Sweden	3993	–	3993	4963	–	4963	
Switzerland	6094	–	6094	7794	–	7794	
Türkiye	11292	1	11293	19882	1	19883	
Ukraine	8062	–	8062	5500	–	5500	
United Kingdom	16275	–	16275	17603	–	17603	
Other Europe	6763	–	6763	9613	–	9613	
Total Europe	288376	2310	290686	355820	2308	358128	
Russian Federation	2193	–	2193	2554	–	2554	
Kazakhstan	1306	–	1306	1196	–	1196	
Other CIS	1431	–	1431	3318	–	3318	
Total CIS	4930	–	4930	7069	–	7069	
Israel	5274	242	5516	5363	242	5605	
Jordan	1990	–	1990	2077	–	2077	
Saudi Arabia	2535	50	2585	4290	50	4340	
United Arab Emirates	5342	600	5942	5411	600	6011	
Other Middle East	3767	52	3819	4964	52	5015	
Total Middle East	18909	944	19852	22106	944	23050	
Algeria	437	25	462	437	25	462	
Egypt	1836	20	1856	2570	20	2590	
Morocco	394	540	934	394	540	934	
South Africa	5665	500	6165	6171	500	6671	
Tunisia	506	–	506	773	–	773	
Other Africa	3593	–	3593	3948	–	3948	
Total Africa	12431	1085	13516	14293	1085	15378	
Australia	33279	3	33282	38469	3	38472	
China	609351	570	609921	887360	570	887930	
India	72517	343	72859	97042	343	97384	
Japan	89077	–	89077	91610	–	91610	
Malaysia	2146	–	2146	2306	–	2306	
Pakistan	1243	–	1243	1395	–	1395	
Philippines	1802	–	1802	2971	–	2971	
South Korea	23493	–	23493	26645	–	26645	
Taiwan	12418	–	12418	14281	–	14281	
Thailand	3295	5	3300	3379	5	3384	
Vietnam	18588	–	18588	18667	–	18667	
Other Asia Pacific	5626	–	5626	7421	–	7421	
Total Asia Pacific	872835	921	873756	1191547	921	1192468	
Total World	1406684	6864	1413548	1858622	6868	1865490	

Source: IRENA (2025), Renewable Capacity Statistics 2025, The International Renewable Energy Agency, Abu Dhabi.

* End of year.

^ Less than 0.05.

Note: Capacity figures in these tables are for both onshore and offshore wind and are on an AC basis.



Renewable energy Wind – Installed capacity by type*

2023				2024			
Megawatts	Onshore	Offshore	Total	Onshore	Offshore	Total	Total
Canada	16989	–	16989	18376	–	18376	18376
Mexico	7318	–	7318	7318	–	7318	7318
US	147979	41	148020	152981	171	153152	153152
Total North America	172286	41	172327	178675	171	178846	178846
Argentina	3706	–	3706	4320	–	4320	4320
Brazil	29113	–	29113	32959	–	32959	32959
Chile	4623	–	4623	4807	–	4807	4807
Costa Rica	408	–	408	402	–	402	402
Uruguay	1524	–	1524	1524	–	1524	1524
Other S. & Cent. America	3029	–	3029	3233	–	3233	3233
Total S. & Cent. America	42403	–	42403	47246	–	47246	47246
Austria	3896	–	3896	4035	–	4035	4035
Belgium	3192	2262	5454	3337	2262	5599	5599
Bulgaria	704	–	704	704	–	704	704
Denmark	4808	2469	7277	4808	2813	7621	7621
Finland	6914	32	6946	8328	32	8360	8360
France	21645	1487	23132	23105	1487	24592	24592
Germany	61013	8473	69486	63608	9215	72823	72823
Greece	5232	–	5232	5357	–	5357	5357
Ireland	4714	25	4739	4917	25	4942	4942
Italy	12276	31	12307	12961	31	12992	12992
Netherlands	6757	3978	10734	6932	4748	11679	11679
Norway	5062	2	5064	5062	90	5152	5152
Poland	9343	–	9343	10059	–	10059	10059
Portugal	5513	25	5538	5558	25	5583	5583
Romania	3027	–	3027	3096	–	3096	3096
Spain	30863	5	30868	31806	5	31811	31811
Sweden	16031	193	16224	17046	193	17239	17239
Türkiye	11806	–	11806	12973	–	12973	12973
Ukraine	1901	–	1901	1921	–	1921	1921
United Kingdom	15418	14745	30163	16157	14745	30902	30902
Other Europe	5242	–	5242	6244	–	6244	6244
Total Europe	235358	33726	269085	248015	35670	283685	283685
Russian Federation	2532	–	2532	2567	–	2567	2567
Other CIS	192	–	192	689	–	689	689
Total CIS	2725	–	2725	3256	–	3256	3256
Iran	365	–	365	376	–	376	376
Jordan	631	–	631	631	–	631	631
Other Middle East	914	–	914	914	–	914	914
Total Middle East	1910	–	1910	1921	–	1921	1921
Egypt	1890	–	1890	2199	–	2199	2199
Morocco	1858	–	1858	2128	–	2128	2128
South Africa	3442	–	3442	3442	–	3442	3442
Tunisia	245	–	245	245	–	245	245
Other Africa	1219	–	1219	1219	–	1219	1219
Total Africa	8654	–	8654	9233	–	9233	9233
Australia	12908	–	12908	15288	–	15288	15288
China	404605	37290	441895	482646	39100	521746	521746
India	44736	–	44736	48163	–	48163	48163
Japan	5153	190	5343	5542	290	5832	5832
New Zealand	1059	–	1059	1263	–	1263	1263
Pakistan	1845	–	1845	1845	–	1845	1845
Philippines	443	–	443	443	–	443	443
South Korea	2069	136	2205	2165	136	2301	2301
Taiwan	914	1763	2677	927	2963	3890	3890
Thailand	1544	–	1544	1544	–	1544	1544
Other Asia Pacific	6881	1104	7984	7151	1104	8254	8254
Total Asia Pacific	482157	40483	522640	566977	43592	610570	610570
Total World	945492	74251	1019743	1055324	79434	1134758	1134758

Source: IRENA (2025), Renewable Capacity Statistics 2025, The International Renewable Energy Agency, Abu Dhabi.

* End of year.

Note: Capacity figures in these tables are for both onshore and offshore wind and are on an AC basis.



Thousand barrels of oil equivalent per day												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	22	22	23	22	21	23	22	22	22	24	33	39.1%	4.2%	1.4%
Mexico	–	–	0	0	0	0	0	1	1	1	1	†	–	†
US	597	614	655	678	701	693	632	685	729	803	856	6.7%	3.7%	37.4%
Total North America	618	637	679	701	723	717	655	708	751	827	890	7.6%	3.7%	38.9%
Argentina	49	38	53	58	51	46	27	38	43	25	31	23.9%	-4.6%	1.3%
Brazil	329	353	331	334	401	429	411	404	409	473	510	7.9%	4.5%	22.3%
Colombia	13	13	13	12	14	13	12	15	15	15	17	11.5%	3.0%	0.7%
Other S. & Cent. America	7	7	8	7	8	10	9	11	10	11	12	15.1%	6.0%	0.5%
Total S. & Cent. America	398	410	404	411	475	498	459	468	477	524	570	8.9%	3.7%	24.9%
Austria	7	8	7	7	7	7	7	7	8	8	8	–	0.9%	0.3%
Belgium	11	7	7	8	8	8	9	8	8	9	10	2.5%	-1.2%	0.4%
Finland	7	11	4	4	11	7	9	12	12	10	11	8.1%	4.6%	0.5%
France	47	49	45	44	50	47	43	36	34	33	29	-12.3%	-4.6%	1.3%
Germany	64	59	60	61	63	66	63	66	67	69	66	-4.1%	0.3%	2.9%
Italy	10	10	10	12	13	15	17	21	20	20	20	0.7%	7.5%	0.9%
Netherlands	33	32	28	37	35	38	37	39	37	41	39	-3.8%	1.6%	1.7%
Poland	14	15	17	17	17	18	18	19	20	20	20	0.8%	3.8%	0.9%
Portugal	6	6	6	6	6	7	6	5	6	6	5	-13.8%	-1.3%	0.2%
Spain	19	21	22	35	40	39	33	31	31	28	29	2.4%	4.2%	1.3%
Sweden	4	4	4	3	7	8	8	9	9	10	17	62.1%	14.6%	0.7%
United Kingdom	7	6	10	14	13	11	12	12	13	15	14	-7.6%	6.7%	0.6%
Other Europe	26	28	30	32	35	40	39	40	41	43	45	4.9%	5.6%	2.0%
Total Europe	255	256	250	281	305	310	301	305	304	312	312	†	2.0%	13.6%
Total CIS	0	0	0	0	0	0	–	^	0	–	–	–	-100.0%	–
Total Middle East	0	0	0	0	0	0	0	1	1	2	2	19.4%	19.0%	0.1%
Total Africa	2	2	2	2	1	2	2	2	2	2	2	0.2%	-2.5%	0.1%
Australia	5	4	2	2	2	3	2	2	2	2	2	5.4%	-7.1%	0.1%
China	47	40	39	31	44	53	56	58	72	81	106	30.3%	8.4%	4.6%
India	5	10	12	11	19	21	23	31	44	55	70	25.9%	30.4%	3.1%
Indonesia	59	24	54	50	91	124	126	151	174	194	205	5.7%	13.3%	8.9%
South Korea	7	8	8	8	13	13	13	11	13	13	14	9.3%	6.9%	0.6%
Thailand	34	36	33	36	40	44	44	39	36	40	39	-1.0%	1.5%	1.7%
Other Asia Pacific	33	37	33	31	35	53	45	48	52	66	77	17.2%	9.0%	3.4%
Total Asia Pacific	189	159	180	170	243	311	310	341	394	451	514	13.8%	10.5%	22.4%
Total World	1463	1465	1516	1564	1748	1838	1727	1825	1929	2118	2290	8.1%	4.6%	100.0%
of which: OECD	895	914	948	998	1053	1048	976	1034	1076	1159	1224	5.6%	3.2%	53.5%
Non-OECD	569	551	568	566	695	790	751	790	853	958	1066	11.2%	6.5%	46.5%
European Union	246	248	237	262	288	293	286	289	287	293	294	0.4%	1.8%	12.8%

Biofuels production by fuel type

Thousand barrels of oil equivalent per day	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Biogasoline														
Canada & Mexico	17	16	17	17	17	18	16	16	17	17	17	2.0%	0.4%	1.4%
US	516	534	554	575	580	569	501	542	554	562	583	3.8%	1.2%	48.5%
Brazil	278	294	275	270	322	341	315	303	317	361	376	3.9%	3.0%	31.2%
Other S. & Cent. America	16	18	19	20	22	22	18	22	22	23	26	13.4%	4.7%	2.1%
Europe	51	52	52	55	56	55	52	57	59	61	61	0.3%	1.8%	5.1%
CIS	^	^	^	^	^	–	–	^	0	–	–	–	-100.0%	–
Middle East	0	0	0	–	–	–	–	–	–	–	–	–	-100.0%	–
Africa	2	2	2	2	1	2	2	2	2	2	2	0.2%	-2.4%	0.2%
Asia Pacific	53	57	52	58	69	80	76	82	98	117	138	18.3%	10.1%	11.5%
Total World	934	974	971	997	1067	1087	980	1024	1068	1142	1203	5.3%	2.6%	100.0%
of which: OECD	591	608	628	652	661	647	575	620	634	644	668	3.7%	1.2%	55.6%
Non-OECD	343	365	343	345	407	439	405	404	434	498	534	7.3%	4.5%	44.4%
European Union	45	48	46	48	50	50	48	52	54	54	54	0.9%	1.8%	4.5%
Biodiesel														
Canada & Mexico	5	6	7	6	5	5	7	6	5	7	16	119.9%	12.3%	1.5%
US	80	80	101	104	121	124	131	144	175	240	273	13.4%	13.0%	25.1%
Brazil	51	58	56	64	79	88	95	100	93	112	135	20.6%	10.3%	12.4%
Other S. & Cent. America	53	40	54	57	52	47	30	43	45	28	34	22.3%	-4.2%	3.2%
Europe	204	204	199	225	249	255	249	249	245	251	251	†	2.1%	23.1%
CIS	0	0	0	0	0	0	–	–	–	–	–	–	-100.0%	–
Middle East	^	0	0	0	0	0	0	1	1	2	2	19.4%	47.8%	0.2%
Africa	^	0	0	^	^	^	^	^	^	^	^	†	-22.4%	†
Asia Pacific	136	102	128	112	174	231	235	258	296	335	376	12.2%	10.7%	34.6%
Total World	529	491	545	567	681	751	747	801	860	975	1087	11.4%	7.5%	100.0%
of which: OECD	304	306	320	347	392	401	402	414	441	515	556	7.9%	6.2%	51.1%
Non-OECD	225	186	225	221	289	351	346	387	419	460	531	15.4%	9.0%	48.9%
European Union	201	200	191	214	238	243	238	237	233	239	240	0.3%	1.8%	22.1%

Source: Includes data from S&P Global Commodity Insights; US Energy Information Administration.

* Includes biogasoline (such as ethanol) and biodiesel (which includes sustainable aviation fuels). Volumes have been adjusted for energy content.

^ Less than 0.5.

† Less than 0.05%.

Note: Annual changes and shares of total are calculated using thousand barrels a day oil equivalent figures.



Renewable energy Biofuels consumption*

Thousand barrels of oil equivalent per day												Growth rate per annum		Share
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Canada	36	34	32	38	39	40	37	39	49	54	53	-2.4%	4.0%	2.4%
Mexico	3	3	3	4	4	4	5	4	4	5	5	0.2%	4.4%	0.2%
US	581	608	658	661	652	670	608	670	705	798	842	5.5%	3.8%	38.6%
Total North America	620	645	693	703	695	715	650	714	759	857	899	4.9%	3.8%	41.2%
Argentina	22	24	26	30	28	29	16	17	23	21	24	14.3%	0.5%	1.1%
Brazil	305	357	324	332	385	426	396	393	390	424	434	2.3%	3.6%	19.9%
Colombia	13	13	13	12	15	16	13	15	16	18	18	1.9%	3.6%	0.8%
Other S. & Cent. America	15	17	18	19	18	19	18	19	19	19	20	5.5%	2.8%	0.9%
Total S. & Cent. America	356	411	380	393	447	489	442	444	447	481	495	2.9%	3.4%	22.7%
Austria	8	9	9	9	8	8	7	8	7	9	8	-2.6%	0.2%	0.4%
Belgium	8	5	8	9	9	9	12	13	14	14	14	-0.1%	6.1%	0.6%
Finland	8	8	3	7	6	7	7	12	10	10	11	6.8%	2.9%	0.5%
France	52	53	53	54	53	55	40	46	50	53	55	3.9%	0.4%	2.5%
Germany	53	50	50	51	53	52	63	56	56	58	49	-15.4%	-0.7%	2.3%
Italy	20	22	19	20	23	24	24	26	26	25	22	-11.6%	0.9%	1.0%
Netherlands	7	6	5	6	10	13	15	15	19	18	15	-16.0%	8.0%	0.7%
Poland	13	12	8	11	17	18	19	20	21	24	26	9.5%	7.3%	1.2%
Portugal	5	7	5	5	5	5	5	6	6	6	7	10.7%	3.1%	0.3%
Spain	23	24	27	31	41	40	36	36	35	46	33	-29.1%	3.5%	1.5%
Sweden	12	14	18	17	20	20	21	23	28	25	7	-73.0%	-5.6%	0.3%
United Kingdom	22	17	18	17	25	33	31	27	37	43	45	3.6%	7.4%	2.0%
Other Europe	37	38	42	50	51	61	63	63	61	61	66	7.8%	6.0%	3.0%
Total Europe	268	264	265	285	322	346	342	351	370	392	357	-8.9%	2.9%	16.4%
Total CIS	^	^	1	2	2	3	3	5	6	8	10	23.5%	35.5%	0.4%
Total Middle East	^	^	^	1	1	1	1	1	1	1	2	22.7%	24.8%	0.1%
Total Africa	1	1	1	1	2	2	2	2	2	2	2	0.8%	5.3%	0.1%
Australia	5	4	2	2	3	2	2	2	2	2	2	-2.6%	-8.6%	0.1%
China	60	44	45	42	54	58	44	46	47	51	60	17.2%	^	2.7%
India	5	6	12	9	17	21	20	32	45	55	77	38.3%	31.8%	3.5%
Indonesia	27	13	44	38	55	94	123	137	154	181	181	-0.3%	20.8%	8.3%
South Korea	7	8	10	11	13	13	13	13	13	13	14	9.5%	6.8%	0.7%
Thailand	28	30	31	34	37	42	42	38	34	37	37	-0.9%	2.7%	1.7%
Other Asia Pacific	18	22	24	25	27	31	33	34	43	46	48	6.0%	10.2%	2.2%
Total Asia Pacific	150	127	168	160	206	261	277	302	338	385	418	8.6%	10.8%	19.2%
Total World	1396	1448	1509	1544	1674	1817	1717	1818	1923	2126	2183	2.7%	4.6%	100.0%
of which: OECD	912	933	982	1012	1047	1087	1015	1090	1156	1279	1287	0.6%	3.5%	58.9%
Non-OECD	484	515	526	532	628	730	702	728	767	848	896	5.7%	6.4%	41.1%
European Union	240	240	237	253	284	297	298	310	320	335	297	-11.4%	2.1%	13.6%

Biofuels consumption by fuel type

Thousand barrels of oil equivalent per day	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024
Biogasoline														
Canada & Mexico	30	30	30	32	34	34	30	32	38	42	43	2.2%	3.6%	3.8%
US	485	503	516	522	520	525	456	503	506	513	513	^	0.6%	45.4%
Brazil	255	299	268	269	305	339	301	292	296	312	299	-4.2%	1.6%	26.4%
Other S. & Cent. America	20	23	25	26	28	29	24	26	27	29	30	3.2%	4.1%	2.7%
Europe	52	53	51	53	57	61	57	66	75	84	88	4.4%	5.5%	7.8%
CIS	^	^	^	1	1	2	2	3	4	5	6	20.7%	^	0.5%
Middle East	^	^	^	^	^	^	^	^	^	0	0	1.2%	-6.1%	^
Africa	1	1	1	1	2	2	2	2	2	2	2	0.8%	5.3%	0.2%
Asia Pacific	54	61	70	65	80	91	84	96	109	122	149	22.3%	10.7%	13.2%
Total World	898	970	961	970	1027	1083	956	1021	1058	1111	1131	1.8%	2.3%	100.0%
of which: OECD	577	596	608	619	624	633	555	611	629	652	656	0.7%	1.3%	58.0%
Non-OECD	321	373	353	351	403	451	401	409	429	459	475	3.5%	4.0%	42.0%
European Union	42	43	41	43	46	50	47	53	59	65	67	1.8%	4.7%	5.9%
Biodiesel														
Canada & Mexico	8	7	6	9	10	10	11	12	16	17	14	-13.4%	5.6%	1.4%
US	96	105	141	138	132	145	152	167	199	285	329	15.4%	13.1%	31.2%
Brazil	50	59	56	63	80	88	95	101	94	112	135	20.7%	10.3%	12.8%
Other S. & Cent. America	30	31	32	34	34	34	23	25	30	28	31	12.1%	0.4%	3.0%
Europe	217	211	214	232	265	285	286	285	295	308	269	-12.5%	2.2%	25.6%
CIS	^	^	1	1	1	1	1	2	2	3	4	28.6%	22.7%	0.3%
Middle East	^	^	^	^	1	1	1	1	1	1	1	24.3%	^	0.1%
Africa	^	^	^	^	^	^	^	^	^	^	^	^	^	^
Asia Pacific	96	66	98	96	126	170	193	206	228	263	269	2.2%	10.9%	25.6%
Total World	498	479	547	574	648	734	761	798	865	1016	1052	3.6%	7.8%	100.0%
of which: OECD	335	337	374	393	423	454	460	478	526	627	631	0.6%	6.5%	60.0%
Non-OECD	163	142	173	181	225	280	301	319	339	389	421	8.4%	10.0%	40.0%
European Union	198	197	196	210	238	247	251	258	261	270	230	-14.6%	1.5%	21.9%

* Includes biogasoline (such as ethanol) and biodiesel (which includes sustainable aviation fuels). Volumes have been adjusted for energy content.

^ Less than 0.5.

† Less than 0.05%.

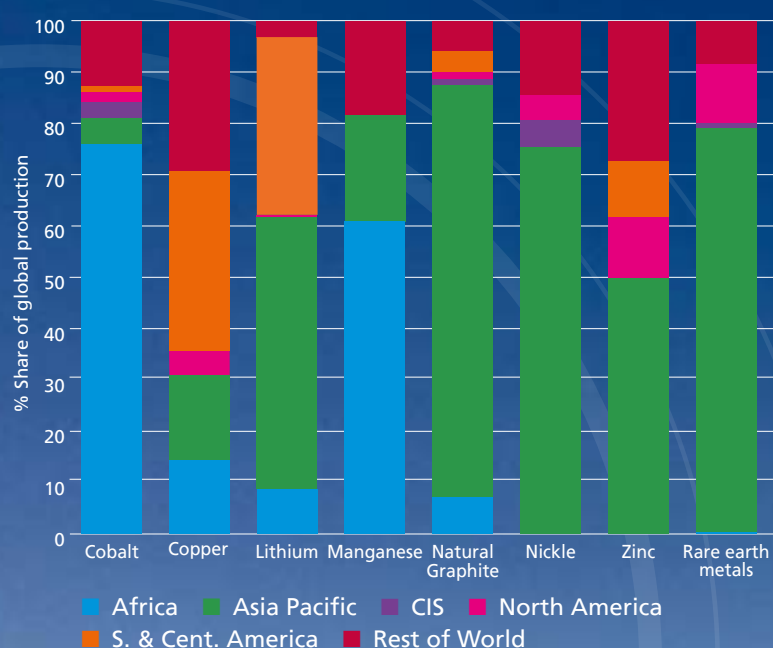
Key minerals

Across minerals key to the energy transition, cobalt saw the largest growth in production in 2024 at 33%. This was largely driven by the 44% increase in cobalt production in the Democratic Republic of Congo, which now has a 74% share of global cobalt production. Lithium saw the second largest increase at 16%, and, despite a 4% reduction in lithium production in 2024, Australia remains the leading producer with a 36% share of global production. South and Central America was responsible for 70% of global lithium production growth in 2024, with Argentina and Brazil roughly doubling their production in a single year. Chile also recorded an 18% growth in production and remains the second-largest lithium producer with a 23% share of global output.

Production across all minerals in Africa increased on average by 4% in 2024, and the region now accounts for 27% of global mineral production. In particular, the region is dominating the Manganese market, with South Africa and Gabon collectively responsible for over 57% of global production in 2024.

China maintained its dominance in the critical minerals industry, notably accounting for 71% of global rare earth metals production and 74% of global natural graphite production. Collectively, China and Australia are home to over 32% of total known global reserves of the key minerals needed for the energy transition. Apart from natural graphite, all mineral's reserves to production (R/P) ratios fell in 2024, reflective of the increasing demand for minerals in the energy transition.

In 2024, the Asia Pacific and Africa regions produced 57% of the key metals and materials needed by the global energy system.



On average, key mineral prices fell globally by 16% in 2024

Key minerals Production and reserves

Manganese production and reserves

Mine production

Thousand tonnes												Growth rate per annum		Share	Reserves at end of		
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024	2024	Share	R/P ratio
Australia	3050.0	2450.0	2240.0	2820.0	3480.0	3180.0	3260.0	3300.0	3040.0	2860.0	2800.0	-2.1%	-0.9%	13.3%	500000	26.8%	179
China	3000.0	3000.0	2330.0	1700.0	1200.0	1330.0	991.0	990.0	743.0	767.0	770.0	0.4%	-12.7%	3.7%	280000	15.0%	364
Gabon	1860.0	2020.0	1620.0	2190.0	2330.0	2510.0	4340.0	4600.0	4670.0	4490.0	4600.0	2.4%	9.5%	21.9%	61000	3.3%	13
Ghana	418.0	416.0	553.0	810.0	1360.0	1550.0	940.0	940.0	844.0	818.0	820.0	0.2%	7.0%	3.9%	13000	0.7%	16
India	945.0	900.0	745.0	734.0	961.0	801.0	453.0	480.0	721.0	744.0	800.0	7.5%	-1.7%	3.8%	34000	1.8%	43
South Africa	5200.0	5900.0	5300.0	5400.0	5800.0	5800.0	7200.0	7200.0	7300.0	7300.0	7400.0	1.4%	3.6%	35.2%	560000	30.0%	76
Rest of World	4052.0	3699.3	3775.5	4583.8	3924.0	4428.0	2902.0	2580.0	2791.0	3777.0	3860.0	2.2%	-0.5%	18.3%	420000	22.5%	109
Total World	18525.0	18385.3	16563.5	18237.8	19055.0	19599.0	20086.0	20090.0	20109.0	20756.0	21050.0	1.4%	1.3%	100.0%	1868000	100.0%	89

Sources: includes data from US Geological Survey and Kearney Energy Transition Institute. Note: Rest of World is the sum of only recorded reserves.

Nickel production and reserves

Mine production

Thousand tonnes												Growth rate per annum		Share	Reserves at end of		
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024	2024	Share	R/P ratio
Australia	245.0	234.0	204.0	190.0	170.0	180.0	160.0	151.0	155.0	149.0	110.0	-26.2%	-7.7%	2.9%	24000	16.5%	218
Canada	235.0	240.0	236.0	210.0	176.0	180.0	130.0	134.0	143.0	159.0	190.0	19.5%	-2.1%	5.0%	2200	1.5%	12
China	100.0	102.0	98.0	98.0	110.0	110.0	120.0	109.0	114.0	117.0	120.0	2.6%	1.8%	3.1%	4400	3.0%	37
Indonesia	177.0	170.0	199.0	400.0	606.0	800.0	1000.0	1040.0	1580.0	2030.0	2200.0	8.4%	28.7%	57.5%	55000	37.9%	25
New Caledonia	178.0	190.0	207.0	210.0	216.0	220.0	190.0	186.0	200.0	231.0	110.0	-52.4%	-4.7%	2.9%	7100	4.9%	65
Philippines	523.0	530.0	347.0	230.0	345.0	420.0	370.0	387.0	345.0	413.0	330.0	-20.1%	-4.5%	8.6%	4800	3.3%	15
Russian Federation	239.0	240.0	222.0	180.0	272.0	270.0	250.0	205.0	222.0	210.0	210.0	0.0%	-1.3%	5.5%	8300	5.7%	40
Rest of World	764.2	844.2	595.0	590.6	698.2	692.8	734.5	753.2	746.8	677.3	552.9	-18.4%	-3.2%	14.5%	39240	27.1%	71
Total World	2461.2	2550.2	2108.0	2108.6	2593.2	2872.8	2954.5	2965.2	3505.8	3986.3	3822.9	-4.1%	4.5%	100.0%	145040	100.0%	38

Sources: includes data from US Geological Survey and Kearney Energy Transition Institute. Note: Rest of World is the sum of only recorded reserves.

Zinc production and reserves

Mine production

Thousand tonnes												Growth rate per annum		Share	Reserves at end of		
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2024	2014–24	2024	2024	Share	R/P ratio
Australia	1560.0	1600.0	965.0	842.0	1110.0	1330.0	1310.0	1320.0	1240.0	1090.0	1100.0	0.9%	-3.4%	9.2%	64000	27.3%	58
China	4930.0	4300.0	4800.0	4400.0	4170.0	4210.0	4060.0	4140.0	4040.0	4060.0	4000.0	-1.5%	-2.1%	33.4%	46000	19.6%	12
India	706.0	821.0	682.0	833.0	750.0	720.0	720.0	777.0	840.0	854.0	860.0	0.7%	2.0%	7.2%	9800	4.2%	11
Mexico	660.0	680.0	670.0	674.0	691.0	677.0	638.0	724.0	744.0	584.0	700.0	19.9%	0.6%	5.9%	14000	6.0%	20
Peru	1320.0	1420.0	1330.0	1470.0	1470.0	1400.0	1330.0	1530.0	1370.0	1470.0	1300.0	-11.6%	-0.2%	10.9%	20000	8.5%	15
US	832.0	825.0	805.0	774.0	824.0	753.0	718.0	704.0	761.0	767.0	750.0	-2.2%	-1.0%	6.3%	9200	3.9%	12
Rest of World	3290.0	3149.0	3299.0	3538.0	3445.0	3615.0	3255.0	3478.0	3542.0	3238.0	3250.0	0.4%	-0.1%	27.2%	71400	30.5%	22
Total World	13298.0	12795.0	12551.0	12531.0	12460.0	12705.0	12031.0	12673.0	12537.0	12063.0	11960.0	-0.9%	-1.1%	100.0%	234400	100.0%	20

Sources: includes data from US Geological Survey and Kearney Energy Transition Institute. Note: Rest of World is the sum of only recorded reserves.

Key minerals Prices

Minerals, materials, and battery prices

Year	USD\$1000/te						USD\$/KWh						Lithium Iron Phosphate Cells ¹¹	Lithium Nickel Manganese Cobalt Oxide Cells ¹²
	Cobalt ¹	Lithium carbonate ²	Nickel Sulphate ³	Pet Needle Coke ⁴	Natural Graphite ⁵	Copper ⁶	Zinc ⁷	Tin ⁸	Aluminium ⁹	Silicon ¹⁰				
2000	33.42	4.47	–	–	–	1.81	56	255	5	55	–	–	–	–
2001	23.26	1.49	–	–	–	1.58	44	211	4	51	–	–	–	–
2002	15.23	1.59	–	–	–	1.56	39	195	4	53	–	–	–	–
2003	23.37	1.55	–	–	–	1.78	41	232	4	61	–	–	–	–
2004	52.76	1.72	–	–	–	2.86	52	409	7	82	–	–	–	–
2005	35.19	1.46	–	–	–	3.68	67	361	6	76	–	–	–	–
2006	37.96	2.32	–	–	–	6.73	159	419	5	79	–	–	–	–
2007	67.35	3.53	–	–	–	7.13	154	679	3	113	–	–	–	–
2008	86.00	4.44	–	–	–	6.96	89	865	4	162	–	–	–	–
2009	39.38	5.94	–	–	0.91	5.16	78	642	5	116	–	–	–	–
2010	45.97	5.19	–	–	1.08	7.54	102	954	6	140	–	–	–	–
2011	39.66	5.10	–	–	1.35	8.82	106	1216	8	158	–	–	–	–
2012	31.02	5.42	–	–	1.43	7.96	96	990	10	127	–	–	–	–
2013	27.07	5.70	–	–	0.99	7.33	96	1041	11	122	–	–	–	–
2014	30.79	5.72	–	–	0.92	6.86	107	1023	20	140	–	–	–	–
2015	28.46	6.55	–	–	0.69	5.51	96	756	13	127	–	–	–	–
2016	25.47	12.02	–	–	0.58	4.87	101	839	8	91	–	–	–	–
2017	55.79	17.04	–	–	0.65	6.17	139	937	9	117	–	–	–	–
2018	81.17	13.04	–	–	0.78	6.53	141	936	19	134	–	–	–	–
2019	35.91	10.29	17.47	–	0.67	6.01	124	868	18	106	–	–	–	–
2020	33.95	6.49	16.63	–	0.53	6.17	111	799	12	97	–	–	–	–
2021	52.93	15.17	24.42	1.02	0.56	9.32	146	1580	26	220	0.07	–	0.10	–
2022	67.06	59.43	27.11	1.38	0.76	8.83	190	1546	30	362	0.10	–	0.14	–
2023	35.44	40.30	20.39	0.89	0.65	8.49	151	1256	23	180	0.09	–	0.10	–
2024	27.24	12.39	17.57	0.70	0.48	9.14	144	1420	19	170	0.07	–	0.07	–

¹ 2000–2012 spot grade for cathodes, source US Geological Survey. 2013–2017 source London Metal Exchange. Data from 2018 onwards: min purity 99.8%, Cobalt metal EXW Europe, min. 99.8% purity, source Benchmark Mineral Intelligence.

² 2000–2008 unit value, data series 140, source US Geological Survey. Data from 2009 onwards: Lithium carbonate global weighted average, min 99% purity, source Benchmark Mineral Intelligence.

³ Nickel sulphate CIF Asia, min 22% (100% Nickel contained basis), source Benchmark Mineral Intelligence.

⁴ Pre-calined pet needle coke DDP China, sulphur <0.5%, source Benchmark Mineral Intelligence.

⁵ Flake graphite FOB China, -194 mesh, source Benchmark Mineral Intelligence.

⁶ Copper, grade A cathode, LME spot price, CIF European ports, source International Monetary Fund (IMF).

⁷ SHG delivered US Midwest Mavg, source S&P Global Commodity Insights, ©2025 by S&P Global Inc.

⁸ In warehouse US MAvg, source S&P Global Commodity Insights, ©2025 by S&P Global Inc.

⁹ P1020 Transaction Premium delivered US Midwest Mavg, source S&P Global Commodity Insights, ©2025 by S&P Global Inc.

¹⁰ 553 grade delivered US Midwest MAvg, source S&P Global Commodity Insights, ©2025 by S&P Global Inc.

¹¹ Global weighted LFP cell, source Benchmark Mineral Intelligence.

¹² Global weighted NCM cell, source Benchmark Mineral Intelligence.

Methodology

The Statistical Review provides a globally consistent data time series. Here we outline the main definitions, conversion factors, and calculations used to produce the report.

Total energy supply

In 2025, the EI switched to using the Physical Energy Content method to calculate Total Energy Supply (TES). The report had previously used a fossil-fuel equivalent method to calculate Primary Energy Consumption. TES is a measure of the total amount of energy that a country needs to supply to meet its final end-use demand. It reflects the energy that is either produced domestically or imported, minus what is exported or stored. Some energy sources are consumed directly while others may be converted into fuels or electricity for final consumption with transmission, distribution, and efficiency losses occurring throughout the system.

The change represents a significant shift in how the contributions of some fuels, particularly non-combustible forms of renewable energy, are measured. The approach is now consistent with the United Nations’ International Recommendations for Energy Statistics (IRES) for calculating national energy balances. By tying non-combustible renewables closer to a marketable commodity (electricity generation) rather than the previous arbitrary measure that included conversion losses that did not exist, it better reflects today’s global energy system as it continues to transition away from fossil fuels. The primary energy consumption measure, calculated using the old fossil fuel equivalent approach, will continue to be made available online.

Instead of comparing renewable energy to fossil fuels, under the new approach, non-combustible renewable energy such as wind, solar photovoltaic, hydro, ocean, wave etc. become “energy products” in the statistical sense at the point of generation of electricity and their “primary energy equivalent” measured as the gross amount of electricity generated. The kinetic energy of the wind or the water does not enter the statistical “energy balance”, although remains “energy” in a scientific sense. Consequently, for these sources of energy, an efficiency assumption of 100% is assumed with kilowatt-hours (kWh) converted to British Thermal Units (BTU) using a standard heat conversion factor for electricity of 3,412 BTU per kWh.

In the case of non-fossil fuel generation such as nuclear, geothermal, and concentrating solar, where the primary energy input is heat, the heat, which is a marketable commodity, is treated as the first point of entry. As it can be difficult to obtain measurements of the heat flow to the turbines, the heat input is estimated based on an efficiency of 33% for nuclear and concentrating solar, and 10% for geothermal. For electricity generation involving the combustion of biomass, an efficiency factor of 33% is used.

The table below summarises the assumptions and treatment of fuels:

Efficiency factors used to calculate Total Energy Supply	
Energy Source	Efficiency
Biomass	33%
Concentrating Solar	33%
Geothermal	10%
Hydro	100%
Nuclear	33%
Ocean	100%
Solar PV	100%
Tidal	100%
Wave	100%
Wind	100%

Note: 1 kWh = 3,412 BTU per kWh

The treatment of fossil fuels remains precisely the same as under the previous methodology and their primary energy consumption continues to be reported in net terms. The gross calorific value to net calorific value adjustment is fuel specific. Fuels used as inputs for conversion technologies (gas-to-liquids, coal-to-liquids and coal-to-gas) are counted as production for the source fuel and the outputs are counted as consumption for the converted fuel.

Oil

Oil reserves

Total proved reserves of oil are generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and geological conditions. The data series for proved oil reserves in this year’s review does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission nor does it necessarily represent the EI’s view of proved reserves by country. Rather the data series has been compiled using a combination of primary official sources and third-party data.

Oil reserves include field condensate and natural gas liquids as well as crude oil. This inclusive approach helps to develop consistency with the oil production numbers published in the Review, which also include these categories of oil. The reserves and R/P ratio for Canada includes Canadian oil sands and the reserves and R/P ratio for Venezuela includes the Orinoco Belt. Liquid hydrocarbon fuels from non-hydrocarbon sources, such as ethanol from corn or sugar or synthetic oil derived from natural gas (so-called GTL or gas-to-liquids), are not included in either the reserves or production series.

R/P ratios represent the length of time that those remaining reserves would last if production were to continue at the previous year’s rate. They are calculated by dividing remaining reserves at the end of the year by the production in that year.

Reserves-to-production (R/P) ratios are available by country and feature in the table of oil reserves. There is a time series of crude oil reserves from 1980, which can be found in the Excel workbook. Data are measured in thousand million barrels.

Please note that these reserves tables have not been updated this year.

Oil production

Oil production data includes crude oil, shale oil, oil sands, condensates (lease condensate or gas condensates that require further refining) and NGLs (natural gas liquids – ethane, LPG and naphtha separated from the production of natural gas). It excludes liquid fuels from other sources such as biofuels and synthetic derivatives of coal and natural gas. It also excludes liquid fuel adjustment factors such as refinery processing gain and oil shales/kerogen extracted in solid form.

The split of crude/condensate and natural gas liquids figures are available. The crude condensate table includes crude oil, shale/tight oil, oil sands, lease condensate or gas condensates that require further refining. It excludes liquid fuels from other sources such as biomass and synthetic derivatives of coal and natural gas. The NGL’s table includes ethane, LPG and naphtha separated from the production of

natural gas and excludes condensates. World oil production tables are available in both thousand barrels daily and million tonnes.

Liquids, oil and oil product consumption
Oil consumption as defined in previous Statistical Reviews (i.e. including biofuels) has been renamed ‘liquids’ consumption and a table is still included on this original basis. In addition, greater granularity has been included on the product split of both oil products and biofuels (breaking out ethane & LPG and naphtha in oil products and the ethanol/biodiesel split of biofuels). Total liquids consumption comprises inland demand plus international aviation and marine bunkers and refinery fuel and loss. Consumption of biogasoline (such as ethanol), biodiesel and derivatives of coal and natural gas are also included.

Oil consumption figures include inland demand plus international aviation and marine bunkers and refinery fuel and loss. Consumption of biogasoline (such as ethanol), biodiesel and derivatives of coal and natural gas are excluded. Derivatives of coal and natural gas are included.

Oil product consumption – Gasoline includes motor and aviation gasoline, gasolines and light distillate feedstock (LDF). Diesel/gasoil includes marine gasoil. ‘Fuel oil’ includes marine bunkers and crude oil used directly for fuel. ‘Others’ consists of refinery gas, solvents, petroleum coke, lubricants, bitumen, wax, other refined products and refinery fuel and loss. Data are supplied in both exajoules and thousand barrels daily figures.

Oil prices

The key crudes quoted are Brent, West Texas Intermediate (WTI), Nigerian Focados and Dubai in US\$ per barrel. The spot crude price history from 1972 and annual crude price history from 1861 are available in the historical data Excel workbook.

Refining

The refinery capacity data presented in this Review represents the sum of reported atmospheric crude distillation and condensate splitting capacity. Capacity should comprise the amount of input that a distillation facility can process under usual operating conditions, taking into account scheduled downtime. Figures are in thousand barrels daily at year end per calendar day. Refinery throughputs are based on the quantity of crude and condensate processed in atmospheric distillation units and condensate splitters. Figures are in thousands of barrels per day.

The refining margins presented are benchmark margins for three major global refining centres: US Gulf Coast (USGC), North West Europe (NWE – Rotterdam) and Singapore. In each case they are based on a single crude oil appropriate for that region and have optimised product yields based on a generic refinery configuration (cracking, hydrocracking or coking), again appropriate for that region. The margins are on a semi-variable basis, i.e. the margin after all variable costs and fixed energy costs.

Oil trade movements

The tables exclude the intra-area movements of oil (for example, crude oil and products moving between countries within Europe). They do not include biofuels. Bunkers fuel is not included as exports. Crude imports and exports include condensates. Saudi Arabian exports from 1980 are also available in the oil trade movements table in the Excel workbook. The split of crude oil

and products are detailed. Data in the tables are in million tonnes and thousand barrels per day.

Natural gas

Natural gas reserves

Total proved reserves of natural gas are generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known reservoirs under existing economic and operating conditions. The data series for proved natural gas reserves in this year's Review does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level, for instance as published by the US Securities and Exchange Commission nor does it necessarily represent the EI's view of proved reserves by country. Rather, the data series has been compiled using a combination of primary official sources and third-party data.

Although every effort is made to come up with a consistent series for reserves based on a common definition, different countries use different methodologies, and the data have varying levels of reliability. R/P ratios represent the length of time that those remaining reserves would last if production were to continue at the previous year's rate. They are calculated by dividing remaining reserves at the end of the year by the production in that year.

As far as possible, the data represents standard cubic metres (measured at 15°C and 1013 mbar) and have been standardised using a gross calorific value (GCV) of 40 MJ/m³. There is a time series of natural gas reserves, which can be found in the Excel workbook. Data are measured in billion cubic metres.

Please note that these reserves tables have not been updated this year.

Natural gas production

Gas production comprises marketed production and excludes gas flared or recycled gas. It includes natural gas produced for gas-to-liquids transformation. As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar) as they are derived directly from tonnes of oil equivalent using an average conversion factor and have been standardised using a gross calorific value (GCV) of 40 MJ/m³ – they do not necessarily equate with gas volumes expressed in specific national terms.

Natural gas production is provided in three different units of measurement to accommodate regional customary usage. World natural gas production PDF tables are in both billion cubic metres and exajoules. Data in the Excel workbook are also in billion cubic feet per day (bcf/d).

Natural gas consumption

Natural gas consumption excludes natural gas converted to liquid fuels but includes derivatives of coal as well as natural gas consumed in gas-to-liquids transformation. As far as possible, the data above represents standard cubic metres (measured at 15°C and 1013 mbar); as they are derived directly from tonnes of oil equivalent using an average conversion factor and have been standardised using a gross calorific value (GCV) of 40 MJ/m³ – they do not necessarily equate with gas volumes expressed in specific national terms. The difference between these world consumption figures, and the world

production statistics is due to variations in stocks at storage facilities and liquefaction plants, together with unavoidable disparities in the definition, measurement, or conversion of gas supply and demand data.

Consumption data in the PDF data table is in billion cubic meters (bcm) and exajoules, data in billion cubic feet per day (bcf/d) can be found in the Excel workbook.

Natural gas prices

Annual prices are given for benchmark natural gas hubs together with contracted pipeline and LNG imports. The benchmark hub prices incorporate US (Henry Hub), Netherlands TTF index, Zeebrugge, and the UK (NBP). Contract prices are represented by LNG imports into Japan, South Korea, and China (mainland). The prices for LNG and European border are calculated as CIF prices, where CIF = cost + insurance + freight (average freight prices) in US dollars per million British thermal units (Btu).

Natural gas trade movements

Trade flows are on a contractual basis and may not correspond to physical gas flows in all cases. The data illustrates the flow of pipeline natural gas and LNG between sources of production and the regions of consumption. LNG trade. As far as possible, the data represents standard cubic metres (measured at 15°C and 1013 mbar) and has been standardised using a gross calorific value (GCV) of 40 MJ/m³.

Coal

Coal reserves

Total proved reserves of coal are generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known deposits under existing economic and operating conditions.

Total proved coal reserves are shown for anthracite and bituminous (including brown coal) and sub-bituminous and lignite. Reserves-to-production (R/P) ratios represent the length of time that those remaining reserves would last if production were to continue at the previous year's rate. They are calculated by dividing remaining reserves at the end of the year by the production in that year. The R/P ratios are calculated excluding other solid fuels in reserves and production. R/P ratios are available by country and feature in the table of coal reserves. R/P ratios for the region and the world are depicted in the chart above and the Energy charting tool.

Coal reserve data is in million tonnes. Please note that these reserves tables have not been updated this year.

Coal production

Coal production includes data for commercial solid fuels only. Included in the hard coal category are bituminous and anthracite (hard coal). The sub-bituminous coal includes lignite and brown coal. Other commercial solid fuels are also included. The data includes coal produced for coal-to-liquids and coal-to-gas transformations. In the coal production PDF table, the units are in exajoules. The data can also be downloaded from the Excel workbook in million tonnes.

Coal consumption

Coal consumption includes data for solid fuels only. Included in the hard coal category are

bituminous and anthracite. The sub-bituminous coal includes lignite and brown coal. Other commercial solid fuels are also included. The figures exclude coal converted to liquid or gaseous fuels, but includes coal consumed in transformation processes. Differences between world consumption figures and the world production statistics are accounted for by stock changes, and unavoidable disparities in the definition, measurement or conversion of coal supply and demand data.

Coal prices

Annual prices quoted include the Northwest Europe marker price, Japan steam spot CIF price, South China spot price, and the US Central Appalachian coal spot price index. Coal prices except for the US North Appalachian price are calculated as CIF prices, where CIF = cost + insurance + freight (average freight prices). The US Central Appalachian price is FOB = free on board. All prices are quoted in US dollars per tonne.

Coal trade movements

Commercial solid fuels only, i.e. bituminous coal and anthracite (hard coal), and lignite and brown (sub-bituminous) coal, and other commercial solid fuels. Intra-area movements (for example, between countries in Europe, Other CIS, Other Africa, Other Asia Pacific) are excluded.

Nuclear energy

The data are based on gross generation and not accounting for cross-border electricity supply. Total energy supply is energy content of the primary heat input required by nuclear power stations to generate the reported electricity output. Details on thermal efficiency assumptions are available online. Data for the units are in exajoules in the PDF. The data are available in the Excel workbook in terawatt-hours (TWh).

Hydroelectricity

The data are based on gross generation and not accounting for cross-border electricity supply. Total energy supply is the physical energy content of the gross electrical output of a hydroelectric plant. Details on efficiency assumptions are available online. In the hydroelectricity consumption PDF table, the units are in exajoules. The data are available in the Excel workbook in terawatt-hours (TWh).

Renewable energy

The data are based on gross generation and not accounting for cross-border electricity supply. For non-combustible renewables, total energy supply is the physical energy content of their gross electrical output. Details on efficiency assumptions are available online. For renewables such as geothermal power and concentrating solar, total energy supply is energy content of the primary heat input they require to generate the reported electricity output. Details on thermal efficiency assumptions are available online. Data for the units are in exajoules in the PDF. The data are available in the Excel workbook in terawatt-hours (TWh).

Biofuels production and consumption

The data includes biogasoline (such as ethanol) and biodiesel. Volumes have been adjusted for energy content. The biofuels PDF tables are in thousand barrels of oil equivalent per day figures. The data are available in additional units in the Excel workbook.

Electricity

Electricity generation is based on gross electrical output.

Carbon

Carbon emissions from consuming fossil fuels are estimated by applying the Default CO₂ Emission Factors for Combustion to the consumption of each energy product type (coal, natural gas, and various oil products) from the list of IPCC emission factors. Biofuels are considered as not emitting CO₂, consistent with the practice of the IEA. The method accounts for fuel consumption used for non-combustion purposes, such as the use of oil products and natural gas in the petrochemicals industry or of oil to produce bitumen for road construction.

Estimates of the share of non-combusted fossil fuels taken from the IEA's energy balances are subtracted from the total consumption of fossil fuels before applying the relevant emission factors.

Carbon emissions from flared natural gas are calculated using data series on volumes of gas flared from two sources: Cedigaz up to 2012, and the Payne Institute for Public Policy, Colorado School of Mines, from 2013 to 2023. Payne Institute's data include flaring from upstream and downstream oil and gas, while Cedigaz includes flaring from upstream only.

Volumes of gas flared have been standardised using a Gross Calorific Value (GCV) of 40 MJ/m³. The IPCC Default CO₂ Emission Factor for

Combustion for natural gas (56,100 kg CO₂ per TJ) is used and perfect combustion has been assumed. These emissions represent around 1% of total CO₂ emissions.

Data for methane emissions associated with the production, transportation and distribution of fossil fuels for 1990-2020 are sourced, where available, from the IEA (all rights reserved). For countries not covered by the IEA, additional data has been sourced from Kayrros. For a select number of fossil fuel producing countries where methane emission data is not currently available through either provider, an estimate of historical methane emissions has been derived using regional average methane intensity of production. There is a wide range of uncertainty with respect to both current estimates of methane emissions and the global warming potential of methane emissions. To ensure alignment with financial and government reporting standards, the methane to CO₂e factor is a 100-year Global Warming Potential (GWP) of 25, recommended by the IPCC in AR4.

Carbon emissions from industrial processes refer only to non-energy CO₂ emissions from cement production.

Minerals

Total proved reserves of minerals are generally taken to be those quantities that geological and engineering information indicates with reasonable certainty can be recovered in the future from known resources under existing economic and geological conditions. The data

series for mineral reserves in this year's review does not necessarily meet the definitions, guidelines and practices used for determining proved reserves at company level nor does it necessarily represent the EI's view of proved reserves by country. Rather the data series has been compiled using a combination of primary official sources and third-party data.

Using S&P Global Commodity Insights and S&P Global Platts data

The redistribution or reproduction of data whose sources is S&P Global Commodity Insights or S&P Global Platts is strictly prohibited without prior authorisation from S&P Global Commodity Insights. Email: ci.support@spgglobal.com

Revisions and corrections

Each year revisions are made to historical data when updated or where more reliable data sources have become available. Corrections are also made when errors are identified in data. In this Statistical Review corrections have been made to the emissions, biofuels, historic oil prices and oil refinery throughput tables.

Appendices Approximate conversion factors

Crude oil*					
From	To convert				
	tonnes (metric)	kilotonnes	barrels	US gallons	tonnes per year
	Multiply by				
Tonnes (metric)	1	1.165	7.33	307.86	–
Kilotonnes	0.8581	1	6.2898	264.17	–
Barrels	0.1364	0.159	1	42	–
US gallons	0.00325	0.0038	0.0238	1	–
Barrels/day	–	–	–	–	49.8

*Based on worldwide average gravity.

Oil products						
From	To convert					
	barrels to tonnes	tonnes to barrels	kilotonnes to tonnes	tonnes to kilotonnes	tonnes to gigajoules	tonnes to barrels oil equivalent
	Multiply by					
Ethane	0.059	16.850	0.373	2.679	49.400	8.073
Liquefied petroleum gas (LPG)	0.086	11.600	0.541	1.849	46.150	7.542
Gasoline	0.120	8.350	0.753	1.328	44.750	7.313
Kerosene	0.127	7.880	0.798	1.253	43.920	7.177
Gas oil/diesel	0.134	7.460	0.843	1.186	43.380	7.089
Residual fuel oil	0.157	6.350	0.991	1.010	41.570	6.793
Product basket	0.124	8.058	0.781	1.281	43.076	7.039

*Based on worldwide average gravity.

Natural gas (NG) and liquefied natural gas (LNG)							
From	To convert						
	billion cubic metres NG	billion cubic feet NG	petajoules NG	million toe	million tonnes LNG	tonnes to gigajoules	tonnes to barrels oil equivalent
	Multiply by						
1 billion m ³ NG	1.000	35.315	36.000	0.860	0.735	34.121	5.883
1 billion ft ³ NG	0.028	1.000	1.019	0.024	0.021	0.966	0.167
1 petajoule NG	0.028	0.981	1.000	0.024	0.021	0.952	0.164
1 million toe	1.163	41.071	41.868	1.000	0.855	39.683	6.842
1 million tonnes LNG	1.360	48.028	48.747	1.169	1.000	46.405	8.001
1 trillion Btu	0.029	1.035	1.050	0.025	0.022	1.000	0.172
1 million boe	0.170	6.003	6.093	0.146	0.125	5.800	1.000

Units	
1 metric tonne	= 2204.62 lb
	= 1.1023 short tons
1 kilolitre	= 6.2898 barrels
1 kilolitre	= 1 cubic metre
1 kilocalorie (kcal)	= 4.1868 kJ
	= 3.968 Btu
1 kilojoule (kJ)	= 1,000 joules
	= 0.239 kcal
	= 0.948 Btu
1 petajoule (PJ)	= 1 quadrillion joules
	(1 x 10 ¹⁵)
1 exajoule (EJ)	= 1 quintillion joules
	(1 x 10 ¹⁸)
1 British thermal unit (Btu)	= 0.252 kcal
	= 1.055 kJ
1 barrel of oil equivalent (boe)	= 5.8 million Btu
	= 6.119 million kJ
1 kilowatt-hour (kWh)	= 860 kcal
	= 3600 kJ
	= 3412 Btu

Calorific equivalents	
One exajoule equals approximately:	
Heat units	239 trillion kilocalories
	948 trillion Btu
Solid fuels	40 million tonnes of hard coal
	95 million tonnes of lignite and sub-bituminous coal
Gaseous fuels	See Natural gas and LNG table
Electricity	278 terawatt-hours

All fuel energy content is net or lower heating value (i.e., net of heat of vaporisation of water generated from combustion).

1 barrel of ethanol = 0.58 barrels of oil equivalent
1 barrel of biodiesel = 0.86 barrels of oil equivalent
1 tonne of ethanol = 0.68 tonne of oil equivalent
1 tonne of biodiesel = 0.88 tonne of oil equivalent

Other terms
Tonnes: Metric equivalent of tons.

Percentages
Calculated before rounding of actuals.

Rounding differences
Because of rounding, some totals may not agree exactly with the sum of their component parts.

Definitions

Regional definitions

Country groupings are made purely for statistical purposes and are not intended to imply any judgment about political or economic standings.

North America

US (excluding US territories), Canada, and Mexico.

Caribbean

Atlantic islands between the US Gulf Coast and South America, including Puerto Rico, US Virgin Islands, and Bermuda.

Central America

Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

South and Central America

Caribbean, Central America, and South America.

Europe

European members of the OECD plus Albania, Bosnia-Herzegovina, Bulgaria, Croatia, Cyprus, Georgia, Gibraltar, Latvia, Lithuania, Malta, Montenegro, North Macedonia, Romania, Serbia, and Ukraine.

Commonwealth of Independent States (CIS)

Armenia, Azerbaijan, Belarus, Kazakhstan, Kyrgyzstan, Moldova, Russian Federation, Tajikistan, Turkmenistan, and Uzbekistan.

Middle East

Arabian Peninsula, Iran, Iraq, Israel, Jordan, Lebanon, and Syria.

Northern Africa

Territories on the north coast of Africa from Egypt to Western Sahara.

Eastern Africa

Territories on the east coast of Africa from Sudan to Mozambique. Also, Madagascar, Malawi, Uganda, Zambia, and Zimbabwe.

Middle Africa

Angola, Cameroon, Central African Republic, Chad, Democratic Republic of Congo, Republic of Congo, Equatorial Guinea, Gabon, and Sao Tome & Principe.

Western Africa

Territories on the west coast of Africa from Mauritania to Nigeria, including Burkina Faso, Cape Verde, Mali, and Niger.

Southern Africa

Botswana, Eswatini, Lesotho, Namibia, and South Africa.

Asia Pacific

Brunei, Cambodia, China[†], China Hong Kong SAR*, China Macau SAR*, Indonesia, Japan, Laos, Malaysia, Mongolia,

North Korea, Philippines, Singapore, South Asia (Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka), Myanmar, South Korea, Taiwan, Thailand, Vietnam, Australia, New Zealand, Papua New Guinea, and Oceania.

† Mainland China

* Special Administrative Region

Australasia

Australia and New Zealand.

OECD members (Organization for Economic Co-operation and Development).

Europe: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, and UK.

Other member countries: Australia, Canada, Chile, Colombia, Costa Rica, Israel, Japan, Mexico, New Zealand, South Korea, and US.

OPEC members (Organization of the Petroleum Exporting Countries)

Middle East: Iran, Iraq, Kuwait, Saudi Arabia, and United Arab Emirates.

North Africa: Algeria and Libya.

West Africa: Equatorial Guinea, Gabon, Nigeria, and Republic of Congo.

South America: Venezuela.

European Union members

Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Republic of Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden.

Non-OECD (Organization for Economic Co-operation and Development). All countries that are not members of the OECD.

More information

Quoting from the review

Publishers are welcome to quote from this review provided that they attribute the source to Energy Institute Statistical Review of World Energy 2025.

However, for extensive reproduction of tables and/or charts, permission must first be obtained from:

El Statistical Review of World Energy
61 New Cavendish Street
London W1G 7AR

statisticalreview@energyinst.org

The redistribution or reproduction of data whose source is S&P Global Commodity Insights, S&P Global Inc, or S&P Global Platts is strictly prohibited without its prior authorisation.

The Energy Institute disclaims any obligation to update this review or to correct any inaccuracies which may become apparent. Neither the Energy Institute (nor their respective officers, employees, and agents) accept liability for any inaccuracies or omissions or for any direct, indirect, special, consequential, or other losses or damages of whatsoever kind in connection to this review or any information contained in it.

The presentation of materials does not imply the expression of any opinion on the part of the Energy Institute concerning the legal status of any region, country, territory, city, or area, or of its authorities, or concerning the delimitation of frontiers or boundaries.

Statistics published in this Review are taken from government sources and published data. No use is made of confidential information obtained by the Energy Institute or its partners in the course of their business.

The KPMG name and logo are trademarks used under license by the independent member firms of the KPMG global organisation.

Acknowledgements

Produced by



The Energy Institute (EI) is the chartered professional membership body for people who work across the world of energy. Our purpose is creating a better energy future for our members and society by accelerating a just global transition to net zero.

www.energyinst.org

In collaboration with

KEARNEY

Since 1926, Kearney has been a leading management consulting firm and trusted partner to three-quarters of the Fortune Global 500 and governments around the world. With a presence across more than 40 countries, our people make us who we are. We work impact first, tackling your toughest challenges with original thinking and a commitment to making change happen together. By your side, we deliver-value, results, impact.

www.kearney.com



KPMG is a global organization of independent professional services firms providing Audit, Tax and Advisory services in 142 countries and territories with more than 275,000 partners and employees working in member firms around the world. KPMG professionals strive to make the difference. They're helping organizations across various sectors accelerate their digital transformation, manage risks, drive forward with their ESG strategies and unlock sustainable growth.

www.kpmg.com

Data compilation by



Heriot-Watt University is a global research-led university based in the UK, with five campuses in Edinburgh, the Scottish Borders, Orkney, Dubai and Malaysia. We are specialists in business, engineering, design and the physical, social, sports, environmental and life sciences subjects which make a real impact on the world and society.

www.hw.ac.uk

With the support of our Knowledge Partner S&P Global Commodity Insights and the continuing support of bp.

Our thanks also go to the various government and bp offices worldwide who kindly give their time and effort each year to complete the annual returns forms. Thanks also go to the following data providers: Benchmark Mineral Intelligence, Comité Professionnel du Pétrole (CPDP), FGE, FGE Iran Desk, ICIS, Institute of Energy Economics (Japan), Kayrros, Oxford Economics, Petro-Logistics, Rystad Energy, and Wood Mackenzie.



ISSN 2976-7857 (Online)

ISBN 978 1 78725 474 9

©Energy Institute, London 2025