



Will electric vehicles drive a slump of oil demand?

The International Energy Agency expects global oil demand to peak in five years' time. The main reason for this is the increasing proportion of electric vehicles, which is expected to reduce consumption in the transportation sector. As production capacities are likely to be significantly expanded at the same time, there is a risk of considerable overcapacity on the oil market which could put pressure on the oil price. However, OPEC+ will probably continue to restrict the supply of oil for some time to prevent oil prices from slipping.

Carsten Fritsch
Barbara Lambrecht

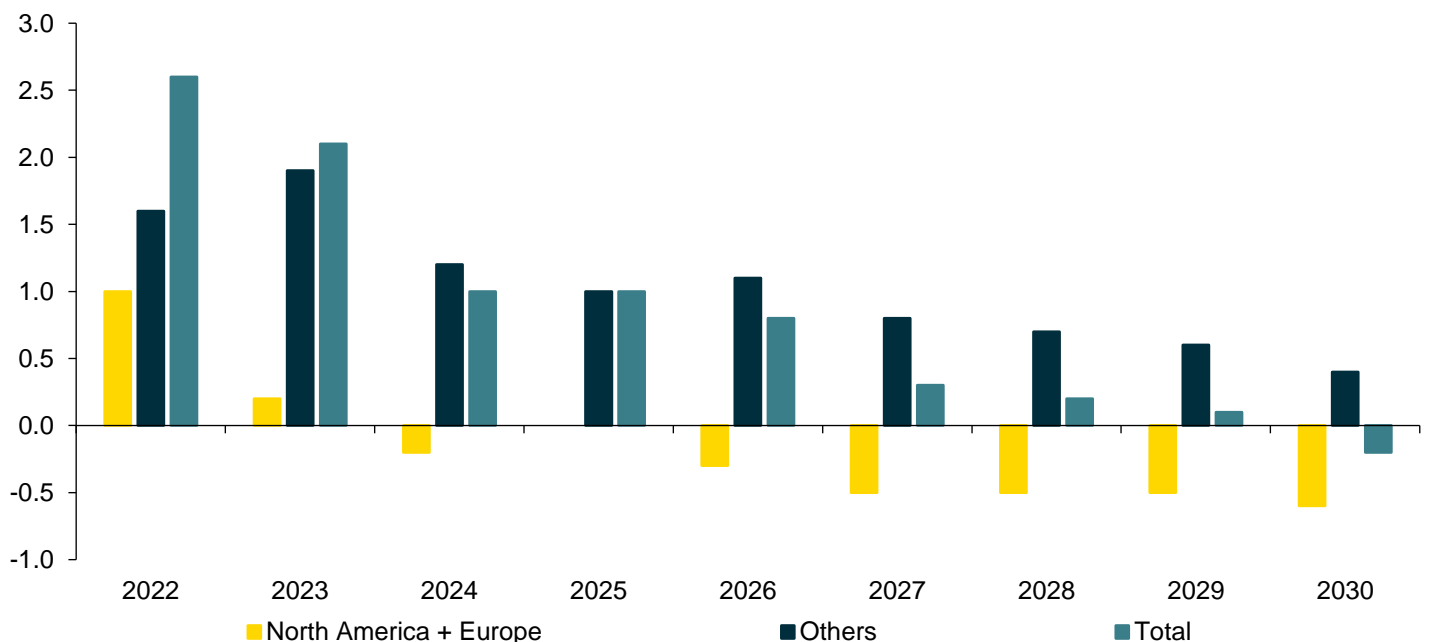
Oil demand near its peak?

Will the long-running rise in global oil demand soon come to an end? At least the International Energy Agency (IEA) thinks so. In its recently published medium-term outlook **"Oil 2024"**, it predicts that oil consumption will fall from the end of this decade. This is a significant change in its expectations. Five years ago, in its longer-term **World Energy Outlook**, the agency still assumed in the main scenario based on the political measures implemented up to that time that global demand for oil would continue to rise until 2040. Only in the so-called sustainability scenario, in which more stringent environmental measures were assumed, did it expect an earlier turning point.

The IEA considers that demand in Europe and North America has long passed its peak. In contrast, consumption in the other regions will continue to rise for the time being, although the increase will level off from 2027 onwards, meaning that global oil demand is expected to reach its peak at the end of this decade (Chart 1).

Chart 1 - Oil demand in industrialized countries expected to fall already this year

Oil demand, change on year in million barrel per day, starting 2024 forecasts of the IEA



Source: IEA, Commerzbank Research

E-mobility slows demand for oil, ...

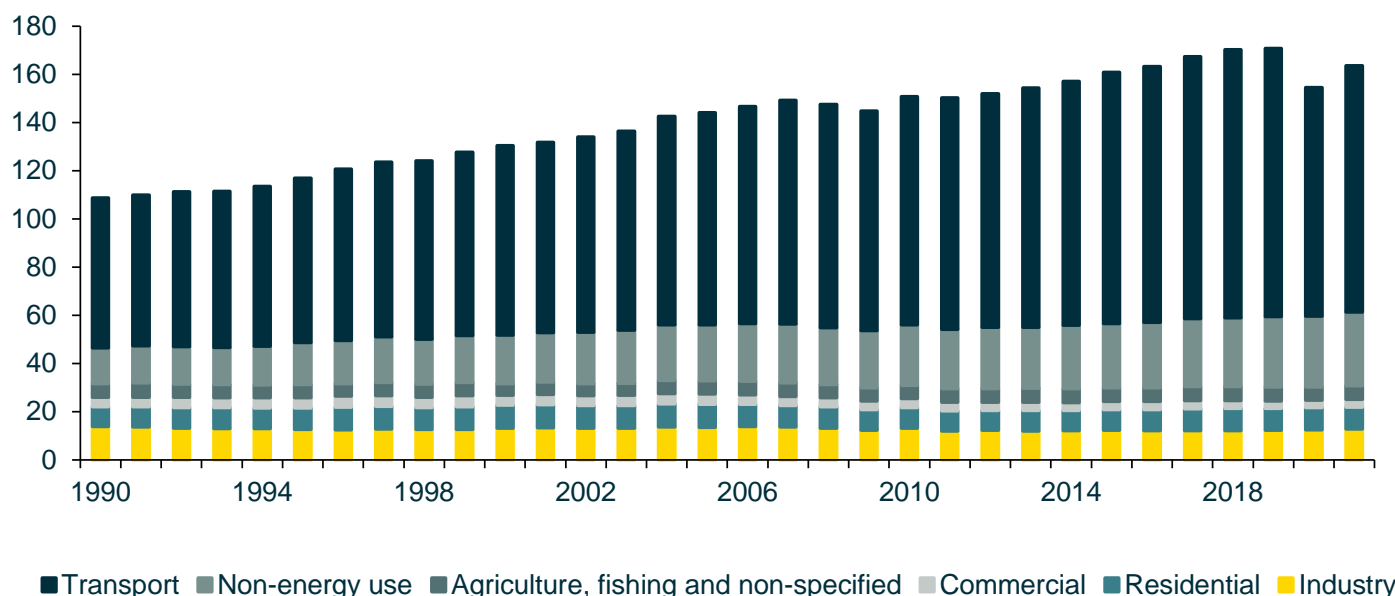
The main driver of global oil demand over the past three decades has been the transportation sector, which now accounts for almost two thirds of demand (Chart 2). This increase is now set to come to an end. Improved fuel efficiency in internal combustion engines,



which has already been observed in recent years, is expected to contribute to this. The IEA estimates that global gasoline consumption per kilometer in passenger cars fell by 11% between 2000 and 2021.

Chart 2 - Demand in the transportation sector has been driving global oil demand to date

in million TJ



Source: IEA, Commerzbank-Research

These efficiency gains have so far been partially offset by the increasing number of cars, especially as there is also a clear trend towards larger cars. While these efficiency gains are expected to continue, they will be amplified by a rapidly growing share of electric vehicles (EVs). In fact, their sales figures have recently risen significantly: While just 3 million EVs were sold worldwide in 2020, last year, just three years later, this figure had already risen to 14 million. That equates to one in five new cars.

There are some indications that this trend will continue. In the EU at least, a significant rise in the carbon price is likely to make gasoline and diesel, and therefore the use of a combustion engine, increasingly expensive. At the same time, the disadvantages of EVs are likely to diminish. The range of EVs has already increased significantly in recent years and further advances in battery technology are expected in the coming years. The charging infrastructure is also likely to be further extended. In addition, EVs are likely to become cheaper in relation to conventional cars over time, and a broadening of the model range and a larger selection of smaller cars could ensure greater acceptance, especially in emerging markets. Last but not least, there are likely to be repeated government subsidy programs for EVs.

... but how much?

The question is therefore not so much whether the proportion of EVs will increase, but rather how strong this increase will be. The IEA's forecast for oil demand is based on the assumption that 40 million cars with electric vehicles will be sold by 2030, meaning that every second new car will be electric. In China, the share was recently already very close to this figure at 38%. Further progress is likely, also because EVs have caught up with conventional combustion engines in terms of price and small cars are even cheaper. However, in Europe, the second largest sales market, the share of EVs in 2023 was still much lower at just over a fifth, and in the US it was significantly lower at 10% in 2023 despite recent strong growth rates.

The fact that the increase in EV sales in these three markets, which together account for 95% of sales, has recently leveled off makes us skeptical that the IEA's expectations will be met. If the sales trend since the beginning of 2022 continues, the share of battery-powered EVs among new cars in the three most important sales markets of China, the EU and the US is likely to be only 30% in 2030. By contrast, if the linear trend since the beginning of 2020 had continued, the share would have been 45% in 2030 (Chart 3).

There is also the risk of political headwinds in both the EU and the US. For example, the ban on the sale of cars with internal combustion engines in the EU, which is due to come into force in 2035, is increasingly being called into question. In the US, momentum is likely



to stall, especially if Donald Trump is re-elected as US President. For instance, when he was nominated as the Republican presidential candidate, he already announced that he would end the e-mobility policy pursued by President Biden on the first day of his presidency.

Lower oil consumption for power generation, ...

Of course, demand for oil could also fall in other markets: In the Middle East, for example, oil is still used to generate electricity at times of peak load. The expansion of gas and solar power should ease this situation. However, this is expected to save just 1% of global oil demand.

... but stronger demand from industry and air traffic

In most product segments, demand for oil is even growing: first and foremost, this applies to petrochemicals, as demand for polymers and synthetic fibers continues to rise. The second growth driver is the increase in air traffic and demand for jet fuel, although this is still a comparatively small segment accounting for a good 7% of demand.

Demand reaches its peak, ...

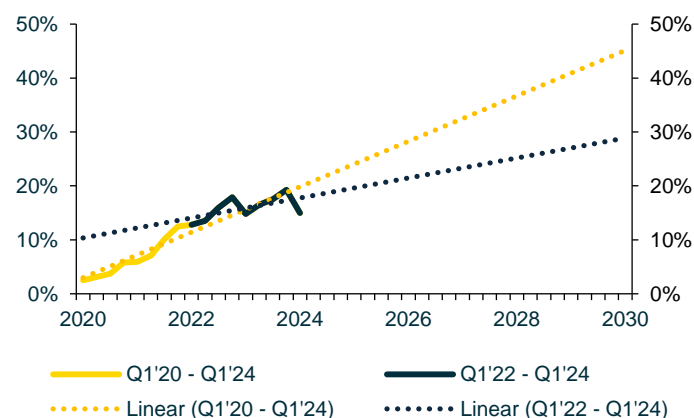
Despite demand still rising in some areas, global oil consumption is actually likely to peak in the coming years. This is because the increasing proportion of EVs and the resulting lower demand for oil in road traffic is likely to compensate for the continued rise in demand, particularly from industry (chart 4).

... but probably a little later than expected by the IEA

However, the recent slower increase in EV sales suggests that oil consumption will not peak in 2029, but probably in the first half of the next decade, and that daily oil demand is likely to increase by around 5 million barrels by then. This is based on the assumption that demand will increase by around 1 million barrels per day in each of the coming years. This corresponds to the increases expected by the IEA for this year and next. Towards the end of the decade, demand growth is then likely to decline steadily. The IEA also points out that demand for oil could continue to rise after 2029 if e-mobility is implemented more slowly.

Chart 3 - Slowing momentum in sales of electric vehicles

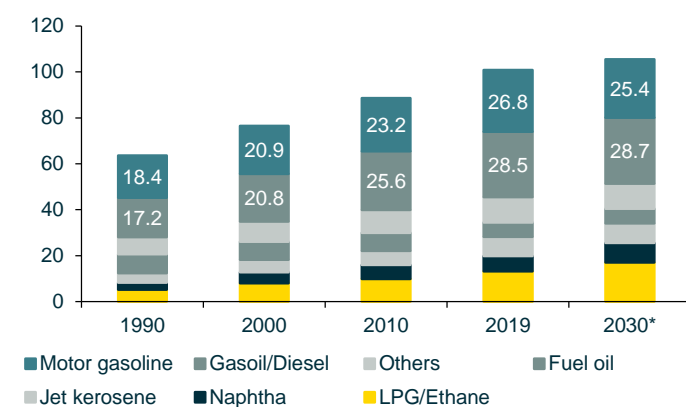
Market share of battery-powered electric vehicles in new cars in % (China, EU, US)



Source: WPIC, Commerzbank-Research

Chart 4 - IEA sees peak in road fuel demand

in million barrels per day, * forecast



Source: IEA, Commerzbank-Research

Overcapacities are increasing, ...

At the same time as demand is leveling off, global production capacities are likely to continue to increase substantially. On the one hand, the production of natural gas, in which natural gas liquids (NGLs) and condensates are produced as by-products, is likely to increase significantly. Secondly, new projects will continue to be profitable, at least in the short term, given that the oil price remains relatively high. The IEA assumes that overcapacity will amount to around 8 million barrels per day in 2030. This would be considerably more than at present. As a result of the voluntary production cuts by OPEC+ and the effects of sanctions, these currently amount to around 6 million barrels per day. Saudi Arabia alone accounts for around half of this.

... but OPEC will probably prevent oil price collapse

However, Saudi Arabia has already announced that it will be forgoing the previously planned expansion of crude oil production capacity by 1 million to 13.5 million barrels per day. In addition, Russia and Iran are unlikely to be able to keep their production stable



at their current levels until 2030, as assumed by the IEA. If Donald Trump wins the US presidential election in November, the US sanctions still in place against Iran are likely to be enforced more strictly again, which would mean a significant decline in production. Similarly, production in Russia is likely to increasingly be affected by the lack of availability of spare parts and technical equipment from the West, as these are required for infrastructure maintenance and the expansion and development of existing and new projects.

In addition, OPEC – and Saudi Arabia in particular – is likely to idle additional capacity and thus stabilize the market. This is because the national budgets of these countries are heavily dependent on stable revenues from the oil sector. According to IMF calculations, Saudi Arabia currently needs an oil price of around USD 95 to keep its state budget in balance. In addition, the experience of 2015 is likely to still have an impact, when Saudi Arabia turned on the oil tap in order to force US shale oil production out of the market with lower prices. However, this measure proved not to be successful in the long term, as shale oil producers were able to significantly reduce their costs, with the result that Saudi Arabia returned to its policy of market stabilization two years later. In the course of this, however, the expanded production cartel OPEC+ was formed, in which Saudi Arabia still coordinates its production strategy with Russia today. The success of OPEC+ in recent years suggests that the cartel will also succeed in counteracting a sharp and sustained fall in prices in the future. Without these market-stabilizing measures, oil prices would come under pressure due to the strong expansion of production capacities, most of which is set to take place in the next two to three years. At the same time, however, the overcapacities will prevent significantly higher prices, meaning that a price level of more than USD 100 for a longer period of time has become unlikely, assuming there is no further escalation of the current conflicts.



Research contacts (E-Mail: firstname.surname@commerzbank.com)

Chief Economist

Dr Jörg Krämer
+49 69 136 23650

Economic Research

Dr Jörg Krämer (Head)
+49 69 136 23650

Dr Ralph Solveen (Deputy Head; Germany)
+49 69 9353 45622

Dr Christoph Balz (USA, Fed)
+49 69 9353 45592

Dr Vincent Stamer (Euro area, World trade)
+49 69 9353 45800

Dr Marco Wagner (ECB, Germany, Italy)
+49 69 9353 45623

Bernd Weidensteiner (USA, Fed)
+49 69 9353 45625

Tung On Tommy Wu (China)
+65 6311 0166

Interest Rate & Credit Research

Christoph Rieger (Head)
+49 69 9353 45600

Michael Leister (Head Rates)
+49 69 9353 45610

Rainer Guntermann
+49 69 9353 45629

Hauke Siemßen
+49 69 9353 45619

Ted Packmohr
(Head Covered Bonds and Financials)
+49 69 9353 45635

Marco Stoeckle
(Head Corporate Credit)
+49 69 9353 45620

FX & Commodities Research

Ulrich Leuchtmann (Head)
+49 69 9353 45700

Antje Praefcke (FX)
+49 69 9353 45615

Tatha Ghose (FX)
+44 20 7475 8399

Charlie Lay (FX)
+65 63 110111

Michael Pfister (FX)
+49 69 9353 45614

Volkmar Baur (FX)
+49 69 9353 26854

Thu-Lan Nguyen (FX, Commodities)
+49 69 9353 45617

Carsten Fritsch (Commodities)
+49 69 9353 45647

Barbara Lambrecht (Commodities)
+49 69 9353 45611

Tung On Tommy Wu (China)
+65 6311 0166

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Analysts

Dr. Jörg Krämer
Chief Economist
+49 69 136 23650
joerg.kraemer@commerzbank.com

Bernd Weidensteiner
Senior Economist
+49 69 9353 45625
bernd.weidensteiner@commerzbank.com

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Commerzbank Offices

Frankfurt

Commerzbank AG
DLZ - Gebäude 2,
Händlerhaus
Mainzer Landstraße 153
60327 Frankfurt
Tel: + 49 69 136 21200

London

Commerzbank AG
PO BOX 52715
30 Gresham Street
London, EC2P 2XY
Tel: + 44 207 623 8000

New York

Commerz Markets LLC
225 Liberty Street, 32nd
floor,
New York,
NY 10281-1050
Tel: + 1 212 703 4000

Singapore

Commerzbank AG
128 Beach Road
#17-01 Guoco Midtown
Singapore 189773
Tel: +65 631 10000