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China's gasoil demand is set to peak in 2026 as sweeping changes in the transportation sector take a toll

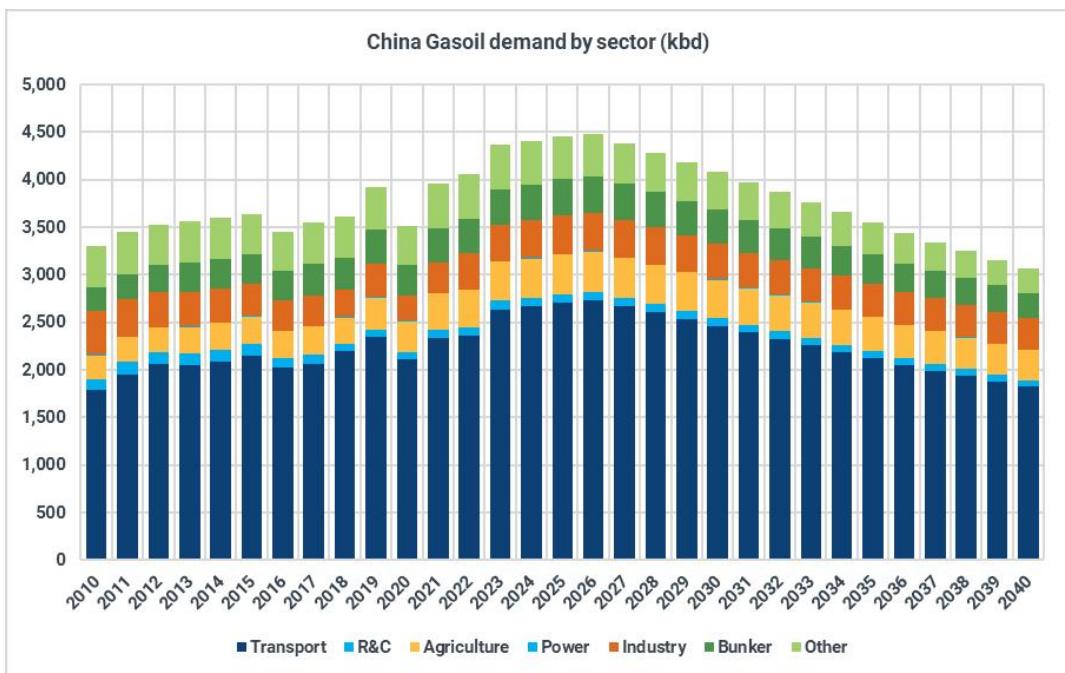
By Elif Binici, Long Term Energy Analyst



Kpler forecasts see very modest growth for the Chinese gasoil demand in the short term and view consumption as likely to peak in 2026. The policy environment and the government's efforts to revive the economy bode well for the low or zero-emission heavy-duty vehicles while the trendline for diesel is set to decline 2.7% per year from 2027 to 2040

Prevailing trends in the Chinese macroeconomic landscape and the exhaustive transformation of the transportation sector point to a lackluster growth outlook for the country's gasoil demand. Our short-term forecast for the period of 2024-2026 points to an absolute growth of **43 kbd, 44 kbd, and 22 kbd**, respectively, while we see the demand on a **downward trend** thereafter.

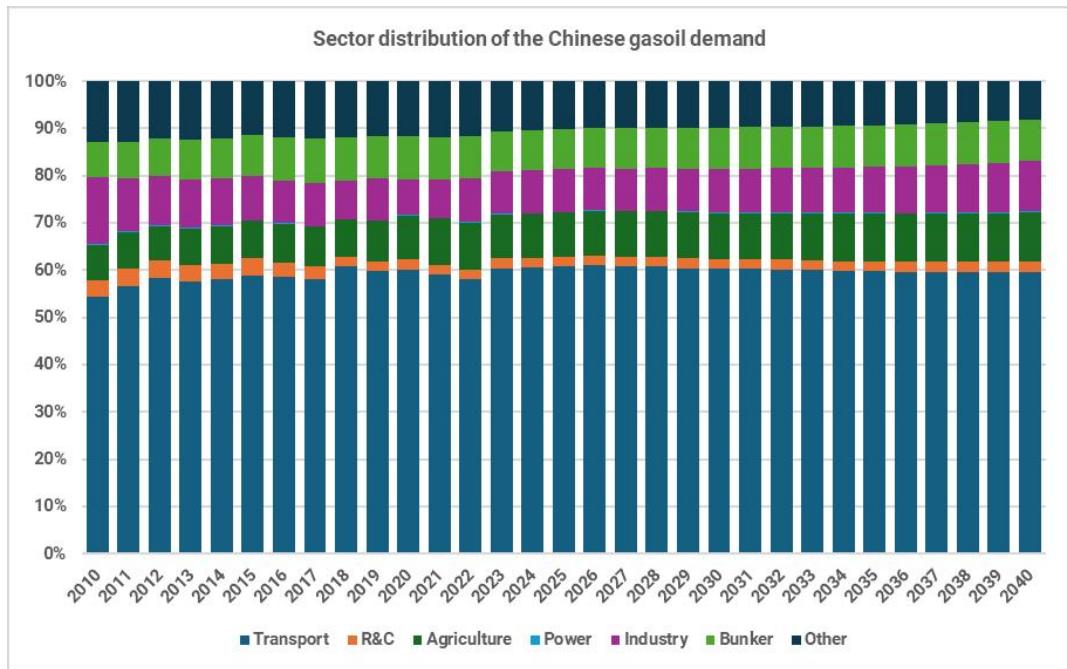
China Gasoil Demand by Sector (kbd)



Source: Kpler

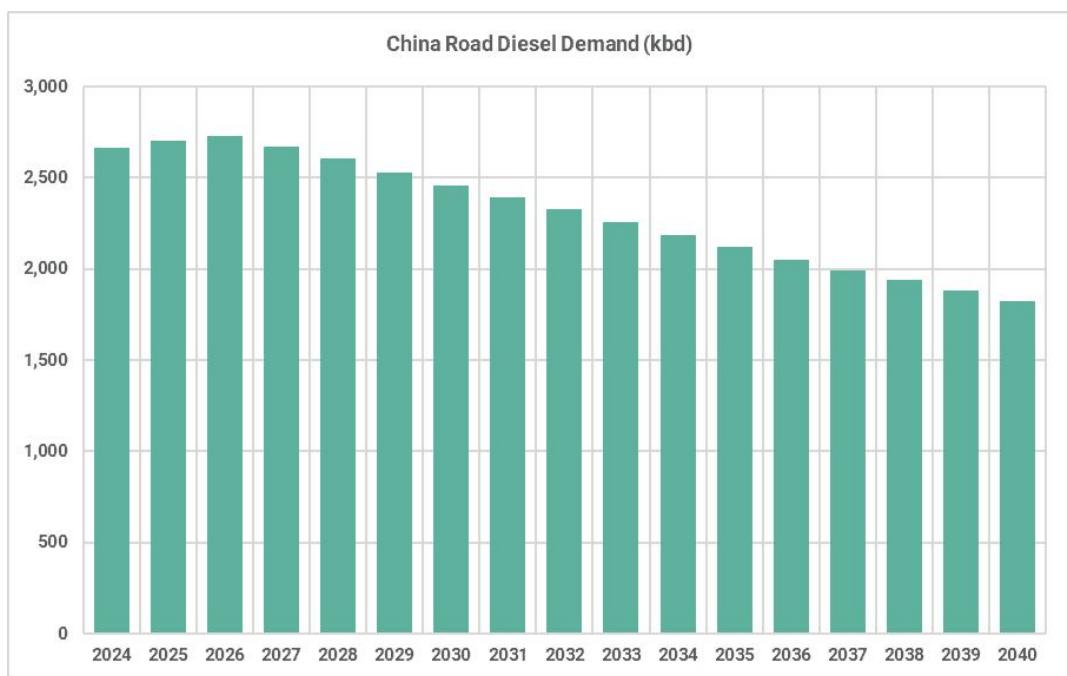
The downward trendline from 2026 onwards exhibits an annual compound decline of **2.7% through 2040**. On a sectoral basis, the transportation sector is leading the decline with an annual rate of 2.8% albeit it will maintain its share of overall gasoil demand at around 60%. The annual compound decline rate in the transportation sector is followed by the power sector (-2.8%), Residential and Commercial (-2.3%), and agricultural sectors (-2%).

Sector Distribution of Chinese Gasoil Demand (%)



Source: Kpler

China Road Diesel Demand, kbd

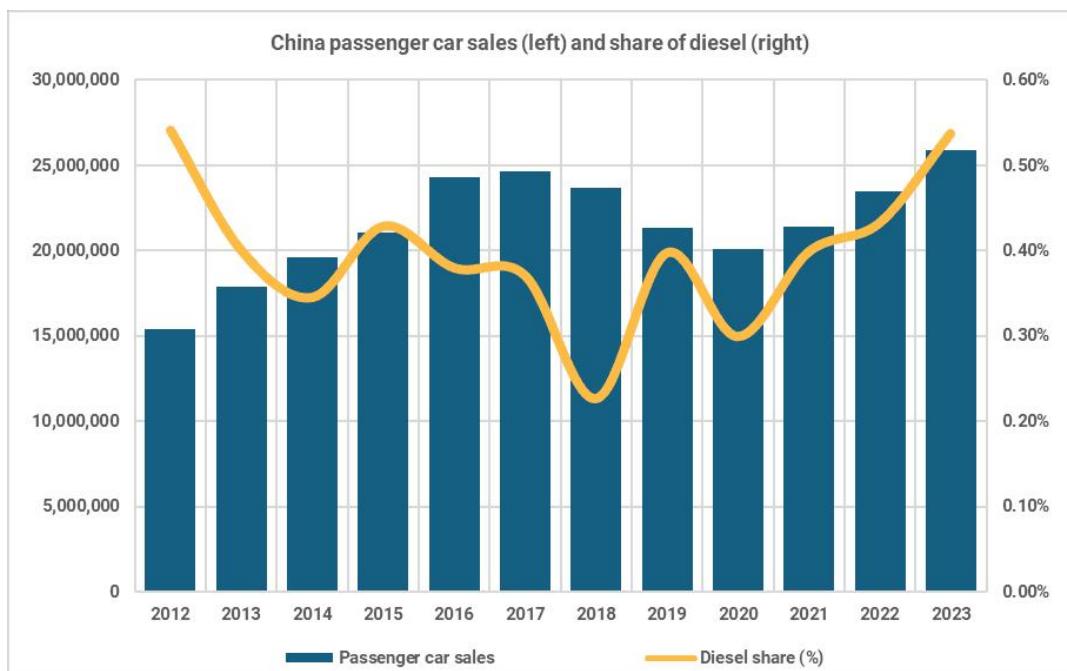


Source: Kpler

The combination of fast contraction in the share of diesel engine passenger cars and the expanding sales of low and zero-emission heavy-duty vehicles (HDV), and limited growth outlook of road freight market supports the bleak outlook. The speed of the ongoing changes, especially in the commercial vehicle market, could even expedite the diesel demand reduction in the transportation sector.

According to the data from the Chinese Association of Automobile Manufacturers and CEIC, diesel passenger car sales make up less than 1% of the total passenger car sales as opposed to the still-dominant gasoline cars which accounted for 61% of total sales in 2023. In other words, passenger vehicles make up less than 5% of the total road diesel demand in the country. Indeed, it is commercial vehicles, and HDVs in particular, that account for almost all of the road diesel demand.

China Passenger Car Sales (left) and Diesel Share (%), right)



Source: China National Bureau of Statistics and CEIC

Road freight transport, a gauge of China's economic activity, was a great metric for forecasting the country's road diesel demand. **Yet, many of the elements that rendered the freight tonnage the key metric for diesel consumption have structurally changed since the pandemic.** China's new macroeconomic setting and its policy-driven investments that is transforming the technology in the sector have played a leading role in this change.

Freight ton kilometer data exhibits some improvement compared to the past two years. In the January-June period, total freight ton kilometers are 9% higher than in 2022 and 6% higher than the corresponding period last year. Compared to pre-pandemic figures, a 2% increase is observed, modest but not discouraging. Again, the average growth rate of 4.4% from 2022-2024 falls below the 7% average growth level observed between 2010-2019.

China Road Freight Ton Kilometers (100 million ton-kilometers)



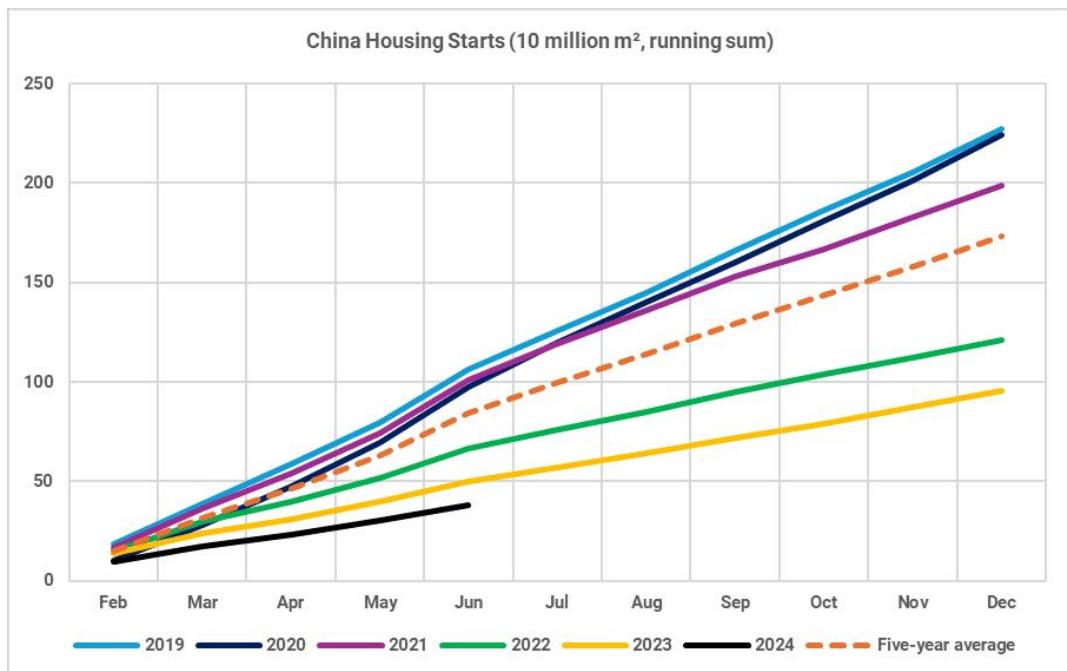
Source: China National Bureau of Statistics and CEIC

However, we believe there will be a ceiling for freight ton growth in China since it is currently fed by the country's exports. Manufactured goods are transported to Chinese ports to be shipped to their final destinations. Recently proposed and implemented import tariffs by the US, the European Union, Brazil, Mexico, and others are likely to strain future Chinese export growth in addition to the uncertainties looming over the economic outlook in several regions. However, we admit that there is considerable unpredictability around the extent to which China might be able to find replacement destinations for its manufactured goods.

Aside from export growth, the second factor that will limit freight ton growth is **the Chinese construction sector**. The construction sector is usually responsible for **3-5%** of total gasoil demand. Diesel is not only consumed by on-site diesel power generators, but feeds into heavy trucking activity related to the construction sites. Currently, three main developments have stalled construction-related trucking activity:

- 1. a persistent real estate slowdown as observed in housing construction starts remaining below the previous averages**
- 2. the slowing launch of infrastructure projects as many local governments are highly indebted**
- 3. investment trends are shifting towards low-carbon-energy technologies, high speed internet, semiconductor industry and artificial intelligence, which are all much less diesel intensive.**

China Housing Starts (10 million m², running sum)

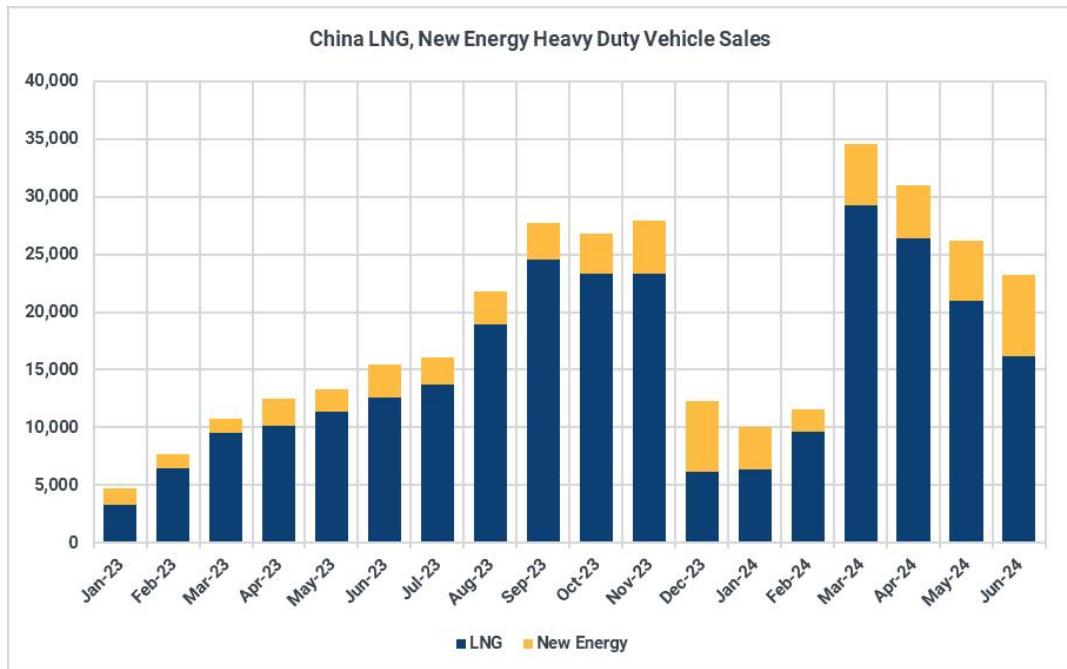


Source: China National Bureau of Statistics

In our view, construction activity will never return to the growth rates of the 2010s. After the current contractionary period comes to an end, limited upside to the growth is the most likely outcome as the woes of the property sector are permanent and the government has limited means to revive it again due to fiscal and macroeconomic constraints. This translates into a no-growth scenario for the sector's diesel demand across our short-term and long-term projections.

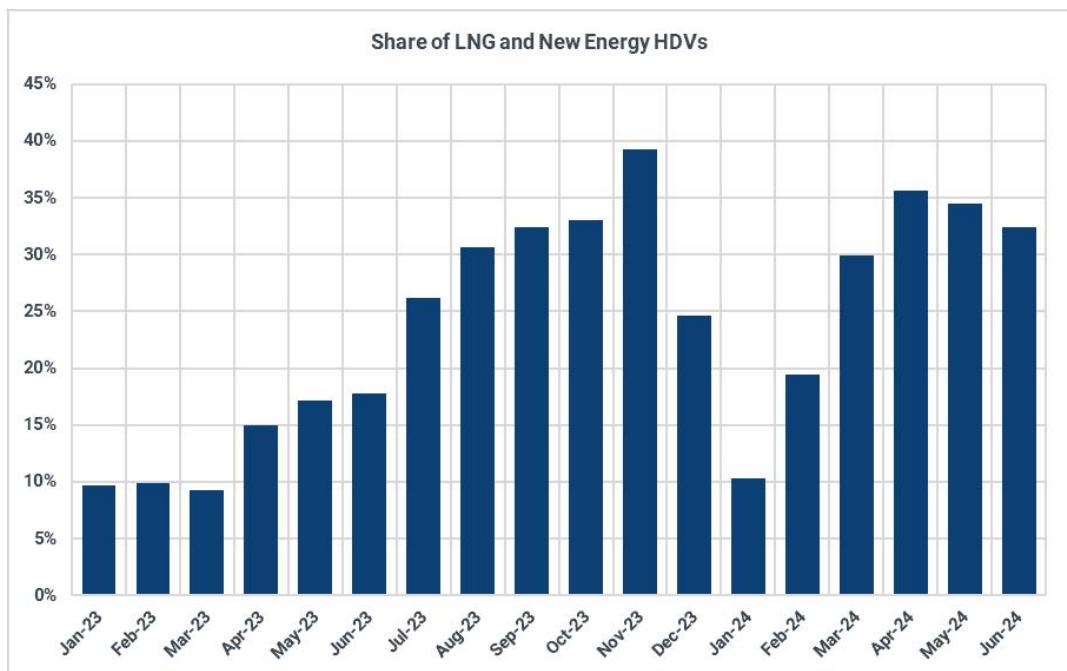
In addition to exports and construction, the pressures on diesel demand growth will also arise from the heavy-duty truck market itself. **HDVs account for around 10% of the total vehicle fleet in China but claim close to 40% of total road fuel demand.** The dynamic transformation of the sector therefore is vital for the direction of diesel demand. We estimate that around 85% of the HDVs currently in the Chinese fleet are propelled by a diesel engine. Their share however is destined for a decline as LNG truck sales and the new energy (electric, plug-in, and fuel cell) truck sales are growing on an exponential scale.

China LNG and New Energy Heavy Duty Vehicle Sales



Source: CVWorld

Share of LNG and New Energy as a % of Total HDV Sales



Source: Kpler calculations based on CVWorld data

LNG truck sales, which jumped by around **30% y/y in June and 104% in the first half**, are swiftly weighing on diesel demand thanks to attractive LNG prices and the scrap subsidies the government proposed for old cars. Kpler calculations based on the emission standards for an HDV of 25-ton Gross Vehicle Weight (GVW) show that the LNG trucks sold during January-June 2024 **displaced close to 70 kbd of diesel demand**. Together with new energy trucks, the diesel amount displaced this year so far amounts to **83 kbd**. With the current sales demand expected to be maintained, LNG trucks added to the existing fleet this year could displace around **110-135 kbd** of diesel demand this year.

Recently announced scrap subsidies as high as 80,000 CNY (\$11,000) meant to make progress towards emission reduction targets in the transport sector and breathe life into domestic consumption are expected to further increase the diesel demand displacement. Scheduled to take place in January 2025, China will introduce more stringent fuel consumption limits for HDVs at different gross vehicle weights (higher than 3.5 tons). The new proposed Stage 4 standards tighten fuel consumption limits for different types of HDVs in the range of 8-18%. While 590,000 (Argus) heavy diesel trucks were below phase III emission standards, the number will only increase further with the new standards, therefore expediting the switch to affordable and environmentally compliant LNG trucks.

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