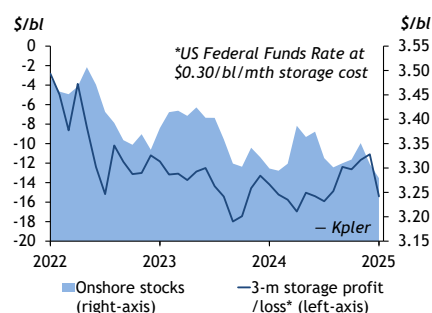


## EDITORIAL: A prolonged supply shock caused by sanctions is likely to dent Chinese oil demand

### Global crude stocks



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## A farewell to alms?

Chinese and Indian refiners have benefited hugely from their access to cheap Russian crude, self-sanctioned in the west since Russia's invasion of Ukraine. New sanctions – a parting shot from former US president Joe Biden – threaten this.

Western governments largely balked at imposing the ultimate sanction of a ban or embargo on Russian oil, instead favouring price caps that allow barrels to keep flowing. This gave Indian refiners cheap access to Russian Urals, which they processed into diesel for Europe's premium market. And discounted crude cargoes were a lifeline in China, where the rapid roll-out of electric vehicles, tepid consumer demand and limits to products exports have hit refiners' profits.

Biden's critics argued that he should have been more assertive in penalising the energy exports that help fund Moscow's war machine. He has done so now, belatedly, with new measures targeting dark fleet tankers, insurers and Russian oil firms Gazpromneft and Surgutneftegaz. "Oil markets are [now] in a fundamentally better place" than when Russia invaded, a former White House official says. The Biden administration was less candid in noting a 26pc rise in Russian oil and gas revenue in 2024.

Backwardation – the premium that buyers must pay to secure prompt supply – is certainly lower than when the war broke out. But the new sanctions will severely test the notion that markets can shrug off a supply shock. Iranian exports are already being squeezed and face further constraints under new US president Donald Trump. The world has a far smaller cushion of stocks to protect against supply disruption thanks to Opec output cuts and a sustained period of high interest rates. The latter, triggered initially by pandemic-era supply chain bottlenecks and sustained by the 2022 energy price shock, forced central banks to raise interest rates, driving up the opportunity cost of holding inventories (see graph).

Spot market differentials now are at 16-month highs. Gazpromneft and Surgutneftegaz exported a combined 700,000 b/d of crude last year, mainly to India and China. Customers of the two firms must halt trade by 27 February or face secondary sanctions similar to those already applied to Iranian counterparties. Such a short wind-down period has left a large hole in Chinese oil firms' procurement plans. At the time of the announcement, they had completed buying long-haul March supplies and were waiting to top up March imports from the prompt-trading ESPO Blend market. Instead, they now must contend with Indian buyers for unsanctioned supplies from Brazil, the UAE, Iraq and Canada.

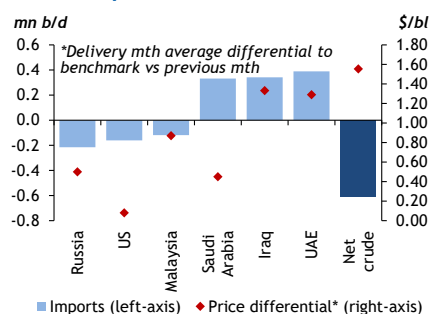
Oil markets found ways to deal with the restrictions imposed on Russian oil trade since 2022, and may do so again. Gazpromneft and Surgutneftegaz could sell their oil to unsanctioned firms for export, or discount cargoes to irresistible levels. Buyers may set up burner banks and shell trading companies in Dubai and Hong Kong to process transactions. There is even an outside chance that Opec may ride to the rescue, bringing forward its timeline for unwinding voluntary output cuts.

The latter looks unlikely, for now. Argus provisionally forecasts a 310,000 b/d market surplus this year even after factoring in a 500,000 b/d loss to Russian supply. This is squeezing unsanctioned crude differentials – and high prices are, famously, the best remedy for high prices. When the cost of delivering crude to China rose to more than \$10/bl over benchmark prices in 2022, demand wilted.

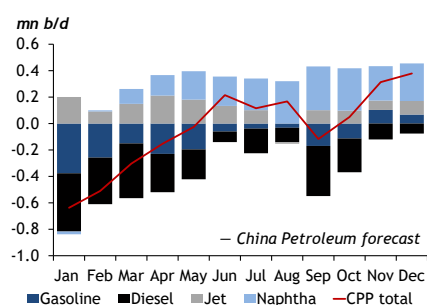
## DEMAND

*The outlook for road fuel demand in China is weak, casting a pall over refiners' profitability*

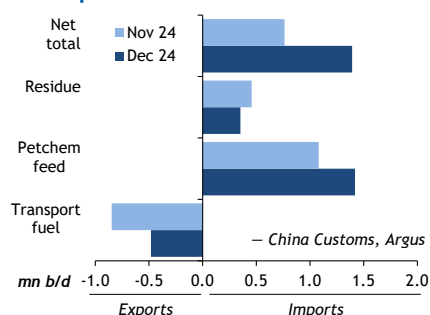
## Crude imports Dec vs Nov



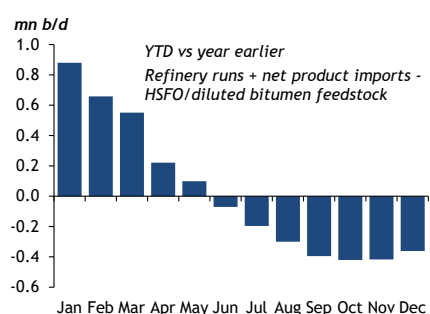
## China demand 2025/24



## China products trade



## Finished products supply change



## China oil demand loss halts – for now

Chinese oil demand stopped shrinking in December. Even so, a crude supply shock and further projected weakness in China's transport sector oil use suggest demand may not grow in 2025.

China cut crude imports by 600,000 b/d in December, to 11.2mn b/d. Finished products supply – the sum of China's refinery output and its net products imports, a proxy for oil consumption – rose by 380,000 b/d from November to 15.69mn b/d in December. LPG imports jumped to 1.2mn b/d. But much of the broader recovery was caused by a sharp decline in net transport fuel exports rather than an increase in demand. Chinese oil firms cut runs and rushed to use up export quotas in November, leaving little for use in December. Finished products supply for the full year was 370,000 b/d lower than in 2023, at 15.71mn b/d.

This year is likely to prove similarly challenging to Chinese refiners. Sanctions announced by the administration of former US president Joe Biden will make it costlier for China to import cheap Russian and Iranian crude. China imported 2.3mn b/d from Russia in December, up from 2.2mn b/d in November, and took 1.6mn b/d from Iran through Malaysia, down from 1.7mn b/d in November. Delivered-China spot differentials for both Russian ESPO Blend and Iranian Light rose steadily over the course of last year, but this did not dent demand as refiners fought to defend their profitability.

The rapid and heavily subsidised roll-out of electric vehicles (EVs) and gas-fuelled trucks in China, in tandem with the country's ongoing real-estate crisis, left gasoline demand only fractionally higher year on year at 3.6mn b/d, and led to a 140,000 b/d reduction in diesel demand, to 4.1mn b/d. The auguries for both fuels look bleak. Crude runs appear to have risen this month, but most industry bodies predict that new energy vehicles – which include battery and plug-in hybrid EVs and trucks running on gas or power – will continue to outsell conventional vehicles this year. Argus is budgeting a further 170,000 b/d displacement of gasoline by EVs and a 90,000 b/d substitution of diesel by LNG. LNG costs on a per kilometre basis fell below those for diesel in north China in January.

Current fuel displacement assumptions would wipe out the 1pc increase in gasoline demand implied by GDP growth forecasts from Oxford Economics, and would push up the 4.2pc implied decline in diesel demand by a further 2.2 percentage points. On this basis, gasoline and diesel demand are projected to shrink by 120,000 b/d and 240,000 b/d, respectively. Higher jet fuel and naphtha demand could offset road fuel demand losses, although naphtha demand growth projections are based on capacity changes and feedstock assumptions. Jet fuel and naphtha demand are on course to grow by 120,000 b/d and 200,000 b/d, respectively, leaving combined demand for the four key products in 2025 flat on last year.

## Shocks away!

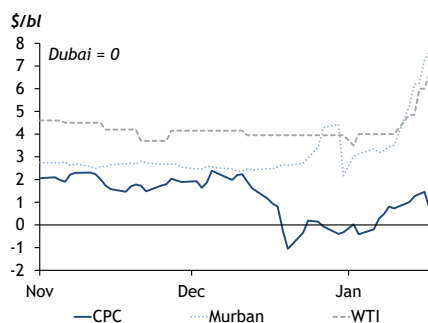
China's ESPO Blend market froze in January after the latest round of US sanctions, with oil companies switching to buy unsanctioned grades from Brazil, Canada and the Mideast Gulf. Brazilian Tupi trading for delivery to China in May surged to \$5.90/bl over North Sea Dated.

The premiums over benchmark prices that Chinese refiners paid to import crude shot to double digits in 2022, after Russia's invasion of Ukraine. At the same time, President Xi Jinping's zero-Covid lockdowns put a major squeeze on mobility. Oil demand shrank by 800,000 b/d in 2022 but came roaring back when lockdowns were lifted and China found ways to import crude despite the G7 price cap. Differentials remain lower for now, but any prolonged supply shock in a weak-margin environment would have major implications for demand.

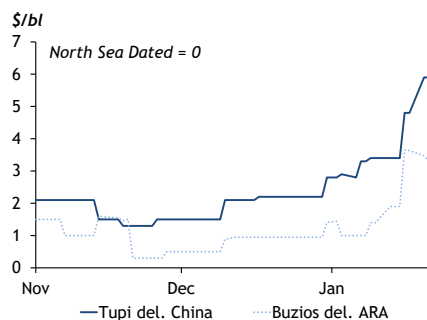
## CRUDE

**Russian crude trade has frozen but it is unclear for how long China will keep buying alternative grades**

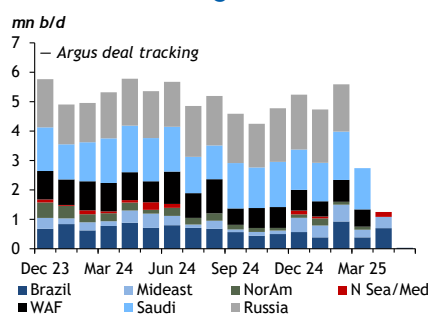
## Delivered China differentials



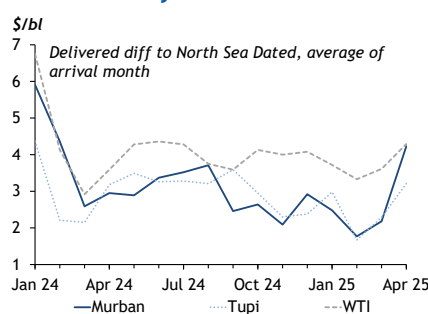
## Brazilian crude differentials



## China deal tracking



## China trade cycle differentials



## China rushes to secure April and May crude cargoes

Fresh US sanctions on Russia may compel China to seek as much as 450,000 b/d of crude from other regions. But weak refining margins could limit the extent to which China can compete with other markets on price.

The administration of former US president Joe Biden on 10 January [announced its largest sanctions package](#) against Russia since the Russia-Ukraine war began. The new measures target key ESPO Blend exporters, oil tankers and financial institutions — the affected institutions and vessels were involved in more than 70pc of China's Russian crude imports last year, data from Argus and oil analytics firm Vortexa show. Chinese state-owned firms took 450,000 b/d of ESPO Blend exported from Russia's Kozmino terminal in 2024 but direct sanctions on private-sector Surgutneftegaz and state-run Gazpromneft, [stricter port regulations](#) and enhanced banking scrutiny make buying Russian crude increasingly challenging.

Chinese state-owned refiners have temporarily exited the seaborne ESPO Blend market in favour of pricier but lower-risk crude grades shipped from the Mideast Gulf, Canada, Brazil and west Africa from 13 January. Early signs of this shift include Chinese refiners' [collective purchase of 10mn bl](#) of unusually prompt medium sour Upper Zakum and Oman crude. This should arrive in March, replacing prompt-trading ESPO Blend.

Chinese refiners have secured 700,000 b/d of Brazilian crude for April delivery, 310,000 b/d more than they bought for March. Higher Chinese demand in tandem with planned maintenance at Brazil's offshore pre-salt Iracema field in February and Tupi field in March drove Tupi's delivered-China spot differential to \$5.90/bl over North Sea Dated on 21 January. China appears to be out-bidding other regions for Brazilian supply — differentials for Brazil's medium sweet Buzios, which is similar in quality but bought mainly by European refineries, failed to keep pace with Tupi. Chinese buyers have also secured 5mn bl of light sweet Kazakh CPC Blend for delivery at the end of April, as a substitute for Russian light sweet Sokol. These cargoes mark the first CPC Blend purchases by Chinese companies in a year.

But Chinese firms reined in their purchases of crude from the Mideast Gulf spot market, largely in response to competing demand from India. Oman spot differentials surged to a 25-month high of \$4.70/bl over regional marker Dubai, equivalent to \$8.30/bl over Ice May Brent on a delivered-China basis. US sanctions jeopardise [at least a third of India's crude imports](#) from Russia and India has only 150mn bl of crude in storage, compared with China's more than 1bn bl, Vortexa data show.

## Sell, sell, buy!

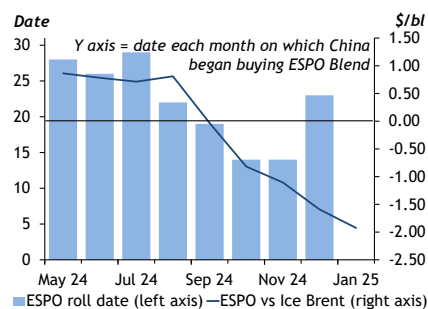
State-controlled Sinopec has turned seller on the Dubai market and will deliver 2.5mn bl of Oman crude to settle its March short position. Even so, Dubai back-wardation — the premium of March to May Dubai — is at a 26-month high of \$2.80/bl because Asian refiners are expected to seek alternatives for large amounts of sour Russian Urals. Mideast Gulf producers such as state-controlled Saudi Aramco and Iraq's state-owned Somo use the Dubai market structure to guide their formula price changes. Saudi Arabia may raise formula prices for March-loading cargoes by at least \$2/bl in early February, market participants say.

Chinese refining margins fell by about \$2/bl in January. This will limit the extent to which Chinese refiners can compete with India for crude arriving in April-May, or push China to favour cheaper supply such as [Canadian grades shipped through the TMX pipeline](#). Private-sector Shenghong has bought Canadian Cold Lake, and mega-refiner Rongsheng switched back to TMX crude after buying UAE Upper Zakum in December. US president Donald Trump plans to tax imports of Canadian crude, which could reduce the US' take and make it cheaper in China.

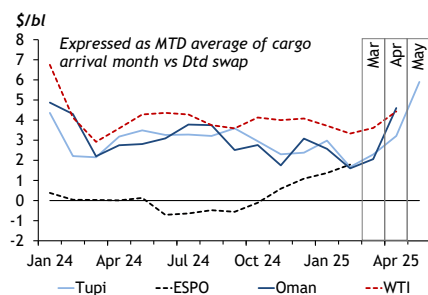
## CRUDE

**The cost of importing Russian crude has shot lower, but Chinese oil firms appear reluctant to increase their take**

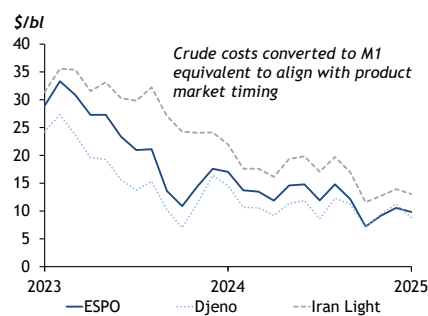
## ESPO Blend roll date



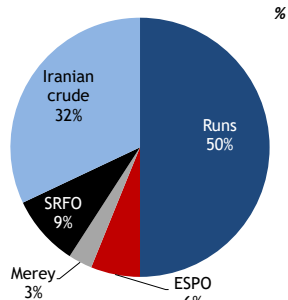
## Trade cycles



## Shandong GPW margin



## Shandong feedstocks



## ESPO Blend trade stalls after new sanctions announced

The market for Russian ESPO Blend in China froze this month, after the US announced more stringent sanctions on Russian crude.

The outgoing administration of former US president Joe Biden unveiled a raft of new measures aimed at staunching Russian oil flows on 10 January, just before firms such as Chinese state-run Sinopec started buying March-arriving cargoes.

A waiver should allow most February-arriving cargoes to discharge as planned, but customers of Russian state-controlled oil producer Gazpromneft and private-sector Surgutneftegaz face secondary sanctions similar to those imposed on Iranian crude buyers, if they continue to do business with the two firms beyond 27 February. Washington's latest measures include sanctioning 183 tankers – about 40 of which are Aframax ships plying the Kozmino-China route – along with pipeline operator Shandong United Energy Pipeline Transportation and insurance providers Ingosstrakh and Alfastrakhovanie, which insure most vessels carrying Russian crude.

ESPO Blend trading started more promptly from August 2024, as state-owned firms raced to secure supply before independent refiners (see graph: ESPO Blend roll date). But the January sanctions announcement came just before March trade began, preventing the trade cycle from rolling (see chart: Trade cycles). March-loading ESPO Blend cargoes have been discussed at as low as \$10/bl below Dubai swaps to offset the \$10/bl cost of freight between Kozmino and Shandong, without attracting any bids in the delivered market. Chinese banks are wary of processing even yuan-denominated payments for crude sanctioned by the US.

Sinopec appears to be the worst affected by the new sanctions – it was taking 7.5mn bl/month of ESPO Blend. Internal compliance rules prevented Sinopec from dealing with the independent trading firms prepared to deliver Russian crude to China. Sinopec primarily bought from Gazpromneft and private-sector Lukoil, with the latter acquiring its cargoes from Surgutneftegaz. Intermediaries bought several March-loading ESPO Blend cargoes to ship to China before the latest sanctions were revealed, which China now does not want to take.

It is even proving difficult for Russian firms to unload February-arriving vessels in China, as Shandong Port Group (SPG) has banned sanctioned vessels from docking. Sanctioned Aframax tanker *Mermer* unloaded 750,000 bl of ESPO Blend at Yantai's Longkou port on 15 January, after waiting offshore for five days. By 23 January, 2.2mn bl of ESPO Blend and Russian Sokol were waiting to discharge.

## Spring cleaning

Sinopec will take 2.5mn bl more Saudi crude in March, partially covering its ESPO Blend shortfall. Shandong independents – more dependent on prompt-trading crude from Iran and Russia – have fewer options. Shandong firms processed a combined 300,000 b/d of ESPO Blend last year, Argus estimates, as well as large volumes of straight-run fuel oil, Venezuelan Merrey crude and Iranian crude (see pie chart). The effective block on ESPO Blend imports comes at a time when US sanctions have also pushed the cost of importing Iranian crude to multi-year highs and Chinese tax authorities are clawing back fuel oil tax rebates.

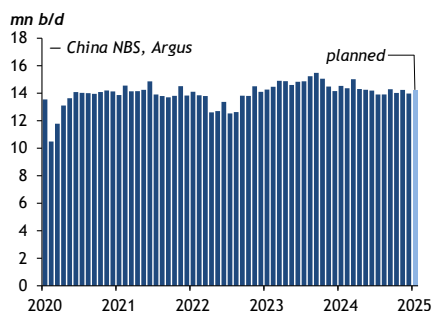
Not all Chinese ports are as unwilling to accept sanctioned tankers as those run by SPG. The very-large crude carrier *Nichola* docked at Huizhou port on 22 January with 1mn bl of Iranian crude, data from trade analytics platform Kpler show. Some Russian tankers hope to unload at Tianjin, across the Bohai bay from Shandong. But Iran's state-owned NIOC is trying to sell as much as 20mn bl of crude that it pumped into storage tanks in Dalian in 2018, market participants say. Some has been taken outside Chinese waters to get new certificates of origin, but it is becoming increasingly hard to find enough "clean" vessels to ship sanctioned crude back into ports.



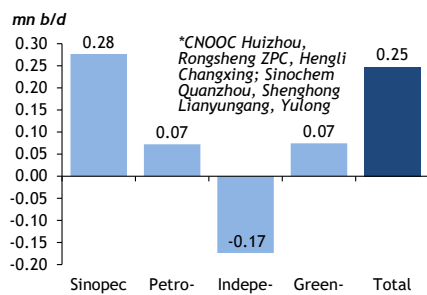
## THROUGHPUTS

**Higher overall run rates mask large reductions in Shandong, where several shuttered plants may not reopen all year**

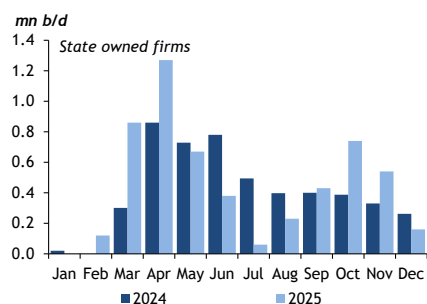
## China crude runs



## Crude runs Jan vs Dec



## China CDU shutdown



## Shandong refiners shut units as costs bite

Higher crude costs and taxes on refinery feedstocks forced Shandong's independent refiners to cut run rates this month. The drop was offset by higher throughputs at China's state-controlled oil firms and mega-refiners, which can secure better margins when independent refiners retrench.

Chinese refiners are on course to process 14.2mn b/d of crude this month, *Argus* surveys show, up by 250,000 b/d from the 13.98mn b/d processed in December, according to National Bureau of Statistics data. State-controlled Sinopec and PetroChina processed a combined 8.32mn b/d of crude in January, up by 350,000 b/d from December, *Argus* surveys indicate. Sinopec hoped to lift runs even further after completing a 220,000 b/d expansion to crude distillation unit (CDU) capacity at its Zhenhai refinery in Zhejiang. But the unit shut down after it [caught fire during trial runs](#) on 7 January and is expected to remain off line for some time, refinery sources say. China's four private-sector mega-refineries – 800,000 b/d Rongsheng ZPC, 400,000 b/d Yulong, 400,000 b/d Hengli and 320,000 b/d Shenghong – lifted runs by a combined 30,000 b/d from December.

These increases offset a drop in throughputs in Shandong, where independent refiners are beset by challenges that show few signs of easing. Run rates at Shandong independent refineries surveyed by *Argus* – with a combined capacity of 1.5mn b/d – fell to 67pc in January from 73pc in December. Independent refiner Yatong [cancelled its planned purchase](#) of the 46,000 b/d Zhonghaiwai refinery in January, in response to tax changes. Zhonghaiwai, which does not have a crude import quota, processed large volumes of straight-run fuel oil (SRFO) last year but the government has increased import duties on SRFO and cut consumption tax rebates. Zhonghaiwai has shut for maintenance following the failure of the deal and has not declared a restart date.

A further 260,000 b/d of crude processing capacity in Shandong has closed for turnarounds in December-January so far, and more could follow suit. The plants may stay shut for the entire year, market participants say. State-controlled Sinochem's three Shandong refineries – Zhenghe, Huaxing, Changyi – [shut last year](#) and the company is seeking to avoid restarting them, according to market participants. Other refiners are struggling with crude procurement, after regional port operator [Shandong Port Group](#) blocked US-sanctioned vessels from docking, choking off a large amount of Russian and Iranian supply to the province. The combination of sanctions and tax rebate cuts may "accidentally speed up" the local government's plan to shut Shandong's small refineries, a refinery source says.

## Close call

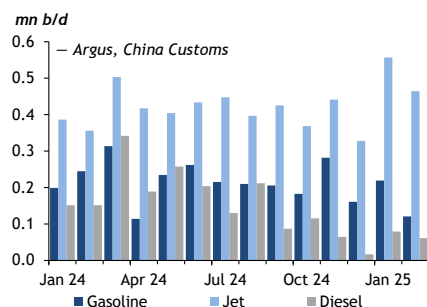
Margins for processing Russian ESPO Blend are now \$10/bl compared with \$33/bl in February 2023. Margins for running Iran Light fell to \$13/bl from \$36/bl over the same period. Refiners in Shandong that do not have crude import quotas appear to be most vulnerable to closure in 2025, as these firms rely on [increasingly pricey fuel oil](#) for feedstock. They imported a combined 420,000 b/d of SRFO in 2024.

About 610,000 b/d of CDU capacity in Shandong is off line this month, some probably indefinitely. How much remains closed will depend to a large degree on whether Russian and Iranian crude and fuel oil suppliers discount their prices to a level where it clears into China. China needs to close capacity because oil demand for many key products such as gasoline and diesel appears likely to shrink this year – weakening margins and, by extension, the ability of all Chinese oil firms to compete in the global market for crude imports. State-owned refiners plan to open 340,000 b/d of new CDU capacity this year, which will heighten margin pressures if there are no significant capacity losses in Shandong.

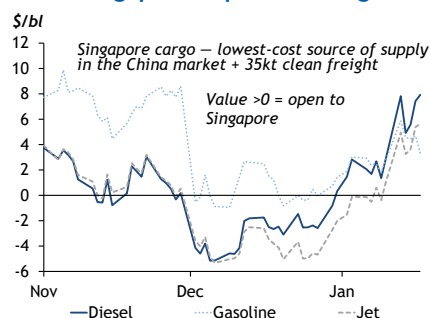
## PRODUCTS

### Large refiners are cutting exports in anticipation of a domestic supply gap in February, caused by refinery run cuts in Shandong

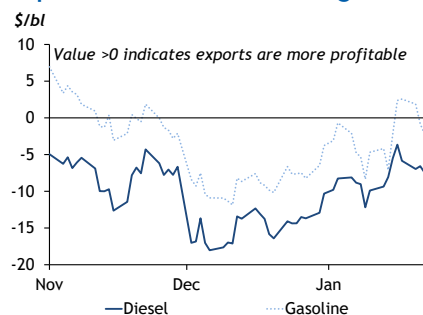
#### China products exports



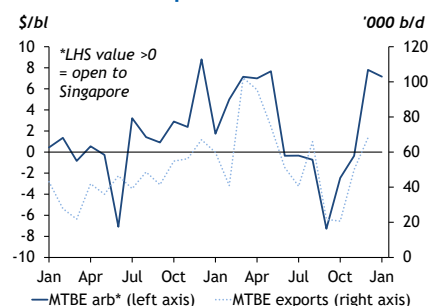
#### China-Singapore export arbitrage



#### Export vs domestic sales margin



#### China MTBE exports



### China to trim exports on Shandong run cuts

Refiners in China will reduce exports of oil products in February because US sanctions have left small independent refiners scratching for feedstock. Shandong firms cut runs, tightening domestic fuel supply this month.

Chinese firms plan to export 650,000 b/d of clean products – gasoline, diesel and jet fuel – in February, down from 860,000 b/d in January. Exports fell to a **29-month low in December**, after changes to China's tax rebate rules encouraged refiners to shift planned December exports into November, leaving them short on export quotas at the end of last year.

Gasoline exports will nearly halve from January to just 120,000 b/d in February. Domestic gasoline consumption typically spikes during the lunar new year holiday. Oil companies also plan to cut exports of jet fuel and diesel by up to a third in February, to 460,000 b/d and 60,000 b/d respectively, although export margins for both products have increased by \$6-7/bl.

Margins could be even more favourable. Export margins are measured as the spread between Singapore cargo prices and the lowest-cost source of domestic supply plus freight, but assume that products are exported under general trade terms and qualify for a 70pc rebate of value-added tax. Fuel exported under so-called processing terms are not subject to Chinese taxes so would be higher.

Margins for diesel exported under general trade terms edged above weak domestic crack spreads in late January. But larger Chinese refiners appear to be anticipating a gap in domestic diesel supply in February caused by run cuts in Shandong, where independent refiners are struggling to secure access to feedstock. One exporter has reduced – rather than increased – planned February diesel exports to just 10,000 b/d from 40,000 b/d, suggesting it expects the diesel market to tighten significantly. US sanctions are making it more difficult to import Iranian and Russian crude, and the Chinese government has raised taxes on Venezuelan crude and fuel oil. Shandong refiners typically supply about 30pc of China's diesel. Shandong refiners cut runs by at least 170,000 b/d in January, but the sector has more than 600,000 b/d of capacity off line for "maintenance", Argus surveys indicate.

#### Process of elimination

Refiners used only about 88pc of their total export quotas last year, down from 103pc in 2023. The process of applying for tax rebates for processing exports is fiddly and bureaucratic. Refiners used just 79pc of their processing quotas last year but 93pc of 2024's general trade quotas.

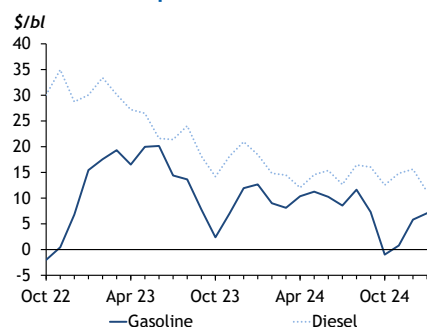
Oil firms hope to export more under processing terms this year, because these – ostensibly occurring at customs bonded sites – are not subject to domestic taxation. Processing quotas accounted for just 19pc of total quotas awarded last year. In **this year's first batch** of quotas, this share rose to 31pc, or 6mn t (47mn bl), while the share of general quotas declined to 69pc from 91pc. Exporters are supposed to earn a fixed fee when they export under processing terms, suggesting exports will be less dependent on changes in arbitrage economics this year. Even so, processing exports are poised to become a go-to option in 2025, saving refiners \$2-5/bl in taxes.

Exports of blendstocks also are likely to increase this year, as domestic gasoline demand shrinks. Refiners do not need quotas to export gasoline components such as MTBE, and exports rose by a third last year, to 60,000 b/d (see *graph: China MTBE exports*). And Chinese refiners are expected to export more jet fuel this year. Jet fuel averaged 51pc of clean oil product exports last year, an 11-year high.

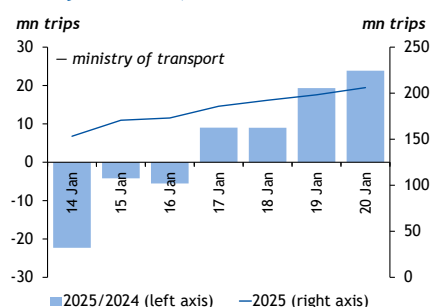
## PRODUCTS

**Independent trading companies are optimistically stocking up on gasoline and diesel, but demand for both fuels is expected to fall**

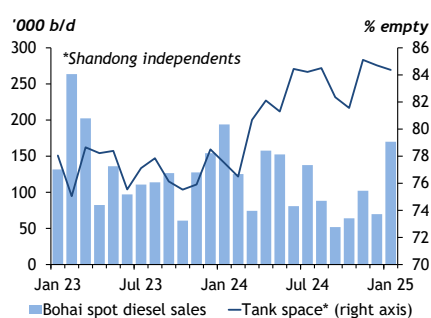
### China crack spreads



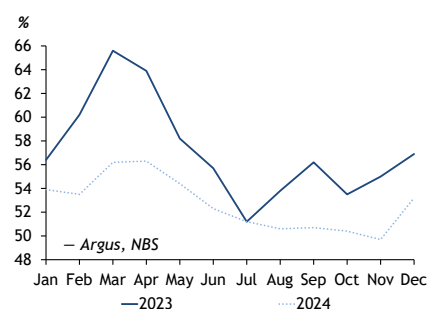
### Chunyun travel, first week



### China diesel sales vs stocks



### Construction sector PMI



## Road fuel markets prepare for rough 2025

China's annual spring festival added a further boost to gasoline margins in January, while diesel margins remain stuck in a seasonal lull. The demand outlook for both fuels this year is weak.

Gasoline crack spreads rose by \$1.30/bl in January to a five-month high of \$7.10/bl, while diesel margins retreated by \$4.40/bl to \$11.20/bl (see graph: *China crack spreads*). This year's 40-day Chunyun travel period that surrounds China's spring festival runs from 14 January-22 February. Road mobility averaged 183mn journeys in the first week of Chunyun this year, up by 2pc from a year earlier, transport ministry data show (see graph: *Chunyun travel, first week*).

Chinese gasoline demand appears to have peaked in 2021 and was flat year on year in 2024, at 3.6mn b/d. Gasoline demand is likely to shrink slightly this year but shows signs of becoming more prone to seasonal swings as a result of the expansion of China's electric vehicle (EV) fleet. EVs are less efficient in cold temperatures – many travellers became stranded on icy roads last year when their EV batteries ran down more quickly than expected. Chinese state-owned refiners have increased crude runs and gasoline yields in January to meet the seasonal boost in demand and because gasoline exports rose, tightening supply.

Average January diesel crack spreads in China's northern Bohai spot market were the lowest since Argus began assessing prices in October 2022, although refiners cut diesel yields in favour of gasoline and jet fuel. Freezing weather in north China has halted much mining and construction activity. And the number of trucks on China's roads fell on the month – pointing to reduced movement of raw materials and, by extension, industrial activity over the new year holiday.

### The greatest of these is... hope

Lower diesel wholesale prices tend to foster opportunistic stockpiling by independent trading companies and this month was no exception. Firms in south and east China snapped up cheap cargoes from the Bohai market, pushing waterborne diesel sales in Bohai to a 12-month high of 170,000 b/d.

"Diesel prices are low enough to buy, and we have replenished some stocks to prepare for a demand rally after the lunar new year holiday," a trading company in east China says. This essentially represents a transfer of stocks from one part of the country to another, rather than an increase in demand. Stockpiling in south and east China – coupled with deep run cuts in Shandong, where independent refiners face feedstock shortages – has led to lower inventories in north China, even as they grow elsewhere (see graph: *China diesel sales vs stocks*).

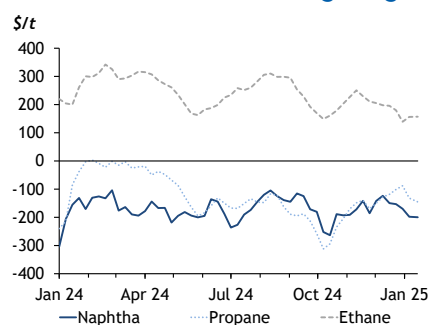
Diesel demand may rise in late February and March, as funds raised through central government bond sales filter down to the provinces, allowing local governments to award construction tenders. Cash raised through a Yn1 trillion (\$138bn) super-long-term treasury bond sale had already been allocated to specific projects by December, Yn700bn of which will go to construction projects, top economic planning body the NDRC says (see graph: *Construction sector PMI*).

Even so, diesel demand is on course to fall by 170,000 b/d to 3.93mn b/d this year, owing to accelerating fuel displacement by LNG and electric-powered trucks and fragile economic growth. About 90,000 b/d of diesel will be displaced in 2025, up from last year's 70,000 b/d, according to Argus forecasts. Beijing has extended its trade-in subsidies for so-called new energy vehicles, as part of an economic stimulus scheme. Sales of new energy heavy trucks, mainly electric, hit 82,000 units last year, nearly 2.5 times 2023's sales, according to commercial vehicles information provider CV World. Gasoline demand may fall to 3.46mn b/d this year, down by 120,000 b/d from 2024, also because of fuel displacement, Argus projects.

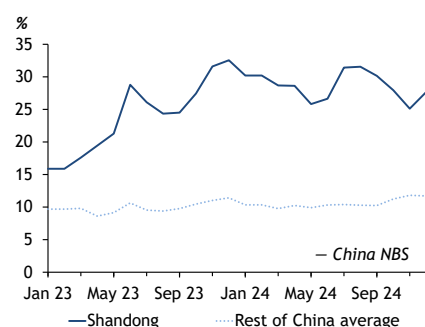
## PRODUCTS

*The rebate changes will shrink many refiners' margins, pushing them to reduce gasoline output*

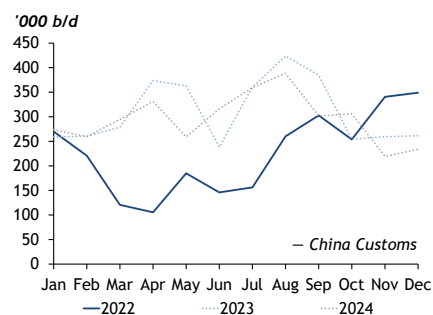
## Northeast Asia cash cracking margin



## China's naphtha yields



## China's naphtha imports



## Shandong toughens up naphtha tax rebate rules

China plans to claw back tax rebate payments for naphtha used to make gasoline, but will likely keep rebates in place for naphtha used in petrochemicals production.

Naphtha is subject to a Yn2,105/t (\$32.50/bl) consumption tax. This can be reclaimed if the naphtha is used to produce ethylene or paraxylene (PX), but not if it is used for gasoline. Refiners upgrading naphtha into reformat — an octane booster known as mixed aromatics — for gasoline production can apply for a rebate to avoid double taxation, as gasoline has its own Yn2,110/t consumption tax. Refiners have tended to claim a rebate on 100pc of the naphtha used this way.

But rebate payments for naphtha should reflect the share of taxable products it is used to produce, the State Taxation Administration (SAT) clarified on 19 December. Refiners should apply for only 89pc of the rebate, or Yn1,870/t, assuming that 1t (8.9bl) of naphtha produces 0.8t (6.2bl) of mixed aromatics and 0.1t is lost, the SAT said. The remaining 0.1t of LPG that is produced by reforming naphtha is not subject to consumption tax, so is ineligible for a rebate.

The SAT's December warning was aimed mainly at firms using domestically produced naphtha, refinery officials say. Following this, the Shandong branch of the SAT decided to enforce a rebate cut in January. This will hit some refiners harder than others. "Our rebate is 80pc, but it is as low as 60pc for others," a Shandong-based refinery official says. The difference is equivalent to an extra cost of Yn420-840/t. Cutting the tax refund will narrow many refiners' margins, forcing them to reduce naphtha purchases and gasoline production.

Shandong refiners have been [over-reporting naphtha output](#) since July 2023, when China [introduced a consumption tax on various gasoline octane boosters](#). This prompted them to invoice mixed aromatics and other non-naphtha products as naphtha, and to apply for the full naphtha rebate. Naphtha yields in Shandong, where independent refiners predominate, averaged 28.7pc last year — much higher than in the rest of China (*see graph: China's naphtha yields*). Narrowing margins may spur some refiners to invoice the non-naphtha products they had invoiced as naphtha as products such as LPG, PX, pentane or mixed xylene, which are not subject to consumption tax — although this is risky.

## It doesn't matter if a K-COT is black or white

The rebate cut will also affect chemicals units, such as those using US engineering firm KBR's catalytic olefins technology (K-COT). K-COT units produce propylene, ethylene and aromatics from hydrocarbons including naphtha. K-COT units can be fed with naphtha with higher sulphur, lower paraffin and higher olefin content than steam crackers, so often process lower-quality domestic naphtha rather than imports. This suggests refineries with K-COT units may become less profitable as enforcement of the rebate rules tightens. Private-sector Chambroad Petrochemical in Shandong built a K-COT unit in early 2024 but has not yet opened it, a company official says. The unit is designed to produce 390,000 t/yr of propylene, 540,000 t/yr of methane and 260,000 t/yr of aromatics, from 2.04m t/yr of naphtha.

In theory, imported naphtha also has become more costly to use since the rebate changes. But in practice, most naphtha imports are used to produce petrochemicals such as ethylene. A 2014 regulation permits chemicals firms to receive a full tax rebate if they prove that ethylene or aromatics account for at least half of the products produced from their purchased naphtha. Ethylene producers favour imported naphtha because the process of applying for rebates is simpler, market participants say. Argus expects naphtha demand to grow by 200,000 b/d this year, driven by steam cracker capacity additions.



## PRODUCTS

**Refining margins will shrink as a result of the changes, forcing refineries without crude import quotas to pare runs or shut**

### Fuel oil refining takes a body blow

Shandong-based private-sector refiners have almost halted buying February-delivery fuel oil in response to rising costs.

Shandong tax offices cut the rebate paid on straight-run fuel oil (SRFO) used as a feedstock in motor fuel production in January, confirming [independent refiners' fears](#). The rebate will vary depending on the yield of taxable gasoline and diesel each refinery gets when processing fuel oil, but is likely to fall to 50-80pc, compared with the 95-100pc rebate refiners received previously. The move is part of a push to increase tax revenue, which has shrunk in response to economic slowdown. It will essentially increase the cost of processing fuel oil by \$5-13/bl.

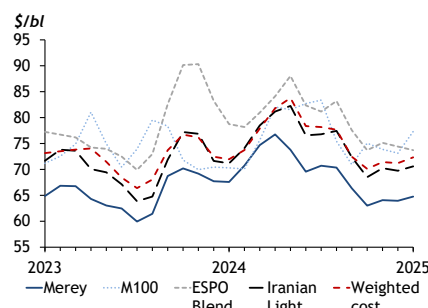
On top of this, the central Chinese government raised import duties on fuel oil to [3pc from 1pc](#) from 1 January. This move adds an estimated \$1-2/bl to fuel oil import costs. The authorities have created a new customs code for fuel oil – HS 27101924 – and removed the No 5-7 categories of fuel oil and the No 1-4 other fuel oil categories, along with their respective customs codes. “Cancelling [the customs codes] should prevent firms from taking advantage of loopholes, for instance, [declaring Iranian crude as other fuel oil](#),” a trading source says. Imports under the other fuel oil customs code have recently declined, the source adds.

Refining margins will shrink as a result of the changes, forcing small refiners to shut, particularly those without crude import quotas. At least five refiners with a combined 340,000 b/d of crude distillation unit capacity cut runs this month – one of these is entirely dependent on fuel oil for feedstock, while the others run crude and fuel oil. A further two plants with a combined 160,000 b/d of capacity have shut. Shandong run rates fell to 67pc this month from 73pc in December.

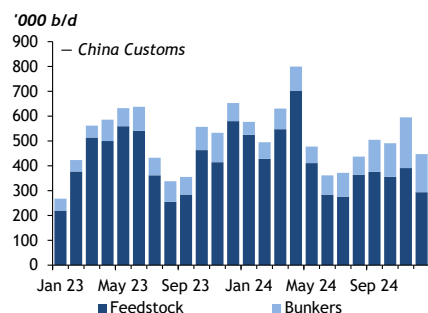
The tax increases come at a time when supply of cheap Russian and Iranian fuel oil to Asia-Pacific is being squeezed by US sanctions. Calculated outright prices for Russian M100 fuel oil have risen to \$77/bl for February delivery (*see graph: Shandong feedstock costs*). About a third of the 183 tankers sanctioned by the US on 10 January were used to carry fuel oil. This has made it far costlier to ship Russian exports to Asia and boosted cargo prices in Singapore to a level that is already drawing alternative imports from Latin America and Europe.

[Shandong Port Group](#) (SPG) banned sanctioned tankers from anchoring on 7 January. SPG terminals still accept unsanctioned vessels carrying Russian cargoes if the loading price of fuel oil is below the G7 price cap of \$45/bl. The price of M100 cargoes loading in the Black Sea was \$52/bl on 20 January.

Shandong feedstock costs



China fuel oil imports



### Bunker mentality

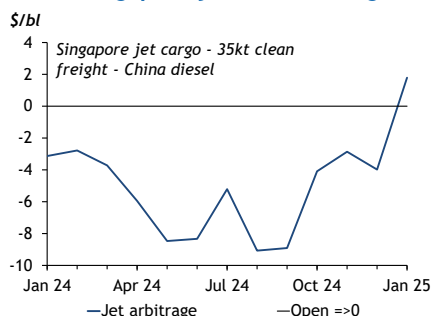
China's fuel oil imports hit a 20-year high of 520,000 b/d in 2024, up by 20,000 b/d from 2023. Much of the increase reflected imports for bunkering, after refuelling costs at local ports such as Zhoushan rose above those in Singapore, encouraging Chinese firms to import low-sulphur fuel oil to meet bunkering commitments (*see graph: China fuel oil imports*). SRFO for use as a refining feedstock still represented the bulk of Chinese imports, at 410,000 b/d. But Shandong refiners began to buy less from September, when tax officials trimmed the Yn1,231/t (\$26/bl) consumption tax rebate to 95-100pc. Rebate cuts, and the prospect of deeper cuts to come, subsequently pushed down China's fourth-quarter SRFO imports to 100,000 b/d.

The consumption tax rebate cuts also apply to cargoes of [Venezuelan Merrey crude](#) imported as diluted bitumen from Malaysia and Brazil. Some refiners are starting to declare it as crude instead. Refiners must pay an 8pc import tariff and Yn1,218/t of consumption tax on diluted bitumen, although this allows them to avoid running down their crude import quotas.

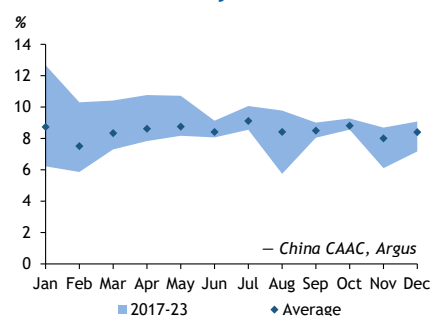
## PRODUCTS

**International travel beat expectations last year, as Beijing handed out more visa exemptions to overseas travellers**

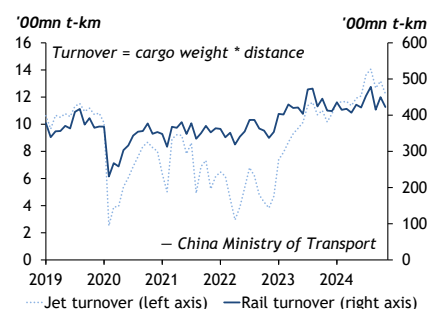
### China-Singapore jet fuel arbitrage



### Jet fuel seasonality



### Air travel vs rail traffic



## Jet fuel demand beats forecasts

China's jet fuel demand is expected to increase further in 2025, despite rapid growth in rail travel at the expense of internal flights. Demand growth will slow this year, official air traffic forecasts suggest – although these under-anticipated actual demand in 2024.

Chinese aviation traffic climbed by 25pc year on year to 148.5bn tonne-kilometres in 2024, data from the Civil Aviation Administration of China (CAAC) show. This implies a 150,000 b/d rise in jet fuel demand from a year earlier, to just over 900,000 b/d, assuming fuel efficiency of 0.282 kg/tonne-kilometres.

International travel demand exceeded expectations last year, aided by the government extending its 30-day visa-free travel policy in November. Nine additional countries were granted visa exemptions, bringing the total to 38.

Air traffic is expected to grow to 161bn tonne-kilometres this year, up by 8.4pc on the year, according to CAAC projections. This could push up jet fuel demand by just 80,000 b/d, or 8pc, from last year, to 980,000 b/d. The demand increase could be more muted still, as advances in aircraft technology – such as US manufacturer Boeing's 737 MAX – are boosting the efficiency of China's carrier fleet. The amount of fuel consumed on flights out of China fell by 3-4pc/yr over 2021-23, CAAC data indicate.

If efficiency gains continue at the current pace, fuel consumption could fall to 0.272 kg/tonne-kilometres this year. That would mean jet fuel demand may rise by just 50,000 b/d, or 5pc, on the year to 950,000 b/d. But stronger-than-expected airline travel offset the effect of efficiency gains on total fuel consumption last year and the CAAC air traffic forecast may, again, prove too conservative. Air traffic overshot the CAAC forecast by 11 percentage points last year.

Appetite for air travel tends to be driven by the strength of consumption as a share of China's GDP growth. Consumption, both government and household, will account for nearly 60pc of GDP growth in 2025, consultancy Oxford Economics forecasts. This suggests jet fuel demand could increase by as much as 120,000 b/d this year, according to Argus projections, rather than the smaller 50,000-80,000 b/d implied by CAAC forecasts.

### Snakes on a plane

Jet fuel exports will probably continue at pace even if Chinese air traffic is stronger than expected this year. Chinese refinery jet fuel yields rose by 1.3 percentage points last year from 2023, pushing excess barrels overseas as domestic supply exceeded demand. Jet fuel dominated Chinese clean products exports last year, exceeding 300,000 b/d. Chinese refiners plan to export 560,000 b/d of jet fuel in January – including jet fuel delivered to bonded storage terminals at airports to fuel international flights – although export economics to Singapore are weaker for jet fuel than diesel. State-controlled oil firms may boost jet fuel and gasoline output at the expense of diesel this month, as the lunar new year Chunyun travel period from 14 January-22 February spurs demand. The CAAC projects an 8.4pc increase in average daily flights over the Chunyun period compared with January 2024, to 18,500 flights a day.

The expansion of China's high-speed rail network, which is cheaper to use than flying, probably displaced more air travel last year than it did in 2023, but the rate at which rail is reducing demand for flights slowed (see graph: Air travel vs rail traffic). Passengers favour air over rail for distances exceeding 500km, according to industry estimates. China now boasts 48,000km of high-speed rail. Of the 3,113km increase in railway lines laid in 2024, high-speed rail accounted for nearly 80pc, or 2,457km. Another 3,000km of railway lines could open this year.

## CORPORATE

***A combined 2.1mn b/d of refining capacity may be lost in Shandong this year, if the local government follows through on its plans***

Shandong capacity closures		'000 b/d
Company	Capacity	Date closed
Jinshi	60	May 20
Yuhuang	60	Jun 20
Binyang	88	Jul 20
Zhonghai Jingxi	46	Aug 20
Hengyuan	70	Jun 21
Fuyu	44	Sep 21
Lianmeng	42	Sep 21
Yongxin	60	Aug 21
Haike Chemical	44	Sep 22
Kelida	44	Oct 22
Zhenghe*	100	May 24
Aoxing	44	May 24
Changyi*	120	Jun 24
Huaxing*	140	Oct 24
Wonfull	116	Dec 24
Haiyou	70	Dec 24
Zhonghaiwai	46	Jan 25
Shangneng Industry	30	Jan 25
<b>Total</b>	<b>1,224</b>	

\*Owned by state-controlled Sinochem

## Shandong independents face up to structural shift

Shandong's independent refiners face another year of challenges in 2025, with tighter tax policy, growing refining competition and strict sanctions on key crude suppliers. Less competitive plants probably will be forced out, while those that remain may lift their output of petrochemicals feedstocks.

Beijing has been ramping up [its scrutiny of refiner tax evasion](#) since 2022, already forcing multiple plants out of the market. The 130,000 b/d Haoye and 340,000 b/d Bora independent refineries were taken over by Panjin government-owned Jincheng in February last year, and state-controlled Sinochem shut 360,000 b/d of capacity in Shandong over June-October – it is unclear if or when Sinochem intends to reopen the shuttered units. Independent refiners have survived past crackdowns but face new pressures that reduce their chances of survival this time round. Tougher [naphtha and fuel oil consumption tax measures](#) and new US sanctions on vessels in early January have increased feedstock costs, spurring independents to already start to trim throughputs.

Meanwhile, state-run Sinopec began work this month on [adding a net 120,000 b/d of crude processing capacity](#) at its 250,000 b/d Qilu refinery in Shandong. This follows the start-up of the 400,000 b/d Yulong Petrochemical mega-refinery in the third quarter. Growing competition is reducing refiner profits and may force smaller plants to close up shop (*see table*). The 70,000 b/d Lanqiao refinery in Rizhao started bankruptcy proceedings in October. It had Yn16bn (\$2bn) of debt against Yn13bn of assets as of September 2023, court documents show.

Adding to refiners' profitability concerns, firms not granted crude import quotas by the government must rely on fuel oil as feedstock, and this is currently uneconomical to run. Zibo-based Wonfull's 116,000 b/d refinery and Zhonghaiwai's 46,000 b/d plant in Rizhao shut for maintenance this month owing to fuel oil supply concerns, market participants say.

The Shandong government in 2018 announced that it would shut all plants with nameplate capacity of less than 60,000 b/d by 2022, and all plants under 100,000 b/d by 2025 – barring those with petrochemicals facilities, which few have. It appears that the province still has 24 refineries with less than 60,000 b/d of capacity, accounting for a combined 600,000 b/d, suggesting many plants did not close as planned. If these facilities, along with plants under 100,000 b/d, are shut down this year, a combined 2.1mn b/d of capacity may be lost. But many have expanded without approval over the years to avoid closure.

And the government's plan to shrink independents' capacity to 1.8mn b/d by the end of 2025 may be pushed back for cost reasons. Shandong forced 10 independents with a combined 560,000 b/d of capacity to shut from 2020-22 to make way for Yulong. This proved highly contentious because forcing firms to close increases unemployment and reduces tax revenue. "The local economy is really bad now so it is unlikely refineries will close that soon," an independent refiner says.

## Swing low

Shandong independents often lack petrochemicals units, so are less able to switch to petrochemicals production when transport fuel margins narrow. They can swing to marketing petrochemicals feedstocks, such as mixed xylene (MX), in an attempt to shore up profits. But weak paraxylene (PX) to naphtha margins and run cuts by purified terephthalate acid (PTA) producers have prompted PX producers to cut runs, reducing demand for feedstock MX. Mega-refiner Hengli, which is a net buyer of PX, is running its PTA units at lower rates owing to seasonally low demand. MX demand still enjoys some support from the blending sector, owing to higher gasoline consumption during the lunar new year holiday.

## GEOPOLITICS

*New tariffs on all Chinese goods remain a key part of Trump's 'America first' strategy, but are on hold for the time being, write Kevin Foster and Haik Gugarats*

*What Beijing will make of the new tariff threats in tandem with words of respect from the US leader remains to be seen*

## Trump offers China soft words and trade threats

US president Donald Trump's return to office comes with an unusual twist of promising a major trade war with China, but also respect for its great power status.

Trump's first actions in office indicate a path towards eventually putting tariffs on China and other foreign countries that would dwarf the US-China trade tensions seen during his first term. In the near term, Trump says he wants to **quickly implement his post-election pledge** to impose a 10pc tariff on all imports from China, on top of current duties, together with 25pc tariffs on Canada and Mexico.

But Trump also heaped praise on Chinese president Xi Jinping and revealed on 21 January that he has asked the Chinese leader to work with the US to bring a quick end to Russia's war in Ukraine – precisely the type of acknowledgement of China's role in the world that many analysts say Beijing has demanded from previous US presidents, but never received.

Contrary to this effort, new secretary of state Marco Rubio met foreign ministers from India, Australia and Japan to express Trump's support for what is essentially an anti-China alliance. "We are committed to strengthening regional maritime, economic and technology security in the face of increasing threats, as well as promoting reliable and resilient supply chains," the ministers said in a joint statement that unmistakably refers to China's actions in Asia-Pacific.

Trump, on his first day in office, issued an executive order on an "America First Trade Policy". This indicates that tariff actions against China and other foreign countries may come into effect in the middle of this year. But Trump's off-the-cuff remarks on 20-21 January suggest he intends to impose tariffs on imports from Canada, Mexico and China as soon as 1 February.

Trump's executive order set 1 April as the date by which semi-independent agency the US Trade Representative must conclude its investigation into whether China is honouring **the existing economic and trade deal** between the two countries, after which time he will take a decision on new tariffs. This could be a prelude to the eventual imposition of the 60pc tariff on all imports from China that Trump promised last year, which he says is separate from his 10pc tariff threat related to Beijing's alleged role in enabling fentanyl trafficking into the US.

What Beijing will make of the new tariff threats in tandem with words of respect from the US leader remains to be seen. Trump invited Xi to attend his inauguration on 20 January – this would have been as unprecedented for a Chinese president as it would have been for a US president. Xi instead sent vice-president Han Zheng to attend the inauguration and hold meetings with US officials, including his counterpart, JD Vance.

## Mixed history and messages

Trump's self-advertised deal-making ability has produced few results with China. Trump and Xi agreed a trade deal in early 2020, under which Beijing pledged to raise its purchases of US agricultural and other products by \$200bn over two years. China's actual purchases fell well short of this amount, partly because of the impact of the Covid-19 pandemic. The US agricultural industry and its prominent backers in US Congress, including key Trump allies, played an important role in bringing about this deal and are already warning Trump of potential negative impacts from a renewed trade conflict with Beijing.

In his inaugural address, Trump repeated claims that China is operating the Panama Canal and promised to retake control of the waterway. And he announced a 75-day reprieve for China-owned social media firm TikTok, which temporarily shut down for US users on 19 January after being banned by the outgoing administration of former president Joe Biden.





## GEOPOLITICS

*The US-China trade war during Trump's first term scrambled global exports of crude, LNG, LPG, agricultural products and critical minerals*

On 21 January, Trump backed a plan to buy TikTok put forward by his key financial backer, carmaker Tesla chief executive Elon Musk, but added a caveat that the US government should own at least half of the social media platform's equity.

Trump and Xi agreed in a phone conversation on 17 January to set up a "strategic communication channel", according to the Chinese foreign ministry. But Xi and Biden had already agreed to establish this in 2021, and Biden's advisers urged their successor to maintain lines of communications with their Chinese counterparts.

The stakes remain high, both for commodity trade and the global economy. Trump's threatened 60pc tariffs on all Chinese goods would cut China's GDP growth by several percentage points and potentially upend the country's commodity demand. The US economy is just as likely to be hurt, to the tune of half a percentage point of GDP growth, according to the IMF.

China's major commodity imports from the US include LPG – of which it bought 17.6mn t last year, more than a quarter of total US exports – as well as soybeans and petroleum coke. US imports from China are dominated by manufactured products including lithium-ion batteries and smartphones, raising concerns in Washington over China's control of supply chains for metals and minerals.

The US-China trade war during Trump's first term scrambled global exports of commodities including crude, LNG, LPG, agricultural products and critical minerals. Since then, China has extended its dominance in renewable energy, electric vehicles and associated raw materials, while doubling down on manufacturing exports as a driver of economic growth.

Trump describes tariffs as one of the "most beautiful words" in the dictionary, but his disdain for trade deficits is equally pronounced. China's exports to the US again topped \$500bn last year, up by more than 30pc since Trump first took power in 2016, while US exports to China have stagnated at less than a third of this, Chinese government figures show. Be it through a trade deal or new tariffs, Trump will almost certainly push to reduce the US deficit before too long.

### What have we learned?

The expected changes in the US' relations with Russia, Iran and Venezuela would affect China as well, through their effects on global crude markets. Trump's administration has indicated it may remove a sanctions waiver that allowed US major Chevron to import crude from Venezuela – about 200,000 b/d last year. Losing access to US markets might make this available to refiners in Shandong. These firms have proved willing to buy crude from sources targeted by US sanctions but may be less so now, because Beijing is increasing taxes on Merey crude.

Trump's team has also signalled plans to take a tougher approach to Tehran, with a view to cutting Iranian crude exports to China. Biden's administration had already significantly stepped up pressure on this market segment over the past year, raising transport costs for the sanctions-busting networks that delivered in excess of 1mn b/d of crude to China last year. Biden's team, on its way out, also delivered a blow to Russia's crude and products exports capacity – an escalation in sanctions that Trump appears content to maintain.

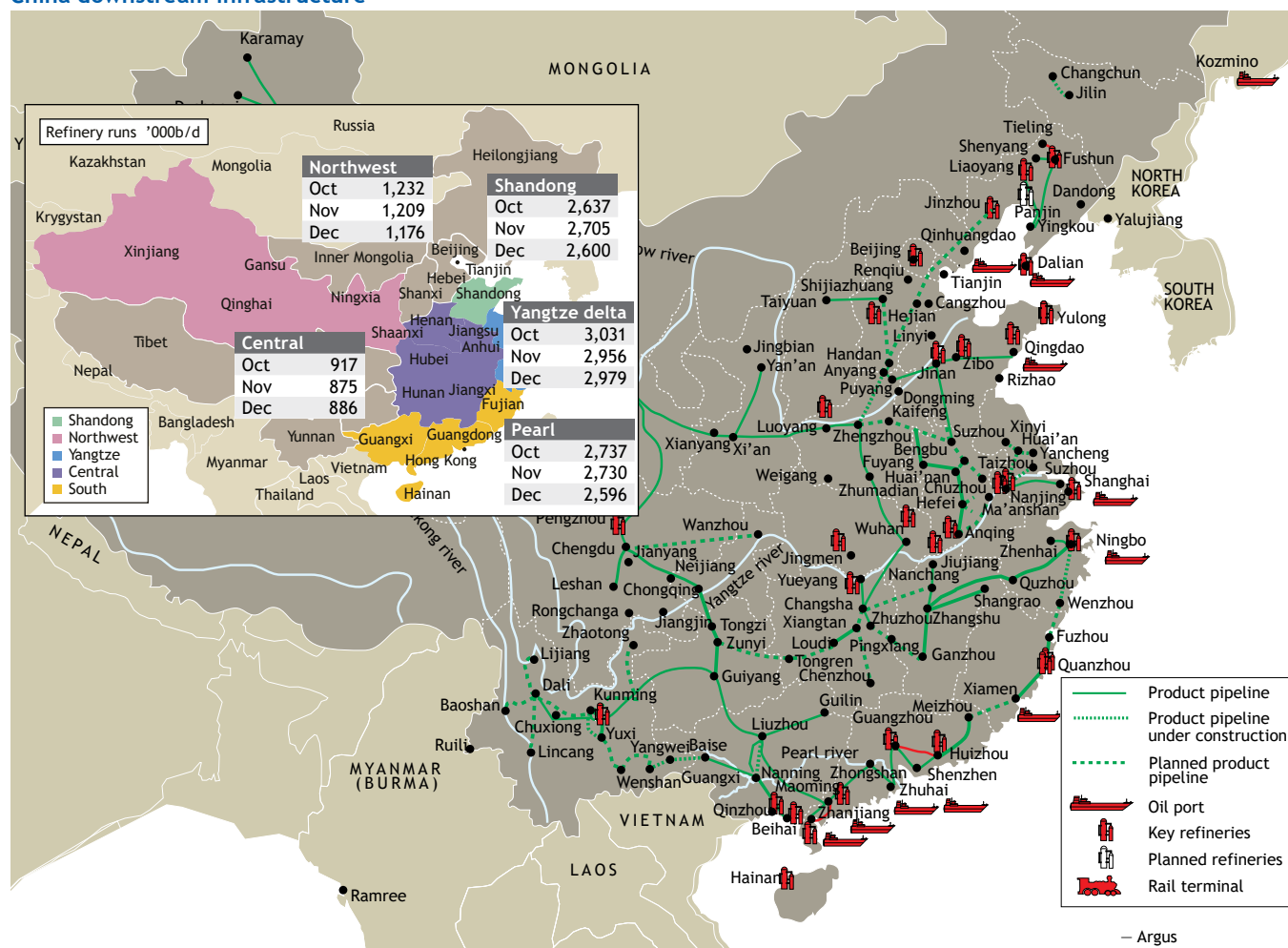
Trump's return to office does not change the tug-of-war that exists between sanctions enforcers and countries under sanctions. In time, a new network of shady intermediaries and vessels will be established to run the gauntlet of financial restrictions. Penalising small-scale violators does not have a sufficiently deterrent effect, while going after larger firms risks a backlash that would hit the US too. Trump's first administration discovered this in 2019 when it slapped sanctions on Chinese shipping giant Cosco, [only to roll them back](#) following a disruption in the global LNG tanker freight markets.

*In time, a new network of shady intermediaries and vessels will be established to run the gauntlet of financial restrictions*

## PRODUCTS

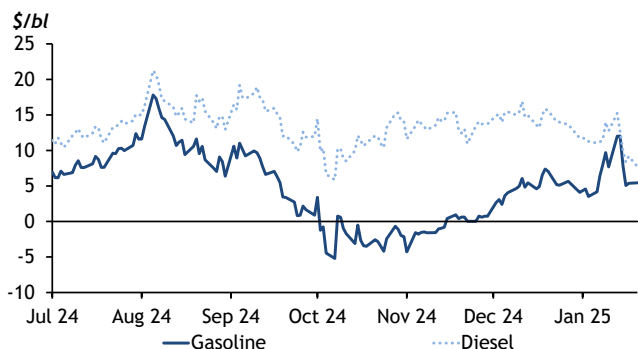
Refinery production						'000 b/d
	Refinery runs	Gasoline	Jet-kerosine	Diesel	Fuel oil	LPG
Jan 24	14,531	3,894	1,252	4,166	885	1,549
Feb	14,360	3,849	1,237	4,117	874	1,406
Mar	15,018	3,895	1,295	4,497	836	1,551
Apr	14,305	3,753	1,232	4,295	744	1,523
May	14,251	3,768	1,245	4,175	672	1,608
Jun	14,191	3,859	1,230	4,119	777	1,482
Jul	13,908	3,800	1,238	3,900	744	1,591
Aug	13,910	3,738	1,276	3,929	769	1,588
Sep	14,290	3,801	1,287	4,204	787	1,640
Oct	14,020	3,608	1,144	4,240	687	1,448
Nov	14,238	3,407	1,138	4,344	707	1,542
Dec	13,977	3,364	992	4,244	763	1,542
						— China NBS

## China downstream infrastructure

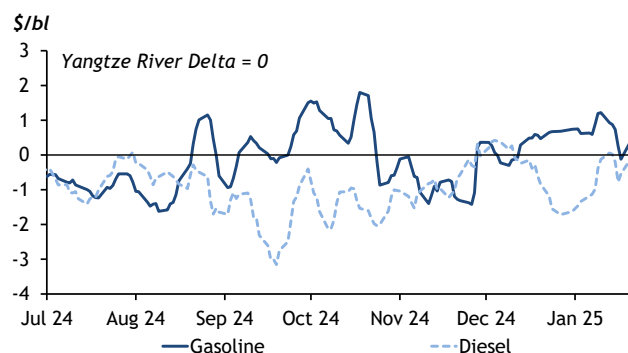


## PRODUCT PRICES

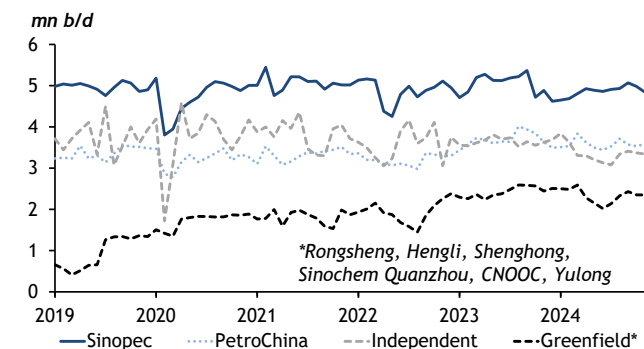
## China, Bohai bay crack spread



## China domestic arbitrage



## China refinery runs



Chinese gasoline/diesel prices		\$/bl, exc. Tax			
		04 Dec	18 Dec	31 Dec	15 Jan
Argus China Diesel (Bohai)		88.6	88.3	86.9	93.3
Argus China Diesel (YRD)		89.9	88.8	88.0	97.3
Bohai-YRD freight (diesel)		1.8	2.2	2.2	2.4
Bohai-YRD arbitrage, diesel		0.5	1.7	1.1	-1.6
Argus China Gasoline (Bohai)		77.0	79.9	79.3	91.1
Argus China Gasoline (YRD)		77.4	81.2	80.9	93.6
Bohai-YRD freight (gasoline)		1.6	2.0	2.0	2.1
Bohai-YRD arbitrage, gasoline		1.2	0.7	0.4	-0.4

Prices are a volume-weighted average of deals done for fuels meeting the China 6 national standard in the Bohai / Yangtze river delta (YRD) markets, net of tax

Chinese retail price caps				Yn/t
	92 Ron gasoline^		10ppm diesel^	
	21 Jan	21 Dec	21 Jan	21 Dec
Northeast: Heilongjiang	9,740	9,330	8,675	8,265
Jilin	9,740	9,330	8,675	8,265
Liaoning	9,740	9,330	8,675	8,265
North: Beijing‡	9,775	9,365	8,710	8,300
Tianjin	9,740	9,330	8,675	8,265
Hebei	9,740	9,330	8,675	8,265
Shanxi	9,810	9,400	8,730	8,320
Hohhot	9,755	9,345	8,690	8,280
East: Shanghai	9,755	9,345	8,680	8,270
Jiangsu	9,795	9,385	8,715	8,305
Zhejiang	9,795	9,385	8,730	8,320
Shandong	9,750	9,340	8,685	8,275
Central: Hubei	9,765	9,355	8,700	8,290
Hunan	9,805	9,395	8,760	8,350
Henan	9,760	9,350	8,695	8,285
Anhui	9,790	9,380	8,725	8,315
Jiangxi	9,795	9,385	8,735	8,325
South: Guangdong	9,820	9,410	8,745	8,335
Fujian	9,815	9,405	8,740	8,330
Hainan	9,885	9,475	8,810	8,400
Guangxi	9,885	9,475	8,810	8,400
Southwest: Chongqing	9,955	9,545	8,885	8,475
Chengdu, Sichuan*	9,960	9,550	8,910	8,500
Chongqing, Sichuan*	9,955	9,545	8,885	8,475
Guiyang, Guizhou*	9,920	9,510	8,835	8,425
Kunming, Yunnan*	9,950	9,540	8,865	8,455
Northwest: Xinjiang	9,520	9,110	8,570	8,160
Xi'an, Shaanxi*	9,725	9,315	8,685	8,275
Xining, Qinghai*	9,705	9,295	8,720	8,310
Gansu	9,725	9,315	8,695	8,285
Ningxia	9,745	9,335	8,675	8,265

\*Prices are for the listed city, not the province. NDRC guidelines stipulate that the highest wholesale prices must be at least Yn400/t below maximum retail prices. ‡Beijing has stricter vehicle emissions standards. Prices listed are for China 4. ^Prices apply to fuel compatible with China 4 vehicle emissions standards.

— NDRC

Shandong independent/official price comparison						\$/bl
		20 Dec	27 Dec	3 Jan	10 Jan	17 Jan
Gasoline, 90 Ron						
Lijin*	Ex-refinery prices	126.64	126.81	129.92	134.78	140.56
	± NDRC wholesale cap	-33.47	-31.05	-30.11	-25.40	-23.35
	% of wholesale cap	79.10	80.33	81.18	84.14	85.76
Dongming†	Ex-refinery prices	131.08	132.00	133.84	138.37	143.79
	± NDRC wholesale cap	-29.03	-25.86	-26.20	-21.81	-20.11
	% of wholesale cap	81.87	83.62	83.63	86.38	87.73
Diesel, 500ppm						
Lijin*	Ex-refinery prices	124.45	122.70	122.39	125.83	127.19
	± NDRC wholesale cap	-37.07	-36.55	-39.20	-35.90	-38.89
	% of wholesale cap	77.05	77.05	75.74	77.80	76.58
Dongming†	Ex-refinery prices	127.80	126.00	126.09	128.05	131.21
	± NDRC wholesale cap	-33.72	-33.25	-35.50	-33.68	-34.86
	% of wholesale cap	79.12	79.12	78.03	79.18	79.01

## Crude price

Shengli**	Ex-field prices	85.74	84.54	85.09	85.17	84.23
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Independent differential to NDRC price caps assumes a Yn400/t wholesale discount to retail cap. \*The 70,000 b/d Lijin refinery runs a blend of imported straight-run fuel oil and domestic crude, producing China 6 standard gasoline and diesel since January 2018. †The 160,000 b/d Dongming refinery produces China 5 and 6 standard gasoline, but mainly China 5 road diesel. \*\*Sinopec produces 540,000 b/d of heavy, sour Shengli crude in Shandong. Since November 2015, it has set prices retrospectively.

## PRODUCT MARKETS

Independent refiner crude import quotas			'000 b/d	
Refinery	Province	CDU cap.	Total 2024	2025 YTD*
Hengli	Liaoning	400	399	40
Rongsheng	Zhejiang	800	798	0
ChemChina	Shandong	466	341	0
Huajin	Liaoning	120	166	0
Dongming	Shandong	150	150	0
Panjin North Asphalt	Liaoning	140	0	0
Hongrun	Shandong	114	106	21
Wanda Tianhong	Shandong	100	88	0
Wonfull	Shandong	116	0	0
Qingyuan	Shandong	164	0	0
Xinhai	Hebei	120	74	0
Yanchang	Shaanxi	348	72	0
Lijin	Shandong	70	70	6
Hengyuan	Shandong	70	0	0
Tenglong Aromatic	Fujian	127	80	0
Jingbo	Shandong	70	66	0
Haiyou	Shandong	70	0	0
Jincheng	Shandong	118	59	5
Dongfang Hualong	Shandong	60	60	6
Qingyishan	Shandong	60	0	0
Dongying Lianhe	Shandong	118	56	0
Yatong	Shandong	70	55	0
Luqing	Shandong	164	51	10
Kenli	Shandong	60	50	0
Shenchi	Shandong	52	50	5
Wudi Xinyue	Shandong	48	47	6
Hubei Jinan	Hubei	100	46	0
Jiangsu Xinhai	Jiangsu	60	46	0
Henan Fengli	Henan	52	44	0
Qirun	Shandong	44	44	5
Shengxing	Shandong	44	44	3
Haike Ruilin	Shandong	46	42	0
Chengda New Energy	Shandong	60	0	0
Zibo Xintai	Shandong	44	40	0
Wantong	Shandong	130	39	4
Zhonghai Jingxi	Shandong	46	0	0
Rizhao Lanqiao	Shandong	70	36	0
Hualian	Shandong	80	34	0
Fuyu	Shandong	44	0	0
Qicheng	Shandong	70	32	5
Kelida	Shandong	44	0	0
Yuhuang	Shandong	60	0	0
Haike Chemical	Shandong	44	0	0
Zhanjiang Dongxing	Guangdong	100	0	0
PetroChina International	na	na	12	0
Dalian Jinyuan	Liaoning	44	16	0
Sinochem Energy	Shandong	na	0	0
Khorgos PetroChina Int.	Xinjiang	na	6	0
Sinopec International	na	na	0	0
Huayue Group	Shandong	na	5	0
Guangxi PetroChina Int.	Guangxi	na	0	0
Alashankou PetroChina Int.	Xinjiang	na	4	0
CNOOC Beijing Trading	Beijing	na	4	0
Erlian City Gaolu	Inner Mongolia	na	4	0
CPC Fuel oil	na	na	0	0
China United Energy Trading	na	na	0	0
Heilongjiang Lianhe	Heilongjiang	na	0	0
Fujian Lianhe	Fujian	na	2	0
Zhenhua	na	na	0	0
Baota	Ningxia	150	0	0
Shenghong	Jiangsu	320	319	0
Guanghui	Xinjiang	na	6	0
Yulong	Shandong	400	166	0
<b>Total</b>		<b>6,247</b>	<b>3,829</b>	<b>117</b>

\*Quotas "borrowed" from 2025 allowance must be used before the end of 2024

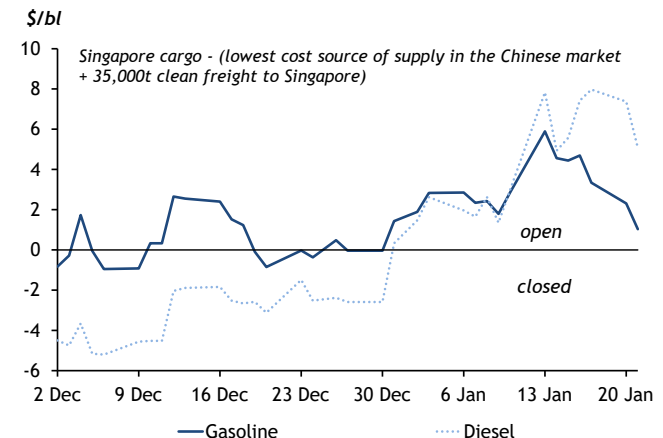
Product prices* (week ending)				
	27 Dec	3 Jan	10 Jan	17 Jan
China				
Yuan/t				
HSFO (cracked) fob south China barges (STS)	4,108	na	4,084	4,180
\$/t				
VLSFO 0.5% 380 Zhoushan Bunker dob	560.75	na	563.10	579.10
HSFO 180 c+f south China (month 1)	461.05	na	465.88	497.78
HSFO 180 c+f south China (month 2)	456.18	na	463.08	494.58
HSFO 180 c+f south China (month 3)	452.30	na	461.33	489.98
South Korea/Japan				
\$/t				
HSFO 180 fob South Korea	461.06	na	465.90	497.80
Naphtha c+f Japan	644.91	na	663.95	683.00
Singapore				
\$/bl				
Gasoil 0.5%	88.19	na	91.95	97.74
Gasoil 0.005%	89.11	na	92.84	98.52
Gasoil 0.005% diff to MOPS	0.65	na	0.74	0.79
Gasoil 0.001%	89.31	na	93.04	98.72
Gasoil 0.001% diff to MOPS	0.85	na	0.94	0.99
Gasoline 92R	80.61	na	83.28	86.41
Naphtha	70.15	na	72.29	74.24
Jet-kerosine	86.98	na	90.91	96.41
HSFO 180 (\$/t)	450.06	na	454.90	486.80

\$1 = Yn 7.33012 17 Jan \*Average weekly prices

Product prices						
	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
Singapore						
Gasoil 0.005%	92.01	84.14	87.70	89.12	88.77	95.52
Gasoil 0.005% diff to MOPS	-0.52	-0.66	0.31	0.66	0.48	0.80
Gasoil 0.001%	92.21	84.34	87.90	89.22	88.90	95.72
Gasoil 0.001% diff to MOPS	-0.32	-0.46	0.51	0.75	0.60	1.00
Gasoline 92R	84.61	78.37	79.59	78.96	81.32	84.46

\* month to date

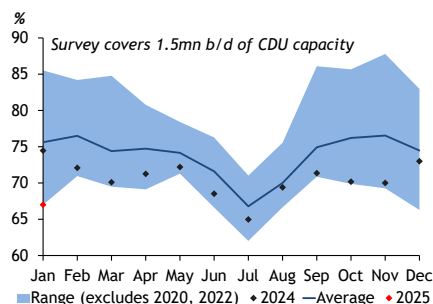
## Product arbitrage: China to Singapore





## PRODUCTS

## Shandong independent run rates



## Shandong crude runs drop on feedstock supply crunch

Shandong crude throughputs fell in January, as new US sanctions against Russia reduced deliveries of Russian crude to China and caused widespread concern of supply shortfalls. Some independent refiners may trim run rates, while others could bring forward planned maintenance.

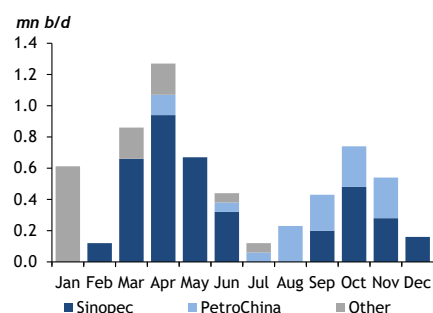
The weighted average crude unit utilisation rate of 15 Shandong independent refiners – with a combined capacity of about 1.5mn b/d – dropped by six percentage points on the month to 67pc in January, seven percentage points lower than in the same period last year. Some refiners in Shandong cut throughputs owing to tight availability of Russian and Iranian crude, their major feedstocks, as more Russia and Iran-linked tankers and Russian oil companies were added to the US' sanctions list in December-January.

The 140,000 b/d Chambroad refinery cut its operating rates by 10 percentage points to 52pc in January. Its coking and hydrotreating units closed for maintenance this month, market participants say. The 190,000 b/d Dongying-based Fuhai plant lowered its run rates by 15 percentage points to about 75pc in the second half this month, owing to feedstock supply uncertainties.

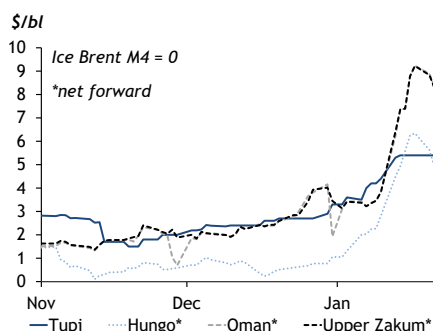
The Zibo-based 118,000 b/d Jincheng refinery and 48,000 b/d Wudi Xinyue plant in Binzhou city lowered their run rates by about 10 percentage points to 40pc and 85pc of capacity, respectively. Some other facilities also trimmed throughputs this month, including the 164,000 b/d Luqing refinery in Weifang city and Dongying-based 44,000 b/d Shengxing plant. The 46,000 b/d Zhonghaiwai plant in Rizhao ran consistently at about 73pc last year, but it shut at the start of January owing to weak refining margins and has not said when it intends to restart.

## CRUDE

## China CDU shutdowns



## Crude delivered China



## Prices rise on sanctions, tariff uncertainties

Oil prices surged after the administration of former US president Joe Biden intensified sanctions against Russian oil companies and tankers involved in transporting Russian crude, sparking concerns over supply disruptions to buyers in China and India. Prices were also pushed higher on account of uncertainty surrounding the timing of potential new US import tariffs under president Donald Trump.

Atlantic basin benchmark North Sea Dated increased by \$6.02/bl to \$79.67/bl from 17 December-22 January. Mideast Gulf medium sour benchmark Dubai rose by \$8.77/bl to \$82.31/bl over the same period.

Seaborne exports of Russian ESPO Blend crude rose to a record high of just over 1mn b/d in December, according to data from analytics platforms Kpler and Vortexa. Shipments from Kozmino averaged slightly more than 900,000 b/d throughout the whole of 2024, about 3pc higher than in 2023. China accounted for roughly 93pc of ESPO Blend shipments last year, with the remainder heading to India.

Chinese refiners will collectively receive at least 1.55mn b/d of February-loading term crude from state-controlled Saudi Aramco. This is slightly higher than the 1.48mn b/d they were allocated for January term shipments. Aramco raised the formula prices of its February-loading crude exports slightly above market expectations, but the prospect of limited sour crude supplies after Opec+ delayed a plan to unwind output cuts may have prompted refiners to secure term crude.

Exports of western Canadian crude shipped through the 890,000 b/d Trans Mountain system declined for a second month in December. The Westridge terminal near Vancouver loaded nearly 10.5mn bl, or about 338,100 b/d, on 22 cargoes last month. An average of 181,200 b/d loaded from the Trans Mountain system for China, accounting for 54pc of the pipeline's December loadings.

## CRUDE MARKETS

Crude Prices							\$/bl
Benchmark	Basis	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
North Sea Dated		80.71	74.26	75.58	74.25	73.78	79.86
Ice Brent M1		78.92	73.27	75.27	73.49	73.13	78.63
Ice Brent M2		78.18	72.69	74.84	73.10	72.75	77.72
Ice Brent M3		77.61	72.29	74.45	72.81	72.43	76.93
IFAD Murban		77.94	73.41	74.87	72.81	73.35	79.73
Dubai swap M1		77.49	72.13	73.78	72.34	72.60	78.23
Dubai swap M2		76.69	71.48	73.37	71.95	72.12	76.90
Dubai swap M3		76.17	71.09	73.00	71.64	71.75	76.00
DME Oman M1		77.54	73.49	74.82	72.46	73.16	79.70
WTI Cushing		75.55	69.48	71.60	69.69	69.79	75.97
Brent-Dubai EFS	Dubai	2.24	1.80	1.90	1.54	1.04	1.64
China/Asia Pacific	Basis	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
Djeno des Shandong	Ice Brent	2.63	1.53	1.56	1.22	1.30	3.98
ESPO Blend des Shandong	Ice Brent	-0.81	0.03	0.82	1.10	1.60	1.78
Johan Sverdrup des Shandong	Ice Brent	3.69	3.18	3.42	2.40	2.35	5.11
Oman des Shandong	Ice Brent	-6.00	-5.24	-3.91	-3.08	-2.16	-1.50
Tupi des Shandong	Ice Brent	2.74	2.56	3.40	2.09	2.48	4.95
ESPO Blend fob Kozmino	Dubai swap M2	-5.03	-3.50	-2.55	-2.10	-1.74	-3.07
WTI CFR South Korea	Dubai swap M2	4.97	4.91	4.72	4.24	4.03	4.82
North Sea	Basis	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
Urals CIF NWE	North Sea Dtd	na	na	na	na	na	-10.94
Forties fob NWE	North Sea Dtd	1.76	1.39	0.48	0.92	0.70	0.55
Johan Sverdrup fob NWE	North Sea Dtd	-0.26	-0.68	-1.21	-2.18	-1.99	-0.23
Mideast Gulf	Basis	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
Basrah Medium fob Iraq	OFP	0.04	0.05	-0.08	-0.49	0.25	0.95
Basrah Heavy fob Iraq	OFP	0.00	0.00	-0.05	-0.10	0.31	1.23
Upper Zakum fob UAE	Dubai swap M2	0.90	2.03	1.56	0.67	1.11	2.81
Murban fob UAE	Dubai swap M2	1.26	1.93	1.62	0.87	1.23	2.83
West Africa	Basis	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
Bonny Light fob Nigeria	North Sea Dtd	2.40	1.09	0.23	0.06	0.70	0.74
Cabinda fob Angola	North Sea Dtd	1.68	1.34	0.87	0.56	0.19	0.52
Girassol fob Angola	North Sea Dtd	2.85	2.50	1.65	1.86	0.89	1.45
Djeno fob Congo	North Sea Dtd	-2.11	-2.48	-2.51	-2.82	-2.92	-2.62
Doba fob Chad	North Sea Dtd	-0.20	-0.05	-0.06	0.15	-0.71	-1.75
Americas	Basis	Aug 24	Sep	Oct	Nov	Dec	Jan 25*
WCS fip Houston	Nymex CMA	-5.79	-4.91	-4.39	-4.30	-3.91	-3.96
WTI fob Houston	Ice Brent	-0.90	-0.96	-1.78	-1.69	-1.51	-0.59
Castilla Blend fob Colombia	Ice Brent	-8.62	-9.02	-8.47	-8.35	-7.48	-7.48
Medanito fob Argentina	Ice Brent	-3.46	-3.11	-3.18	-3.61	-3.26	-2.77

\* month to date

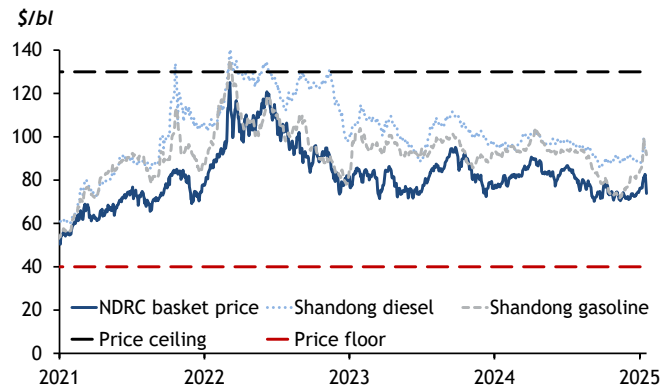
Calendar month average

## CRUDE MARKETS

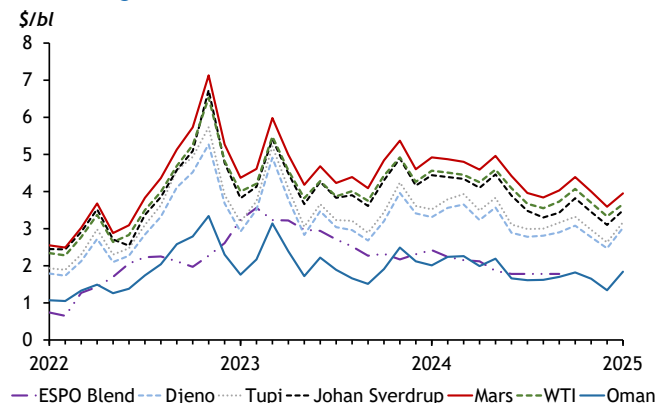
Spot crude: Des Shandong					\$/bl
Date	Grade	Delivery	± Ice Brent	Outright	
4 Dec	Djeno	Jan 25	1.20	74.56	
18 Dec	Djeno	Feb 25	1.10	74.00	
31 Dec	Djeno	Feb 25	2.00	76.18	
15 Jan	Djeno	Mar 25	5.40	83.55	
4 Dec	ESPO Blend	Jan 25	1.40	74.76	
18 Dec	ESPO Blend	Jan 25	1.40	74.61	
31 Dec	ESPO Blend	Feb 25	2.10	76.28	
15 Jan	ESPO Blend	Feb 25	2.10	81.24	
4 Dec	Tupi	Feb 25	2.00	75.05	
18 Dec	Tupi	Mar 25	2.60	75.24	
31 Dec	Tupi	Apr 25	3.30	76.77	
15 Jan	Tupi	Apr 25	5.40	82.73	
4 Dec	Johan Sverdrup	Feb 25	2.10	75.15	
18 Dec	Johan Sverdrup	Mar 25	2.30	74.94	
31 Dec	Johan Sverdrup	Mar 25	3.00	76.80	
15 Jan	Johan Sverdrup	Apr 25	6.10	83.43	
4 Dec	Oman	Jan 25	-2.50	70.86	
18 Dec	Oman	Jan 25	-2.00	71.21	
31 Dec	Oman	Jan 25	-1.50	73.11	
15 Jan	Oman	Feb 25	-1.50	77.64	
4 Dec	Urals	Jan 25	-0.30	73.06	
18 Dec	Urals	Feb 25	0.00	72.90	
31 Dec	Urals	Mar 25	0.50	74.30	
15 Jan	Urals	Mar 25	0.50	78.65	
4 Dec	TMX high TAN	Feb 25	-4.00	69.05	
18 Dec	TMX high TAN	Feb 25	-4.00	68.90	
31 Dec	TMX high TAN	Mar 25	-5.00	68.80	
15 Jan	TMX high TAN	Apr 25	-4.00	73.33	

Formula pricing						\$/bl
	Oct 24	Nov	Dec	Jan 25	Feb	
Saudi Arabia fob Ras Tanura to Asia-Pacific: average Oman/Dubai						
Arab Super Light	+2.45	+2.95	+2.45	+1.75	+2.25	
Arab Light	+1.30	+2.20	+1.70	+0.90	+1.50	
Arab Medium	+0.45	+1.35	+0.95	+0.25	+0.75	
Arab Heavy	-0.50	+0.20	-0.20	-0.90	-0.50	
Iran: fob Kharg Island: average Oman/Dubai						
Iranian Light	+1.70	+2.60	+2.15	+1.35	+1.95	
Iranian Heavy	-0.65	+0.25	-0.10	-0.80	-0.30	
Iraq to Asia-Pacific: average Oman/Dubai						
Basrah Medium	-0.50	+0.40	nc	-0.60	+0.05	
Basrah Heavy	-3.50	-2.75	-3.15	-3.70	-3.20	
Kuwait: average Oman/Dubai						
Kuwait	+0.15	+1.00	+0.60	nc	+0.45	
Yemen: North Sea Dated						
Masila	na	na	na	na	na	
Nigeria: North Sea Dated						
Bonny Light	+2.17	+1.13	+0.47	+0.89	na	

### NDRC crude basket vs spot prices

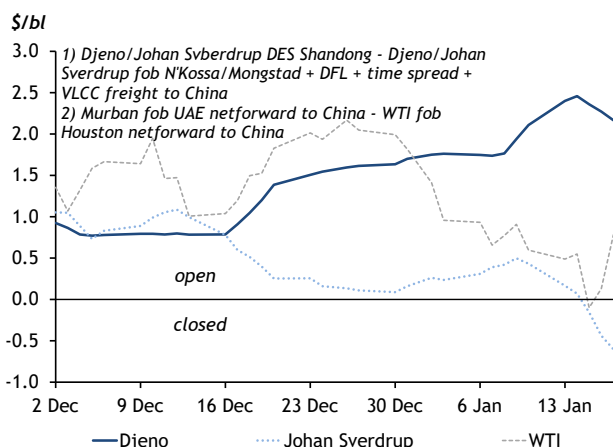


### China freight rates



Official selling prices							\$/bl
	Jul 24	Aug	Sep	Oct	Nov	Dec	
Middle East							
Oman							
Oman MOG	83.89	82.50	83.85	77.54	73.49	74.82	
Asia-Pacific							
Indonesia							
Minas	84.95	80.47	73.76	74.99	73.48	72.78	
Duri	86.97	82.78	78.71	80.17	79.26	76.25	
Malaysia							
Tapis	86.23	82.60	78.38	79.17	77.13	75.06	
Opec basket	84.43	78.41	73.59	74.45	72.98	73.07	
Japanese Crude Cocktail	88.04	87.08	82.83	80.23	na	na	

### Crude arbitrage: Atlantic basin to China



## REFINERY THROUGHPUTS

Refinery throughputs, Jan 25 (plan)									
	Province	Owner	Capacity†	Crude sources	Shut-downs	Jan (plan)		± Dec	
			mn t/yr '000 b/d		'000 b/d	'000t	'000 b/d	% util.	'000 b/d
<b>Northeast*</b>			<b>92.2</b>	<b>1,840 Local, some Russian rail</b>	<b>0</b>	<b>6,270</b>	<b>1,474</b>	<b>80</b>	<b>+9</b>
Dalian (PetroChina)	Liaoning	P	10.0	200 Daqing, Russian rail, West Africa	0	824	194	97	-2
Daqing petrochemical	Heilongjiang	P	9.5	190 Local (Daqing), some Russian rail	0	581	137	72	+2
Daqing refining & chemical	Heilongjiang	P	5.5	110 Local (Daqing), some Russian rail	0	425	100	91	+1
Fushun	Liaoning	P	11.5	230 Local (Daqing 85%, Fushun 15%)	0	776	183	80	-1
Harbin	Heilongjiang	P	5.0	100 Daqing, Russian rail 20%	0	304	72	72	+3
Jilin petrochemical	Jilin	P	10.0	200 Local (Daqing, Jilin), Russian rail 20%	0	747	176	88	+0
Jinxi	Liaoning	P	6.5	130 Domestic, Imports 10%	0	409	96	74	+0
Jinzhou	Liaoning	P	9.0	180 Domestic, Imports 30% (Chad, Russia etc)	0	446	105	58	+0
Liaohe, Panjin	Liaoning	P	5.2	100 Local (Liaohe)	0	378	86	86	-1
Liaoyang	Liaoning	P	10.0	200 Local (Liaohe, Daqing) Russian rail 20%	0	713	168	84	+4
Wepec Dalian	Liaoning	Wepec	10.0	200 Mideast sour imports only	0	667	157	79	+3
<b>Northwest*</b>			<b>49.5</b>	<b>995 Xinjiang, local, Kazakh rail/pipeline</b>	<b>0</b>	<b>3,139</b>	<b>745</b>	<b>75</b>	<b>+10</b>
Changqing, Xianyang	Shaanxi	P	5.0	100 Local (Changqing)	0	355	84	84	+2
Dushanzi	Xinjiang	P	9.9	200 Xinjiang, Kazakh (40pc)	0	675	161	81	+3
Karamay	Xinjiang	P	5.0	100 Xinjiang	0	423	100	100	+0
Lanzhou	Gansu	P	10.5	211 Xinjiang, local	0	651	154	73	+3
Tahe	Xinjiang	S	4.7	94 Local (Tahe)	0	278	65	69	-2
Urumqi	Xinjiang	P	9.4	190 Xinjiang, Kazakh	0	556	133	70	+2
Xian	Shaanxi	S	2.5	50 Local (Yanchang)	0	0	0	-	+0
Yumen	Gansu	P	2.5	50 Xinjiang, local	0	200	48	96	+2
<b>North*</b>			<b>55.7</b>	<b>1,099 50:50 seaborne imports:domestic</b>	<b>0</b>	<b>3,364</b>	<b>783</b>	<b>71</b>	<b>+21</b>
Beijing Yanshan	Beijing	S	13.5	270 Daqing, some imports	0	711	167	62	+5
Cangzhou	Hebei	S	3.6	71 Domestic 50%, Imports (Oman etc) 50%	0	209	49	69	+1
Dagang	Tianjin	P	5.1	98 Local (Dagang)	0	342	78	80	+1
Huabei, Renqiu	Hebei	P	10.2	200 Local (Huabei)	0	595	138	69	+14
Shijiazhuang	Hebei	S	8.1	160 Local (Huabei), Russian rail 30%	0	475	111	69	+6
Tianjin	Tianjin	S	15.2	300 Local (Dagang) 50%, Imports (sweet) 50%	0	1,033	240	80	-6
<b>East*</b>			<b>127.1</b>	<b>2,520 2/3 imports</b>	<b>0</b>	<b>8,356</b>	<b>1,949</b>	<b>77</b>	<b>-25</b>
Jinan	Shandong	S	8.3	160 Local (Shengli)	0	613	138	86	-1
Qilu, Zibo	Shandong	S	14.2	280 Local 50%, Imports (ME, Waf) 50%	0	712	165	59	-3
Qingdao	Shandong	S	10.0	200 Imports only (Mideast sour crude)	0	647	153	77	-7
Qingdao Petrochemical	Shandong	S	5.0	100 Imports only (Mideast sour crude)	0	340	80	80	-2
<b>Yangtze river delta</b>			<b>89.6</b>	<b>1,780 2/3 imports</b>	<b>0</b>	<b>6,043</b>	<b>1,413</b>	<b>79</b>	<b>-12</b>
Gaoqiao, Shanghai	Shanghai	S	13.1	260 Imports (sweets) 50%, local	0	929	217	84	-2
Jinling, Nanjing	Jiangsu	S	19.1	380 Imports 50%	0	1,275	298	78	-2
Shanghai (Jinshan)	Shanghai	S	16.1	320 Imports (light & medium) 75%	0	1,019	238	74	-2
Yangzi, Nanjing	Jiangsu	S	14.1	280 Imports (sour) 60%, Shengli	0	1,000	234	84	-5
Zhenhai, Ningbo	Zhejiang	S	27.2	540 Imports; over 2/3 sour	0	1,820	426	79	-1
<b>Central*</b>			<b>51.6</b>	<b>1,022 40-50% imports (Angola etc)</b>	<b>0</b>	<b>3,557</b>	<b>830</b>	<b>81</b>	<b>+59</b>
Anqing	Anhui	S	9.1	180 Imported sour, Shengli, Daqing	0	541	126	70	+0
Changling, Yueyang	Hunan	S	0.0	0 Shengli 60-70%, imports	0	0		#DIV/0!	na
Jingmen	Hubei	S	5.7	112 Domestic 50%, imports 50%	0	288	67	60	-2
Jiujiang	Jiangxi	S	10.0	200 Shengli (60-70%), imports	0	713	168	84	-2
Luoyang	Henan	S	8.1	160 Imports (Oman/Russia) 50%+, domestic	0	756	176	110	+2
Wuhan	Hubei	S	8.6	170 Domestic, imports	0	614	143	84	+75
Hunan Petrochemical	Hunan	S	10.1	200 Shengli, Daqing, imports	0	645	150	75	+122
<b>South*</b>			<b>73.3</b>	<b>1,474 100% imports</b>	<b>0</b>	<b>4,226</b>	<b>1000.0</b>	<b>68</b>	<b>+18</b>
Fujian, Quanzhou	Fujian	S	14.0	280 Imports (Yemen, Oman etc)	0	666	157	56	+26
Hainan	Hainan	S	8.0	160 Imports (Mideast, Angola)	0	601	142	89	-1
Qinzhou	Guangxi	P	9.6	200 Imports (Light, sweet Angolan/Australian)	0	210	52	26	-4
<b>Pearl river delta</b>			<b>41.7</b>	<b>834 100% imports</b>	<b>0</b>	<b>2,749</b>	<b>649</b>	<b>78</b>	<b>-3</b>
Guangzhou	Guangdong	S	13.2	264 Imports (Angola, Oman etc)	0	942	222	84	+0
Maoming	Guangdong	S	23.5	470 Imports (Mideast sour crude)	0	1,457	344	73	-2
Zhanjiang Dongxing	Guangdong	S	5.0	100 Imports (Libya, Angola etc)	0	350	83	83	-1
<b>Southwest</b>			<b>23</b>	<b>460</b>		<b>1,755</b>	<b>414</b>	<b>90</b>	<b>+3</b>
Anning	Yunnan	P	13.0	260 Imports (Mideast Gulf)	0	1,016	240	92	+3
Pengzhou	Sichuan	P	9.7	200 Imports /Light, sweet Kazakhstan)	0	739	174	87	+0
<b>Total Sinopec*</b>			<b>311.8</b>	<b>6,193</b>	<b>0</b>	<b>18,635</b>	<b>4,653</b>	<b>75</b>	<b>60</b>
<b>Total PetroChina*</b>			<b>196.5</b>	<b>3,929</b>	<b>0</b>	<b>12,631</b>	<b>3,388</b>	<b>86</b>	<b>35</b>
<b>Total above 47 refineries</b>			<b>449.4</b>	<b>9,410</b>	<b>0</b>	<b>28,911</b>	<b>6,781</b>	<b>72</b>	<b>92</b>
<b>Total China*†‡</b>			<b>802.4</b>	<b>16,047</b>	<b>612</b>	<b>60,408</b>	<b>14,225</b>	<b>89</b>	<b>248</b>
<b>PetroChina + S'pec % of total China</b>				<b>63</b>			<b>57</b>		
<b>Above 47 refineries % of total China</b>				<b>59</b>			<b>48</b>		

\*China total and company totals include plants not listed. Regional totals are for listed plants only. PC total includes refineries under CNPC and Wepec. †China total refinery capacity includes 46 major PC/S-owned plants identified as well as 730,000 b/d of, smaller plants operated by the two oil giants. ‡ Additionally, it includes CNOOC's Huizhou refinery in Guangdong and 10 of the country's largest teakettle refineries totalling 1.36mn b/d.  
PC=PetroChina W=Wepec S=Sinopec



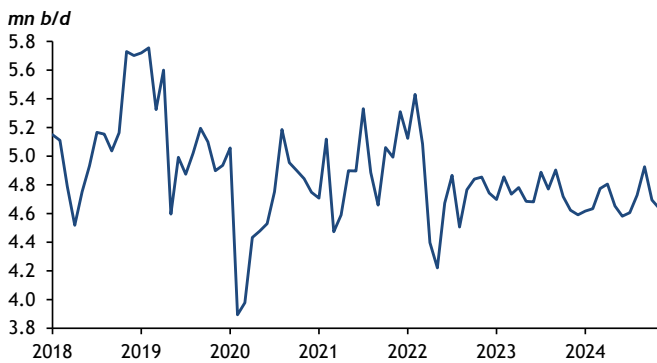
# REFINERY THROUGHPUTS

Refinery throughputs, Nov 24										
	Nov 24			Oct 24			Jan-Nov			± 2023
	'000t	'000 b/d	%util.	'000t	'000 b/d	%util.	'000t	'000 b/d	%util.	'000 b/d
<b>Northeast*</b>	<b>6,336</b>	<b>1,539</b>	<b>84</b>	<b>5,996</b>	<b>1,408</b>	<b>77</b>	<b>69,049</b>	<b>1,501</b>	<b>79</b>	<b>-132</b>
Dalian (PetroChina)	822	200	100	924	218	109	9,840	214	80	-109
Daqing petrochemical	590	143	75	613	144	76	6,783	148	78	+22
Daqing refining & chemical	429	105	96	430	101	92	4,711	103	93	+17
Fushun	785	191	83	811	191	83	8,923	194	85	+11
Harbin	310	76	76	314	74	74	3,573	78	78	+12
Jilin petrochemical	764	186	93	255	60	30	7,112	155	78	-26
Jinxi	417	101	78	420	99	76	4,904	107	82	-10
Jinzhou	450	110	61	455	107	59	4,559	99	55	-33
Liaoh, Panjin	372	87	87	386	87	87	4,419	93	93	-1
Liaoyang	723	176	88	718	169	85	7,725	168	84	+16
Wepec Dalian	674	164	82	671	158	79	6,498	142	71	-31
<b>Northwest*</b>	<b>3,150</b>	<b>773</b>	<b>78</b>	<b>3,314</b>	<b>786</b>	<b>79</b>	<b>35,872</b>	<b>788</b>	<b>79</b>	<b>-14</b>
Changqing, Xianyang	355	87	87	382	90	90	4,137	90	90	+15
Dushanzi	678	167	84	701	167	84	6,405	141	71	-31
Karamay	424	104	104	443	105	105	4,751	104	104	-5
Lanzhou	657	161	76	685	162	77	7,664	168	80	-1
Tahe	296	72	77	318	74	79	3,503	76	81	-17
Urumqi	548	135	71	585	140	74	6,883	152	80	+35
Xian	0	0	0	0	0	0	0	0	0	0
Yumen	191	47	94	200	48	96	2,530	56	111	-12
<b>North*</b>	<b>3,344</b>	<b>804</b>	<b>73</b>	<b>3,190</b>	<b>744</b>	<b>68</b>	<b>35,027</b>	<b>754</b>	<b>69</b>	<b>+7</b>
Beijing Yanshan	705	171	63	780	184	68	8,102	177	65	+16
Cangzhou	207	50	70	41	10	14	1,700	37	52	-6
Dagang	345	81	83	355	81	83	3,979	84	86	-5
Huabei, Renqiu	534	128	64	552	128	64	6,133	131	66	+6
Shijiazhuang	466	113	71	482	113	71	4,920	106	67	+1
Tianjin	1,087	261	87	981	228	76	10,193	219	73	-6
<b>East*</b>	<b>8,538</b>	<b>2,059</b>	<b>82</b>	<b>8,999</b>	<b>2,100</b>	<b>83</b>	<b>92,844</b>	<b>2,005</b>	<b>80</b>	<b>+32</b>
Jinan	624	146	91	652	147	92	6,822	143	89	+24
Qilu, Zibo	737	177	63	762	177	63	7,193	155	55	-64
Qingdao	710	173	87	764	180	90	7,721	168	84	+27
Qingdao Petrochemical	355	87	87	372	88	88	4,003	87	87	+28
Yangtze river delta	6,111	1,476	83	6,450	1,508	85	67,106	1,452	82	+17
Gaoqiao, Shanghai	937	226	87	1,001	234	90	10,659	231	89	+12
Jinling, Nanjing	1,329	321	85	1,338	313	82	13,358	289	76	-50
Shanghai (Jinshan)	1,032	249	78	1,108	259	81	11,729	254	79	+7
Yangzi, Nanjing	1,002	242	86	970	227	81	10,448	226	81	+10
Zhenhai, Ningbo	1,811	438	81	2,033	475	88	20,912	453	84	+39
<b>Central*</b>	<b>3,125</b>	<b>752</b>	<b>69</b>	<b>3,354</b>	<b>781</b>	<b>72</b>	<b>38,683</b>	<b>834</b>	<b>76</b>	<b>+27</b>
Anqing	561	135	75	587	5	3	6,209	133	74	+2
Changling, Yueyang	635	152	66	681	5	2	7,332	158	69	+1
Jingmen	307	74	66	324	75	67	3,248	70	62	+8
Jiujiang	740	180	90	764	180	90	7,803	170	85	+14
Luoyang	764	183	114	743	173	108	7,855	169	106	+47
Wuhan	0	0	0	132	31	18	4,969	107	63	-44
Hunan Petrochemical	118	28	70	122	28	70	1,266	27	68	0
<b>South*</b>	<b>4,217</b>	<b>1,035</b>	<b>70</b>	<b>1,584</b>	<b>1,080</b>	<b>73</b>	<b>54,256</b>	<b>1,192</b>	<b>81</b>	<b>-202</b>
Fujian, Quanzhou	0	0	0	155	37	13	7,126	155	56	-22
Hainan	625	152	95	639	151	94	6,613	144	90	-10
Qinzhou	752	191	96	790	195	98	8,517	194	97	+2
Pengzhou	740	180	90	773	182	91	8,553	193	93	+57
Pearl river delta	2,840	692	83	2,956	697	84	32,001	698	84	-36
Guangzhou	966	235	89	1,031	243	92	10,605	231	88	-10
Maoming	1,507	367	78	1,517	358	76	17,147	374	80	-42
Zhanjiang Dongxing	368	90	90	408	96	96	4,249	93	93	+17
<b>Southwest</b>	<b>1,765</b>	<b>430</b>	<b>94</b>	<b>1,811</b>	<b>427</b>	<b>93</b>	<b>19,921</b>	<b>441</b>	<b>95</b>	<b>+61</b>
Anning	1,026	250	96	1,038	245	94	11,368	248	96	+4
Pengzhou	740	180	90	773	182	91	8,553	193	93	+57
<b>Total Sinopec*</b>	<b>19,047</b>	<b>4,635</b>	<b>74</b>	<b>19,934</b>	<b>4,694</b>	<b>75</b>	<b>217,260</b>	<b>4,702</b>	<b>76</b>	<b>-51</b>
<b>Total PetroChina*</b>	<b>14,932</b>	<b>3,633</b>	<b>93</b>	<b>14,942</b>	<b>3,519</b>	<b>90</b>	<b>165,941</b>	<b>3,616</b>	<b>90</b>	<b>-50</b>
<b>Total above 47 refineries</b>	<b>19,759</b>	<b>6,962</b>	<b>73</b>	<b>19,989</b>	<b>6,899</b>	<b>73</b>	<b>226,625</b>	<b>7,074</b>	<b>74</b>	<b>-282</b>
<b>Total China*†‡</b>	<b>59,539</b>	<b>14,442</b>	<b>90</b>	<b>59,539</b>	<b>14,453</b>	<b>90</b>	<b>656,090</b>	<b>14,297</b>	<b>-</b>	<b>-509</b>
<b>PetroChina + S'pec % of total China</b>		<b>57</b>			<b>57</b>			<b>58</b>		
<b>Above 47 refineries % of total China</b>		<b>48</b>			<b>48</b>			<b>49</b>		

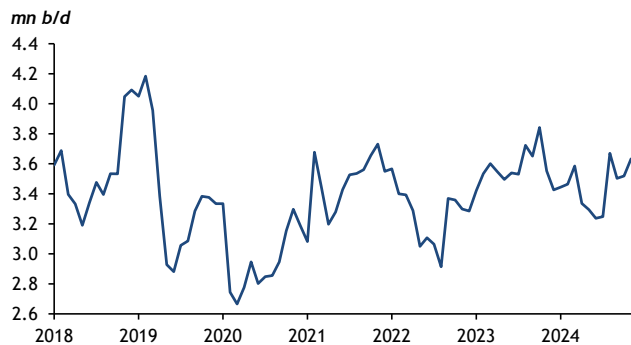
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## REFINERY THROUGHPUTS

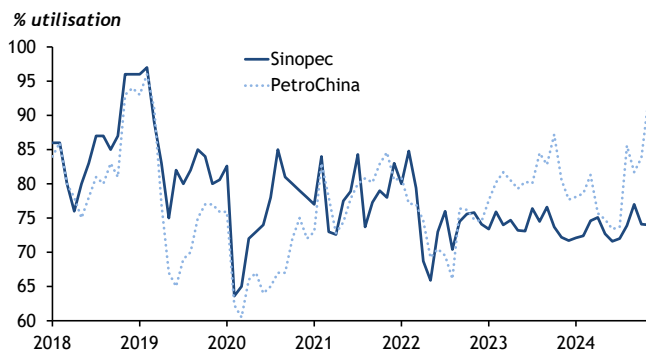
Sinopec total runs



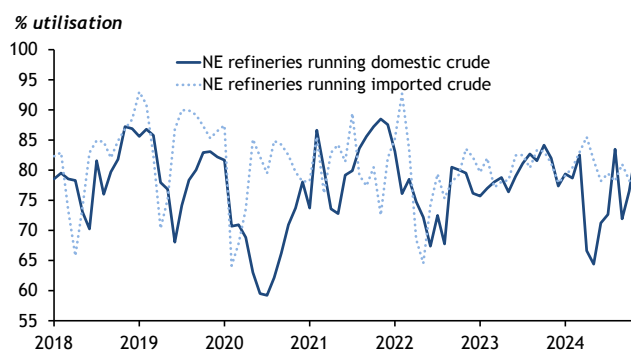
PetroChina total runs



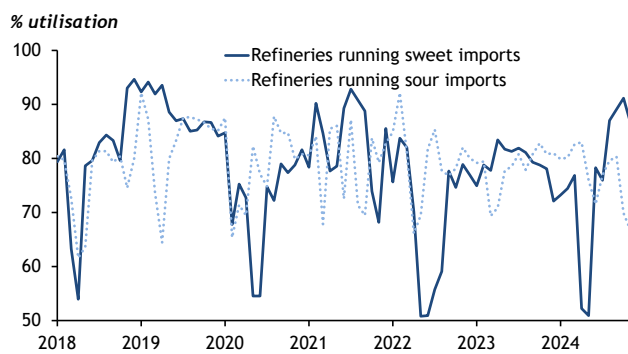
Sinopec vs PetroChina runs



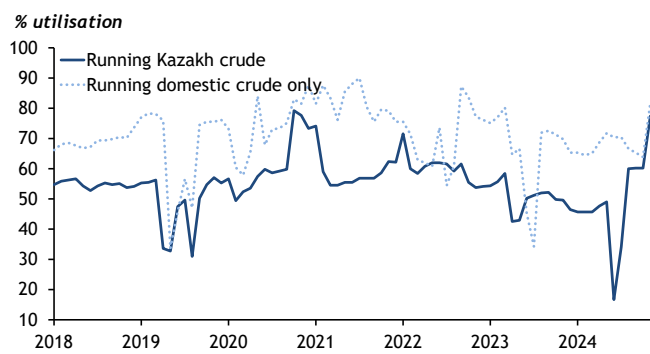
Domestic vs import economics



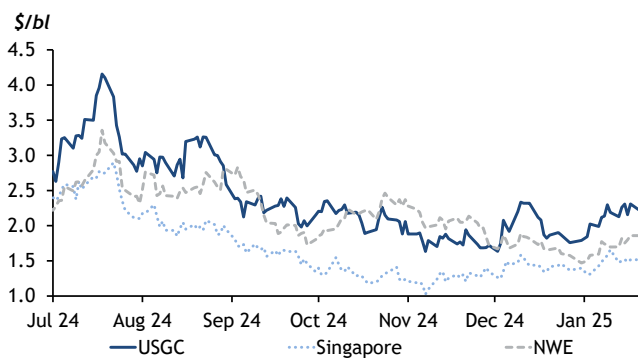
Sweet vs sour imports



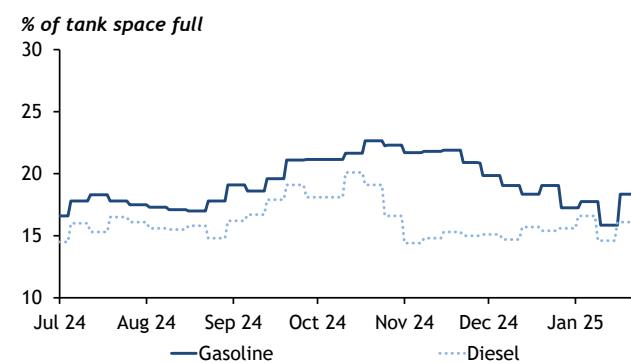
NW China refinery runs



Regional refining margins

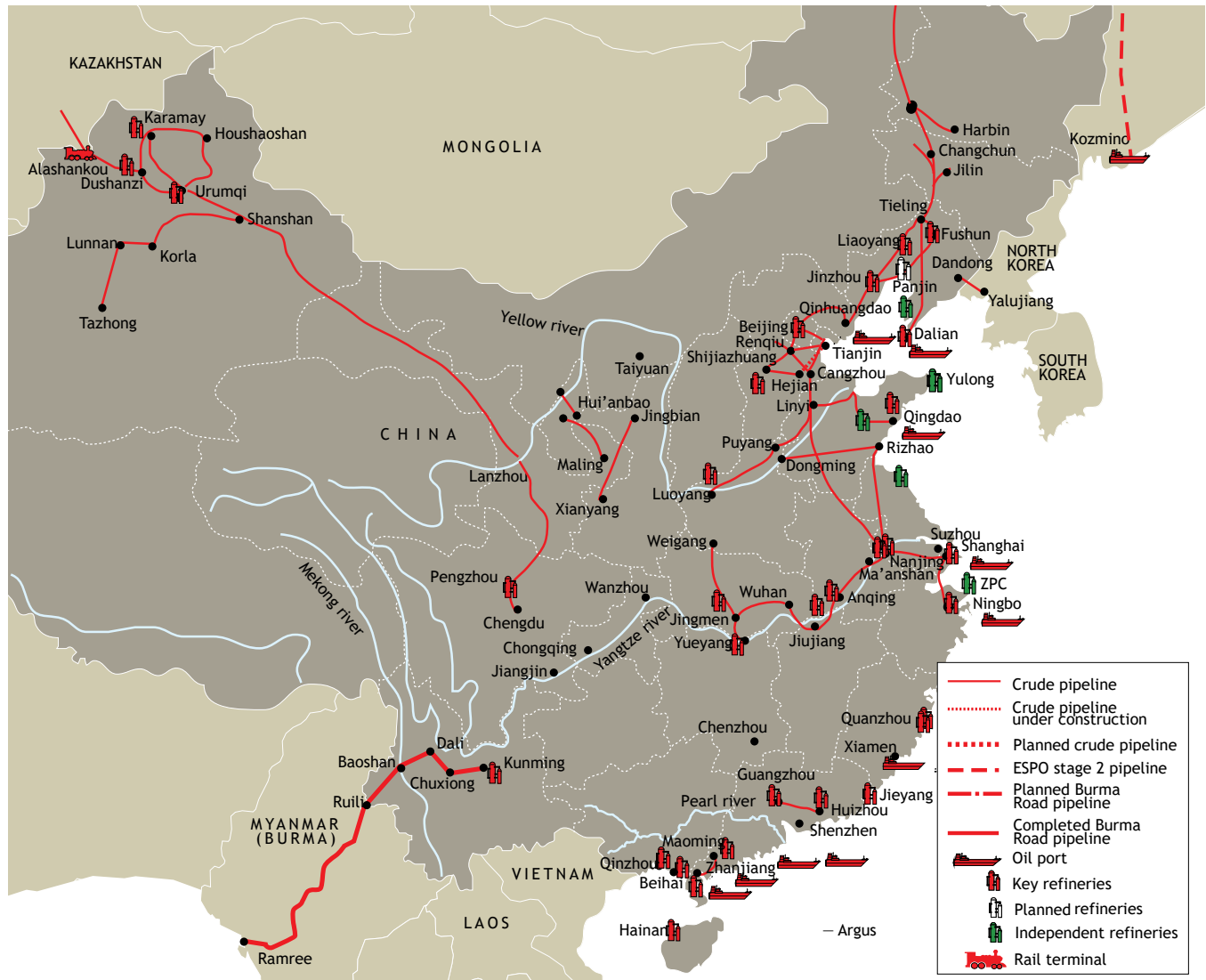


Bohai independent, product storage tank level

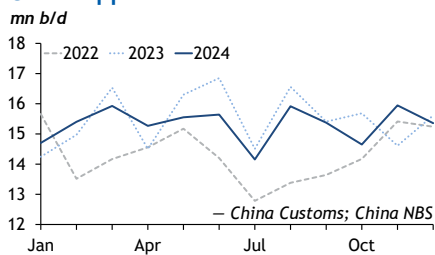


## MAP AND GRAPHS

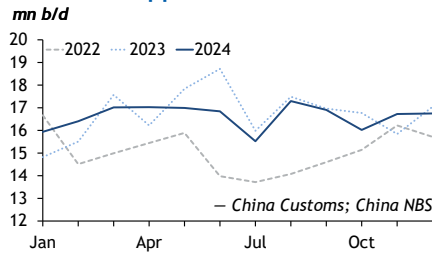
## China crude infrastructure



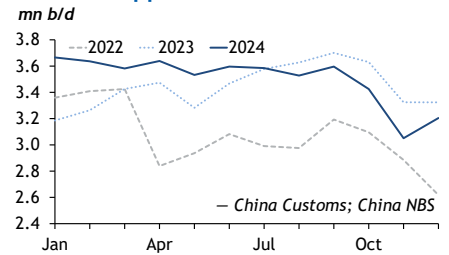
## Crude apparent demand



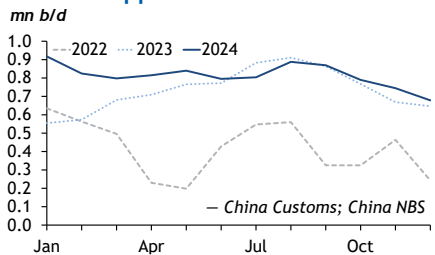
## Petroleum apparent demand



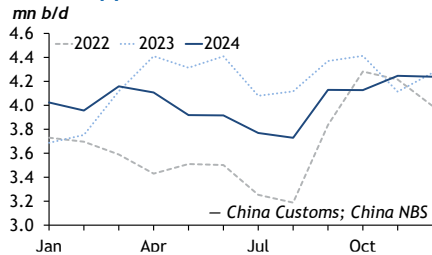
## Gasoline apparent demand



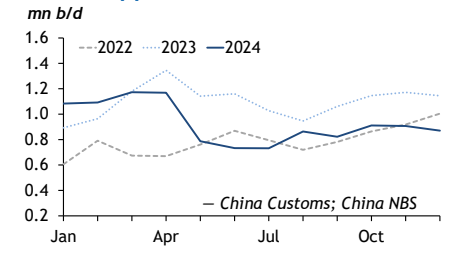
## Jet-kero apparent demand



## Diesel apparent demand



## Fuel oil apparent demand



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