

Argus White Paper: Mixed prospects for China's rare earths market amid Covid-19



China's rare earths market is facing mixed prospects as global economies and industries reel from the impact of the Covid-19 pandemic. Spot supply is rising as Chinese operations emerge from lockdown ahead of many key consuming countries, but downstream magnet demand is expected to remain sluggish in the medium-term, potentially weighing on rare earth prices for the rest of 2020. That said, Chinese producers remain unperturbed and earlier-stage projects outside China are still striving to move forward, anticipating a longer-term revival in demand from the new energy vehicle (NEV) and wind power sectors in particular.

Feedstock supply poised to rise

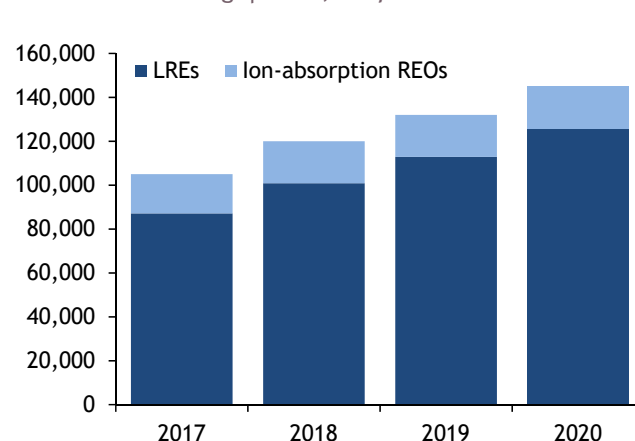
Domestic supply of rare earth separation and processing products is widely expected to rise, with China potentially increasing its 2020 rare earth production quotas, and ore imports from the US and Myanmar also on the rise.

Overall, China's 2020 rare earth production quotas are expected to increase by around 6pc from 2019 to almost 140,000t this year, based on China's 13th five-year plan. The rise would be underpinned by light rare earths, in response to the limited availability of ion-absorption rare earth ores in southern China in the wake of anti-pollution measures and resource restrictions.

Meanwhile, China's imports of rare earth ores from the US and Myanmar are expected to remain elevated this year. This follows [Beijing's removal](#) last month of its 25pc tariff on imports of US rare earth metal ores, and also reflects rising operating rates at most rare earth separation plants as China's lockdown measures ease.

China's imports of rare earth metal ores from the US rose by 67pc to 23,074t last year, according to customs data. Imports jumped further in the first quarter of 2020, up by 324pc from a year earlier to 11,544t. China's removal of the 25pc import tariff is expected to ease financial pressure and reduce production costs for most rare earth separation and processing plants. It may also prompt Chinese importers to buy more material from the US.

China's REO mining quotas, 2017-20



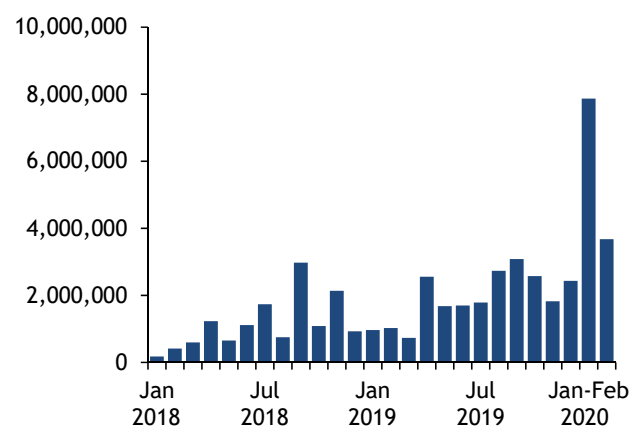
China's imports of rare earth ores from Myanmar rose by 15pc to 16,935t in 2019, despite import restrictions in June-August and tight feedstock supply in the fourth quarter, with China's rising demand dominating the agenda and driving volumes upward. Last year's total included a rise in imports of rare earth oxides to 13,273t which more than offset a 49pc drop in imports of rare earth carbonate ores to 3,662t.

China imported 5,248t of rare earth ores from Myanmar in the first quarter, down by 2pc on the year, as the Covid-19 pandemic created logistical bottlenecks.

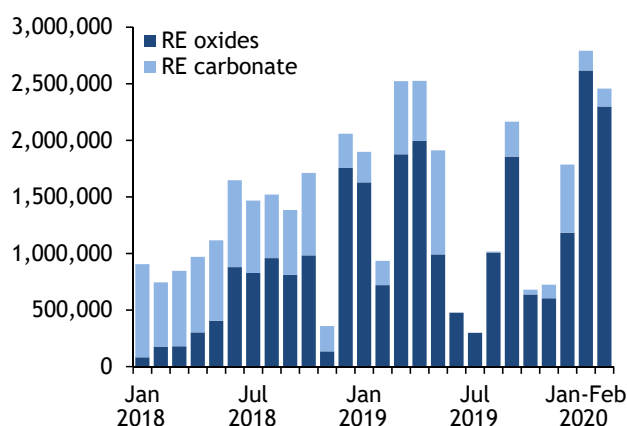
Supply issues driving price volatility

Covid-19 had a limited impact on January-April operating rates for China's major light rare earth production provinces of Inner Mongolia, Sichuan and Shandong — rates here averaged over 75pc, according to an *Argus* survey. But logistical and feedstock constraints in these provinces have led to some unstable price conditions this year.

China's imports of RE metal ores from the US t



China's imports of RE ores from Myanmar t



Argus' domestic China assessment for 99pc praseodymium-neodymium oxide fell to Yn258,000-263,000/t ex-works on 14 April, down by 9pc from Yn284,000-288,000/t ex-works on 18 February – a temporary price spike caused by constrained logistics as the pandemic gathered pace in late January. Low feedstock inventories at most metal processing plants then lifted the assessment by almost 4pc to Yn268,000-271,000/t ex-works on 19 May.

Subdued magnet consumption is likely to keep prices from rising much in the near term, with most end-users only turning

to the spot market for small top-ups to meet their immediate requirements.

Looking to other major producing provinces, average operating rates in Jiangxi, Guangdong and Guangxi fell to 25-30pc in January-February, pressured by shutdowns ahead of the lunar new year holiday and delays in restarts caused by the Covid-19 outbreak. Most medium and heavy rare earth plants have now resumed operations, with rates rising above 75pc from March as logistical bottlenecks eased. And the accompanying rise in spot supply has weighed on the dysprosium and terbium markets.

The *Argus* domestic China assessment for 99.5pc dysprosium oxide fell to Yn1,760-1,780/kg ex-works on 18 May from Yn1,880-1,900/kg ex-works on 12 May.

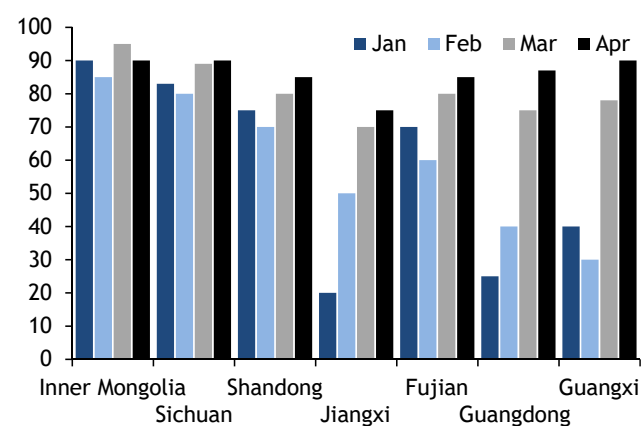
Reduced high-end magnet consumption and increased spot supply squeezed prices for 99.99pc terbium oxide to Yn3,850-3,890/kg ex-works on 13 May, down by 9pc from mid-March, but up by 21pc from early February.

A national stockpiling drive and higher bid levels had lifted spot prices to Yn1,930-1,950/kg ex-works for 99.5pc dysprosium oxide and Yn4,150-4,200/kg ex-works for 99.99pc terbium oxide on 26 May.

Exports under pressure

China's rare earth exports are expected to fall further this year as key consuming industries in Europe, Japan, South Korea and the US reel from the impact of the Covid-19 – the lasting impact of which is yet to be determined. Shipments to these regions accounted for around 90pc of the 46,330t that China exported in 2019, according to customs data.

RE operating rates in major regions, Jan-Apr %



Significantly, last year's 12.6pc drop in exports meant China became a net importer for the first time. And data from late 2019 suggested the trend was persisting, with November exports totalling just 2,636t, the lowest in around three years.

China's exports to Europe fell by 40pc to around 8,000t last year, in part owing to rising availability of material outside China and lower usage of the feedstocks themselves.

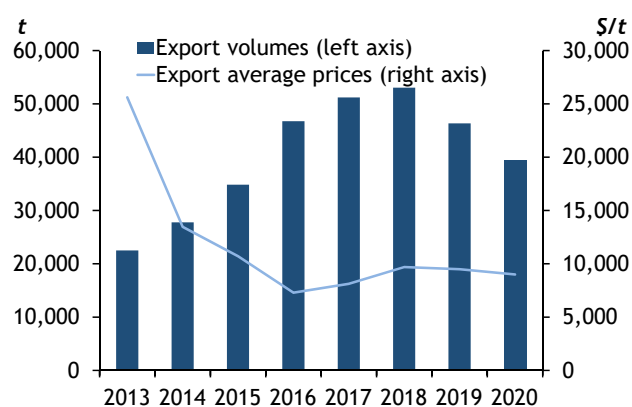
Most Chinese exporters are currently focused on fulfilling long-term contracts and did not secure many new orders from foreign consumers in May.

Pandemic hits demand but long-term outlook robust

The Covid-19 outbreak has dealt a significant blow to demand for rare earth feedstocks from China's magnet sector, with magnet production rates falling to less than 30pc between late January and mid-February.

Rates recovered to above 65pc in March following restarts as logistics recovered, but the sector has remained under pressure, with some magnet plants cutting output by 20-30pc in April in response to a drop in exports caused by the spread of Covid-19 globally. China's magnet production is likely to have fallen further in May amid sluggish export sales and the slowdown in global economic growth.

China's RE exports, 2013-20



That said, the longer-term outlook for magnet consumption appears positive, with Chinese government policy geared to support the NEV and wind power sectors, although it may take several months for domestic rare earth demand to recover to normal levels. China's NEV production and sales rose on the month in April, as the Covid-19 outbreak eased and the government took measures to boost sales.

Ratings agency Moody's expects global automotive sales to drop by 20pc this year and US auto sales to decline by a quar-

New price launches

In response to growing demand and evolving trade flows, *Argus* launched a series of new China rare earth prices on 1 June to complement our long-standing robust pricing portfolio. Full methodology available on request.

- Gadolinium oxide min 99.99% fob China
- Gadolinium oxide min 99.99% fob China MTD
- Gadolinium oxide min 99.99% fob China monthly average
- Gadolinium oxide min 99.99% ex-works China
- Holmium oxide min 99.5% fob China
- Holmium oxide min 99.5% fob China MTD
- Holmium oxide min 99.5% fob China monthly average
- Holmium oxide min 99.5% ex-works China
- Lutetium oxide min 99.99% fob China
- Lutetium oxide min 99.99% fob China MTD
- Lutetium oxide min 99.99% fob China monthly average
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- Ytterbium oxide min 99.99% ex-works China

ter as a result of the slowdown in economic growth triggered by Covid-19.

The IEA expects electric vehicles (EVs) to account for 16pc of total auto production by 2030, up from 2.4pc in 2019 and driving up demand for rare earths.

Meanwhile, the wind power sector continues to be the main driver of demand for neodymium-iron-boron (NdFeB). *Argus* expects a recovery in the wind power sector during the second quarter, helping to add 5,200t of domestic NdFeB consumption this year.

Globally, the installed capacity of offshore wind farms exceeded 27,000MW by the end of last year, according to the *Global Offshore Wind Report 2019*. More than 5,000MW of offshore wind capacity came into operation in 2019 – a record high and up by 24pc from 2018.

Argus Consulting Services expects global offshore wind capacity to increase by more than 50GW in 2020-24.

Demand for NdFeB from the inverter air-conditioner sector is expected to exceed 7,000t this year, despite China's January-April air conditioner output falling by 24.8pc on the year to 55.81mn units because of Covid-19, according to data from the national bureau of statistics.

The pandemic's spread outside China has disrupted export demand for high-end magnets, particularly as European and US automotive and consumer electronics manufacturers went into lockdown – jeopardising more than 40pc of China's rare earth export market. China's magnet exports are expected to decline by at least 40pc from May, given that magnet producers have received very few new orders from export buyers and many shipments have been delayed in the past month.

China's exports of permanent magnets rose by 20pc to 35,266t in 2019, driven by higher demand from the EV and wind power sectors. Argus Consulting Services expects China's permanent magnet exports to drop by at least 6pc this year because of the fall-out from Covid-19.

Possible stockpiling scheme may boost Dy, Tb prices

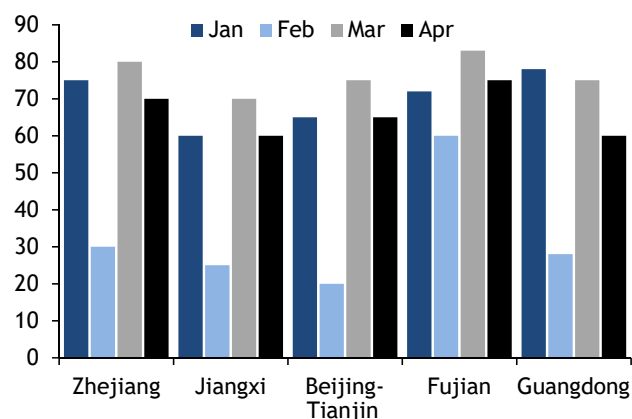
China's state reserve bureau has not launched any national stockpiling drives for rare earths since the first half of 2017. But most market participants anticipate that a scheme might be unveiled this year, focused on purchases of dysprosium and terbium products – tightening spot supply and potentially pushing up prices. As yet, there have been no indications of a possible launch date or the volumes that might be involved.

For now, restocking activity from the high-end magnet sector remains sluggish, with the Covid-19 pandemic having dented magnet exports and curbed dysprosium and terbium consumption. But China's large producers have kept dysprosium and terbium prices firm, withholding material from the spot market in anticipation of prices eventually rising if a national stockpiling scheme is announced.

Heavy rare earths dysprosium and terbium are used in the production of high-performance rare earth magnets, which are widely applied in consumer electronics, electric vehicle engines and other automotive applications.

China magnet plant operating rates, Jan-Apr

%



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