

# Argus Tungsten Monthly Outlook



## Outlook

### The month ahead

Chinese ammonium paratungstate spot prices were stable in June, but dropped slightly in early July in quiet trading conditions and a general lack of demand. The outlook for the month ahead is for some weakness in the tungsten market on a lack of business.

### The next 3-6 months

Recessionary pressures could weigh on prices in Europe in the medium term, but in China squeezed margins and restocking demand may help to maintain or boost prices.

### 12 months forward

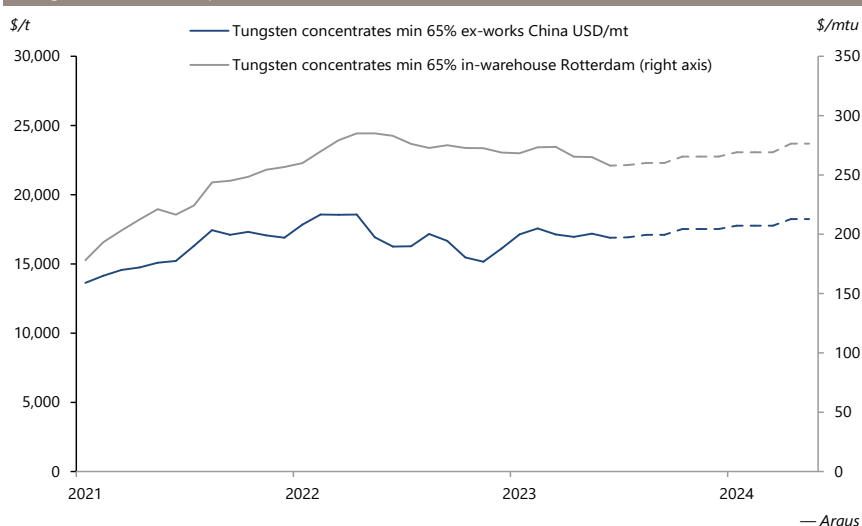
Market fundamentals will come more into play in the longer term and suggest a higher annual average for tungsten prices in 2023, compared with 2022.

### Tungsten concentrate prices

Spot tungsten concentrate prices in China (65pc wolframite) dropped by just under 2pc in June and by a further 1.5pc in early July. Monthly average prices were 1.8pc lower at \$16,819-16,958/t in June and down by 2.1pc at \$16,472-16,611/t in the month to 10 July. Argus' European tungsten concentrate assessment averaged \$255-267.95/dmtu in May, down by 0.8pc.

OUTLOOK: Stable-weakening

Tungsten concentrate prices, 2021-24

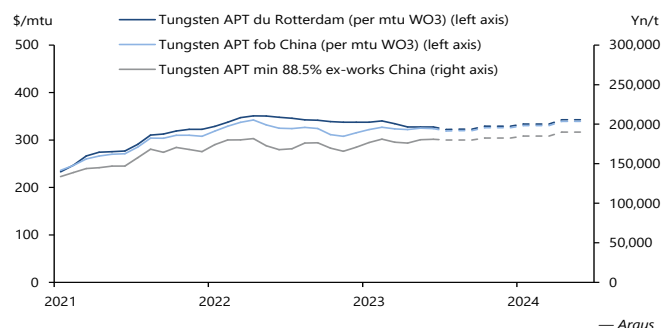


## International pricing series

### Ammonium paratungstate (APT)

Spot APT prices were more stable in June, compared with concentrate feedstock prices. Average monthly prices for 88.5pc grade APT ex-works were up by 0.3pc at Yn180,425-181,425/t (\$25,215-25,355/t) in June, while the Chinese export fob price for APT averaged \$319-329/mtu (down by 0.3pc). Average European APT prices were stable at \$325-330/mtu.

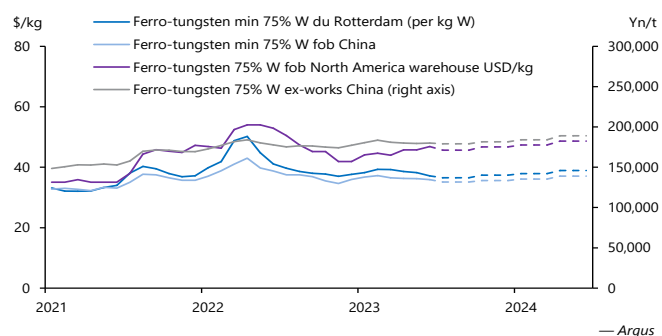
OUTLOOK: Stable-weakening



### Ferro-tungsten

Spot European ferro-tungsten prices fell by 1.9pc in June, while spot prices in China were unchanged on the month. Domestic Chinese prices for 75pc grade alloy rose by 0.3pc to average Yn179,500-180,500/t in June, while export prices averaged \$35.40-36.40/kg (down by 0.9pc). In Europe, the monthly average was 2.8pc lower at \$36.64-37.64/kg.

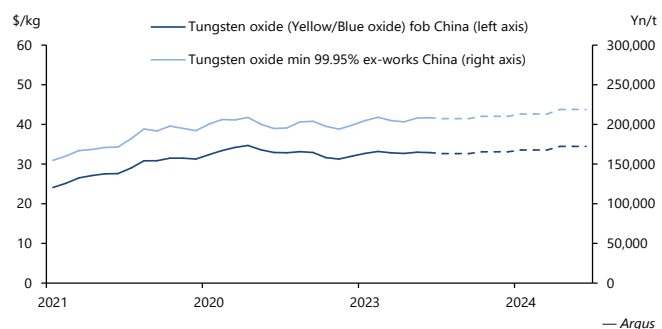
OUTLOOK: Stable-weakening



### Tungsten oxides

Chinese tungsten oxide prices have followed the price trends for upstream and intermediate tungsten products. Ex-works prices for 99.95pc oxide averaged Yn207,425-209,425/t in June, 0.2pc up from Yn207,100-209,100/t in May. Export prices for yellow/blue tungsten oxide were 0.3pc lower at an average price of \$32.40-33.40/kg in June.

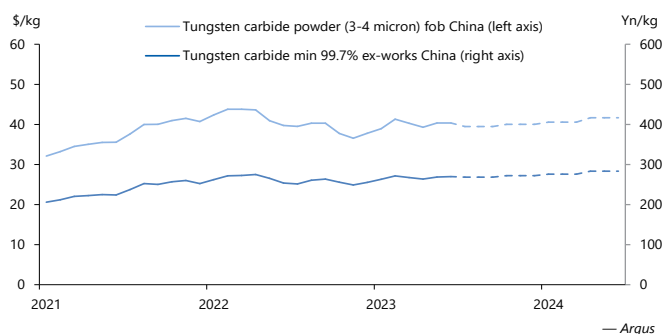
OUTLOOK: Stable-weakening



### Tungsten carbides

Monthly average prices for tungsten carbide in China followed feedstock prices up in May. Average prices for 99.7pc carbide ex-works rose by 0.4pc to Yn268.75-270.75/kg in June, while the average to 12 June was 0.6pc lower at Yn267.17-269.17/kg. Export prices for tungsten carbide powder (3-4 micron) averaged \$39.80-40.80/kg (down by 0.1pc) in June.

OUTLOOK: Stable-weakening



## Price outlook

■ Group 6 Metals has started commercial production of tungsten concentrate at its Dolphin Tungsten Mine, processing more than 10,000t of low to medium-grade ore

■ Chinese auto production and sales rose in June by 9.8pc and 2.5pc to 2.56mn and 2.62mn, respectively, compared with 2022

■ China's tungsten exports fell in January-May to 8,713t, down by 21pc from a year earlier

The Chinese tungsten market is expected to soften further in mid-July, following declines earlier in the month. This is a result of continued soft demand from the downstream cemented carbide industry, which has dented market confidence.

Tungsten concentrate feedstock suppliers have become reluctant to make major price concessions after a significant fall earlier this week. Suppliers have been citing tight supplies as a result of environmental restrictions, as well as higher summer temperatures.

Primary tungsten material producer Jiangxi Tungsten on 5 July cut its offer price for 65pc grade wolframite concentrate for the first half of July to Yn119,500/t (\$16,620/t) from Yn121,000/t for the second half of June. *Argus* last assessed prices for 65pc grade wolframite at Yn119,500-120,500/t ex-works on 4 July, down by Yn1,000/t from 30 June after prices held stable at Yn120,500-121,500/t ex-works on 6-30 June.

Tungsten smelters are facing difficulties as concentrate feedstock suppliers have scaled back sales and held firm on prices, while consumers are pressing down purchase prices and buying only for prompt demand. This has likely led to most smelters incurring losses.

Xiamen Tungsten, which operates an integrated tungsten supply chain from primary mining and smelting to processing and recycling, lowered its bid price for ammonium paratungstate (APT) feedstock to Yn178,000/t in the first half of July from Yn180,500/t in the second half of June. Major consumers Zhangyuan Tungsten and Ganzhou Tungsten Association had yet to release their bid prices and reference

prices as of 12 July. Market participants predicted that their APT prices would be in a range of Yn178,000-178,500/t.

Cemented carbide producers have reduced output owing to a lack of orders. This has weighed on demand for intermediate tungsten products including APT, tungsten oxides and carbide. Some APT and carbide producers are poised to cut or halt output to cope with profit losses if this situation continues.

China sold 191,000 metal-cutting machines in January-April, down by 3pc from a year earlier, according to data from the China Machine Tool and Tool Builders' Association. The decline reflects lower demand for manufacturing industry products in which tungsten is largely consumed.

Chinese exports of tungsten products totalled 8,713t of tungsten metal equivalent in January-May, down by 21pc from a year earlier, according to customs data. Shipments of tungsten intermediates fell sharply, compared with previous years as a result of weaker demand from European and Asian buyers, which are likely well-supplied by term contracts or have reduced their purchases owing to global economic uncertainty.

In *Argus*' most recent assessments in China, prices for 65pc grade wolframite concentrate were assessed unchanged

**Ganzhou Tungsten Association monthly guide prices, 2022-23**

Month	Wolframite (55pc) Yn/t	APT (88.5pc) Yn/t	Tungsten carbide (99.7pc) Yn/kg
June	119,000	181,500	280
May	119,000	181,000	280
April	113,000	173,500	267
March	116,000	178,000	276
February	114,000	175,500	275
January 2023	114,000	175,500	275
December	108,500	168,500	262
November	106,000	165,000	255
October	110,500	172,000	265
September	115,000	177,500	273
August	113,000	174,500	270
July	107,000	167,000	258
June	107,500	168,000	260
May	112,500	176,000	276
April	118,000	182,000	282
March	115,000	178,000	278
February 2022	115,000	178,500	275

from 6 July at Yn118,500-119,500/t on 11 July, after falling by Yn1,500/t on 4-6 July. That was the first decline in over three months, because of lower offers and bids. Concentrate suppliers were unwilling to make further concessions on prices in the near term, as high summer temperatures have affected production and will tighten spot supplies.

The range for 88.5pc grade APT was assessed at Yn178,000-180,000/t ex-works on 11 July, unchanged from 6 July, following a fall of Yn2,000/t on 4-6 July. APT producers were committed to term contracts and received few spot orders over the past weeks, which prompted APT producers to consider cutting production in the future.

Prices for 99.7pc grade carbide held stable from 6 July at Yn268-270/kg on 11 July, with demand from the cemented carbide industry unlikely to see a recovery during the lull season in July and August, according to market participants.

The export market saw limited spot liquidity, with prices holding at \$312-322/mtu for APT and were unchanged at \$34.50-35.50/mtu for carbide. Export firms were mostly committed to term contracts, waiting for demand to recover in the fourth quarter.

The domestic ferro-tungsten market remained stable as firm feedstock costs offset moderate downstream demand to leave prices range-bound. Prices for 75pc grade alloy were assessed unchanged from a week earlier at Yn179,000-180,000/t ex-works on 11 July, following a slight fall of Yn500/t on 4 July resulting from limited purchasing interest from steelmakers.

The export market also held stable after a falling in the previous week. The export range for 75pc grade alloy was assessed at \$34.50-35.50/kg fob, unchanged from a week earlier and down from \$35-36/kg fob two weeks earlier. The market is expected to stay muted in July and August, when many western consumers leave for their summer holidays.

In Europe, prices remained stable for both APT at \$320-325/mtu and tungsten concentrates at \$255-265/dmtu on limited spot demand. A recent tender by the US Defence Logistics Agency ended with no sales concluded, highlighting how subdued the market has been in recent weeks. One trader offered APT material at \$325/mtu but received no return bids.

Ferro-tungsten prices were flat at \$36-37/kg duty unpaid Rotterdam on the back of thin spot trade. A trader sold 7t of the alloy at \$36.60/kg in the past seven days, while Chinese sellers offered material at \$36.70/kg in Rotterdam.

European spot demand for most tungsten products has been slow this year, market participants said. European ferro-tungsten prices rose in January and February following higher export prices from China, but have been steadily declining since mid-March as a result of very sluggish demand from consumers.

Looking ahead, market participants expect prices could continue to fall, especially as Chinese export prices have dipped to \$34.50-35.50/kg fob this week, down from the 27 June assessment of \$35-36/kg

#### Tungsten prices and forecast, 2023-24

Product	Unit	Month index June 2023	Moving quarterly index	Moving yearly index	Forecast June 2024
Ferro-tungsten min 75% W EU	\$/kg	37.14	37.98	38.28	39.00
Ferro-tungsten min 75% W fob China	\$/kg	35.90	36.14	36.41	37.00
Ferro-tungsten 75% W fob North America warehouse	\$/kg	46.85	46.11	45.26	48.50
Tungsten APT EU	\$/mtu	327.50	327.50	336.53	342.50
Tungsten APT fob china	\$/mtu	324.00	323.67	321.05	340.00
Tungsten APT min 88.5% ex-works China	Yn/t	180,925.00	179,143.83	175,041.83	190,000.00
Tungsten carbide min 99.7% ex-works China	Yn/kg	269.75	267.33	261.61	285.00
Tungsten carbide powder (3-4 micron) fob China	\$/kg	40.35	40.00	39.39	41.50
Tungsten concentrates min 65% ex-works China	\$/t	16,888.57	17,008.65	16,639.80	18,250.00
Tungsten concentrates min 65% Rotterdam	\$/dmtu	257.84	262.73	270.11	275.00
Tungsten oxide (yellow/blue) fob China	\$/kg	32.90	32.86	32.60	34.50

## Markets

The automotive industry is the biggest consumer of tungsten, mainly in the form of tungsten carbide for machining/tooling and die-cast applications, and represents 25pc-30pc of global demand currently.

China's automobile production and sales rose on the month and on the year in June because of sustained economic recovery and market expectations of stable sector growth for 2023.

Production rose by 9.8pc on the month and by 2.5pc from June 2022 to 2.56mn units, according to the China Association of Automobile Manufacturers (CAAM). Sales rose by 10pc from a month earlier and by 4.8pc from a year earlier to 2.62mn units.

Passenger car sales and output rose by 11pc and 10pc, respectively, from the previous month to 2.268mn units and 2.219mn units in June. Sales increased by 2.1pc from a year earlier, but production was down by 0.9pc.

Passenger car sales growth was weaker and production down on the year in June, as demand was boosted in June 2022 after the Chinese government halved a purchase tax for fuel vehicles priced no higher than Yn300,000/unit, excluding value-added tax (VAT). The government halved the purchase tax to no higher than Yn15,000/unit in June-December from Yn30,000/unit earlier, excluding VAT.

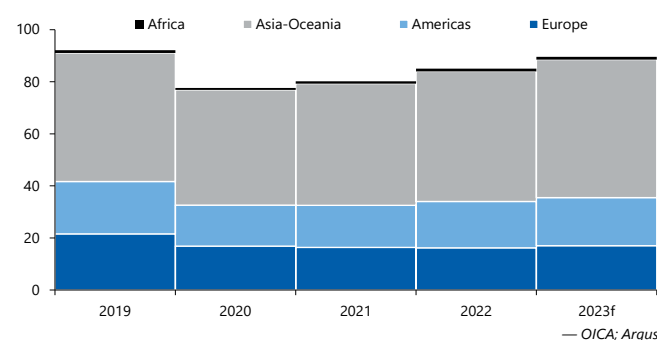
China exported 382,000 vehicles in June, down by 1.7pc from May but up by 53pc from a year earlier. China's vehicle exports increased to 2.14mn in January-June, rising by 76pc from the same period last year, CAAM said.

China's new energy vehicle (NEV) production and sales each surpassed 3.7mn units in the first half of 2023 in response to buoyant demand.

China produced 784,000 NEVs in June, up by a third from a year earlier and by 10pc from May, according to data from the CAAM. Sales also rose to 806,000 units, up by 35pc from June 2022 and by 12pc from May.

The country produced 3.788mn NEVs in the first half of 2023, up by 42pc from a year earlier. Total sales in January-June

**Global motor vehicle production, 2019-23** *mn units*



rose to 3.747mn units, up by 44pc from a year earlier. NEVs refer to battery-electric vehicles, plug-in hybrids and fuel-cell vehicles in China.

China's decarbonisation targets for 2030 and 2060 have boosted its NEV sales significantly, with the country leading global growth in the past decade. NEVs accounted for 26pc of China's total new vehicle sales in 2022, 28pc in January-May and 31pc in June.

CAAM earlier this year lowered its prediction for China's NEV sales growth to 30pc at 9mn units in 2023 after the government abolished its electric vehicle subsidies, compared with a year-on-year rise of 93pc last year to 6.89mn units.

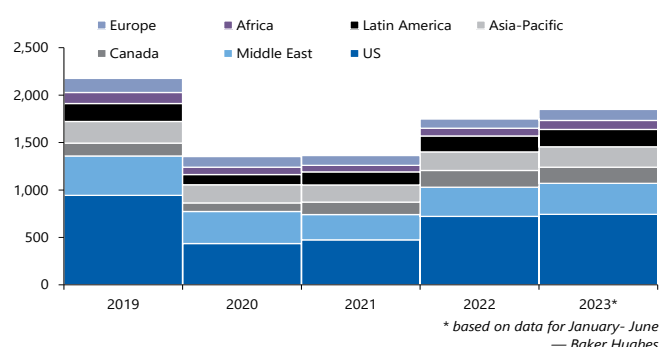
The EU's automotive industry has undergone a recovery in the first half of this year, compared with last year, with data showing a sharp increase in registrations and production.

The EU passenger car market has had 10 months of consecutive growth since August 2022, and data from the European automobile manufacturers' association (ACEA) show 18pc growth on the year in January-May, with 4.4mn new vehicles having been registered. June probably will be another strong month, as preliminary data released from German automobile industry association VDA this week show a 25pc year-on-year increase. Production in Germany in the first half of this year is up by nearly a third to 2.2mn cars. To put this in context, production for the whole of last year totalled just 3.4mn units, up from 3.1mn in 2021.

EU passenger car registrations increased by 18.5pc on the year to 938,950 units in May, the ACEA said. The increase,

## Global annual average rig count, 2019-23

units



from low levels last year was driven by Italy, Germany and France. Registrations in Italy were up by 23.1pc year on year to 149,373 units, and in Germany by 19.2pc to 246,966 units.

France recorded a 14.8pc increase to 145,536 units. In the first five months of the year France saw a double-digit increase of 16.3pc to 698,929 units registered.

When examining other European car markets, Spain recorded an 8.3pc increase on the year to 92,025 units, whereas in Belgium registrations rose by 42.5pc to 41,359 units. Sales in the UK jumped by 16.7pc on the year to 145,204 units.

US sales of light vehicles rose by about 4pc in June from the previous month, as steady job growth and wage gains prompted Americans to buy more cars and trucks.

Sales of light vehicles — light trucks and cars — rose to a seasonally adjusted annual rate of 15.7mn vehicles in June from a 15.1mn unit pace in May, according to the Bureau of Economic Analysis. Sales peaked this year in April at a 16.1mn unit rate and were at a 13mn unit pace in June last year.

Americans are returning to car dealerships as robust job and wage growth, and slowing inflation, pushes back concerns of a broad economic slump. Growth in the US services sector, the largest part of the economy, rose in June to the highest since February, according to the Institute for Supply Management's services purchasing managers index survey.

Sales of light trucks rose to a 12.6mn unit rate from a 12mn annual unit pace in the previous month. Sales were at a 10.3mn unit pace in June 2022. Sales of cars rose to a 3.1mn unit annual rate in June from a 3.05mn pace in May. Sales were at a 2.74mn rate in June last year.

Domestic US auto production rose to a seasonally adjusted 154,000 units in May from 166,200 units in April and 143,700 units in May last year. Production data is presented with a one-month lag to sales.

Japan's car production in May increased by 48.4pc from a year earlier to 584,336 units, as it continued to rebound from output cuts arising from a shortage of auto parts.

The country's eight major car producers all reported on 29 June that their May output increased from a year earlier, largely because overall volumes in May 2022 were most heavily pressured by production cuts on the back of components shortages caused by the Covid-19 pandemic.

Toyota said its May domestic output marked a fifth consecutive year-on-year increase, as semiconductor shortage problems eased.

Oil and gas drilling is a major consumer of tungsten in the form of tungsten carbide. The global drilling rig count picked up in both January and February this year, but dropped back in March, April and May, before picking up again in June, according to Baker Hughes.

In June, the worldwide rig count stood at 1,800, 1pc up from 1,783 in April but 6.3pc lower than the February count of 1,921. The average rig count for 2023 (to June) was 1,849, which was 5.8pc up from the 2022 average of 1,748.

The US represented 40pc of the 2023 average, followed by the Middle East (18pc), Asia-Pacific (12pc), Latin America (10pc), Canada (9pc), Europe (6pc) and Africa (5pc).

The US drilling rig count rose by six in the week ending 7 July to 680 as a rise in natural gas rigs more than offset a decline in oil rigs, according to Baker Hughes data. The number of rigs pursuing natural gas rose by 11 from last week to 135. The tally of oil rigs was down by five to 540, the lowest since April 2022.

The Canadian rig count increased on the week, while crude production in Alberta fell to a two-year low amid wildfires. The Canadian rig count increased by eight to 175 in the week ended 7 July, which was unchanged from the same week a year prior.



## Supply

India has identified 30 critical minerals, including tungsten, essential to its green energy transition and push to reduce a reliance on imports, planning to use the list to help inform government strategy.

The government considers these metals to have both high supply risks and significant importance to India's economic development. All of them play a major role in decarbonising and digitalising industry, but sourcing options are often narrow and China-centric, and India is heavily dependent on imports.

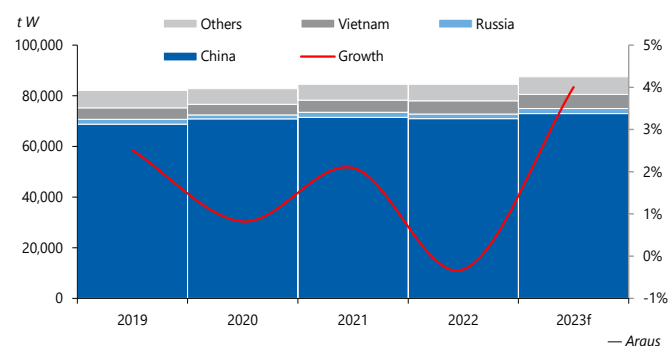
India will set up a Centre for Excellence for Critical Minerals (CECM) to periodically update the list and help inform the government's critical minerals strategy. The CECM is also designed to help the development of critical mineral value chains within India, and may consider collaborating with international agencies or Kabil to acquire foreign assets. Kabil, a joint venture between state-run companies Nalco, HCL and MECL, was formed to explore and produce minerals overseas.

Until recently, Australia's only primary tungsten producer EQ Resources (EQR) has resumed operations and launched its first blast at the Mount Carbine mine in north Queensland. Blast hole drill-outs are likely to continue over the next 12 months and EQR expects to sample and assay the blast holes to mark up the ore zones accurately.

"We are expecting a great result over the next 12 months and anticipate all our mining systems to complete ramp-up by the end of the third quarter to meet planned production targets," EQR chief executive Kevin MacNeill said. The firm is targeting production of 80,000 t/month of tungsten ore by September.

Australian Stock Exchange-listed mining company Group 6 Metals started commercial production of tungsten concentrate in June at its Dolphin Tungsten Mine on King Island, Tasmania. The process plant is said to have achieved 70pc runtime, processing more than 10,000t of lower to medium-grade ore at an average grade of 0.3pc WO<sub>3</sub>. The company reported that approximately 10t of saleable tungsten concentrate was produced in June.

Global tungsten concentrate production, 2019-23 t W



Initial site tests showed that the produced concentrate has achieved an average grade of 55pc of WO<sub>3</sub> and a maximum of 68pc WO<sub>3</sub>. The firm's team is focused on optimising performance to maximise recovery. By achieving production at a grade that meets offtake requirements, the firm has achieved full-scale proof of flow sheet.

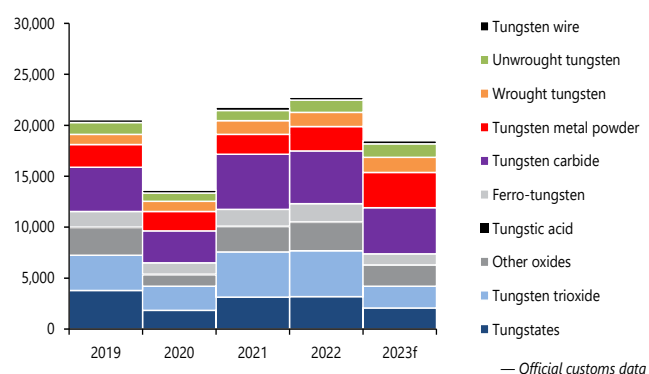
"We are thrilled to achieve commercial production within weeks of the production of first concentrate at the Dolphin Tungsten Mine," Group 6 Metals chief executive and managing director Keith McKnight said. "Our achievement of successfully processing more than 10,000t of ore in June and producing concentrate ready for sale is another significant milestone and a credit to the hard work and dedication of our site team and contractors."

London Stock Exchange-listed Tungsten West is to cut its headcount by almost half as it partially restarts the Hemerdon mine near Plymouth, Devon in the UK following a restructuring. The firm is redeveloping the mine, which is estimated to be the second-largest global reserve of tungsten.

Tungsten West launched a review of operating costs, capital expenditure and sale of surplus assets amid "multiplying" energy, fuel and construction costs. In an update on 2 June the firm's management told investors it expected a 42pc reduction in headcount and monthly payroll costs via redundancy and resignations.

According to the group's half-year results published in December, it employed 61 staff, excluding directors, as of the end of September 2022. More than 90pc of its employees live in Devon and Cornwall, with the average salary of £53,000 significantly above average for the region.

## Chinese tungsten product exports, 2019-23



Having previously put its plans for Hemerdon on hold, Tungsten West said it has been scaling up its workforce since July 2022 as it restarted work at the site. Experienced mining consultant Neil Gawthorpe was appointed as chief executive in March, to help secure the funding needed to complete the project.

The firm has been pressing ahead with the project and on 2 June it announced a partial restart of production of the mine's legacy tungsten and tin ore. Just over 50t of ore had been processed, generating more than £400,000 in revenue.

"This small-scale production of tungsten and tin is a mere indication of what can be achieved once the mine is fully re-opened," said Gawthorpe. "The success of the recommissioning of the dry section of the refinery has also provided us with valuable insight into the future operating parameters."

"We are dedicated to building and operating this mine with the support of all key stakeholders, especially our local communities, in order to create a responsible mining operation and sustainable source of tungsten and tin concentrate in south Devon."

Toronto Stock Exchange-listed Fireweed Metals, a Canadian mining exploration and mineral development firm, recently announced its Mactung tungsten project's capacity after signing a definitive asset purchase agreement and making a robust mineral inventory. The firm has also released a new resource estimate for its Mactung tungsten project, said to be the world's largest high-grade tungsten deposit.

In a statement, chief executive Brandon Macdonald said: "In one year we have gone from signing an initial letter of intent

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to a definitive asset purchase agreement to the publication of a new mineral resource for Mactung. We have taken the historic resource through a process involving relogging, resampling and a rigorous, modern estimation methodology, and confirmed an impressive and world-class tungsten resource at Mactung."

"Mactung's unmatched combination of grade and scale establishes it as a strategic critical minerals project for the west, with the underground resource alone able to supply much of North America's expected demand for decades."

The current mineral resource at Mactung, which is estimated at 41.5mn t indicated resource at 0.73pc WO<sub>3</sub> and 12.2mn t inferred resource at 0.59pc WO<sub>3</sub>, ranks it as the world's largest high-grade tungsten resource. It is a clear statistical outlier in terms of grade and contained metal.

In late 2022 and early 2023, Fireweed collected bulk density and assay data to resample Mactung's historical drill core. As a result, the firm has made a new geological interpretation of the deposit, leading to a robust estimate of the mineral inventory at Mactung and providing a solid foundation for future mine development studies.

Going by the estimates, the potential exploration target at Mactung is 2.5mn-3.5mn t at a grade of 0.4-0.6pc WO<sub>3</sub>, in addition to the current mineral resources disclosed in the news release. Mactung is located 13km north of Fireweed's Macmillan Pass Project camp in the Yukon and Northwest Territories. It was discovered and staked in 1962 by an Amax company geologist.

The property changed ownership several times and was acquired by the North American Tungsten Corporation (NATC) in 1997. In 2007, NATC published updated mineral resources, and in 2009 published a positive feasibility study. But the government of the Northwest Territories bought the Mactung project for \$4.5mn in 2015 and obtained class 4 mining land use approval in 2020 for mineral exploration activities in the Yukon. Fireweed signed a definitive asset purchase agreement for the Mactung project with the government of the Northwest Territories earlier this year.



Project tracker							
Company	Project	Start-up*	Progress	Capex \$mn	Resource mn t	Capacity W t/yr	Notes
W Resources	La Parrilla (mine), Spain	2016	Suspended	11	29.8	1,300	Company delisted from AIM and in administration (Jan 23)
Saloro	Barruecopardo, Spain	2018-19	Operating	65	27.4	2,000	Mine operating at steady state (Apr 23)
EQ Resources	Mt Carbine, Australia	2020	Operating	55	61.0	1,300	Mining at Andy White open pit due in June 23 (May 23)
Group 6 Metals	Dolphin, Australia	2023	Operating	60	8.3	2,000	First concentrate produced; 10,000t ore processed (Jul 23)
Almonty Industries	Los Santos, Spain	2023	Care and maintenance	na	2.8	750	Restart of the mine due in 3Q 2023 (May 23)
Almonty Industries	Sangdong, South Korea	2024	Under construction	64	61.1	3,500	Mine commissioning due in 2024 (May 23)
Tungsten West	Hemerdon, UK	2024	Suspended	43-57	143.0	3,200	First tungsten pre-concentrate processed; commercial output due 4Q23 (Jun 23)
Pilar Gold	Bodo, Brazil	2023	Reopening of existing mine infrastructure	na	na	500	Intend to reopen in 2022 at 70-80 t/yr 64pc tungsten concentrate (Apr 22)
Pivotal Metals	Santa Comba, Spain	2025+	PFS completed	38	9.9	na	Formerly Rafaella Resources; PFS due 1Q 24 (Feb 23)
Premier African Minerals	RHA, Zimbabwe	2015	Suspended	13	4.4	na	Negotiating to sell RHA Ltd (Oct 21)
Tungsten Mining	Mt Mulgine, Australia	2025+	Pre-feasibility study in progress	na	259.0	4,000	Updated resource and capacity from PFS assumptions (Jul 20)
Almonty Industries	Valtrexial, Spain	2025+	NI 43-101 filed October 2014	na	19.2	na	Almonty owns 100pc of the project
Almonty Industries	Wolfram Camp, Australia	2025+	Upgrading	na	2.8	750	Restart of the mine will depend on a sustained improvement in APT prices
Rafaella Resources	Borralha & Vila Verde, Portugal	2025+	Drilling and resource definition	na	na	na	Projects acquired in November 2021 (Nov 21)
Apollo Minerals	Couflens, France	2025+	Reviewing historical mine data	na	na	na	Toulouse court cancels Couflens exploration licence; appeal in progress (Jun 19)
Venture Minerals	Mt Lindsay, Australia	2025+	BFS completed, mining lease granted Jul 14	200	45.0	1,500	Recent drilling successfully intersected 93m of high-grade mineralisation (Nov 21)
Happy Creek Minerals	Fox, Canada	2025+	NI 43-101 resource estimate completed	na	1.1	na	NI 43-101 resource estimate completed (Jan 17), updated (Feb 18)
Largo Resources	Northern Dancer, Canada	2025+	PEA complete	645	223.4	6,500	Not planning any significant expenditures for the foreseeable future (Dec 17)
Northcliff Resources	Sisson, Canada	2025+	DFS completed	579	334.0	4,400	Ongoing engineering studies focused on reducing capital & operating costs (Apr 18)
Fireweed Metals	Mactung, Canada	2025+	PFS completed 2009, environmental approval received 2014	400	44.9	7,000	Project acquired from NWT government (Jun 22)
Silver Predator	Springer, US	2025+	Permitting largely in place	30	1.8	1,150	Seeking joint-venture partner (Jun 16)
Thor Mining	Molyhil, Australia	2025+	Updated DFS completed	56	4.4	1,250	Mineral resource estimate updated to 4.4mn t at 0.27pc WO3 (Apr 21)
Thor Mining	Pilot Mountain, US	2025+	Scoping study	na	10.7	na	Mineral resource increased by 6.5pc to 10.7 mn t grading 0.26pc WO3
Tungsten Mining	Watershed, Australia	2025+	DFS completed, fully permitted	75	49.2	2,000	Fully permitted; sold to Tungsten Mining NL for £15mn (Aug 18)
Xiamen Tungsten	Bobai Judian, China	2026	Deposit acquired in 2021	na	40.0	3,000	Mine construction expected to be up to 36 months (Oct 22)

\* Based on company announcements/data

## Trade

China's tungsten exports fell in January-May from a year earlier on weaker demand from European and Asian buyers, likely well-supplied by term contracts or reduced purchases, given the global economic uncertainty.

Chinese exports of tungsten products totalled 8,713t of metal equivalent of tungsten in January-May, down by 21pc from a year earlier, according to customs data. Shipments were at 1,810t in May, compared with 1,898t in April, 1,891t in March, 1,563t in February and 1,551t in January, and lower by 18pc from a year earlier.

China's ammonium paratungstate exports fell to 548t in January-May, down by 52pc from 1,140t the previous year. Tungsten trioxide shipments fell to 2,243t in January-May, down by 45pc from 4,095t a year earlier. Shipments of tungsten carbide fell by 14pc to 2,052t from 2,373t during the same period. But tungsten powder exports rose to 1,138t, up by 44pc from 790t in January-May 2022.

China exported 909t of ferro-tungsten in January-May, down by 39pc from 1,486t over the same period of 2022. Exports in May were 297t, up from 228t in April, increasing from 132t in March and 150t in February, and higher than the 212t a year earlier. Demand for ferro-tungsten has yet to show signs of recovery in June, with seaborne consumers making a small purchases on an as-needed basis.

The US is the major individual importing country for tungsten products and its imports of tungsten were almost unchanged in the first five months of the year, compared with 2022. Assuming a similar performance over the whole year, US tungsten imports would remain at just under 13,300t W.

In January-May, the US imported 4,770t W of tungsten products at a total cost of \$216mn and an average value of \$45,305/t W.

Tungsten waste and scrap was the main form of tungsten imported into the US in the first five months of 2023, accounting for 31pc. Tungsten metal products represented 24.5pc of US tungsten imports, followed by tungstates (15pc), tungsten carbide (13pc), tungsten ores and concentrates (11pc), tungsten oxides (5pc) and ferro-tungsten (0.5pc).

Japan is the next-largest individual importing country for tungsten products after the US and imports decreased by 22pc in January-May. A similar drop in imports for the year as a whole would take total Japanese imports of tungsten from 6,290t W in 2022 to 4,865t W in 2023.

In the first five months of the year, Japan imported 2,045t W of tungsten products at a total cost of \$96.8mn and an average value of \$47,375/t W.

In January-May, tungsten metal products accounted for 34.5pc of total Japanese tungsten imports, followed by tungsten carbide (25pc), tungstates (17pc), ferro-tungsten (9.5pc), tungsten oxides (9.5pc), and waste and scrap (4.5pc).

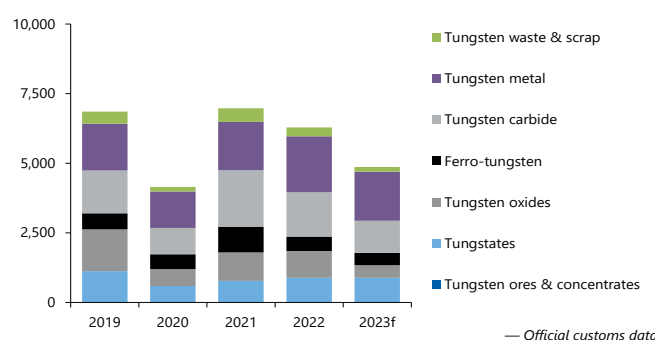
Europe as a whole imports close to three times the amount of tungsten products as the US, with Germany, Sweden and Austria the largest individual importers within the region. European (EU27 countries plus the UK) imports of tungsten fell by 16.5pc in the first four months of 2023. Assuming a similar performance over the whole year, European tungsten imports would decrease from 25,805t W in 2022 to 22,470t W in 2023.

In January-April, Europe imported 9,285t W of tungsten products at a total cost of \$419.4mn, giving an average value of \$45,165/t W.

Tungsten waste and scrap accounted for 27.5pc of total European tungsten imports, followed by tungsten carbide (26.5pc), tungsten metal (17.5pc), ferro-tungsten (10.5pc), tungsten oxides (10.5pc), tungstates (7pc), and tungsten ores and concentrates (0.5pc).

Japanese tungsten product imports, 2019-23

t W



## Trade

Chinese tungsten trade							
	May		Year-to-date		2022	2023f	±% 23/22
	Volumes t	Revenues \$	Volumes t	Revenues \$	Volumes t	Volumes t	
<b>Tungsten ores &amp; concentrate imports</b>	<b>219.12</b>	<b>2,551,138</b>	<b>1,602.36</b>	<b>16,332,427</b>	<b>5,901</b>	<b>4,573</b>	<b>-22.50</b>
Mongolia	-	-	-	-	99	0	-100.00
Myanmar	51.94	181,370	232.53	1,865,740	803	381	-52.50
North Korea	83.50	785,500	886.38	8,281,354	2,955	2,437	-17.50
Russia	-	-	179.81	1,847,308	58	432	645.00
Rwanda	-	-	24.37	325,108	386	68	-82.50
<b>Tungstate exports</b>	<b>210.88</b>	<b>6,387,959</b>	<b>1,217.45</b>	<b>36,214,286</b>	<b>4,464</b>	<b>2,902</b>	<b>-35.00</b>
Japan	40.00	1,081,822	357.01	10,130,573	1,003	1,078	7.50
Netherlands	61.24	1,866,094	284.53	8,769,888	1,526	534	-65.00
US	76.14	2,350,634	300.86	9,117,888	1,256	848	-32.50
Vietnam	-	-	-	-	80	0	-100.00
<b>Tungstic acid exports</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>52</b>	<b>0</b>	<b>-100.00</b>
Japan	-	-	-	-	-	-	0.00
South Korea	-	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-
US	-	-	-	-	51	0	0.00
<b>Tungsten trioxide exports</b>	<b>355.21</b>	<b>10,852,353</b>	<b>1,386.91</b>	<b>43,259,991</b>	<b>5,660</b>	<b>2,689</b>	<b>-52.50</b>
Japan	81.00	2,566,254	240.50	7,765,528	1,073	536	-50.00
Netherlands	-	-	60.00	2,035,269	980	98	-90.00
South Korea	20.20	624,333	173.20	5,644,956	1,371	343	-75.00
US	-	-	23.00	654,670	10	55	450.00
<b>Tungsten oxide/hydroxide exports</b>	<b>160.00</b>	<b>4,975,601</b>	<b>862.10</b>	<b>27,097,124</b>	<b>3,530</b>	<b>2,648</b>	<b>-25.00</b>
Japan	-	-	0.00	0	140	0	-100.00
Netherlands	20.00	626,866	160.00	5,324,999	1,773	532	-70.00
South Korea	120.00	3,746,055	600.00	18,784,075	1,320	1,716	30.00
US	-	-	40.10	1,127,400	100	-	-
<b>Ferro-tungsten exports</b>	<b>297.00</b>	<b>8,783,903</b>	<b>908.76</b>	<b>26,615,268</b>	<b>2,384</b>	<b>1,430</b>	<b>-40.00</b>
Japan	87.00	2,706,086	280.25	8,698,592	610	702	15.00
Netherlands	156.00	4,556,814	417.00	12,050,558	1,432	537	-62.50
South Korea	14.00	358,161	55.50	1,498,256	176	88	-50.00
<b>Tungsten carbide exports</b>	<b>355.32</b>	<b>15,241,063</b>	<b>2,052.28</b>	<b>83,148,522</b>	<b>5,452</b>	<b>4,770</b>	<b>-12.50</b>
Germany	41.50	1,749,971	320.31	12,708,222	857	642	-25.00
Japan	153.03	6,432,930	536.07	22,250,191	1,674	1,214	-27.50
South Korea	54.90	2,191,662	717.28	27,423,045	1,191	1,578	32.50
US	29.87	1,268,716	230.80	9,536,363	530	504	-5.00
<b>Tungsten metal powder exports</b>	<b>266.60</b>	<b>10,542,844</b>	<b>1,137.62</b>	<b>44,666,311</b>	<b>2,389</b>	<b>3,464</b>	<b>45.00</b>
Japan	18.20	844,499	115.07	5,059,495	471	283	-40.00
South Korea	180.00	6,823,183	703.11	26,289,867	939	2,159	130.00
UK	5.00	211,482	40.00	1,637,116	27	96	255.00
US	42.00	1,807,059	176.69	7,743,367	500	525	5.00
<b>Wrought tungsten exports</b>	<b>62.00</b>	<b>2,527,019</b>	<b>496.20</b>	<b>19,830,996</b>	<b>1,201</b>	<b>1,321</b>	<b>10.00</b>
Japan	40.00	1,614,116	236.50	9,310,423	656	591	-10.00
Taiwan	-	-	20.00	819,293	20	48	140.00
UK	-	-	18.00	734,090	64	77	20.00
US	10.00	417,433	160.00	6,439,099	284	398	40.00
<b>Unwrought tungsten exports</b>	<b>137.29</b>	<b>8,556,460</b>	<b>644.66</b>	<b>42,312,913</b>	<b>1,392</b>	<b>1,496</b>	<b>7.50</b>
Japan	45.63	2,461,978	259.35	14,138,165	609	563	-7.50
Russia	5.16	456,906	24.54	2,210,389	83	37	-55.00
UK	0.95	81,006	8.09	699,262	24	22	-7.50
US	35.15	1,994,403	108.64	6,851,222	220	291	32.50

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