

Tungsten Supply and China's Export Controls

WHY EUROPE IS NOT BUILDING ITS WAY OUT

Policy Brief



Colophon

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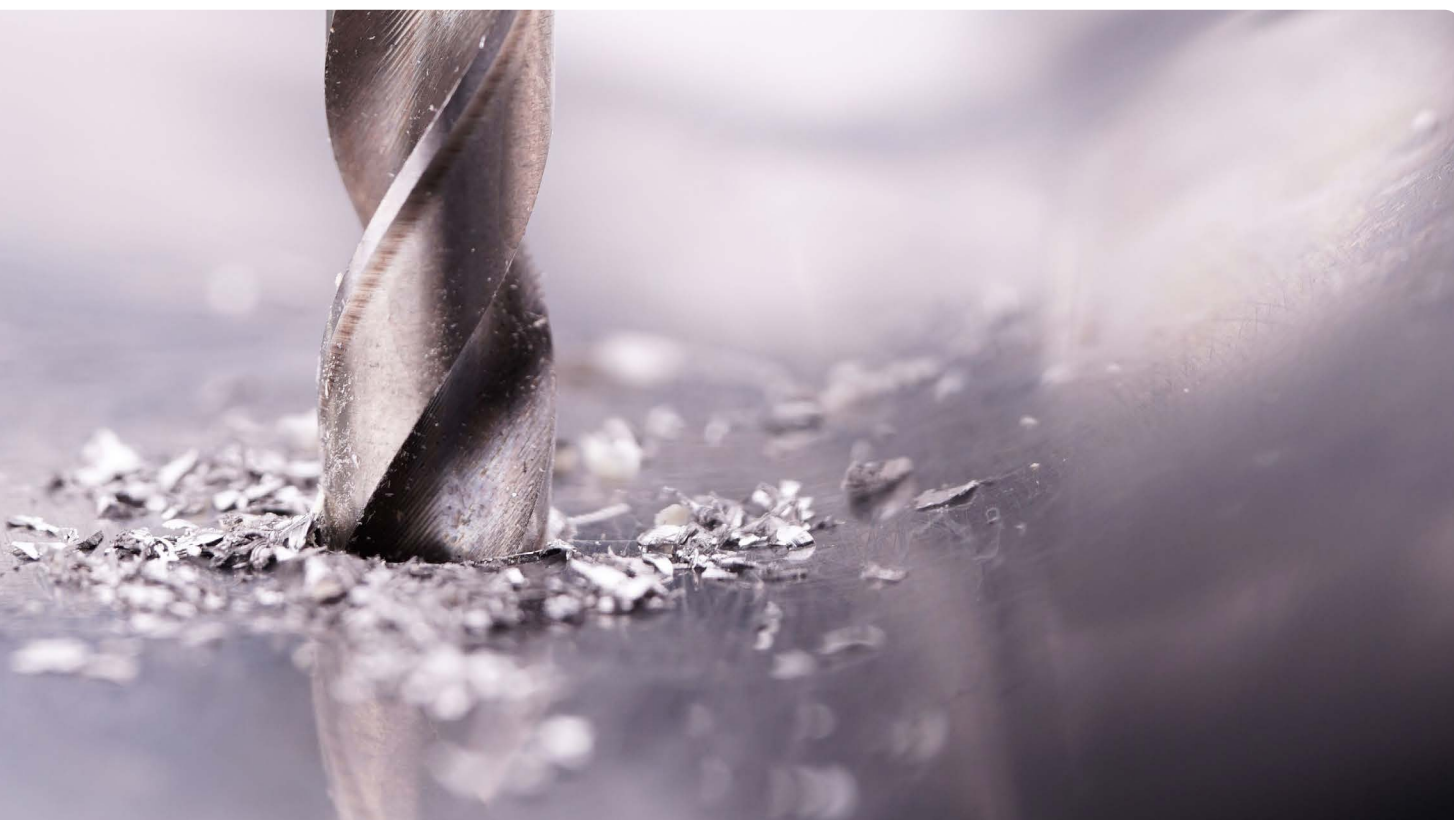
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EXECUTIVE SUMMARY

Tungsten has limited or performance-reducing substitutes at industrial scale, both for the cemented carbide tools that machine many manufactured products and for armour-piercing munitions. China mines 79% of the world's tungsten and performs about 86% of the world's processing, and the EU imports 80% of its processed tungsten. In February 2025 China placed tungsten exports under licensing, and in January 2026 it prohibited dual-use exports to Japan for military end-uses. European prices rose roughly ninefold between February 2025 and June 2026.

Prices inside and outside China diverged in the spring of 2026. Chinese domestic prices peaked in March and by June had fallen by about half, while European prices were down only 3.2% from their peak. This has created a de facto two-tier market in which Chinese manufacturers buy tungsten at a fraction of what their European competitors pay.

Europe faces three risks. The first is restriction. The export controls of February 2025 remain in force. The second is oversupply. China's control of supply works in both directions: it restricts supply today but can produce oversupply tomorrow. Between 2014 and 2018, Chinese supply at below-cost prices led to the bankruptcy of Western projects. That prospect makes new non-Chinese capacity difficult to finance. The third is competition. From 1 January 2027, US defence contracts may not contain tungsten mined, refined or produced in

China, Russia, Iran or North Korea. After that deadline, scarce non-Chinese supply will divert toward US buyers. The United States, Japan and South Korea are each more pro-active in solving tungsten supply issues than the EU, and because all four buy from the same non-Chinese supply, the EU will be last in line when supply becomes even more constrained.

New mining projects solve the wrong problem: a new mine produces concentrate, and concentrate must still be processed in plants that are overwhelmingly Chinese. The main constraint on European processing investment is financing risk, more than geology or permitting. Policy should therefore address demand certainty and financing risk. We make five recommendations.

Tungsten is already among the best-recycled critical raw materials in Europe. Nevertheless, the EU should create more demand for recycled tungsten through procurement and reconditioning standards. Tungsten scrap exports should be monitored and, if necessary, regulated, to keep scrap available to European recyclers. The tungsten market lacks a long-term contract counterparty. Defence procurement, a fast-growing consumer, is ideally positioned to become that counterparty. Price floors and long-term offtake commitments should make non-Chinese processing capacity financeable. Finally, a coordinated tungsten stockpile should be implemented, with allocation priorities agreed upon in advance.

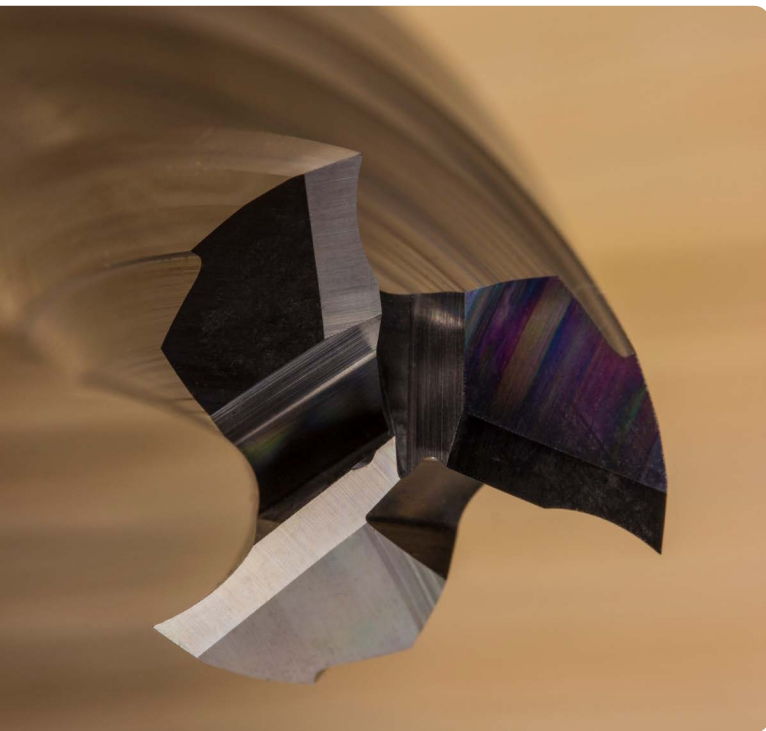


TUNGSTEN SUPPLY UNDER PRESSURE

“Every missile fired over Iran is burning through US tungsten stocks,” ran one headline in March 2026 (Home, 2026). The war raised concern about several materials whose production and export were constrained by the blockade of the Strait of Hormuz, among them helium (Sprecher & Bos, 2026) and sulphuric acid. Tungsten’s constraint, however, is different in origin: it comes not from the blockade but from China’s position in the supply chain, and it will therefore outlast the reopening of the strait (Williams, 2026). As one observer put it, “Helium can be sourced from the U.S. or Russia. Tungsten can only come from China” (Han, 2026a).

This report explores the supply chain of tungsten from the perspective of European resilience, noting that the West lost much of its tungsten industrial capacity in the past decades. In particular, between 2014 and 2018, prices below Western production cost halted projects and forced the closure of mines. For example, Hemerdon in the UK, the largest new Western mine of its generation, failed in 2018 (Tang et al., 2020; European Commission, 2020). The report first describes tungsten’s applications and the structure of its supply chain, then the export controls of 2025 and 2026 and the limits of alternative supply, and closes with the policy context and five recommendations.

Tungsten’s constraint comes from China’s position in the supply chain, and it will therefore outlast the reopening of the strait.



Tungsten melts at around 3,420°C, a higher temperature than any other metal, and keeps its tensile strength beyond 1,650°C. The metal itself is therefore used in superalloys and other high-temperature parts. Tungsten carbide and cemented tungsten carbide are valued for hardness and wear resistance rather than heat resistance. These carbides cut, drill and shape many of the machined products in industrial use, and account for 65% of world tungsten consumption (see previous page for tungsten use and end-use). The same density and hardness make tungsten a defence material, used in kinetic energy penetrators, warheads and counterweights (Pavel & Tzimas, 2016). NATO lists it among its twelve defence-critical raw materials (NATO, 2024).

The EU's 2015 criticality assessment scored tungsten's substitutability between 0.7 and 1.0, where 1.0 means no substitute exists (Bilewska et al., 2016). Despite over 90 years of research, a 2015 review found no better available combination of hard carbide and metallic binder than tungsten carbide combined with cobalt (Ortner et al., 2015), which itself is also on the EU critical raw materials list (Pavel & Tzimas, 2016). Ceramic tools can replace cemented carbide inserts in high-speed finishing and semi-finishing, but they are too brittle for rough machining (Grigoriev et al., 2019). Nevertheless, high prices are inducing substitution: US drill-bit manufacturers are reverting from carbide to steel and accepting poorer performance (Mukherjee, 2026).

In the semiconductor industry, the current standard in memory and logic chips is tungsten film, deposited from tungsten hexafluoride gas. Molybdenum is already replacing part of this tungsten in NAND chip mass

production (Han, 2026a, 2026b). However, we note that molybdenum is subject to the same February 2025 Chinese export controls as tungsten (MOFCOM, 2025).

Semiconductor exposure to the controls is already visible: Japanese producers of tungsten hexafluoride supply about a quarter of the world market and have warned customers of output cuts in the second half of 2026, because China's export controls have made the tungsten feedstock difficult to obtain (Han, 2026a). Qualifying a replacement supplier typically takes more than eighteen months (Han, 2026a).

The war in Iran reduced existing tungsten-containing defence stocks (Home, 2026). Defence consumption was 8% of world end-use in 2021 (see previous page). Market estimates put it at about a tenth in 2025 and around 12% by mid-2026, with roughly 15% expected between 2027 and 2028 (Home, 2026; Shivaprasad & Choubey, 2026). If the trend continues, defence could replace the automotive sector as the largest consumer of tungsten by the mid-2030s (Shivaprasad & Choubey, 2026). The Pentagon has asked its industrial base for proposals to mine, process or recycle thirteen critical minerals, including tungsten (Scheyder, 2026). Military buyers can afford to outbid civilian users, which endangers supply to semiconductors, circuit boards and solar panels (Home, 2026).

If export controls persist, rearming militaries and growing civilian demand (photovoltaic tungsten wire alone required an estimated 4,500 tonnes in 2025, almost triple the year before; CTIA, 2025) will compete for a supply that in the short term is difficult to expand quickly. If export controls ease and prices fall, a repeat of 2014–2018 is plausible: Chinese supply at prices below Western production cost. The latter prospect is what deters investment in new European capacity (Tang et al., 2020).

Tungsten as a critical material

World mine production was approximately 85,000 tonnes of tungsten in 2025, of which China produced 67,000 tonnes (79%). Reserves exceed 4.7 million tonnes, of which China holds 53% (USGS, 2026). China's own resource base is declining: average ore grades have fallen from about 0.42% to 0.27% in two decades (CTIA, 2025). The EU mined an estimated 2,340 tonnes in 2025, in Austria, Spain and Portugal (USGS, 2026), and depends on imports for 21% of its tungsten at the extraction stage and 80% at the processing stage (European Commission, 2025a). Tungsten has been on every EU critical raw materials list since 2011 (European Commission, 2020; Payne, 2026).

The Uses of Tungsten

Fig. 1a | Tungsten consumption by first use

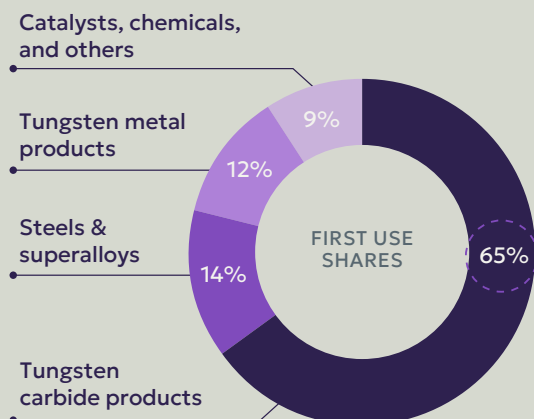


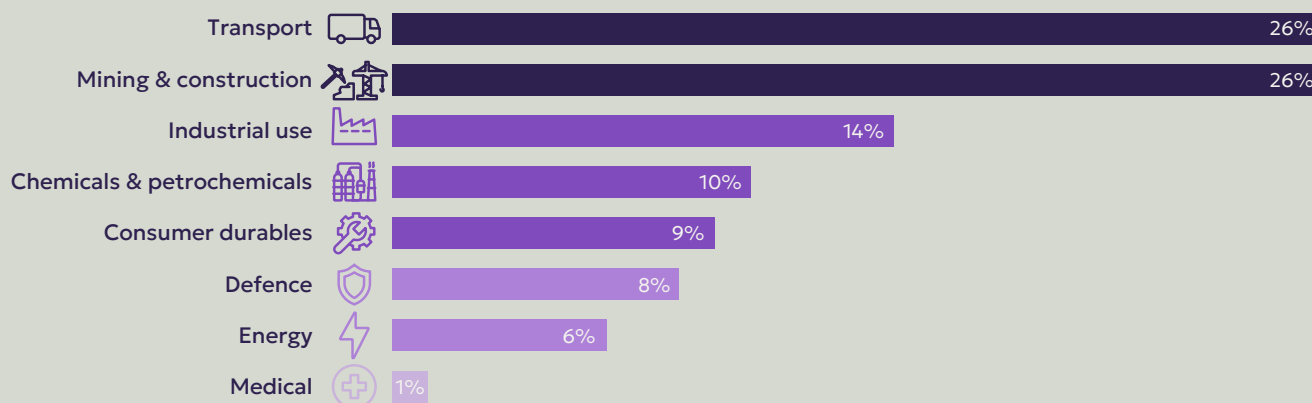
Fig. 1b | Tungsten carbide consumption by application

TUNGSTEN APPLICATIONS	TONNAGE	ECONOMIC VALUE
Stone-working	26%	10%
Wood & plastic machining	26%	10%
Metalcutting	22%	65%
Wear parts	17%	10%
Chipless forming	9%	5%

Fig. 2 | Tungsten end-use by region

China 36%	USMCA (US, Mexico, Canada) 17%	Rest of world 11%
Europe 20%	Japan 8%	Other Asia 8%

Fig. 3 | Tungsten end-use by industry



Industry statistics distinguish between first use (the material a tungsten intermediate is first processed into, Fig. 1a) and end use (the industry in which the product is finally applied, Fig. 3). More detail on tungsten carbide applications is given in Fig. 1b, and the regional distribution of end use in Fig. 2.

Fig. 1a & 1b | Tungsten consumption by first use

Tungsten is consumed in high-speed steels that contain 1.5–20% tungsten, hot-work steels up to 18%, cold-work steels up to 3% (data for 2008); turbine-blade superalloys up to roughly 10% (data from 2017); about 95% of high-speed steel is used for machining tools. Tungsten metal products consist of wire, welding electrodes, heavy alloys for ammunition and counterweights. Tungsten carbide mostly goes to cutting and wear tools. Note that tungsten carbide data is for 2010.

Fig. 3 | Tungsten consumption by end-use industry

Automotive is responsible for about three quarters of ‘transport’ sector demand. This makes it the single biggest tungsten-consuming industry, mainly in the form of carbide tools for machining and forming. The ‘mining and construction sector’ is 62% mining, with the balance going mainly to tunneling and road milling. ‘Chemicals and petrochemicals’ consists mainly of catalysts and ‘consumer durables’ is mainly tungsten metal products. Finally, the 8% market share for defence in 2021 has significantly changed in recent years, reaching around 12% by mid-2026 and ~15% projected for 2027-28. Defence is mainly tungsten metal products, notably heavy alloys.

Disclaimer: All data in this box are from ITIA, except where noted otherwise.

THE STRUCTURE OF THE SUPPLY CHAIN

The tungsten market is small. In tonnage terms, the combined capacity of the entire mining industry is the size of a single copper mine (ITIA, n.d.), and Vietnam, the second producer, mines less than a twentieth of China's volume (USGS, 2026). The market is an estimated \$16 billion in 2026. As of 2026, the tungsten market has no futures exchange and therefore no hedgeable forward price (Attwood et al., 2026).

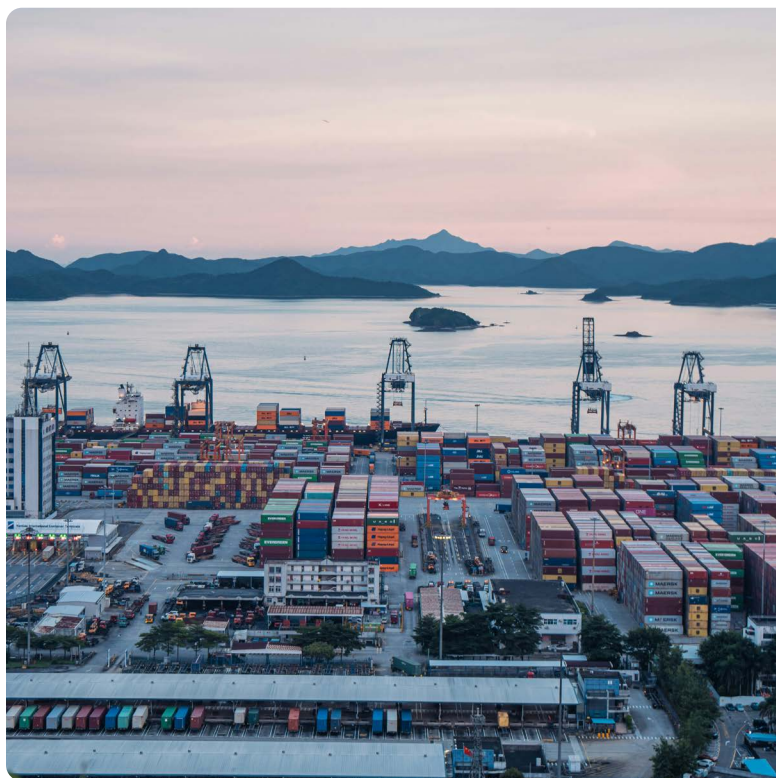
Mine concentration is nevertheless not the main problem. The chokepoint is one step downstream, where concentrate is processed into ammonium paratungstate (APT) and then into oxides, powders and carbide. Nearly all tungsten products are made from APT. China performs about 86% of the world's tungsten processing (CBS, 2025).

Europe is the largest consumer of imported tungsten resources. Its net imports nearly tripled between 2000 and 2018, and it is among the most vulnerable economies in trade-network models of a Chinese supply disruption (Tang et al., 2023; Zheng et al., 2025). As of 2020, the European processing base consisted of processing facilities in Austria and Germany, which together produced an estimated 8,000 tonnes of processed tungsten (European Commission, 2020; TNO, 2025). High energy costs are forcing the closure of European plants (Payne, 2026).

China has also been climbing the value chain. Final products rose from 54% of its tungsten exports in 2001 to 80% in 2019 (Liang et al., 2022), and the country now imports raw material on a large scale: in the first two months of 2026, concentrate imports rose by more than 150% year on year while exports of smelted products fell 28%, making China a net importer of tungsten for the period (SMM, 2026). The strategy is clear: buy the ore, keep the processing, sell the products.

How China manages tungsten

China has treated tungsten as a strategic mineral for decades, with extraction quotas since 2002, a "Total Amount Control" system from 2012, and a ban on foreign investment in tungsten mining (Wang et al., 2022; Liang et al., 2022). The 2025 mining quota was cut 6.5%. By August 2025, mine operating rates were below 35% and spot inventories covered about two weeks (CTIA, 2025). China also buys ore abroad. Tungsten ore became its second-largest import from North Korea in early 2026, at 4.7 times the previous year's level (Reuters, 2026).



THE EXPORT CONTROLS OF 2025 AND 2026

The February 2025 announcement (MOFCOM No. 10) put APT, tungsten oxides, tungsten carbide and solid tungsten, and tungsten-production technologies under export licences. The export control parameters happen to be consistent with dense tungsten-nickel materials used in military applications: the list specifies dense tungsten-nickel alloys by density (above 17.5 g/cm³), tensile strength and elasticity (MOFCOM, 2025).

Chinese APT exports fell from 782 tonnes in 2024 to 243 tonnes in the first eleven months of 2025. No APT was exported at all in the first two months of 2026 (Cao, 2026; SMM, 2026). Exports of all controlled tungsten products fell about 40% (Attwood et al., 2026).

A second export control, in January 2026, followed a dispute over Japanese government statements on Taiwan, and prohibited dual-use exports to Japan for military end-uses, with legal liability extending to re-transfers through third countries (MOFCOM, 2026; Cao, 2026). One Chinese producer described pausing all APT shipments to Japan (Cao, 2026). According to Japan's Ministry of Finance, April 2026 Japanese imports of three tungsten-related products under Chinese controls, including tungstates, fell 63% compared with April 2024, before the export controls were introduced (Ge, 2026). Carbide and powder suppliers reported delivery backlogs of months, and buyers began approaching mines directly to secure ore for their own processing (Patel-Campbell, 2026).

Tungsten prices, Feb 2025 – June 2026

The divergence between Chinese domestic and European prices following export controls has created a de facto two-tier market in which Chinese manufacturers buy tungsten at a fraction of what their European competitors pay, a structural cost advantage on top of a supply risk.

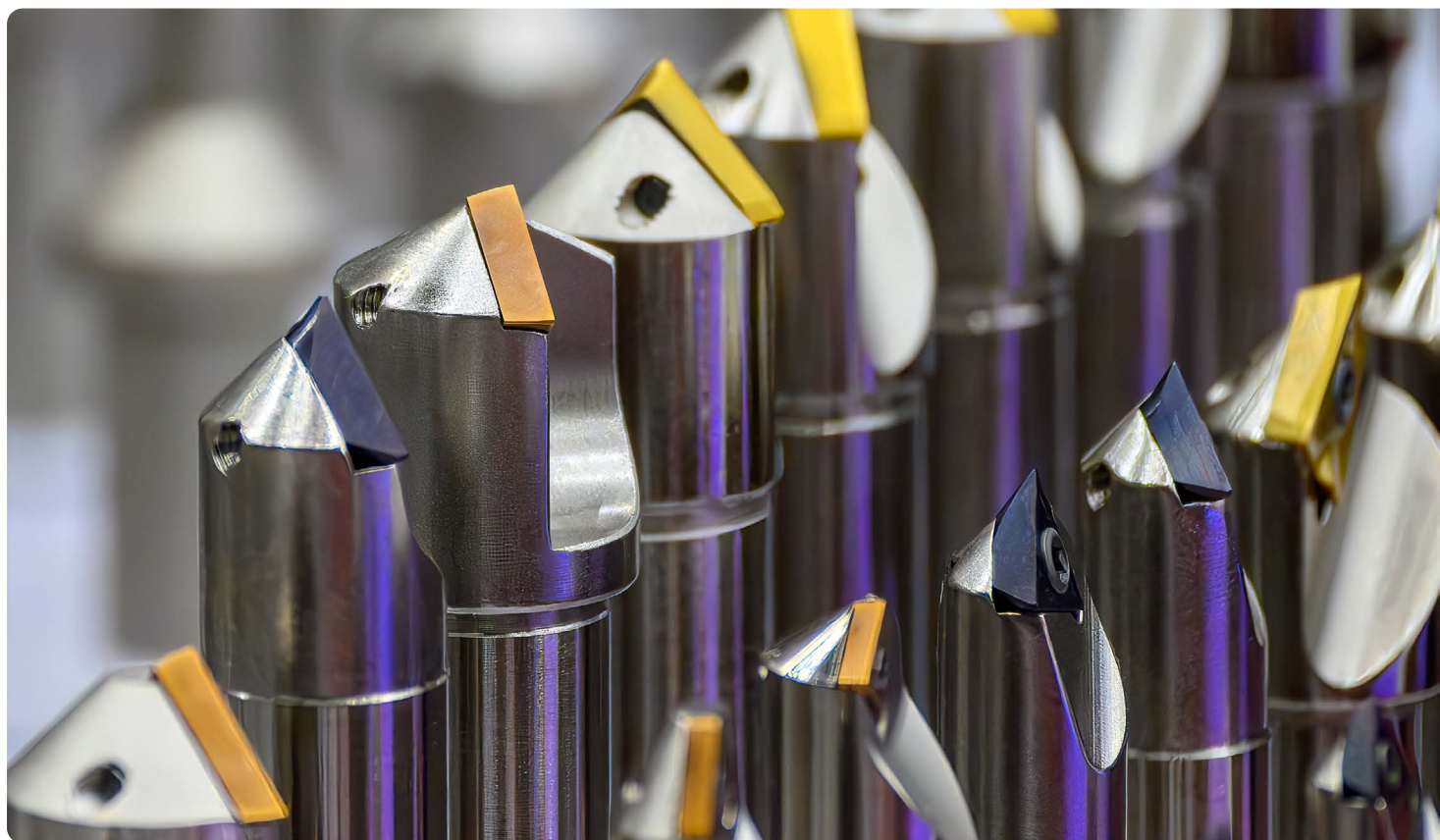
The European APT spot price rose roughly ninefold between the February 2025 announcement of the controls and June 2026. The quoted prices were \$330-355 at the time of the announcement, \$2,250 by March 2026, \$2,800-3,289 in April 2026, and \$2,900-3,180 in early June 2026, in dollars per metric tonne unit (mtu) delivered in Rotterdam (Attwood et al., 2026; Nguyen, 2026; CTIA, 2026b). Note that these are spot assessments on a thin market, while most of the volume is covered by longer contracts whose prices generally adjust more slowly. Ferrotungsten, the steelmaking alloy and a separate market, rose more than fourfold in a year (Patel-Campbell, 2026).

By June 2026, Chinese domestic prices had corrected sharply from their March peak, and scrap prices had fallen by half. However, the European spot price barely moved and in June 2026 was only down 3.2% from its peak (CTIA, 2026a, 2026b).

ALTERNATIVE SUPPLY AND ITS LIMITS

Mine production outside China rose 20% in 2025, to 18,000 tonnes. Much of this increase is from the new Boguty mine in Kazakhstan (USGS, 2026), although we note that this mine is Chinese-led. Another recent addition is a restart: the Sangdong mine in South Korea, closed in 1994 (Nikkei Asia, 2024), resumed production in March 2026 with a capacity of roughly 2,300 tonnes of tungsten in concentrate per year and a planned doubling in 2027 (Almonty, 2026). However, Masan High-Tech Materials in Vietnam, one of the largest producers outside China, mined 9% less in 2025 (Nguyen, 2026). The Masan Group intends to sell the mine, and two Chinese companies have asked foreign firms to act as proxies in bidding for a stake (Guarascio & Nguyen, 2025). European capacity is small by comparison (see box). The Canadian Almonty Industries, the largest tungsten mining company outside China, owns Sangdong as well as mines in Spain and Portugal (Stutt, 2025). Two of the EU's three producing mines therefore belong to the same company.

In sum, mine production outside China is growing, but the largest new mine is Chinese-led and one of the largest existing producers may pass into Chinese ownership. New capacity outside China is therefore not necessarily capacity in the European sphere of influence.



Tungsten mining in Europe

Three mines produce tungsten in the EU. Mittersill in Austria, Panasqueira in Portugal and Barruecopardo in Spain mined an estimated 2,340 tonnes between them in 2025 (USGS, 2026), with Mittersill, the largest, accounting for roughly 25 to 30% of European tungsten ore production (Gleeson, 2026).

Hemerdon in the UK operated from August 2015 to October 2018 (MDO, n.d.-a). Its operator entered voluntary administration after spending about £130 million, having suffered from processing problems and tungsten price volatility (Adam, 2018). The successor company, Tungsten West, secured a \$25 million bridging loan in May 2026 and expects full commissioning in Q1 2027 (Tungsten West, 2026).

Two Spanish tungsten projects, El Moto (extraction) and P6 Metals (the La Parrilla deposit; integrated extraction and processing), were designated Strategic Projects in March 2025 (European Commission, 2025b). At planned capacity, P6 Metals would correspond to roughly 30% of EU tungsten consumption and El Moto to roughly 20% (TNO, 2025). In addition, a number of dormant and care-and-maintenance assets exist, such as the Los Santos mine in Spain, on care and maintenance since February 2020 (MDO, n.d.-b).



Some 70 tungsten mining projects, with a combined investment value of \$6.9 billion, are active worldwide (IIR Energy, 2026). The response to sharply increased demand, however, is slow: advanced projects need about two years to reach the market, and new discoveries up to a decade (Attwood et al., 2026; Patel-Campbell, 2026). And it solves the wrong problem: a new mine produces concentrate, and concentrate must still be processed in plants that are overwhelmingly Chinese. Only two non-Chinese refined-supply projects have been announced worldwide (Nguyen, 2026).

Europe's existing strength is in recycling rather than mining. Tungsten has a recycling input rate of 35% globally (Zeiler et al., 2021) and a recycling ratio of 42% in the EU (CBS, 2025), which places it among the best-recycled critical raw materials. Recycled carbide returns as feedstock of virgin quality, and recycling high-quality scrap needs roughly a third of the energy of primary production (Zeiler et al., 2021; Shemi et al., 2018). Cutting tools, the largest application of tungsten, reach about 55% end-of-life recycling, and the major producers consider more than 80% achievable (Zeiler et al., 2021). European recycling capacity is growing: Mitsubishi Materials, which acquired the German recycler H.C. Starck in 2024, plans to increase its European tungsten recycling capacity by half by 2031 (TNO, 2025).

The recycling feedstock is contested. Chinese scrap traders have been outbidding domestic recyclers in the United States, in some cases at premiums of several times the market price (Chen, 2026). After the January 2026 controls, Japanese manufacturers also began buying tungsten scrap from the United States, Singapore and Europe. US scrap exports to Japan rose 24-fold year on year in the first quarter of 2026 (Ge, 2026). In August 2026, the United States announced a one-year ban on exports of tungsten scrap, with national security as the stated reason, although exporters can apply for exemptions (Ritchie & Lee, 2026).

For European recyclers, the constraint is therefore access to scrap, not processing technology.

There are also physical limits to recycling rates, due to dissipative use cases: tungsten fired in munitions is generally not recoverable, tungsten in dispersed small products is rarely collected, tungsten in electronics is present as ultra-thin layers and is not recycled, and tungsten in the general steel-scrap stream disappears by dilution (Zeiler et al., 2021).

THE POLICY CONTEXT

Tungsten has been on the EU critical raw materials list since the first list in 2011 and is a strategic raw material under the Critical Raw Materials Act (European Commission, 2020; Payne, 2026). EU conflict-minerals rules also cover tungsten, but as a due-diligence framework for provenance and conflict risk rather than a supply-security tool (European Commission, 2020; OECD, 2016). The CRMA sets EU-level 2030 benchmarks of 10% extraction, 40% processing and 25% recycling. In December 2025 the Commission proposed REsourceEU, with €3 billion to fast-track strategic projects. In May 2026 the EU shortlisted tungsten for its first coordinated strategic stockpile, together with rare earths and gallium, with talks under way with ports including Rotterdam (Jamasmie, 2026).

The United States has responded faster. A 25% tariff on Chinese tungsten took effect at the end of 2024 (USTR, 2024). Project Vault, announced in February 2026, is a \$12 billion public-private minerals reserve (Payne, 2026; Patel-Campbell, 2026). The Department of Defense funds mine studies and small military refineries (Home, 2026; Scheyder, 2025). The United States has committed up to \$1.6 billion in export-credit and development finance to a second Kazakh project, with a planned capacity of 12,000 tonnes per year, roughly 15% of current world mine output (Williams, 2026).

Crucially, from 1 January 2027, US defence contracts may not contain tungsten mined, refined or produced in China, Russia, Iran or North Korea (Patel-Campbell, 2025). After that deadline, scarce non-Chinese supply will divert toward US buyers: 45% of Sangdong's initial output was committed to the United States before the mine reopened, and the US Defense Logistics Agency has flagged interest in 1,700 tonnes of concentrate (Nikkei Asia, 2024; Patel-Campbell, 2025).

For tungsten from outside China, Europe therefore competes with Washington as well as with Beijing.

South Korea and Japan have also established national strategies. South Korea has pursued domestic production, diversification, stockpiling and recycling, aiming to cut its dependence on Chinese supply from 70% to 50% by 2030 (ORF, 2026). The Japanese government now treats tungsten dependence as an economic-security vulnerability and addresses it through subsidies under its Economic Security Promotion Act (Ge, 2026). Japan maintains JOGMEC stockpiles (ORF, 2026) and already buys tungstates from Taiwan and Vietnam alongside China (Cao, 2026). Japanese industry is also investing: Sumitomo Electric is spending \$100 million on a new tungsten plant that will raise its supply capacity by 50%, alongside an expansion of domestic recycling, with Japan's trade ministry covering nearly



half the cost (AsiaBits, 2026). Nevertheless, Sumitomo Electric has raised prices for some cutting tools by up to 60% (Ge, 2026). This illustrates that even well-prepared countries face costly adjustments.

The Netherlands is the EU's fifth-largest tungsten importer and the third-largest from outside the EU, with €146 million of gross imports in 2024, but only 7% stays on the Dutch market. The rest moves through in transit or re-export (CBS, 2025). The real Dutch role is that of a distribution hub: European benchmark prices are assessed for delivery in the harbour of Rotterdam (Patel-Campbell, 2026), which is also among the candidate ports for the EU's coordinated stockpile (Jamasmie, 2026). Domestic use is mostly consumables (catalysts, welding electrodes, machining tools), and several Dutch firms trade tungsten scrap (TNO, 2025). For Dutch defence, an HCSS analysis of an air-defence frigate rates tungsten, used among other things in missiles, a medium-likelihood supply risk, and recommends contingency planning, stress testing and procurement requirements (HCSS, 2024). As far as we are aware, no tungsten-specific stockpile, scrap-retention measure or recycling instrument exists in the Netherlands or elsewhere in the EU.

POLICY RECOMMENDATIONS

In February 2026 the European Court of Auditors concluded that EU diversification efforts had “yet to produce tangible results” (Payne, 2026), indicating that fundamental problems deterring European investment in the tungsten supply chain persist.

Europe faces three risks. First, restriction: China placed tungsten exports under licensing in February 2025. Second, oversupply: investors in new non-Chinese

capacity face the risk that China again reduces prices to unsustainable levels, as it did between 2014 and 2018 (Tang et al., 2020; Belda, 2025). Third, competition: the United States, Japan and South Korea are each more pro-active than the EU in addressing the first two risks. Because all four buy from the same non-Chinese supply, relatively slower European response means that the EU will be last in line when supply becomes even more constrained. We therefore make five recommendations.



Create demand for recycled tungsten.

Tungsten is among the best-recycled critical raw materials, but demand to further increase recycling rates is lacking. Public procurement should give preference to tools with recycled tungsten content and to suppliers operating take-back schemes. EU standards for refurbished and remanufactured tooling would potentially enable reuse, and support for qualifying recycled powder would speed its return to production (Zeiler et al., 2021).



Use defence procurement to give the market demand certainty.

Mining and processing projects need long-term contracts, and defence ministries are best placed to sign them. Defence procurement agencies should assess their tungsten exposure at the level of semi-finished components rather than raw materials (HCSS, 2024; Pavel & Tzimas, 2016), aggregate multi-year volume commitments for European-qualified material, and begin qualifying non-Chinese feedstock now, because from January 2027, US sourcing restrictions are likely to divert Western supply toward US buyers (Patel-Campbell, 2025).



Implement the coordinated stockpile as a safeguard, designed against the price cycle.

In the short term, and to protect against immediate constraints, EU-coordinated national stockpiles of APT and carbide powder should be established. These stockpiles should be drawn down only for physical shortage among priority users, not to reduce prices. Allocation priorities for defence and semiconductor production should be agreed upon in advance. Coordinating purchases and releases with the US, Japan and South Korea would reduce the risk that allied buyers bid against each other.



Keep scrap available to European recyclers.

Japan increased its resilience in part by importing European scrap, and scrap exported from Europe reduces the feedstock available to European recyclers. Given the bidding pressure on scrap described above, tungsten scrap exports should be monitored and, if necessary, made subject to some form of regulatory controls. The United States announced an outright ban on tungsten scrap exports in August 2026 (Ritchie & Lee, 2026). For aluminium scrap, the EU was reported in June 2026 to be preparing a 15% export levy, the first charge it would place on goods leaving the bloc (Bounds, 2026). This creates an EU precedent for applying the same logic to tungsten.



Make non-Chinese processing capacity financeable.

The main constraint on European processing investment is financing risk, more than geology or permitting. Various instruments could be implemented, including price floors or contracts-for-difference for European APT and carbide-powder capacity, multi-year offtake commitments related to public and defence procurement, and energy-cost relief for critical raw material processing. Financing is harder still because tungsten has no futures exchange. A futures exchange allows a producer to sell part of its future production at a fixed price, so that part of the revenue is certain before the mine or plant is built. For tungsten this is not possible. Revenue remains uncertain, and lenders have no forward price against which to underwrite loans (Attwood et al., 2026). Where tungsten projects hold Strategic Project status under the CRMA (European Commission, 2025b), the fast-track permitting that status entails (Jamasmie, 2026) should proceed on schedule.

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