

April 1, 2025

Bureau of Industry and Security, Office of Strategic Industries and Economic Security, U.S.  
Department of Commerce

Submitted electronically via <https://www.regulations.gov/>

Re: Rio Tinto Comment on Bureau of Industry and Security Request for Public Comments on  
Section 232 National Security Investigation of Imports of Copper (BIS-2025-0010).

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Rio Tinto sincerely appreciates the opportunity to provide comments in response to the U.S. Department of Commerce, Bureau of Industry and Security's (BIS's) request for public comment on its initiation of an investigation into imports of copper under Section 232 of the Trade Expansion Act of 1962 (Section 232).<sup>1</sup> Rio Tinto commends the Trump administration's efforts to revitalize the U.S. copper industry and combat non-market practices. Rio Tinto also applauds BIS's commitment to investigate this issue, so that the Trump administration can better understand the challenges facing the U.S. copper industry and the critical role that it plays in contributing to U.S. economic and national security.

Rio Tinto is the world's second biggest miner by market value and has been operating in the U.S. for over 120 years. Rio Tinto operates in 35 countries spanning the globe, where it produces iron ore, copper, aluminum, lithium, borates, critical minerals and other materials needed to power modern economies and support the manufacturing and defense industrial base. Although Rio Tinto is dual-listed in Australia and the United Kingdom, the United States is among Rio Tinto's most important markets. The company's robust operations in the United States reflect its deep commitment to America, including mines, processing, projects, offices and joint ventures across Arizona, California, Illinois, Indiana, Kentucky, North Carolina, Ohio, Wisconsin, Nevada, Michigan, and Utah. The U.S. headquarters in Salt Lake City, Utah hosts support for the future of U.S. copper operations, including a robust exploration department and technology center developing cutting-edge copper processing. Rio Tinto has a strong desire to continue to invest in the United States, particularly in copper—with the right market conditions.

Through these comments, Rio Tinto hopes to contribute to BIS's understanding of the global copper industry and market, the challenges currently facing the U.S. copper industry, and what actions BIS and the Trump administration can take to achieve the administration's objective of reinvigorating the U.S. copper industry to enhance U.S. economic and national security. In the discussion below, Rio Tinto addresses each of the regulatory criteria under 15 C.F.R. § 705.4 for determining the effect of copper imports on U.S. national security, as requested by BIS in its notice requesting public comment.<sup>2</sup>

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<sup>1</sup> *Notice of Request for Public Comments on Section 232 National Security Investigation of Imports of Copper*, 90 Fed. Reg. 11940 (Mar. 13, 2025).

<sup>2</sup> *Id.* Specifically, information related to criteria (i) through (iii), (v) and (vi) as set out in BIS's notice are addressed in Section II of these comments. Criteria (iv) and (vii) are addressed in Section III of these comments. Criteria (viii) is addressed in Section IV of these comments. Finally, criteria (ix) is addressed in Section V of these comments.

## **I. Executive Summary**

Copper is critical to both traditional industries and emerging technologies that are likely to drive future economic growth. As an electrical conductor, copper is present anywhere that electricity is used (buildings, factories, vehicles) and is crucial to power generation and distribution networks. Artificial intelligence (AI) and defense applications are expected to become increasingly significant copper consumers while traditional applications such as consumer goods and electronics continue to grow.

By 2030, the International Energy Agency predicts that the total copper production from existing mines and mines under construction will only meet 80 percent of the world's copper needs. The United States will be a key component of this future demand growth. Failure to produce enough copper to meet America's future needs will hamper many of the Trump administration's key policy objectives, including achieving AI and energy dominance and reshoring manufacturing.

The processing of copper concentrate extracted from copper mines, via processes known as smelting and refining, is the lynchpin of the copper supply chain. These processing activities create the refined copper that is usable for myriad critical downstream derivative products. The smelting and refining processes also play an outsized role in shaping prices and market dynamics for the rest of the copper supply chain.

Currently, China produces nearly half of the world's refined copper. China builds smelters up to 500% cheaper and at least a year faster than any country in the rest of the world, and then operates these smelters at less than half the cost of smelters in the rest of the world. The low-cost advantage of Chinese copper smelters has dramatically shifted the global copper market in the process. Moreover, because many critical minerals are byproducts of copper smelting, China's critical minerals dominance also grew. These shifts led to the decline of the U.S. copper industry, especially with respect to smelting capacity. Currently, Rio Tinto operates 1 of only 2 active copper smelters in the United States at its Kennecott operation in Utah. For the Trump administration to meet its objectives, it is important that the United States have viable smelting capacity. While the capabilities to build and operate a mine are difficult to find in the United States, Rio Tinto possesses these capabilities, as evidenced by over 150 years of mining and processing worldwide, and is keen to deploy these capabilities at greater scale in the United States.

The United States has among the largest reserves of raw copper in the world, as well as plentiful copper scrap that can be recycled and used as feedstock to create refined copper (i.e., copper cathode). However, U.S. smelting capacity has declined significantly. The result has been a gaping mismatch between U.S. production capacity for copper feedstock (i.e., copper concentrate and copper scrap) and copper smelting capacity. Consequently, the United States exports much of the copper feedstock that it produces for smelting and refining, much of it to China. This mismatch dynamic has made investment in additional smelting capacity in the United States challenging. Rio Tinto has experienced this investment suppression first-hand with respect to its Kennecott smelting facility in Utah and has observed the impacts of these

practices in the context of the currently-shuttered Hayden smelting facility in Arizona. Rio Tinto, however, continues to believe in the importance of smelting capacity in the United States for our customers and has recently invested over \$700 million to maintain and improve its Kennecott smelter.

Due to the serious mismatch between production of copper feedstock and smelting capacity, the United States is currently reliant on imports for approximately half of its supply refined copper. Chile is the top foreign supplier of refined copper to the United States, supplying nearly 70% of U.S. refined copper imports. Chile is followed by Peru, Canada and Mexico as the top U.S. foreign suppliers.

The United States' significant import reliance for refined copper creates serious vulnerabilities to the U.S. economy and national security. These vulnerabilities can be grouped into three categories. The first category of vulnerability is the risk of diversion of supply from these key foreign suppliers to other countries. The second category of vulnerability relates to the risk of a reduction of smelting capacity—and therefore, production of refined copper—in these foreign markets. If refined copper production in these key U.S. foreign suppliers decreased (or substantially lagged behind rising demand), U.S. downstream users of refined copper could face a supply shortage and/or higher prices. The third category of vulnerability relates to risks from logistical issues associated with transport of refined copper. For example, disruptions due to reduced throughput in the Panama Canal caused by drought conditions—through which 95% of U.S. seaborne refined copper imports flowed in 2023—or large ocean swells that interfere with Latin American port operations, could lead to production delays and other operational disruptions to downstream U.S. derivative product manufacturers. If any of the above scenarios materialize, it could lead to increased U.S. dependence on non-domestic sources of refined copper.

Despite these challenges, the United States has the ability to reduce its import dependence and achieve effective self-sufficiency in the copper industry. According to a study conducted by S&P Global Market Intelligence in 2024, if the United States were to quickly bring online its top three domestic sources of copper concentrate, including Rio Tinto's Resolution Copper project, and assuming commensurate investment was made in ramping up domestic smelting capacity to allow for conversion of this new supply of copper concentrate into refined copper, the United States could increase its production of refined copper by 70%. In that scenario, the United States would be capable of producing enough refined copper to satisfy U.S. demand for the foreseeable future.

While Rio Tinto commends BIS's investigation under Section 232 as a positive step, a whole-of-government approach that also spans actions in other policy domains will be necessary to achieve the administration's objective of securing the U.S. copper supply chain. If the Trump administration determines that imposition of tariffs on copper imports is appropriate, then Rio Tinto would suggest that such tariffs be imposed equally on both imports of refined copper and certain downstream semi-fabricated derivative products such as copper wire and copper sheet.

This broader action would ensure that the tariffs have the intended effect of encouraging domestic production, rather than simply encouraging imports to shift from refined copper to these derivative semi-fabricated products, to the detriment of U.S. producers of those derivative products. Additional measures to facilitate the revival of the U.S. copper industry that Rio Tinto would encourage the Trump administration to consider include: (1) adding copper to the U.S. Geological Survey's (USGS) Critical Minerals List; (2) expediting and/or streamlining permitting and other regulatory requirements that impede expanding copper production capacity; (3) providing tax credits or other forms of financial support to smelting operations (e.g., for capital investments); (4) implementing "Buy American" preferences in federal government procurement for products that incorporate U.S.-origin copper and/or other forms of U.S. government purchase commitments; and (5) export restrictions on domestically produced copper concentrate and scrap.

## **II. Copper Industry Background**

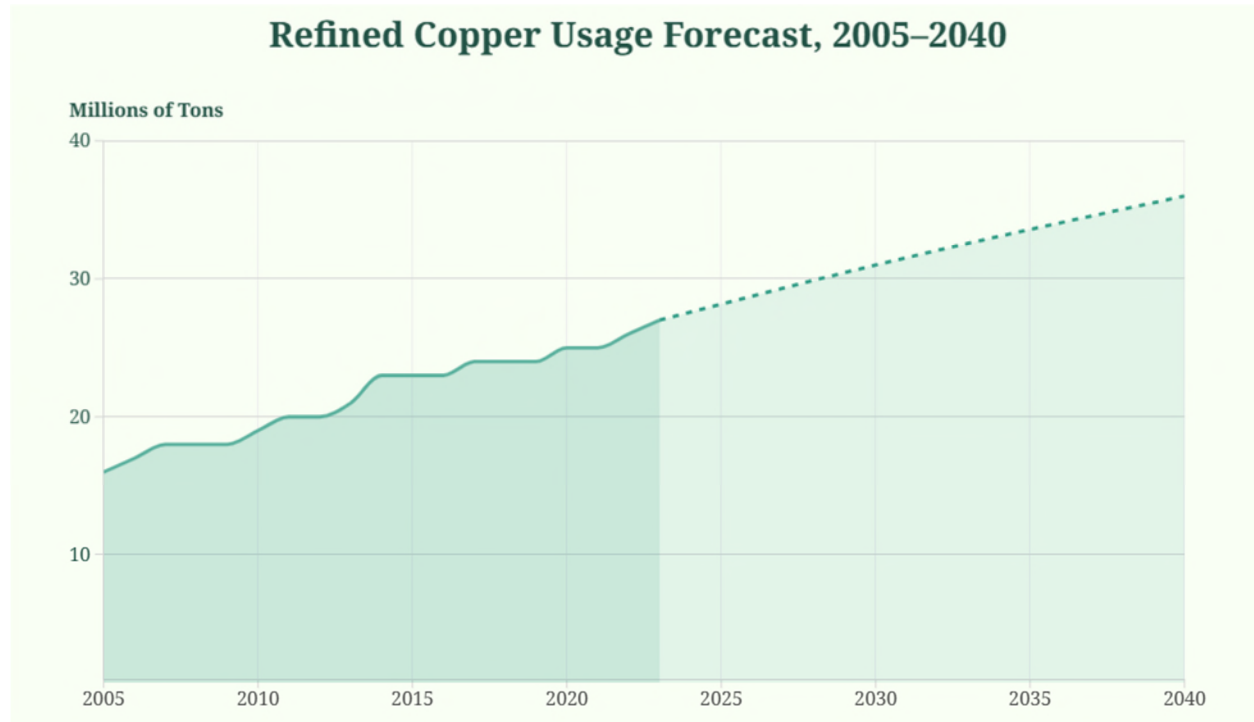
Making refined copper in America has never been more important as the world is projected to consume more copper in the next 25 years than it has in its entire history. Much of this demand will occur in the United States as it reshores manufacturing, leads the world in AI investment, and increases power generation and grid resilience to support a growing economy and larger manufacturing base.

As discussed below, on the current trajectory the ability of the United States to source the copper it needs to achieve critical policy objectives, such as energy and AI dominance and reshoring manufacturing, is in jeopardy. China leads the market on the smelting and refining processes that turn copper concentrate (or scrap) into refined copper that produces critical downstream derivative products. Consequently, the ability of the U.S. copper industry to produce the refined copper that the U.S. economy demands has experienced a precipitous decline, and investment to restore U.S. production capacity has become challenging under the current distorted global market conditions.

### **a. Global Demand Growth**

Copper is critical to both traditional industries and emerging technologies that are likely to drive future economic growth. As an electrical conductor, copper is present anywhere that electricity is used (e.g., buildings, factories, vehicles) and is crucial to power generation and distribution networks. AI and defense applications are expected to become increasingly significant copper consumers while traditional applications such as consumer goods and electronics also continue to grow.

By 2030, the International Energy Agency predicts that the total copper production from existing mines and mines under construction will only meet 80 percent of the world's copper needs.<sup>3</sup>



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Failure to secure the required copper may impair America's competitiveness in various manufacturing industries, including those critical to national security, and lead to a commensurate loss in jobs. In short, ensuring that the United States can meet its robust demand for copper in the coming years is imperative for U.S. economic prosperity and security.

## *b. Smelter Economics*

The smelting and refining process, which converts copper concentrate extracted from copper mines into useable refined copper, represents the lynchpin of the copper supply chain and plays an outsized role in shaping the dynamics of the copper market as a whole. Accordingly, understanding the economics of the smelting process is a critical predicate for formulating effective policy to address the existing distortions in the copper industry.

Most copper mines produce a copper concentrate that is approximately 25% copper through a process called flotation. Copper concentrate must be transported, sometimes great distances, to a smelter that processes the concentrate into 99% pure copper anode by removing impurities.

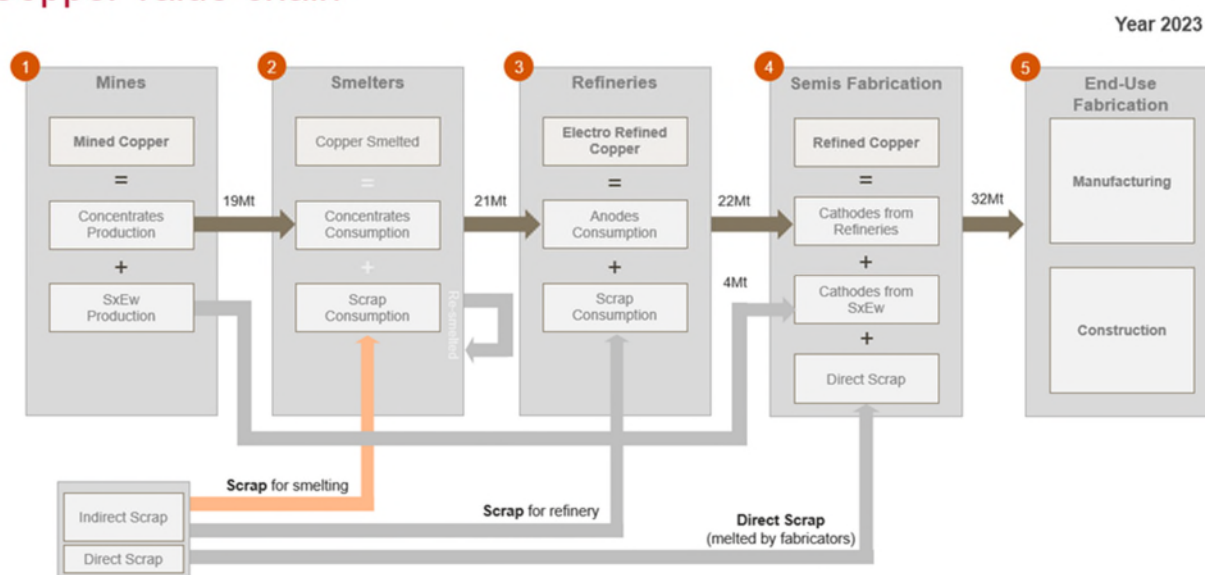
<sup>3</sup> See "The Role of Critical Minerals in Clean Energy Transitions", International Energy Agency, <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions/executive-summary> (March 2022).

<sup>4</sup> See Gracelin Baskaran et. al., "Latin America: The World's Copper Stronghold", Center for Strategic and International Studies, <https://features.csis.org/copper-in-latin-america/> (Nov. 13, 2024).

This copper anode is then transported to a refinery that removes the final impurities to produce a 99.999% pure copper cathode. Copper cathode (colloquially referred to as refined copper) is then sold and re-melted by semi-fabricators who produce a wide range of products—e.g., electrical wire for buildings and construction, magnet and motor wire for transportation and power, tube and fittings for HVAC, ammunition, coinage, etc.

As of 2024, there are 112 smelters in the world: only two of these are in America. Because other third countries mandate copper processing be performed in their countries due to its strategic importance and centrality to growing their economies, there are 14 planned new smelters globally which could add another roughly 4.7 million tonnes per annum (Mtpa) of capacity to the global total.

## Copper value-chain



There are two types of copper production operations: (1) integrated and (2) custom. Integrated operations house the mine, smelter, and refinery under one owner, and are frequently co-located. This structure has both advantages and disadvantages. On one hand, transportation costs from mine to smelter to refinery are minimal, which reduces value leakage and supports optimized transfers from one node to the next. If mine production is lower than the smelter and refinery capacity, the operation may be forced to buy additional concentrate from third parties.

Custom operations generally only occupy one node of the value chain. A custom mine does not own a smelter/refinery and therefore sells its concentrate to custom smelters that do not own mines. Custom mines and smelters enjoy greater supplier and customer flexibility, but may also be exposed to shortages or surpluses that negatively impact their profitability.

A smelter's revenue comes from multiple sources, the largest of which have historically been treatment and refining charges (TC/RCs) and revenue from sulphuric acid sales.

However, both integrated and custom smelters make money in several ways:



- a) **Treatment and refining charges** – A charge levied against the mine in exchange for treating their material in the smelter, and another charge for refining the anode into a cathode. When copper concentrate is readily available in the market, TC/RCs rise as mines fight to sell readily available material into fixed smelting and refining capacity. When copper concentrate supply is constrained, TC/RC's fall as smelters fight to fill capacity with scarcely available concentrate.
- b) **Sulphuric Acid** – Smelters produce roughly one ton of sulphuric acid for every ton of concentrate processed (or four tons per ton of copper). Sulphuric acid is a key input in the production of fertilizers for crop production. The price of sulphuric acid is highly location dependent.
- c) **Free metals** – Smelters pay for a given percentage of the copper, gold and silver present in the copper concentrate. If recoveries in the process are greater than the “payable” level, the smelter has “free metal” to sell.
- d) **Other By-products** – Trace quantities of many other elements, including many critical minerals, are present in copper concentrate, which smelters may seek to recover if economically viable. These include materials such as selenium, tellurium, lead, platinum, nickel, cobalt, rhenium and many other metals.
- e) **Product premiums** – Copper cathode trades at prices set on Exchanges such as the Chicago Mercantile Exchange (CME). These Exchange prices are for delivery of a standard product at standard locations. Physical delivery of metal to a consumer location usually attracts a premium over the exchange price. The magnitude of this premium is location- and quality-dependent. On occasion an undesirable brand and/or poor-quality product may trade at a discount to exchange prices.
- f) **Freight differentials** – Copper concentrate sellers are generally expected to pay freight to receiving ports in Asia, with TC/RCs quoted on a CIF Asian Port basis. Selling to a local smelter may result in lower freight costs to the seller. In these circumstances, smelters will seek to share in the cost saving. For example, a copper mine in the United States has two choices to sell its copper concentrate 1) sell to the nearby Rio Tinto Kennecott smelter and incur a freight cost of \$50/ton, or 2) sell to a Chinese smelter for \$200/ton. The \$150/ton cost savings delivering to Kennecott is referred to as the “freight differential”. This may be split between the parties.<sup>5</sup>

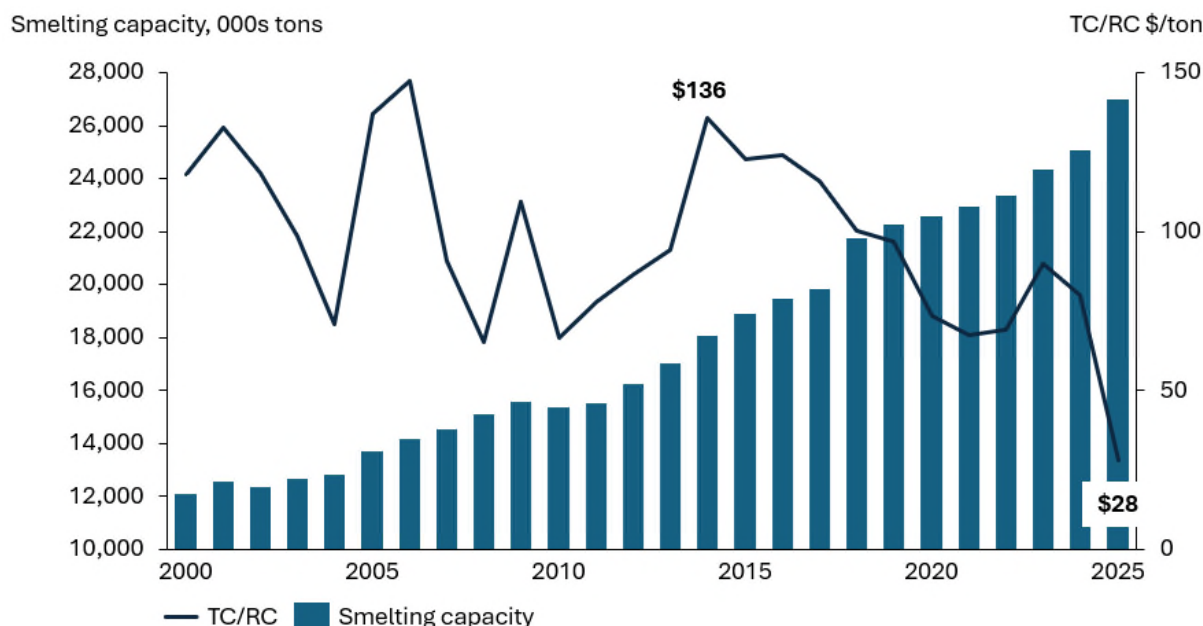
Global copper concentrate production in 2023 was roughly 18Mtpa versus total smelter capacity of 24Mtpa. When smelting capacity exceeds concentrate production, TC/RCs decline as smelters pay higher prices to secure concentrate to fill their smelter to capacity, cover fixed costs, and maximize profitability.

As global smelting capacity grew without a commensurate increase in global copper concentrate production, TC/RCs have plunged from \$136/ton in 2014 to \$21/ton in 2025 with

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<sup>5</sup> Figures are illustrative only and do not reflect actual conditions in the freight markets at the time of writing.

spot prices as low as negative \$37/ton<sup>6</sup> (implying what is normally a major revenue line for smelters is now a cost). At these levels, many smelters are in jeopardy of being unprofitable and thus reducing their production or closing.



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## c. China's Role in Global Copper Production

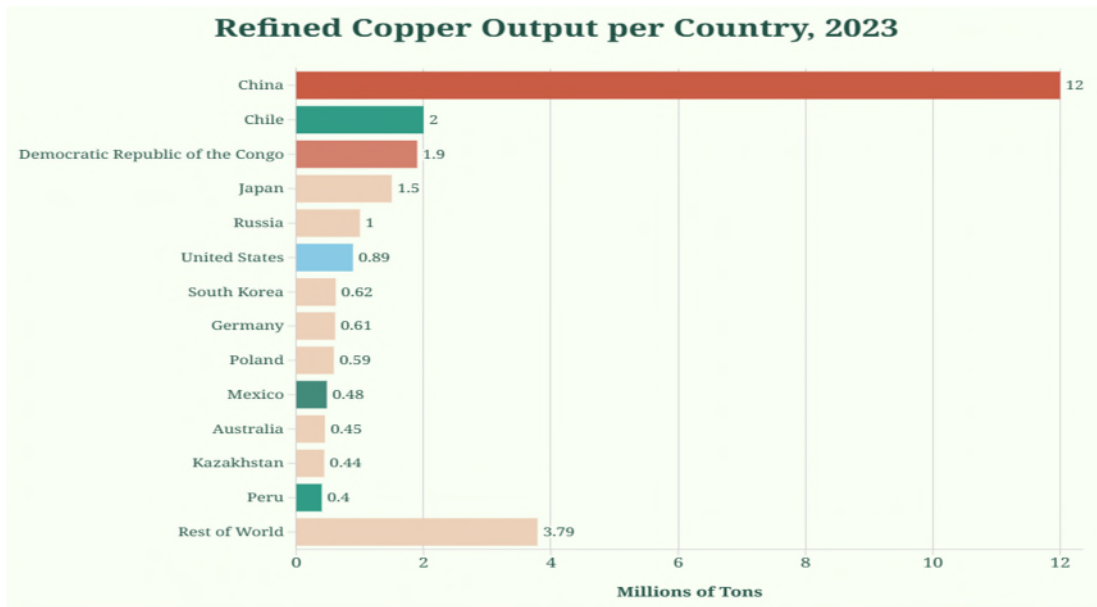
Despite having negligible total copper reserves, China accounts for nearly half of world's copper smelter capacity and plans to continue growing.<sup>8</sup> This dominance over copper smelting makes China the most profitable destination for almost any mine in the world to sell its copper.

<sup>6</sup> Figures in 2024 real USD terms.

<sup>7</sup> Rio Tinto analysis of Wood Mackenzie Global Copper Concentrate Strategic Planning Outlook Q4 2024.

<sup>8</sup> See Gracelin Baskaran et. al., "Latin America: The World's Copper Stronghold", Center for Strategic and International Studies, <https://features.csis.org/copper-in-latin-america/> (Nov. 13, 2024).





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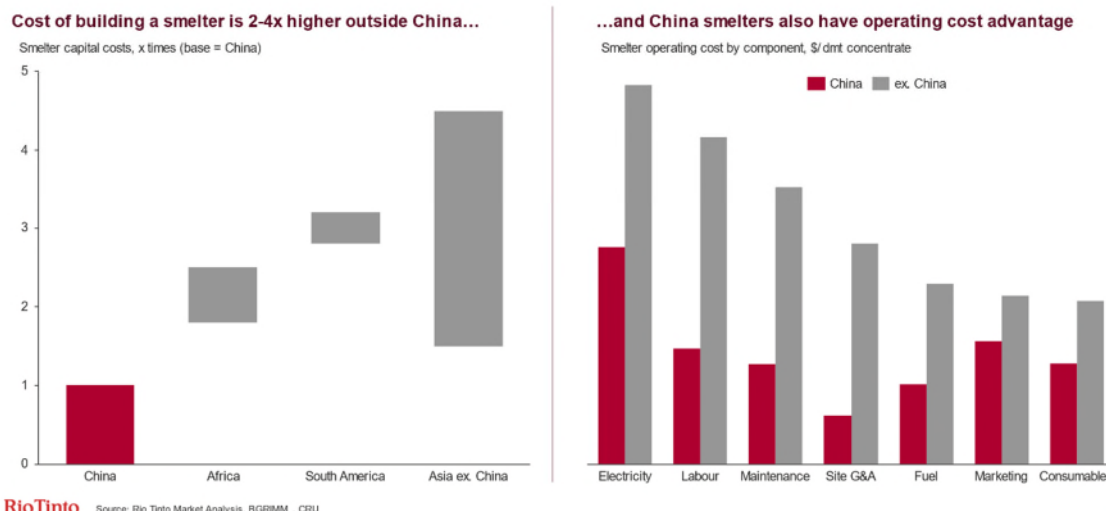
China achieved global smelting dominance in several ways:

- As detailed below, China builds smelters up to 500% cheaper and at least a year faster than any country in the rest of the world. This efficiency allows China's copper industry to be responsive to market changes and gives them confidence to deploy large amounts of capital. This advantage is supported by low or near-zero rate financing from state-owned or supported banks, debt assistance, and other measures.
- China then operates these smelters at less than half the cost of smelters in the rest of the world. This cost position allows China's copper industry to be the most competitive buyer of copper concentrate virtually anywhere in the world. Key advantages include cheaper power and labor, among others.
- The China Smelter Purchase Team (CSPT), a consortium of major Chinese smelters, collaborates in setting purchase prices, potentially further strengthening Chinese smelters' advantages.

China also builds more by-product recovery circuits which also allows them to recover and monetize more products than smelters elsewhere. This includes critical minerals circuits that are otherwise difficult to justify economically but are strategically important.

<sup>9</sup> *Id.*

## China's smelting advantage: Capex and Opex



The net result of China's global smelting advantage has been to make smelters elsewhere in the world less profitable to operate. This advantage has manifested itself in a dramatic fall in TCs<sup>10</sup> from a 25-year average of \$97/ton down to \$0/ton today, and sometimes even negative (implying what is normally a major revenue line for smelters is now a cost). An all-time low TC creates a challenging operating environment for non-Chinese smelters due to their inability to buy copper concentrate at prices required to achieve sustainable margins. This environment makes it virtually impossible to invest in new smelter capacity or existing smelter upgrades.

The Chinese copper industry also benefits from operating under different environmental and social conditions, as demonstrated by the fact that no Chinese-owned copper mines or smelters in China are currently listed in the Copper Mark assurance framework. To be certified as meeting the Copper Mark standard, a company must be independently assessed across more than 30 criteria covering areas such as the environment, community, business and human rights, labor and working conditions, and governance. Rio Tinto's key U.S. facility was the first in the world to be awarded the Copper Mark in 2020, and has been awarded it in every year since.

China's low-cost smelters may have also benefited further from various types of state support.<sup>11</sup>

<sup>10</sup> For clarity, it is worth noting that a smelter is paid both a treatment charge and a refining charge. In practice, however, the refining charge is a derivative of the treatment charge, such that typically when discussing these trends, the focus is on TCs only. Accordingly, discussion of TC/RC trends hereinafter only references TCs.

<sup>11</sup> See Cecilia Jamasmie, "China funneled \$57 billion to control critical mineral supply chain", Mining.com, <https://www.mining.com/china-funnelled-57-billion-to-control-critical-mineral-supply-chain/> (Jan. 29, 2025); Rodrigo Castillo & Caitlin Purdy, "China's Role in Supply Critical Minerals for the Global Energy Transition: What Could the Future Hold?", Brookings Institute, <https://www.brookings.edu/wp->

Through equity investments worldwide, China also controls another roughly 5% (about 1.4Mt) of copper smelter capacity in third-party countries,<sup>12</sup> as well as around 21% of global copper concentrate production.

Furthermore, the importance of smelting capacity for co-production of other commodities cannot be overstated. Low capital and operational costs enable smelters to become diversified businesses that produce and sell more products than just copper. For example, various Chinese smelters may generate 50% of revenue from gold, 18% from zinc, and 37% from lead and zinc, while others produce approximately 6% of the world's bismuth supply. Chinese industry is incentivized to produce these byproducts and critical minerals<sup>13</sup> due to their "national strategic value" and "irreplaceable role in the high-tech industry of manufacturing of electronic devices, precision instruments, advanced composite materials...military engineering, and play a role in supporting national security and economic construction."<sup>14</sup> This diversification allows for cross-subsidization among different products within a portfolio, enhancing resilience to cyclical downturns and other external pressures associated with a specific portfolio product.

#### *d. U.S. Copper Industry*

##### *i. U.S. Copper Demand*

As discussed above in Section II.a, copper is critical to the production of myriad downstream products, including in the defense, energy and critical infrastructure sectors. Total U.S. copper demand is forecast to grow more than 41% over the next decade, with a substantial portion of that demand coming from critical infrastructure applications such as electrical utilities and data centers. In fact, a study of just one data center facility in Chicago showed that the facility used the equivalent of 27 tonnes of copper for every megawatt of applied power, meaning it required a total of 2,177 tonnes of copper for construction of just this one facility.<sup>15</sup> And one global mining company estimates that "copper used in data centers globally will grow six-fold by 2050" from half a million tonnes in 2025 to approximately 2 million tonnes in 2050.<sup>16</sup>

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[content/uploads/2022/08/LTRC\\_ChinaSupplyChain.pdf#:~:text=53%20Chinese%20companies%20like%20Tianqi%20have%20benefited.at%20a%20time%20of%20low%20commodity%20prices](#) (Jul. 2022).

<sup>12</sup> China owns another 500ktpa of copper production in the Democratic Republic of Congo, but it is not from smelting.

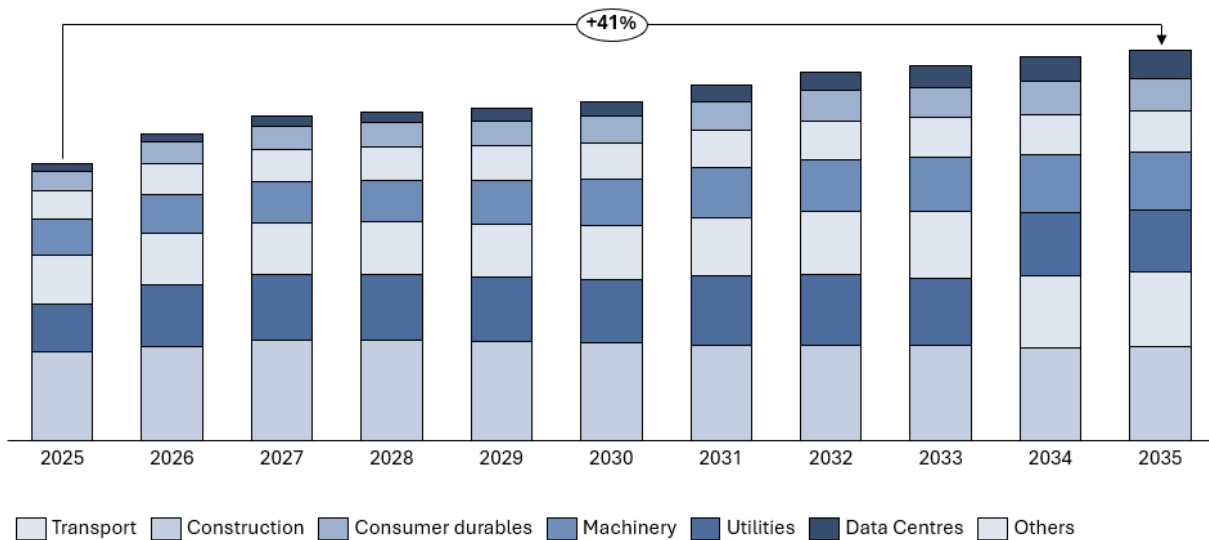
<sup>13</sup> China's copper industry made plans to develop minor metals processing, specifically germanium, selenium, tellurium, antimony, bismuth, indium, and cadmium.

<sup>14</sup> "China Copper Industry: Developing Minor Metals to Make Big Business", China Copper, <https://mp.weixin.qq.com/s/UCRfS3YQq7uL2CGtPoOXtg> (Sep. 6, 2024) (quotation provided via machine translation of original Mandarin).

<sup>15</sup> Bruno Venditti, "Why Copper Is Critical for Data Centers," Elements, <https://elements.visualcapitalist.com/why-copper-is-critical-for-data-centers/> (Oct. 17, 2023).

<sup>16</sup> "Why AI tools and data centres are driving copper demand", BHP, <https://www.bhp.com/news/bhp-insights/2025/01/why-ai-tools-and-data-centres-are-driving-copper-demand> (Jan. 20, 2025).

### United States Copper Demand by Sector



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Although granular demand data broken out for the defense, energy, and critical infrastructure sectors is not available to Rio Tinto, the categories in the graph above can provide a rough sense of the substantial role that those sectors play in U.S. copper demand. What could be considered demand from the critical infrastructure and energy sectors would be included in the above categories of “data centers,” “utilities,” as well as certain components of “transport” (e.g., EV batteries, wire harnesses in cars and aircraft, etc.) and “construction” (e.g., copper wire in buildings), as well as perhaps some items in the “machinery” category. U.S. copper demand for defense is more challenging to isolate, although ammunition would likely fall under the “consumer durables” category. While Rio Tinto does not have the ability to provide precise U.S. demand data for the defense, energy and critical infrastructure sectors, it is nevertheless clear that these three sectors represent a significant component of aggregate U.S. demand.

In sum, ensuring that the United States has access to stable and secure supplies of copper to satisfy its current and future demand is a national security imperative. The most secure and stable source of copper is from U.S. domestic production. However, as discussed in the following sections, the United States is currently unable to rely on domestic production to meet all or even most of its copper needs.

### ii. U.S. Copper Concentrate-Smelting Mismatch

U.S. manufacturers consume two types of copper: 1) refined copper (cathode) produced by smelters that consume copper concentrate from mines, and/or 2) copper scrap produced by

<sup>17</sup> Rio Tinto.

recycling. Only a smelter and refinery can process copper concentrate into copper cathode used for downstream manufacturing.

In the United States, copper concentrate supply exceeds smelting and refining capacity, which results in exports of copper concentrates. Although the United States produces approximately 789ktpa of copper concentrate, it turns this into only about 417ktpa of refined copper<sup>18</sup> because the United States has only two operational copper smelters. This results in the United States being the only major copper consuming nation that exports copper concentrate (and copper scrap) while importing about 49% of its refined demand (850ktpa out of 1.7Mtpa).<sup>19</sup> Nearly half of U.S. exports of copper concentrate go to China for smelting.<sup>20</sup>

Due to the dearth of U.S. smelting capacity, additional mining and copper concentrate production in the United States does not necessarily support U.S. reshoring of manufacturing. If the United States wants to reshore its manufacturing base, it must increase its copper smelting capacity. If not, its imports of refined copper will continue to rise from roughly 49% today to around 60% by 2030.

Unfortunately, making refined copper in America has never been harder, or less profitable, due to market conditions caused by overbuilding of low-cost smelter capacity. This has made U.S. smelters structurally higher cost/less competitive, which can pay higher prices and/or offer lower TCs for copper concentrate due to their lower operating costs.

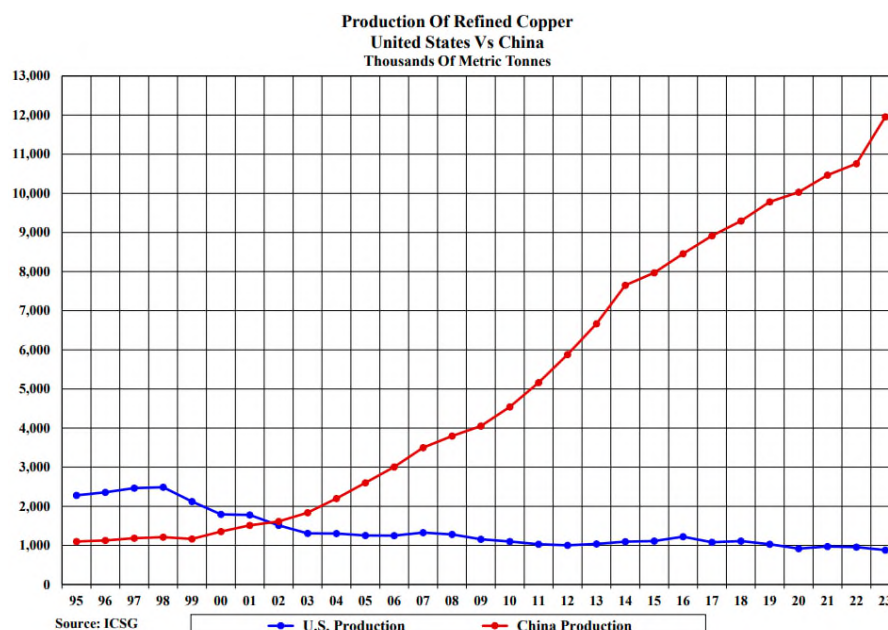
During the China smelter buildout (beginning around 2000), the global TC fell from a 25-year average of around \$97/ton to \$0/ton and at times even negative (implying what is normally a major revenue line for smelters is now a cost). An all-time low TC exacerbates the structural issues of American smelters (of being higher on the cost curve) and makes it nearly impossible for U.S. smelters to buy concentrate and operate profitably.

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<sup>18</sup> “Copper Supply & Consumption 2003 – 2023”, Copper Development Association, Inc., [https://copper.org/publications/pub\\_list/pdf/copper-supply-and-consumption-report-2003-2023-no-graphs.pdf](https://copper.org/publications/pub_list/pdf/copper-supply-and-consumption-report-2003-2023-no-graphs.pdf) (2024).

<sup>19</sup> *Id.*

<sup>20</sup> Of 340ktpa exported in 2023, 54ktpa went directly to China while another 226ktpa went to Mexico, which is known for exporting concentrate globally. See S&P Global Database.



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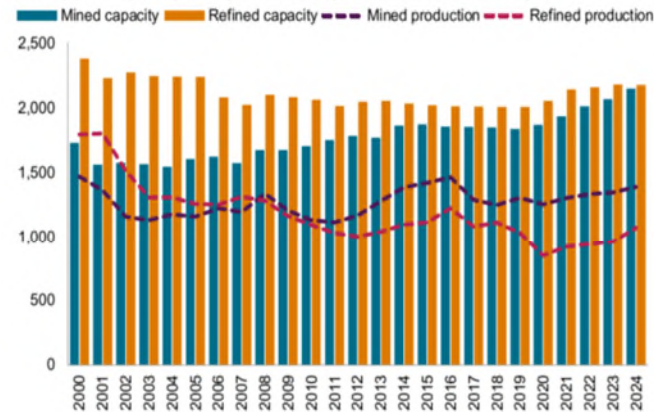
Since 2000, U.S. refining capacity has fallen by approximately 9%, from nearly 2.4 MMt to less than 2.2 MMt, as the number of copper refineries declined from nine to five. Refined production fell much more sharply, from nearly 1.8 MMt to less than 1.1 MMt—a reduction of over 40%. This means U.S.-mined copper is increasingly exported rather than refined domestically.<sup>22</sup>

It is also important to note that additional smelting capacity to support the U.S. copper industry can also contribute to U.S. production of other key input materials, because the copper smelting process can also produce other useful materials. Such materials that can be produced in the smelting process include sulphuric acid (used in batteries, fertilizer, and metals production (e.g., lithium, copper, beryllium, uranium), silver (used in electronics and various industrial applications), gold (used in coinage), selenium (used in glass production) and tellurium (used in solar cells). In other words, investment in copper smelting capacity represents not only an investment in U.S. copper supply chain resilience, but also in U.S. critical material security more generally.

<sup>21</sup> International Copper Study Group via the Copper Development Association.

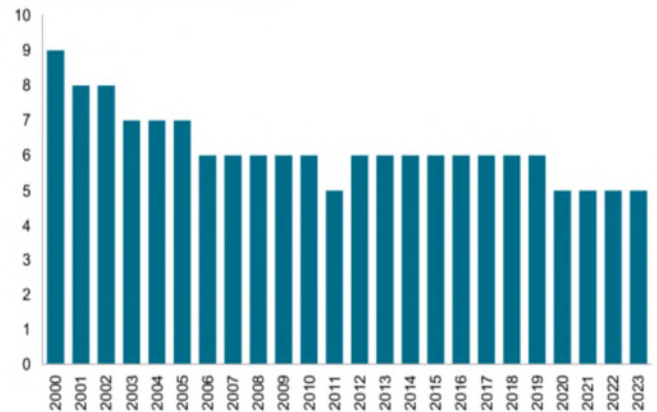
<sup>22</sup> See Mohsen Bonakdarpour et. al. “Copper in the US: Opportunities and challenges”, S&P Market Intelligence, <https://view.highspot.com/viewer/f15367148e71dbfd68def7b8338645d2#1> (Aug. 2024) (“S&P Copper Report”).

US copper capacity and production (thousand metric tons)



Data compiled Feb. 24, 2023.  
Source: S&P Global Commodity Insights.

Number of US copper refineries<sup>1</sup>



Data compiled Jan. 24, 2024.  
<sup>1</sup> The US' five remaining refineries are: Indiana, Garfield, El Paso, Reading and New Haven.  
Source: S&P Global Commodity Insights.

23

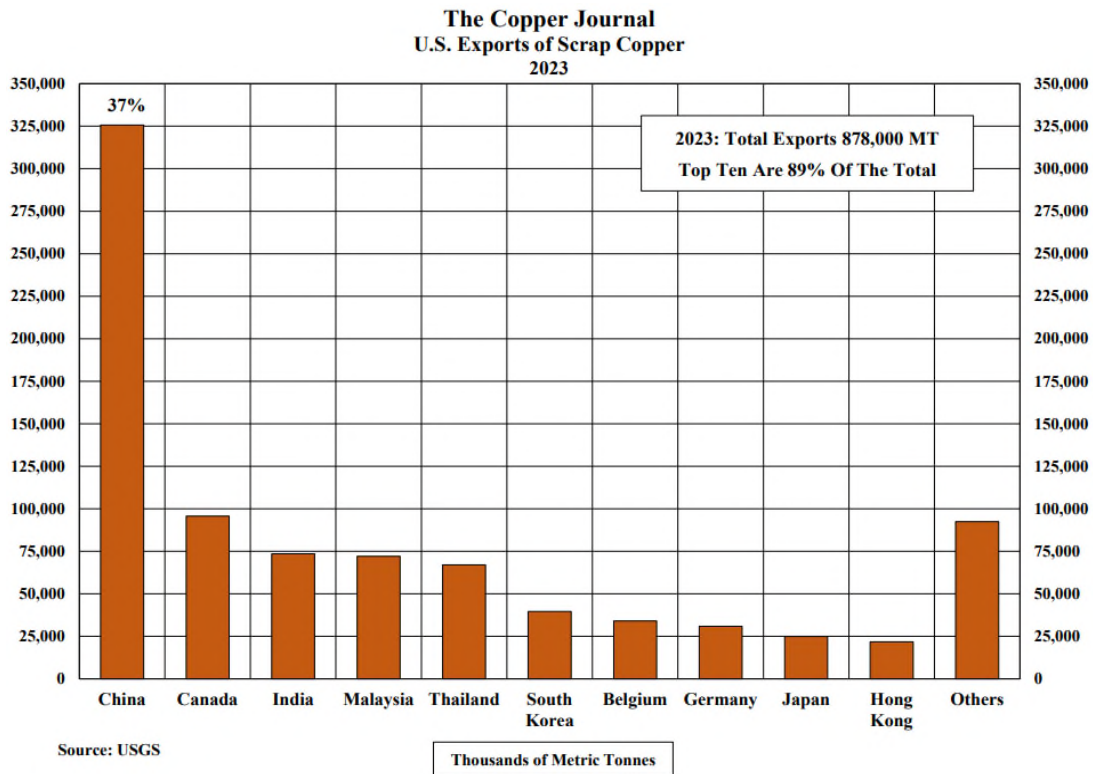
### iii. Recycling

Besides copper concentrate, recycling represents the other key source of copper feedstock to produce the refined copper necessary for production of critical downstream products. However, the dearth of U.S. smelting capacity creates a similar dynamic for the processing of recycled copper as is seen in the context of copper concentrate.

The United States exported almost 900kt of copper in scrap in 2023, more than any country in the world, at least 325kt of which was sold to China. Recycling this scrap would seem to be a logical solution to reducing imports and providing supply chain resilience and material security to the United States. However, processing all of this scrap is neither possible nor would it alone meet the 1.2Mtpa import requirement forecast by 2035.

<sup>23</sup> S&P Copper Report.





24

There are two broad groups of copper scrap: a) high-grade scrap that is 96%+ pure (e.g., clean end of life wire scrap) b) low-grade complex scrap that is approximately 30-80% pure and fraught with hard-to-process impurities (e.g., end of life electronics scrap, auto radiators, etc.). U.S. copper scrap export data is not collected in a way that allows industry participants to breakdown exports by grade.

High-grade scrap can be consumed by select semi-fabricators who are largely already processing this scrap. Low-grade scrap, on the other hand, requires a smelter like those that process copper concentrate to remove complex impurities. However, the smelters in the United States were built decades ago and were not designed to process the complex scrap that forms the U.S. scrap surplus. The only solution is to build new (secondary) smelters designed to process this complex scrap and/or to pursue costly and challenging modifications to existing smelters.

Rio Tinto recently announced an investment into one of two known secondary smelters in the United States. The complex impurities in this scrap result in a 3:1 conversion ratio—e.g., processing 200ktpa of this scrap yields around 50ktpa of refined copper. Processing high-grade results in a nearly 1:1 ratio—e.g., re-melting 100ktpa of high-grade scrap results in 100ktpa of

<sup>24</sup> U.S. Geological Survey Copper, December 2023.

refined copper. Generally speaking, however, the current challenging global copper market conditions make it difficult for significant expansion in scrap processing in the United States.

#### *iv. Rio Tinto U.S. Operations*

Rio Tinto's Kennecott integrated asset (co-located mine-smelter-refinery) near Salt Lake City, Utah has been in operation since 1903. This smelter is one of only two operational smelters in the United States capable of producing the refined copper needed for manufacturing industries. Rio Tinto's Kennecott smelter supplies about 10% of America's copper demand. This smelter also produces around 9% of U.S. molybdenum (used in specialty steels used in aerospace, oil & gas, automotive & construction), 3% of U.S. sulphuric acid (used in batteries, fertilizer, and metals production (e.g., lithium, copper, beryllium, uranium)), 2% and 5% of U.S. gold & silver, respectively (used in coinage, electronics), and 3% of global tellurium (used in solar cells), all of which support U.S. industry and supply chains. In fact, Rio Tinto's Kennecott facility is one of only two U.S. producers of tellurium.

Rio Tinto is actively investigating and working with the United States government on how to more economically recover critical minerals at Kennecott, including, gallium, indium, bismuth, and tellurium, as well as critical minerals from other domestic historic and active operations. A majority of critical minerals are only available as by-products of copper processing. Without more copper processing in the United States, there cannot be more domestic recovery of critical minerals.

The capabilities to build and operate a mine are difficult to find in the United States. However, Rio Tinto possesses these capabilities, as evidenced by over 150 years of mining and processing worldwide, and is keen to deploy these capabilities at greater scale in the United States.

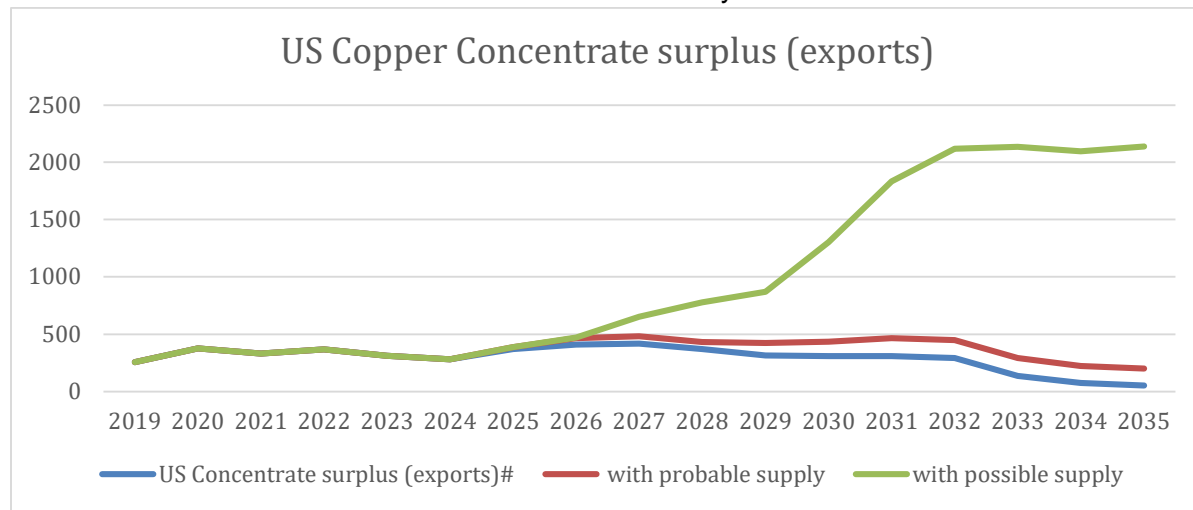
#### What we sell from RTKC?



The Bingham Canyon mine is the deepest, and one of the oldest, open-pit mines in the world. The deeper and older a mine becomes, the more difficult it becomes to produce at the same levels due to declining head grade and the amount of material being moved. Kennecott aims to expand its current open pit mine and in 2023 opened its first underground mine in the last 50 years. Still, the co-located Garfield smelter that is fed by Bingham Canyon must begin buying, transporting, and processing copper concentrate from farther away and third party-owned copper mines. This presents operational and cost challenges that must be overcome to be economically viable. Furthermore, the Garfield smelter is also disadvantaged due to its utilization of double flash furnace technology, which was innovative when installed in the late 1990s but is now outdated. Double flash furnace smelting has higher capital and operating costs vis-à-vis alternative smelting technologies. Although it has some of the lowest emissions of any copper smelter in the world, it is not as flexible and hence not as competitive when compared to other smelting technologies around the world. Consequently, in order to maximize the capacity and output of the Garfield smelter, significant investment would be required.

Rio Tinto also operates, and owns a majority interest in, a brownfield project in Arizona that is not yet operational, but if brought online would significantly contribute to the United States' ability to source its copper needs domestically. The Resolution deposit lies between 5,000 and 7,000 feet below the earth's surface, and the deposit's average grade is estimated at 1.5% copper. The Resolution Copper mine (once online), will be capable of producing up to 25% of total U.S. copper demand each year. There is also a smelter nearby in Arizona that is currently not operating. Bringing this pair of facilities online would add an additional 215ktpa of refined copper to the U.S. market, reducing import reliance by approximately 13%.

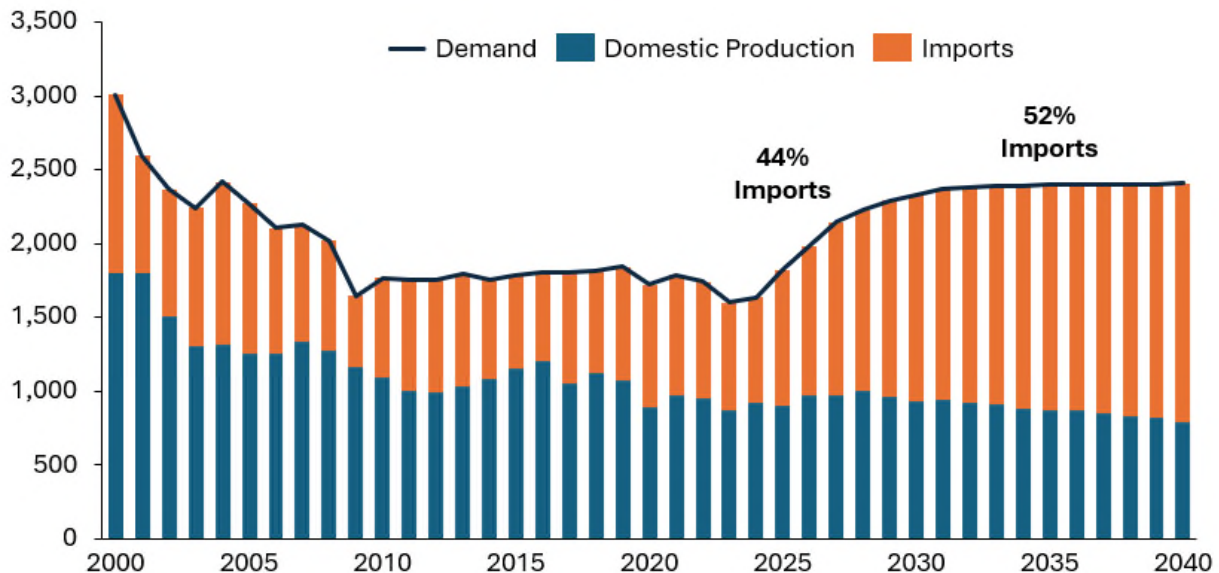
Although there is excess copper concentrate in the United States, and the potential for increasing copper concentrate production in the near term, the cost of transporting the concentrate from nearby states to Utah for processing, Kennecott's position on the cost-curve, and all-time high concentrate prices make it very difficult for the Garfield smelter to compete with non-domestic smelters under the current market dynamics.



Given the boom in global smelting capacity, which has resulted in low TC rates that jeopardizes the profitability of many global smelters, and the higher costs/lower profitability associated with transporting domestic copper concentrate and/or domestic low-grade scrap to the Garfield smelter at Kennecott, Rio Tinto has been reluctant to pursue capital-intensive projects that would increase capacity. However, given the importance of domestic copper smelting and refining to U.S. efforts to become material independent and build resilient supply chains, there are policies or incentives that the U.S. government could implement (discussed in Section V) that would enable domestic smelters to contribute further to the United States' ability to meet these strategic objectives.

#### *v. U.S. Current Import Dependence*

The United States is heavily reliant on imports for refined copper. During the period from 2019 through 2023, the United States consumed an average of 1.7 MMt of refined copper per year, more than 44% of which was imported.<sup>26</sup> As U.S. demand increases due to reshoring manufacturing, building more power generation, and upgrading the grid, the United States may have to import over 50% of its refined copper needs by 2035.



Importing 40% to 50% of U.S. refined copper demand results in vulnerable supply chains that are not prepared for supply disruptions, much less an emergency.

<sup>25</sup> Wood Mackenzie Global Copper Concentrate Strategic Planning Outlook Q2 2024.

<sup>26</sup> See S&P Copper Report.

<sup>27</sup> Rio Tinto.

Chile is by far the largest source of imported refined copper into the United States, comprising nearly 70% of U.S. imports. The next three largest foreign sources of refined copper imports—Canada, Peru and Mexico—when taken together with Chile accounted for 98% of U.S. refined copper imports in 2023.<sup>28</sup>



### III. U.S. Vulnerability

The United States' current reliance on imports to satisfy the nation's demand for copper creates significant vulnerabilities for the United States, particularly given the key role of copper as an input into critical downstream products in the defense, energy and critical infrastructure sectors. These vulnerabilities can generally be grouped into three categories.

The first category of vulnerability is the risk of diversion of supply from key foreign suppliers to other countries. In 2023, the United States accounted for around 20% of Chile's refined copper exports. By contrast, China was the destination for nearly 40% of Chile's refined copper exports. Similarly, the United States represented around 18% of Peru's refined copper exports in 2022, while China's comprised 53% of such exports.<sup>30</sup>

Foreign investment in third-country copper mines and/or processing facilities exacerbates this risk. Two of Peru's biggest mines, which account for 502ktpa of 2,724ktpa of copper production (Las Bambas and Toromocho), are owned by Chinese companies, and nearly all of the copper produced is shipped, processed, and ultimately consumed in China, and streamlining is in process as China is actively building new ports and infrastructure in Peru.

The second category of vulnerability relates to the risk of a reduction of smelting capacity—and therefore, production of refined copper by U.S. foreign suppliers. Mines and smelters have often been the targets of protests, labor strikes, environmental concerns and other forms of

<sup>28</sup> See S&P Copper Report.

<sup>29</sup> *Id.*

<sup>30</sup> See *id.*

disruption throughout the Americas. For example, there is little to no support for constructing new smelters in Peru due to community opposition. As such, if Peru mine production increases without building new smelters, the copper concentrate will be exported to other foreign smelters given the constraints on U.S. copper smelting capacity.

The third category of vulnerability relates to risks from logistical issues associated with transport of refined copper from Latin America to the United States. Approximately 95% of 2023 seaborne refined copper imports into the United States were via the Panama Canal. Transport through the Panama Canal has experienced disruption from low water levels in Gatun Lake, which feeds the canal's lock system. Starting around June 2023, the Panama Canal Authority had reduced the number of transits through the canal steadily to 22 vessels, compared with the typical 36 vessels, per day during winter months. Waiting times consequently rose to 2.5 days. Although the water levels have since returned to normal after the 2024 rainy season—temporarily resolving the throughput restriction—continued drought conditions could lead to the reduced water levels that constrain canal throughput becoming more frequent or even permanent. If this came to pass, it could have a substantial effect on U.S. imports of refined copper by significantly restricting the volume of refined copper that the United States could import from Latin America in a given time period, which in turn would constrain downstream production of critical products.<sup>31</sup> Moreover, because nearly all refined copper shipments from Latin America to the United States travel through the Panama Canal, there is a risk that low water levels in the canal could drive more exports to countries other than of the United States.

Similarly, ocean swells during the southern hemisphere's summer months can affect maritime commerce. For example, in December 2024 the coastlines of Chile and Peru were hit by serious ocean swells that produced unusually large and violent waves. The effects of the swells were so significant that 91 of Peru's 121 ports were closed for multiple days.<sup>32</sup> These kinds of weather events can cause disruption to exports of copper to the United States. Given the reliance of U.S. manufacturing on imported copper, these disruptions create operational risk for manufacturers who may be forced to slow or stop their production lines due to lack of refined copper.

#### **IV. Reshoring U.S. Copper Supply Chains**

The United States has approximately 275 MMt of copper reserves and resources, with 140 MMt coming from mines not yet in production. These sources mean that there is sufficient copper in the ground for the United States to be self-reliant to meet copper demand for the foreseeable future—so long as the U.S. copper endowment can be economically accessed and refined. The 20 largest copper properties in the United States in terms of reserves and resources comprise 245 MMt of the 275 MMt (89%) of copper resources and reserves in the United States. The reserves and resources from the five-largest projects not yet operating account for

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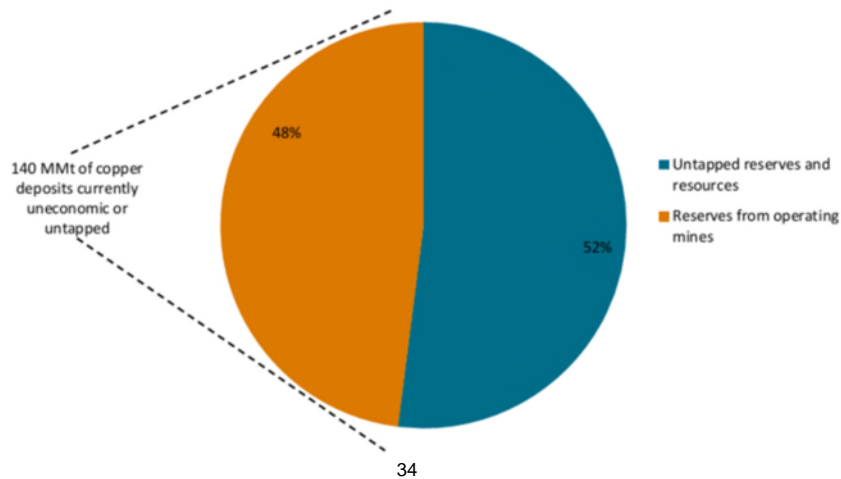
<sup>31</sup> See S&P Copper Report.

<sup>32</sup> See "Unnatural tides 'hit' Peru, Ecuador and Chile – Three dead", Protothema, <https://en.protothema.gr/2024/12/30/unnatural-tides-hit-peru-ecuador-and-chile-three-dead/> (Dec. 30, 2024).



roughly 35% of all U.S. reserves and resources and nearly 70% of the endowment of properties not yet in operation.<sup>33</sup>

US primary copper mine reserves and resources by status



The United States' supply of copper scrap as feedstock is also poised to increase in the coming years. Copper scrap recovery is generally a function of lagged copper usage. As copper usage in the United States increases, this will result in higher scrap recovery and recycling in the future. This trend means that if the U.S. copper industry can invest sufficiently in facilities to process increasing U.S. supplies of copper scrap for recycling, scrap can act as a significant source of U.S. copper supply for years to come.

Accordingly, the real constraints on the United States achieving effective self-reliance in copper are not so much related to the domestic availability of copper feedstock (i.e., copper concentrate and scrap). Rather, the key constraint is the lack of smelting and refining capacity to ensure the bountiful copper feedstock that is or could be available to the U.S. can be processed into usable product. Addressing this key challenge—i.e., ensuring that the United States has copper processing capacity that is commensurate with its feedstock production capacity—will require robust action from the Trump administration to restore a level playing field where U.S. copper industry companies can compete and succeed.

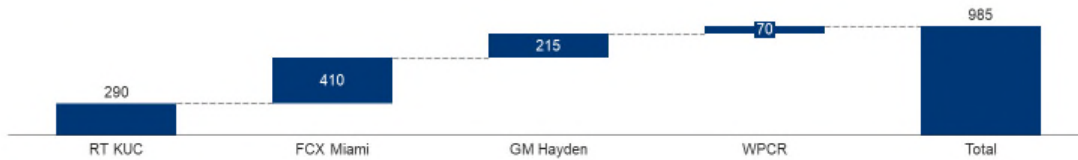
<sup>33</sup> See S&P Copper Report.

<sup>34</sup> *Id.*



## Restarting Idle U.S. Copper Smelters and Refineries

Operator	Location	Capacity <sup>1</sup>	Operating	Idle	Utilization Rate
Rio Tinto	Salt Lake City, Utah <sup>2</sup>	290ktpa	200ktpa	90ktpa	69%
Freeport	Miami, Arizona <sup>3</sup> and El Paso, TX <sup>4</sup>	410ktpa <sup>5</sup>	225ktpa <sup>5</sup>	185ktpa	55% <sup>5</sup>
Grupo Mexico	Hayden, Arizona <sup>3</sup> and Amarillo, TX <sup>4</sup>	215ktpa	0ktpa	215ktpa	0%
White Pine	White Pine, Michigan <sup>4,6</sup>	70ktpa	0ktpa	70ktpa	0%
<b>Total</b>		<b>985ktpa</b>	<b>425ktpa</b>	<b>560ktpa</b>	<b>43%</b>



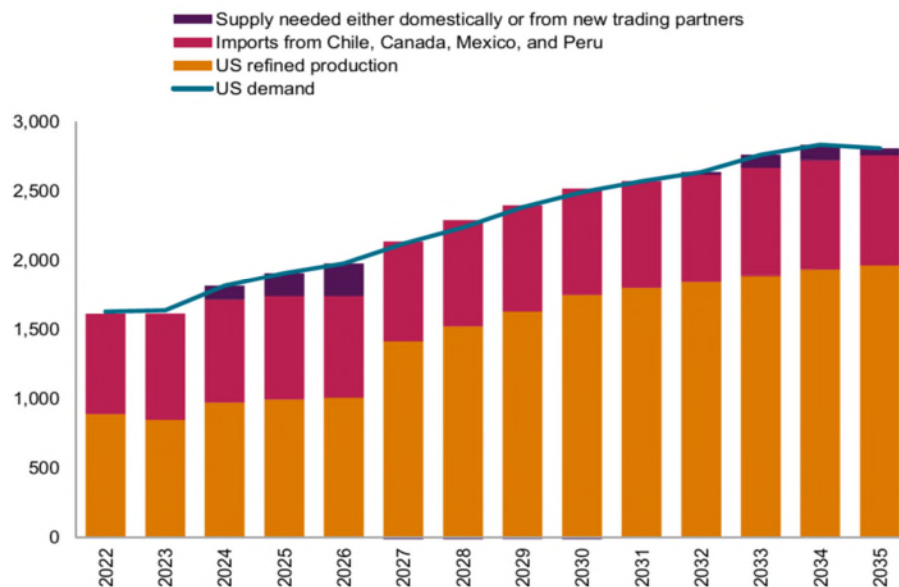
1. All units are approximate and in contained copper, not concentrate volume
2. Smelter and refinery co-located
3. Smelter – produces anodes by consuming concentrate from mines
4. Refinery – produces cathode by consuming anodes from smelter; cathode production only exceeds the smelter's anode production if it processes third-party anodes
5. Smelter is running at capacity but since the refinery has greater capacity, it has lower utilization
6. Requires third-party anodes because it does not have a smelter

RioTinto

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According to a study conducted by S&P Global Market Intelligence in 2024, if the United States were to quickly bring online the top three domestic sources of copper concentrate, including Resolution, and assuming commensurate investment was made in ramping up domestic processing capacity to allow for conversion of this new supply of copper concentrate into refined copper, the United States could increase its production of refined copper by 70%.<sup>35</sup> In that scenario, the United States would be capable of producing enough refined copper to satisfy U.S. demand for the foreseeable future.

**US refined copper supply and demand (thousand metric tons)**



<sup>35</sup> *Id.*

This estimate does not even take into consideration the additional domestic production of refined copper that would be possible if the United States simultaneously and substantially increased its capacity to process its bountiful domestic supply of recyclable copper scrap, which is likely to grow in the coming years.

In sum, the United States is actually well-positioned to reshore its copper supply chain to secure its access to this critical material. However, bold action by the U.S. government is necessary to address the existing issues facing the U.S. copper industry to enable this outcome.

## **V. Policy Actions to Revitalize the U.S. Copper Industry**

Rio Tinto supports the Trump administration's efforts to revitalize the U.S. copper industry and take robust action to mitigate distortions in the global copper market. While Rio Tinto commends BIS's investigation under Section 232 as a positive step, a whole-of-government approach that spans both trade action and actions in other policy domains will be necessary to achieve the administration's objective of securing the U.S. copper supply chain.

### **a. Trade Actions Regarding Copper Imports**

Section 232 provides the President the authority "to adjust the imports of {an} article and its derivatives so that such imports will not threaten to impair the national security."<sup>37</sup> Such actions to adjust imports in this case could take the form of tariffs or other types of import restrictions on imports of copper as well as copper derivatives.

As a global company with operations in the United States, Rio Tinto understands the imperatives of fair trade, global competitiveness, and supply chain security and works with customers and governments to provide the materials that the world needs. Accordingly, the Trump administration may conclude that imposition of tariffs on imports of copper and derivative products is appropriate under these circumstances. If the Trump administration does decide to impose tariffs on imports of copper and derivative products, Rio Tinto would suggest that the administration carefully consider the scope and structure of those tariffs to ensure that they are both effective at achieving their objective and avoid creating unintended consequences that ultimately undermine, rather than bolster, the U.S. copper industry.

In particular, if the Trump administration decides to impose tariffs on U.S. imports of refined copper (i.e., copper cathode), it should also impose similar tariffs on U.S. imports of semi-fabricated derivative products. Imposition of tariffs on imports of both refined copper and

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<sup>36</sup> *Id.*

<sup>37</sup> 19 U.S.C. 1862(c)(1)(A)(ii).

derivative products such as copper tubes and pipes, copper sheet and copper wire<sup>38</sup> would ensure that U.S. imports do not simply shift from the upstream refined copper to the semi-fabricated derivatives. Otherwise, foreign copper industry companies would export these semi-fabricated derivatives at low prices that U.S. producers could not compete with, because U.S. producers' input costs (i.e., for the copper cathode) would be substantially higher as a result of the upstream tariffs on U.S. copper cathode imports (perhaps among other factors). In other words, applying import tariffs on the upstream refined copper input but not on the downstream derivative semi-fabricated products, would harm U.S. copper industry companies by placing them at a competitive disadvantage vis-à-vis their foreign competitors, and simply shift the injurious imports downstream.

By carefully crafting any tariffs that the Trump administration decides are appropriate to impose on imports of copper and its derivative products, such tariffs can serve to protect and promote the development of the U.S. domestic copper supply chain from the upstream to the downstream and avoid collateral damage that is at cross-purposes with this important policy objective.

*b. Other Policies Crucial to Strengthening the U.S. Copper Supply Chain*

In addition to actions taken on imports of copper and derivative products, Rio Tinto believes that a suite of other actions will be necessary to achieve the sustainable revitalization of the U.S. copper industry and reduce U.S. import dependence for copper. This suite of policies must include a combination of both proverbial “carrots” and “sticks” to create the appropriate mix of incentives to correct for the distortions in the copper market.

First, the Trump administration should consider adding copper to the U.S. Geological Survey's (USGS) Critical Minerals List.<sup>39</sup> The U.S. is the only major developed industrial country in the world that has not designated copper as a critical mineral. Designating copper as a “critical mineral” on the USGS Critical Minerals list would make key copper industry projects eligible for various benefits such as expedited permitting and other forms of government support.

Second, the Trump administration should consider expediting and/or streamlining permitting and other regulatory requirements that have hampered the ability of the U.S. copper industry to bring copper mining and processing projects online within a reasonable period of time and undermined investment certainty for these projects (especially due to development litigation risk). The unreasonably long development times for U.S. copper industry projects relative to other countries have a meaningful chilling effect on investment in this sector and prolong the

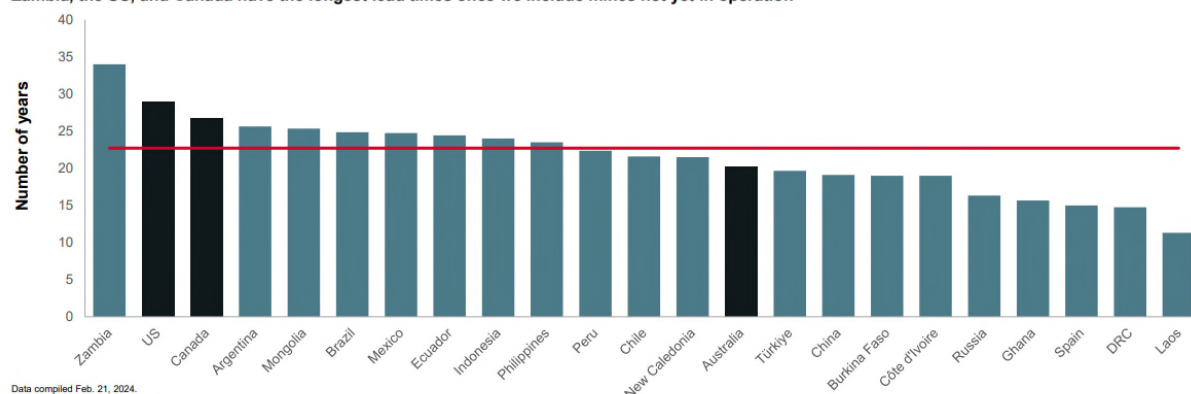
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<sup>38</sup> Specifically, Rio Tinto would suggest applying tariffs to the following HTS codes (which are at either the four- or six-digit level, as appropriate): 740311; 740321; 740319; 740313; 740322; 740329; 740312; 7407; 740811; 740819; 740821; 740829; 740811; 740912; 740921; 740911; 740931; 740940; 740929; 740990; 740939; 741110; 741121; 741122; 741129; 741220; 741210; 7413; 7419; 854419; 854419.

<sup>39</sup> See 30 U.S.C. § 1606(a)(3), (c)(4).

U.S. vulnerability that stems from its import reliance.<sup>40</sup> For example, mines in the U.S. typically take nearly 29 years to begin producing in the United States.<sup>41</sup> This is undoubtedly far too slow, and U.S. government actions to address the regulatory obstacles that produce such long delays to increasing U.S. copper production capacity are critical to revitalizing the U.S. copper industry and achieving U.S. independence for critical materials such as copper.

Zambia, the US, and Canada have the longest lead times once we include mines not yet in operation



Data compiled Feb. 21, 2024.  
DRC = Democratic Republic of Congo.  
\* Includes countries with at least two mines.  
Source: S&P Global Market Intelligence.  
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S&P Global

President Trump's recent Executive Order on "Immediate Measures to Increase American Mineral Production" (March 20, 2025) is a positive step forward in addressing these regulatory issues. However, subsequent agency actions implementing that Order, as well as other measures specifically focused on the challenges facing key copper industry projects—such as starting production at the Resolution copper mine and restoring operations at closed U.S. smelting facilities—are needed to make the overarching policy in that Executive Order a reality for the U.S. copper industry. The most productive U.S. copper mines are located on federal land, which means that several different government authorities—including the Bureau of Land Management, the Forest Service, the U.S. Army Corps of Engineers and the Fish and Wildlife Service—may be required to review aspects of an environmental impact statement for such projects. Streamlining this environmental review process, including working with Congress to pass reform legislation and restrict judicial review where necessary and appropriate, would be another critical action to facilitate increasing U.S. production of copper concentrate and refined copper in a timely manner.

Third, tax credits for capital investments would enable U.S. copper industry companies to pursue otherwise cost prohibitive modifications to modernize or build new copper smelting facilities. This measure would allow for lower operating costs and make smelting facilities both more financially sustainable and globally competitive. Federal government financial support for

<sup>40</sup> See Mohsen Bonakdarpour et. al., "Mine development times: The US in perspective", S&P Global, [https://cdn.ihsmarkit.com/www/pdf/0724/SPGlobal\\_NMA\\_DevelopmentTimesUSinPerspective\\_June\\_2024.pdf](https://cdn.ihsmarkit.com/www/pdf/0724/SPGlobal_NMA_DevelopmentTimesUSinPerspective_June_2024.pdf) (Jun. 2024).

<sup>41</sup> S&P Copper Report.

other aspects of smelting facility operations, such as financial support to lower the cost of fuel or energy (a key cost driver for smelting facilities), or eligibility for the so-called “Section 45X Advanced Manufacturing Production Credit,” could further incentivize investment in new smelting capacity, lower operating costs and enhance competitiveness for these U.S. facilities. The revenue collected from tariffs imposed on imported copper and derivative products could be dedicated to funding these kinds of government financial support for copper industry projects and/or facilities. Government support for other activities in the domestic copper supply chain are also worthy of consideration, such as financial incentives for domestic copper concentrate producers to send their product to domestic smelters (in lieu of exporting).

Fourth, the Trump administration should consider implementing “Buy American” preferences in federal government procurement for products that incorporate U.S.-origin copper. Such a government procurement preference would help to spur investment in U.S. copper production by providing a significant and steady source of demand for U.S. copper. Additionally, the Trump administration could consider establishing an offtake mechanism for refined copper, whereby the U.S. government would commit to buying a certain volume of domestically produced refined copper annually. This measure would similarly help to generate investment in expanding copper production capacity by providing the demand certainty necessary for persuading investors to undertake highly-capital intensive projects that often require many years of profitable operation to recoup the investment costs. This kind of offtake mechanism could be established using the President’s authority under Title III of the Defense Production Act.<sup>42</sup>

Finally, the Trump administration should consider implementing export restrictions on domestically produced copper concentrate and copper scrap. The purpose of U.S. export restrictions on these feedstock sources for refined copper would be to insulate the U.S. copper market from the distorted global pricing that incentivizes U.S. copper miners and scrap companies exporting these materials due to the high purchase prices/low TCs that foreign smelters are able to offer. As discussed in Section II, the current market dynamic makes investment in expanded copper smelting and refining capacity uneconomical, effectively preventing those necessary investments from occurring. Because U.S. copper concentrate production far exceeds U.S. smelting capacity, an export restriction would cause U.S. TCs to increase to a level that could make U.S. smelters more profitable and sustainable over time. Similarly, an export restriction on copper scrap would create the incentive for investment in smelting and refining facilities that can process the domestically available scrap.

Although the higher U.S. TCs that would result from U.S. export restrictions on copper concentrate and scrap would raise costs for copper miners and scrap companies, such issues could be mitigated through a variety of offsetting actions—e.g., phasing in the export restriction to correspond to increases in U.S. processing capacity, support to those domestic entities via tax credits or other government incentives, etc.

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<sup>42</sup> See 50 U.S.C. §4531–4534.

Should BIS's investigation conclude that the current depressed state of the U.S. copper industry poses a threat to U.S. national security, the President might consider invoking his authority under the International Emergency Economic Powers Act (IEEPA)<sup>43</sup> to address this national security threat and quickly implement such an export restriction. Similar export restrictions could also be imposed via the Short Supply Control provisions of the Export Administration Regulations (EAR).<sup>44</sup>

## **VI. Conclusion**

President Trump's Executive Order initiating BIS's Section 232 investigation into imports of copper represents a call to action for all stakeholders in the U.S. copper industry to come together to find ways to address the challenges currently facing the industry. Rio Tinto applauds the Trump administration's efforts in this regard, and is prepared to continue to support BIS in its investigation as needed. The issues currently facing the U.S. copper industry are significant. However, the U.S. copper industry has tremendous potential, which can be unlocked by the right mix of U.S. government policies. By working together, the U.S. government and U.S. copper industry can achieve the material independence and supply chain resiliency needed to ensure American security and prosperity for years to come.

Thank you for your consideration of these comments.

Sincerely,



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Del Renigar  
Vice President External Affairs, USA & Latin America

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<sup>43</sup> See 50 U.S.C. §§ 1701 *et seq.*

<sup>44</sup> See 15. C.F.R. Part 754.