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Copper Development  
Association Inc.

# Copper Age 2.0 in America



# IWCC Legal Disclaimer

The purpose of this presentation is to guide programs benefiting the copper industry and to provide attendees with information to make independent business decisions

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**MARKET  
INTELLIGENCE**



**ADVOCACY**



**CODES &  
STANDARDS**



**MARKET  
SUPPORT**



**Cu** Copper Development  
Association Inc.

**INDUSTRY  
NEWS & UPDATES**



**EVENTS &  
NETWORKING**

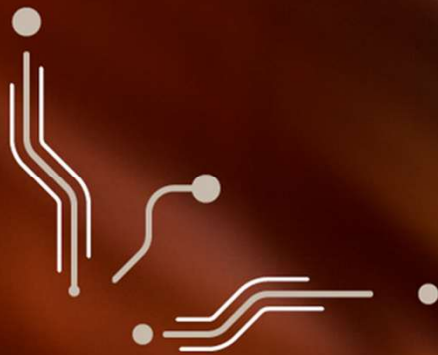


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Welcome to

# Copper Age

# 2.0

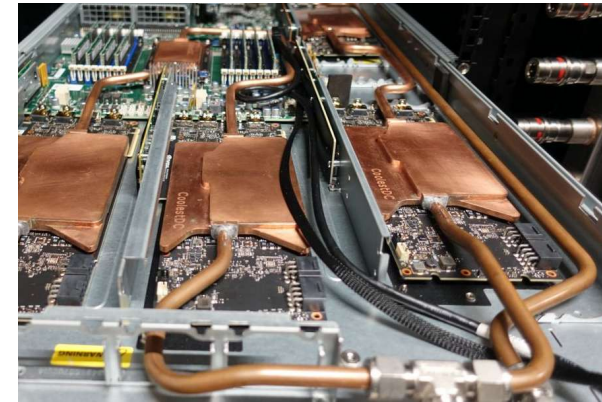


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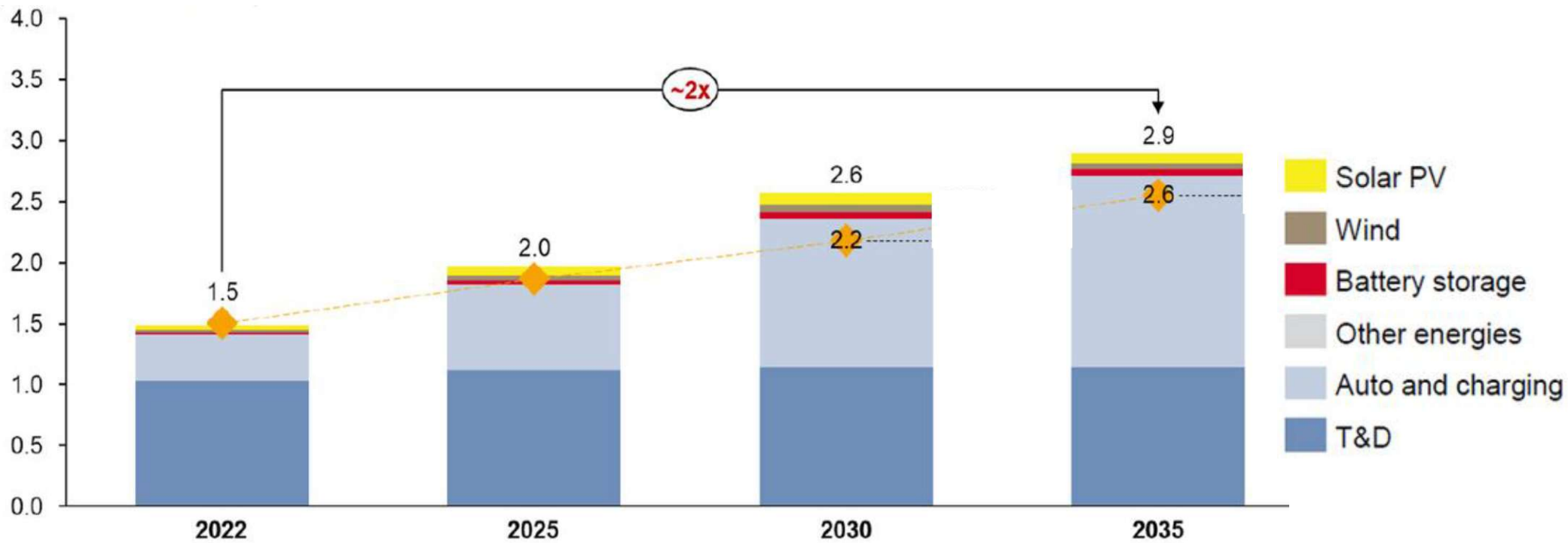
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# Copper & the U.S. copper industry are critical to America's policy goals



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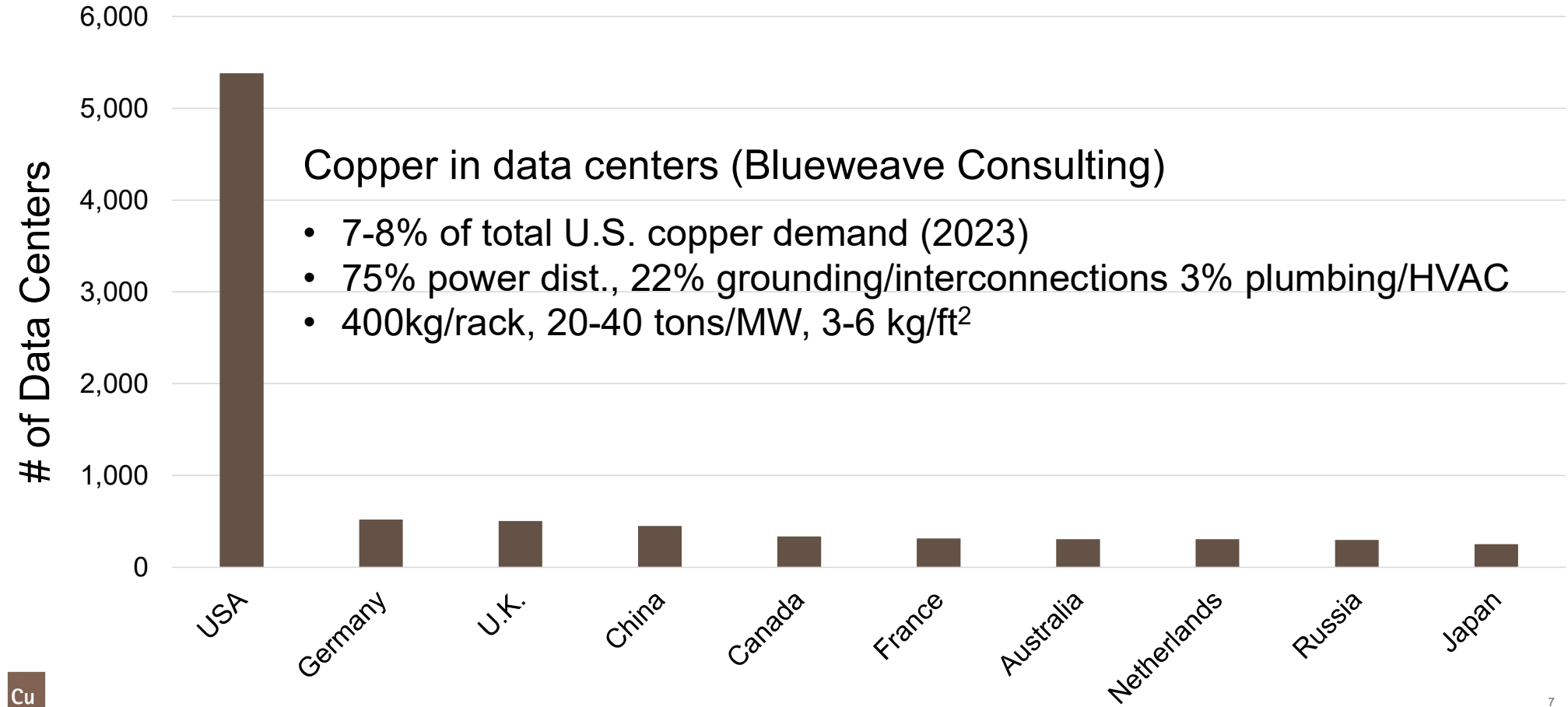
U.S. copper demand is projected to double by 2035, fueled by data centers, grid expansion/hardening, national energy strategy, defense, infrastructure & EVs



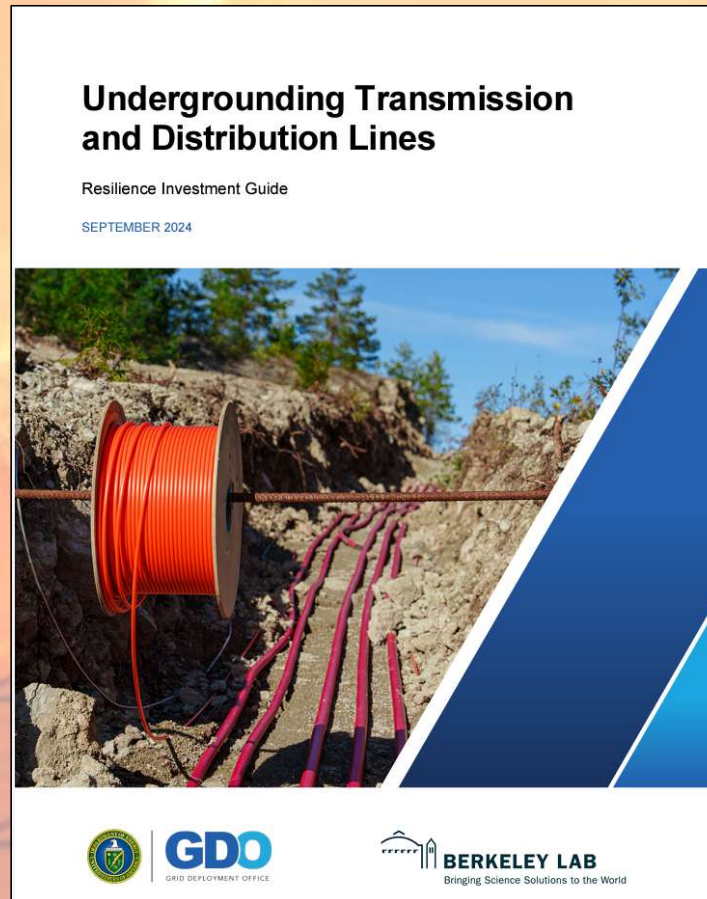
Cu Source: S&P Global, 2024

# U.S. leadership in data centers

(CloudScene, U.S. Global Investors, March 2024)

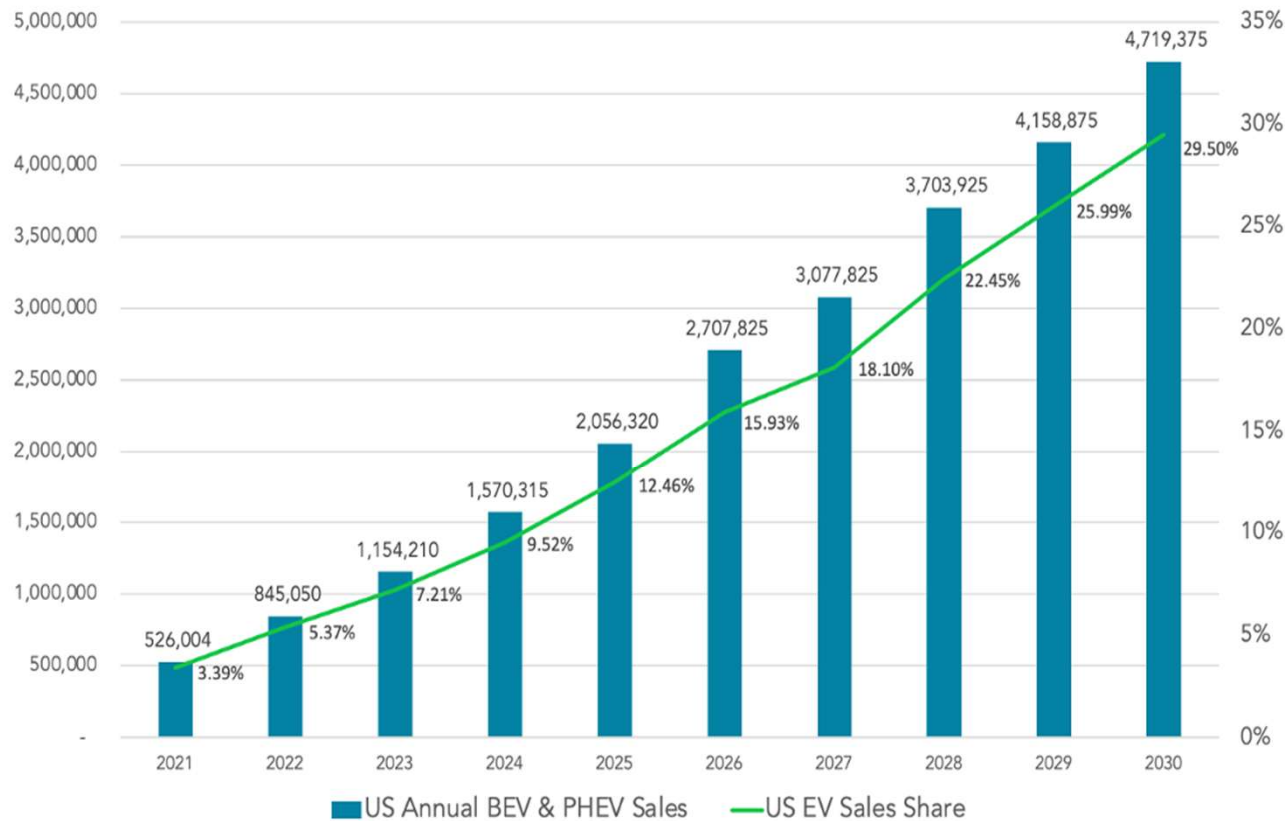


# Overhead aluminum transmission lines dominate the U.S., but climate disasters and grid upgrades present big opportunities for copper



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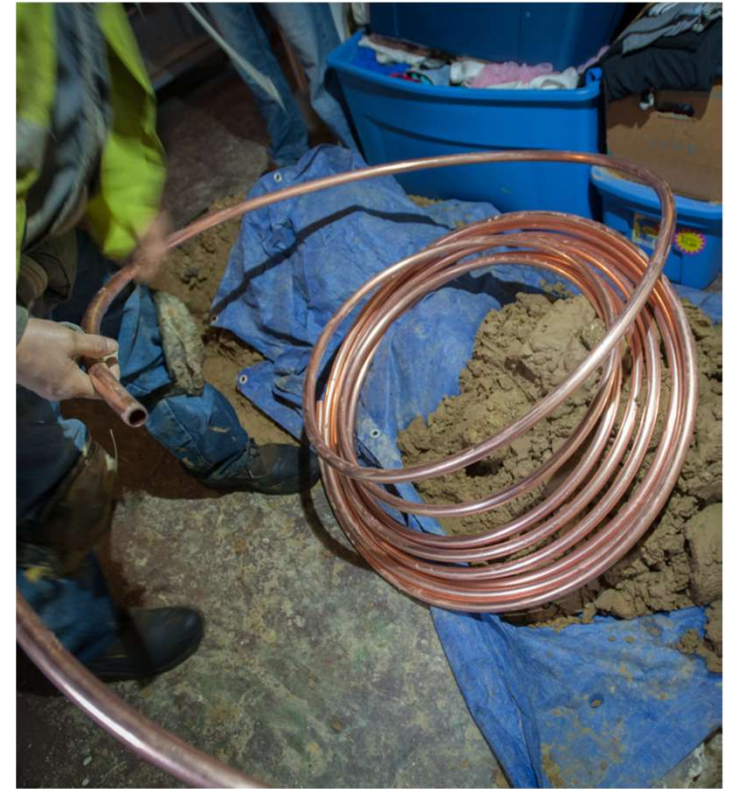
U.S. EV market growth is shaped by several drivers; Every 10% increase in EV sales requires ~55k tonnes of additional copper



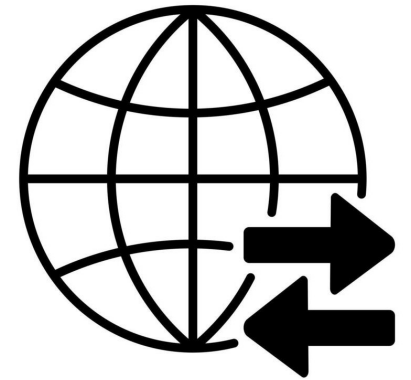
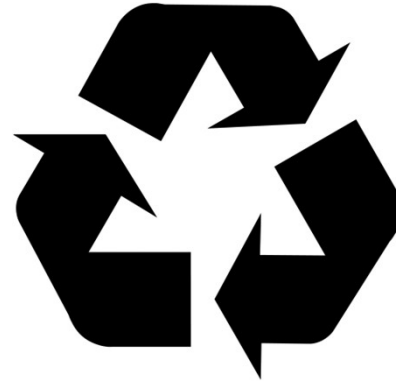
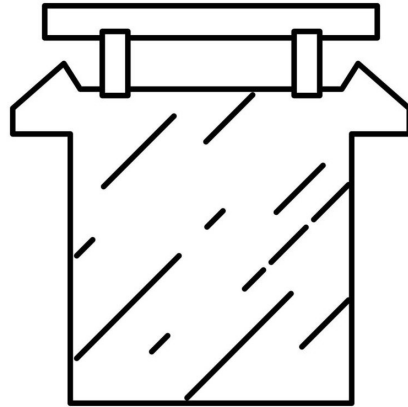
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Historical Sales Data: GoodCarBadCar.net, InsideEVs, IHS Markit / Auto Manufacturers Alliance, Advanced Technology Sales Dashboard | Research & Chart: Loren McDonald/EVAdoption

# Upgrading America's water infrastructure to remove lead pipes

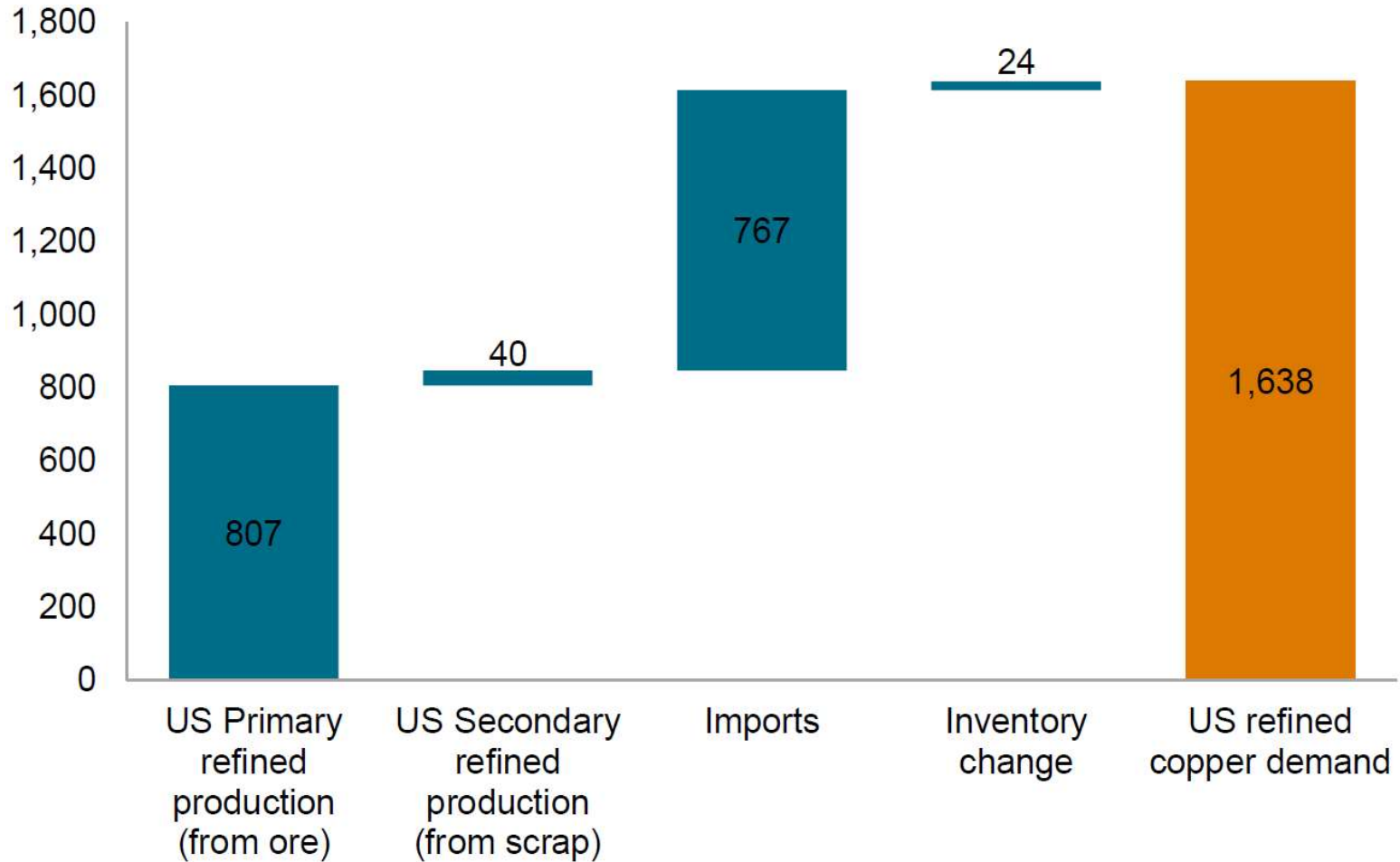


U.S. will need an 'all-of-the-above' copper sourcing strategy to meet the projected doubling of demand by 2035



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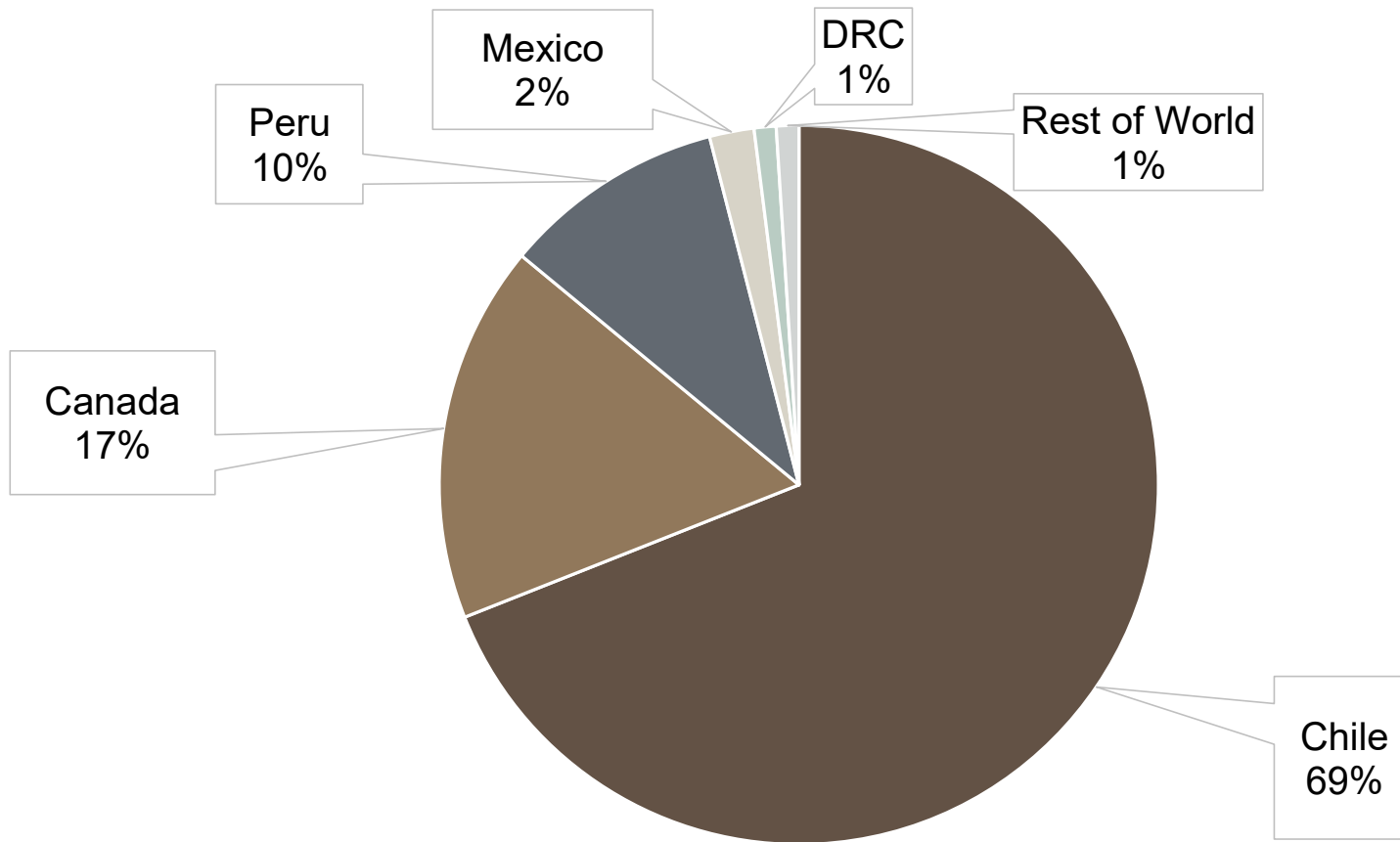
## High import reliance on refined copper (S&P Global, U.S. Refined Supply & Demand)



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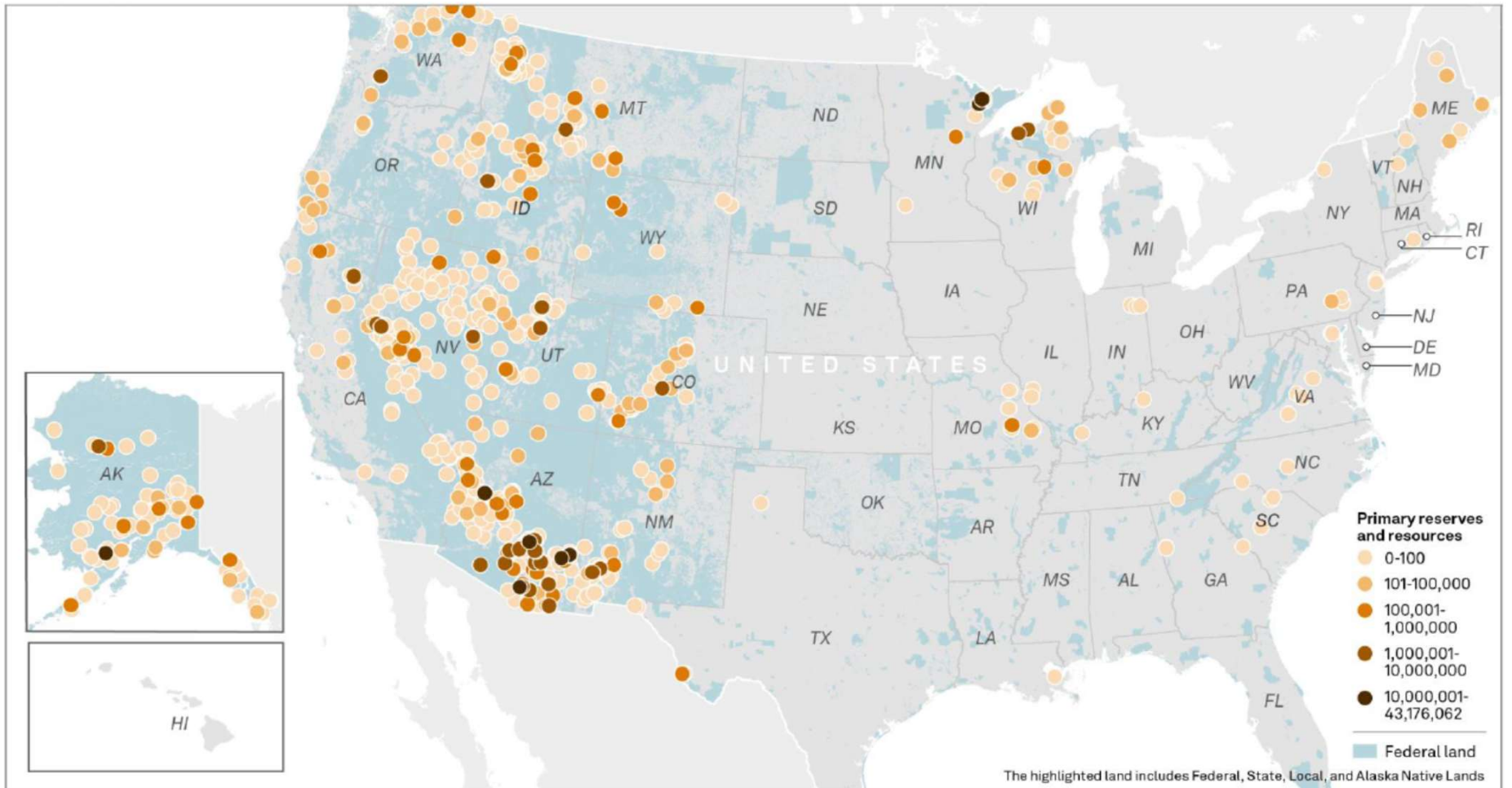
# High import reliance on refined copper

(S&P Global, U.S. Refined Supply & Demand)



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# Permitting challenges stymie access to America's 275Mt copper endowment

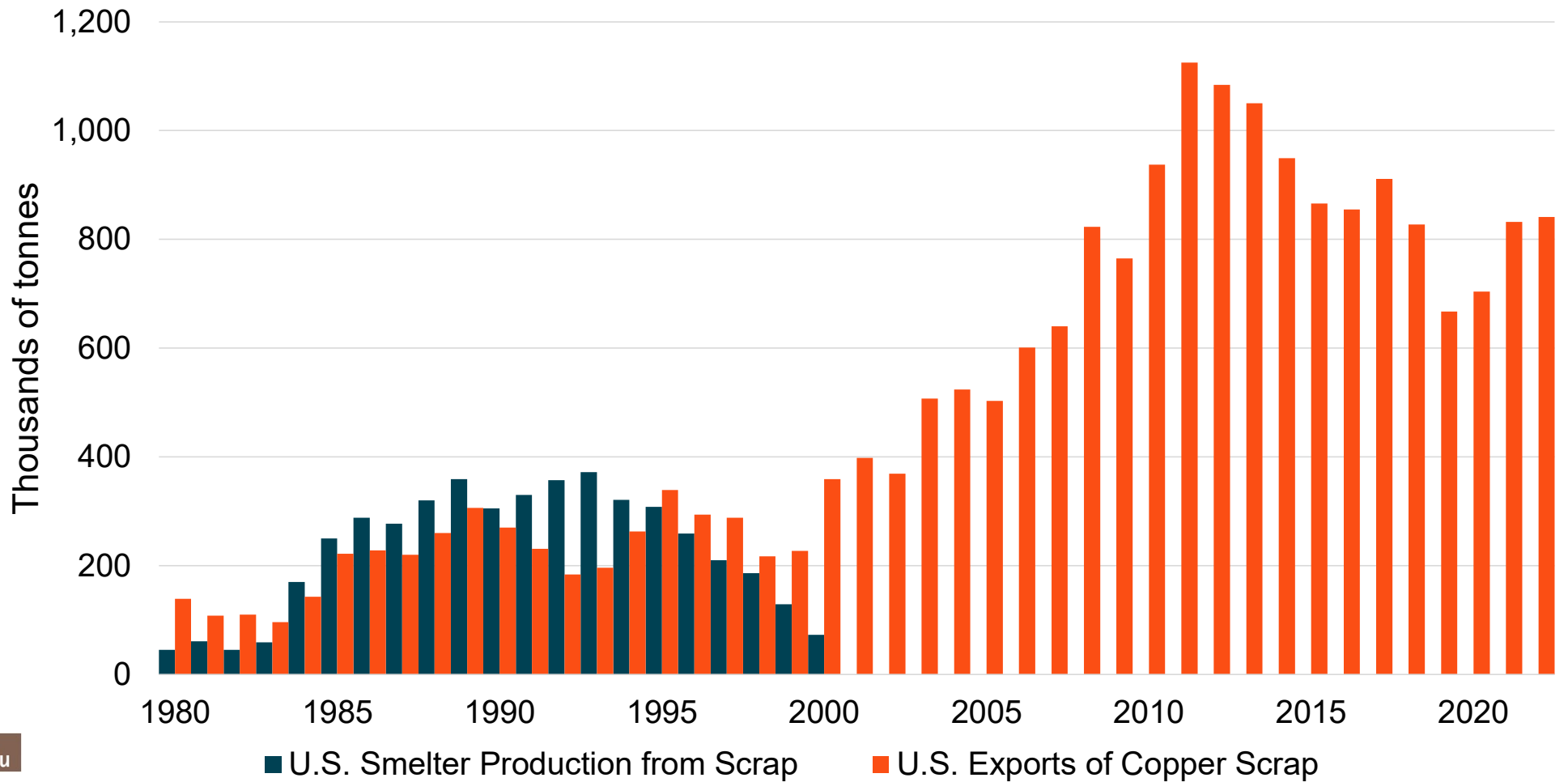


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Data compiled Dec 4, 2023.  
Sources: The United States Bureau of Land Management; S&P Global: 2014135.

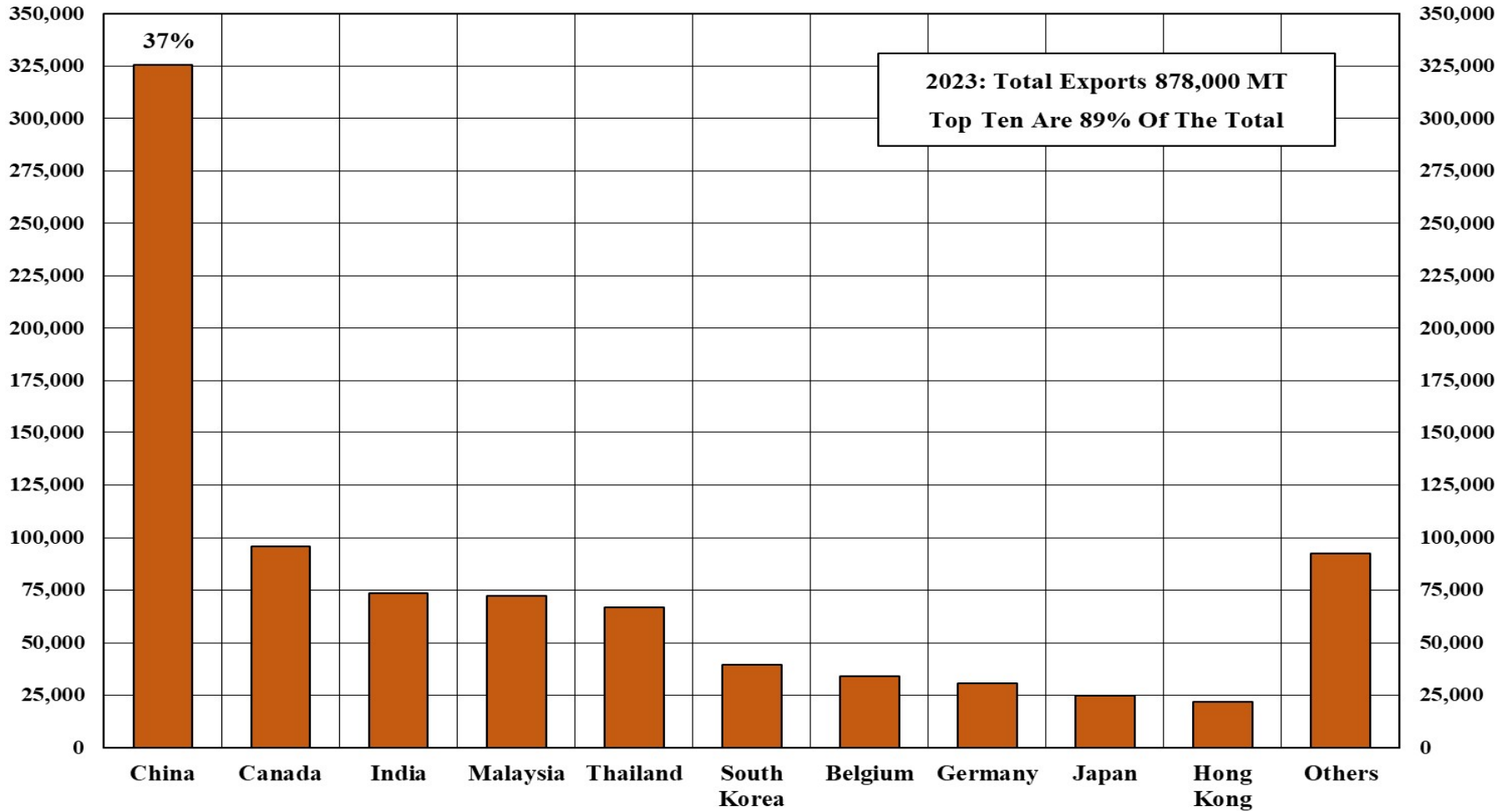
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# Scrap in focus: U.S. smelter production from scrap vs. scrap exports



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# U.S. is the largest copper scrap exporter & China is the largest importer (U.S. International Trade Commission & U.S. Department of Commerce, 2023)



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# Copper tariffs?



## Fact Sheet: President Donald J. Trump Addresses the Threat to National Security from Imports of Copper

**SECURING AMERICA'S COPPER SUPPLY:** Today, President Donald J. Trump signed an Executive Order launching an investigation into how copper imports threaten America's national security and economic stability.

- The Order directs the Secretary of Commerce to initiate a Section 232 investigation under the Trade Expansion Act of 1962.
- This investigation will assess the national security risks arising from the United States' increasing dependence on imported copper, in all its forms, and the potential need for trade remedies to safeguard domestic industry.
- The investigation will culminate in a report identifying vulnerabilities in the copper supply chain and providing recommendations to enhance the resilience of America's domestic copper industry.

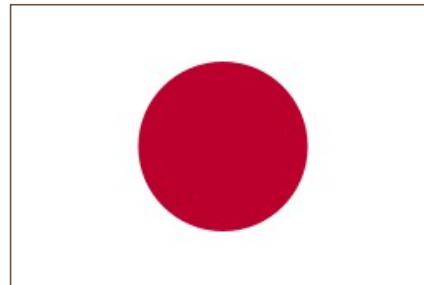
**ADDRESSING THE THREAT TO NATIONAL SECURITY:** President Trump recognizes that an overreliance on foreign copper, in all its forms, could jeopardize U.S. defense capabilities, infrastructure development, and technological innovation.

- Copper is an essential material for national security, economic strength, and industrial resilience.
  - Copper plays a vital role in defense applications, infrastructure, and emerging technologies like clean energy, electric vehicles, and advanced electronics.
  - Copper is the Defense Department's second-most utilized material.
- Despite possessing ample copper reserves, America's smelting and refining capacity lags behind global competitors like China, which controls over 50% of global smelting.
  - The United States isn't even in the top five nations in copper smelting capacity.
- America's reliance on copper imports has surged from virtually 0% in 1991 to 45% of consumption in 2024, heightening risks to supply chain security.
- Foreign overcapacity in smelting and refining, coupled with potential export restrictions from other nations, threaten to disrupt copper availability for U.S. defense and industry needs.



Image credit: ChosunBiz

Countries around the world are developing their own “critical” lists to both support increased domestic production as well as keep important minerals within their borders



# U.S. Critical Minerals – supporting supply AND demand



IRA 45X Advanced  
Manufacturing Clean  
Energy Tax Credit

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DOE Title 17  
Clean Energy  
Financing Program

---

IRA EV Tax Credit  
Domestic Content  
Requirements

---

Fast-41 Permitting  
Dashboard

Defense Production  
Act Support

---

Congressional  
Legislation to  
Support Domestic  
Supply Chains

---

48C Qualifying  
Advanced Energy  
Project Credit



# *Copper* and the *Critical Minerals List*

The USGS defines a Critical Mineral as having three components, and copper meets each one:



It is essential to *economic* and *national security*



It plays a key role in *energy technology, defense, consumer electronics*, and other applications



Its *supply chain is vulnerable to disruption*

## 2022 Critical Minerals List: Copper did not meet scoring criteria

	USGS Calculations				Copper Development Association Calculations				
	2015	2016	2017	2018	2019	2020	2021	2022 H1	2022E
Economic Vulnerability	0.932	0.921	0.933	0.922	0.931	0.933	0.978	0.968	0.968
Disruption potential	0.103	0.101	0.145	0.119	0.141	0.146	0.161	0.163	0.163
Trade exposure	0.309	0.307	0.380	0.318	0.367	0.367	0.493	0.479	0.477
Annual Supply Risk	<b>0.310</b>	<b>0.306</b>	<b>0.372</b>	<b>0.327</b>	<b>0.364</b>	<b>0.368</b>	<b>0.427</b>	<b>0.423</b>	<b>0.422</b>
Recovery Weighted 4-Year Supply Risk				<b>0.334</b>	<b>0.349</b>	<b>0.359</b>	<b>0.387</b>	<b>0.407</b>	<b>0.407</b>

Based on a study by the Copper Development Association using the USGS' methodology, copper meets the cutoff score for inclusion on the Critical Minerals list.

# Copper is Critical Campaign Launched February 2023

[www.CopperIsCritical.org](http://www.CopperIsCritical.org)

**United States Senate**  
WASHINGTON, DC 20510-6300

February 2, 2023

The Honorable Deb Haaland  
Secretary of the Interior  
1849 C Street NW  
Washington, DC 20240

Dear Madam Secretary:

On behalf of the undersigned bipartisan group of Senators, we write to urge you to revisit and consider the designation of copper as a critical mineral in accordance with the Mineral Security provisions of the Energy Act of 2022. While we believe that copper has always been key to our national security, as copper did not meet mineral. However, significant increase

Looking ahead to its between worldwide have serious concern

**Congress of the United States**  
Washington, DC 20515

February 2, 2023

The Honorable Deb Haaland  
Secretary  
United States Department of the Interior  
1849 C Street, N.W.  
Washington, DC 20240

Dear Secretary Haaland:

We write to request your assistance to formally designate copper as a critical mineral by the United States Geological Service (USGS). As our country makes new investments in infrastructure, advanced technology, and electrical and clean energy sectors, copper is becoming more valuable to our future, sustainable economic growth. Since these new supply chains are central to our country's competitiveness in the face of rising global threats, this designation is also a national security imperative.

## Government Advocacy

Cu

The collage features several key public relations assets:

- Bloomberg News Article:** "Copper's Fight for Critical Mineral Status Gets Political Push" - A group of US senators urge government to review copper status. Giving copper critical status is a 'no-brainer,' Sinema says.
- Copper Development Association Analysis:** "Copper Development Association analysis shows copper should be included on US Critical Minerals List" - The U.S. Critical Minerals List contains minerals deemed essential to U.S. economic or national security that have supply chains vulnerable to disruption.
- Infographic:** "Critical Copper Role in the Economy" - Highlights copper's role in Infrastructure (Electrical grid, Buildings and structures), Clean Energy (Wind farms, Solar panels), and Transport (Electric vehicles, Airplanes, High-speed trains).
- Facebook Post:** "Add Copper to the Critical Mineral List NOW" - A call to action from the Copper Development Association.

## Public Relations

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# Copper is Critical Campaign Launched February 2023



## Government Advocacy

Cu



United States Department of the Interior  
U.S. Geological Survey  
Office of the Director  
Reston, Virginia 20192

April 13, 2023

The Honorable Kyrsten Sinema  
United States Senate  
Washington, DC 20510

Dear Senator Sinema:

Thank you for your letter to Secretary Haaland dated February 2, 2023, requesting that copper be reconsidered for inclusion on the list of critical minerals. I am pleased to respond on behalf of the U.S. Geological Survey (USGS). In this response, we briefly review the approach the USGS follows in leading the interagency development of the list of critical minerals, address the concerns raised in your letter, and highlight the latest data and some specific considerations regarding USGS studies related to copper.

### Methodology

The list of critical minerals is based on a methodology developed over several years under the leadership of the USGS and with interagency input coordinated by the White House Office of Science and Technology Policy's National Science and Technology Council (NSTC) Critical Minerals Subcommittee. Minerals were included on the 2022 list of critical minerals<sup>1</sup> based on three evaluations: (1) a quantitative evaluation wherever sufficient data were available, (2) a semi-quantitative evaluation of whether the supply chain had a single point of failure, and (3) a qualitative evaluation when other evaluations were not possible<sup>2</sup>. The quantitative methodology is based on an approach that defines supply risk as the confluence of the following three factors: (1) the likelihood of a foreign supply disruption, (2) the dependency of the U.S. manufacturing sector on foreign supplies (i.e., net import reliance), and (3) the vulnerability of the U.S. manufacturing sector to a supply disruption. The consideration of these factors to assess criticality is consistent with the definition of a "critical mineral" from the Energy Act of 2020.

For both accuracy and completeness, the list is based on the most recent data for actual consumption and production of mineral commodities. Your letter notes that data from 2018 were the most recent used in developing the 2022 list of critical minerals. Development and publication of the new methodology and the associated quantitative analysis was completed in 2020-2021, using data from 2018, the most recent year for which complete datasets (both USGS and external) were available for inclusion in the analysis. Subsequently, the methodology and draft list were subject to a rigorous review process including peer review required of all USGS

<sup>1</sup> <https://www.federalregister.gov/documents/2022/02/24/2022-04027/2022-final-list-of-critical-minerals>

<sup>2</sup> Nassar, N.T., and Fortier, S.M., 2021, Methodology and technical input for the 2021 review and revision of the U.S. Critical Minerals List: U.S. Geological Survey Open-File Report 2021-1045, 31 p., <https://doi.org/10.3133/ofr/20211045>.

# U.S. Dept of Energy Critical Materials List – Cu Added July 2023

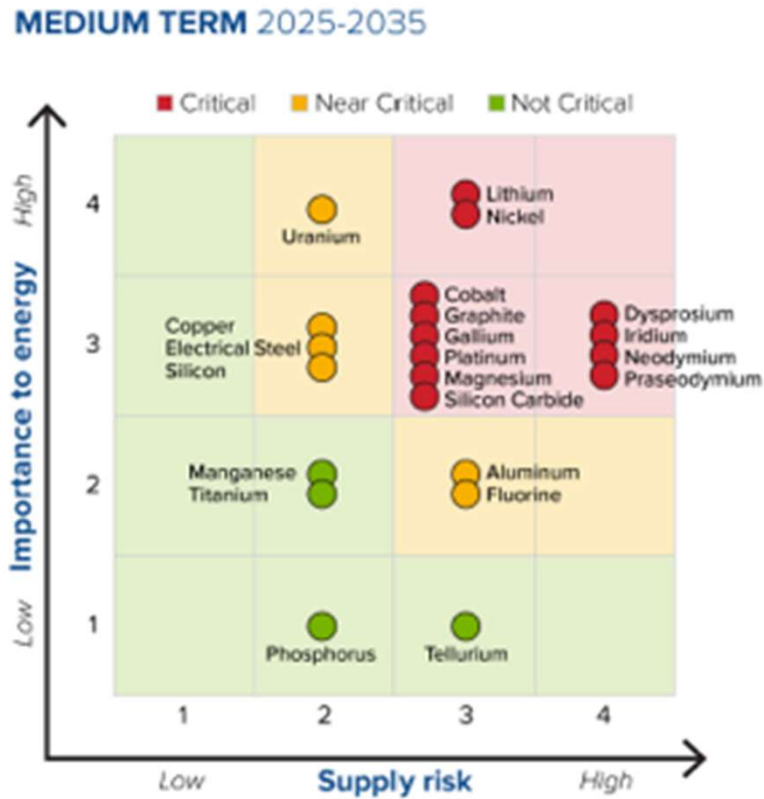
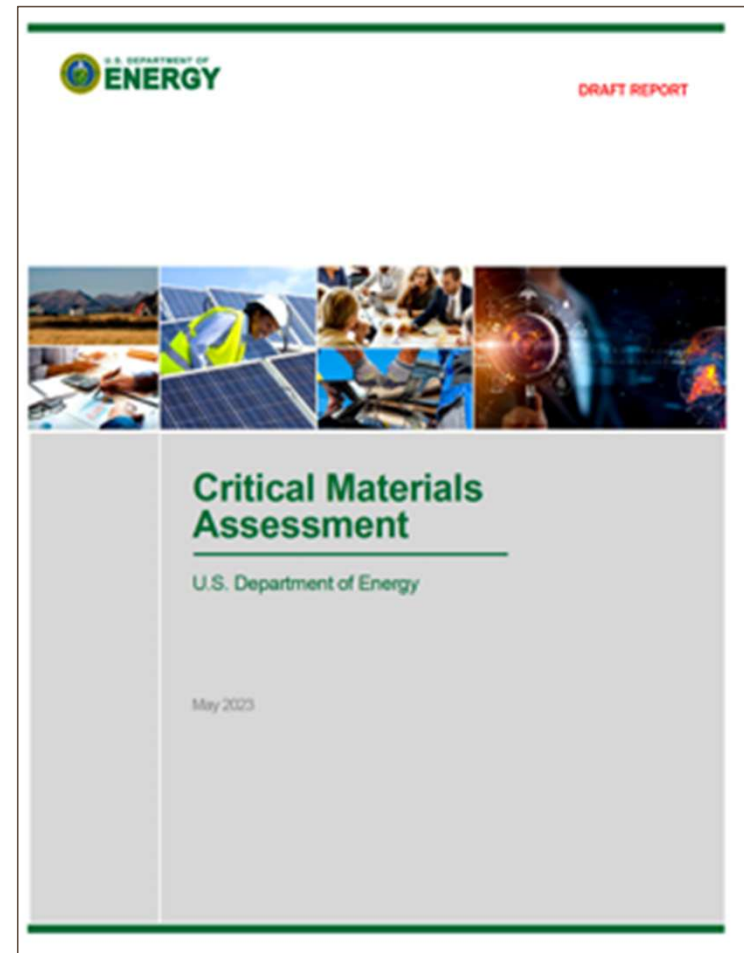


Figure 3.2 Medium-term (2025–2035) criticality matrix



# DOE Critical Material Disadvantage

**BENEFITS:**  
The Critical Material Disadvantage

*Includes: copper, electrical steel, silicon, and silicon carbide*

	DOE CRITICAL MATERIALS 18 MATERIALS	USGS CRITICAL MINERALS 50 MINERALS
IRA 45X Advanced Manufacturing Clean Energy Tax Credit	✗	✓
DOE Title 17 Clean Energy Financing Program	✗	✓
IRA EV Tax Credit Domestic Content Requirements	✗	✓
Fast-41 Permitting Dashboard	✗	✓
Defense Production Act Support	✗	✓
Congressional Legislation to Support Domestic Supply Chains	✗	✓
48C Qualifying Advanced Energy Project Credit	✓	✓

USGS Critical Minerals automatically on DOE list, but not the reverse

# Legislative strategy: Critical Mineral Consistency Act

## ENERGY ACT OF 2020

### DIVISION Z—ENERGY ACT OF 2020

### TITLE VII—CRITICAL MINERALS

#### SEC. 7002. MINERAL SECURITY.

(a) DEFINITIONS.—In this section:

(1) BYPRODUCT.—The term “byproduct” means a critical mineral—

(A) the recovery of which depends on the production of a host mineral that is not designated as a critical mineral; and

(B) that exists in sufficient quantities to be recovered during processing or refining.

(2) CRITICAL MATERIAL.—The term “critical material” means—

(A) any non-fuel mineral, element, substance, or material that the Secretary of Energy determines—

(i) has a high risk of a supply chain disruption; and

(ii) serves an essential function in 1 or more energy technologies, including technologies that produce, transmit, store, and conserve energy; or

(B) a critical mineral.

(3) CRITICAL MINERAL.—

[(A) IN GENERAL.—The term “critical mineral” means any mineral, element, substance, or material designated as critical by the Secretary under subsection (c).]

(A) IN GENERAL.—The term “critical mineral” means—

(i) any mineral, element, substance, or material designated as critical by the Secretary under subsection (c); and

(ii) a critical material as determined by the Secretary of Energy under paragraph (2)(A).

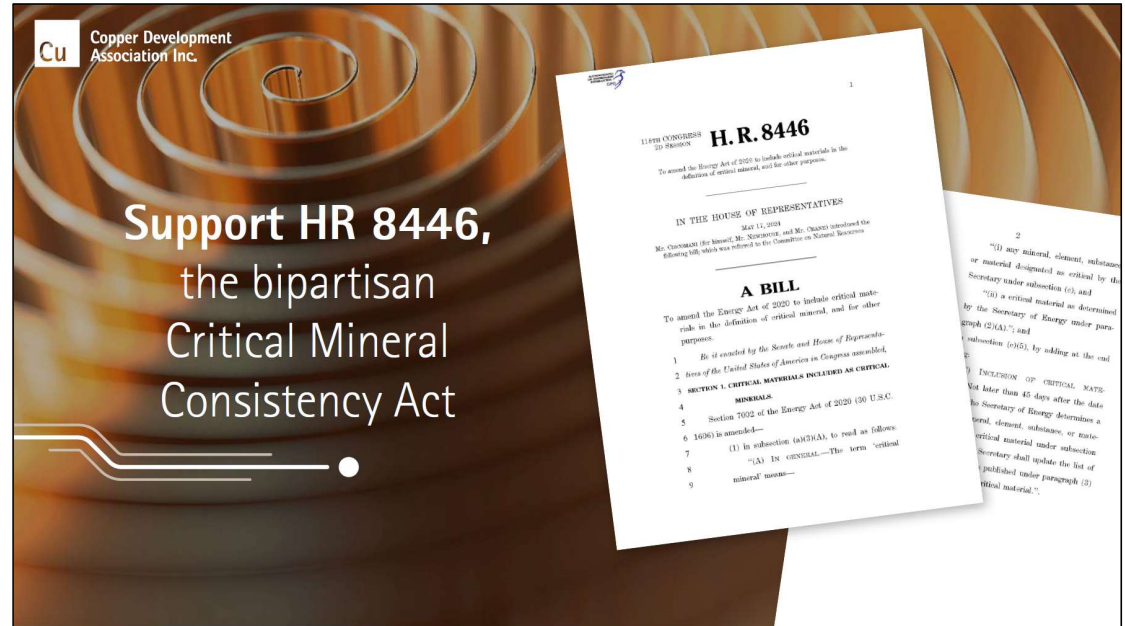
(B) EXCLUSIONS.—The term “critical mineral” does not include—

(i) fuel minerals;

(ii) water, ice, or snow;

(iii) common varieties of sand, gravel, stone, pumice, cinders, and clay.

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Support HR 8446,  
the bipartisan  
Critical Mineral  
Consistency Act

IN GOD WE TRUST

**ON PASSAGE**

<b>H R</b>	<b>8446</b>		
<b>YEA</b>	<b>NAY</b>	<b>PRES</b>	<b>NV</b>
<b>REPUBLICAN</b>	<b>201</b>	<b>2</b>	<b>17</b>
<b>DEMOCRATIC</b>	<b>44</b>	<b>153</b>	<b>16</b>
<b>INDEPENDENT</b>			
<b>TOTALS</b>	<b>245</b>	<b>155</b>	<b>33</b>
<b>TIME REMAINING</b>	<b>0:00</b>		

Bipartisan House Members of Congress reintroduced the **Critical Mineral Consistency Act (CMCA)** in the 119<sup>th</sup> Congress on January 29; Senate Companion Bill introduced on February 25 with bipartisan co-sponsors.

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[11818446]

(Original Signature of Member)

119<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION **H. R. \_\_\_\_\_**

To amend the Energy Act of 2020 to include critical materials in the definition of critical mineral, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

Mr. CISCOMANI introduced the following bill; which was referred to the Committee on \_\_\_\_\_

**A BILL**

To amend the Energy Act of 2020 to include critical materials in the definition of critical mineral, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*  
3 **SECTION 1. SHORT TITLE.**  
4 This Act may be cited as the "Critical Mineral Con-  
5 sistency Act of 2025".

g:\V\F\011525\F011525.011.xml (0625872)  
January 15, 2025 (10:48 a.m.)

**JUAN CISCOMANI**  
ARIZONA'S 6<sup>TH</sup> CONGRESSIONAL DISTRICT

FOR IMMEDIATE RELEASE  
January 29, 2025

PRESS CONTACT  
[Andres.Kardonski@mail.house.gov](mailto:Andres.Kardonski@mail.house.gov)

**Ciscomani Introduces Bill to Strengthen the Domestic Supply of Critical Minerals**

*"Arizona leads the way in the production of Critical Minerals, which are key to our economy, national security, and clean energy technologies"*

WASHINGTON, D.C. - U.S. Congressman Juan Ciscomani (AZ-06) re-introduced an effort to strengthen the domestic supply of critical minerals by ensuring parity between Critical Materials, as defined by the Department of Energy (DOE), and Critical Minerals, as defined by the U.S. Geological Survey (USGS). Ciscomani is joined by Rep. Susie Lee (NV-03) in this bipartisan effort.

Currently, DOE's Critical Material list has the disadvantage of not being eligible for the more extensive energy-focused benefits conferred to the USGS Critical Mineral list. Ciscomani's bill, the *Critical Mineral Consistency Act* ([H.R. 755](#)) would add the DOE's list of Critical Materials to USGS' list of Critical Minerals.

This will eliminate confusion between the two definitions and confer the same benefits to both Critical Materials and Critical Minerals, allowing the U.S. to strengthen its domestic supply of critical minerals.

*"Arizona leads the way in the production of Critical Minerals, which are key to our economy, national security, and clean energy technologies," said Congressman Ciscomani. "As demand for these resources continues to grow, it is essential that our federal agencies are operating with the same understanding and definitions. My legislation will ensure parity between U.S. Geological Survey Critical Minerals and Department of Energy materials lists to include copper, electrical steel, fluorine, silicon, and silicon carbide on the Critical Minerals list, a long overdue classification. This will strengthen our domestic supply and secure these resources for a more resilient future."*

*"Accessing critical minerals and materials is essential for our national security and energy grid. Government red tape should not be a barrier to development and innovation," said*

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# Call to action: Help us secure copper's inclusion on the list!



**A critical oversight**

Supply risk score:

Year	Score
2016	0.301
2017	0.366
2018	0.332
2019	0.363
2020	0.370
2021	0.412
2022	0.473
2023	0.488

Copper Development Association Inc. 6,518 followers  
The USGS Critical Minerals list doesn't include copper, but data says it should. To qualify in 2022, the USGS required a supply risk score of 0.40 or higher. This list used old data (2015 to 2018), and according to a CDA analysis using the USGS' methodology with current data, copper meets the requirements with a score of 0.456!  
Click here to see the full report <https://lnkd.in/dTRBePqd>  
Copper is beyond critical. Its inclusion will allow for streamlined regulations and faster development of new supply sources.  
#Copper #CDA #CopperIsSecure #CopperIsCritical #USGS #CriticalMineral

Recycling more

Strengthening trade partnerships

A must-read SETP report

The future is electric

America's copper advantage

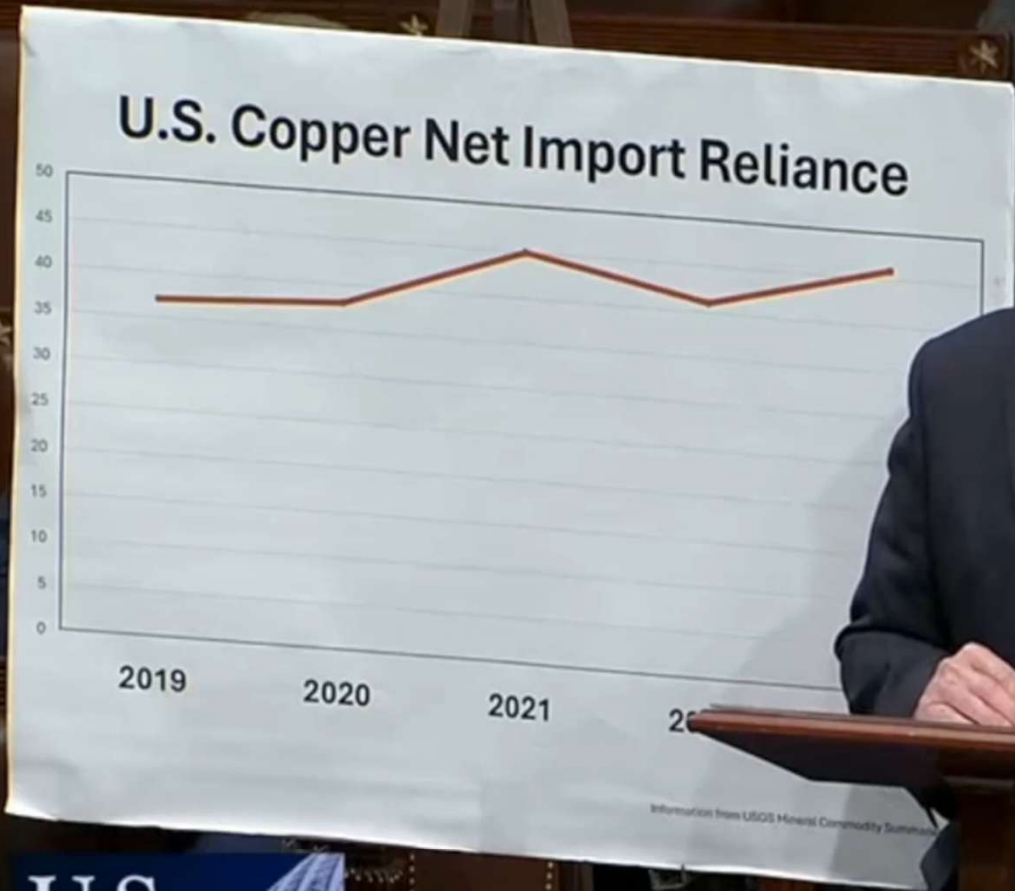
Expedite, invest, revitalize

We must streamline permitting to attract investment

QR Code

Cu

LIVE  
12:11 pm ET



U.S.  
HOUSE

C-SPAN

The logo consists of a dark brown square containing the letters 'Cu' in a white, sans-serif font.

Cu

Copper Development  
Association Inc.

Thank you!

[adam.estelle@copperalliance.us](mailto:adam.estelle@copperalliance.us)