

COPPER MINER'S PERSPECTIVE MINE PERMITTING AND DEVELOPMENT IN NEW MEXICO CHALLENGES AND OPPORTUNITIES

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ICMM (International Council on Mining and Metals) –

“... net-zero emissions by 2050 ...

demand for key critical minerals increasing exponentially....

the world will need over 300 new mines....

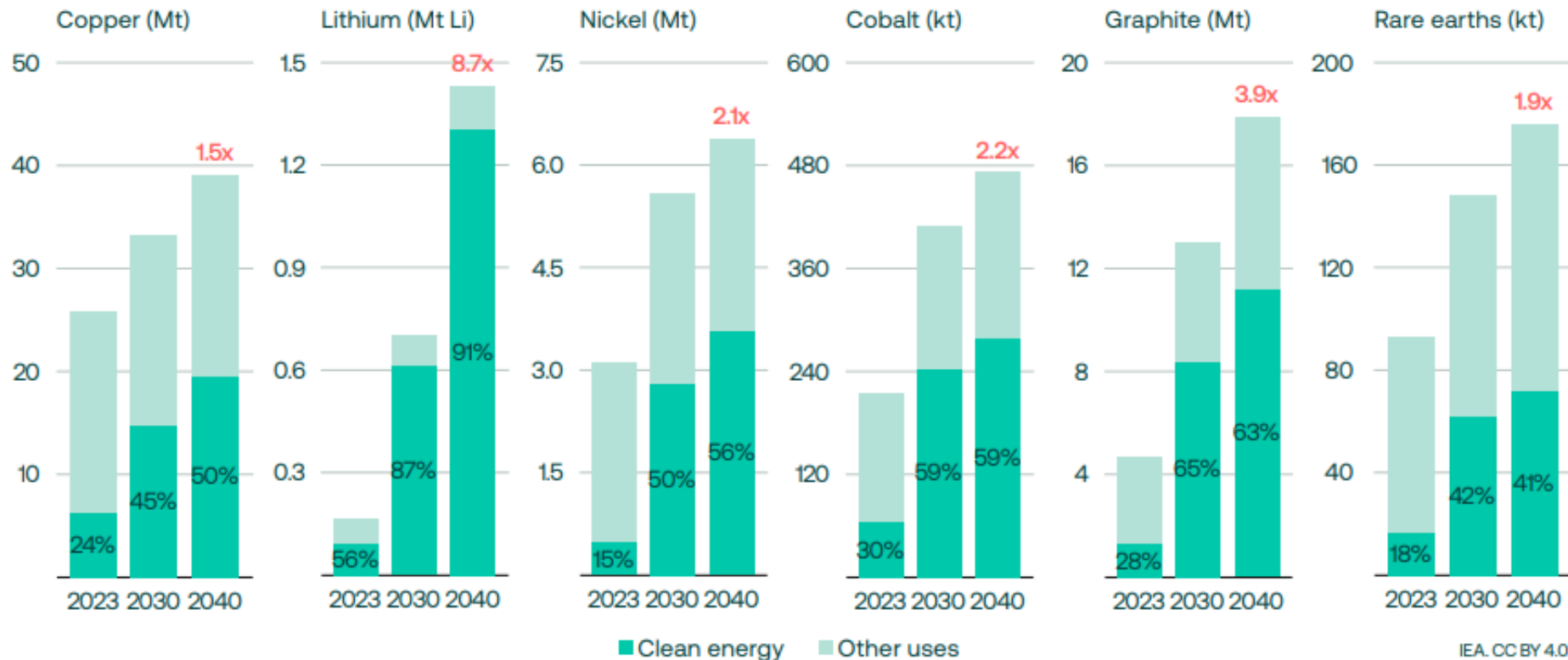
New investment to meet this demand is estimated to be between US\$360-450 billion...”

https://www.icmm.com/website/publications/pdfs/mining-metals/2024/factsheet_tax.pdf?cb=79550

**Opportunity:
New Mexico Could Lead...
Resources and Technology...**

Figure 1: Limiting global warming to 1.5C means very rapid growth in demand for critical minerals

Notes: The figures for copper are based on refined copper. Those for rare earth are for magnet rare earth elements only. Growth rates (in red) are between 2023 and 2040.



CHALLENGE

Example

Little Rock Mine near Tyrone Mine

Exploration Permit to Mine Operating =

20 years – Existing Mine

Commodities | Exploration & Production | Manufacturing | Sustainable & EV Supply Chain | EV Strategy

US mine development timeline second-longest in world, S&P Global says

By Ernest Scheyder

July 18, 2024 9:52 AM MDT · Updated 4 months ago



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**WHAT HAS INDUSTRY
DONE TO TRY TO
IMPROVE PROCESS?**

2004 to 2012 Tailing and Stockpile Reclamation



**Build Trust - Agencies and
Community**

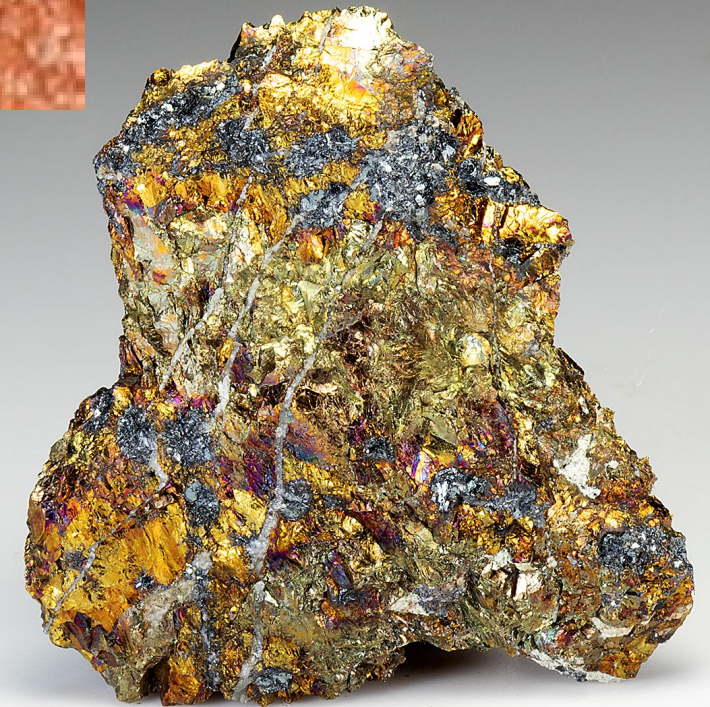


Unprecedented Financial Assurance

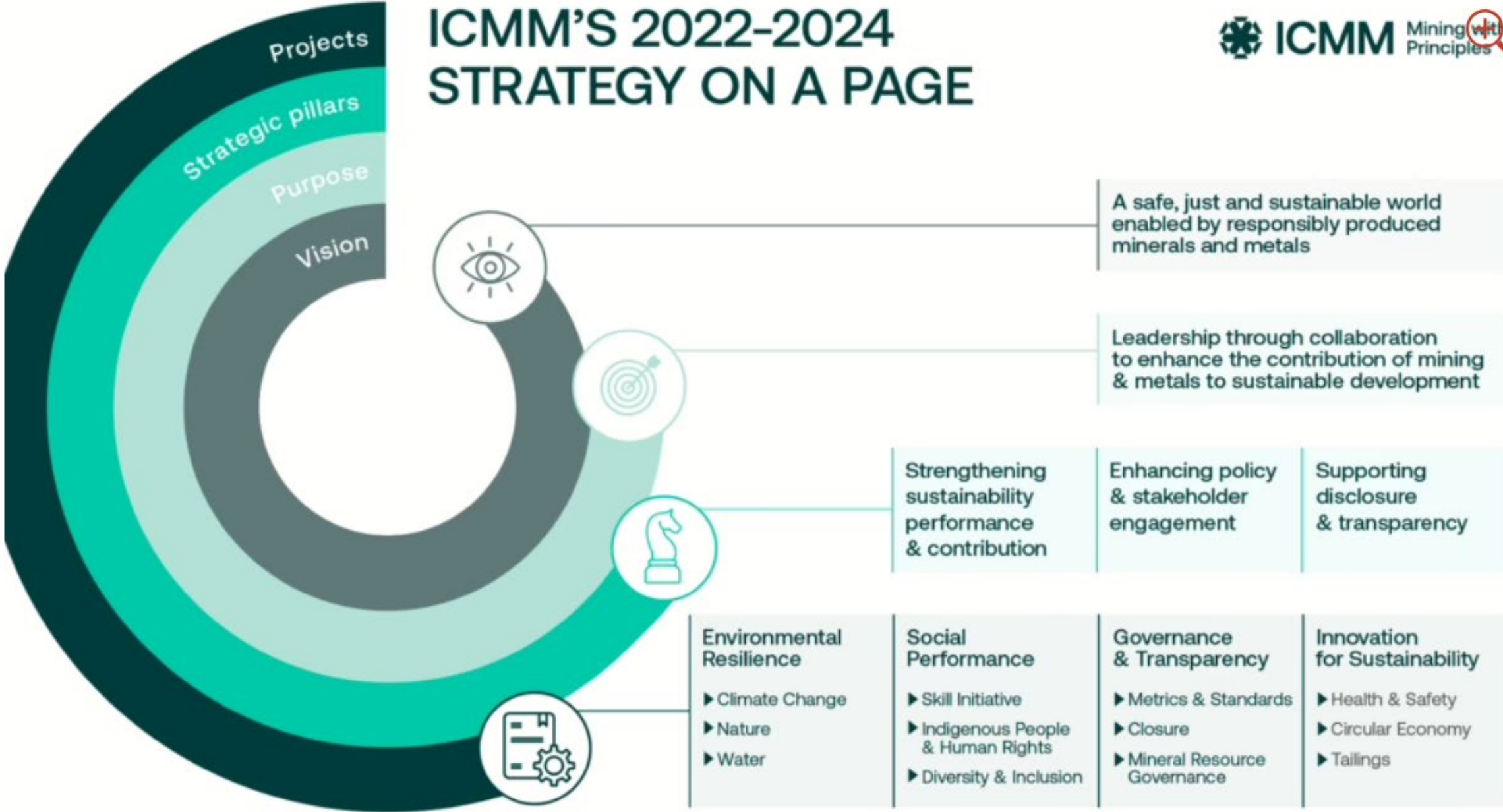
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LEGISLATION REGULATION COPPER RULES

- Industry Goals
 - Certainty
 - Reduced Timelines
- Prescriptive Rules/Standards/Methods
- Some Improvement

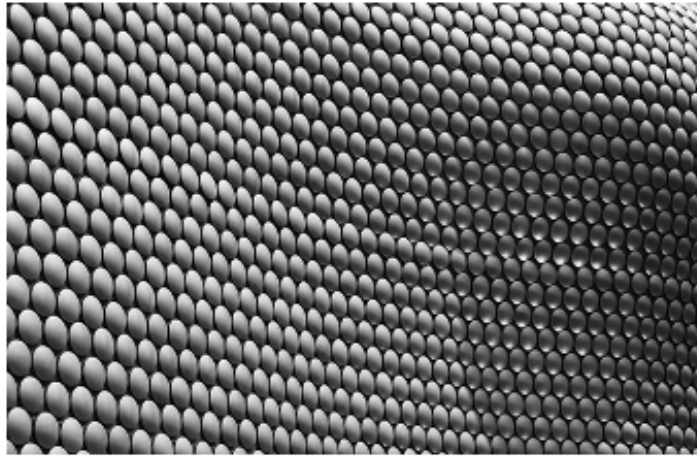


ICMM'S 2022-2024 STRATEGY ON A PAGE



Equivalency Benchmarks

Sharing the objectives of improving environmental, social and governance practices at the operational level.



Aluminium Stewardship Initiative (ASI) Performance Standard

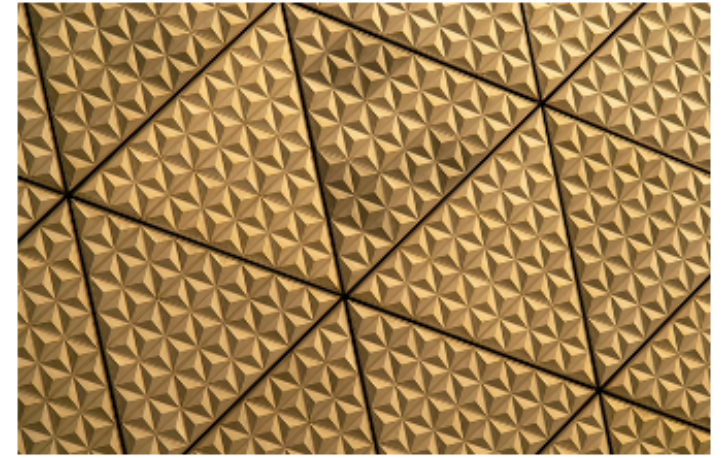
The ASI Performance Standard defines environmental, social and governance principles and criteria that address sustainability issues in the aluminium value chain. >



The Copper Mark

The Copper Mark is an assurance framework to demonstrate the copper industry's responsible production practices and industry contribution to the United Nations SDGs. >

e.g., significant goals, commitments to decrease fresh water usage; Assistance to community for their water supply



World Gold Council's Responsible Gold Mining Principles (RGMPs)

The Responsible Gold Mining Principles is a framework that sets out clear expectations for consumers, investors and the downstream gold supply chain on responsible gold mining. >

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Copper Development Association Inc.

In 2023, Freeport-McMoRan's Foundation awarded a total of \$450,000 to organizations in New Mexico

Community Partnership Panels



\$200,000 to WNMU for EV charging stations



\$200,000 to City of Bayard for Wastewater Treatment Plant



450 ac./ft. water rights to Town of Hurley and Village of Santa Clara



Collaboration to enhance cell phone and internet service in local communities



NM Tech Summer STEM Scholarships



Career Technical Education (CTE) Training Facility

TECHNOLOGY AND INNOVATIONS

- Recovering more from existing footprint
 - e.g. Leaching Innovation – “new applications, technologies and data analytics...”
- Mine Ops and Mill technology and real time analytics – e.g. MineSense, etc.
- In-situ Solution Mining
- Longer term mine planning
- Mine Design that facilitates Closure; concurrent reclamation
- Circular Economy and Reuse



OPPORTUNITIES



- Trust –
 - ICMM/Copper Mark
 - Community Engagement
 - Government, agencies and community leaders
 - NGOs
 - Building confidence in shared goals with agencies and Communities
- Additional technologies/innovations
- Changes to regulations?
 - Additional Streamlining

THANK YOU

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