



COLLABORATION FOR CHANGE

Case Study: Zero Emission Copper

Embodied CO2e reduction
(tCO2e)

50,000,000

CATEGORY

PRODUCT	SYSTEM	PROJECT	CONCEPT
---------	--------	---------	---------

SUPPLY CHAIN

MANUFACTURING	PROCESSING	TRANSPORTATION	CONSTRUCTION
---------------	------------	----------------	--------------

REGION

WA	NT	SA	QLD
NSW	ACT	VIC	TAS

Profile

Organisation: B&A, LS, ICAA

Website:

<http://greener technologies.com.au>

About: Consortium for "Zero Emission Copper Mine of the Future". Brinson & Associates, LarkinSykes, ICA Aus



CLEANER. GREATER. BETTER.

Section 1: Opportunity

Copper is essential to build PV solar, wind turbines, EVs, etc. but globally, approx 50mil tonnes CO2eq/yr is related to primary copper production. The industry seeks to reduce its own emissions, but the upstream production is quite complex.

Section 2: Solution

An industry consortium is studying pathways to a Zero Copper Mine of the Future, adopting new technologies, electrifying, digitising and rethinking how processes work.



Zero Emission Copper Mine of the Future



Section 3: Lessons

Phase Two is studying how to reduce emissions related to the large volume of water used in processing minerals. Copper, energy and water are a nexus of challenging possibilities. Drought, climate and agriculture demands add further to the complexities. Zero carbon supply chains seek new copper.

Section 4 : Impact measurement

Copper is essential to a zero carbon energy future. Globally around 50mil tonnes/yr CO₂ comes from copper itself. The impact is to produce copper for zero energy without the CO₂ upstream. High recycling already occurs, but primary metal production is still required.

Disclaimer

The Materials Embodied Carbon Leaders Alliance (MECLA) has dedicated the work to the public domain by waiving all of his or her rights to the work worldwide under copyright law, including all related and neighboring rights, to the extent allowed by law. You can copy and distribute even for commercial purposes, without asking permission. In no way are the patent or trademark rights of any person affected by this nor are the rights that other persons may have in the work or in how the work is used, such as publicity or privacy rights. Unless expressly stated otherwise, MECLA makes no warranties about the work, and disclaims liability for all uses of the work, to the fullest extent permitted by applicable law. When using or citing the work, you should not imply endorsement by the author or the affirmer.

The views expressed in this publication may not reflect the combined opinion of MECLA or any of its affiliated organisations. Whilst care has been taken to present the most accurate information, none of the authors, contributors, administrators, or anyone else connected with MECLA, in any way whatsoever, can be held responsible for any errors, omissions, or use of the information contained in or linked from this publication. All information is provided 'as is', with no guarantee of completeness, accuracy, timeliness or the results obtained from the use of this information. Information is intended for general informational purposes and users should obtain specific independent advice from professionals.