



MRIWA Accelerated Mineral Carbonation Research Program Guidelines - *November 2024*



Accelerated Mineral Carbonation (AMC) Research Program

Introduction

The AMC Research Program (the Program) aims to accelerate the development and implementation of mineral carbonation, the industrial-scale process to convert CO₂ into a stable form using mining wastes and byproducts.

By implementing this comprehensive and flexible \$2.5 million funding program, the Minerals Research Institute of Western Australia (MRIWA) seeks to catalyse significant advancements in mineral carbonation research, fostering innovation and practical solutions that can make a substantial contribution to technologies and methodologies available to the Western Australian mining and mineral processing sector within a 5-year period to reduce CO₂ emissions

Program Structure

Inter-institutional and cross-sector collaborations are strongly encouraged.

Funding Tiers:

1. Breakthrough Projects (2 available up to \$750,000 each, financial leverage greater than or equal to 4)
 - For large-scale, high-risk, high-reward research initiatives
 - Projects must involve at least one industry partner
 - 3-year duration
2. Innovation Projects (5 available up to \$150,000 each, financial leverage greater than or equal to 4)
 - For targeted research on specific aspects of mineral carbonation
 - Projects must involve at least one industry partner
 - 2-year duration
3. Rapid Response Projects (10 available up to \$25,000 each, financial leverage greater than or equal to 2)
 - For short-term, focused studies addressing urgent challenges
 - Funding support available to industry, First Nations, university and government organisation applicants
 - 6-month duration

Mineral Carbonation Roadmap (the Roadmap) Alignment

The Roadmap sets out a coordinated program of work to enable accelerated ex-situ mineral carbonation in Western Australia across four themes:

1. science and technology;
2. economic viability;



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3. social and environmental impacts, and;
4. policy and regulatory needs.

All projects should demonstrate how they clearly align to the Roadmap themes and detail how anticipated outcomes contribute to achieving Roadmap milestones.

Assessment

Eligibility Criteria

All projects are required to demonstrate they meet the Eligibility Criteria contained in MRIWA Research Grant Guidelines¹. Eligible Breakthrough and Innovation Projects will be referred for assessment by a Grant Assessment Panel. Eligible Rapid Response Projects will be considered through a streamlined assessment process.

MRIWA's Reporting Guidelines² and IP Policy and Guidelines³ apply to this funding program.

Merit Criteria

All Applications meeting the Eligibility Criteria will be assessed for overall value and risk against both the Merit Criteria in the MRIWA Research Grant Guidelines¹ and those outlined below:

- Potential for CO₂ emissions sequestration via mineral carbonation
- Alignment to the Roadmap
- Innovation and scientific merit
- Feasibility and scalability
- Western Australian industry relevance and potential time to market for commercialisation
- Collaborative strength and interdisciplinary approach

¹ <https://www.mriwa.wa.gov.au/wp-content/uploads/2023/12/231219-Final-Research-Grant-Guidelines-v1.7.pdf>

² <https://www.mriwa.wa.gov.au/wp-content/uploads/2024/06/Reporting-Guidelines-1.pdf>

³ <https://www.mriwa.wa.gov.au/wp-content/uploads/2024/01/231214-MRIWA-Intellectual-Property-Policy-and-Guidance-Notes-2023v1.1-export-2.pdf>



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Program Timeline

Year 1:

- Launch the Program and call for proposals
- Select and fund Breakthrough Projects and first round of Innovation Projects

Years 2-3:

- Monitor progress of ongoing projects
- Allocate Rapid Response Project grants as needed
- Fund second round of Innovation Projects
- Conduct mid-term evaluation and adjust program if necessary

Years 4-5:

- Continue monitoring and support of ongoing projects
- Organise knowledge-sharing workshops and industry showcases

Year 5:

- Final project reporting and evaluation
- Host a Western Australian Mineral Carbonation Symposium to share results and foster future collaborations

Additional Program Features

1. **Community of Practice Mentorship Network:** Establish a network of experienced researchers and industry professionals to mentor funding recipients.
2. **Annual Showcase:** Host yearly events for researchers to present their progress and network with industry partners.
3. **Industry Matching Fund:** Encourage industry partners to match funding assistance, potentially doubling the program's impact.
4. **Pilot Plant Priority:** Allocate a portion of the Breakthrough Project funding for the development or enhancement of pilot plants, following the success of previous initiatives.
5. **Cross-Sector Collaboration:** Encourage partnerships with related industries such as construction and manufacturing to explore potential applications of carbonated products.
6. **International Knowledge Exchange:** Facilitate collaborations with leading international research groups to leverage global expertise and resources.