

# IRON AND STEEL R&D FUNDING ROUND

FREQUENTLY ASKED QUESTIONS

APRIL 2023



Australian Government  
Australian Renewable  
Energy Agency

**ARENA**

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# APPLICANTS

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## › Can my organisation apply for funding?

To be eligible for funding, your organisation must hold, at the time of applying, an Australian Business Number (ABN) and be either an Australian entity incorporated under the *Corporations Act 2001* (Cth) or an eligible Australian research institution as set out in item 3.3 of the Program Guidelines and below:

- › an Australian university;
- › the Australian Nuclear Science and Technology Organisation (ANSTO);
- › the Commonwealth Scientific and Industrial Research Organisation (CSIRO) including Data61;
- › the Australian Institute of Marine Science (AIMS);
- › the Defence Science and Technology Organisation (DSTO);
- › Cooperative Research Centres (CRCs);
- › the National Measurement Institute (NMI); or
- › Australian Research Council (ARC) Centres of Excellence.

## › Can an individual submit more than one Proposal or be a member of more than one Project<sup>1</sup> team?

Yes. There is no limit to the number of Proposals that can be submitted by an organisation or a research institution. However, if you intend to be part of more than one Project you must be able to justify that you will have, or be able to allocate, sufficient time and resources to all Projects should they each be successful.

## › Does ARENA support collaboration between Australian universities?

ARENA encourages collaboration. This includes collaboration between universities as well as between universities, industry, and international partners.

## › Are international research institutions eligible for funding?

International research institutions are not eligible to apply directly for funding as the lead Applicant. They may be a partner in a Project with Australian research institutions, universities, or companies; however, the majority of the Project must take place in Australia. No more than 10 percent of the total Project Budget may be spent overseas - except for the purchase or use of equipment and materials. Any overseas spending above this cap can only take place with prior written approval by ARENA.

## › Does ARENA require Applicants to have an industry partner to be eligible for funding?

No. It is not a requirement to have an industry partner to apply for funding. Each Project will be assessed against the Merit Criteria outlined in part 4 of the Program Guidelines, including consideration of the capability and capacity of the Applicant and Project team to deliver the Project.

## › Could Proposals that include industry partners be considered higher merit?

Projects that benefit from the support of industry partner(s) to progress research commercialisation may be considered of higher merit dependent on ARENA's assessment. For example, ARENA will consider whether the Applicant or Project Partner has the necessary skills or expertise to contribute meaningfully to the project (assessed under Merit Criterion B) and whether this is appropriately reflected in cash and/or in-kind contributions (assessed under Merit Criterion D) as outlined in part 4 of the Program Guidelines.

## › Can industry partners be from overseas?

Yes. However, consistent with item 3.8 of the Program Guidelines, any items of expenditure incurred by the Applicant outside of Australia, other than in respect of equipment or materials, must be limited to no more than 10 percent of the total Project Budget except in exceptional circumstances that must be justified by the Applicant and agreed to by ARENA in writing.

## › Is there a limit to Ph.D. student involvement in the Project?

No. Applicants can nominate the inclusion of Ph.D. students within their application. The identity of Ph.D. students does not need to be known at the time of applying. Budgets should outline salary costs, including Ph.D. stipends and any FTE allocations known that will be apportioned to the Project.

### › Can my organisation apply for ARENA funding in addition to other grant or government funding?

Yes, an organisation can apply for ARENA funding in addition to other grant or government funding (pending or received). However, all sources of funds will need to be detailed as part of the Application. ARENA typically requires that a maximum of 50 per cent of a Project cost come from combined government funding (including ARENA contribution). If your organisation has already received government funding for the Project, your Proposal should clearly outline why additional funding from ARENA is required and ensure that the same activities are not being funded by both the ARENA Grant and other government/grant funding.

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## PROJECTS

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### › What does 'research commercialisation' mean and what might commercialisation activities include?

Projects that have attempted to go straight from bench or desktop to demonstration often face considerable challenges (including raising capital, cost overruns and changing commercial value proposition). ARENA's intent is to ensure R&D Projects have buy-in and the best chance of progressing from the research lab to use in industry.

Research commercialisation references the first step(s) of progressing a technology towards commercial use at industrial scale. Typically, this might progress a technology the first step(s) beyond laboratory scale but will depend on TRL and scope of the research.

The TRAC Program aims to progress core research into early-stage commercialisation activities to support a more disruptive, transformative approach to investment in research and development. Any activities that improve the commercial readiness of a technology are considered commercialisation activities. These might include, but are not limited to, prototype development and scale, testing (e.g., in industry conditions), technical demonstration within industry, integration of a new technology into existing processes, business development etc.

### › What is the 'stage-gate' mechanism and when will this be triggered?

In the TRAC Program, Projects will be split between a core research stage (up to three years) (Stage One) and a research commercialisation stage (up to two years) (Stage Two). The finalised Funding Agreement will include a stage-gate mechanism, with a review to occur after the core research stage, at which time ARENA will decide whether or not the project will proceed to the next stage.

The value and viability of the proposed technology, activity or approach being researched will be assessed by ARENA at the stage-gate, prior to the commencement of Stage Two.

### › What type of Projects are eligible?

Applicants under the Round are required to meet all Eligibility Criteria as outlined in part 3 of the Program Guidelines and section 5 of the R&D Funding Announcement.

The Applicant must be able to demonstrate to the satisfaction of ARENA that the Project described in the Proposal:

- › involves technologies specific to low emissions Iron and Steel production;
- › meets the definition of R&D activities as set out at item 3.5 of the Program Guidelines; and
- › involve a technology with a minimum of TRL 2 at the time of applying.

### › What if my Project contains technologies that are at different TRLs?

The starting TRL of the overall Project or activity that is being undertaken should be considered as the Project TRL, rather than what might be differing TRLs of the individual technology(s). If this is unclear, it is recommended that the primary technology is referenced. ARENA recognises that some Projects may be conducting early-stage research (at low TRLs) which have application to semi-commercial technologies to make technology advancements in these areas.

### › Are there any restrictions on the start and end dates of Projects?

Yes. The maximum Project length is 5 years, with the earliest possible start date following execution of the Funding Agreement.

### › Can the core research stage be shorter than the research commercialisation stage?

Yes. The core research stage can be designed as needed to meet the requirements of progressing to research commercialisation stage.

### › Does research need to develop novel or new technologies to be eligible?

No. The Round is not restricted to novel or new technologies. Research can focus on significant optimisation of, or step change improvement in key performance metrics of existing technologies. The merit of any Project will be considered based on the Merit Criteria defined in part 4 of the Program Guidelines and section 6 of the R&D Round Funding Announcement.

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## ASSESSMENT PROCESS

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### › How do I apply for funding?

The Round will have a two-stage application process. Expressions of Interest (EOIs) and Full Applications must be submitted online using ARENA's Grants Management System (GMS), accessible on ARENANet. The timetable for the Round is described in section 11 of the R&D Funding Announcement.

### › How does ARENA decide which Project will receive funding?

Eligible Projects will be scored and ranked against the four Merit Criteria as outlined in part 4 of the Program Guidelines. ARENA will engage an expert panel to undertake this process. Each Merit Criterion will be weighted equally. The Merit Criteria are:

- A. The extent to which the Project will contribute to the Program Outcomes and Round Objectives as set out in the R&D Funding Announcement for the Round.
- B. The capability and capacity of the Applicant, Project Partners, and key Project personnel to deliver the Project.
- C. The strength of the Project design and methodology, in terms of meeting the proposed objectives within the timeframe and budget set out in the Proposal.
- D. The financial viability and co-funding commitment of the Project

Refer to section 6 of the applicable R&D Funding Announcement for further clarification on the Merit Criteria.

### › When will the round close for applications?

Application and assessment for the Round will involve two stages: an EOI and, for those successful at the EOI stage, a Full Application. The opening and closing dates are set out in section 11 of the applicable R&D Funding Announcement.

### › What is a portfolio approach?

When selecting Projects for funding ARENA may consider how a Project will contribute to the Program Outcomes and Round Objectives, or as part of a suite of complementary ARENA Projects. ARENA may elect not to fund an otherwise meritorious Project if the aims or outcomes of that Project are the same as, or similar to, the aims and outcomes of a Project that has previously been funded or is currently under assessment. ARENA's current portfolio of Projects is listed on its website <https://arena.gov.au>.

### › What feedback can I get on my Project?

Applicants successful at either the EOI or Full Application stage will receive written feedback on their application. Feedback from EOIs will need to be addressed as part of their Full Application. Applicants that are unsuccessful at the EOI stage will not receive feedback.

### › How will I know if my application progresses from EOI to Full Application stage?

Applications will be assessed once the EOI submission period has closed. Successful applicants will be notified in writing as to the outcome of the assessment and will be invited to submit a Full Application.

### › Can ARENA provide examples of previous successful Proposals from past rounds?

No. ARENA does not provide sample answers or example Proposals for any of its programs. ARENA does not have standard expectations on how questions should be answered. ARENA expects all answers to be honest, succinct, well justified, and complete.

› **When demonstrating merit against Merit Criterion A, do I need to consider technology performance against all performance metrics listed?**

No. Technology performance should be considered against the set of metrics relevant to the technology or process that is the primary focus of the research. Well justified technology performance estimations with clear assumptions against relevant metrics will aid in the assessment of a Project's merit.

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## FINANCES

› **How much funding can ARENA provide to my Project?**

ARENA has allocated a \$25 million of funding to this Round. ARENA reserves the right to allocate an amount of funding that is lower than the Funding Envelope if there is an insufficient number of high merit Proposals received. ARENA may, at its discretion, allocate an amount of funding greater than the Funding Envelope if it considers this to represent value for money.

The amount of ARENA grant funding requested must be a minimum of \$500,000 and no greater than \$5 million. The total ARENA funding requested should not exceed more than 50 per cent of the Project cost.

› **Is there a limit to how much funding can be directed towards research commercialisation activities vs core research activities?**

Yes. Proposals must budget no more than 50 per cent of total ARENA funding sought towards commercialisation activities, to a limit of \$2.5 million.

› **Is there a template for the ARENA budget?**

Yes. The ARENA budget template is a part of the online ARENANet application form, under 'Merit Criterion D'. The budget is split by 6 Milestones spanning the duration of the Project which correlate to points in the Project timeline. Project cost should be estimated across these Milestones accordingly.

Stage One budget: Core Research Stage (Milestones 1-3)

- › Milestone 1: is expected to be paid shortly following execution of the Funding Agreement.
- › Milestone 2: expected to be paid at the midpoint of Stage One (e.g., 18 months).
- › Milestone 3: expected to be paid at the end of the Stage One.

Stage Two budget: Research Commercialisation Stage. (Milestones 4-6). Subject to approval to proceed being received at the Project stage-gate

- › Milestone 4: expected to be paid shortly following commencement of Stage Two.
- › Milestone 5: expected to be paid at the midpoint of Stage Two.
- › Milestone 6: expected to be paid at the conclusion of Stage Two.

Milestone 1 will be paid upfront shortly following commencement of the Project. Milestones 2, 3, 4, 5 and 6 will be paid in arrears and should align with those described in the Project design in Merit Criterion C. The Milestone Payments should generally reflect the work undertaken to complete the Milestones deliverables (i.e., the work undertaken on the Project since the last Milestone) and Recipient and Partner co-contributions should be commensurate with the allocation of ARENA funds across Milestone 2, 3, 4, 5 and 6 (e.g., 100 per cent of co-contributions should not be allocated in Milestone 6).

› **Should the Project budget cover both the core research and research commercialisation Stages?**

Yes. The Project budget should cover both the core research and research commercialisation Stages according to the Milestones specified.

› **What level of budget accuracy is expected for the research commercialisation stage?**

ARENA recognises that the research commercialisation plan is subject to refinement as the Project progresses. An indicative budget for this stage should be included in the Application, with estimated breakdown of Project cost. Comparatively higher budget accuracy is expected of the core research stage.

### › Is there a required level of co-investment that must be provided?

It is expected that Projects will at least match, with a combination of cash and in-kind contributions, the ARENA grant.

Projects which include a commitment of funding from sources other than ARENA may be considered of higher merit. ARENA expects that proposals closer to commercialisation will provide a higher proportion of total funds.

Applicants may wish to review the Grant funding provided to existing ARENA R&D projects through previous R&D rounds for guidance; however, all Proposals are assessed on their own merits. Project examples can be found at [arena.gov.au/projects](http://arena.gov.au/projects).

### › Why does ARENA require co-investment?

ARENA funds Projects to support commercialisation outcomes over the short, medium, and long-term. ARENA therefore expects that Project proponents should bear some of the cost and risk associated with the Project.

ARENA is seeking to fund Projects that offer high value for its contribution to the total Project cost. Projects that seek a lower proportion of ARENA funding as a share of the total Project cost may be of higher merit. Please refer to Merit Criteria D in the Program Guidelines.

### › Is co-investment from an industry partner required?

No. Co-investment from an industry partner is not a requirement.

### › Is supporting evidence required if co-investment is expected from a Project Partner?

If Project Partner investment is expected, the Full Application should include supporting evidence or letters of support.

Letters of support should include details of the contribution (i.e., cash/in-kind, amount and what the contribution is for), any terms under which the contribution will be provided (including the timeframe for provision) and any other relevant information to demonstrate support for the project. The letter needs to be provided on letterhead and signed by an appropriate person who can commit the level of contributions proposed.

### › Should salaries be counted as in-kind or cash contributions?

Where personnel are already engaged by the Recipient prior to the commencement of the Project and have not been engaged specifically to work on the Project, this cost should be classified as an In-kind Contribution, as opposed to Cash Contributions. In addition, where an existing member of personnel is transferred to work on the Project (for all or part of the time), then the proportion of time that is spent on the Project should be classed as an In-kind Contribution.

Where personnel are (or will be) specifically hired to work on the Project, this can be classed as a Cash Contribution. The hire of personnel to work on the Project may also include the hire of existing personnel, where the duration of their existing engagement does not cover their proposed involvement in the Project. The appropriate FTE must be apportioned to the Project and must not overlap with any pre-existing role or work on other projects.

The Applicant can elect to assign cash salaries from either a Cash Contribution or the ARENA Grant funding request under the budget. This budget and its justification will be assessed for merit under Merit Criterion D.

### › Can salary on-costs be counted as contributions?

Yes. Eligible expenditure covers labour expenditure including reasonable on-costs for personnel employed directly on the Project, which may be calculated as up to 125 percent of salaries as set out in item B.5 of the Program Guidelines.

### › Will university overheads be accepted as a contribution?

Eligible expenditure includes administrative expenses, expenditure on legal, audit and accounting costs directly relating to Project cost as set out in item B.5 of the Program Guidelines.

### › How will payments be made if my Proposal is successful?

Payments will be made according to the six Milestones outlined in the Funding Agreement. In general, a payment will be made at the start of the Project (50 per cent of the grant value for Stage One), at the midpoint of Stage One (30 per cent of the grant value for Stage One) and at the conclusion of Stage One (20 per cent of the grant value for Stage One). On approval to proceed being received at the Project stage-gate, a payment will be made at the start of Stage Two (40 per cent of the grant value for Stage Two), at the midpoint of Stage Two (30 per cent of the grant value for Stage Two) and at the conclusion of Stage Two (30 per cent of the grant value for Stage Two).

With exception of the first payment which is made upon Project commencement, the last five instalments will be subject to the Applicant achieving their milestone deliverables for that period.

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## KNOWLEDGE SHARING

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### › What are ARENA's requirements for knowledge sharing?

As required under Eligibility Criterion G in the Program Guidelines, the Applicant must agree that it will participate in any knowledge sharing events and activities related to the Round as specified in the Knowledge Sharing Plan template.

### › Will any Project or company IP be protected under ARENA knowledge sharing requirements?

It is the Recipient's responsibility to ensure that any Project documentation or information (including any Knowledge Sharing Deliverables) prepared for public release do not contain any Recipient Confidential Information. Any sensitive information (information not for public release) is to be provided as a confidential addendum for ARENA (as Recipient Confidential Information) or as agreed with ARENA. Public deliverables must be approved by ARENA prior to publishing.

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## SCOPE OF ACTIVITY

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### › What type of ore feedstock are in scope for research?

Any Australian iron ores are considered in scope when part of a Project that aligns with the Scope of the Activity as outlined in section 4 of the R&D Funding announcement.

### › Are technologies progressing incremental emissions reduction in iron or steel making processes (but not yet delivering net-zero iron or steel making) considered in scope of the Round?

Yes. Partial or incremental emissions abatement technologies will be considered, on the basis that the technology or process clearly progresses the net zero iron and steel transition, and that the total addressable emissions abatement potential is significant. ARENA will consider the reduction in emissions intensity and the total emissions abatement potential in assessing the merit of a Project as outlined in section 6 of the R&D Funding Announcement and part 4 of the Program Guidelines.

### › Is the development of low-cost hydrogen as an input to iron and steel making in scope of the Round?

No. Research focusing on low-cost hydrogen production can be considered under the scope of the separate, Hydrogen R&D Funding Round. The use of renewable hydrogen in specific iron and steel making processes can be considered in the Iron and Steel R&D Funding Round.

### › Can research which builds on a semi-commercial technology or process be considered 'innovative'?

Yes. Provided that there is clear and significant evidence of benefit comparative to the existing technology or process. Benefit could be seen in the form of significant improvement to performance metrics, such as reduction in emissions intensity and the cost of production.



› **Are lower maturity technologies (such as steel electrolysis or plasma reduction) in scope of the Round?**

Yes. Any technology or processes that involve a technology with a minimum of TRL 2 at the time of applying is considered in scope from a TRL perspective.

› **Is a Project eligible if it is based on carbon capture and storage (CCUS)?**

No, research that focuses specifically on CCUS technology falls outside ARENA's statutory mandate and is not considered eligible as outlined in section 4 of the R&D Funding Announcement.

› **How should I answer Merit Criterion A when referring to technology performance against the key metrics listed?**

ARENA will assess the expected performance of the technology or process against relevant metrics set out under Merit Criteria A in section 6 of the R&D Funding Announcement. This can be approached by considering:

- › Emissions intensity: The volume of emissions per unit product, relevant to the technology or process in question (e.g., tCO<sub>2</sub>e / tsteel).
- › Emissions abatement: Absolute emissions abatement potential, based on the relevant production volumes in the proposed addressable industry market or use case.
- › Production cost: The estimated production cost per unit product for the technology or process being researched. This should be compared relative to the production cost of the existing technology or process which is used in the proposed addressable market.
- › TRL advancement: The estimated change in TRL relative to the starting TRL of the Project.
- › Potential for commercial viability can be approached by considering:
  - › Size of addressable market at commercial scale: The proposed target market or industry use case where the technology or process in question might be applied at scale. This should be quantified with an estimated market size.
  - › Pathway to commercial scale: The key steps to progress the technology from research scale.

If relevant, the potential contribution to a net zero Australia iron and steel value chain can be approached by considering:

- › Proportion of iron ore supply relevant to the Project: The volume of Australian iron ores that might be impacted by the technology or processes of a Project.
- › Potential incremental economic opportunity of a higher value iron product: The potential economic value that could be gained relative to the value of current comparable Australian iron products. This might be most relevant to export feasibility and value of iron products relative to direct shipped ores.

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**Endnotes**

- 1 Capitalized terms are defined in accordance with the Glossary outlined in the Program Guidelines and R&D Funding Round Funding Announcement.



Further information is available at  
[arena.gov.au](http://arena.gov.au)

Australian Renewable Energy Agency

To explore potential for funding visit:  
[arena.gov.au/funding](http://arena.gov.au/funding)

*Postal Address*  
GPO Box 643  
Canberra ACT 2601

*Location*  
2 Phillip Law Street  
New Acton ACT 2601

*Engage with us*

**ARENAWIRE**



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