TRAC Program Round 1: ULCS FAQs - Version 2 updated 29 June 2022 (updates in **blue**)

Applicants

Can my organisation apply for funding?

To be eligible for funding, your organisation must hold an Australian Business Number (ABN) and be either an eligible Australian research institution or an Australian entity incorporated under the Corporation Act 2001 (Cth).

The following Australian research institutions are eligible to apply:

- 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 the lead Applicant change during Project delivery?

Yes. It may be appropriate for the lead Applicant to be substituted by a Project Partner over the delivery of the Project (e.g. between core research and commercialisation phases). ARENA will seek to facilitate a change in the Recipient at the end of the research phase to help achieve Project outcomes.

Can an individual submit more than one Proposal or be a member of more than one project team?

Yes, there is no limit to the number of Proposals that can be submitted by an individual, organisation or a research institution. However, if you intend to be part of more than one Proposal you must be able to justify that you will have, or be able to allocate, sufficient time and resources to all of the Proposals 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. ARENA may seek to facilitate collaboration between applicants with similar or complementary Proposals with their prior consent, but cannot assist in facilitating collaborations prior to application.

Are international research institutions eligible for funding?

International research institutions are not eligible to apply directly for funding as the main 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 - with the exception of 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?

It is not essential to have an industry partner. Each Proposal will be assessed on its merit against all selection criteria, including alignment to the Round Objectives. However, proposals that can demonstrate a strong commercialisation strategy are likely to be considered of higher merit.

Will Proposals that include industry partners be considered higher merit?

ARENA will assess the capability and capacity of the lead applicant and any project partners under Merit Criterion B. For example, ARENA will consider whether the partner or applicant has the necessary skills or expertise to contribute meaningfully to the project and whether this is appropriately reflected in cash and/or in-kind contributions (assessed under Merit Criterion D).

Due to the emphasis on commercialisation and the facilitation of collaboration between research and industry groups, Proposals that include and benefit from strong industry partner support are likely to be considered of higher merit.

Can industry partners be from overseas?

Yes. However, consistent with the eligibility criteria, no more than 10 percent of the Project budget can be spent overseas.

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

No. The capability and capacity of the Team conducting the Project is assessed under Merit Criterion B. Applicants should include team members and skill sets they consider appropriate to deliver the Project. The budget, including salaries, is also assessed under Merit Criterion D and the FTE allocated to each team member must be apportioned to the Project.

Projects

What is commercialisation and what do commercialisation activities include?

Commercialisation is the process of bringing new products or services to market. Projects that have attempted to go straight from bench or desktop to demonstration at a commercial scale face the greatest challenges, such as raising private sector co-investment commitments, costs exceeding early expectations and the external market context changing over time such that the original goals no longer deliver a sustainable commercial proposition. ARENA has a broad mandate to to assist Projects through to commercialisation although this has not been the focus of ARENA's previous R&D programs. The TRAC Program aims to progress core research into early stage commercialisation activities to support a more disruptive, transformative approach to investment into research and development. Activities that improve the commercial readiness of a technology are

considered commercialisation activities (e.g. business development, technical demonstration within industry, integration of a new technology into existing processes, etc.).

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

In line with the transformative approach and an emphasis on commercialisation, Projects will be split between core research (up to 3 years) and commercialisation (up to 2 years) with a stage-gate mechanism implemented between both phases. The value and viability of the proposed technology will be assessed at the transition point between phases and prior to the commencement of any material commercialisation activities. If a Project does not proceed past the stage-gate (which will be at ARENA's discretion based on its assessment of the value of this phase) it will be terminated and any funding allocated for the commercialisation phase returned to ARENA. ARENA may propose a variation to the Funding Agreement at the stage-gate, which may include a reduction in the total amount of funding available in the commercialisation stage.

What are the Streams of the ULCS Round?

For a Project to be eligible for funding it must address one of the Round's Streams, which are:
- Cells and modules: Improvement in the efficiency of cells and modules is a key lever for reducing LCOE. Cells and modules also need to be cost competitive, offer longevity and consider sustainability issues when manufactured and deployed at scale.
- Balance of system costs and Operations and Maintenance: Significant reduction of balance of system (BoS) costs and Operations and Maintenance (O&M) costs are also required to achieve ULCS. Innovative plant design configurations and the use of advanced automation in assembly and construction are potential pathways to lower utility scale solar PV construction costs. In the O&M phase, automated maintenance technology and intelligent plant monitoring systems are potential cost reduction pathways.

What if my Project covers more than one Stream?

Although Projects may contribute to more than one Stream, Applicants are required to select only one (the most relevant) Stream to be addressed under Merit criteria A.

Will ARENA consider one Stream more favourably than another?

ARENA will be assessing each of the two Streams separately meaning, for example, that "Cells and Modules" Proposals will not be assessed against "Balance of system costs and Operations and Maintenance" Proposals. However, ARENA reserves the right to reallocate funding from one Stream to the other if it considers that there are insufficient high merit Proposals in one Stream.

What type of Projects are eligible?

This Round is open to Projects that:
- are at or above Technology Readiness Level (TRL) 3 at the time of application;
- meet the description of one of the the Streams of the Round;
- meet the definition of an R&D Project (see below); and
- are no more than 5 years in duration with up to 3 years allocated for core research

and up to 2 years for commercialisation activities.

R&D includes specialised scientific and technical information services, postgraduate research, and the design, construction and testing of prototypes (pilot plants where new data is evaluated).

R&D does not include basic or blue-sky research (Technology Readiness Level (TRL) 1-2), education and training of students (except postgraduate research), maintenance of national and international standards, feasibility studies, business models or marketing and market studies.

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

You should consider the starting TRL of the overall Project or activity that you are undertaking and apply this to your Proposal rather than the individual technology(s). ARENA recognises that you may be conducting early stage research based on commercial technologies in order to make technology advancements to these products.

What does cost-effectiveness mean and how can I compare my Project to current mass-market solar PV technologies?

Cost-effectiveness should take into consideration the cost of generation over the lifetime of a solar panel. This might include parameters such as the cost of manufacture, efficiency and stability in a real-world environment.

Applicants should consider how their Project aims to improve on the performance of existing, mass-market technologies by referencing the International Technology Roadmap for Photovoltaic (ITRPV), April 2021.

Should all Proposals reference the ITRPV Report?

No. Applicants should only reference the ITRPV to demonstrate improvements to the cost-effectiveness of solar PV panels in mass-market production. In such Proposals, the figures in the ITRPV Report are to be used as a benchmark for comparison. If your Proposal is focused on a different area, then you do not need to reference the ITRPV Report.

Can all Proposals include a one-page attachment or is it only for Proposals referencing the ITRPV report?

Yes. All Proposals can include a one page attachment that includes any graphical representation, other material which assists in explaining your Proposal. Proposals referencing the ITRPV report can use this attachment to support any claims made.

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 being 1 September 2022.

How does ARENA calculate Levelised Cost of Energy (LCOE)?

ARENA calculates LCOE based on the industry-accepted calculation using a discount rate

of 6% (pre-tax). Given that different systems will have different cost characteristics, lifetime generation, and asset lives, ARENA is not prescriptive on the other assumptions that should apply to the calculation of LCOE. Any assumptions used to calculate LCOE should be included as part of your application.

Assessment Process

How do I apply for funding?

Expressions of Interest (EOIs) and Full Applications must be submitted using ARENA's Grants Management System (GMS). From 7 February 2022, Applicants can commence an online application by going to ARENA's online GMS, ARENANet.
Each section of the application contains instructions on what information is required and any word limits which may apply. Applicants can save their application at any time before submitting to ARENA before 5pm Australian Eastern Standard Time (AEST), Monday 11 April 2022.

How does ARENA decide which Project will receive funding?

ARENA will score and rank eligible Projects against the four Merit Criteria. 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 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, in terms of meeting the proposed objectives within the timeframe and budget set out in the Proposal.
    D. The financial viability of the Project, including the level of co-investment and evidence of commitment, both cash and in-kind, to the Project.

When will the round close for Proposals?

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 for each stage are:

Stage	Opening Date	Closing Date and Time
Expression of Interest (EOI)	Monday 7 February 2022	5.00 pm Australian Eastern Daylight Time, Monday 11 April 2022
Full Application	Full Applications are open to invited Applicants from mid June 2022 and close Monday 1 August 5:00 PM AEST	
Application outcome	Notification to Applicants as to whether their Full	

	Application has been successful is expected to take place in October 2022. ARENA will advise all Applicants in writing as to the outcome of their Application.
Negotiation and finalisation of Funding Agreement	Estimated October - December 2022 (subject to change)

How long will the entire process take?

Applications will be assessed once the EOI submission period has closed. It is expected Applicants will be notified of the outcome of their assessment within 4 weeks from the closure of the EOI submission period. ARENA anticipates Applicants invited to submit a Full Application will then have 8 weeks to prepare their Full Application. It is expected Applicants will be notified of the outcome of this assessment around October 2022.

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.

Portfolio fit may also be a consideration in allocating funding across the Streams of a Round. While ARENA expects to allocate funding to successful Projects in each Stream, should Projects not be considered of sufficient merit, ARENA will allocate funding as appropriate. This may result in no funding being awarded to Projects in one particular Stream.

What feedback can I get on my Proposal?

ARENA will provide feedback to Applicants who are unsuccessful at the Full Application stage only. Feedback on merit will not be provided at the EOI stage for unsuccessful Proposals.

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

No, ARENA does not provide sample answers or 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.

Finances

How much funding can ARENA provide to my Project?

Up to $40 million will be invested in Projects through this round. This amount may be varied up or down at the discretion of the ARENA Board. The following funding parameters apply:

- The expected minimum ARENA grant to a Project is $2 million.
- The expected maximum ARENA grant to a Project is $8 million.

Is there a limit to how much funding can be directed towards commercialisation activities?

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

Where is the ARENA budget template?

The ARENA budget template can be found in the online ARENANet application form, under 'Merit Criterion D'.

The budget is split by the Stage One: R&D Stage Budget and the Stage Two: Commercialisation Stage Budget. The budget for each Stage will be split by Milestone Payments. For the Stage One Budget, the first Milestone is expected to be paid upon execution of the Funding Agreement, the second Milestone at the midpoint of Stage One (e.g. 18 months) and the third Milestone at the end of the R&D Stage. Subject to approval to proceed being received at the Project stage-gate, the first of the Commercialisation Payments (also the fourth Milestone) will be made upon the commencement of Stage Two, the fifth Milestone at the midpoint of Stage Two and the sixth Milestone at the conclusion of Stage Two.

Milestone 1 will be paid upfront at the 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% of co-contributions should not be allocated in Milestone 6).

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 funding contributions of existing ARENA R&D projects funded through previous R&D rounds for guidance, however all Proposals are assessed on their own merits. Project examples can be found at https://arena.gov.au/projects and by searching "Solar PV R&D".

Why does ARENA require co-investment?

ARENA funds Projects in order 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 considered to be of higher merit. Please refer to Merit Criteria D in the Program Guidelines.

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 is able to 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. Salary on-costs can be calculated as an additional 25 percent of the salary and should be included as eligible expenditure, within the salary budget line. More information is available in the Program Guidelines under Appendix B.

Will university overheads be accepted as a contribution?

Where overheads are directly related to the Project, e.g. contract negotiation or administration costs incurred as part of the Project management, expenses should be included as eligible expenditure.

Where overheads are related to costs incurred in the normal course of business and do not relate directly to the Project, e.g. general administration costs for school or university services, these should be considered ineligible expenditure. More information is available in the Program Guidelines under Appendix B.

How will payments be made if my Proposal is successful?

In general, a payment will be made at the start of the Project (50% of the grant value for Stage One), at the midpoint of Stage One (30% of the grant value for Stage One) and at the conclusion of R&D Stage (20% 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% of the grant value for Stage Two), at the midpoint of Stage Two (30% of the grant value for Stage Two) and at the conclusion of Stage Two (30% of the grant value for Stage Two). Payment of the last five instalments will depend on the Applicant achieving their milestone activities for that period. These activities will be agreed upon during negotiation of the Funding Agreement. Payment of the last three instalments will be subject to receiving approval to proceed at the Project stage-gate. The performance metrics that will determine whether a Project will proceed to Stage Two will also be agreed upon during negotiation of the Funding Agreement.

Knowledge Sharing

What are ARENA's requirements for knowledge sharing?

Knowledge sharing does not include any commercially valuable information or intellectual property (IP).

For any successful Applicants, ARENA support must be acknowledged in all communications material distributed by Grant Recipients in relation to the ARENA-funded Project. Knowledge sharing refers to lessons learnt throughout the Project, the sharing of successful stories, and creating opportunities for collaboration with the wider renewable energy sector. In some cases this may be made publically available, in others it may be restricted to a relevant audience within the specific sector.

For this Round, Knowledge Sharing is not a Merit Criterion. Instead, Applicants are required to agree to a Knowledge Sharing Plan which can be found on the TRAC Program webpage on ARENA's website https://arena.gov.au/funding/trac-program, as an eligibility requirement.