



Australian Government

Australian Renewable Energy Agency

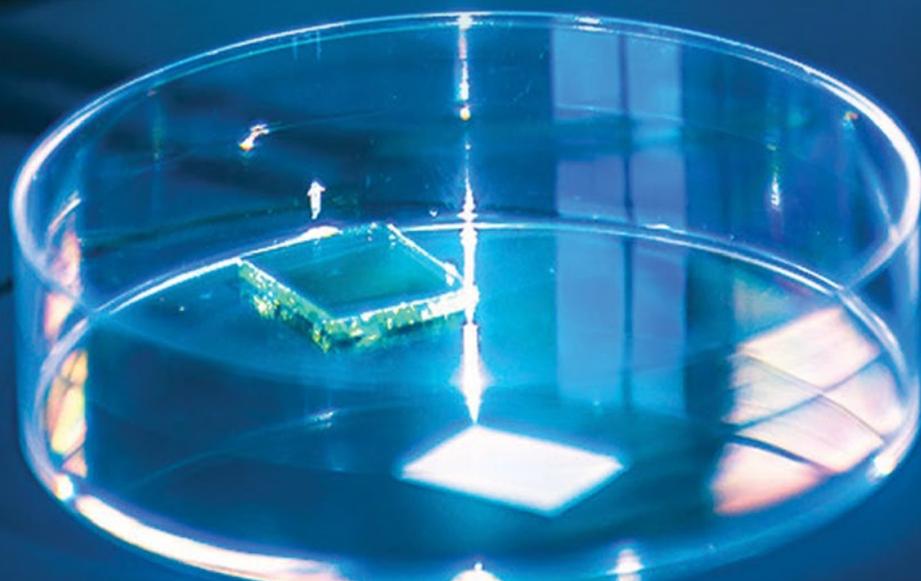
Research and Development Programme

Round 2: Industry-Researcher Collaboration Guidelines

April 2015



ARENA



Executive Summary

Research and Development Programme Round 2: Industry-researcher collaboration

1. The ARENA Research and Development (R&D) Programme is delivered by ARENA in competitive rounds.
2. The priority for Round 2 of the R&D Programme is to fund collaboration between industry and the research sector focused on innovative renewable energy technologies that integrate renewable energy into networks, buildings and industrial processes.
3. The total funding allocated for Round 2 is up to \$20 million. This amount may be reduced or increased at the discretion of the ARENA Board. It is expected that ARENA grants awarded to projects under Round 2 will be between \$500,000 and \$5 million, with at least matched funding from the project proponent on a 1:1 basis.
4. The application and assessment process for Round 2 involves two stages: an expression of interest (EOI) and a full application.
5. All applications must be completed online using ARENA's Grants Management System, ARENA OmniNet, which is accessible from the R&D Programme webpage on ARENA's website arena.gov.au.
6. The key dates below signify when the online system will be open for Round 2 EOIs, and full applications.
7. Opening and closing dates for each stage of the application process are:

Table 1: R&D Programme Round 2: Industry-researcher collaboration

Stage	Opening date	Closing date
Expression of interest (EOI)	13 April 2015	5pm Australian Eastern Standard Time, 3 July 2015
Full application	TBA during 2015, ARENA will advise dates to applicants with successful EOIs The expected timeframe for preparation of a full application is 6 weeks	
Application outcome	Expected during December 2015. ARENA will advise applicants	
Negotiation and finalisation of grant contract	Expected during December 2015 – January 2016	

Contents

Research and Development Programme

Round 2: Industry-researcher collaboration

Part 1 – Overview	3
Purpose.....	3
Introduction.....	3
Objectives and outcomes of the Programme.....	3
Commencement and authority for the Guidelines.....	3
Programme funding model.....	4
Part 2 – Application and assessment process	5
Overview.....	5
Expression of interest.....	5
Full application.....	5
Submitting an application.....	5
Assessment process.....	7
Collaboration.....	8
Part 3 – Eligibility criteria	9
Part 4 – Merit criteria	13
Part 5 – Funding offers and other arrangements	19
Funding offers.....	19
Funding arrangement.....	19
Use of funding.....	19
Knowledge sharing and publication of project information.....	19
Part 6 – Further Programme information	20
Confidentiality and disclosure of information.....	20
Review of decisions and complaints.....	20
Conflicts of interest.....	20
No contract or liability.....	21
Work health and safety.....	21
Other applicable requirements.....	21
Appendix A – Technology Readiness Levels	22
Appendix B – Eligible expenditure guide	27
Glossary	31

Part 1 – Overview

Purpose

- 1.1 The purpose of these Programme Guidelines (the Guidelines) is to provide a framework for the operation of ARENA’s Research and Development Programme (the Programme).
- 1.2 Applicants should read the Guidelines in conjunction with any supporting information provided on the Programme’s webpage. These resources can be accessed at arena.gov.au.
- 1.3 In the Guidelines, a word takes its common meaning unless defined in the glossary at the end of the Guidelines.
- 1.4 In the event of any inconsistency between other ARENA materials and these Guidelines, the Guidelines prevail.

Introduction

- 1.5 The Australian Renewable Energy Agency (ARENA) was established on 1 July 2012 under the *Australian Renewable Energy Agency Act 2011* (ARENA Act) with a remit to improve the competitiveness and increase the supply of renewable energy in Australia.
- 1.6 Round 1 of the Programme awarded \$21.5 million funding to 12 projects focused on solar excellence.

Objectives and outcomes of the Programme

- 1.7 The objectives of the Programme are to provide funding to deliver the following outcomes:
 - a. a range of high quality and innovative renewable energy technologies that enhance Australia’s world-class research position and/or address conditions specific to Australia
 - b. an increase in skills, capacity and knowledge relevant to priority renewable energy technologies within Australia
 - c. an increase in investment that improves the technology readiness and commercial readiness of priority renewable energy technologies.

Commencement and authority for Guidelines

- 1.8 The Guidelines have been approved by the ARENA Board and come into force on 13 April 2015. The Guidelines supersede the previous version dated 25 September 2013.
- 1.9 The Guidelines may be revoked or varied from time to time, pursuant to section 24 (1)(b) of the ARENA Act.
- 1.10 The ARENA Board is responsible for approving the entering into of contracts and approving financial assistance under the Programme.
- 1.11 The ARENA Board may delegate responsibility for the Programme in accordance with the ARENA Act.

Programme funding model

- 1.12 ARENA has allocated up to \$300 million from 2013 to 2022 to develop ARENA's research and development portfolio.
- 1.13 Funding for the Programme will be drawn from these funds and available until the Programme funds are exhausted or the ARENA Board decides to close the Programme.
- 1.14 All funding provided through the Programme will be in the form of grants, typically paid in arrears. No grant under the Programme will exceed \$10 million.

Part 2 – Application and assessment process

Overview

- 2.1 The application and assessment process for proposals under the Programme is a competitive process involving two stages:
 - a. an initial expression of interest (EOI)
 - b. a full application.
- 2.2 Eligible applicants can apply for funding under the Programme for eligible research and development projects (the Project). The eligibility criteria for applicants and Projects are described in Part 3.

Expression of interest

- 2.3 Applicants must submit their EOIs by the closing date and time specified in the Guidelines.
- 2.4 EOIs submitted after the EOI closing date may not be considered by ARENA.

Full application

- 2.5 Full applications must be submitted by the closing date and time specified in the Guidelines.
- 2.6 Full applications submitted after the application closing date may not be considered by ARENA.

Submitting an application

- 2.7 All applications must be completed online using ARENA's Grants Management System, ARENA OmniNet, or as otherwise directed by ARENA. ARENA OmniNet is accessible from the R&D Programme webpage on ARENA's website arena.gov.au.
- 2.8 The online application system prescribed by ARENA may include a mix of mandatory fields, optional fields (including some free text fields) and require attachments to be provided by the applicant.
- 2.9 Strict word limits may apply at various fields when completing the online application. Where these word limits apply, applicants may indicate to ARENA that they have further information available to support their application. If this is the case, ARENA may request an applicant to provide further information. ARENA is not obliged to request or consider this information in its assessment.
- 2.10 Where an attachment page limit is prescribed in ARENA's application process or in any Programme documentation, and an applicant provides a document in response which exceeds that limit, ARENA may elect to stop reading the document at the end of the last page of that prescribed limit. ARENA is not obliged to consider any of the information in the document that exceeds the prescribed page limit.
- 2.11 Applicants should take care to ensure they have comprehensively completed each section of the online application form.

- 2.12 Various documents are required to be completed and submitted at each stage of the application process. These documents are listed below.
- 2.13 The information required from applicants in the EOI stage is less detailed than that required during the full application stage. The information required from applicants in a full application includes detailed evidence and documentation to describe and support the applicant's proposal and to support the applicant's claims against the eligibility and merit criteria.
- 2.14 If an EOI or full application (as the case may be) is received by ARENA and does not include the information specified below (in the format set out in ARENA's prescribed online application system) ARENA may decline to assess the EOI or application, or seek supplementary information or clarification from the applicant.
- 2.15 EOIs must include:
- a. brief descriptions of the quality, capability and capacity of the applicant and the relevant research expertise of the key personnel
 - b. the resources the applicant will use to deliver the Project
 - c. the indicative Project phases, milestones and duration (note, it is not necessary at the EOI stage to provide a full Project plan or Gantt chart)
 - d. an indicative budget for the Project
 - e. the value of and how the applicant will create and share knowledge and information from the Project (note, it is not necessary to prepare a full Knowledge Sharing Plan at the EOI stage).
- 2.16 Full applications must include:
- a. details of the quality, capability and capacity of the applicant and the key personnel
 - b. examples where the applicant and/or the key personnel have successfully progressed the outputs of other research projects towards commercial readiness
 - c. descriptions of any similar research and development projects managed by the key personnel in the past five years, and whether these were completed on time and on budget
 - d. a well-articulated Project plan including: Project phases and stage-gates (if relevant); objectively verifiable milestones and deliverables; duration of the Project (and each phase, if relevant); any periods where the Project is dormant; and indicative start and end dates
 - e. a Risk Management Plan that includes key technical and personnel risks of the Project and how these will be managed including work health & safety (WHS) requirements where relevant
 - f. a WHS Management Plan
 - g. a Compliance Table stating any general conditions of the draft funding arrangement that the applicant does not accept, accepts in part or does not consider to be applicable
 - h. a detailed budget for the Project
 - i. evidence of support by participating institution(s) and/or organisation(s), including their commitment to provide the specified cash and in-kind contributions for the duration of the Project

- j. a Knowledge Sharing Plan which sets out how knowledge and information from the Project will be collected, analysed, stored, used and shared
 - k. an Intellectual Property Management Plan.
- 2.17 Templates for various plans and attachments are available on the Programme’s webpage, accessed from the ARENA website at arena.gov.au.

Assessment process

- 2.18 ARENA may engage consultants or advisors to assist with the assessment of a proposal against the eligibility criteria or merit criteria.
- 2.19 ARENA will assess the eligibility of applicants and their proposals against the Programme’s eligibility criteria set out in Part 3.
- 2.20 Eligible applications will then be assessed and ranked against the Programme’s merit criteria set out in Part 4. The merit assessment and ranking will be undertaken by the ARENA Advisory Panel in its role as advisor to ARENA. Information on the members of the ARENA Advisory Panel is available from the ARENA website at arena.gov.au.
- 2.21 ARENA may seek further information from the applicant in relation to any matter arising from the assessment of the EOI or full application.
- 2.22 ARENA may, at any time during the process, modify the due diligence activities it proposes to undertake when assessing a proposal, considering the value, size and complexity of the proposal. Due diligence activities may include, but are not limited to: inviting the applicant to present on its proposal to ARENA; commissioning or completing relevant research, analysis and modelling to support assessment of proposals; and contacting any relevant state, territory and international government agencies, project partners or other relevant parties about an applicant’s proposal.
- 2.23 ARENA may take a portfolio approach to selecting projects for funding, that is, it may consider how a Project will either uniquely contribute to the Programme 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. ARENA’s current portfolio of projects is listed on its website arena.gov.au.
- 2.24 Following its assessment of an EOI or full application (as the case may be) ARENA may:
- a. in the case of an EOI, invite shortlisted applicants to progress to the full application stage or
 - b. in the case of a full application, offer successful applicants funding for their proposal or
 - c. in the case of an EOI or full application (as the case may be), not accept the proposal submitted by the applicant.
- 2.25 Only eligible applicants with proposals that satisfy the merit criteria to a high standard will be successful.

- 2.26 The decision on whether to offer funding to an applicant will be made by the ARENA Board.
- 2.27 The decision of ARENA on whether to offer funding will be final.
- 2.28 ARENA will advise the applicant in writing of the outcome of the assessment of their EOI or full application and, if the Project has been accepted for funding, the amount and nature of any funding support to be offered by ARENA and any conditions attached to the funding offer. A funding offer under the Programme may be for less or more than the amount of funding requested by the applicant and may exclude parts of a Project submitted by an applicant.
- 2.29 All applicants may request feedback from ARENA on the merit of their EOI or full application at the conclusion of the assessment process.

Collaboration

- 2.30 ARENA may seek to work from time to time with applicants or potential applicants and their participating or prospective institution(s) or entity(ies) to initiate or develop proposals, with the consent of respective parties.
- 2.31 ARENA may choose to facilitate collaboration between any applicants with similar or complementary proposals or between applicants and other research institutions or funding bodies, to develop consortia to finance and carry out projects. Any such facilitation of collaboration, including the release of confidential information to another applicant or person, will be subject to the applicant's prior consent.
- 2.32 When facilitating collaborations, ARENA is not responsible or liable for any comments, consultation or assistance provided by ARENA, its staff or any consultants, and the opportunity must not be taken to imply that ARENA will invite the applicant to submit a full application or that ARENA will offer funding for the collaborative project.

Part 3 – Eligibility criteria

3.1 All of the following eligibility criteria must be met.

Eligibility criterion A – eligible applicant

3.2 The applicant must:

- a. at the time of applying, hold an Australian Business Number (ABN) and
- b. be either
 - i. an eligible Australian research institution (research partner) or
 - ii. an Australian entity incorporated under the *Corporations Act 2001* (Cth) (industry partner).

3.3 The Australian research institutions listed below are eligible to apply for the Programme:

- a. an Australian university (University)
- b. the Australian Nuclear Science and Technology Organisation (ANSTO)
- c. the Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- d. the Australian Institute of Marine Science (AIMS)
- e. the Defence Science and Technology Organisation (DSTO)
- f. Cooperative Research Centres (CRCs)
- g. National ICT Australia (NICTA)
- h. the National Measurement Institute (NMI)
- i. Australian Research Council (ARC) Centres of Excellence.

Eligibility criterion B – eligible project

3.4 The applicant must be able to demonstrate to the satisfaction of ARENA that the research and development project (the Project) described in the proposal:

- a. meets the definition of research and development activities
- b. involves a renewable energy technology
- c. meets the Programme's priorities for Round 2.

3.5 For the purposes of the Programme, research and development activities:

- a. are characterised by their originality, with the primary objective of the works being investigation, the outcomes of which will be new knowledge and may lead to practical applications, new improved materials, products, processes or services
- b. include specialised scientific and technical information services, post-graduate research, and the design, construction and testing of prototypes (pilot plants where new data is evaluated)
- c. do not include basic or blue sky research (Technology Readiness Level (TRL) 1), the implementation of innovations (including trial production and copying of prototypes), education and training of students (except post-graduate research), maintenance of national and international standards, feasibility studies, or marketing and market studies.

- 3.6 The TRL index is a globally accepted benchmarking tool for tracking progress and supporting development of a specific technology through the early stages of the innovation chain, from blue sky research (TRL 1) to actual system demonstration over the full range of expected conditions (TRL 9). More information on the TRL that ARENA uses for renewable energy technologies is set out in Appendix A.
- 3.7 It is expected that at the start of the Project, research and development activities of any specific technology Programme should be between TRL 2 “Research to prove feasibility – Technology concept and/or application formulated” and TRL 6 “Technology Demonstration – Engineering/ pilot-scale, similar (prototypical) system validation in relevant environment”.¹
- 3.8 The Programme priorities for Round 2 are to:
- a. develop industry-researcher partnerships with at least one eligible Australian research institution (research partner) and at least one industry partner. The eligible Australian research institutions are set out in eligibility criterion A in clause 3.3
 - b. address one of the following four challenges or opportunities that seek to integrate renewable energy technologies into networks, buildings and industrial processes:

Table 2: R&D Programme Round 2: Technology focus areas

1. Balance of System (BoS) cost reduction (either on-grid or off-grid)
<p>Development of new technologies or new applications of technologies and/or processes to reduce renewable energy system payback time and lower levelised cost of energy (LCOE).</p> <p>Balance of System is the non-generation part of the plant including both hard costs (eg inverter, electronics, etc) and soft costs. For example, in a solar PV plant it does not include the PV modules.</p>
2. Integration and high penetration of renewables into networks (either on-grid, off-grid or mini-grids)
<p>New technologies or applications of technologies, including associated financial and economic modelling, to address the challenges of integrating renewables and the grid, and increasing penetration levels.</p>
3. Integration of renewable energy for industrial process (excluding electricity generation)
<p>New applications of technologies, including associated new business models, for renewables to provide process heat or cooling where gas or other fossil fuels are typically used.</p>
4. Integration of renewable energy into buildings or building materials
<p>Development of innovative renewable technologies for building integrated applications (eg roofing, walls, windows, paint), or heating and/or cooling systems.</p>

¹ Technology Readiness Levels beyond TRL 6 may be achieved over the life of the project.

- 3.9 Applications for the following types of proposals will be deemed non-responsive and will not be reviewed or considered:
- a. renewable resource or energy forecasting proposals: ARENA currently has sufficient forecasting projects in its portfolio
 - b. proposals involving demonstration or deployment of existing commercial renewable energy technologies in existing conditions
 - c. regulatory or market reform studies: ARENA supports these types of studies through other funding Programmes.

Eligibility criterion C – take place in Australia

- 3.10 The applicant must be able to demonstrate to the satisfaction of ARENA that the Project will take place primarily in Australia.
- 3.11 Any expenditure incurred by the applicant outside of Australia, other than in respect of equipment or materials, must be limited to no more than 10 per cent of total ARENA funds except in exceptional circumstances that must be justified by the applicant and agreed to by ARENA in writing.
- 3.12 Applicants will be required to explain why Project research and development activity conducted overseas:
- a. cannot be done in Australia, or any equipment or materials supplied from overseas cannot be sourced in Australia or
 - b. would benefit from being performed outside Australia.

Eligibility criterion D – intellectual property

- 3.13 The applicant must warrant it has ownership of, access to, or the beneficial use of, any intellectual property necessary to carry out the Project.
- 3.14 The applicant must be able to provide evidence that they have the necessary rights to any intellectual property (IP) needed to undertake the Project. This includes identifying and dealing with:
- a. any third party background intellectual property, and the measures that will be put in place to ensure continuing access to this intellectual property and to protect it
 - b. the effect any third party ownership of background intellectual property will have on the ownership of intellectual property expected to be created by the Project
 - c. any measures that may be needed to protect intellectual property created by the Project
 - d. any licensing arrangement required.

- 3.15 Evidence to support claims against this eligibility criterion could include patents, licences or any relevant intellectual property agreements.
- 3.16 Following its consideration of an EOI or full application (or both, as the case may be), ARENA may request evidence or documentation supporting the applicant's claim of access to the appropriate rights to any intellectual property necessary to carry out the Project, or a documented plan detailing the proposed course of action to acquire such access.

Eligibility criterion E – workplace gender equality

- 3.17 The applicant must not be named as an organisation that has not complied with the *Workplace Gender Equality Act 2012* (Cth).
- 3.18 The Commonwealth has a policy of not entering into agreements with or providing discretionary grants or loan funds to organisations that do not comply with their obligations, if any, under the *Workplace Gender Equality Act 2012* (Cth).
- 3.19 Applicants must make a declaration in the application form to demonstrate that they understand and meet their obligations, if any, under that Act. ARENA will check applicants' names against the list of non-compliant organisations on the website of the Workplace Gender Equality Agency at wgea.gov.au.

Eligibility criterion F – knowledge sharing

- 3.20 The applicant must agree to enter into an agreement with ARENA to publicly share knowledge and information about, and resulting from, the Project described in its proposal.
- 3.21 To determine the knowledge and information to be shared about a Project, applicants must complete a Knowledge Sharing Plan as a part of a full funding application, in accordance with the requirements of clauses 4.25 to 4.28 below.

Eligibility criterion G – comply with other requirements

- 3.22 The applicant must comply with the following mandatory requirements for:
 - a. applying and submitting an application to the Programme (including completeness and comprehensiveness)
 - b. disclosure of legal proceedings: all applicants must disclose any litigation, arbitration, mediation, conciliation or proceeding or any investigations (Proceedings) that to the best of the applicant's knowledge, after having made proper enquiry, are taking place, pending or threatened, against them or a related body corporate, as defined in the *Corporations Act 2001* (Cth), where such Proceedings have the potential to affect either
 - i. the applicant's capacity to undertake the proposed Project or
 - ii. the applicant's reputation
 - c. any relevant requirements outlined in Part 6 of the Guidelines.

Part 4 – Merit criteria

- 4.1 Eligible applications will be assessed for overall value for money and risk against the merit criteria. The merit criteria are equally weighted.

Merit criterion A – applicant quality, capability and capacity

- 4.2 The quality, capability and capacity of the applicant, and other Project partners, to deliver the proposed Project.

Overview

- 4.3 There are several factors to assessment of this criterion: the quality, capability and capacity of the applicant; and the applicant's history in delivering projects on time and to budget, as well as in identifying and managing risks:
- a. quality: whether the key personnel nominated in the applicant's proposal have the necessary technical and research expertise and experience; and the credentials, resources and professional reputation of the applicant organisation
 - b. capability: whether the applicant organisation and other project partners have sufficient resources (personnel, project management skills and physical resources) to achieve the proposed outcome, including a capability to progress the Project towards commercial readiness
 - c. capacity: whether the proposed resources will be available to the Project at its commencement, and whether those resources will remain dedicated to the Project for its duration (to the extent needed to successfully achieve the proposed outcome).

Demonstrating against the criterion

- 4.4 The applicant should demonstrate merit by describing:
- a. the quality and professional excellence of the applicant and other Project partners, and any accreditations, quality standards and benchmarks, so far as they are relevant to the Project
 - b. the technical and research expertise and experience of the key personnel, as relevant to the Project, including any awards, peer recognition or other validation of the credentials. This should include examples of other significant research and development projects (and their outcomes) undertaken by the applicant or the key personnel (in the past five years) in the same or similar field contemplated by the Project
 - c. the applicant's capability to progress the Project towards commercial readiness. This should include examples of where the applicant and/or the key personnel have successfully progressed the outputs of other research projects towards commercial readiness, in the same or similar field contemplated by the Project
 - d. the resources (including personnel, physical resources and facilities) the applicant will use to deliver the Project including confirmation that they will be available for the duration of the Project.

Merit criterion B – contributes to Programme objectives

4.5 The extent to which the Project will contribute to the Programme’s objectives.

Overview

- 4.6 This merit criterion focuses on how well the Project meets the Programme’s objectives (detailed in clause 1.7 of the Guidelines).
- 4.7 Priority will be given to projects in technology areas that have good prospects for commercialisation, where Australia currently has a world class position, and/or that address conditions specific to Australia.

Demonstrating against the criterion

- 4.8 The applicant should demonstrate merit by describing:
- a. the innovative nature of the renewable energy technology proposed
 - b. whether (and how) the Project complements other existing or emerging areas of research in a similar field, both nationally and in the global context
 - c. the industry energy problem or opportunity that the Project seeks to address and its significance in addressing conditions specific to Australia
 - d. how the Project will develop skills and capacity, and lead to greater collaboration between industry and researchers beyond the end of the Project
 - e. how the Project contributes to improving the commercial readiness of renewable energy technology, including
 - i. where the Project fits on the TRL index at the beginning and conclusion of the Project, including justification for the assessment (more information on TRL is at Appendix A)
 - ii. proposed future activities and clear path to market: for example leading to a further research Programme, development of a commercialisation plan, or potential partnerships.

Merit criterion C – project design and methodology

4.9 The strength of the Project design and methodology.

Overview

- 4.10 The purpose of this merit criterion is to assess the technical strength of the Project and how well the applicant has designed and planned the Project, including identifying and managing risks, in order to successfully deliver the Project.
- 4.11 This criterion assesses Project risk not identified in the assessment of the other merit criteria and the steps the applicant proposes to take to mitigate those risks. It also assesses Project risk in terms of the likely success of the Project and the achievement of stated outcomes and considers the risk of negotiating and executing a funding arrangement which is acceptable to ARENA.

- 4.12 In assessing this criterion ARENA may consider a range of factors including:
- a. the technical feasibility of the Project
 - b. how well designed and planned the Project is, including whether it has clearly defined objectives and research methodology, and the applicant's approach to identifying, managing and reporting the technical and techno-economic risks to the Project.
- 4.13 In planning projects, applicants should allow time in their Project plans for assessment and consideration of their proposal by ARENA and the negotiation and execution of a funding arrangement.

Demonstrating against the criterion

- 4.14 The applicant should demonstrate merit by describing:
- a. the objectives and deliverables of the Project
 - b. the technical design and research methodology of the Project
 - c. a well-articulated plan for the Project including
 - i. a clear description of the Project
 - ii. the location of the Project
 - iii. details of Project management methodology, systems or tools to be used
 - iv. Project phases and stage-gates (if relevant), objectively verifiable milestones and deliverables
 - v. duration of the Project (and each phase, if relevant)
 - vi. any expected periods where the Project is dormant (for instance, because a key resource is not available)
 - vii. the proportion (if any) of the Project dedicated to post-graduate research
 - viii. the proportion (if any) of the Project which will take place outside Australia
 - ix. indicative start and end dates
 - x. any dependencies which are outside the control of the applicant and other participating institution(s) or entity(ies), such as any resources or approvals from third parties that are needed to start the Project (other than funding from ARENA)
 - d. key technical and personnel risks of the Project and how these will be managed
 - e. the degree to which the applicant complies with ARENA's standard funding arrangement.
- 4.15 Applicants should be aware that low compliance with the funding arrangement may impact on ARENA's assessment of Project risk. Strong compliance with the funding arrangement will generally increase the merit of a Project.

Merit criterion D – financial viability and co-funding commitment

- 4.16 The financial viability of the Project including the level of co-investment and evidence of commitment, both cash and in-kind, to the Project.

Overview

- 4.17 This merit criterion assesses whether the applicant and any Project partners have the financial capacity and level of commitment to deliver the Project successfully.
- 4.18 Applicants may apply for any amount of Project funding within the scope of the Round 2 funding parameters:
- a. the expected minimum ARENA grant to a Project is \$500,000
 - b. the expected maximum ARENA grant to a Project is \$5 million
 - c. it is expected that Projects will at least match the ARENA grant on a 1:1 basis, with a combination of cash and in-kind contributions
 - d. it is expected that Projects will include a cash contribution, which may be from either a research partner or an industry partner.
- 4.19 ARENA will accept proposals above or below the minimum and maximum funding amounts specified above up to a total ARENA contribution of \$10 million, however any proposal that exceeds \$5 million will need to demonstrate exceptional merit.
- 4.20 ARENA is seeking to fund proposals that offer high value for the ARENA funding contribution compared to the total Project cost. Applicants should be aware that:
- a. proposals which seek lower proportions of ARENA funding compared to proposals that seek higher proportions of ARENA funding, may be considered to be of higher merit
 - b. ARENA expects that applicants with proposals closer to commercialisation, that is with a higher TRL, will make a larger financial contribution compared with proposals that are in the earlier stages of development
 - c. proposals which include a higher cash contribution from the applicant and its Project partners may be considered of higher merit
 - d. proposals which include a higher financial contribution, either cash or in-kind or both, from industry partners may be considered of higher merit
 - e. while financial contributions to proposals from state and territory governments are welcome, proposals that have a higher proportion of funding from government sources may be considered of lower merit.
- 4.21 ARENA will also assess whether the amount of ARENA funding sought and the total cost of the Project for TRL 2-6 is appropriate:
- a. for the stage of research and development of the renewable energy technology
 - b. considering the extent to which the applicant or other partners are providing funding or in-kind support for the Project.

- 4.22 While there is no separate ARENA funding stream supporting post-graduate research, funding for post-graduate research will be supported as part of a Project. Projects in which post-graduate research comprises the majority component of funding requested may be considered of lower merit.
- 4.23 Applicants should refer to the eligible expenditure guide at Appendix B for information on what the ARENA funding may and may not be used for.

Demonstrating against the criterion

- 4.24 The applicant should demonstrate merit by providing:
- a. a detailed budget for the Project, showing
 - i. a breakdown of the expected expenses for the Project, including any overseas expenses
 - ii. the total cost of the Project
 - iii. the funding sought from ARENA, and the proposed payment milestones
 - iv. details and amounts of cash and in-kind contributions from the applicant and all other sources
 - v. the cash flow profile of the Project
 - b. evidence of support by the applicant and any Project partners, including their commitment to provide the specified cash and in-kind contributions
 - c. information to confirm the applicant (and any Project partners) has the financial capacity to fund its proposed share of the funding or in-kind contributions for the duration of the Project
 - d. any other research and development projects in a similar field for which the applicant or the key personnel have received from Australian Government, state government and local government sources, funding (including from agencies such as ARENA and the Australian Solar Institute) in the past three years
 - e. an explanation why ARENA funding is needed.

Merit criterion E – knowledge sharing

- 4.25 The value of the knowledge and information generated and the extent to which it will be collected, analysed, stored, used and shared.

Overview

- 4.26 This merit criterion assesses:
- a. the value of the knowledge generated by the Project, that is how it will enable a range of participants in the energy sector to take action that will decrease the cost and increase the supply of renewable energy in Australia

- b. how well that knowledge is targeted to specific audiences relevant to the Project
 - c. how the applicant will capture, store and disseminate the data, information and lessons learned from the Project.
- 4.27 Applicants should demonstrate a clear line of sight from the Project and the knowledge it will generate to a broader audience who will be interested in applying that knowledge to address knowledge gaps or pursue opportunities for increasing the deployment of renewable energy in Australia.

Demonstrating against the criterion

- 4.28 The applicant should demonstrate merit by describing:
- a. how the knowledge the Project intends to generate contributes materially to ARENA's objectives and the Programme objectives, including how it will contribute to the uptake of renewable energy in Australia by helping industry participants overcome barriers, solve problems or pursue opportunities
 - b. how the data, information and lessons learned from the Project will be collected, stored, analysed and disseminated so that it reaches the target audiences in the broader energy sector
 - c. a commitment from the applicant and other partners to deploy its specialist resources to produce high quality knowledge products and communicate the research results not only to the academic community but more broadly beyond the Project consortium
 - d. the extent to which the data, information and lessons learned from the Project will be made publicly available. Applicants must clearly identify what data, information and lessons learned
 - i. can be released into the public arena
 - ii. the applicant will provide to ARENA, but is to be treated as commercial in confidence by ARENA
 - iii. the applicant wishes to keep confidential
 - e. any constraints that may prevent the applicant from sharing knowledge and information, such as IP protection processes and rights of any third parties including third party materials and IP.

Part 5 – Funding offers and other arrangements

Funding offers

- 5.1 All funding offers and any payment of funds under the Programme are conditional upon the execution of:
 - a. a funding agreement with ARENA
 - b. a new head funding agreement between ARENA and the applicant or
 - c. a variation to an existing head funding agreement between ARENA and the applicant.
- 5.2 Applicants must keep funding offers confidential until the execution of such a document by both the applicant and ARENA. All public communication by the applicant between application lodgement and agreement signature can only be done with ARENA's consent.
- 5.3 ARENA may withdraw its offer of funding should an applicant not comply with clause 5.2.
- 5.4 The funding offer will include details on the funding agreement negotiation process.

Funding arrangement

- 5.5 The funding agreement or head funding agreement will provide the legal framework for the obligations of each party and terms around payment in relation to the Project.
- 5.6 Details of the process for management and variation of the funding agreement or head funding agreement will be as set out in the agreement.

Use of funding

- 5.7 Applicants are required to prepare a budget for their Project, which is to be submitted with their EOI or full application. Applicants will be required to identify verifiable milestones and prepare their budgets to meet the expenditure required for each milestone.
- 5.8 Funding from the Programme must be used only for approved expenditure on the Project.
- 5.9 Information on what the Programme funding may and may not be used for is set out in the eligible expenditure guide at Appendix B.

Knowledge sharing and publication of project information

- 5.10 A condition of funding through the Programme is agreement to a Knowledge Sharing Plan about the Project to inform industry and the broader community about the Project's development and findings.
- 5.11 An approved Knowledge Sharing Plan will form part of the funding arrangement for the Project.
- 5.12 Once a funding agreement has been executed for a Project, the knowledge sharing requirements for that Project may be varied from time to time as set out in the funding agreement.

Part 6 – Further Programme information

Confidentiality and disclosure of information

- 6.1 Subject to this clause, information of a confidential nature which is provided by an applicant as part of or in connection with any application or negotiation process (if any) will be treated as commercial-in-confidence information by ARENA and will only be disclosed with the consent of the applicant.
- 6.2 Commercial-in-confidence information provided by applicants may be disclosed by ARENA to the following parties:
- a. the Minister and the Minister's office
 - b. the Parliament of the Commonwealth of Australia in response to a request by a House or a Committee of the Parliament of the Commonwealth of Australia
 - c. the Auditor General, Ombudsman, Information Commissioner or Privacy Commissioner
 - d. ARENA staff, consultants² and advisers
 - e. any Commonwealth agency or body, or any other organisation or individual considered by ARENA to have a need or an entitlement to know that information (including any state or territory agency or body), where that need or entitlement arises out of or in connection with ARENA's assessment, verification or due diligence of any aspect of an application
- or where authorised or required by law to be disclosed.

Review of decisions and complaints

- 6.3 Complaints concerning assessments or processes will, in the first instance, be reviewed by ARENA. If ARENA cannot resolve the complaint within 30 business days of receiving the complaint, ARENA must notify the applicant of the identity of a nominated Complaints and Review Officer and of the next steps. If the applicant is not satisfied with the complaint resolution procedure, the applicant can approach the Commonwealth Ombudsman for external review of the administrative actions of ARENA.

Conflicts of interest

- 6.4 ARENA will administer its conflict of interest procedures, including procedures for Board members, the Chief Executive Officer of ARENA, the Chief Financial Officer of ARENA and other ARENA staff to declare their interests.
- 6.5 All consultants and advisers engaged by ARENA to assist:
- a. in the assessment of an application or
 - b. in the preparation of new or variations to head funding agreements or funding agreements
- will be required to disclose any conflicts of interest they may have in relation to applicants and may be excluded from work if required under ARENA's conflict of interest procedure.

² *Consultant* means a consultant engaged by ARENA pursuant to section 63 of the ARENA Act to provide services to assist ARENA in the performance of its functions.

No contract or liability

- 6.6 Despite anything in the Guidelines or in any EOI or full application submission, or any other documentation that forms part of this process (in part or together), by submitting an application, each applicant:
- a. acknowledges that neither ARENA nor the applicant intends to create any contract or other relationship under which ARENA is obliged to conduct the process in relation to the Programme in any manner or at all, and that there is in fact no such contract or other relationship in existence
 - b. accordingly, acknowledges that neither the Guidelines nor any submission will create any legal or other obligation upon ARENA to conduct the process in any manner or at all
 - c. releases ARENA from any claim it might otherwise have been able to make or bring against ARENA, arising out of or in connection with ARENA's conduct of, or failure to conduct, the process in any manner or at all.

Work health and safety

- 6.7 All organisations have obligations under relevant Work Health and Safety (WHS) law (as persons conducting a business or undertaking) to ensure the health and safety of workers so far as is reasonably practicable and that the health and safety of other persons is not put at risk from their undertakings. This obligation includes funding recipients ensuring that safe systems of work are in place for each of their activities. ARENA expects applicants to be committed to health and safety management in the proposed Project.
- 6.8 ARENA also has a policy of ensuring that it enters into agreements with or provides funding to only those organisations that take a proactive approach to managing work health and safety risks in accordance with the requirements of WHS law. For information on our requirements, please refer to the funding agreement template and WHS Management Plan template available on the ARENA website at arena.gov.au.

Other applicable requirements

- 6.9 A range of Commonwealth policy and legislative requirements may also affect the conduct of Projects funded through the Programme. Applicants should seek their own advice on any relevant legislation that may be applicable under the funding agreement.
- 6.10 ARENA will not enter into a funding agreement with:
- a. an organisation on the list of persons and entities designated as terrorists. The list and more information on the anti-terrorism requirements are available at http://www.dfat.gov.au/icat/UNSC_financial_sanctions.html
 - b. an organisation that does not comply with their obligations under the *Workplace Gender Equity Act 2012* (Cth).

Appendix A – Technology Readiness Levels

- A.1 The Technology Readiness Level (TRL) index is a globally accepted benchmarking tool for tracking progress and supporting development of a specific technology through the early stages of the innovation chain, from blue sky research (TRL 1) to actual system demonstration over the full range of expected conditions (TRL 9).
- A.2 There are various TRL rating scales that may be applicable to various technologies. For the purposes of this Programme, ARENA uses the US Department of Energy Technology Readiness Level scale.
- A.3 It is expected that at the start of the Project research and development activities of any specific technology should be between a TRL of 2 and 6 to be funded under the Programme, as set out in Part 3 of the Guidelines.
- A.4 To assist applicants in assessing the TRL of their Project refer to the table below. Applicants may also wish to use the TRL calculator available on the Programme webpage at arena.gov.au. The TRL calculator is a tool developed by the US Air Force Research Laboratory³ for applying TRLs for technology development programmes. In its present form, the calculator is a Microsoft Excel spreadsheet application that allows the user to answer a series of questions about a technology project. Once the questions have been answered, the calculator displays the TRL achieved. Because the same set of questions is answered each time the calculator is used, the calculator provides a standardised, repeatable process for evaluating the maturity of any hardware or software technology under development. In this way, the TRL calculator is one tool that can answer the question of how one can measure TRLs using a standardised method.⁴

3 Nolte, William L., et al., "Technology Readiness Level Calculator," October 20, 2003, Air Force Research Laboratory (AFRL), presented at the NDIA System Engineering Conference

4 US Department of Energy Technology Readiness Assessment Guide (DOE 413.3-4 10-12-09) <https://www.directives.doe.gov/directives/0413.3-EGuide-04/view>, page 28

Table 3: US Department of Energy Technology Readiness Levels⁵

Relative level of technology development	TRL	TRL definition	Description
Systems operations	TRL 9	Actual system operated over the full range of expected mission conditions	The technology is in its final form and operated under the full range of operating mission conditions. Examples include using the actual system with the full range of wastes in hot operations.
System commissioning	TRL 8	Actual system completed and qualified through test and demonstration	The technology has been proven to work in its final form and under expected conditions in almost all cases, this TRL represents the end of true system development. Examples include developmental testing and evaluation of the system with actual waste in hot commissioning. Supporting information includes operational procedures that are virtually complete. An Operational Readiness Review (ORR) has been successfully completed prior to the start of hot testing.
	TRL 7	Full-scale, similar (prototypical) system demonstrated in relevant environment	This represents a major step up from TRL 6, requiring demonstration of an actual system prototype in a relevant environment. Examples include testing full-scale prototype in the field with a range of simulants in cold commissioning ⁶ . Supporting information includes results from the full-scale testing and analysis of the differences between the test environment, and analysis of what the experimental results mean for the eventual operating system/environment. Final design is virtually complete.
Technology demonstration	TRL 6	Engineering/pilot-scale, similar (prototypical) system validation in relevant environment	Engineering-scale models or prototypes are tested in a relevant environment. This represents a major step up in a technology's demonstrated readiness. Examples include testing an engineering scale prototypical system with a range of simulants. Supporting information includes results from the engineering scale testing and analysis of the differences between the engineering scale, prototypical system/environment, and analysis of what the experimental results mean for the eventual operating system/environment. TRL 6 begins true engineering development of the technology as an operational system. The major difference between TRL 5 and 6 is the step up from laboratory scale to engineering scale and the determination of scaling factors that will enable design of the operating system. The prototype should be capable of performing all the functions that will be required of the operational system. The operating environment for the testing should closely represent the actual operating environment.

⁵ US Department of Energy Technology Readiness Assessment Guide (DOE 413.3-4 10-12-09) <https://www.directives.doe.gov/directives/0413.3-EGuide-04/view>, page 9 and 10

⁶ Simulants should match relevant chemical and physical properties.

Table 3: US Department of Energy Technology Readiness Levels (continued)

Relative level of technology development	TRL	TRL definition	Description
Technology development	TRL 5	Laboratory-scale, similar system validation in relevant environment	The basic technological components are integrated so that the system configuration is similar to (matches) the final application in almost all respects. Examples include testing a high-fidelity, laboratory scale system in a simulated environment with a range of simulants and actual waste ⁷ . Supporting information includes results from the laboratory scale testing, analysis of the differences between the laboratory and eventual operating system/environment, and analysis of what the experimental results mean for the eventual operating system/environment. The major difference between TRL 4 and 5 is the increase in the fidelity of the system and environment to the actual application. The system tested is almost prototypical.
	TRL 4	Component and/or system validation in laboratory environment	The basic technological components are integrated to establish that the pieces will work together. This is relatively “low fidelity” compared with the eventual system. Examples include integration of ad hoc hardware in a laboratory and testing with a range of simulants and small scale tests on actual waste. Supporting information includes the results of the integrated experiments and estimates of how the experimental components and experimental test results differ from the expected system performance goals. TRL 4–6 represent the bridge from scientific research to engineering. TRL 4 is the first step in determining whether the individual components will work together as a system. The laboratory system will probably be a mix of on hand equipment and a few special purpose components that may require special handling, calibration, or alignment to get them to function.

⁷ Testing with as wide a range of actual waste as practicable and consistent with waste availability, safety, ALARA, cost and project risk is highly desirable.

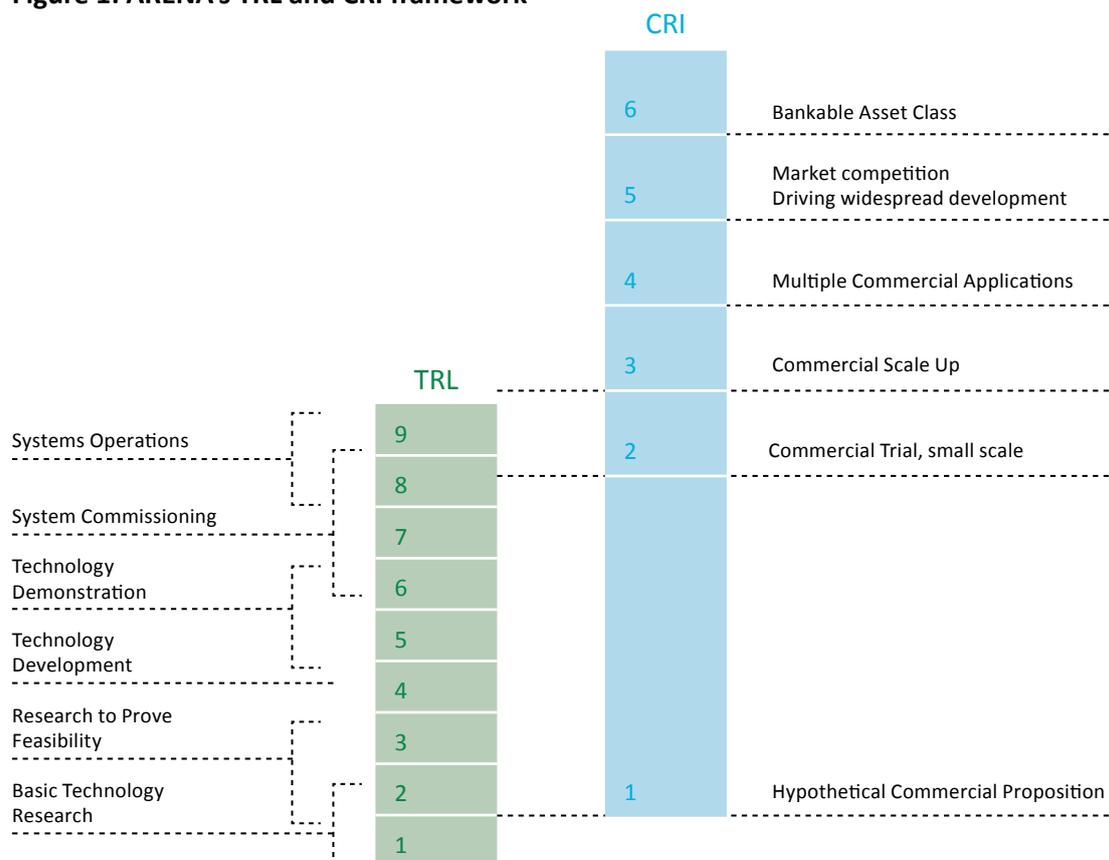
Table 3: US Department of Energy Technology Readiness Levels (continued)

Relative level of technology development	TRL	TRL definition	Description
Research to prove feasibility	TRL 3	Analytical and experimental critical function and/or characteristic proof of concept	Active research and development is initiated. This includes analytical studies and laboratory-scale studies to physically validate the analytical predictions of separate elements of the technology. Examples include components that are not yet integrated or representative tested with simulants. Supporting information includes results of laboratory tests performed to measure parameters of interest and comparison to analytical predictions for critical subsystems. At TRL 3 the work has moved beyond the paper phase to experimental work that verifies that the concept works as expected on simulants. Components of the technology are validated, but there is no attempt to integrate the components into a complete system. Modelling and simulation may be used to complement physical experiments.
	TRL 2	Technology concept and/or application formulated	Once basic principles are observed, practical applications can be invented. Applications are speculative, and there may be no proof or detailed analysis to support the assumptions. Examples are still limited to analytic studies. Supporting information includes publications or other references that outline the application being considered and that provide analysis to support the concept. The step up from TRL 1 to TRL 2 moves the ideas from pure to applied research. Most of the work is analytical or paper studies with the emphasis on understanding the science better. Experimental work is designed to corroborate the basic scientific observations made during TRL 1 work.
Basic technology research	TRL 1	Basic principles observed and reported	This is the lowest level of technology readiness. Scientific research begins to be translated into applied research and development. Examples might include paper studies of a technology's basic properties or experimental work that consists mainly of observations of the physical world. Supporting Information includes published research or other references that identify the principles that underlie the technology.

Commercial Readiness Index

- A.5 ARENA has developed the Commercial Readiness Index (CRI) for applicants to use when considering their projects and developing funding applications for ARENA consideration. The CRI provides a rigorous structure for evaluating where one or more industry sectors are facing barriers, and enables ARENA to structure its funding support to best reduce risks and barriers at the various stages of the pathway to commercialisation.
- A.6 A pictorial representation of the TRL and CRI is shown in Figure 1. The CRI extends to the point at which the technology or application is commercially deployed and has become a bankable asset class. This figure demonstrates how researchers can consider at an early stage how their research will become commercial.
- A.7 The Programme rewards projects that can identify a pathway to commercialisation.
- A.8 More information on the CRI is available on the ARENA website arena.gov.au.

Figure 1: ARENA’s TRL and CRI framework



Appendix B – Eligible expenditure guide

- B.1 This eligible expenditure guide specifies the kinds of expenditure that are eligible or ineligible for projects funded through the Programme. The guide is recognised in the funding arrangements for the Programme, and is to be followed:
- a. in the preparation of the budget that is submitted with an EOI or full application for funding under the Programme
 - b. by funding recipients as part of the regular milestone reporting and annual financial reporting required of recipients under the funding arrangements.
- B.2 Applicants are required to identify verifiable milestones and to prepare their budgets to meet the expenditure required for each milestone. Budgets should be realistic and feasible in relation to the nature of the Project and the expected cash flow. As part of a full application applicants are required to:
- a. explain the underlying assumptions and the basis for calculation of expenditure items
 - b. indicate where quotations and contracts are in place
 - c. provide any documentary evidence to support the expenditure calculations used by the applicant.
- B.3 If a proposal is accepted for funding and a funding arrangement is executed, ARENA will make payments upon the achievement of agreed milestones. Payments for each milestone will be calculated as a proportion of the eligible expenditure expected to be required to achieve the milestone, subject to review where actual eligible expenditure for the milestone falls significantly short of the expected eligible expenditure. The proportion of eligible expenditure to be paid for each milestone will be determined on a case-by-case basis as part of the process of negotiating the funding arrangement. In addition, the funding arrangement will require recipients to provide financial reports detailing eligible expenditure on the Project.
- B.4 Where an applicant is in any doubt as to the eligibility of some of the expenditure on their proposed Project, the applicant should discuss the matter with ARENA. ARENA will consider the request and make a determination about the eligibility of the expenditure.

General principles

- B.5 The following general principles apply in the consideration of eligible expenditure:
- a. eligible expenditure is expenditure related directly to the undertaking of the Project
 - b. eligible expenditure is calculated net of GST
 - c. non-cash and in-kind contributions may be considered as eligible expenditure, provided that the applicant can demonstrate to the satisfaction of ARENA that the requirements in these eligible expenditure guidelines are satisfied
 - d. in-kind contributions are non-monetary resources used on the Project where no cash has been transferred to the recipient's account(s) for the Project
 - e. expenditure is generally not eligible expenditure if it is undertaken prior to the signing of the funding arrangement or after the completion date for the Project specified in the funding arrangement

- f. opportunity costs are not eligible expenditure
- g. opportunity costs are any benefits or production lost due to the allocation of resources to the Project ahead of any other possible activities by the recipient
- h. where resources are used on a Project and on unrelated activities elsewhere in the recipient organisation, the cost of those resources should be apportioned to the Project on the basis of the proportion of those resources that were used by the recipient in undertaking the Project. Where it is not possible to make such a proportionate allocation, the recipient should allocate the cost of the resources on a reasonable basis and provide information to ARENA to support this allocation of the cost of the resources
- i. related party transactions must be treated on an at cost basis, without mark-up, unless the recipient can demonstrate to the satisfaction of ARENA that the transaction has been calculated on an arm's-length basis
- j. generally accepted accounting principles are to be followed and it must be possible to track expenditure relating to the Project through a recipient's accounting system to meet the financial reporting and audit requirements in the funding arrangement.

Specific eligibility provisions

B.6 Eligible expenditure includes:

- a. expenditure on the preparation of contracts entered into for the purposes of undertaking the activities required for the conduct of the Project, subject to the ineligible expenditure constraints below
- b. labour expenditure, such as salaries and wages, including reasonable on-costs for personnel employed directly on the Project. Labour on-costs include: workers' compensation insurance, employer contributions to superannuation, recreation and sick leave, long service leave accrual and payroll tax
- c. administrative expenses, including expenses incurred on communications, accommodation, computing facilities, travel, recruitment and printing and stationery, where such expenses are related directly to the Project
- d. expenditure for plant installed for the Project at the full delivered cost of the plant
- e. expenditure on plant used for the construction of a Project, calculated on the basis of hire or lease costs, and running costs directly related to the construction of the Project, such as rent, power, fuel and repairs and maintenance
- f. expenditure activities that directly contribute to or enable knowledge including database development, websites, applications and reports
- g. expenditure on legal, audit and accounting costs related directly to the Project
- h. expenditure related to the raising of funds for the Project, or the formation of consortia or joint ventures or other partnering arrangements, where such activities can be related directly to the Project
- i. expenditure such as relevant licence fees or intellectual property purchase costs, where the applicant needs to access specific technology to undertake the Project
- j. expenditure related directly to obtaining government approvals to undertake the Project.

- B.7 Ineligible expenditure should be included in the total Project cost. However, ARENA funds cannot be spent on ineligible expenditure.
- B.8 Ineligible expenditure includes, but is not limited to:
- a. expenditure related to the general operations and administration of the applicant or recipient that the applicant or recipient could reasonably be expected to undertake in the normal course of business. This includes research institution overheads, for example, which may be calculated as 125 per cent of research staff salaries for laboratory-based research
 - b. expenditure on activities that a local, state, territory or Commonwealth government agency has the responsibility to undertake, unless the applicant or recipient can demonstrate to the satisfaction of ARENA that the expenditure is related to a co-contribution
 - c. interest on loans for new and pre-existing capital items used for the Project
 - d. expenditure on the acquisition of land for a Project
 - e. sales or promotional activities that do not support directly the successful completion of the Project
 - f. geothermal licence retention fees
 - g. membership fees
 - h. donations
 - i. expenditure that does not support directly the successful completion of the Project.

Labour

- B.9 Eligible labour expenditure is the gross amount paid or payable to an employee of the applicant's or recipient's company or organisation. Eligible salary includes any components of the employee's total remuneration package that are itemised on their Pay As You Go (PAYG) annual payment summaries submitted to the Australian Taxation Office (ATO).
- B.10 Recipients must provide evidence to demonstrate the amount of time that an employee spent on the Project. Evidence to support eligible expenditure on labour could include timesheets, job cards or diaries.
- B.11 Labour costs cannot be claimed based on an estimation of the employee's worth to the company, where no cash has changed hands.

Contract expenditure

- B.12 Eligible contract expenditure is the cost of any activities to support the Project performed for the recipient by another organisation. Work to be performed on a Project must be the subject of a written contract, including a letter or purchase order, which specifies the nature of the work to be performed for the recipient and the applicable fees, charges and other costs payable. The written contract must be executed prior to the commencement of the work undertaken under the contract.

- B.13 It is not a requirement for contracts to be in place at the time an applicant submits a proposal to ARENA. However, for major items of contract expenditure such as purchases of major items of hardware to be incorporated in the Project, applicants will be expected to have some form of documentary evidence such as written quotes from suppliers, to substantiate the expenditure included in the budget for the Project.
- B.14 Where the contractor and the applicant or recipient are not at 'arm's-length', the amount assessed for work performed will be an amount considered to be a reasonable charge for that work and contain no unacceptable overheads and no element of 'in group profit'. Organisations considered not at 'arm's-length' include related companies and companies with common directors or shareholders.

Expenditure prior to execution of the funding arrangement

- B.15 Expenditure is generally not eligible, if undertaken prior to the signing of the funding arrangement. A recipient, however, may be able to claim some expenditures incurred prior to execution of a funding agreement with the prior agreement of ARENA and only where such expenditures are incurred after ARENA has made a funding offer to the applicant for the Project. This expenditure and the funding attached to it will be considered by ARENA on a case-by-case basis.

Overseas expenditure

- B.16 As set out in clause 3.11, 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 per cent of total ARENA funds except in exceptional circumstances that must be justified by the applicant and agreed to by ARENA in writing.
- B.17 Following execution of a funding arrangement, expenditure on goods and services overseas may be subject to approval by ARENA as specified in the funding arrangement.

Accounting systems

- B.18 Recipients are required to have in place suitable accounting systems and to provide to ARENA assurances that the accounting system used by the recipient and any consortium partners allows for:
- a. the separate and accurate identification of contributions and eligible expenditure on the Project
 - b. a clear audit trail of all Programme funding contributions and eligible expenditure to be available on request and as required to meet the requirements in the funding arrangement.

Glossary

Applicant – an eligible institution as defined in clause 3.2 that has submitted a proposal for funding under the Programme.

Commercial readiness – the level of introduction into the market of a new renewable energy technology being investigated by a Project, as mapped on the scale described in Appendix A.

Conflict of interest – a situation where a person makes a decision or exercises a power in a way that may be, or may be perceived to be, influenced by either material personal interests (financial or non-financial) or material personal associations.

Consultant – a consultant engaged by ARENA pursuant to section 63 of the ARENA Act to provide services to assist ARENA in the performance of its functions.

Corresponding WHS law – as defined in the *Work Health and Safety Act 2011* (Cth), means each of the following:

- the *Work Health and Safety Act 2011* of New South Wales
- the *Occupational Health and Safety Act 2004* of Victoria
- the *Work Health and Safety Act 2011* of Queensland
- the *Occupational Safety and Health Act 1984* of Western Australia
- the *Work Health and Safety Act 2012* of South Australia
- the *Work Health and Safety Act 2012* of Tasmania
- the *Work Health and Safety Act 2011* of the Australian Capital Territory
- the *Work Health and Safety (National Uniform Legislation) Act 2011* of the Northern Territory
- any other law of a State or Territory prescribed by the regulations, as amended from time to time.

Eligibility criteria – the eligibility criteria for Projects listed in Part 3 of the Guidelines.

Eligible expenditure – expenditure of the kind set out in Appendix B.

Funding arrangement – the agreement between a recipient and ARENA for funding under the Programme. This includes a head funding agreement or an individual funding agreement. Both agreements consist of two parts – the General Conditions and the Schedule:

- General Conditions – the predetermined standard contract approved by ARENA
- Schedule – the specific information and conditions that are consistent with the funding offer of one or several projects.

General Funding Strategy – the document made under Subdivision A, Division 2, Part 3 of the ARENA Act.

Grant – an amount awarded for a particular Project in return for the completion of specified milestones. A grant is not to be confused with a gift or a loan. In the case of the Programme, the grant is the amount identified in the funding arrangement. Grants are subject to normal taxation treatment as income and no special taxation arrangements will apply to grants under the Programme.

Guidelines – the Research and Development Programme Guidelines.

Head funding agreement – an agreement entered into by ARENA with an institution that has multiple projects receiving funding. This may include projects from more than one Programme. Individual projects are listed as schedules to the agreement.

In-kind contribution – non-monetary resources used on the project where no cash has been transferred to the recipient’s account(s) for the project.

Investment Plan – the ARENA Investment Plan, a document that ARENA releases annually, outlining ARENA’s investment programmes and initiatives.

Merit criteria – the merit criteria listed in Part 4 of the Guidelines.

Opportunity costs – any benefits or production lost due to the allocation of resources to the Project ahead of any other possible activities by the recipient.

Priority renewable energy technologies – those priority renewable energy technologies identified for the Programme listed in clause 3.8 of the Guidelines.

Programme – the Research and Development Programme.

Project – see research and development Project.

Renewable energy technology – includes (a) hybrid technologies and (b) technologies (including enabling technologies) that are related to renewable energy technologies.

Research and development Project – research and development activities involving a renewable energy technology that meets the Programme’s priorities as advised in the Guidelines.

Technology Readiness Level (TRL) – the level of development of a renewable energy technology being investigated by a Project, as mapped on the scale described in Appendix A.

Proposal – a submission for a Project under any stage of the application and assessment process for the Programme, which is submitted by an applicant and received by ARENA.

Recipient – An entity that has entered into a funding arrangement with ARENA for funding of a Project.

WHS law or WHS legislation – the *Work Health and Safety Act 2011* (Cth), corresponding WHS law or superseded work health and safety or occupational health and safety law in any jurisdiction. The WHS law includes regulations established under the relevant Acts.

WHSMS – work health and safety management system.

World class position – ability to influence the global competitiveness and/or supply of the renewable energy technology.

ARENA

Further information on initiatives and individual projects is available on ARENA's website arena.gov.au

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