

ARENA

# RENEWABLE HYDROGEN DEPLOYMENT FUNDING ROUND UPDATED FUNDING ANNOUNCEMENT

FULL APPLICATION STAGE  
JULY 2020



Australian Government  
Australian Renewable  
Energy Agency

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# RENEWABLE HYDROGEN DEPLOYMENT FUNDING ROUND

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This Updated Funding Announcement details the competitive process that will be used by ARENA under the Advancing Renewables Program (ARP) to fund two or more large scale hydrogen production projects. This process is referred to as the Funding Round. The Funding Round is a Competitive Process as defined in the ARP Guidelines and clauses 4.27 to 4.32 apply.

This Funding Announcement should be read in conjunction with the [ARP Guidelines](#) which apply to the Funding Round. Definitions contained in the ARP Guidelines also apply to this Funding Announcement.

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## 1.0

### FUNDING ROUND KEY OBJECTIVES

The key objectives of the Funding Round are to:

- a) Demonstrate electrolysis and associated renewable hydrogen technologies at scale.
- b) Facilitate a pathway to technical and commercial viability of renewable hydrogen in Australia.
- c) Provide price discovery and transparency in relation to the current and projected economics for renewable hydrogen technologies.

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## 2.0

### FUNDING ALLOCATION

ARENA has allocated \$70 million (Total Funding Allocation) for the Funding Round. ARENA intends to provide grant funding for at least two projects as part of the Funding Round.

ARENA may allocate an amount of funding that is less than the Total Funding Allocation, or fund fewer than two projects, if the Proposals received are not considered to be of sufficient merit to support an offer of ARENA funding or if it is not possible to support all high merit projects within the Total Funding Allocation. At its discretion, ARENA may also allocate an amount of funding greater than the Total Funding Allocation if it considers this to represent value for money and if ARENA has sufficient available remaining funding.

# 3.0

## SCOPE OF ACTIVITY

The Funding Round is open to Proposals from invited Applicants that demonstrate the production of hydrogen via electrolysis. Proposals for projects must comply with the following parameters:

PARAMETER	DESCRIPTION
Electrolyser	Projects must include a new-build electrolyser for the production of renewable hydrogen in Australia. The project may utilise existing energy generation infrastructure or hydrogen end use infrastructure.
Minimum electrolyser size	Projects must meet or exceed the minimum electrolyser size of 5 MW (at the DC capacity warranted by the manufacturer) with preference given to projects with an electrolyser size greater than 10 MW. There is no maximum size limit.
Location	Projects must be for a single site location in Australia.
Commercial case	Projects must have a valid commercial case for the production and use of hydrogen.
Renewable energy	<p>Hydrogen production must be 100% powered by electricity that is derived from:</p> <ol style="list-style-type: none"><li>on-site renewable electricity generation</li><li>retirement of Renewable Energy Certificates (RECs) or equivalent certificate</li><li>contracted electricity derived from a renewable Power Purchase Agreement (PPA), or</li><li>combination of the above.</li></ol> <p>Where an Applicant is proposing to use contracted electricity derived from a renewable PPA and surrender RECs, the Applicant must voluntarily surrender/retire these associated certificates. That is, certificates associated with electricity contracted to the project cannot be applied for other purposes not associated with the project (for example, extinguishing a certificate liability or on-selling the certificates). This is also the case for any certificates generated by on-site renewable electricity generation. An arrangement to confirm such surrender/retirement will be outlined in any ARENA Funding Agreement.</p> <p>Where an Applicant intends to use contracted electricity from a renewable PPA that has not qualified for RECs but supplies 100% renewable energy, the application must clearly demonstrate that the energy supply is renewable. ARENA reserves the right to consult with the Clean Energy Regulator as required to assess whether the energy supply is compliant with the Funding Round requirements.</p> <p>ARENA will only accept Small-scale Technology Certificates (STCs) to the extent that they have not been utilised or applied against any other target or application. Applicants are required to consult with the Clean Energy Regulator in the event that they wish to utilise STCs as their method for demonstrating renewable electricity and include the outcome of such correspondence in their Full Application.</p>
Commercialisation pathway	The Applicant must present a credible commercialisation pathway (cost reduction pathway) for hydrogen production.

A project is required to involve the deployment of a new-build electrolyser that satisfies the above conditions as part of either a brownfield or greenfield project for the production of renewable hydrogen. The project may include upstream and downstream processing activities, however, as ARENA funding is intended to support the electrolyser and balance of plant components and these aspects must be clearly identified in the Proposal.

Projects that do not fit within these parameters will not be assessed as high merit under the Funding Round.

# 4.0

## ELIGIBILITY REQUIREMENTS

Applicants under this Funding Round are required to meet all eligibility criteria as outlined in the ARP Guidelines.

# 5.0

## CLARIFICATION OF MERIT CRITERIA

The following table sets out the merit criteria for the Funding Round. These criteria include all criteria in Part 3 of the ARP Guidelines, with additional clarifications included below. Applications must address each of these merit criteria. A list of requirements for each stage of the application process is provided at Appendix A. These should be addressed, in addition to the items set out in this section.

ARP MERIT CRITERIA	APPLICATION TO FUNDING ROUND
<i>A - Contributes to the Program Outcomes</i>	<p><i>This criterion assesses how well the project contributes to the Program Outcomes, taking into account the investment priorities in the Investment Plan and any relevant Funding Announcements.</i></p> <p>In assessing the contribution of a Proposal to the Program Outcomes, ARENA will consider:</p> <ul style="list-style-type: none"><li>› the alignment to the Funding Round objectives and Scope of Activity;</li><li>› the Grant Funding<sup>1</sup> request for a project, and the justification for the amount of funding requested. The Full Application should demonstrate that the funding requested is the minimum Grant Funding required for the project to proceed including reference to any commercial constraints;</li><li>› the cost competitiveness and efficiency of the project will be considered with reference to the following:<ul style="list-style-type: none"><li>◦ the amount of total Grant Funding requested per MW of Electrolyser Capacity (representing the economic gap to commercial competitiveness);</li><li>◦ the amount of total Grant Funding per tonne of Hydrogen Delivered<sup>2</sup> over the first 12 months of steady state operations;</li><li>◦ the implied cost per kilogram of Hydrogen Delivered over the life of the electrolyser (including capital and operating costs); and</li><li>◦ MWh / Hydrogen Delivered over the first 12 months of steady state operations.</li></ul></li><li>› the potential for the project and its application to be replicated and/or provide a clear path for further cost reduction of renewable hydrogen production over a specified timeframe and production volumes. This may include:<ul style="list-style-type: none"><li>◦ a quantitative assessment, with associated analysis or financial modelling, of the cost reduction pathway that would be required beyond the project to allow the project to be replicated with a reduced subsidy in the medium term;</li><li>◦ comparison of the hydrogen cost reduction pathway with with reference to the cost of a relevant alternative energy source;</li><li>◦ analysis of any planned expansion of the project and impact on the renewable hydrogen production costs enabled by the expansion.</li></ul></li></ul> <p>ARENA may, in its discretion, normalise Grant Funding requests for different tax positions adopted by Applicants and additional concessional inputs (e.g. electricity pricing, land etc) including when considering any relevant project metrics.</p>

1 Grant Funding includes both ARENA funding and other grant funding or concessional support a project may receive from State or Federal Government initiatives. It excludes concessional (debt) finance such as CEFC or NAIF funding that requires repayment of funds.

2 Hydrogen Delivered is calculated as the tonnes of hydrogen delivered to the point of hydrogen offtake in normal operations. This should be calculated with reference to the System Efficiency guaranteed by the equipment supplier, and the electricity capacity factor (the extent to which the electrolyser is used) as assumed in the financial model and / or relevant commercial agreements.

## ARP MERIT CRITERIA APPLICATION TO FUNDING ROUND

### *Additional guidance for Full Application stage*

At the Full Application stage, ARENA will focus on:

- › the cost competitiveness of the Proposal with reference to the metrics above;
- › the justification for the amount of the Grant Funding including the ARENA funding requested;
- › the quality and completeness of information and analysis to support key assumptions that impact or determine the amount of Grant Funding requested; and
- › other details that provide confidence that the Proposal will proceed with the requested Grand Funding amount.

### *B - Applicant capability and capacity*

*This criterion assesses the capability and capacity of the Applicant and project Partners to deliver the project.*

In assessing this criterion, ARENA will consider:

- › the demonstrated level of experience and expertise of the Applicant and/or Applicant's consortium including where members of the consortium have successfully delivered hydrogen or other projects of a similar nature, scale or value in Australia or internationally;
- › the appropriateness of the proposed allocation or roles and responsibilities between the Applicant, the Applicant's consortium and project partners (including but not limited to major equipment suppliers, EPC contractors, advisors and commercial partners); and
- › the quality and completeness of project documentation and agreements provided to ARENA (such as procurement processes, timelines and participation agreements), as well as the extent to which these provide evidence of the Applicant's capability and readiness to implement the project.

### *Additional guidance for Full Application stage*

ARENA will have a particular focus on the Applicant's and its consortium's demonstrated ability to develop the project from its current stage to achieve Financial Close in line with the timeframe specified in the Full Application.

ARENA will focus on the level of commitment and engagement of key project partners to support the delivery of the project.

### *C - Activity design, methodology, risk and compliance*

*This criterion assesses:*

- › *how well designed and planned the project is, including whether it has clearly defined objectives and methodology, as well as your approach to identifying, managing and reporting the personnel, delivery, technical and financial risks of the project;*
- › *activity risk in terms of the likely success of the project, the achievement of intended outcomes that align with the Program Outcomes, investment priorities in the Investment Plan and any relevant Funding Announcements;*
- › *the risk of negotiating and executing a Funding Arrangement which is acceptable to ARENA; and*
- › *compliance with any other requirements outlined in Part 5 of the ARP Guidelines.*

In assessing this criterion, ARENA will consider:

- › the quality and completeness of the Project Plan, including the level of project definition and the hydrogen use case or offtake agreement (where relevant);
- › the level of project technical definition and pathway to complete the front end engineering and design phase (FEED) including process flow diagrams, utility flow diagrams, preliminary piping and instrument diagrams, plot plan, developed layout drawings and engineered process and utility equipment lists;
- › the completeness of the project timeline and the timing of project development and delivery up to and including the point of commissioning;
- › the level of detail regarding management of water source for the project including detail on the proposed source of water, water consumption, water quality and access;
- › the quality of the risk management plan (including hazard and operability analysis, workplace health and safety, and safety management plan) and the extent to which key risks have been identified and mitigated in project contracts and the financial model;
- › the identification and consideration of all required permits (including environmental and planning), licences, approvals and consents for the project;
- › the extent to which the Applicant accepts the terms of the Funding Agreement template; and
- › the Applicant's compliance with any other requirements outlined in Part 4 of the ARP Guidelines.

*Additional guidance for Full Application stage*

ARENA will particularly focus on the quality of the Project Plan and the project timeline, which should demonstrate that the Applicant has the commercial agreements, resources, permits, licenses and plans in place to develop the project to achieve Financial Close and ultimately deliver the project as described in the Full Application.

ARENA expects the Applicant to have reviewed and identified any proposed areas of non-compliance with the template Funding Agreement and will be unlikely to accept any proposed amendments that have not been raised in the Applicant's Full Application (refer to Appendix A for further details).

The Full Application should include evidence in the form of term sheets (or equivalent) of all necessary project documents, including the following:

- › **capital cost:** completed engineering feasibility studies and technical specification of the Proposal design including relevant supplier specifications of all major capital items;
- › **Engineering, Procurement, Construction (EPC):** term sheet for EPC contractor including pricing, key terms and conditions;
- › **Operations and Maintenance (O&M):** term sheet for all O&M costs including pricing, key terms and any conditions;
- › **land access:** evidence of land access or associated term sheet including key terms and any conditions;
- › **revenue:** countersigned term sheet with a third party for offtake of hydrogen and any outputs that the project requires (or that are included in the financial model). The term sheets are expected to specify timing, volume, price and any specific conditions. In the case of self consumption, Applicants should provide detail on the use of the hydrogen;
- › **revenue:** detailed analysis to support the assumptions relating to any non-contracted revenue reflected in the financial model, including third party support for the assumptions where relevant;
- › **energy:** countersigned term sheet for renewable energy supply including pricing, term and key conditions if contracted, or agreement to acquire and retire required RECs. If Applicants are constructing renewable energy assets for the project, detail should be provided on the proposed sizing of the renewable energy assets, construction timelines, costs and pathway to achieving the stated Financial Close timetable. ARENA will consider the relevant counterparty's ability to enter into a binding arrangement which may include consideration of creditworthiness, capabilities and experience;
- › **timetable:** timetable for the key development milestones of the project which should include expected timing of:
  - total project cost becoming binding
  - key technical and commercial milestones; and
  - Financial Close and commissioning.

Projects that have a more timely and supported Financial Close and commissioning timetable may be assessed as higher merit. The timetable should provide an expected timing of key development events supported by firm internal and external evidence.

*D - Financial viability and co-funding commitment*

*This criterion assesses the Applicant's financial capacity to deliver the project and whether the amount of ARENA funding sought and the total cost of the project is appropriate. In doing so ARENA assesses:*

- › *whether you and any project partners have the financial capacity and appropriate levels of co-funding commitment to deliver the project successfully*
- › *the extent to which you or other project partners are providing funding or in-kind support for the project*
- › *relevant industry benchmarks for the economics of a particular project.*

In assessing this criterion, ARENA will focus on the level of funding certainty to deliver the project within the proposed timetable, including:

- › deliverability of the financing plan;
- › level of conditionality of the funding commitments;
- › the risk of cost overruns;
- › the capacity of the Applicant to manage cost overruns; and
- › the quality of the financial model and assumptions for the project.

Proposals are expected to clearly set out the level of confidence regarding project cost estimates which should include external evidence where applicable.

ARENA will assess the amount of ARENA funding sought and total cost of the project within the competitive framework elements outlined under Merit Criterion A. The ARENA grant request is not expected to change materially between the EOI stage and the Full Application stage, refer to Section 6 part c for further clarification.

**ARP MERIT CRITERIA APPLICATION TO FUNDING ROUND**

<i>Additional guidance for Full Application stage</i>	<p>At the Full Application stage, high merit Proposals should include the following:</p> <ul style="list-style-type: none"> <li>› provide evidence of proposed electrolyser supplier(s) pricing and details of performance guarantees;</li> <li>› provide evidence of quotes from equipment suppliers for any capital items greater than or equal to 10% of total project cost, including balance of plant;</li> <li>› state the total project cost confidence level and provide third party evidence to support the stated cost confidence level;</li> <li>› provide evidence of quotes for O&amp;M;</li> <li>› have a clear financing strategy in place for all capital required for the project, including where relevant:             <ul style="list-style-type: none"> <li>○ countersigned long form term sheet with all equity financiers (including Applicant and third party equity financiers) setting out the key terms of investment (return expectations or hurdle rates) and conditions;</li> <li>○ countersigned long form term sheet for all debt finance, including debt sizing terms and other conditions;</li> <li>○ letter of support from any other potential grant funders outlining the nature and value of the support (grant amount or value of any other concessional support);</li> </ul> </li> <li>› outline how all financing activities align with the project Financial Close timetable;</li> <li>› include a detailed plan for how cost overruns will be managed and funded;</li> <li>› provide a dynamic financial model for the project including all associated assumptions (refer to Appendix A for further clarification);</li> <li>› provide detail on any development costs, profits and fees paid or payable to all parties (with supporting documentation); and</li> <li>› confirmation that the financing and commercial terms agreed are reflected in the financial model.</li> </ul>
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<i>E - Knowledge sharing</i>	<p><i>This criterion assesses:</i></p> <ul style="list-style-type: none"> <li>› the value of the knowledge generated by the project in contributing to the Program Outcomes</li> <li>› how well that knowledge is targeted to specific audiences</li> <li>› how you will capture, store and disseminate the data, information and lessons learned from the project.</li> </ul> <p>In assessing this criterion, ARENA will consider:</p> <ul style="list-style-type: none"> <li>› how well the knowledge generated will contribute to the objectives of the Funding Round;</li> <li>› the extent to which the Applicant is willing to comply with ARENA's Knowledge Sharing Plan;</li> <li>› the extent to which additional valuable knowledge may be generated and shared from the project; and</li> <li>› the extent to which the knowledge generated supports the development of new markets and supply chains.</li> </ul>
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<i>Additional guidance for Full Application stage</i>	<p>Applicants must review and identify any proposed non-compliance with the Knowledge Sharing Plan. ARENA will be unlikely to accept subsequent amendments that have not been raised in the Applicant's Full Application. The Proposal should include any additional knowledge sharing deliverables proposed.</p>
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Proposals must address the relevant Additional Information Requirements set out in Appendix A.



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# 6.0

## APPLICATION AND ASSESSMENT PROCESS

An application made under the Funding Round must be completed according to the ARP Guidelines.

Further detail is outlined below on the application and assessment process that is specific to the Funding Round.

**a) Measurement and assessment of cost reduction and commercial competitiveness**

When evaluating Proposals against the Funding Round objectives, ARENA will assess Proposals against the Scope of Activity parameters and the ARP merit criteria provided in Sections 3 and 5 above.

Note that Section 6.7 of the ARP Guidelines allows ARENA (in its absolute discretion) to reject, refuse to consider, or cease evaluating a Full Application at any time if ARENA determines (at its absolute discretion) that the Full Application is unlikely to be successful. This will apply particularly when a Proposal does not fit within the Scope of Activity parameters (as presented in Section 3) for this Funding Round.

**b) Full Application stage**

A Full Application will only be accepted from Applicants invited by ARENA to submit a Full Application following the assessment of EOIs. Full Applications must clearly address each of the ARP merit criteria, taking into account the clarifications provided in the table above. Full Applications will be assessed against the ARP merit criteria and rank ordered. Each merit criterion has equal weight in the assessment process.

Only Proposals that are assessed as being of overall high merit against the ARP merit criteria at Full Application stage will be considered for funding (High Merit Projects).

The highest ranked High Merit Projects will be recommended for funding approval subject to the Total Funding Allocation available and the portfolio approach described below.

Full Applications must be submitted via [ARENAnet](#) 'Advancing Renewables Program - Renewable Hydrogen Deployment Funding Round' no later than 5pm (AEDT) on the Full Application Due Date.

Further information on requirements for the Full Application stage is presented at Appendix A.

**c) Material change**

To ensure consistent Proposals at both the EOI and Full Application stages, and to ensure fairness in the assessment, no material change to the Proposal will be permitted between the EOI and Full Application stages.

ARENA retains the right to not assess Full Application Proposals where a material change(s) is observed from the EOI stage. ARENA will determine, at its discretion, whether any such change is material in nature. In assessing whether a material change has occurred, ARENA may consider key project elements such as the size of ARENA funding request, project sizing, project offtake nature, key counterparties, project location and other such factors.

Similarly, no material change to the project is expected between the Full Application and Financial Close. ARENA will determine, at its discretion, whether any such change is material in nature or whether to waive this requirement. In the event that a material change occurs, ARENA reserves the right to determine if the changes are acceptable and support the objectives of the Funding Round. ARENA may, at its discretion, determine it is appropriate to increase the amount of ARENA funding if it is considered to represent value for money and in line with the Funding Round objectives and subject to the Applicant meeting the conditions of the Offer to Negotiate letter.

d) Q&A process

A Q&A process will be undertaken during the application process to respond to Applicant queries on applications and assessment. Queries can be emailed to [hydrogen@arena.gov.au](mailto:hydrogen@arena.gov.au). Responses for commonly asked questions will be published on [arena.gov.au](http://arena.gov.au).

ARENA will issue Applicants with a communication schedule which will outline a framework within which ARENA will communicate with Applicants as part of the Full Application due diligence process. This will include an option for ARENA to hold due diligence meetings with Applicants at any stage of the Full Application process. ARENA will provide all Applicants with a minimum number of due diligence meetings.

ARENA may, at its discretion, request due diligence meetings with parties connected to a Full Application Proposal which may include but is not limited to financiers, offtakers, advisors and/or equipment suppliers. Failure to comply with due diligence requests may impact on the assessment of a Proposal.

e) Publication of information

ARENA may publish aggregated and non-identifiable data<sup>3</sup> from the Proposals received at the conclusion of the Full Application stage of the Funding Round to provide a high level of transparency to stakeholders on the range of Proposals received. This may include information on the following:

- › Proposed Electrolyser Capacity sizes.
- › Summary of proposed electrolyser types.
- › Total electrolyser supply cost (including and excluding identified balance of plant) per MW of Electrolyser Capacity.
- › End use cases (aggregate categories).
- › Grant Funding amount per MW of Electrolyser Capacity.
- › Grant Funding amount per tonne of Hydrogen Delivered over the first 12 months of steady state operations.
- › MWh per tonne of Hydrogen Delivered over the first 12 months of steady state operations.
- › ARENA grant as a percentage of total project cost.
- › Total project cost or Grant Funding by state.
- › Cost (\$/L) and volume (L/Kg of hydrogen produced) of water used in production of hydrogen.
- › Water sources (i.e. potable, recycled, seawater).
- › Estimated reduction in carbon footprint in CO<sub>2</sub>e compared to the alternative technology (e.g. Steam Methane Reforming (SMR) vs renewable hydrogen).
- › Number of full time equivalent employees (FTEs) required during the construction period and number of ongoing FTEs during the operation of the project.

ARENA may also publish the name of Proposals, Applicants and the public project description provided in the ARENANet application form that receive an offer of funding.

f) Portfolio approach

ARENA intends to apply a portfolio approach when offering funding under the round (as allowed for under ARP Guidelines clauses 4.23 and 4.24). In this regard, ARENA may elect not to fund an otherwise meritorious project, or in the case of a Competitive Process, a higher ranked project, if the aims or outcomes of that project are the same as, or similar to, the aims and outcomes of a project that ARENA is intending to fund through the Funding Round or has previously funded.

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<sup>3</sup> Where relevant, it is expected that data presented will represent the information provided to ARENA, not ARENA's assessment of that information.

# 7.0

## FEED COST REBATE

An aggregate total of up to \$2.0 million will be made available to partially reimburse qualifying Applicants for FEED related expenditure incurred during the application process (Total FEED Cost Rebate Amount). This will only be available to Applicants who are invited to submit a Full Application but do not receive an offer of funding. The FEED Cost Rebate is designed to provide:

- › an incentive for projects to progress the FEED element of a project during the period between the acceptance of an invitation to the Full Application stage and the receipt of an Offer to Negotiate (if any); and
- › a range of advanced development projects in the event that a project does not receive an Offer to Negotiate.

Applicants that are eligible for the FEED Cost Rebate may request up to 50 per cent of Verifiable Third Party Costs subject to:

- › evidence of the costs being incurred in the period between the acceptance of an invitation to the Full Application stage and the receipt of an Offer to Negotiate (ARENA will not pay for work that occurred outside of this period);
- › evidence of the costs being substantially required to support the electrolyser component of the project as presented in the Full Application;
- › the costs relating to services that are being provided by a suitably qualified party;
- › the request not exceeding the estimated FEED costs outlined in the Full Application; and
- › the Applicant agreeing to make aspects of FEED publicly available including, but not limited to, electrolyser pricing and the cost of major equipment items equal to more than 10% of the total project costs.

The decision on an Applicant's eligibility to receive the FEED Cost Rebate, and the amount of any payment to any Applicant is at the absolute discretion of ARENA. Any FEED or other development costs incurred by the Applicant during the Full Application stage are at the Applicant's own risk.

### a) Compliance and requirements for FEED Cost Rebate

The maximum amount of FEED Cost Rebate payable with regards to a single Proposal is \$1 million (excluding GST). Applicants that receive an Offer to Negotiate (whether accepted by the Applicant or otherwise) are not eligible to receive funds under the FEED Cost Rebate.

If an Applicant or Project Partner has previously received ARENA funding or other Grant Funding, the Applicant will be required to demonstrate that it does not relate to the Proposal in order to be eligible for the FEED Cost Rebate. Where ARENA has provided funding to support feasibility work, no FEED Cost Rebate will be provided for the same Proposal. Similarly, no FEED Cost Rebate will be provided where other Grant Funding from another party has been received in support of the Verifiable Third Party Costs. Applicants that may be subject to these requirements should seek clarification from ARENA via the Funding Round Q&A framework prior to the submission of a Proposal.

In the event that ARENA receives complying FEED Cost Rebate claims greater than the Total FEED Cost Rebate Amount, the amount of the actual FEED Cost Rebate payable to an Applicant will be prorated (reduced) according to the Verifiable Third Party Costs incurred.

To be eligible to receive a partial rebate, an Applicant must satisfy the following requirements:

- › an eligible Full Application must be lodged by the Full Application Due Date in accordance with the Updated Funding Announcement;
- › the Full Application must not include material change relative to the EOI (refer to Section 6 part c);
- › the Applicant does not receive an offer of funding under the Funding Round;
- › submission of a request for FEED Cost Rebate payment using the prescribed form (Appendix B); and
- › the request for FEED Cost Rebate payment must be accompanied by detailed third party material and supporting information.

On acceptance of a FEED Cost Rebate request, ARENA will provide further information on how such payment will be made.

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# 8.0

## OFFER TO NEGOTIATE

Applicants that are successful at the Full Application stage of the Funding Round will be issued a non-binding offer to negotiate a Funding Agreement (Offer to Negotiate). The Offer to Negotiate will outline the terms under which ARENA is prepared to enter into negotiations for a Funding Agreement for the Proposal. The Offer to Negotiate will outline:

- › the amount of ARENA funding that is being offered;
- › the terms and conditions associated with the offer of ARENA Funding;
- › that the ARENA funding is linked to the operation of the renewably powered electrolyser specified in the Full Application;
- › the development milestones and timetable that the Applicant is required to meet (such as relevant milestones up to and including Financial Close);
- › the terms under which ARENA may withdraw the offer of funding;
- › requirements for monthly confirmation that the Applicant is proceeding with the project; and
- › Bid Bond details and associated deed poll.

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# 9.0

## PROJECT BID BONDS

When an Offer to Negotiate letter is issued, the Recipient will be required to provide ARENA with a bid bond of \$500,000 (Bid Bond). The Bid Bond will be due to ARENA within 20 business days following the date of the Offer to Negotiate letter. The Bid Bond amount represents a genuine pre-estimate of the costs that would be incurred by ARENA in seeking a replacement project in the event that an Applicant that has received an Offer to Negotiate but does not proceed to Financial Close within the timetable prescribed in the Offer to Negotiate. Bid Bonds will be forfeited if a project does not reach Financial Close by the date specified in the Offer to Negotiate letter, unless ARENA grants an extension to that timeline (in its discretion). Furthermore, where development milestones are not achieved, ARENA may, in its discretion, elect to terminate funding agreement negotiations with the Recipient at which point the Applicant Bid Bonds will be forfeited or extended in agreement between the parties.

The Bid Bond must be issued by a bank with a branch in Sydney or Melbourne that has a rating from Standard & Poor's of at least A- or a rating from Moody's of at least A3.

The Offer to Negotiate will provide that:

1. ARENA may make a demand under the Bid Bonds if:
  - a) the Applicant withdraws from negotiations in respect of the Funding Agreement;
  - b) the Applicant fails to submit notice of a development notice;
  - c) the Applicant does not achieve a development milestone; and
  - d) once the Funding Agreement has been entered into, the Applicant fails to meet Financial Close on or before the CP Satisfaction Date.
2. ARENA must return the Bid Bonds to the Applicant if the Applicant achieves Financial Close on or before the date specified in the Offer to Negotiate.

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# 10.0

## COMMUNICATIONS AND PUBLIC ANNOUNCEMENTS

Any media releases by Applicants related to Proposals in the Funding Round are to be jointly agreed between ARENA and the Applicant. All media announcements, releases or other public disclosure to third parties relating to the Proposal and the Funding Round must only be with the prior written approval of ARENA. Once a Funding Agreement is executed, the terms of the Funding Agreement will govern any public announcements.

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# 11.0

## FUNDING AGREEMENT

The Funding Agreement will provide the legal framework for the obligations of each party and terms of payment for each successful Full Application under the Funding Round.

ARENA's Funding Agreement template is provided on the ARENA website page dedicated to the Funding Round at <https://arena.gov.au/funding/renewable-hydrogen-deployment-funding-round/>. Applicants are expected to accept this Funding Agreement with no, or very limited, changes. Based on limited feedback from Applicants during the EOI stage, ARENA has not updated the Funding Agreement template. Compliance with the Funding Agreement will form part of ARENA's assessment of project risk under ARP Merit Criterion C.

Applicants must provide a detailed list of any proposed amendments to the Funding Agreement in the form of a compliance table. A template compliance table is provided at <https://arena.gov.au/funding/renewable-hydrogen-deployment-funding-round/>. ARENA is unlikely to accept material proposed amendments to the Funding Agreement template that have not been raised in the Applicant's Full Application.

The Funding Agreement will stipulate the development milestones for the project that the Recipient will be expected to adhere to.

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# 12.0

## KNOWLEDGE SHARING PLAN

A Knowledge Sharing Plan specific to the Funding Round is provided at <https://arena.gov.au/funding/renewable-hydrogen-deployment-funding-round/>. Applicants are expected to accept this Knowledge Sharing Plan with no, or very limited, changes. Compliance with the Knowledge Sharing Plan will form part of ARENA's assessment of merit against ARP Merit Criterion E. Applicants are required to provide a response to the Knowledge Sharing Plan with the Full Application by including the completed template provided as an attachment to the Full Application. Applicants are encouraged to include any incremental knowledge sharing outputs that it considers to be valuable to the market.

# 13.0

## TIMETABLE

The timetable for the Funding Round is presented in the table below.

EOI STAGE (COMPLETE)	
EOI Open Date	Wednesday 15 April 2020
EOI Due Date	5pm Australian Eastern Standard Time (AEST), Tuesday 26 May 2020
FULL APPLICATION STAGE	
Applicants invited to submit a Full Application	20 July 2020
Full Application Due Date	5pm Australian Eastern Daylight Time (AEDT), Wednesday 20 January 2021
Offer to Negotiate or communication of outcome of the Full Application stage	ARENA aims to issue outcome letters from the Full Application stage prior to 30 April 2021
Bid Bond provided	No more than 20 business days following an Offer to Negotiate
IMPLEMENTATION	
Financial Close Satisfaction Date	ARENA may assess, as higher merit, projects that have a more timely and credible proposed date of Financial Close and commissioning timetable. The timetable should be developed to provide an expected timing of key development events, supported with firm internal and external evidence.
Commissioning Date	ARENA anticipates that supported projects should achieve commissioning no later than 18 months following Financial Close.
ARENA reporting period	Extends to the third anniversary of the Commissioning Date

Other than in exceptional circumstances, ARENA will not accept a Full Application submitted after the relevant due dates.

The above dates represent the current timetable for the Funding Round. ARENA retains the right to amend proposed timelines and stages or alter any element of the Funding Round at its discretion. ARENA will monitor the COVID-19 situation as the Funding Round progresses. If ARENA, at its discretion, deems it beneficial to achieving the objectives of the Funding Round, ARENA may extend or change the timetable for the Funding Round.

# 14.0

## GLOSSARY

\$	All references to dollars or \$ are to Australian Dollars.
AEST	Australian Eastern Standard Time
AEDT	Australian Eastern Daylight Time
Applicant	An eligible person, organisation or institution as defined in clause 2.2 of the ARP Guidelines that has submitted a Proposal for funding under ARP
ARP	ARENA's Advancing Renewables Program
Bid Bond	Amount of \$500,000 paid by Applicant to ARENA 20 business days following an offer of ARENA funding.
Commissioning Date	Expected to be the final completion of the project in accordance with the Engineering Procurement and Construction contract and the relevant project documents.
CP Satisfaction Date	As defined in the ARENA Funding Agreement
Electrolyser Capacity	Electrolyser Capacity is the electrolyser stack capacity warranted by the equipment provider at the Commissioning Date.
EPC	Engineering, Procurement, Construction
FEED	Front End Engineering and Design
FEED Cost Rebate	Partial rebate of FEED costs subject to the conditions set out in Section 7.
Financial Close	As determined at ARENA's discretion, the phase of the delivery of the project where all sources of financing have been successfully contracted and related project documentation has been executed.
Financial Close Satisfaction Date	Date for meeting all conditions required to achieve Financial Close.
FTE	Full time equivalent employees (including those working on the project under contract or other employment arrangements)
Full Application Due Date	As reflected in Section 13 of this Updated Funding Announcement
Funding Agreement	The agreement between a Recipient and ARENA for funding under the ARP. A template is available on the ARENA website.
Funding Round	The competitive process that will be used by ARENA under the ARP to fund two or more large scale renewable hydrogen production projects as set out in this Funding Announcement.
Grant Funding	Grant funding includes both ARENA funding and other grant funding or other concessional support a project may receive from State or Federal Government initiatives. It excludes concessional finance such as funding from the Clean Energy Finance Corporation (CEFC) or Northern Australia Infrastructure Facility (NAIF).
High Merit Projects	Proposals assessed as being of overall high merit against the ARP merit criteria at Full Application stage.
Hydrogen Delivered	Calculated as the tonnes of hydrogen delivered to the point of hydrogen offtake in normal operations. This should be calculated with reference to the System Efficiency guaranteed by the equipment supplier, and the electricity capacity factor (the extent to which the electrolyser is used) as assumed in the financial model and / or relevant commercial agreements.
Knowledge Sharing Plan	Template plan setting out the minimum knowledge sharing deliverables expected to be provided by the Applicant.
Offer to Negotiate	ARENA will issue a non-binding offer to negotiate a Funding Agreement to those Applicants that are successful at the Full Application stage of the Funding Round.
O&M	Operations and Maintenance
P&ID	Piping and Instrumentation Diagrams.
PPA	Power Purchase Agreement.

Proposal	Has the same meaning as in the ARP Guidelines
Project Plan	The principal application document, which includes a summary of all of the items detailed in Appendix A and refers to any further supporting information (via attachments). The Project Plan should support the Applicant's response to each of the merit criteria.
Renewable Energy Certificates / RECs	As defined by the Clean Energy Regulator under the Renewable Energy Target scheme or equivalent certificate scheme.
Scope of Activity	As defined in Section 3.
Small-scale Technology Certificates / STCs	As defined by the Clean Energy Regulator, certificates created under the Small-scale Renewable Energy Scheme.
SMR	Steam Methane Reforming.
System Efficiency	Hydrogen produced by the electrolyser system divided by the electricity entering the system.
Total FEED Cost Rebate Amount	Up to a combined total of \$2 million.
Total Funding Allocation	\$70 million allocated to this Funding Round.
Total Project Cost	All costs incurred to construct and finance the project including costs incurred during the development stage. This should include contingency costs.
Verifiable Third Party Costs	Includes external consultant costs that are clearly and evidently related to the FEED element of the project that have been incurred from the date of invitation to the Full Application the date of the Full Application outcome letter. Verifiable Third Party Costs must be supported by third party information (such as a contract or invoice) that clearly specifies the nature of the work, the project, the cost and the dates on which the costs are incurred. The acceptance of any cost as a Verifiable Third Party Cost is at ARENA's absolute discretion.



# APPENDIX A

## ADDITIONAL INFORMATION REQUIREMENTS

Note Proposals should include information in this Appendix in addition to the guidance provided in Section 5 Clarification of Merit Criteria.

### FULL APPLICATION STAGE

› Applicants should provide the following:

- a. Detailed long form countersigned term sheet for renewable energy supply including pricing, term and key conditions if contracted, or a signed agreement to acquire and retire required RECs. If Applicants are constructing renewable energy assets for the project, detail should be provided on the proposed sizing of the renewable energy assets, construction timelines, costs and pathway to achieve the stated Financial Close timetable.
  - b. Detailed countersigned term sheet(s) for all equity funding (including Applicant and third party financiers) including any conditions, funding limits and return requirements.
  - c. Detailed countersigned term sheet for any debt funding including any conditions and debt sizing terms.
  - d. Detailed countersigned term sheet for any concessional debt funding including any conditions and debt sizing terms.
  - e. Letter of support from any other potential grant funders outlining the nature and value of the support (grant amount or value of any other concessional support).
  - f. Detail on the current status of funding approval for all sources of funds required for the project and how all financing activities align with the Financial Close timetable.
  - g. Detailed countersigned term sheet for offtake of hydrogen and any outputs the project requires (or that are included in the financial model). The term sheets are expected to specify timing, volume and price and any specific conditions. In the case of self consumption, Applicants should provide comprehensive detail on the use case for the hydrogen.
  - h. Detailed analysis to support the assumptions relating to any non-contracted revenue reflected in the financial model, including third party support for the assumptions where relevant.
  - i. Completed engineering feasibility studies and evidence or copies of these studies, including evidence from suppliers to support the technical specifications.
  - j. Detailed term sheet for EPC contractor including pricing, key terms and conditions.
  - k. Detailed term sheet for all O&M costs including pricing, key terms and any conditions.
  - l. Evidence of land access or associated term sheet including key terms and any conditions.
  - m. Detail on all development costs, profits and fees paid or payable to all parties (with supporting documentation)
  - n. Evidence of quotes from equipment suppliers for any capital items greater than or equal to 10% of total project cost, including balance of plant.
  - o. State the total project cost confidence level and provide third party evidence to support the stated cost confidence level.
  - p. Evidence of preferred electrolyser supplier firm pricing and details of performance guarantees. Pricing should include the following (or specify inclusions in the equipment supplier quote):
    - Cells
    - Electric control (Including Transformers, Rectifiers, PLC)
    - Water polishing
    - Water cooling
    - Water chilling
    - Hydrogen Purification.
- › In addition to the requirements specified in Section 5 Clarification of Merit Criteria, Applications should also provide a longform Project Plan document that includes (at a minimum):
- a. Summary of the project including description, size, proposed location and use of the hydrogen.
  - b. Summarise the current technical design of the project including the source of renewable energy and Piping and Instrumentation Diagrams (P&ID).
  - c. Summarise the level of project technical definition and pathway to complete FEED, including evidence of feasibility, design and/or FEED work undertaken to date.

- d. List the key project partners including equipment suppliers, EPC, O&M, commercial and technical advisors and provide the incorporation details, major subsidiaries and associated entities and details of current Australian operations and relevant experience in Australia and internationally. Include any examples where the Applicant and/or the Applicant's consortium members have successfully delivered hydrogen production or hydrogen related projects in Australia, or internationally.
- e. Detail on current status of development, planning and environmental approvals, permits and /or licenses required for the project and anticipated pathway and timing to finalisation.
- f. Evidence of land access for proposed site of project.
- g. Detail of any regulatory licences, permits or approvals required to carry out the project and current status of registration.
- h. Detail regarding the status of connection agreement process and where possible, evidence provided to confirm the current status (if relevant).
- i. Detail regarding proposed source(s) of water, annual water consumption, water quality, access, costs and any related approvals required (including status).
- j. Timetable for the project, including key milestones, target final investment decision, target Financial Close date and target Commissioning Date.
- k. Provide key project metrics including targeted electricity supply cost (\$/MWh), capacity factor (%), hydrogen production cost (\$/Kg hydrogen). The hydrogen production cost should include capital and operational expenditure.
- l. A section summarising the estimated reduction in carbon footprint in CO<sub>2e</sub> compared to the alternative technology (e.g. SMR vs renewable hydrogen). Carbon footprint should only include the impact from renewable energy supply or impact on downstream processes that are incremental to the hydrogen production (carbon reduction should not be counted twice in a process)
- m. Provide the metrics specified at Section 5 Clarification of Merit Criteria in Merit Criterion A:
  - the amount of total Grant Funding requested per MW of Electrolyser Capacity (representing the economic gap to commercial competitiveness);
  - the amount of the total Grant Funding per tonne of Hydrogen Delivered over the first 12 months of steady state operations;
  - the implied cost per kilogram of Hydrogen Delivered over the life of the electrolyser (including capital and operating costs); and
  - MWh / Hydrogen Delivered over the first 12 months of steady state operations
- n. Details of all development costs including any pre-feasibility, feasibility and FEED costs spent to date, including clarification of such costs incurred between the date of the acceptance of the invitation to Full Application and the Full Application Due Date.
- o. Detailed breakdown of all development costs required for the project including FEED costs. This should include the timing of all costs and third party evidence for cost estimates. Development costs expected to be incurred prior to Financial Close should be clearly identifiable. Note any development costs that will be repaid at Financial Close.
- p. An outline of the proposed capital structure to fund the project including evidence of the proposed sources of such funds, noting level of commitment in line with the compulsory requirements above, including timeline for financing becoming unconditional.
- q. Details on how the Applicant will manage contingency costs and cost overruns, including any limits.
- r. Details on the proposed maintenance and replacement regime for the lifetime of the asset.
- s. Analysis to demonstrate a clear path to further cost reductions beyond this project, which might allow the project to be replicated with a reduced subsidy within the medium term.
- t. Analysis to support the size of the proposed ARENA grant request, including reference to return requirements and offtake benchmark pricing where relevant.
- u. Detail on the Applicant's long term hydrogen investment strategy.
- v. Details on all concessional components of the project.
- w. Details on any climate risk aspects identified for the project.
- x. Analysis demonstrating that the project would not be able to proceed without the requested ARENA funding.
- y. An appendix noting responses to any EOI feedback.

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## ATTACHMENTS

- z. A detailed risk management plan for the project including hazard and operability analysis, workplace health and safety, and safety management plan.
- aa. A detailed community consultation plan for the project.
- ab. A statement of acceptance of the requirements set out in the Knowledge Sharing Plan.
- ac. A statement of compliance with the acceptance to the standard terms and conditions in the Funding Agreement template.
- ad. Any further letters of support of commitment from project partners.
- ae. List of any further documents available for due diligence.

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## FINANCIAL MODEL

- › A dynamic financial model should also be provided, including at a minimum:
  - a. All associated costs of deployment with clear breakdown of cost including:
    - electrolyser (components as specified above)
    - balance of plant
    - operating costs
    - development costs
    - energy supply costs
    - all other processing costs required by the project (broken down in appropriate detail)
  - b. All assumptions to be clearly labelled and dynamic.
  - c. Note the proposed tax treatment of the ARENA funding, basis for assumption and confirmation that it is reflected in the financial model.
  - d. Note key project metrics including targeted electricity supply cost (\$/MWh), capacity

- factor (%), hydrogen production cost (\$/Kg hydrogen). The hydrogen production cost should include capital and operating costs.
- e. Ability to clearly sensitise the model to view the equity IRR (pre and post tax) with and without ARENA funding (and other grant funding).
- f. Comprehensive assumption book with evidence of third party information for all key inputs. This should include, but not limited to, the following:
  - Hydrogen offtake key terms including price, term and volumes, consistent with supporting documentation.
  - Energy supply key terms including price, term and volumes, consistent with supporting documentation.
  - Water supply key terms including price, term and volumes.
  - Any other revenues (e.g. Ammonia, oxygen, electricity, etc), consistent with supporting documentation.
  - Other key Electrolyser assumptions including operating efficiency (MWh / Hydrogen Delivered over the first 12 months of steady state operations), availability, degradation rate, stack replacement lifecycle costs.
  - Operating costs by type.
  - Sources of funding including key terms such as tenor, repayments and interest rate (if relevant).
  - Development, install and commissioning costs
  - All assumptions and calculations should be transparent and dynamic (no hard coding of calculations, hidden sheets or name ranges not referenced in the model).
- g. If the Financial Model includes macros, a macro enabled version of the Financial Model should be emailed to [hydrogen@arena.gov.au](mailto:hydrogen@arena.gov.au) prior to the Full Application Due Date, referencing the Application title.

# APPENDIX B

## FORM FOR FEED COST REBATE

As outlined in Section 7, ARENA may allocate up to \$2.0 million to compensate unsuccessful Full Application stage Applicants for FEED costs incurred during the application process. The FEED Cost Rebate will cover up to 50 per cent of Verifiable Third Party Costs incurred in the development of the Proposal from the date of the acceptance of an invitation to submit a Full Application and the date of an Offer to Negotiate letter.

The decision to pay a FEED Cost Rebate, and the amount of the payment to any Applicant is at the absolute discretion of ARENA.

To be eligible to receive a FEED Cost Rebate, an Applicant must submit the information to ARENA in the form presented below.

Subject	Applicant response	ARENA guidance notes
Applicant Name		As per application
Project Name		As per application
ARENA project reference		As provided by ARENA
Confirmation complying Full Application submitted by Full Application Due Date		Applicant to provide evidence that Full Application submitted on the due date. Applicant to provide evidence that Full Application was fully compliant with Updated Funding Announcement and capable of proceeding under this Competitive Round
Confirmation that the Full Application did not materially change from the EOI stage		
Detail of each Verifiable Third Party Cost (separate section per supplier)		Evidence that the Verifiable Third Party Cost meets the definition as presented in the Updated Funding Announcement, including but not limited to: <ul style="list-style-type: none"> <li>› Evidence that the service provider is a third party with skill, expertise and has a track record of performing comparable services</li> <li>› Applicant prepared summary of scope of work performed by the service provider and the services application to the Funding Round application process</li> <li>› Third party tax invoice and supporting documentation that clearly indicates: <ul style="list-style-type: none"> <li>◦ Detail on the nature of the services performed</li> <li>◦ Evidence that the services were specific to the Full Application</li> <li>◦ The period during which the services were performed, including invoice dates corresponding to the period between the invitation to the Full Application and the outcome letter.</li> </ul> </li> <li>› Third party receipts indicating payment of above tax invoice for services</li> </ul>
Funding confirmation		Confirmation that the Verifiable Third Party Cost that the Applicant is seeking support for as part of the FEED Cost Rebate has not received funding from a grant provider (including but not limited to ARENA or a State or Territory Government).

Subject	Applicant response	ARENA guidance notes
Net calculation		<p>Application of 50% to the Verifiable Third Party Cost presented above.</p> <p>Confirmation that the calculated amount does not exceed the maximum AU\$1.0m applicable to each unsuccessful Full Application. Note that the FEED Cost Rebate is capped at AU\$2.0 million across the Funding Round</p>
Knowledge sharing		<p>Applicant to outline FEED information to be shared with ARENA and made publicly available if it receives a FEED Cost Rebate payment. This should include, but is not limited to, electrolyser pricing and the cost of any major equipment that is greater than 10% of the total project costs.</p>
<p>Signed statement by a director of the Applicant that:</p> <ul style="list-style-type: none"> <li>› the cost information presented as part of the FEED Cost Rebate is a true and accurate reflection of the actual costs incurred</li> <li>› that costs defined in the FEED Cost Rebate form are consistent with the definition of Verifiable Third Party Costs as defined in the Updated Funding Announcement</li> </ul>		

An application for a FEED Cost Rebate must be submitted to ARENA ([hydrogen@area.gov.au](mailto:hydrogen@area.gov.au)) within 21 business days of receipt of an outcome letter.

The decision to pay (and the amount of the payment to) any unsuccessful Applicant a FEED Cost Rebate is at the absolute discretion of ARENA.

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

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**ARENAWIRE**



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