Regional Australia Microgrid Pilots Program (RAMPP)

Information Session
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Australian Government
Australian Renewable Energy Agency

ARENA

Introductions

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Agenda

1. Welcome and Introduction to ARENA
2. Program Overview
3. Eligibility Criteria
4. ARENA’s Assessment Process and the Merit Criteria
5. Key links and dates
6. Q&A

1. Welcome and Introduction to ARENA

ARENA's Purpose

ARENA is the Australian Renewable Energy Agency.

The Agency was established by the Australian Government in July 2012.

Our objects are to:

- improve the competitiveness of renewable energy technologies, and
- increase the supply of renewable energy in Australia.

To support the global transition to net zero emissions by accelerating the pace of pre-commercial innovation, to the benefit of Australian consumers, businesses and workers.

AUSTRALIAN RENEWABLE ENERGY AGENCY

KEY STATISTICS 2012-2021

ARENA

Australian Government
Australian Renewable Energy Agency

INVESTED	PROJECTS	VALUE	INVESTMENT LEVERAGE
$1.77B	602	$7.75B	$1:$3.38

INVESTMENT BY TECHNOLOGY

BIOENERGY	GEOTHERMAL	GRID INTEGRATION	HYBRID	HYDROGEN	OCEAN	SOLAR PV	SOLAR THERMAL	STORAGE - BATTERIES/PHES
$131M	$42M	$287M	$111M	$60M	$44M	$725M	$178M	$190M

RECENT ACTIVITY

$47M for Genex to build Australia's first pumped hydro energy storage system in 37 years

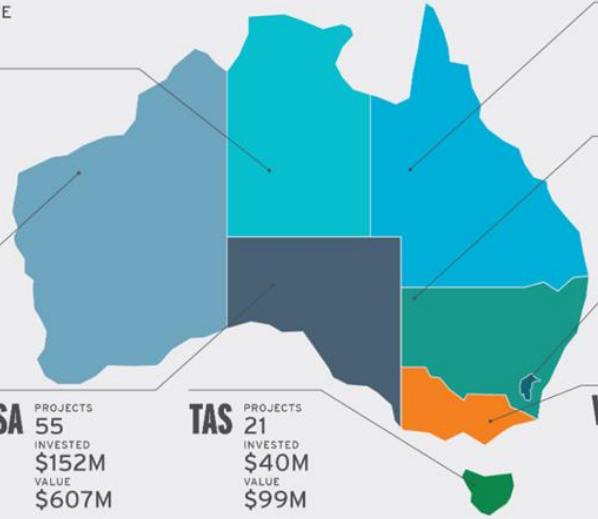
$15M for Raygen to build a world-first solar hydro power plant comprising 4 MW of solar PV generation and 3 MW / 50 MWh of dispatchable storage

$11.3M to demonstrate electrifying steam production in Alcoa's alumina refining process

$2.6M for Luceo Energy to help DNSPs to overcome challenges in managing distributed energy

579K for Rio Tinto to reduce emissions in alumina refining using renewable hydrogen

INVESTMENT BY STATE



NT PROJECTS 8 INVESTED $40M VALUE $82M

WA PROJECTS 39 INVESTED $188M VALUE $1.83B

SA PROJECTS 55 INVESTED $152M VALUE $607M

TAS PROJECTS 21 INVESTED $40M VALUE $99M

VIC PROJECTS 110 INVESTED $204M VALUE $503M

QLD PROJECTS 60 INVESTED $251M VALUE $1.98B

NSW PROJECTS 240 INVESTED $823M* VALUE $2.46B

ACT PROJECTS 69 INVESTED $68M VALUE $187M

* Includes $567 million contributed to projects inherited by ARENA in 2012.

INVESTMENT LEVERAGE ALONG THE INNOVATION CHAIN

STUDY	R&D
$1:$1.68	$1:$1.63
DEMONSTRATION	**DEPLOYMENT**
$1:$1.84	$1:$6.37

RECENT ENGAGEMENT

ARENA INSIGHTS WEBINAR

More than 150 people attended an ARENA webinar on Advanced Inverters with speakers from the AEMC AEMO, Neoen, Monash University, Powerlink, Tesla and Transgrid.

MICROGRID PILOTS PROGRAM

Consulted more than 100 people on the Regional Australia Microgrid Pilots Program, which will support pilot projects for microgrids in regional Australia.

30 JUNE 2021

ARENA's microgrid portfolio has developed over time...

Jul '14 — Coober Pedy Renewable Diesel Hybrid Project

Sep '14 — Flinders Island Hybrid Energy Project

May '15 — Rottnest Island Renewable Energy Water Nexus Project

Aug '16 — Garden Island Microgrid Project

Mar '19 — UniWave200 King Island Project

Jun '19 — Gold Fields High Penetration Renewable Microgrid Demonstration

Nov '20 — Horizon Power Denham Hydrogen Demonstration

Sep '21 — RAMPP launch

Example projects only - not exhaustive

ARENA is on a mission to

support the **global transition** to net zero emissions

by accelerating the pace of **pre-commercial innovation**

to the **benefit of Australia.**

OUR STRATEGIC PRIORITIES

OPTIMISE THE TRANSITION TO RENEWABLE ELECTRICITY

COMMERCIALISE CLEAN HYDROGEN

SUPPORT THE TRANSITION TO LOW EMISSIONS METALS

SCALE UP CCS & REDUCE THE COST OF SOIL CARBON MEASUREMENT

Deliver the Budget programs

Future Fuels Fund | Industry Energy Transformation Studies Program | **Regional Australia Microgrid Pilots Program** | Freight Efficiency Assistance Grants | Freight Energy Productivity Trial Program

2. Program Overview

Overview and strategic intent of the RAMPP

The Regional Australia Microgrid Pilots Program (the **Program**) was announced in the October 2020 Commonwealth Budget.

Funding of up to **$50 million** to be administered by ARENA over 6 years (until 2025-26).

- $30 million between now and December 2022
- $20 million to remain for Projects applying in 2023 onwards

The **objective** of the Program:

To support **improved resilience and reliability** of electricity supply in **Regional Australia** through **pilot microgrid demonstrations** that use or enable the use of **renewable energy** and **resolve the remaining barriers to final investment and full deployment**.

Program objectives

Projects will need to:

- Have demonstrated project viability through a **feasibility study**.
- Include the **deployment** of equipment and technology solutions.
- Be located in **a regional or remote area.**
- Demonstrate improved **resilience and / or reliability** of microgrids.
- Demonstrate capability of resolving **barriers to final investment and full deployment.**

Eligibility and Merit Criteria are discussed in greater detail in Sections 3 and 4 of the webinar.

Configurations of microgrids

For the purposes of the Program, the term microgrid is used to include the following technical configurations:

Embedded Microgrid	Standalone Power Systems (SAPS)	Remote Isolated Microgrid
An electricity supply arrangement that coordinates and optimises the use of connected, locationally proximate distributed energy resources (DER) to provide secure and reliable electricity within the microgrid and is able to provide value to the major grid. This could include energy market participation, provision of system flexibility, systems services and deferral of network investment.	An electricity supply arrangement that can demonstrate temporary or permanent operation when not physically connected to a major grid. SAPS encompasses supply to single and multiple customers. Where: ● customers, currently connected to a major grid, can move to a SAPS, or ● a SAPS is installed rather than a new grid connection.	An electricity supply arrangement that already operates as an isolated SAPS and will continue to do so. These systems are often in very remote locations and managed by State Government owned corporations.

Other technical configurations will also be considered as part of the Program.

Program operation

- **Timeframe:** Program opened on 24 September 2021, and is expected to remain open until all funds are exhausted
- **Total ARENA grant funding available:** $50 million, which may be reduced or increased at the discretion of the ARENA Board
- **Minimum grant:** $250,000 - ARENA anticipates **most grants will be between $1 million and $5 million**
- **Feasibility study requirement:** Feasibility study **must be registered** and reviewed prior to submitting an Application
- **Set Submission dates:** Applications can be submitted **at any time** however assessment periods will occur bi-monthly (subject to demand). Submission deadlines for assessment periods will be posted on the Program website.
- **Assessment process:** Applications will be assessed individually against the merit criteria
- **Portfolio fit:** ARENA will review applications against the existing and emerging project portfolio

Program operation and timeline

Timing	24 September 2021	Anytime from September 2021 until Program completion	Bi-monthly submission deadlines	Assessment timeframe to be advised upon submission
Stage	**Funding Guidelines released and open for applications**	**Register Project Feasibility Study**	**Submit Application**	**Notification of Application outcome**
Description	ARENA staff are available to provide guidance Please send queries through to microgrids@arena.gov.au	Feasibility Study will be reviewed by ARENA (20 business day target), and if the project is suitable for the Program, the Application form will be made available	ARENA internal assessment process including potential presentation by Applicant to ARENA Advisory Panel	Applicant notified if Application is successful. Progress through to negotiating Funding Agreement

3. Eligibility Criteria

Eligibility Criteria

Part 3 of Guidelines

A - eligible applicant	• Must hold an Australian Business Number (ABN) and be either: ○ an Australian entity incorporated under the Corporations Act 2001 (Cth); or ○ an Australian State or Territory owned corporation or a subsidiary of an Australian state or territory owned corporation; or ○ an Australian local government or council; or ○ registered with the Australian Charities and Not-for-Profit Commission (ACNC); or ○ an Australian university; or ○ the Commonwealth Scientific and Industrial Research Organisation (CSIRO).
B - eligible project	• **As outlined in item 3.3 of the Guidelines (next slide)**
C - take place in Australia	• The majority of the Project activities must take place in Australia
D - intellectual property	• Must warrant that the Applicant has ownership or access to any IP necessary to complete the project
E - workplace gender equality	• Applicant must not be named as being non-compliant with the Workplace Gender Equality Act 2012 (Cth)
F - modern slavery	• Must agree to take reasonable steps to identify, assess and address risks of modern slavery practices in its operations and supply chains used to deliver the Project • Comply with, and assist ARENA to comply with, required obligations under the Modern Slavery Act.
G - knowledge sharing	• Must agree to ARENA's Knowledge Sharing Plan, which is included as part of the Funding Agreement template.

Eligibility Criteria B: Eligible Project

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

a. Is demonstrated to be feasible through a **Feasibility Study** which has been accepted by ARENA in accordance with Part 2 of the Guidelines.

b. Includes the deployment of equipment and/or technology solutions that enable the **microgrid demonstration**.

c. Includes the use of a **Renewable Energy** technology or enabling technology and/or the Project contributes to increased uptake of Renewable Energy.

d. Is located in an **inner regional, outer regional, remote or very remote area as defined by the Australian Statistical Geography Standard (ASGS) Remoteness Area** *(weblink in Part 3 of Guidelines)*.

The Project must comply with <u>all requirements</u>

Feasibility Study Requirements

- Part 2.6 of the Guidelines - requirements for a suitable feasibility study

- The Feasibility Study should be prepared by an appropriately qualified individual. ARENA expects a Feasibility Study to include at a **minimum**:
  a. A clear description of the Project.
  b. The proposed Project location.
  c. A description of the proposed microgrid technology and concept design solution including any known design limitations.
  d. A description of the renewable energy technology(ies) or enabling technologies considered, including any technology comparisons considered as relevant.
  e. Justified capital and operating cost estimates for the Project.
  f. A Project Financial Model in a format readable with common spreadsheet software such as Microsoft Excel and enables the analysis of the capital cost, operational expenses, revenue, cash flow and returns of the Project.
  g. Consideration of potential risks associated with the proposed Project (these may include but are not limited to technical, environmental, community and/or commercial risks).
  h. Demonstrated consideration of the commercial model (including contractual relationships between the project participants and customers) and regulatory treatment or requirements (including potential exemptions) needed for the Project to proceed.
  i. A statement on the technical, regulatory and financial feasibility (viability) of the Project and consideration of any further work or assessment that may be required.

Eligibility Criteria B: Eligible Project

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

a. Is demonstrated to be feasible through a **Feasibility Study** which has been accepted by ARENA in accordance with Part 2 of the Guidelines.

b. Includes the deployment of equipment and/or technology solutions that enable the **microgrid demonstration**.

c. Includes the use of a **Renewable Energy** technology or enabling technology and/or the Project contributes to increased uptake of Renewable Energy.

d. Is located in an **inner regional, outer regional, remote or very remote area as defined by the Australian Statistical Geography Standard (ASGS) Remoteness Area** *(weblink in Part 3 of Guidelines)*.

The Project must comply with <u>all requirements</u>

4. ARENA's Assessment Process and meeting the Merit Criteria

ARENA's assessment process

One stage process	• Submit Feasibility Study online through ARENA's Grant Management System ARENANet. • Receive confirmation that Feasibility Study has been accepted • Receive invitation to submit Full Application online through ARENANet
Eligibility Criteria	• 7 eligibility criteria (A - G) • All must be met to proceed to merit assessment
Merit Criteria	• All 4 merit criteria equally weighted • ARENA Advisory Panel will assess applications against merit criteria • Applications must be considered to be of high merit against all merit criteria to be recommended for funding • Feedback and/or conditions to funding may be provided by ARENA

Merit Criteria

- Merit Criterion A: Contribution to the Program Objectives
- Merit Criterion B: Applicant capability and capacity
- Merit Criterion C: Project design and methodology
- Merit Criterion D: Financial viability and co-funding commitment

Merit Criterion A - Contribution to the Program Objectives

The extent that the Project contributes to the Program Objectives of supporting demonstration of improved resilience and reliability of electricity supply in regional Australia through pilot microgrid demonstrations that use or enable the use of renewable energy, and resolving the remaining barriers to final investment and full deployment.

Resilience and reliability	• Demonstrating improved **resilience** – ability to maintain continuous supply of electricity to the microgrid in preparation for, during and after natural disasters • Demonstrating improved **reliability** – ability to balance electricity supply and demand from a very short time to a very long time
Barriers to final investment and full deployment	• Identifying the technical, regulatory and commercial barriers and how the project will address those barriers to provide replicable, scalable models for the deployment of microgrids • If relevant, evidence of engagement with relevant stakeholders to deliver those solutions • Project to address *at least* ***one*** barrier. A single project does not need to address all three identified barriers. Other barriers may also be identified • **Greater detail around barriers is included later in the presentation**

Merit Criterion A cont'd - Barriers identified

Barrier	Why is this a barrier?	How you can demonstrate merit
Support technical innovation	**Many off-grid demonstrations exist, however, technical challenges remain.**	Includes but is not limited to innovation that mitigates challenges and delivers or unlocks new system services such as greater demand flexibility and efficient use of the grid and locally generated DER.
Inform regulatory reform	**Regulation poses the most significant near term barrier to full deployment of microgrids. Regulatory regimes are also complex and locationally unique.**	Includes but is not limited to informing regulatory reforms, licensing frameworks, customer protections and procedural change while unlocking new technologies that can support the energy transition.
Demonstrate commercial feasibility	**A lack of incentives on incumbents to employ microgrid solutions has led to a bias toward traditional infrastructure solutions.**	Includes but is not limited to improving the business case (revenue enhancement and cost reductions), demonstrating new business models and bankability, and unlocking and reducing the cost of debt finance.

Applicants may identify barriers other than those above that the Project is seeking to overcome

Merit Criterion A cont'd - Contribution to the Program Objectives

The extent that the Project contributes to the Program Objectives of supporting demonstration of improved resilience and reliability of electricity supply in regional Australia through pilot microgrid demonstrations that use or enable the use of renewable energy, and resolving the remaining barriers to final investment and full deployment.

Microgrid pilot	• Project must be a **pilot project**, being a deployment of equipment and technology solutions that enable the microgrid demonstration
Portfolio fit	• Project must advance learnings and innovation already demonstrated either within the ARENA funded portfolio or elsewhere in Australia or internationally

A high merit Project should meet all the objectives above (addressing at least one barrier)

Merit Criterion B - Applicant capability and capacity

The extent to which the Full Application demonstrates that the Applicant and its partner organisations have the capability and capacity to deliver the Project.

Capability	For Applicant and partner organisation(s): ● Previous **experience** delivering similar projects, in terms of scale, value, technologies or solution deployed (in Australia or internationally) ● Appropriate **expertise** as relevant to the Project - including management, technical, regulatory, commercial and professional expertise and experience of the key personnel
Capacity	● **Access to appropriate resources:** including personnel, physical resources, facilities and infrastructure to achieve the Project outcomes ● **Agreements between partner organisations or consortium members:** Evidence of agreements in place such as draft agreements, Letters of Support, co-funding commitments

Optional attachments: CVs of Key Personnel (up to 5 per application no more than 2 pages per CV) and Letter(s) of Support from Project partners

Merit Criterion C - Project design and methodology

The purpose of this Merit Criterion is to assess how well the Applicant has designed and planned the Project, including identifying and managing risks (e.g. personnel, delivery, technical, regulatory and financial), in order to successfully deliver the Project within the timeframe and budget set out in the Application.

Project design

Key elements of Project design:

- Well-articulated plan for the Project including:
  - Technical design and delivery methodology (ie key steps for how you will undertake the Project)
  - Project governance arrangements
  - Delivery of knowledge sharing outcomes
- Key risks for the Project being delivered on time and on budget
  - Key personnel, delivery, technical, regulatory, financial
- Appropriateness of Community Consultation Plan
- Compliance with template Funding Agreement

*Refer to item 4.13 of the Guidelines for a non-exhaustive list of Project development work streams and list of **mandatory** and optional attachments.*

Merit Criterion D - Financial viability and co-funding commitment

This Merit Criterion assesses the Project's value for money, financial ability of the Applicant and any Project partners to deliver the Project and the level of cost certainty over total Project costs.

Budget table and attachments	• Simple budget table is required in ARENANet • A detailed budget and Project financial model must be submitted as separate attachments • Evidence of financial capacity may also be provided (i.e. evidence of financial commitment to the Project by Applicant and Partner(s))
Written justification	• Justification for overall budget and ARENA funding request *(200 words)* • Approach to manage cost overruns *(150 words)* • Identification of other budget risks or financial sensitivities and appropriate mitigation *(200 words)* • Other activities in a similar field where Applicant / key personnel have previously received concessional funding? Is other concessional finance (in addition to ARENA) expected for the Project?

Refer to Appendix A: Eligible Expenditure in the Guidelines for more information on what ARENA funds can and cannot be used for

Attachments

The following attachments are mandatory. Failure to submit one or more of these attachments may result in your Full Application being considered unsuccessful:

- **Project Feasibility Study** - as already provided to ARENA
- **Risk Management Plan** - use your own template or ARENA's template available at: https://arena.gov.au/funding/rampp
- **Community Consultation Plan** - Applicants to use their own template. Guidance around content provided within the Guidelines
- **Compliance Table response to the Funding Agreement** - use the template available at: https://arena.gov.au/funding/rampp
- **Project budget** - a detailed Project budget submitted as an excel file. Note this is in addition to the simple budget table in the application form.
- **Project Financial Model**

The following attachments are optional:

- **Evidence of financial capacity**
- **CVs**
- **Letters of Support and other evidence**

5. Key links and dates

Key links and dates

Program opened
24 September 2021

Regional Australia Microgrid Pilots Program webpage
https://arena.gov.au/funding/RAMPP/

ARENANet
https://arenaomnistar.f1solutions.com.au/ or through the RAMPP webpage

Guidelines
https://arena.gov.au/assets/2021/09/regional-australia-microgrid-pilots-program-guidelines.pdf

FAQs
https://arena.gov.au/assets/2021/09/regional-australia-microgrid-pilots-program-guidelines-faq.pdf

Further questions?
Email: microgrids@arena.gov.au

6. Q&A

End