



Learnings from Australian renewable micro-grids and application for energy projects in developing nations

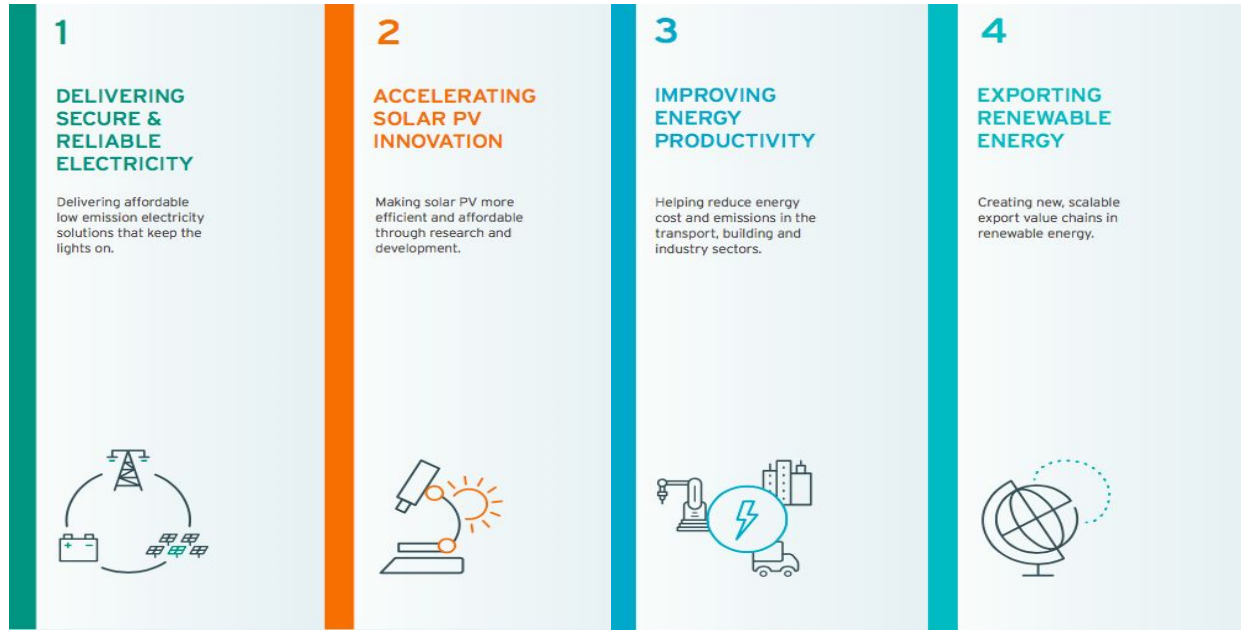
Chris Twomey ARENA



Australian Government
Australian Renewable
Energy Agency

ARENA

1. ARENA Investment Priorities



2. Before ARENA's remote area renewables funding initiatives...

Renewable energy and industrial isolated system projects built pre-2013[#]



[#] Excludes small systems installed under the *Bushlight* renewables program

[^] Alice Springs region projects include: Alice Solar City, Alice Springs Airport, Crown Plaza, Desert Knowledge and Uterne solar farm



3. ARENA Role in remote projects



Accelerating
Australia's shift
towards a
sustainable,
affordable and
reliable energy
future

2013

ARENA launched the
Regional Australia's
Renewables (RAR)
Program

72
Applications
made

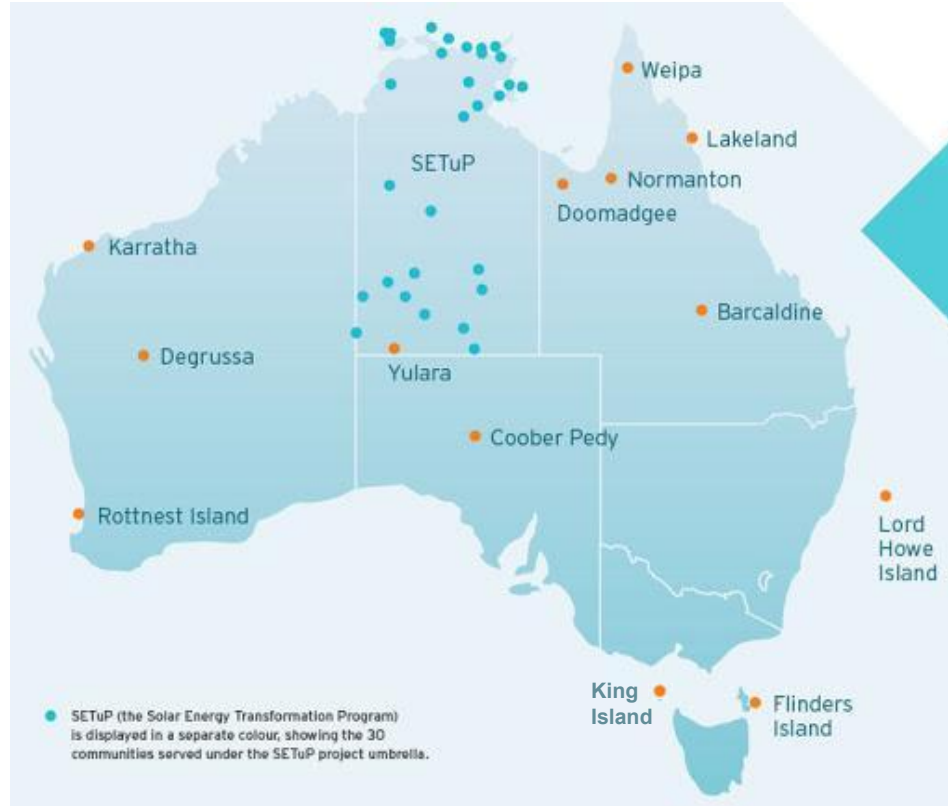
18 Approved
for funding

Knowledge Sharing | Collect, analyse, interpret and disseminate

- Address real and perceived barriers
- Build on lessons learnt
- Accelerate path to commercial adoption without subsidy



4. ARENA's Regional Australia's Renewables portfolio: 14 projects across six states.



+78.3 MW new renewables capacity



5. ARENA Case Studies

- Laing O'Rourke - redeployable solar power
- Degrossa - hybrid solar, battery diesel for mining company
- Rottnest Island - island community renewable energy



Laing O'Rourke redeployable solar PV



Degrussa hybrid solar battery project

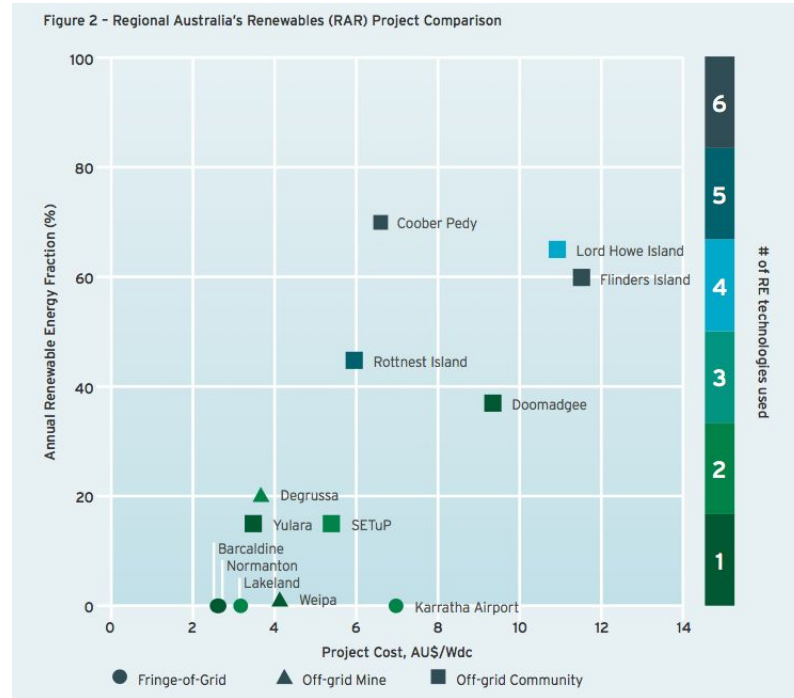


Rottneest Island



6. Challenges and lessons learnt

- Remoteness premium
- Bespoke nature of off-grid projects results in higher risks which could result in higher costs
- Consider optimal use of existing assets
- Integration of multiple technologies is tough
- Don't discount demand management



THANK YOU

Contact us at offgrid@arena.gov.au



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