



Submission to the Senate Standing Committees on Economics review of the Australian Renewable Energy Agency (Repeal) Bill 2014

The Australian Renewable Energy Agency (ARENA) should be retained because:

- There is a strong economic rationale for public support for research, development and early stage deployment;
- ARENA is a critical institution for the development and deployment of the next generation of renewable energy technology in Australia;
- ARENA has been effective in managing its investment portfolio to date;
- When it was in opposition the Federal Government had supported ARENA from its inception and continued to do so until this year;
- ARENA is instrumental in driving local deployment of large scale solar;
- Local deployment is essential to drive cost reductions and industry development;
- The closure of ARENA would stall the diversity and development of key renewable energy sectors, particularly large-scale solar; and
- Closure of ARENA would lead to the development and commercialisation of homegrown innovations likely going offshore, along with the jobs and investment they would bring.

The proposed scrapping of the Australian Renewable Energy Agency (ARENA) will be a backwards step for Australia's drive to develop innovative new renewable energy technologies, and for Australian and international companies who have been working to bring investment to Australia.

It is extremely disappointing to see the Federal Government withdraw support for ARENA, when in opposition it had supported ARENA from its inception until this year.

Many companies have been driving innovation in exciting new technologies like large-scale solar, geothermal and ocean energy, and now the development and commercialisation of homegrown innovations will likely go offshore, along with the jobs and investment they would bring. Abolishing ARENA will stall progress in these exciting technologies and increase our reliance on increasingly expensive energy sources, such as gas. This is bad news for consumers who want more renewable energy and bad news for the Australian economy.

Abolishing ARENA is a backwards step at a time when job losses in traditional industries like the automotive and manufacturing sectors mean we need new, innovative industries to take their place and fill this void.

There is a strong economic rationale for continued public support for research, development and early stage deployment (RD&D). The failure of companies to capture the spillover effects of RD&D investment leads to a suboptimal investment level. Public funding for RD&D addresses this market failure, and helps create a well functioning national innovation system.

ARENA is a critical institution for the development and deployment of the next generation of renewable energy technology in Australia. Support for emerging technologies through the research, development and deployment cycle would not only ensure a diversified clean energy mix well into the future but promises to deliver a range of benefits to communities around Australia, from increased investment levels to niche technology exports to expanded employment opportunities. While the role for the Renewable Energy Target is to commercialise the least-cost renewable energy technologies (predominantly wind and rooftop solar at this point in time), ARENA plays a crucial role in helping to demonstrate the potential of a range of new technologies such as large-scale solar, geothermal, marine energy and storage solutions.

ARENA is instrumental in driving deployment of large scale solar. The large-scale solar sector in particular has been affected by ongoing policy mismanagement and instability. Continued changes and reductions in key clean energy programs have occurred all too regularly, and further substantive changes would exacerbate the lack of confidence of the renewable energy industry and its investors.

Australia's solar resource is world class. Solar resources are typically superior in northern states, whereas wind resources are typically superior in southern states. Australians appreciate the logic of exploiting our natural advantages. Surveys have demonstrated that solar technology is extremely popular among Australians, consistently achieving approval ratings of around 90 per cent.

The cost of these technologies is already coming down and presents a major opportunity for Australia to take advantage of our massive renewable energy resources and protect us from rising fossil fuel prices in the longer term. ARENA can continue to build on the significant progress to date.

Funding allocated to a dedicated large scale solar program would give the industry confidence to invest in continued development. The experience in the U.S. has been that repeated deployment has driven down solar pricing and financing costs. As these costs are largely determined by local experience, local deployment is need for the cost reductions to be realised. There is a misconception that PV module costs are the major cost component for large-scale solar facilities and that the costs will continue to decline with reductions in manufacturing costs, irrespective of policies and programs implemented by the Australian Government. This is untrue. Module costs comprise only about a quarter of total project costs. Local spending on development and balance-of-system costs comprise about a third of costs, with remainder being made up by financing costs.

There is currently a capital cost difference between Australia and other parts of the world where deployment of solar is at higher levels. This is in large part due to a lack of experience with the technology of constructors within Australia, which will be overcome with ongoing deployment of solar projects within Australia. To capitalise on the full potential of large-scale solar technology the industry needs to deploy significant capacity in the local context. This will reduce costs and enable access to competitively priced finance. For example, First Solar says that local procurement accounts for 56.3 per cent of its spending on the Nyngan and Broken Hill projects, with more than 450 direct construction jobs expected to be created and over \$66 million spent on local equipment. Local

procurement creates new business opportunities for manufacturers, which will be increasingly important over the next few years as activity in automotive manufacturing in Australia declines. For example, the Australian auto parts specialist IXL is branching into a new business with the opening of a new plant to assemble and deliver the mounting structures for the large-scale solar plants that are being built by First Solar in Broken Hill and Nyngan on behalf of AGL Energy. The Geelong-based company is facing the loss of a major strand of its business with the collapse of the Australian car manufacturing industry. The new plant in Salisbury South, South Australia will create about 40 local jobs and would not have been possible without support of ARENA.

ARENA is one of the few remaining dedicated government bodies that promotes and supports renewable energy development. It is the only initiative which has the ability to support utility-scale solar to become competitive with other forms of generation. Although less than two years old, ARENA has been effective in managing its investment portfolio to date, providing \$1.2 billion in funding to more than 180 projects and to scholarships and fellowships. About \$1.80 has been successfully leveraged for every ARENA dollar spent.

Among the many successful projects funded to date are:

AGL	– Australia’s <i>largest</i> solar farm
CSIRO and Abengoa	– World <i>FIRST</i> supercritical steam from solar thermal
Carnegie	– <i>FIRST</i> grid connected wave project
Weipa	– <i>FIRST</i> Australian mine site to incorporate renewables
Geodynamics	– Australia’s <i>FIRST</i> electricity generation from enhanced geothermal systems
Vast	– <i>FIRST</i> Australian project to demonstrate reliable and safe use of CST
BlueScope	– <i>FIRST</i> integrated PV thermal system in Australia
CSIRO	– solar forecasting included in the NEM
Stockland	– solar powered air-conditioning system at shopping centre
APVI Solar map	– live map tracking the contribution of solar PV systems across Australia

ARENA is playing a key role in knowledge sharing and developing capability within the renewable energy sector. It is helping to drive down technology and deployment costs and has assisting with diversifying the technology mix that will deliver Australia’s renewable energy target.

The closure of ARENA would stall the development of key renewable energy sectors, particularly large-scale solar which is beginning to demonstrate massive potential and a very clear cost reduction pathway. The jobs and investment potential of the sector would be lost and many local and international companies operating in the Australian large-scale solar sector may close or leave the country, moving to markets with more supportive and stable programs for emerging and pre-commercialisation stage technology and projects. This will ultimately delay the development of the sector and substantially reduce the rate at which the technology comes down in cost.