



ARENA Submission to CEFC Statutory Review

Summary

Thank you for the opportunity to make a submission to the Statutory Review of the Clean Energy Finance Corporation (CEFC). ARENA makes this submission to inform the Review of how our roles complement each other within Australia's climate and energy policy framework and areas of collaboration.

In summary:

- ARENA and the CEFC play distinctly different, but complementary, roles in catalysing investment into clean energy businesses and projects. ARENA generally focuses on earlier stages in the innovation chain, including research, development, demonstration and pre-commercial deployment. This focus calls for different types of funding programs, reflecting the higher risks and public good spill-overs associated with early stage innovation. On the other hand, the CEFC invests in later stage technologies and businesses and requires a commercial return from each investment.
- ARENA and the CEFC collaborate in areas where our investment mandates come together, such as through jointly managing the Clean Energy Innovation Fund which is helping Australian innovators transition to full commercial deployment.
- Together, ARENA and CEFC are building the pipeline of technology and commercial innovation that will underpin Australia's transition to a clean energy economy.

About ARENA

ARENA was established to make renewable energy solutions more affordable and increase the supply of renewable energy in Australia. ARENA provides financial assistance to support the development of renewable energy and enabling technologies. This assistance is designed to accelerate the commercialisation of these technologies by helping to overcome technical and commercial barriers. A key part of ARENA's role is to collect, store and disseminate knowledge gained from the projects and activities it supports for use by the wider industry and government.

The complementary roles of ARENA and the CEFC

The CEFC and ARENA have played important and complementary roles in facilitating the development of Australia's renewable and clean energy industries since being established in 2012. Over this period, the rate of technology and commercial innovation has greatly increased, as has the demand for solutions that can underpin Australia's shift to an affordable and reliable renewable energy future. ARENA sees both agencies making strong complementary contributions to the evolution of Australia's energy sector into the future.

	ARENA	CEFC
Object and Mandate	Increasing the supply and improving the competitiveness of renewable energy through financial assistance	Facilitating increased flows of finance into the clean energy sector
Industry Focus Area	Renewable energy (including hybrid) and enabling technologies	Clean energy (includes renewable energy but also low emission and energy efficiency)
Value Proposition	Improving commercial and technical readiness, generating and sharing knowledge	Working collaboratively with co-financiers and project proponents to secure financing solutions for the clean energy sector
Investment Stage	From R&D to pre-commercial deployment, for projects that have significant technical or commercial risk	Commercially viable deployments with low remaining commercial or technical risk

The CEFC and ARENA coordinate activities at an operational level, as well as through strategic joint investments and the Clean Energy Innovation Fund which is discussed further below. Our respective activities provide a diversity of financing products that reflect the different stages of bankability and diverse funding needs of innovators within industry.

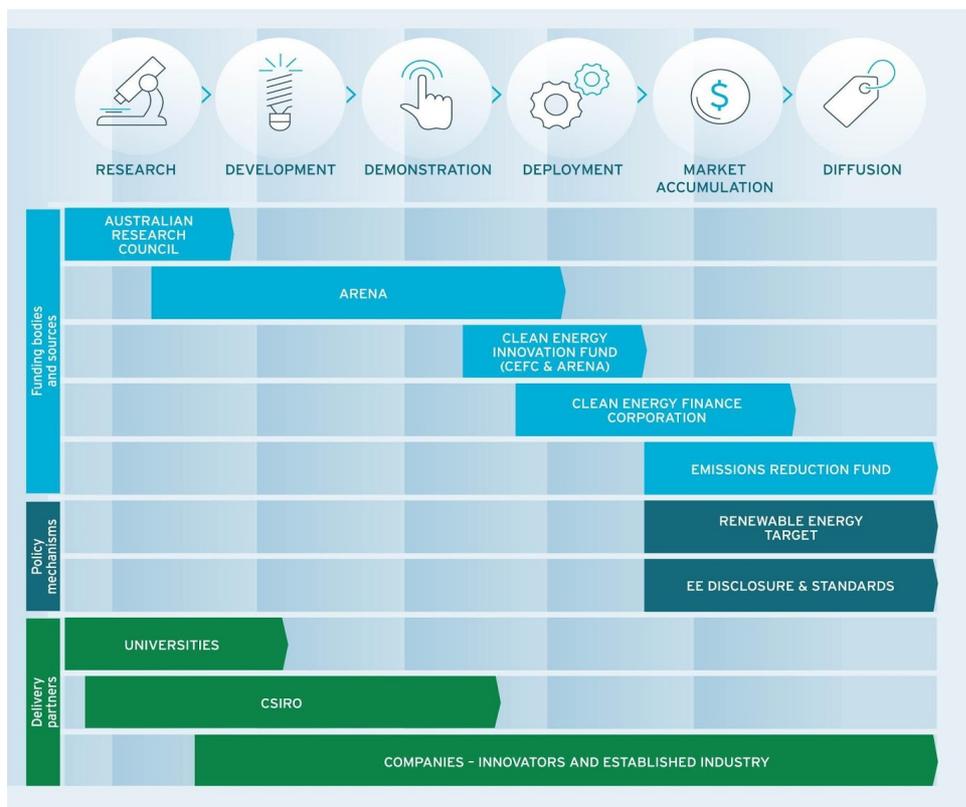


Figure 1: Location of Australian Government agencies and programs on the energy innovation chain

Source: ARENA General Funding Strategy 2017-2018

Figure 1 illustrates the role of Australian Government funding agencies and programs in Australia’s energy innovation chain, relative to supporting policy mechanisms and delivery partners.

Australia’s energy and climate policy innovation framework can also be considered as a continuum from early-stage research to technology diffusion, supporting national energy and climate policy objectives. At each stage of this continuum, different circumstances call for different types of program intervention. Grants by governments are important for basic and early stage research, development and deployment because returns from investment in these types of research are longer term and more uncertain in nature. They are therefore unsuited to programs which require a commercial return within a defined period and they are less likely to receive investment from non-government sources. By contrast, investments at later levels of technology readiness are expected to identify more concrete commercial returns, and can typically be supported by a broader range of financial instruments. The CEFC participates at this later stage, to fund commercially viable deployments and this can work to ‘crowd-in’ further commercial investment.

The ultimate aim of these program interventions is to bring products and services to the point they are mature enough to support deployment without specific support from government. As this occurs, ARENA is able to turn its focus to new emerging opportunities.

ARENA considers that Australia’s energy and climate policy innovation chain is working to develop a strong pipeline of products and services that have high prospective commercial value in a future low carbon energy system. As a result, Australia’s energy sector will be very well placed to support Australia’s international climate commitments.

Joint investments

ARENA and the CEFC have jointly invested in projects where they contribute to the mandate of both our respective agencies. These investments have typically sat at the lower-risk end of ARENA’s investment portfolio, but require ARENA funding to reduce risk or improve project economics and be investable by the CEFC and/or other commercial financiers. These projects are also typically at a scale which is beyond ARENA’s capacity to fund without substantial external project finance. To fulfil ARENA’s mandate, each of these projects must have substantial demonstration value for industry.

Table 1: Summary of ARENA and CEFC joint investments

Proponent	Project Name	MW (AC)	ARENA funding (\$m, ex. GST)	Total Project Cost at Project Financial Close (\$m)	CEFC debt (up to, \$m)
Fotowatio Renewable Ventures (FRV)	Moree Solar Farm	56	101.7	189.5	46
Barcaldine	Barcaldine Remote Community Solar Farm Project, QLD	20.7	22.8	61.5	20

Neoen	DeGrussa Solar Project, WA	10	20.9	40.57	15
Genex Power Pty Ltd	Kidston Solar Project, QLD	50	8.85	125	54
Neoen	Dubbo, Parkes and Griffith Solar Farms	110	16.2	230	150
RATCH-Australia Corporation	Collinsville Solar Plant	42.5	9.5	100	60
Canadian Solar	Longreach Solar Farm	15	1.3	29	12
Canadian Solar	Oakey Solar Farm	25	2.2	48	19.5
Edify Energy/ Wirsol	Whitsunday Solar Farm	57.5	9.5	122	23
Windlab	Kennedy Energy Park	60	18	170	93.5
Total		477	211	1116	493

In these projects, ARENA's grant funding acts as concessional funding which bridges the commercial gap to enable the CEFC (often together with private lenders) to provide commercial debt. The CEFC developed structured debt products that were not previously available in the market. In these cases, ARENA's funding is akin to equity and is therefore on opposite sides of the negotiating table to the CEFC in terms of, for example, liquidation priority discussions. It is important that positions reflect the commercial reality so that the market becomes educated and also so that these positions can be sold on the secondary market. It is therefore logical that ARENA and the CEFC are maintained as separate organisations.

As more projects are replicated, it brings down costs and allows the whole industry to move to commerciality. This has especially been the case in the large scale solar industry which now sees projects funded purely by the private sector.

In addition to the above projects, ARENA continues to work closely with the CEFC on a pipeline of future projects that may involve financing from both organisations.

The Clean Energy Innovation Fund (Innovation Fund)

The Government established an Innovation Fund in March 2016 to support emerging technologies make the leap from demonstration to commercial deployment. The Innovation Fund targets technologies and businesses that have passed beyond the research and development stage, but are not yet established or of sufficient maturity, size or otherwise commercially ready, to attract sufficient private sector capital. These businesses can benefit from early stage capital to help them get to the next stage of their development.

The Innovation Fund can provide debt and/or equity finance for innovative clean energy projects and

businesses which support renewables, energy efficiency and low emissions technologies.

The venture capital market in Australia is relatively thin. By building both a pipeline of projects ('deal flow') and improving the availability of early stage capital, the Innovation Fund is helping build a more mature venture capital sector in Australia. This in turn encourages homegrown innovators to stay in Australia as they scale up for domestic and international markets.

Role of the CEFC and ARENA in the Innovation Fund

Recognising the complementary expertise of both organisations, the Innovation Fund is jointly managed by the CEFC and ARENA. A Memorandum of Understanding (MOU) was executed in December 2016 between the ARENA and the CEFC which clearly sets out the roles and responsibilities. This MOU covers that:

- The CEFC and ARENA both develop proposals and make recommendations for investment approval;
- ARENA makes available members of the ARENA Advisory Panel (a group of independent technical experts that provides advice to ARENA to support the development and assessment of projects) to assist the Innovation Fund on technical assessments of investment opportunities;
- ARENA and the CEFC have two nominated members each on a Joint Investment Committee that makes investment recommendations to the CEFC Board. Currently the ARENA CEO and ARENA CFO (whose role includes 'head of investments') are serving as ARENA's nominated members on the Joint Investment Committee. The Joint Investment Committee meets approximately monthly and has held 13 meetings to date; and
- The CEFC Board applies its investment expertise and risk framework in considering each recommendation from the Joint Investment Committee for investment approval.

Investments to Date

Whilst the CEFC and ARENA maintain their distinct identities and clarity around their respective roles, the working relationship between the two organisations is strong and together we are efficiently developing and assessing a growing pipeline of opportunities. This cohesive relationship has led to the Innovation Fund being able to make the following investment commitments to date.

Table 2: Summary of Innovation Fund investments to date

Company Name Date of Commitment	Purpose of investment	Innovation Fund Commitment
REDBACK October 2017	To expand Redback Technologies resourcing and accelerate the deployment of its smart hybrid system with the aim of transforming home and commercial solar and battery economics.	Approximately \$6.42 million (US\$5 million out of total US\$7 million Series A-2 capital raising)

RELECTRIFY October 2017	To help Relectrify prove its lithium ion battery repurposing business, with further development of the technology and initial trials.	\$750,000 as part of a \$1.5 million pre-Series A capital raising
SEA ELECTRIC August 2017	To ramp up Victoria-based manufacturer SEA Electric conversion of medium-duty trucks and commercial vans to electric vehicles. The technology can be applied to businesses performing express freight, general delivery, and waste collection duties around Australia.	\$5 million
THINXTRA August 2017	To help Thinxtra build essential support technology for devices collectively known as the Internet of Things (IoT).	\$10 million as part of a \$20 million Series B capital raising
WATTWATCHERS July 2017	To help Wattwatchers expanding production of technology that helps better manage energy use and costs. <i>ARENA also supports the Wattwatchers parent entity Energy Savings Networks Group through the Southern Cross Renewable Energy Fund. ARENA's share of the Fund's investment is \$1 million.</i>	\$2 million as part of a \$4 million Series A capital raising
GREENSYNC January 2017	GreenSync , an innovative Melbourne-based company aiming to bring smart technology solutions to the energy grid of the future. <i>ARENA also supports Greensync through the Decentralised Energy Exchange (deX) project (ARENA funding: \$450,000; total project cost: \$983,000) and Southern Cross Renewable Energy Fund (ARENA's share of the Fund's investment is \$2.5 million).</i>	\$5 million as part of a \$11.5 million Series B capital raising.
CARBON REVOLUTION December 2016	Geelong based Carbon Revolution produces one-piece carbon fibre car wheels that, through their light weight, help reduce energy consumption and carbon emissions from lighter vehicles.	\$10 million as part of a \$50 million capital raising
CLEAN ENERGY SEED FUND September 2016	The Clean Energy Seed Fund , focuses on unearthing and financing emerging innovations and startups in clean energy. The Seed Fund is managed by Artesian Venture Partners.	\$10 million cornerstone commitment to the \$26 million Fund.

In the majority of cases, these capital raisings have involved at least 50% private sector funding and in this way the Innovation Fund has allowed the CEFC to achieve its aim of facilitating increased flows

of commercial investment into the clean energy sector. The Innovation Fund has catalysed the ability for Australian technologies to access funding that was not previously available from the private sector. These technologies have the potential to be transformative not only in Australia but also on the global stage.

The Innovation Fund has also played a non-financial role in strengthening the local venture capital and investment community. As an example, in February 2017 the Innovation Fund hosted an “Innovators Demo Day” in which approximately 10 Australian start-ups pitched to members of the local venture capital and investment community. The event was well attended and allowed for private sector investors to access clean energy innovators that they would not have otherwise had the opportunity to.

ARENA would welcome the opportunity to meet with the Review team and discuss these matters in more detail. Please feel free to contact us if we can be of any assistance.