



Transcript

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ARENA supporting CST R&D and early deployment

ARENA CEO Ivor Frischknecht
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Check against delivery

Passion for renewables is not enough

Passion for renewables is strong. In 2012 around 100 people who were campaigning for coal-fired generation to be replaced by solar thermal in Port Augusta marched the 320km from Port Augusta to Adelaide.

This is them coming into Adelaide; their numbers swelled by supporters.

The late Joy Baluch, who was Mayor of Port August for nearly 30 years, campaigned tirelessly for her community to be allowed to choose their own future.

A future based on renewable energy, and solar thermal in particular, because she saw it as an obvious replacement for coal based energy for her community.

But as we in the renewables sector know only too well, demonstrations and passionate advocacy cannot reduce a technology's cost or turn an unviable project around.

The first serious attempt to plan a solar thermal plant in Port Augusta – by Alinta – did not even finish, because it was so far out of the money.

To get the technology costs to where they need to be it'll take more time, investment and hard work by committed people like you.

Thank you for coming. I'm impressed by your dedication to the sector. And I'm delighted to be opening this year's ASTRI-CST symposium

Now imagine that Joy Baluch's vision for Port Augusta is realised. Or that the 40% of energy that is used by industry starts being replaced by renewables.

That is our challenge. To make the numbers stack up. Even projects seeking ARENA's help need to be able to point to a clear path to a future without support.

I'm Ivor Frischknecht here to represent ARENA and the support that we provide to the concentrating solar power sector.

ASTRI – an \$87M collaboration – plays an important part in helping solar thermal ultimately get to market.

ARENA recognises that R&D is the place where innovation begins – the laboratory, the workbench, the green field – and without the initial R&D stage, further innovation cannot occur.

ARENA's role in supporting R&D

ARENA has deep understanding of the connection between R&D and a commercial solution.

Our work spans the innovation chain, from R&D through to early-stage commercial deployment.

We've worked hard to ensure that commercial investors and industry get involved as early as possible in the development of a new solution.

Our approach is commercially rigorous, during both the assessment of project proposals and the management of our grants – when necessary we have terminated projects that do not meet funding milestones and recouped funds for redeployment to new projects.

That commercial approach has come from ARENA having a commercially oriented, skills-based board with broad and deep experience in relevant disciplines.

We are therefore delighted to welcome six new Directors to the ARENA Board, who were appointed last month.

ARENA not only has a new Board but also an expanded role.

Minister Hunt recently announced the Government's intention to keep ARENA—this is important. We are now part of the Government's agenda to reduce emissions over the long term.

He also announced plans to establish a \$1 billion Clean Energy Innovation Fund jointly managed by ARENA and CEFC that will provide up to \$100 million a year for ten years in debt or equity for clean energy, low emission and energy efficiency projects.

The Minister's proposed changes would see ARENA shift from being a predominantly grants-based organisation to one that supports renewables innovation through provision of debt and equity – with a focus on deployment and demonstration.

\$100 million in grant funding will still be provided through ARENA's current LSS competitive round.

ARENA and CEFC are working together on the details of how the fund might work.

The Government's decision to keep ARENA and establish CEIF is an important vote of confidence in the work that ARENA does, which we welcome.

ARENA's support for solar R&D

This of course raises questions about ARENA's future in supporting R&D, particularly solar R&D.

We are currently conducting a solar R&D review, to better understand what future role ARENA should play in continuing to supporting the earlier stages of solar research.

The review will tackle the obvious difficult questions, such as how can Australia make a difference given solar R&D is a global endeavour, what types of solar R&D and value chain enablers should be fostered with taxpayer funds, in what way should ARENA provide that support, and to what extent.

The ASTRI mid-term review will be undertaken as part of the broader solar R&D review.

Your views will inform our thinking on this important matter, so expect to hear more about the review in the weeks to come.

ARENA and solar thermal

No doubt you are wondering what this means for solar thermal in particular.

ARENA has a technology neutral stance that gives us the flexibility to assess each renewable energy project on its merits.

As a result, ARENA's current portfolio involves the commitment of \$125 million to 37 existing and completed solar thermal projects, which are worth \$311 million in total (at 31 March 2016).

As we all know, the path to renewables commercialisation has taken unexpected twists and turns over the years.

Even the most optimistic renewables advocate may not have anticipated the exponential uptake of rooftop solar PV, particularly in Australia, or the potential that storage now has to completely change the roles and relationship of energy users with the traditional energy suppliers.

So we can't assume that today's renewables technologies and solutions will necessarily remain at the forefront in the next 10, 20 or 50 years.

ARENA's long-lens approach is well suited to that uncertainty, and our technology neutral stance allows us to keep as many technological options as possible open for the future.

Solar PV + storage is a major contender for large-scale solar in Australia.

Associated technology costs are dropping, supply chains are being established, local skills and experience are being developed.

Moree Solar Farm, for example, was able to take on additional market risk, allowing the project to reach financial close by selling electricity and LGCs in the spot market even before securing a PPA.

Hot renewables to replace gas

If solar thermal cannot achieve an LCOE that is competitive with Solar PV and storage, CST developers will need to look beyond large scale electricity generation for other opportunities.

One opportunity for CST may be sitting on the roofs of nearly a million Australian households – delivering heat instead of electricity.

ARENA is currently exploring the potential for heat-generating renewables to replace the use of gas in industrial processes.

This has been identified as an investment priority for ARENA and we've held a number of workshops.

ARENA has also announced funding for a solar thermal project of this type in the latest R&D competitive funding round.

We have committed \$4.5 million to a \$15 million project that will evaluate the potential for energy produced from CST to be integrated into the Bayer alumina refining process. Alcoa is a key participant.

Just as rooftop PV is providing lower-cost and more reliable energy with greater autonomy for households, CST may be the key to delivering similar benefits to businesses involving large-scale industrial processes.

Conclusion

If there is one thing those of us in the renewables sector are used to, it is uncertainty – it is an inevitable part of the innovation process, particularly at the R&D stage.

ARENA is well placed to deal with technological uncertainty, partly through our rigorous commercially-focussed approach, and also due to our operating scope, which extends to 2022.

Solar thermal will remain a part of ARENA's work over that time in the hope that we can make Joy Baluch's vision a reality. Or if not, find the best applications for solar thermal, which may be as a source of heat.

A number of ARENA staff are attending this event, so I encourage you to seek them out.

Thank you.

About ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the supply of renewable energy in Australia. Through the provision of funding coupled with deep commercial and technical expertise, ARENA provides the support needed to accelerate the development of promising new solutions towards commercialisation. ARENA invests in renewable energy projects across the innovation chain and is committed to sharing knowledge and lessons learned from its portfolio of projects and information about renewable energy. ARENA always looks for at least matched funding from the projects it supports and to date has committed \$1.1 billion in funding to more than 250 projects. For more information, visit www.arena.gov.au.