



Transcript

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ARENA CEO Ivor Frischknecht addressing R&D funding launch

The Australian Renewable Energy Agency (ARENA) today announced nine cutting edge research and development (R&D) projects to be supported through its latest Industry-researcher collaboration R&D funding round.

Minister for the Environment Greg Hunt, Western Australia Minister for Energy Mike Nahan, LandCorp CEO Frank Marra and Curtin University Professor of Sustainability Peter Newman joined ARENA in Perth to mark the occasion.

ARENA CEO Ivor Frischknecht's address

Thank you all for coming, particularly Ministers, thank you for making the effort to be out here.

Exactly one year ago I was at RMIT in Melbourne and opened this round for R&D in Collaboration with Industry. I remember that date, because it was my birthday. And so, it's great to be able to have a birthday present of launching these nine projects and announcing the \$17 million. So thank you for the great birthday present.

For those of you who don't know, ARENA has a unique role to invest across the Innovation Chain, and from early stage research all the way through to near-commercial technology. Any one of these two hundred projects that are in the R&D space could be a game changer. But before I go on to the projects themselves, let me make one thing clear – ARENA is not your typical grant giving agency.

We were established with the objective of making renewable energy more affordable. And so we can't do that by simply funding blue sky research--we won't get there in the short term. Turning great ideas into commercial reality can be incredibly difficult and it can take a long time. So we always look for at least matched funding for our projects because we know that having skin in the game gets better results in the long term. And everything we fund has to have a pathway to being fully commercial.

This R&D round focuses on industry partnership projects. We wanted to firmly align our investment in research and development with the needs of industry and help forge stronger partnerships between the two.

The nine projects to receive funding from ARENA through this round focus on integrating renewables or integrating energy into networks or into industrial processes and they help drive down the balance of system costs. So now I will run through them briefly.

I know many of you are from the projects and have worked hard over the last year with my team to bring it together through the application process and the negotiation process so I thank you for persevering through that and I also thank you for being here today. So I'd like you to stand up or wave if you are already standing when I come to

your project so that everybody can get a sense of who you are and come talk to you afterwards, if they have a particular interest in what you are doing.

Thanks to Minister Hunt, you already know about the Curtin University and the LandCorp projects – that’s about integrating solar and storage into a strata title situation. So we won’t go any more into that one; there’s \$900,000 from ARENA out of a \$2.6 million project. So if everyone who’s involved in that, I’m guessing it’s a good number, could either stand up or wave and I think we could give them some applause.

(Applause)

We have a project with the University of South Australia together with Glaciem Cooling Technologies, they’re a refrigeration company. They’re looking at developing low-cost phase-change material, able to store solar energy for the industrial refrigeration market. So this is interesting – we’re actually storing energy in the form of thermal energy, as opposed to in the form of a battery, it’s much cheaper to store energy that way, but of course you need to have a use for that heat, for the cooling, in order to make it work. So that’s \$1 million out of a total project size of \$2.1 million.

University of Wollongong, together with Sydney Water Corporation and some international technology partners are working on a new type of sodium-ion battery—so not lithium-ion, sodium-ion—near lithium in the periodic table. It’s a new type of sodium battery that’s modular, the idea is very low-cost storage. That’s a \$2.7 million grant. Anyone here from that project?

(Applause)

Congratulations to you!

The ANU has done particularly well! They’ve got two integrating renewables-type projects. The first one is with Reposit, so Reposit is a software company that figures out how to get more value out of a battery, grade the energy, make it available to networks for example. And they are going to focus on Bruny Island in Tasmania, because Bruny Island is an off-grid situation, they have a very high penetration of renewables, and a very good wind resource; so how can you actually use renewables and storage in combination, renewables at a very high penetration level, to supply secure energy to the people there. They have a particular problem, in that lots of holiday-makers go there, so there are times of the year when they have lots of demand, and if they have lots of demand and there’s no sun or wind at that moment, what do they do? And so it’s about designing a whole network that way. Anyone from that project here?

(Applause)

So that’s a \$2.9 million project – a \$2.9 million grant.

The other ANU project is a partnership with about a dozen network companies, which is a tremendous achievement in and of itself, to get a dozen energy networks to work together on one project as well as some technology companies, and that is about estimating the power produced by rooftop solar. So one of the big issues that we have in that system-wide context is figuring out what the virtual power station that Minister Nahan alluded to—when is it going to be producing, how much, and in what location? So

that's what that project is focusing on. A million dollar grant, out of a \$3.3 million project. Anyone from that project here?

(Applause)

The third ANU project, together with FRV, a large-scale solar developer and Vast Solar, Vast Solar is Australia's leading home-grown solar thermal developer; is about bringing down the operation cost. So this is trying to figure out when modules aren't working, when they're dirty, when there are leaves on them, when mirrors are broken in solar thermal. So that's a \$900,000 grant out of a \$3.1 million project. Anyone here from that project?

(Applause)

The University of Western Australia is working together with the local wave company, Carnegie, to determine the optimum size and location of wave energy generators. Now we already have an ARENA-supported project with Swinburne University in Victoria, to try to figure out how wave energy generators work in an array--there's a wave version of shadowing and interaction. So there's that project, and there's this one which is complimentary in terms of trying to figure out sizing relative to the local geology and hydrology, and to figure out where it should go in the bay and that sort of thing. I know there are some Carnegie people here and a few UWA people here as well. So that was a \$1 million grant.

(Applause)

Congratulations to all of you. There are still some others, I'll get to those in a second. They can tackle industrial processes, which is a particularly interesting area, because industrial energy use accounts for about 40 per cent of Australia's energy use, which is about two times commercial and residential put together. So it really matters. Natural gas is the predominant fuel for that sector, where much of it is used to process heat. So we're looking at thermal energy now.

So a couple of projects, the first is Queensland University of Technology is leading a project together with various players in the sugar industry—Manildra, Sunshine Sugar, and Utilitas, which is a local utility up in Queensland, to figure out how you can turn the sugar trash that is the stuff that's left in the field, into usable energy. And in particular they're going to generate thermal energy through that process. The sugar industry already uses the gas – for those of you that don't know the sugar industry - that the gas, as opposed to the trash, the gas is the stuff that's left over after you squeeze the syrup out of it. So it's in a fundamentally both different location and different substance. That is used for energy production on a routine basis and is economical, or almost economical. So this is about bringing the next phase of waste into the economics, into being commercially viable.

And lastly, oh, I should just say, a \$2.1 million grant out of \$5.7 million project. Anyone from that project here? Yes, well done.

(Applause).

Thank you for making the trip from far away.

Lastly, perhaps most exciting out of all of these—but they're all great projects, I should say!—is the one focused on alumina refining. So this is about turning bauxite into alumina. It uses a huge amount of heat. Aluminium refining and smelting is obviously big industry in Australia, so this is about exploring options that use solar thermal to generate that heat, as opposed to vast amounts of gas, or some plants use coal. So that is together with Alcoa which is obviously a leader in the sector and is together with the University of Adelaide. Anyone here from that project?

(Applause)

So that's the biggest project in the round by far, \$4.5 million grant out of \$15 million total project size, so a very essential project.

So outside of this R&D round, ARENA has been working to establish closer links between industry and end users, and renewable energy researchers, and also the technologies provided. So it's good to see that these projects are advancing with that collaboration.

So that's the thumbnail sketch of the new projects, and in total \$17 million out of \$54 million project size, so you can get a sense that our money is pretty well leveraged, by a factor of almost three.

Thank you very much for joining me here today.

(Applause)

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.