C O R R E C T E D V E R S I O N

ECONOMIC, EDUCATION, JOBS AND SKILLS COMMITTEE

Inquiry into community energy projects

Sydney — 15 February 2017

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Witness

Mr Tom Nockolds, Secretary, Pingala

The CHAIR — Tom, welcome. I declare open the Public Hearing for the Economic, Education, Jobs and Skills Committee's Inquiry into community energy projects. All mobile telephones should now be turned to silent. I now welcome Tom Nockolds, Secretary of Pingala. In accordance with Victorian legislation and reciprocal provisions in other Australian jurisdictions, all evidence taken at this hearing is protected by Parliamentary privilege as if you were giving evidence in Victoria. Therefore, you are protected against any action for what you say here today, but if you go outside and repeat the same things, including on social media, those comments may not be protected by this privilege.

Any reporting of this proceedings enjoy qualified privilege for fair and accurate reporting as if the proceedings were in Victoria. The Committee does not require witnesses to be sworn but questions must be answered fully, accurately and truthfully. Witnesses found to be giving false or misleading evidence may be in contempt of Parliament and subject to penalty. All evidence given today is being recorded by Hansard. You will be provided with an approved version of the transcript for you to check as soon as available. The verified transcript, PowerPoint presentation and the handout will be placed on the Committee's website as soon as possible. So I invite you to give us whatever you'd like to say and then we have some questions. You've already heard who the Committee members are.

Mr NOCKOLDS — Yes, thank you very much. It's really a pleasure to be given this opportunity. I'm a volunteer at Pingala but in the spirit of full disclosure I'm also a member of the team at Community Power Agency and we play the role of the secretariat at the Coalition for Community Energy and submissions have been made to your Inquiry already by the Coalition for Community Energy. So Pingala is a community organisation based in Sydney and we were heavily inspired by other groups around Australia, in particular ClearSky Solar and Repower Shoalhaven down the coast.

We had a very clear vision and values of what we wanted to achieve. We wanted to build a fairer energy system for the communities that exist in Sydney and we also have a big audacious goal, if you like, which is to one day become a major energy services provider, providing fairer energy to the communities in Sydney and disadvantaged communities further afield. When we looked at the models that existed at ClearSky and at Repower we really liked what they were doing but we saw some things that weren't quite right for our purposes. It's a very collaborative sector and we're able to share a lot of information with each other and what we did is, with a lot of help from particularly Repower Shoalhaven, we were able to adopt and adapt their model and create our own new version of that in a truly innovative kind of way. It's not about creating the new idea; it was about applying that new idea in a successful way.

So we've only done one project. That's been the project on the roof of a craft brewery based in Sydney, Young Henrys, and we financed that from local community members. One other thing is—I'm not sure this will come out of the questioning so I'll cover this upfront—I'm really keen to get across that community energy is about communities themselves being involved in the project and there's a growing trend that I'm perceiving where commercial operators are coming into the space and they're saying, 'We're delivering renewable energy at the scale the community needs,' perhaps in close proximity to the community, 'therefore, that's community energy,' and I'd say that's absolutely not community energy. The community needs to somehow be involved, whether that's involved in deciding what it should be, developing it, owning it, perhaps operating it. Any one of those is fine, as long as the community has input.

Ms FYFFE — So how do you define community? Are you talking about a small town? It's not the widespread, broader environmental community?

Mr NOCKOLDS — Community can be a community of geography, so the community around a town or in a geographic location, or it can be a community of interest, and so ClearSky is a great example of a community of interest. There's a genuine community who is interested in seeing more renewable energy out there through their investors. They actually offer that to local investors as well and so they would be clearly in the range of being a community energy group.

A couple of members of Community Power Agency have done some great research looking at this question of what is community energy, particularly for the benefit of policymakers to understand how they can—

Ms FYFFE — Hence my question.

Mr NOCKOLDS — rule what's in and what's out, and they're coming up with a pretty sophisticated answer which talks about weaker and stronger models, not there is and isn't. It's not necessarily a black and white question, but you can identify a range of attributes of what you think makes up community energy and then determine, looking at a particular project, is this at the weaker end or at the stronger end, and then, through that mechanism, you can essentially create a set of criteria and build up an answer as to whether a project sits at the weaker or the stronger end of community energy. There's no clear answer but I think the principle is simple. The community needs to be involved in deciding, developing, owning and perhaps operating a project. If they're not involved, if they're just a customer, then it's probably not community energy. Thank you.

Ms FYFFE — May I continue?

The CHAIR — Yes, continue.

Ms FYFFE — When you emphasise community, and this is getting more down to a local community basis, they haven't got the skills necessary for this. They may have good intentions, be well meaning, but how are they going to get those skills?

Mr NOCKOLDS — A range of measures. First of all, some communities do have the skills and we see that in communities like Repower Shoalhaven and ClearSky. They've clearly got some really smart people and expertise and they've been able to create these pioneering projects. Secondly, groups collaborate with each other heavily. There's a lot of information sharing. You can also outsource of lot of this. What ClearSky have done is they've cut off a huge part of their business model around finding sites, making the sale to those. That's all done by their commercial partner, Smart Commercial Solar, and so that allows them to focus on the narrow piece of what they do which is just the investment piece.

Where did the expertise come from? Well, they've probably done the hard yards and built their knowledge and figured it out, and I think that one of the great things about community energy is it really builds capacity, builds knowledge within the communities of how to do local grassroots projects and they're more likely, therefore, to go on and do other ambitious projects in other areas, perhaps around big issues that are affecting these communities. It might be things like food or healthcare or transport, whatever the case may be, and I think that's a pretty inspiring vision.

The CHAIR — How do you attract investors to the project?

Mr NOCKOLDS — One of the benefits that Pingala has is that we're one of the few urban-based community energy groups, so we have a very large population base. There's almost 90 community energy groups around Australia and quite a small number of those are in capital city areas. So for us so far it hasn't been much of a challenge to attract investors. I'll give you an example. For our first project we needed to raise a relatively modest amount of money, only about $20,000. We held a public investment event. We invited as many local people in as close proximity to the brewery as possible to come along and express an interest in investing.

We knew that we were going to be oversubscribed so we actually ran a crowd-funding event and about 200 people put their name in and only 50 were selected. We sold all the shares in nine minutes and were massively oversubscribed.

The CHAIR — What is the rate of return to investors and how will they be paid dividends?

Mr NOCKOLDS — Just on the previous question, I think the real answer to how do we find our investors is it's all about building our community. So the real answer to that question is we've put a lot of time and effort into genuinely building our connections and our embeddedness within the local communities that exist in Sydney. To move forward to your technical question about rate of return, what we've done is we've set ourselves up as a cooperative. So unlike ClearSky where we have what they call a special purpose vehicle, a trust being created for every single project limited to just 20 investors, we have one cooperative and that same cooperative will handle all of our future projects and we can have an unlimited number of investors on each project and an unlimited number of investors across all the projects.

So within that cooperative we have in the disclose statement that we have submitted with the regulator in New South Wales, the Department of Fair Trading, a target range of return of between 5% to 8%, so that's what we're aiming to give our investors.

Mr MELHEM — So on that project the supply is to the brewery or to the wider community?

Mr NOCKOLDS — So, exactly like ClearSky are doing, we, like almost every other community solar group, are heavily constrained by the dynamics of the energy market.

Ms FYFFE — So you're off the grid all the time?

Mr NOCKOLDS — We are working behind the meter. It's much more valuable for us to offset retail cost of energy to commercial customers than it is to export to the grid. So we do everything to size our systems down so that export is minimised. In my opinion, I think this is a perverse outcome. We see things quite commonly like really large industrial roofs with a very small solar array in the corner because that's all the load that's needed, whereas there's actually a missed opportunity there—they could be covering that roof in solar—because of the fact that we don't properly reward local generation here in Australia and it's a common problem across the entire national energy market.

Mr NARDELLA — What would be the appropriate return on solar panels according to that statement that you've just made?

Mr NOCKOLDS — Essentially, what makes up an energy bill comprises several parts. There's obviously the cost of generation, which is a surprisingly small amount of the cost. It's between six to eight cents per kilowatt hour. Then you've got the cost of distribution and transmission which actually accounts for approximately half the cost of energy at the customer. Then you've got the margins for the retailer and various taxes and levies that are added onto the top, and all of this lands at about 25 cents a kilowatt hour for a typical small business customer.

If you export energy, you're getting about six cents. If that energy is then sold next door, that customer pays the full cost of the network as if it had been transported from, say, Newcastle or, in the Victorian analogy, from Latrobe to Melbourne.

Mr NARDELLA — Or Latrobe to Newcastle.

Mr NOCKOLDS — Indeed, it's a national system. So there's no mechanism to reward that local generation, and the whole energy market is fundamentally designed from the ground up based on an outdated idea, which is very large centralised generation going to the customers who are far away, and so if we're going to be redesigning the energy market for the future, regardless of the types of energy generation that are going to be built, we need to change that dynamic. The rules need to be rewritten for a new system, which is a system where generation happens much closer to where it's needed. It's very simple, really.

Mr CRISP — With the indulgence of my Committee members, I'm very interested in the governance

structures again. May I invite you to explain what you put to your co-op members as to how you fund a project?

Mr NOCKOLDS — I'd love to, yes.

Mr CRISP — I think as we're focusing on recommendations it's which model fits which community and if we can get all the models up then communities can go to the smorgasbord and work out what's best for them. That's why I'm asking.

Mr NOCKOLDS — We've actually developed a bit of a tool called the common legal structure. That's basically a standard framework by which we describe every single community solar model that's out there. So this is going to be Pingala described using the common legal structure and at its heart you have what's known as the financial entity. This is the organisation that owns or pays for the solar equipment; it's where the investors sit. So for us there's a co-operative right at the centre and we put the customer, in this instance Young Henrys, at the top.

So between the co-operative and Young Henrys we have a lease and the lease is the mechanism by which we derive revenue from the solar panels that we've installed on their roof. There are two other ways you can derive revenue from solar panels you install on the roof of a customer. There's a power purchase agreement and there's a loan, and to my knowledge there's no other way you can derive revenue from the solar panels you've installed for a customer. That's the only way you can do it. To demystify this, there's just three ways. We're using a lease.

Then basically we've got our investors over here and there's a disclosure statement. It's probably a legal agreement but it's required for them to have access to that document. There're also the rules. So in the world of co-operatives they don't have a constitution; they have rules. So that is the legal document that sits between the investors and the co-operative. Then down here we have Pingala which, again, is the association. This was the original organisation that Pingala set up and this is a not-for-profit association and it's the organisation that developed the model or adapted the ClearSky retail model and created our own model and, because it's not-for-profit and what we wanted to do was to offer a return on investment to local community investors for installing solar, we're not able to do that.

So actually what we did is we created this new entity. They're genuinely separate legal entities. Unlike companies, you can't have one owning the other. So what we need to have there is a services agreement because, basically, this association offers services to that co-operative. It manages that co-operative's affairs for it. And then over here we have the commercial solar company. This is the organisation that did the installation and then, of course, there's engineering, procurement, infrastructure and contract and an operation and maintenance contract that sits there. So that's our business model in a nutshell.

Then we explain how it differs to ClearSky. Instead of having a co-operative here they have the trust here and have the trust company here. Smart Commercial Solar, their commercial company, and customers are the same and have various subtly different agreements.

Mr CRISP — How do the members of the co-op vary from the investors?

Mr NOCKOLDS — They are, in fact, one and the same. So membership in a co-operative is tied to the share ownership.

Mr MELHEM — Are you able, without giving away commercial-in-confidence material to email that across the secretariat how the business model has been set up? Is it possible?

Mr NOCKOLDS — Yes, we can do that.

Mr MELHEM — It's been a great explanation but it would be great as well if you're able to so that we've got a bit of time with the business model and how you've developed it.

Mr NOCKOLDS — The common legal structure model that Community Power Agency are developing is still under development but we do have a prototype version of it which we can send through; that's not a problem. And as well as that, Pingala has developed its own documentation which explains the way the model works.

Mr NARDELLA — Do you do the energy efficiency beforehand, like the previous gentleman talked about?

Mr NOCKOLDS — We didn't have to do that with Young Henrys. They'd already done loads of energy efficiency but it's very much our intention to make sure that we do that, and the reason for that is very simple. The best way to save money on energy for the best return on investment—you guys all know this—is to spend it on energy efficiency first, minimise the size of the renewable energy you need and you get a much better outcome for your investors and the customer.

Ms FYFFE — With your knowledge of the industry Australia-wide, what would be the best thing that the Victorian Government could do to help facilitate more groups of people doing community alternative energy, apart from rebuilding the entire grid and building the power stations in different places?

Mr NOCKOLDS — This question of, 'How do we redesign our energy system for the future?; that's a big question that sits outside of this room and, in my opinion, obviously what we're talking about with community energy is heavily influenced by that and we're a part of the energy industry in the renewable sector but, yes, you're absolutely right, that's outside the scope of what we're talking about here today. I think there're significant barriers to behind the meter getting a fair price for energy problem and I think the key thing around this is what we call closing the gap.

There's a common refrain when we explain to people what it is that we've done where they say, 'Oh, so the investors are buying the energy? Are they getting to use that energy at home?' and people naturally assume that that's what these projects mean and we have to carefully explain, 'Well, no, we can't actually do that. We can't sell the energy locally. It has to be behind the meter and consumed entirely at that local site,' and I think people are really disappointed by that and, as I mentioned earlier, it creates perverse outcomes. So one of the key things we'd like to see is a change to the rules so that it's more feasible to have local energy trading and, unfortunately, that rule just went forward and it was knocked back at the AER level.

Ms FYFFE — Because it's so difficult?

Mr NOCKOLDS — Why was the rule knocked back? I can't really comment on that, but I was a firm proponent of the rule change so I can't understand why it was knocked back.

Mr CRISP — What are the barriers and roadblocks that you encountered in getting your model developed, because we're looking at what other community groups will have to deal with in order to get to where you are?

Mr NOCKOLDS — The way I like to describe this is developing one of these models is hugely complex. Developing community energy projects sits at the junction of two heavily regulated industries, the energy industry and the investment, the financial services industry, both heavily regulated, and I describe it as you don't know anything about either of these industries as a community member when you start, but when you finish you know so much about them it's quite mindboggling.

It's like walking into a whole series of rooms and each room has a hundred doors and you don't know

which door to go to and you just start trying them, and eventually you find out that, for that particular room, it's door 46. The next time you come back to that room you know that it's door 46 and it's not a challenge for you. The point is that, once you've done one project, it's really easy to navigate your way through to doing the second, third and fourth and ClearSky is a great example of that. With their $60,000 grant they've converted that into approaching $1 million of invested funds and that's an amazing lever for a government to think about. It is such an amazing success story.

So to come to answering two questions, in a way, there's a really big challenge about expertise, knowledge and support for these groups and one of the great things that we can point to nationally in the community energy sector is the success in the Moreland area with Moreland Energy Foundation. They have been a local organisation that has built within itself knowledge of these challenges and they know that it's door 46 for that particular room. So when there's a local community group developing a project in their area, they can help them with that knowledge.

Community groups also are faced with quite a difficult proposition of looking after the administration of these projects over a long period of time. ClearSky is entirely volunteer-run, as is Pingala, and we have to voluntarily administer these projects over time. We hope, like ClearSky would, to be able to eventually resolve that problem by creating enough revenue out of developing these projects to start to pay people, but there is an alternative way and it's again more doing and expanding what they're doing, which is to create the administrative centres where that support can be offered.

So we believe there should be more organisations like that peppered all around the country. They should be well resourced. Moreland was founded with multimillions of dollars in the year 2000 and that's why they've been so successful.

Mr NARDELLA — Is it a selloff of their electricity power company?

Mr NOCKOLDS — That's where the money came from, but the point I'm making is that, as an institution, it took a substantial amount of money to get them going and that is something that has paid back really well over time. Try to do it with too little money and all you're going to end up with is a temporary outcome, not a long-term institutional outcome. And if we have lots of these organisations spread around the place then we also need a way of having them collaborate amongst each other, so there's a concept of having a network that sits above them that co-ordinates the whole thing.

If we do that, and we do that in Victoria, in New South Wales and across the whole country, I think we're going to see a dramatic shift in how quickly these projects can get up. I just think if we had had that sort of support available to us it wouldn't have taken us three and a half years; it would have taken us nine months to do a project.

Mr NARDELLA — Because this model has a good payback, do you see a bit of a risk that some private company comes along, some investors that get out of the TAFE training area and then they go into this and they take over the model? I mean, there's obviously money to be made. Your rate of return at the moment is about 7% and could be up to 9% depending on the years if they deliver a rate of return like a bank or an insurance company, but if they give a rate of return of 4% to 5% then the rest of the money pays for their administrative costs. May that then undercut the things that you're doing and the principles that underlie what you do, and that is community involvement, education, innovation, understanding?

Mr NOCKOLDS — Yes and no, and I think that the yes is we are starting to see more and more companies emerging who are trying to take advantage of the good brand name that community energy is developing for itself, and what they tend to look like is they're private developers that are going into a particular town and they're saying, 'We're going to install a really big solar farm next to your town and it's going to be matched to the size of your town.' They put in a development application. They do what you need to do when you put in a development application, which is you have to do a certain base amount of community consultation, and they then claim that, because they did

community consultation, the community was involved. But it's a very external, 'We are projecting this upon you;' it's not from within the community. So I think that's already starting to happen. We're seeing instances of this, which is why I led with this, 'We need to be careful about what is the definition of community energy and be aware of the imposters,' if you like.

Ms FYFFE — So the Mildura one in which people are investing now, do you know much about that proposal?

Mr NOCKOLDS — I'm not familiar with that.

Ms FYFFE — I just sat next to someone on the plane who said he was investing in this.

Mr NOCKOLDS — There's nothing wrong with those projects but what is an issue—and I'm not going to make any comment about any particular project—is if they're trying to capture the community energy brand. Now this is the second part of my answer, which is the no bit. Community energy is a very specific thing. It's about the community themselves developing a response to the big energy issues that face them, and they're going to do that in a way to solve the other challenges that exist in their areas and that might be energy affordability, it might be grants for other community endeavours, but other private organisations that are not embedded, they can pretend but they can't actually act that way. So what Pingala has done is we're doing local investment and other people can't do that; they can only impersonate something approximating it.

Mr MELHEM — Tom, you're one of the specialists now in metro areas. What are the challenges faced by this sort of project in metro areas? I'm talking about high density where it's overshadowing corporate regulations and tenants in and out, et cetera. So what are the challenges and what's your advice about how we can overcome these challenges?

Mr NOCKOLDS — I think one of the big opportunities, the flipside of a challenge, is that in dense urban areas there are many people like me that live in an apartment and they don't have a sunny roof and/or they rent and, in fact, the statistics around the suburbs in capital cities are quite amazing. I know that in the city of Sydney, and this is an extreme example and the city of Melbourne would be the same, it's something like 60% of households are renting and 60% of households are in apartments. So I think that's a really big opportunity. If we can start to create new ways for those community members to create generation—solar, bioenergy, batteries, whatever—which they can then directly buy, I think that's a really big opportunity and, in a sense, that's kind of the barrier as well.

So there's a particular model of local energy trading which is based on a one-to-many model and there's been some great research done by the Institute for Sustainable Futures up in Moira and Swan Hill around this, as well as the other models of local energy trading, but we love this idea that a centralised solar farm can be installed close to a population centre and the community members, the households, can co-own that solar and the benefit of owning that is credited directly off their energy bill. It looks, feels and behaves a lot like solar on their own roofs but they don't need a roof to be able to do that. This is called a solar garden and it's the dominant model of community energy in the US.

Mr NARDELLA — There was something in the paper today—this is probably the next part of where all this is going—that there's been some discussion from the regulator in terms of saying, 'You can't put batteries in garages or in enclosed spaces'—I think there's one or two little vested interests in there somewhere—'and you need to put it in some box in the back yard somewhere.' Is that going to have an effect on some of these urban developments with SolarGuard and those types of things? I mean, one of the things that I would be doing is actually having a look at a battery pack, picking up power when it's cheap between 1 o'clock in the morning and 5 o'clock in the morning, charging it up and then selling it back into the grid in peak from 9 till 4, and you might be able to do that in apartments or whatever else, and a lot of apartments have got garages or other areas, but is that something that you've been thinking about or there's been some discussion about?

Mr NOCKOLDS — Yes, I would say that that current discussion about battery is a classic case of the regulations struggling to keep up with the technology, and there are some genuine concerns about fire danger with certain battery chemistries, not all. Certainly certain lithium ion technologies have an issue and we see that with the Samsung, as an example, but certain lithium ion technologies, on my understanding, also don't have these problems. So I think it's a big mistake for there to be a blanket, 'Oh, this lithium ion technology, they're all bad.' I think they need to come up with a slightly more nuanced solution to this.

Also a thing that I'm really passionate about is I think we need diversity and that would be diversity in the models of community energy, diversity in the technologies of renewable energy, diversity outside of community energy—community is not the answer to everything; it's just a really important piece of the bigger puzzle—and then diversity around the chemistries of batteries would be included in that as well, and there's other technologies that are not lithium ion. There's sodium ion based technologies which have no flammability risks. So I think we just need the regulators to catch up to this and be a little bit more nimble around that.

Ms FYFFE — It's very hard for governments to be nimble about regulations.

Mr NOCKOLDS — Yes, but if you want to look at a great example of a government somewhere in the world really trying to do this, look at New York's Reforming the Energy Vision. We've actually just appointed the head architect of that as the head of the Australian Energy Market Operator, AEMO.

Mr NARDELLA — Who failed in South Australia the other day.

Mr NOCKOLDS — What failed, sorry?

Mr NARDELLA — AEMO.

Mr NOCKOLDS — Yes, that's not what I was talking about. I was talking about the fact that we actually have an amazing appointee with a deep knowledge and a very visionary view on how we change—

Mr NARDELLA — What's her name?

Mr NOCKOLDS — I've actually forgotten her name but you look at the appointment of the new head of AEMO.

Mr CRISP — Just to finish, I want to explore virtual metering a little more from your point of view. The rule has been knocked back. What are the next steps that can be taken to allow virtual net metering to go ahead in Australia?

Mr NOCKOLDS — First of all, the best source of information around this subject is the Institute for Sustainable Futures and the big project they did, and the Moira and Swan Hill trials are a small part of that piece of work. The terminology they're using is local energy trading because it's slightly more encompassing and it doesn't carry the same baggage of an implied tariff-type structure, which is what they use in the USA. But the point that can be taken out of their research is that right now there's no impediment to doing local energy trading.

We can do it, except that we have to pay the full value of the network as if we transmitted the energy 150 kilometres. So we can do this right now and so I think the best thing to do is to get on with starting to put these projects in on the ground. We can actually start doing local energy trading projects right now. They may struggle to stack up economically but we can get the first pioneering ones done and that will then build the momentum for a future rule change that will appropriately reward those.

Mr CRISP — Is the solar garden the most likely one to go there first, do you think?

Mr NOCKOLDS — I believe so, yes, and the word we're hearing is there are multiple community groups, multiple energy retailers and multiple commercial operators currently working to bring solar gardens to the market right now. We're going to see them very soon.

The CHAIR — Tom, on behalf of the Committee I'd like to thank you for coming and giving us the evidence.

Mr NOCKOLDS — Thank you all for taking the time to do this Inquiry.

Ms FYFFE — Tom, thank you, that was excellent. You really explained it in a way I can understand.

Mr NOCKOLDS — Thank you.

Witness withdrew.