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

Shepparton — 31 May 2017

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Witness

Mr Thomas Brown, Executive Officer, Goulburn Broken Greenhouse Alliance.

The CHAIR — Welcome to the public hearing for the Economic, Education, Jobs and Skills Committee's inquiry into community energy projects. All evidence taken at this hearing is protected by parliamentary privilege. Any comments you make outside the hearing are not afforded such privilege. Hansard is recording today's proceedings. We will provide a proof version of the Hansard transcript so you can correct any typographical errors. I invite you now to make your contribution and to give us some time to ask some questions, and please state your name before your contribution. Thank you.

Mr BROWN — Good morning. I am Thomas Brown, the Executive Officer of the Goulburn Broken Greenhouse Alliance. Thanks for the opportunity to come and speak to you today as part of this parliamentary inquiry into community energy. I am representing the Goulburn Broken Greenhouse Alliance, which is now a collection of 11 local governments in the Hume region of Victoria and the two catchment authorities, the Goulburn Broken and the North East catchment management authorities.

The Goulburn Broken Greenhouse Alliance was established in 2007 to help coordinate climate change responses across local government through project management, advocacy, capacity building, and seeking funding and support to councils. Renewable energy has always been a central component of the work the alliance has done, and community energy has been a growing sphere of interest for the 11 member councils.

Over the last several years the agenda items of our quarterly meetings have continually had community energy or renewable energy components as part of those discussions. In the last two years there has really been quite a growth in the number of member organisations who are interacting either directly with or providing some supporting role to community energy initiatives in the region.

The CHAIR — Thank you for that. Thomas, can you tell us what projects you work on and how you engage the community with these projects?

Mr BROWN — The perspective that I wanted to bring to the Committee today was of a group that does not work directly with the community but with a large number of councils who have the ambition of working with the community and to try and share a regional perspective of what those councils are aiming to do and perhaps some of their motivators. A lot of councils here have a very large utility expenditure on electricity each year; I think across Victoria that is in the realm of tens of millions of dollars. Councils today have no capacity to orientate some of that electricity expenditure back into their local communities like they try to do with other procurement activities when they do not like the new road building or new asset construction and things like that.

One area of interest that councils are potentially trying to work with their communities is seeing whether they can sponsor or be involved in community energy projects where they themselves could become a customer of the energy that is generated through these programs and cause some economic closed-loop circles with some of that operational expenditure, which to date has always left these municipal boundaries and gone elsewhere.

Councils, through the perspective of having a very capital-constrained budget setting in local government, are looking at how they could better use their operational expenditure to leverage more community outcomes and community economic benefit. Community energy is a new and emerging opportunity that councils can see where they might be able to increase the value proposition they get in their operational electricity expenditures. That is one of the main current focuses of councils because it is an opportunity they can look to to add value to an existing spend without needing additional resources to do so.

Ms RYALL — You mentioned your electricity generation licensing issues there. Do you have an arrangement with a provider? We just heard before about SP AusNet, where there are MOUs and so forth. Is that something you have?

Mr BROWN — No, that is not anything that the alliance has looked into directly. The operational area of the alliance spans the two large regional distribution businesses, being Powercor and SP AusNet. The anecdotal perspective that the group takes is that the distribution businesses need to be treated as an

element of a project that just needs to be dealt with and played with within the rules of the distribution businesses, and the costs and fees associated with interacting with those have to be borne by any project.

That is the perspective the group takes initially in their thoughts around community energy, borne out of experiences through a previous large-scale energy efficiency program that the councils did that directly involved distribution businesses. From those experiences the councils realised the lack of sway or influence they hold as customers interacting with those businesses and, I suppose for lack of better words, have resigned themselves to responding to the requirements of those distribution businesses.

Ms RYALL — So where you state looking at 'licence to generate, distribute and sell', how does that work with the grid?

Mr BROWN — My knowledge of the finite details of licences to generate and sell I would not say is extensive, so I would not venture to try and illuminate any further on what is already outlined in my response. There are differences in electricity licensing between New South Wales and Victoria. I believe there are some exemptions that are applicable to certain electricity generator types in New South Wales that have not previously been available to Victoria. I might make a comment, though, that since this submission was made last year in September there has been a huge amount of change, and change is probably the only thing that is constant in this space. Some emerging enterprises in the field of renewable energy and energy trading, perhaps, are lending some weight to some of these issues now becoming a lesser consideration for community energy projects, particularly in the retailing space. I hope that answers your question.

Mrs FYFFE — In your submission you mention regional development strongly being linked to community energy projects. Have you got any examples you could give us of how that has worked?

Mr BROWN — I will give you a parallel example of how renewable energy development in a regional setting can bring economic growth to an area and a new industry. One of our member councils has had a very strong level of interest from commercial solar developers over the last six to eight months, and there is now up to about half a billion dollars worth of solar development in the pipeline for that particular council. Those developments are geared along the existing commercially viable renewable energy models …

Mrs FYFFE — I am sorry, just to take you back, is that the production of solar panels or is it the actual council's use of solar panels?

Mr BROWN — The value I just spoke to is the value of the capital works that will be done in the council areas to deploy this new renewable energy generation. That then has flow-on effects to local employment and the supply of labour for those constructions.

In terms of local development, going back to my earlier points around council's operational expenditure on electricity leaving the area, the theory behind community energy is that if councils can use that ongoing annual expenditure and redirect that into local distributed community generations, such as solar or wind, and run appropriate tenders for the local development of those facilities and the maintenance of those facilities from local providers, that helps create some new economic growth estimates in the regions from money that had previously been leaving the regions.

Mrs FYFFE — Okay, so in simple language the money that councils will save from electricity costs by having solar panels and so forth—you expect them to direct that money into other areas, not just to go into consolidated revenue?

Mr BROWN — No, that is not what I am saying. What I am saying is that today councils have no choice but to spend their operational electricity costs—their money—on electricity from the grid that is derived from generators that sit well outside their municipal boundaries. There is no financial gain to the local economies from that council expenditure. And when you consider an average council in this area is spending upwards of $1 million per annum on electricity, the theory is that by supporting community energy and being a co-investor in local generators and buying some of that locally generated electricity, a

portion of that operational expenditure that has traditionally left the municipalities could be redirected to local expenditure on local community energy projects and generate revenue for those local community energy projects, which is retained within the municipalities in the form of local employment or local employment in operational construction of those community energy facilities.

Mrs FYFFE — Do you know of any areas where it is actually working now?

Mr BROWN — No, and that is principally because Australia lags well behind the Western world in community renewable energy developments. North America and some European countries, including England, Denmark and Germany, are well ahead of Australia. There are regulatory barriers and price barriers in Australia that have really prevented any of these examples being further developed in Australia. There are some emerging examples such as the Sunshine Coast solar farm, which is an example of a council building somewhere in the order of 20 or 50 megawatts. You will have to excuse my lack of knowledge on the exact size of that facility, but that is a council bringing forward some of their operational expenditure to build a large-scale solar farm within their own municipality using local contractors.

There are some other examples in New South Wales where there are innovative purchasing models for electricity that enable a large institution to purchase electricity from a community-owned solar farm that was developed with community capital and operated through a community cooperative-type structure. So there are some examples, but they are very thin on the ground. Part of that challenge in Victoria has been around lack of certainty of what is possible within the current rules of the electricity market, but there is emerging clarity in those rules as well as some new electricity retail players coming into the market in Victoria—one in particular and a couple of others waiting for retailing licences. Having those come online will enable community members who are interested to coalesce around an idea and actually be able to progress that idea, whereas to date we have really been unable to participate in community renewable energy in Victoria in any kind of large scale in anything that is not behind the meter. Behind the meter means installations that sit generally on rooftops and supply energy to a building. There is an important distinction between behind the meter community energy and in front of the meter community energy projects.

Mrs FYFFE — We understand the difficulties if you are not behind the meter.

Mr BROWN — So I guess the point I would like to make is my lack of ability to bring evidence to that statement is because of the complexities and the lack of knowledge in the community energy space to date. The fact that it is improving at a huge rate I think speaks to the fact that the support that has already been provided through the community energy projects and the like, through DELWP and formerly through DEDJTR, is making progress. Certainly that lack of information and knowledge and coordination speaks to that continued need for support I think.

The CHAIR — Just to follow up, if local generators pay less for network, how would the maintenance of the grid be funded? How can you fund that?

Mr BROWN — Sure. Really, really important question. I am sure you are well and truly aware of how we all pay for the grid in terms of it being a component of the units of electricity that we consume. Currently the way the energy market is set up in Australia is there is very, very little consideration given to the place of energy generation and the relationship to the place of the consumption of that generated electricity. So there is no geographical weighting applied to the cost that a consumer pays to access electricity from a generator. To put that into a case study, a community group here in Shepparton, if they wanted to build a 4 or 5-megawatt solar farm on an old landfill and restrict the investors to the postcode of Shepparton—3630—the electricity generated at that solar farm would be consumed at those local shareholders' premises within the postcode. The electricity is generated within the postcode and consumed within the one postcode. To enable that electricity to move from the solar farm to those generation shareholders requires using the electricity grid. The way the rules are set up at the moment is those customers have to pay the same flat rate fee to use that grid as if they were pulling energy out of the Latrobe Valley or a gas-fired power plant from interstate.

I like to use the analogy of comparing that to a toll road. That analogy of the way the Australian energy market is set up today and the prices we pay for using and maintaining the grid are comparable to paying a fixed rate fee for driving on a toll road irrespective of the distance that you drive. If you wanted to drive from the CBD of Melbourne down to the Mornington Peninsula, you would pay a flat rate fee, the same fee that someone would pay if they wanted to drive from Melbourne just down to the first exit of the Eastern Freeway or something like that. So it is a fixed rate fee. There are some components of the transmission network that are regionally based or have a geographical consideration, but at the distribution business level—so that is the lower voltage wires—there is absolutely zero geographical consideration to where the point of consumption is in relation to the point of generation.

Mrs FYFFE — The reality is that no matter where the power is derived from, whether it is a community energy project or from the Latrobe Valley, once it is in the grid it is in the grid and it is mixed up. You talk about taking that energy and delivering it to this postcode area, which is virtually impossible once you have gone to the grid. You would have to have your own grid established to connect the buildings.

Mr BROWN — No, I disagree with that. There is a very succinct and well-researched piece of work done by the Institute for Sustainable Futures that culminated in a rule change proposal for the Australian Energy Market Commission last year proposing the exact methodology to enable this type of process, which we have termed 'local generation network credits'. It is a refined process with some very sophisticated modelling behind it. It actually outlines some significant savings to the Australian public in terms of deferred investment requirements in our grid to encourage increased distributed energy generation. I would encourage the Committee to review that rule change proposal, which has subsequently been denied by the Australian Energy Market Commission. But in my opinion, I would say that denial is based on inappropriate third-party modelling commissioned that needed to include more considerations than it did. I think that should be reviewed and those differences in the modelling further explored to explain that.

Mrs FYFFE — I will defer to my colleague Mr Crisp in telling me which is right.

Mr CRISP — I would think that perhaps this is one that is going to be decided outside of Victoria and outside of our committee. It is a very interesting topic, but in the interests of not having myself and Mr Brown here for the rest of the day we should move on.

Mr BROWN — And I respect that. That is an east coast interconnected grid issue for consideration in terms of national electricity rules, and I certainly think in that vein Victoria can show some leadership through, say, the COAG Energy Council and the like in terms of some of those critical changes that could be considered to create a more buoyant community energy sector in Victoria.

I think what is important, and to your point, Christine, around how you distinguish electricity electrons once they going to the grid, you distinguish that through some modern electricity retail mechanisms called virtual metering or local electricity trading. What that does is it allows an electricity retailer to determine from a customer who is a member of a community energy cooperative how much energy they are entitled to, based on the generation of electricity from the community solar or community energy installation and how much electricity they are required to buy from the grid. So there is proportional charging applied to that customer based on the percentage of electricity that is supplied to them from different sources, be that point source generators such as in the Latrobe Valley or a local community renewable energy program.

Two years ago, and even last year when this submission was written, we were not sure whether virtual net metering or this local trading of electricity was even legal within the Australian energy market. It turns out that it is; there are no legislative barriers standing in its way. We considered that there were even some economic barriers in its way, but as time has rolled on there are now electricity retailers with a licence in Victoria preparing to offer local electricity trading mechanisms to enable community energy to actually generate electricity at one point and move that to a point of consumption at another.

The economics of that model are still viable, even paying the full exposure to the network charges, so there is an expectation that community energy programs can move forward using this local electricity trading, and once we sort out how we are going to adjust the fair use of charging for the distribution system for these distributed energy projects, the economics will continue to improve for community renewable energy.

The CHAIR — Deputy Chair?

Mr CRISP — I would love to, Chair, but perhaps not.

Mrs FYFFE — I know. I think you have met your equal there, Peter.

Mr CRISP — No. We would need to delve into issues of how sustainable those communities are when there is not energy and the lights go out or how the grid managers will react to that small amount of energy that you need to top up when your battery has run out, it is a cloudy day or the wind is not blowing. They will get their pound of flesh for managing the grid, and that is the risk in all of this. And who pays for that risk?

Ms RYALL — I think it is a valid question.

Mr BROWN — Yes. Absolutely, I totally agree with Peter that the security of the system and indeed the cross-subsidisation of regional electricity to consumers from metropolitan consumers is a real point of consideration. But what I want to perhaps throw into that discussion is that I think sometimes there is the perspective that our energy system does not need community renewable energy or it does not need more renewable energy and we should bolster what we already have. I want to bring a local example, and I hope I am not stealing the thunder from my colleagues here from the region. I will give you the example of Euroa. Euroa currently has a grid constraint, which means the local power distribution business is having to run some large diesel generators in that community to supply peak energy through those summer months, in the evenings and the afternoons.

I use that as an example to say that if that scenario is occurring today, where we are having to deploy diesel-powered distributed energy generation to supplement these regional communities, why not look at community energy as a way of replacing those diesel generators with renewable energy, empowering the local community to come together to provide a solution to provide their own energy security and increase that community's intelligence and capacity to organise around their own needs and requirements and to increase their resilience to the increasing threats that climate change is going to bring, whether that be energy or bushfires or floods.

Our energy system today is already struggling to provide the energy and the resources we need through our traditional approach from this point source generation and distribution out to regional customers, and perhaps community energy, if it done in a coordinated fashion with some appropriate consideration around rules and legislation, might actually be a positive contributor to the grid and those security issues that need to be addressed, rather than being viewed as a detrimental impact.

Mr CRISP — That I agree with. However, something we have learned as we move into a greater renewable energy dependent state or country is we have had a lot of evidence that you need to get on very well with your neighbours and be able to move energy over distance to balance that up, and those investments have to be paid for somehow. Again, in my view if you go down the virtual net metering path, you are putting at great risk the future stability of the grid because you are not creating the finance within the energy industry to make those interconnectors that are needed. So we need to continue to get on very well with our other states and we will, as we move forward in the world, be able to have strong connectors to balance off the climatic variation of that.

Mr BROWN — Yes.

Mr CRISP — It is who pays for that, and I see virtual net metering as a threat to that—to having those investments done before there is a crisis.

Mr BROWN — So I would strongly disagree on that point, respectfully so. Virtual net metering, I can understand the perspective that you bring to that in terms of trading electricity and making sure there is a grid infrastructure to enable that to occur. I would raise the point of virtual net metering being critical to the future security of the national grid and in Victoria, principally because the way technology is moving in terms of renewable energy generation and energy storage there is soon approaching a very convenient point in time when people disconnect from the grid and not participate in the grid—they will be grid defectors.

Virtual net metering provides an opportunity for the grid to maintain its relevance to modern electricity consumers moving forward by enabling people to participate in renewable energy generation that they own that is not necessarily attached to a single residence or a single point of business. To put that in context, there are 50 houses in Shepparton and they are all considering putting in rooftop solar and batteries to disconnect from the grid, but they are all going to live in those houses for a few years so they do not meet the criteria to earn their money back on their investment. What they decide to do is pool their money together and build a solar farm on a paddock outside town with a battery system attached to it and pay a fair price to use a distribution system to move that energy from that generator to their houses as they move through Shepparton in different houses or different business premises through time.

That provides a new and novel income stream for the distribution businesses and retailers to capitalise on to help provide some of that capital to improve the ability of the distribution businesses and hopefully the transmission networks to enable that movement of electricity across the grid that is necessary in times of energy demands in different spots. So I see virtual net metering being really important as a new model—a new business product that can be brought into play in Australia for the distribution businesses and the retailing sector that will actually unlock new income for those distribution businesses to improve the capacity of the grid to be a modern, innovative and responsive grid that is more aligned to a post-millennial period.

Mr CRISP — Chair, Mr Brown and I have arrived at an agreement that my issue is people who want net metering for nothing.

Mr BROWN — And I would absolutely agree that net metering is not a free deal. Everyone should be required to pay their fair share of the proportion of the network they use, and my particular point of difference is that today there is no capacity in the Australian energy rules that allows that proportional charging for the fair use of the electricity distribution system, and that is putting downward pressure on the economics of community and energy projects across Victoria and that income flow to the distributors.

Mr CRISP — Thank you, Thomas.

Ms RYALL — Thomas, just on two issues. One is the vulnerable. How do they sit in all of this given a certain investment is required in establishing renewables? They may not have the funds to do so—to put solar on their roofs or to join in a community scheme and so forth—and at the end of the day what it does is push the cost down for those who can afford it but the cost up to those who cannot. Your comments?

Mr BROWN — My comments are that community energy provides the only opportunity for disadvantaged or low socio-economic groups to actually be able to participate in some control over their energy prices and also participate in response to climate change if that is part of their personal mandate to do so. There are a large number—and I do not have the figures with me today, but there are a large number—of households in Victoria today who are institutionally unable to participate in renewable energy with the exception of purchasing green power, which we can take as a given they would not be able to afford to do.

Their inability to participate in renewable energy is largely driven by the fact that a lot of these individuals cannot access capital—they have insecurity in their housing either because of tenancy rights or because of stresses in terms of maintaining ownership of the property; they may live in properties that have unsuitable roofs that are shaded, that may be orientated the wrong way, that may have structural issues et cetera; and

they may also not have the knowledge, experience or confidence to participate in the existing processes, such as getting quotes to put on rooftop solar.

Community energy projects provide an opportunity for those segments of households and businesses in Victoria who cannot participate in the existing renewable energy programs, such as rooftop solar or green power, to be able to purchase renewable energy generation shares or capacity in a community-owned solar farm or wind farm or bioenergy plant and have that electricity delivered to their premises irrespective of where that premises is. Their residence moves through time.

Ms RYALL — How do they purchase when they are living week to week on, perhaps, Centrelink or …

Mr BROWN — Fair point. The issues around finding the capital to purchase and participate in these programs are no different to the same issues that surround finding money to put rooftop solar on a house or do energy efficiency upgrades. What community renewable energy programs can do is to provide structure and support for those individuals to lower their entry costs or the inertia to participate in community renewable energy. What that can translate into is bulk solar purchase, which enables individuals to access a much lower cost solar installation than they would do as a sole consumer, as well as some better guarantees around the quality of those systems and the performance of them over time.

Ms RYALL — I just reiterate the point that if there is no fat in the budget for them, there is no ability to pay extra funds.

Mr BROWN — The next point here is a role that the Victorian Government could look to explore further. It is currently a project that is sitting with ARENA, proposed for funding, to look at low socio-economic status households and how community solar farms can benefit those communities, the role that state government energy subsidies might be able to play in lowering the cost for those households to participate, what the economic trade-offs are for the state government to divert some energy concessions that are paid to low-income households towards ownership of generation in community solar farms and whether that is actually a lower cost option for the state moving forward, considering the increasing costs of energy that we have seen. And we have seen energy costs increase by 100 per cent or 200 per cent as a commodity through time.

Ms RYALL — Just the second part of my question that I mentioned was: how much energy is needed to power the areas you are talking about?

Mr BROWN — In terms of households and businesses?

Ms RYALL — Total energy.

Mr BROWN — I cannot speak to that today. There is certainly some good information available from the distributors on their energy load to different postcodes within Victoria, but if you look at, as an example, the penetration of rooftop solar, some of the municipalities up here are approaching 20-plus per cent of rooftop solar on residential properties, and if you look at an average system size of about 3 kilowatts, you can multiply that out to an average daily generation and get what renewable energy generation capacity there is existing today. You will be surprised by the volume of that generation capacity and the contribution that is already making to the grid. That is beginning to be recognised through the fair price solar review that was done by ESC over the short term. I would encourage the distribution businesses to be approached to provide that information on those energy demands and what fraction they see would be viable for community energy to supply. I do not have the statistics today on energy demands for these regions, but they are not insignificant.

Mrs FYFFE — Just very quickly, thank you for your presentation. It has given a lot of food for thought. How many councils are involved, and how much do they put in annually to fund the Goulburn Broken Greenhouse Alliance?

Mr BROWN — The 11 councils and the two CMAs currently contribute a per capita contribution to the alliance. That per capita contribution is currently 40 cents per capita—per person—and that enables …

Mrs FYFFE — So it is driven by the population of the council area.

Mr BROWN — Yes, it is proportional, so it is fair, which is a theme, I think, of this presentation today. Interestingly the return on investment of that to this group in the five years from 2010 to 2015 has been around $15 to $1 of investment.

Mrs FYFFE — Excellent.

Mr BROWN — So, looking at collaboration and coordination of community, whether that be local government as a community or community members, by collaborating and working together there are some significant incomes and value propositions that could be generated from regions that would not flow from people working in isolation. You would think that community renewable energy could equate to the same type of benefit.

Ms RYALL — Do you have a report that you can provide us that actually gives us the breakdown?

Mr BROWN — Yes, I can—of the contributions towards this group?

Ms RYALL — Yes, and the return on investment that you have just talked about.

Mr BROWN — Yes, I certainly can. There is a report that is publicly available from our website, our financial report from last year. I encourage you to download that, but certainly I can get in touch with your Secretariat and provide some additional reports for your consideration.

Ms RYALL — Thank you very much.

The CHAIR — If there are no further questions, on behalf of the Committee I would like to thank you for your time and your contribution.

Witness withdrew.