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

Daylesford — 30 May 2017

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Witnesses

Mr Ian Rossiter, President, Ballarat Renewable Energy and Zero Emissions (BREAZE).

The CHAIR — Welcome to the public hearing of 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 transcript so that you can correct any typographical errors. I invite you now to make your contributions, and allow us some time to ask questions. Please state your name before you start.

Mr ROSSITER — Thank you very much. My name is Ian Rossiter. I am the President of Ballarat Renewable Energy and Zero Emissions. Prior to retirement, I was a senior officer with the City of Ballarat and was a representative on the Victorian Local Sustainability Accord. Therefore, I was directly involved in project control committees for two important community renewable energy projects, namely the Central Highlands Solar Cities project and the Beaufort Hospital biomass heating project. BREAZE is a signatory to the Victorian Community Solar Alliance's submission and I note that you received a presentation at your sitting held in Melbourne on 7 November from the VCSA by Linda Parlane and Les Pradd. BREAZE is a volunteer, not-for-profit establishment with the purpose of making the Ballarat region a nil net carbon emissions community by 2030. At the time when there were only two rooftop solar panel installations in Ballarat, BREAZE initiated a bulk purchase supply and installation program for approximately 80 residents for solar panels, which was then backed up by a similar project for the supply of solar hot water heating.

In subsequent years the supply and installation of PV and solar hot water systems for domestic and commercial applications has become available through a range of businesses, including BREAZE Energy Solutions, which was established by our not-for-profit as a trading entity. Last year BREAZE completed a crowd-funded 30-kilowatt rooftop PV installation at the Ballarat Regional Industries Sebastopol facility with three objectives: the first was to supply this not-for-profit disability support group with affordable green energy; the second to reduce BRI's rapidly rising energy costs, allowing more funds to be directed to services for the disabled; and third to provide a source of income back to BREAZE to start a revolving fund so that we could provide further access to renewal energy for financially disadvantaged members of our community.

While we set out to deliver the project under a similar arrangement as pioneered by the Bendigo Sustainability Group's library installation at Bendigo, we realised that BREAZE as an organisation may not be in a situation to manage the metering and invoicing of the power supplied behind the meter for the life of the installation. We therefore gifted the system to BRI and entered into an interest-free loan arrangement, whereby we get money back and use that to fund our revolving fund. Funds received from the loan repayment will supplement other donations received to fund solar installations for social housing in our region. The first of these will be occurring in the coming months for the United Housing Victoria's social housing in Delacombe, a suburb of Ballarat.

In terms of our response to the terms of reference for this committee, point 3, to 'investigate the best ways to encourage the uptake of community energy projects': at this point in time we have found that projects that require the sale of electricity or biogas through existing grids by a community group to other users are the most difficult projects to implement due to the need to gain approvals, exemptions and the need to prove there are ongoing structures in place to meet the regulatory requirements.

Victoria's RET, we understand, will be delivered through a reverse auction process requiring investors to nominate the quantum of renewable energy, its price for supplying and accompanying economic prosperity projects identified by the bidders. This is an efficient system for attracting significant investment for larger-scale solar, wind, hydro and bioenergy generation facilities. But unless the economic prosperity projects are targeted as supplying renewable energy to disadvantaged members of our society, access to renewable energy remains the realm of those that can afford the capital investment to reduce their dependence on grid-supplied energy.

We therefore believe we should concentrate on residential and small institutional scale renewable energy projects that can deliver behind-the-meter solutions for electricity heating and cooling. BREAZE's social solar project is one example, as is the Beaufort Hospital biomass heating project, in which heating for the

hospital is predominantly supplied through efficient boilers supplied by dried timber wastes from a local sawmill.

BREAZE is also working on developing a supply distribution chain for compressed sawdust briquettes produced from waste from one of the region's joineries that uses plantation dried hardwoods. We propose to enlarge the production through sourcing suitable sawdust from Ballarat Regional Industries and other suppliers to partner the installation of more modern, efficient, briquette-fuelled heating units in a number of community facilities.

Point 4, terms of reference, 'Investigate the ability to expand community energy projects outside solar and wind power'. Bioenergy is an important renewable energy source. In our region we have access to single-source streams of biological wastes, including wood from manufacturing and urban and street tree removal, demolition and packaging, which can be used to produce heat through the incineration of pellets, briquettes, chips or biogas through pyrolysis; food waste from farm production and the manufacturing, retail and hospitality sectors that can be turned into biogas through anaerobic digestion, the best example in our region is Berrybank Farm at Windermere operated by Charles IFE; agricultural wastes including manures, carcases, offal, dairy residues and crop residues, which can be used for anaerobic digestion to produce biogas or be fed into biomass heating units; and sewerage, whereby small-scale anaerobic digesters are used to treat discharge from toilets to safely produce biogas for heating and cooling, which are particularly suited to cluster housing and small-community facilities.

One such proposal being investigated in our region is the use of a single-source aquatic plant harvested all year round to be macerated and fed into a biodigester, with further investigations being put in place to see if the methane produced could be scrubbed and put back into the natural gas supply system.

Point 6 is 'Investigate the challenges to community energy projects in metropolitan areas'. Ballarat is a large regional community and as such shares some of the issues that community energy projects have in metropolitan areas such as Melbourne. For example, the generation of a whole-of-community vision is a challenge, together with the geographical spread of people and organisations willing to form a community energy project. To overcome this, BREAZE is exploring the concept of a virtual microgrid managed by a cooperative. In essence, members of the cooperative trade electricity between themselves via the existing distribution network.

We believe that this concept has merit for the following reasons: the number of premises that would produce an excess of energy from their solar PV systems is increasing; the excess energy can be sold within the community to those who cannot install solar PV systems as they cannot access their roof space due to either living in rented premises or in multi-storey flats; battery storage is becoming more economical and is starting to be installed, and to make the most economical, environmental use of battery storage, pooling of this capacity will be needed.

This model also allows the community to have an influence on the price they pay for energy, including keeping this expenditure within the community, and maintaining the viability of the distribution network — i.e. the grid — by providing an income stream to the distribution companies, and mitigating against an increase in distribution charges if people opt out of participating in the grid.

BREAZE believes this is a looming crisis, as those who remain on the distribution network will have to bear the full cost of the system as others jump off it. As mentioned above, we are of the opinion that this will fall on those least able to afford the capital costs associated with renewable energy installations. And of course the concept will return jobs to the local community, as the management and operation of the cooperative would be locally conducted. Such a model would look something like the community telcos and community banks. Thank you very much.

The CHAIR — The sort of project you developed for the Ballarat Regional Industries—how was it funded, and how was the site located?

Mr ROSSITER — The site was located by looking at not-for-profit and community facilities that were primarily used during the day because, like the Bendigo Sustainability Group, we needed to find a

beneficiary that was using most of their electricity during the daylight hours when solar was produced. We found a disability provider that was perfect because they had clients in five and a half days a week during the daytime, and their electricity costs were higher during the day because they ran lots of processes using motorised equipment—conveyor belts, crushers and those sorts of things. So by looking at a range of not-for-profits, we identified a number in the disability sector, and then we of course obtained their power bills to ascertain what sort of saving could be made.

The CHAIR — I am sure you have learned some lessons from this project. Would you do anything differently for future projects?

Mr ROSSITER — Look, probably not. What we did find, as the Bendigo Sustainability Group found, is that crowdsource funding is a hell of a lot of work, and you can only go back to the same people so many times. Obviously with our own membership, we are very good to contribute, as were some of the families of the clients of the disability agency, but we were also delighted with the uptake we had with schools and other groups who were raising charitable funds for various reasons.

For that reason we are embarking more on small-scale projects now. We are looking at social housing as being probably our target in the area, and again, it is to decentralise it from being focused just on Ballarat. We are a regional organisation, and there is a network of social housing extending from Ballarat through to the western districts of Victoria and managed in Ballarat through the various agencies.

Mrs FYFFE — Could you expand on the Beaufort Hospital project, how you became to be involved and why it was chosen as a site for a bioenergy installation?

Mr ROSSITER — The Central Highlands region group of councils put together in its regional plan bioenergy as a priority area probably about 10 years ago. The Victorian Local Sustainability Accord was a fund that through a ministerial advisory group, which I was on, was able to encourage applications from local government and other partnering agencies to invest in sustainability outcomes for their communities. What was evident was that within the Central Highlands area there were no living, working, community-owned bioenergy examples for people to see that it actually works. It is old technology, but we wanted to prove that it is easily done. We had heard about the pellet heating system in the Royal Children's Hospital Melbourne and liked the concept of trying to find a source of waste that could actually fund an alternative to using LPG at the Beaufort hospital. As it so happened, Beaufort is a timber town; it has three sawmills within it, and wood waste was something that was not valued by the local community. There is an abundance of mulch if you want to get it. You can just about get it for nothing. So we were trying to turn what was a waste stream into an energy source and quickly came up with the concept of getting a supply-chain improvement whereby one local sawmill invests some money to make sure that their woodchip is suitably dry and free of dust to be a suitable supply and the hospital invests in a bank of boilers that could operate in tandem with the existing LPG gas heating.

They have now moved onto the woodchip heating. That project was installed about four years ago. It is all captured on the Pyrenees Shire Council website. If you go to pyrenees.vic.gov.au, there is a whole page attributed to that project. It paid for itself in the first two years of operation, and pretty much the LPG gas consumption by that hospital is very, very minimal compared to previously, so it has saved them money, it has been great for the environment and it has created local jobs. It is really a win-win project.

Mrs FYFFE — Terrific.

Mr CRISP — I would like to talk a little more about particularly the biogas proposal you talked about. To find a source of methane, scrub it up, compress it and get it into the system, are the economics of that going to work? I know you have got the regulatory issues you mentioned in your introduction, but I am just interested in the economics of getting methane into the system.

Mr ROSSITER — That is not proven at this point in time, but currently the Victorian Government through the New Energy Jobs Fund has funded the Central Victorian Greenhouse Alliance to do a feasibility study on exactly that project, so we will know the answer in the coming months. That will be

done independently, so at least we can actually look at not only what the regulatory barriers are but whether it actually stacks up on its own merit.

Mr CRISP — I presume the Windermere pig farmer is using it all on site?

Mr ROSSITER — He was exporting energy back into the grid and making quite a lot of money from the sale of electricity, albeit at the low rate of 5 cents per kilowatt. He is also using all of the heat produced on site for producing a range of composts and a number of other things, so it is a totally integrated farm concept.

Mr CRISP — Looking precinct-wide, when you talked about sawdust briquettes for low-income people—to go back to something that some of us remember—can you explain a little more about what you have in mind there and how that could work?

Mr ROSSITER — At the moment in Ballarat we are seeing an incredible amount of growth in particularly community housing because we have become a centre for all of western Victoria. Because of the growth of the health sector and the disability sector we are seeing a lot of cluster housing getting produced, plus supporting accommodation for students at universities and supporting accommodation for people with special needs. That development, which is about to proceed in the next few months, is going to have a series of residential care facilities clustered together with a restaurant to provide employment for people in the disability sector. That is a classic example of at the time of design if they can actually network hydronic heating into all of those buildings, then a centralised boiler can actually provide the baseload heating for not only residential but also some of the commercial operations.

Mr CRISP — Are you looking at the woodchip to be the supply for that?

Mr ROSSITER — Yes. That one will either use woodchip or could use briquettes. The beautiful thing about briquettes is that they are much safer to store. You do not have problems of potential ignition if you are storing large piles of briquettes compared to piles of woodchip.

Mr MELHEM — Just on challenges for projects in regional areas, what are the current challenges to be able to develop renewable energy community-based projects in regional areas? What are the current challenges, and can you can advise us on how we can make it a bit more possible to have a successful one?

Mr ROSSITER — It is a very good question. I would say, Cesar, that the biggest challenge is the lack of awareness of bioenergy. There are many, many groups that have been working with farmers, that have been working with silviculture, the forestry industry, that have been working with the food manufacturing and the waste sectors and that have been trying to create awareness around how bioenergy is really a fantastic way to establish baseload supply of heat or electricity, and yet we do not see too many projects. A lot of it is about the vocabulary of politicians and of the media. We never hear about bioenergy.

I myself am lucky enough to have been to the international bioenergy congress in Sweden. I have seen how at a local and clustered level farmers are able to produce sawn timber logs to go into local energy supply companies—cooperatives. I have seen how food waste has been taken from supermarkets and dairies and turned into biogas to run their bus fleets. It is happening, and it is just really a case of how we can enable it. I do not think it is so much about the dollars. I think it is an awareness issue, and I certainly encourage more senior officials of government and politicians to have a look at the bioenergy projects that are all over Asia, they are all over Africa, they are all over Europe and yet we do not seem to see them here.

Mr MELHEM — That could help and sort of address our landfill problems. A lot of the stuff you talked about with the food and all this waste going to landfill could actually go into generating electricity.

Mr ROSSITER — Absolutely. One of my previous responsibilities at the City of Ballarat was to take strategic control of the regional landfill. It just appalled me seeing trucks after trucks coming from food manufacturers just full of food, because it had not passed this test or that test, going straight into landfill.

Yet in Europe or anywhere else that would be producing scrubbed methane that would be used for transport and heating.

Mr MELHEM — In Ballarat and the region of Ballarat there are a lot of wind farm projects taking place. Do you see any likelihood of cooperation between these major developers in the community, for example? Is there any talk about community ownership, for example, part ownership or a share with these major developers? Do you see any signs of that?

Mr ROSSITER — Absolutely. BREAZE, the Committee for Ballarat and the City of Ballarat are currently partnering on a program called Imagine Ballarat 100% Renewable. It is a campaign. What we are trying to do is position ourselves ahead of the reverse energy auction. The first round we believe is coming up in September. What we are doing is identifying a whole raft of projects that would constitute the economic prosperity 10 per cent element of their bids. They are not about putting renewable energy in necessarily. We are looking at zero emissions public transport. We are looking at incredibly large biolink plantations to link the Enfield state forest with the Wombat forest here. We are looking at a number of projects that provide that community licence—the social licence—associated with wind farms coming or large solar parts in Victoria. We are not just restricting our bids to those companies who are building wind farms in our immediate area. We are suggesting that Ballarat can become a centre for administration, for call centres, for training. And we are really thinking big because the figure around the amount of reverse energy with the economic prosperity project is probably in the order of $600 million for western Victoria. So Ballarat wants a large slice of that.

To answer your question, we can see a lot of that either going into social housing or going into a number of other areas other than traditionally just putting in more community facilities that get paid for once but can actually have an ongoing cost for the community to look after.

Mr MELHEM — To follow up on that, going back years ago renewable energy was a very high cost. Cost is no longer an issue, so basically having that community involvement could actually deliver investments in social housing and various other areas you talked about. It is good.

Mrs FYFFE — If I could just ask about the operations at BREAZE, how are your administration and project management costs covered? Do you have in-house legal financial and technical expertise?

Mr ROSSITER — Only to the extent that I can recruit talent onto the board. We are all volunteers; none of us receive payment. So the quick answer is we do get in-kind legal advice through two solicitors in Ballarat. We are lucky that our treasurer actually has worked in the power industry so is totally au fait with NEM and its rules and all those sorts of things. We have recently been to a panel of providers. At the beginning of the year, in anticipation of some of the funding schemes that the Victorian Government have issued, we appointed a panel of suppliers in terms of project managers and event managers to run workshops and to project manage some of the projects we are now looking at.

Coming back to one of the things that we did last year with the crowdfunding, that was a huge amount of work with three volunteers, so if we do it again we will probably back that up with a paid person to help us actually manage the fundraise and particularly in getting the recognition side of it right in terms of social media and other means of making sure that people feel acknowledged.

Mrs FYFFE — So the funding you get is from the crowdfunding and no other source, as in actual cash?

Mr ROSSITER — That is right. We were lucky enough to apply for a federal government grant to the extent of about $12 000 for the BRI project, for the social solar project, which was great to get and which left us with some money to roll into the revolving fund to fund our first social house.

Mrs FYFFE — Well done.

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

Mrs FYFFE — Thank you very much.

Mr ROSSITER — Thank you very much.

Witness withdrew.