

ELECTRICITY SUPPLY — CENTRAL WHEATBELT

Grievance

MS M.J. DAVIES (Central Wheatbelt — Leader of the Opposition) [9.52 am]: I rise to grieve on the matter of power reliability in the electorate of Central Wheatbelt and for the opportunity to ask the minister to consider microgrid technology, particularly in those communities on the edge of the grid, and those with regular power failures or interruptions. The minister will be familiar with one case, as we have had previous exchanges and I have requested advice from him on how best to guide the North Eastern Wheatbelt Regional Organisation of Councils—that is, Dowerin, Koorda, Mt Marshall, Mukinbudin, Nungarin, Trayning and Wyalkatchem—to achieve a project that it has been pursuing. The minister may not be familiar with the other case, unless the Parliamentary Secretary to the Minister for Regional Development has reported back on his meeting with the Shire of Quairading last week. Nevertheless, they address the same issue of seeking to improve power supply and reliability. The desire of both NEWROC and the Shire of Quairading is that they would like a disconnected microgrid—a small, isolated self-supporting network that was once connected to the interconnected network but operates independently from the rest of the grid—on a permanent basis.

I know that Western Power understands the problem that these communities face; in fact, it articulated the problem very succinctly in a report on its website and outlined that —

- Western Power’s ageing distribution network (415v to 33kV) is approaching end of life in many areas
- Like-for-like replacement cost can present a significant challenge
- Small edge of grid towns can experience poor reliability, with customers experiencing frequent power interruptions due to stretches of bare overhead conductor sometimes hundreds of kilometres long
- Some rural towns have relatively low peak loads in the order of a few hundred kilowatts and daily average kWh usage of in the order of few hundred kilowatt hours for the majority of the year. The demand increases during grain receivals —

The report also notes —

- Preliminary Feasibility (PF) assessments indicated that the rebuilding of the network may be a higher cost than providing a supply to some towns via a Disconnected Microgrid (DMG).
- ...
- Similar to a stand-alone power system (SPS) but services more than 5 customers.
- Envisaged that the first pilot DMG will supply power to less than 50 customers.

At a meeting with the minister in February this year, NEWROC requested information it had been seeking to put together a project to address the issues that Western Power has outlined, and take up the opportunity for its group of councils. In doing so, it has faced some challenges while dealing with Western Power. At the meeting with the minister, NEWROC specifically asked for transparent and open access data for Bencubbin, engagement with the Western Power engineering team when it required it, and access to the physical network for the project. It was disappointed to be told that other project proponents had been able to obtain relevant information, which implied that it had not pursued the correct avenues to obtain the information, but it was not given any guidance on how to do this during the meeting. It was also told that the cost to Western Power of energy transmission to regional areas is 24 times more expensive than providing the same power to metropolitan customers, who subsidise regional supply. NEWROC is very aware of this and it is trying to provide a solution that is affordable and more reliable in its communities. It was also told that if a viable solution to the power reliability problem in the Wheatbelt existed, it would have already been delivered.

I understand that Western Power made a request for information, which closed in January this year. It explicitly stated that it was seeking submissions from vendors that could provide a capex solution that is a Western Power-owned, operated and maintained asset, an opex solution that is a vendor-owned, operated and maintained asset, or a combination of both capex and opex. It is clear from that ROI that there is an opportunity for project proponents to develop an opex solution but I am getting mixed messages about whether this is in fact a model that the government supports. I seek the minister’s advice. Will the government support and approve a project that would be owned, operated and maintained by an organisation other than Western Power? If that is the case, could the minister please advise how NEWROC and Quairading, which I will get to, can proceed to engage with government to advance and achieve this?

I want to close by raising some of the issues I am sure the minister is aware that Quairading have faced on a regular basis but, most recently, over the last weekend. The lights went out for three days over the weekend and they are out again today. I want to make it clear that no criticism is being levelled at the workers on the ground; we are

very appreciative that they are doing their very best, but it was disappointing that the shire was without power for three days and it took so long for a generator to arrive. I am aware of a gentleman who is on dialysis; he was very concerned about his health. The Shire of Quairading had to open the Town Hall because people's houses were freezing, quite frankly. They had no access to hot showers. The community has done the right thing but it went three days without a generator. It had to be sourced from some distance away—Perenjori, I understand. It does not really seem appropriate for communities to face this on a regular basis in modern times.

I met with the Shire of Quairading over a month ago, and it expressed its desire to investigate a disconnected microgrid solution for the community but, I am sure the minister understands, its resources are limited. I think NEWROC has been trying to do this as a group of councils. It has been working with the Minister for Local Government on a regional subsidiary model, but there have been discussions with other representatives of government and it has not become clear—or not as clear—whether this model that it is pursuing is ever going to be supported by the government. Some clarity and guidance to both these groups and other parts of the electorate that are seeking to improve their power reliability would be much appreciated. I look forward to continuing to work with the minister to improve the reliability in the electorate of Central Wheatbelt.

MR W.J. JOHNSTON (Cannington — Minister for Energy) [9.58 am]: I thank the member for the grievance; it is an important issue. There is no question that these are complicated things. The first thing I want to do is apologise because I made a commitment on 23 March that somebody in my office would talk to the member for Central Wheatbelt and, unfortunately, I only found out today that that never occurred. I apologise unreservedly for that. I will make the member an offer: if she is available on Friday, 16 September, I will clear my diary and accompany her to any part of her electorate that she thinks I should visit to meet with individuals, council and others to hear directly from them. I understand the challenges that the member is raising and I know that people want to know and hear that the minister is listening. It would appear that my office failed in what I wanted it to do, which may give the appearance that I am not interested. I am getting my diary cleared on Friday, 16 September. If that suits the member, I will be in the member's hands to spend the whole day in her electorate and talk to the people who are important to her.

We have changed Western Power's obligations regarding the expression of interest for capital expenditure and operating expenditure solutions. It now must look for alternative solutions for network challenges, because sometimes an operating expenditure solution might be better than a traditional network solution. Of course, it has to be value for money. One of the challenges for everybody bidding for capital-heavy projects is that government can usually do it more cheaply because the government is the only one with the AAA credit rating. I will give an example of when we did that here in the metropolitan area, because I want to make it clear that this is not just a challenge in country areas. None of the solutions provided by the private sector could match the cost structure of a traditional engineering solution. In fact, in one example, to reinforce a feeder line, it was five times more expensive to do an operating expenditure solution than a traditional solution.

The 24-times cost is absolutely correct. That is why we can do innovative solutions in the wheatbelt. It is because the cost structure is so high. If the member wants to look at details of that, a great report that sets out all the challenges was tabled by the member for Swan Hills during the last Parliament, when Hon Terry Redman was the deputy chair.

I met with the North Eastern Wheatbelt Regional Organisation of Councils. The problem with the proposal from NEWROC is it will not solve its problem. Its proposal is based on the idea of using a battery, but the problem with a battery is it is empty after four hours. It has to have a generation solution. In Walpole, we are putting in a pumped hydro solution and, because that is generation, if there is an outage, it will have generation on the other side. The same applies to the microgrid in Kalbarri; a wind farm gives it generation on the other side of an outage. When I go up to that area, I am sure NEWROC will talk to us again. There is a solution, but it is not the one that the people NEWROC is talking to will solve. The data NEWROC is after is not the sort of data that we ordinarily share with anybody because it is not the data that it needs to come up with an engineering solution. Does the member see what I mean? It was after a particular set of data that is not related to the challenge of creating a microgrid.

We are about to announce a disconnected microgrid for one community in the wheatbelt. We have to make sure this technology works. A lot of people come and tell us, "Here's this technology." I will give the example of the Onslow microgrid. The heart of the Onslow microgrid is what is called DERMS—distributed energy resource management system—software. The original DERMS software did not function. Even though the other party sold it to Horizon Power, it did not work, and Horizon had to find somebody else who had software that worked. Then, the first time it trialled the microgrid just using the rooftop solar in Carnarvon, it had 18 hours of outage because nobody knew about the buried protection software in the two batteries being used to support the microgrid. Even the vendor almost did not know about the buried protection software, and it switched the batteries off when the synchronous generation was disconnected. These things are very complicated, and sometimes people tell us things that they are not able to achieve. We have to test before we implement. Soon, Western Power will announce a trial of a disconnected microgrid in the wheatbelt. If that works, we can roll it out. One of the good things is that

Horizon and Western Power share information, and so the learnings that Horizon is now rolling out across all its microgrids are available for Western Power as well. Every time we have a different challenge.

I make this genuine offer. The outage that started on Sunday was two separate outages, which is always difficult when they impact the same community. A flooded creek knocked out the power on Sunday. We do not have generators sitting around everywhere, because outages do not happen all the time and it would just not be possible to do it that way. They did move the generator from Perenjori; of course, that would mean that if Perenjori had an outage, it would not have a generator. The reason we all went from individual generation to the network is that it is actually a cheaper solution. It is not always best to be disconnected; it is sometimes better to be connected. We are going through it in a systematic way and looking at standalone power systems in the wheatbelt; we will roll out 1 000 over the next four years. We will certainly do disconnected microgrids, where they are practical and will work. I would love to come and talk to the member's community about those options.