

RECONOMICS AND INDUSTRY STANDING COMMITTEE

INQUIRY INTO MICROGRIDS AND ASSOCIATED TECHNOLOGIES IN WA



**TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
MONDAY, 18 JUNE 2018**

SESSION SIX

Members

**Ms J.J. Shaw (Chair)
Mr S.K. L'Estrange (Deputy Chairman)
Mr Y. Mubarakai
Mr S.J. Price
Mr D.T. Redman**

Hearing commenced at 3.33 pm**Mr GREG SZOZDA****Engineer, Jacobs, examined:****Mr DERMOT COSTELLO****WA Adviser, Clean Energy Council, examined:****Mr JASON GREEF****Lawyer, PricewaterhouseCoopers, examined:**

The CHAIR: On behalf of the committee, I would like to thank you for agreeing to appear today for a hearing for the committee's inquiry into microgrids and associated technologies in Western Australia. My name is Jessica Shaw and I am the Chair of the Economics and Industry Standing Committee. I would like to introduce the other members of the committee: to my right, Yaz Mubarakai, member for Jandakot; and, to my left, Stephen Price, member for Forrestfield; and Terry Redman, member for Warren–Blackwood. Our Deputy Chair, Sean L'Estrange, will pop in; he has had to go out shortly. It is important that you understand that any deliberate misleading of this committee may be regarded as a contempt of Parliament. Your evidence is protected by parliamentary privilege. However, this privilege does not apply to anything you might say outside of today's proceedings.

Before we begin with our questions, do you have any questions about your attendance here today?

The WITNESSES: No.

The CHAIR: Would you like to make a short opening statement?

Mr COSTELLO: No, thank you, just to thank you for providing us with the opportunity to attend. We would like to provide some feedback during the process, and we are looking forward to today as well.

The CHAIR: Great. Thank you. Perhaps to begin, could you give us a bit of an overview of the Clean Energy Council, what your membership base is like, what your role is, and I suppose your perspectives on the topic that we are inquiring into?

Mr COSTELLO: I will just give you an update on the Clean Energy Council. It is a peak body for the clean energy sector. It is not a government body. It is a membership organisation. We have a couple of main key strands for our business. Apart from some lobbying, it is more policy development at both state and federal levels, just to make sure that renewables is part of the conversation. We play a strong role in the governance part of the industry as well. We have over 5,000 accredited CEC installers, so all your electricians who put your solar panels on the roofs should, as best practice, carry a CEC accreditation card. We also have a governance list in regard to solar panels and inverters that carry CEC standards.

Groups such as Western Power and Horizon have adopted our approved list so that they do not have to keep their open trace of what is a good panel and a bad panel; they just keep referring to our lists. If people are trying to put systems onto the SWIS, for example, one of the requirements will be CEC accreditation. We are currently co-sharing with Standards Australia the development of similar governance standards for domestic battery storage, because obviously there is a huge amount happening in this space, but industry is playing catch-up with the technology. They are probably the main strands.

We have a diverse membership base. We have over 400 members. They range from the large-scale retailers and developers right down to the technology providers and everything in between. We have a lot of interest at the minute from the resource sector and we are trying to explore what is happening with this whole fangle renewable piece. The greenwashing days are gone and they are looking at it from an economic perspective now—hence microgrids, virtual power stations and peer-to-peer trading. It is all about evolution. We are trying to put in some proper governance, where possible, and have conversations, which we feel is pretty much middle of the road from a political situation. We look at all sides of politics the same. We are just trying to have that sensible conversation. That is a quick snapshot. We have the engineering consultancies and we have the big four as well that we all kind of just leverage off, and from us submitting papers, to inquiries or anything, we always go to our members as well to try to get some impartial inputs.

The CHAIR: That is a perspective that we are particularly keen to understand. We have heard from Synergy and from Western Power and Horizon Power, and obviously they are the three stakeholders in Western Australia in terms of providing these technologies and managing the networks. We have had heard from a couple of the smaller companies, but it is a really important perspective that we certainly are very keen to understand in more depth—the way that your members interact with those GTEs, the sorts of opportunities that your members perceive in the market, and how those smaller companies might like to participate in this microgrid revolution,

Mr COSTELLO: Evolution, revolution.

The CHAIR: Yes, that is right. So if you could maybe give us a bit of understanding of those sorts of issues, that would be great.

Mr COSTELLO: I suppose at a state level, Jessica, Synergy, Horizon and Western Power are all members of the Clean Energy Council. For this process, we have agreed that they all obviously have their own agendas, so they have not really weighed into the CEC submission at all, which both sides were quite happy with. That kind of allowed us to have more of an agnostic view, as we felt. So we would go to engineering firms, some of the smaller development companies, but more so from the guys here, to get this type of viewpoint of what is happening. From an industry perspective, not everyone is very positive on the evolution of what is happening. Everybody is keen to see where it goes. From a smaller perspective, I wonder from some of the feedback we have got—Jason or Greg might be able to jump in—about how the wider industry would look at the three big companies and kind of go: what role should they be playing as state entities compared to the private sector?

We have not felt a huge amount of—I was going to say angry—annoyed or curious people yet, but we feel that that is coming. The private sector is kind of going, “What’s the role of the three gentailers and where does the private sector complain?” That is probably a concern that we are just starting to hear stories and rumours about. It is not in the mainstream yet. I think it is still a good news story. People are all seeing the opportunities. At this stage, it is not anything that is really concerning us as to where do different parties all fit in.

Mr D.T. REDMAN: Can I just expand on that? When you are talking about the potential for some angst to come into the system, are you talking about people feeling like it is not an even playing field in their capacity to pick up contracts? Can you just expand on that for me?

Mr COSTELLO: I think so, Terry. If you take the two big ones of Western Power and Horizon, the question that might be asked is: is that Horizon’s role to be developing solutions and developing microgrids or should it be—we will not use any companies by name—private sector solution—type companies?

Mr D.T. REDMAN: Internal capacity versus external capacity?

Mr COSTELLO: Yes. The Western Power method of going about it—doing some demonstrations and really working with the private sector—has been very welcomed, but I guess they have kind of ramped that up to the next 60 standalone solutions and the next stage might be thousands of standalone solutions. The question might just be: where do Western Power step back or where do Western Power own batteries or where does the battery sit, just to simplify things a little bit? I would not say there is angst yet, Terry, but there have been some conversations. I think that is as far as it has got.

Mr D.T. REDMAN: Just to expand on that again, are you talking about the engagement in contracting to build or are you talking about ongoing operational contracts?

Mr COSTELLO: No, engagement to build. Some people have referred to it as Synergy coming out with their battery solar product in the retail space. People are going, “Is that Synergy’s role?” Synergy would go, “That’s what our members are looking for.” It is a two-way conversation. We will try to play a very sensible role in that, but we just see it could get —

Mr D.T. REDMAN: Correct me if I am wrong, did I hear that Horizon put in a submission to a Western Power contract?

Mr COSTELLO: I would be very surprised if they did not. That is the division where they see their solutions division within Horizon, which I think they have now set up as a separate entity, and would very much look at the Western Power opportunity and go, “That’s what we want to be doing.”

The CHAIR: Has there been any conversation amongst your membership base about appetite to contract directly with customers? We had some evidence last week from an EPC provider to suggest that they are quite happy playing in the EPC space. They do not necessarily want to enter into long-term power sales contracts with customers directly. They are quite comfortable with a model where they are contracting with Western Power or Horizon Power, because that is the big state government—underwritten counterparty with a credit capability and very low risk in terms of a counterparty. Is that a live issue amongst your membership? Have there been conversations around those sorts of issues?

Mr COSTELLO: It depends on the scale, Jessica. Yes, on the large-scale projects, if a developer or an EPC were coming in, the local person would want the government-backed entities. What you are referring to there are some of the smaller members who are looking to try to get creative in regard to is it offering corporate PPAs or just small retail-type opportunities. We are seeing a lot more of that happening. Again, the first thing is small companies would go, “The hardest thing we can do now is the barriers that Western Power and Synergy in particular would put up.”

But there is a lot of frustration from small people trying to be quite innovative in that space. At the big scale, no, I think—Greg, it is probably in your space—that comfort level has to be there and you just see the lack of large-scale projects getting up in WA compared to over east, which is a frustration. They like the solidity of a state-backed entity. But our concern will be on that small scale. Some of it is even behind the meter in the one to five megawatt scale. That is where we are seeing some frustrations.

Mr SZOZDA: Nobody really wants to take on companies on those bigger projects, so the guarantees have to come from somewhere. Typically, a power purchase agreement of some sort gives that guarantee. That comes with a scale of the project, and entities such as Synergy have perhaps more freedom in this space or many more options than the smaller operators.

The CHAIR: You mentioned barriers from interface with Synergy and Western Power. Could we explore technical barriers first? That is something that this committee is really quite keen to understand. In your interaction around grid connections, have you encountered or have your

members encountered difficulties navigating the technical arrangements and how open do you think Western Power is to accommodating many of the technologies that your members would like to offer into the market?

Mr COSTELLO: I would probably tackle it both ways, Jessica, again. The large-scale stuff has been kind of a merry-go-round for several years with the CAG, with the GIA and back to the CAG process again. It has seen a lot of disillusionment in the sector and, I think, a lot of frustration and that is from investment right through to just the technical—I was going to say risk—uncertainty around it. From a large-scale perspective, I think everybody knows the frustrations that are there. I think that is underpinned quite a lot with the constrained access process. I think as an industry, we could do a lot if we could move that on a bit quicker.

As a CEC, that is the kind of role we take. We just start talking to AEMO, PUO and the minister's office to try to go, "What needs to be done to move that?" It is not about anything other than giving the sector some certainty that they know what they are dealing with, be that a technical commitment of a couple of million dollars to a project development or from an investor overseas even looking at it going, "It's just too hard." That is what we hear a lot: it is just too hard.

Mr SZOZDA: And we have seen that on a number of occasions. As an engineering company, we are not associated with anyone. We are completely open and we work on both sides of the fence and we experience that type of approach: "It is too hard; why is it so hard?"

Mr COSTELLO: That is the large scale, Jessica. The underlying theme that we have had from our members is just the frustrations there. I can understand, because I spend a lot of time with Western Power, their place in it. I think they have been quite proactive and open, particularly in the last year, to try to step through, so I would not sit here and lambaste Western Power at the moment. I think they are trying; their hands just seem quite tied with what they can do. I think the GIA process is okay. Nobody liked it, but it kind of filled that gap. The new CAG process again has frustrations, but you can see that is probably the best of a bad scenario. Tightening it up could be the constrained access legislation going through sooner rather than later.

On the smaller microgrid side, I must say hats off to Western Power about how engaging they have been. I have been in numerous meetings with proponents and members of ours who kind of just brought us along to try to give them support at Western Power, and Western Power have really been very open and looking at different types of connection processes and getting a little more creative around how it is done, not stepping outside the rules, but they have been very, very open.

So I would give Western Power full kudos in this microgrid space at the moment. That is everything from microgrids to virtual power stations to peer to peer. They are a new innovation group and their message very much is "We're open for business." I think on the microgrid smaller scale, you would have to sort of say that the feedback from the industry is it is quite positive coming from Western Power. Horizon are kind of doing their own thing. Some of the proponents trying to provide solutions to Horizon are seeing some frustrations that Horizon are kind of going, "We're doing this ourselves now, so we don't really need you anymore." That part, I think, will be the angst that will come up, Terry, a bit more.

Mr D.T. REDMAN: What is your assessment of the level of private sector capacity here in Western Australia to deliver to these solutions and how important is what you are talking about now—the contracts and the ongoing work—to maintaining that capacity?

Mr COSTELLO: It is a very good point. I talk to Western Power about it. The new standalone process they are running is to test that supply chain to see who is there. You will find that a lot of the local proponents are partnering with either a foreign investment arm or foreign technology. There are

five or six pretty credible what we call small-scale microgrid type solutions companies here who are all very, very capable. But beyond that you are looking at—I will not use any names—your eastern states companies and overseas companies who have all identified WA as the microgrid sandbox and they are all keen to get involved. Yes, there are some very good capabilities here but probably not as much as we would like to see.

Mr D.T. REDMAN: That link to having international and interstate connections is a pretty important piece you were saying to maintain that capacity, which means it should be something we should be fearful of?

Mr COSTELLO: I definitely do not think it should be something we should be fearful of, no. To bring in the expertise and to bring in the technology and in often case to bring in finance as well.

Mr SZOZDA: And honestly, WA because of its geography across the State and how straight the grid is gives much more flexibility and opportunities for the microgrid part than it would otherwise in the eastern states. This is beautiful piece. It has great opportunities.

Mr COSTELLO: To touch on that again, we are seeing that major interest from the resource sector. That is where it is going to go from. Okay, how many companies can deliver under SWIS and under NWIS to bottom mining companies do, and who can deliver for them? They will be looking at the big end of town for solutions.

Mr SZOZDA: Definitely, there is a lot of activity within the mining industry right now. They pretty much try to take their destiny in their own hands without waiting for full legislation coming in or a carbon tax decision. They actually are doing what they believe is their corporate responsibility, and that is very nice to see. I am talking about plants for decarbonising compound, for example—big miners. Is that going to go ahead? It is a different story. That is a commercial decision that needs to be taken by them, but they are looking into it actively, so that is good to see.

Mr COSTELLO: In any case, we work very closely with ARENA and the CEFC as well. There are a lot of inquiries coming through either us or through them about what is happening in WA. It will be kind of, I think, highlighted in next week's conference of energy and mines. I think that will kind of harness the actual interest there is in the state.

The CHAIR: We had the CEFC in this morning and they outlined that of the \$6 billion they have so far spent out of their \$10 billion fund. Only \$34 million of that has been spent in Western Australia. One of the things they spoke to us about was a general level of awareness and engagement from industry to seek the funding that could potentially be deployed into Western Australia. Certainly, that is the situation that they are very cognisant of and want to see turned around. How aware are your members of the CEFC and how do you and your members engage? What more could be done to support your members trying to secure funding from sources like ARENA or from the CEFC?

Mr COSTELLO: ARENA is probably more, as people say, low-hanging fruit. With CEFC coming through under debt finance kind of aspect of projects, people are kind of going off it. "I'll go and talk to CEFC when I have my 10 megawatt-plus project contracted and ready to go", and there are not too many of them in Western Australia at the minute. That is probably why there has been a lack of investment from a debt finance perspective from CEFC here.

I know some of the more advanced projects are already talking to CEFC about whether to use them or a foreign source or a standard domestic bank. That is probably one of the reasons why. ARENA on the other hand: a lot of the people are aware of it, they kind of know the goals and aims of ARENA to actually give out considerable amounts of funding, sometimes no strings and sometimes with caveats attached. But that is more on the, not so much equity, but under development funds. People know a lot more about how to access ARENA than they do about accessing CEFC.

I would say anyone in the sector would be aware of who CEFC is, but they will not go and look for a small bit of investment for \$1 million or \$2 million. CEFC is renowned for being that little bit more expensive. If you are only getting a small project, the benefits that the large guys would have of engaging CEFC would not filter down to a smaller one.

The CHAIR: When you say “a little bit more expensive”, do you mean —

Mr COSTELLO: Just the cost of finance.

The CHAIR: The cost of finance?

Mr COSTELLO: Yes, just slightly. I want people to use them. That is part of federal funding. The perception is that they are a little bit more expensive.

Mr D.T. REDMAN: They suggested a 70 basis points advantage today; that was what they presented to us.

Mr COSTELLO: Caught out!

The feedback we get from them as well is that they do a huge amount more detailed due diligence as well and a lot more kind of hoop jumping just to make sure, because it is government money they are sharing out. The big four banks are getting very aggressive in this space now, so they are all being quite competitive. That is probably why CEFC has not spent as much money; it is just that the projects have not been there.

The CHAIR: They mentioned two other potential models. They had a couple of hundred million dollar innovation fund where they had, I guess, a different set of hurdles that needed to be jumped through in order to access that financing, and were perhaps a little freer in their ability to distribute funding to less mature projects, rather than with a-ribbon-tied-around-it projects that basically need the finance.

The other structure they spoke about as well was equity participation in projects, which again made them cast their eye over return a little differently. It was an interesting discussion insofar as the CEFC, it would seem, was trying to be a little more creative in the way in which they are able to participate in projects. I think they were very mindful because of the differences in our market here—the fact that there are not that many large-scale renewable projects that are ready to be inked and delivered. They are trying to think of other ways in which they can try and channel some of that funding into Western Australia, recognising that we have had such a small part of that pie. That seems to be a repeated story over and over again for Western Australia.

Mr SZOZDA: Part of that is just the simple reality of WA. There is an excess of generation on that grid. There is massive excess of generation, so the question is: How can they make the market attractive for the new entrants? What can we do to actually make room for them right now? There were some initiatives like shutting down some of the older assets. That may have made a little bit of the market more energetic, but there is still excess, so that is one of the stoppers of those developments.

The CHAIR: That is a really interesting segue into an issue that I would like to tease out a little further. We have heard about different asset categories, particularly the performance of batteries and the way they are able to interact with networks and the ways these types of assets derive revenue and how they are able to participate in the market. If what they are doing is not being adequately valued by the market and they are not achieving therefore access to revenue streams to underwrite the rollout of these assets, that is an issue. I wondered if you had any thoughts on regulatory or market reform to encourage these types of assets to roll out?

Mr SZOZDA: I can comment from the technical perspective. I am an engineer, so I will stick to my guns. If we take into account batteries, for example, simple calculation will show you that harvesting the market or the grid, as we call it, is not going to give you revenue. A defence between peak and trough of the generation and consumption is just not there. So your return is not going to make it. There is still no real market in WA for ancillary services to the grid. What to do with those batteries? They are good for things like ancillary services, spinning reserves, et cetera but there is no market for that. Simply buying energy cheap and selling it expensive, is not going to make the cut—not with the life span of those batteries down there.

There is no other room right now, except maybe on the real hybrid systems where there are standalone microgrids, which we are discussing, yes, absolutely, but on the larger scale—I have done some calculations myself on the back of the envelope—it just did not stack up. I think that is maybe one of the barriers. There is no market for ancillary services to the extent that it will enable those technologies to come online right now.

The CHAIR: But, nonetheless, real value that these assets could provide in supporting the network.

Mr SZOZDA: Absolutely, they can. But how to get the money from that—that part is not there yet. I think there is some push from in Western Power. I think Western Power is looking at developing for those ancillary services to be provided with different means than traditionally just keeping peaking stations and paying capacity credits. That is in the progress of changing. That might enable those different technologies to come online and be profitable.

The CHAIR: Have your members experience in other jurisdictions where these types of revenue streams are available or the services are—they are able to make a living out of these asset classes in other jurisdictions? What frameworks have you seen work well that encourage these technologies—or have your members? I am happy for you to take that on notice if you do not feel that you are in a position to answer it off the bat.

Mr COSTELLO: It is one we will definitely take on notice, Jessica, and come back to you. There are some companies that spring to mind, but I would not want to speak on their behalf—members of ours. When I talk about the Teslas, who have done the large-scale stuff on the NEM, there are some more innovative companies that are eking out a living. Again, I just want to ask their permission that I can provide that kind of info through.

To follow on from Greg, the ancillary services market might not be there yet, but it is the potential offsetting of Western Power expansions or Western Power upgrades I think that is where these companies are seeing some opportunity. That means Western Power then is their client, but they are going to be competing with Western Power, and the same with the Horizon space. Until the batteries come down in cost so they can be used as an energy battery, it is hard for them at the moment to justify a business case. But some of them have been quite innovative, but they are niche opportunities.

Mr S.K. L'ESTRANGE: On page 3 of your submission, just at the bottom there, you say —

Building on the success of these pilot programs, it is now time to maximise the economic opportunities of microgrids by moving from the 'pilot phase' to a more comprehensive program.

I noticed you just then said we are not quite ready.

Mr COSTELLO: Sean, that is kind of the same point, that they are there for the development of—the prevention to upgrades for Western Power for running 60 standalone systems, for example. That is the kind of business model on them, but providing eight, 10 hours battery or two or three hours battery, they are still not there yet. So, it is the niche applications.

Mr S.K. L'ESTRANGE: Do you look to create a strategic plan for when the optimum time would be to recommend a movement onto microgrids?

Mr SZOZDA: We do not do a huge amount of the projection-type work ourselves. We leave a lot to our members and then we leverage off that. There is that crossover point curve is coming; I think it will peak in about 18 to 24 months, but I will not put pressure on Jason to come up with a figure. The only thing we would say there is it is very much following the same price trajectory as the PV panels. That is what a lot of it has been based on. Even the large Tesla battery is just for services. It is not pushing that evening peak by half an hour or anything. It is not the driver for the batteries just yet.

Mr D.T. REDMAN: Just going back to the past conversation about the ancillary benefits that can come from new tech that is not able to enter into the marketplace now and we talked about the necessity to have some change, whether it be regulatory or other government policy settings to allow that to happen. If you were to recommend to the committee here to make—we are going to make recommendations at some point in time. A lot of the presentations that have been put to us are talking about the pace of change that is occurring in distributed energy and resources and technology, batteries and the like. Do you think that that change needs to be evolutionary or revolutionary? How aggressively should government take up that issue?

Mr COSTELLO: Personally, I do not think it is revolutionary; I think it is happening. Government can probably facilitate it through small tweaks and changes—I think we refer to them there—but in reality, it is happening anyway. Are there any wholesale-type changes that government need to make? Not really, nothing that jumps out at us. We are more concerned around the choice of people within a microgrid to still have that reliability and then what happens if there is some competition comes into the space and are they tied in with that provider? That is a little bit more what we are concerned about. I think for the uptake of microgrids, you can see it is going to happen from a technical perspective.

Mr D.T. REDMAN: What you are talking about is just policy settings within the GTEs in terms of how they behave with the private sector?

Mr COSTELLO: Fundamentally, yes. They would need clear direction from government as to what their role is. Are they a facilitator or they are partaking? I think that is probably the crux, Terry, just that certainty within the industry of what the roles of the three big companies are.

Mr D.T. REDMAN: There were groups at one point getting a lot of money to have capacity just sitting on the side and lobbying government very hard when there were shifts occurring. Do you have any of those as any of your members?

Mr COSTELLO: No, it was a very interesting space when the EnerNOCs of the world lobbied very hard. We do not have those sorts of members in our space at the minute. We have some of the incumbents, such as Synergy, that might not like a huge fundamental shift and change. Again, that is more the traditional sector; the Bluewaters et cetera are not really members of ours. They are aware of what we are doing and what we stand for, but we have not clashed with them directly yet or we have not had any huge push back from them, but change is bad, because I think everybody kind of accepts it is happening.

Mr SZOZDA: Those companies usually also have power purchase agreements, in the long term, directly with their clients. So they are not that much affected by what is happening, as long as the grid connection exists, which is in Western Power's hands, so what they use now. A shift to microgrids or any other technologies does not really have an impact on them because they are on a set contract for 20 years. That is perhaps why they are not really that concerned.

Mr COSTELLO: Terry, to summarise the answer, it is just the role of the large state utilities and what they are doing, what their role will be moving forward.

Mr SZOZDA: I have solar panels on my roof on two sides to make it better, actually, for the grid. When solar panels came, there was a big wave of solar panels coming on the roof because it was very attractive price-wise. Paybacks were very good, the rates, and that has declined, rightfully. However, now with the new technologies coming such as batteries, if we discuss a situation when our traditional thermal generation becomes obsolete and we want to replace it with new technologies, that is not definitely not revolutionary. That is evolutionary. But somehow we have to enable that to happen so our generation and storage and supply chain is distributed as well. Eventually we will end up with equivalent, just as good or even better, just at the right time when the older generation is coming to the end of age. I think getting this mix right is very, very difficult. But it is possible.

The CHAIR: How important are the enabling technologies around this? How important is the IOT and the telecommunications as part of all of this?

Mr COSTELLO: I can answer, Jessica. The IOT and software solutions, nobody knew about it 12 months ago and now they are the keywords. It is not the Power Ledgers of the world who know that they have the challenges. It is just the generic piece. It is all about the consumer practices of having your apps and having your HDMI unit on your wall as to how you are going to do it. That is going to be the key changer, that digitalisation part of it. The battery would be a unit just like your panel would be a unit and your inverter would be a unit. It is how you go about using them.

Mr SZOZDA: However, for example, large battery storage which is a name for a frequency support as a spinning reserve, naturally will react on its own to the frequency disturbance. The problem with that is that you do not really want that. We want to set some thresholds, so you want to stop it overreacting because that impacts on the lifespan of the plant, and that is where the comms and some proactive measures are coming into place. Definitely you might want to have a trigger that will actually enable that feature and normally just leave it dormant, so you might want greater disturbance to be triggered and next keep that system in. So from that perspective, in order to manage all those distributed assets, I think the communication will be important. Again, to what extent? Household level? Probably not, but community or locality level, yes, we start talking about managing the network and managing the grid, so probably at that level, yes, that becomes progressively more and more important.

The CHAIR: Do you see a role for a distribution network operator in that space?

Mr COSTELLO: I am trying to think back to what Greg was saying, but I know if Brian answers here —

The CHAIR: He would have a field day!

Mr COSTELLO: He would have a field day. He represents a company that is trying to do virtual power stations, so he does believe that it is actually at the household level where all the change is going to happen. There is no one-stop fix to this; it is not going to be a virtual power station or peer-to-peer trading or community batteries, it is going to be a blend; it really is going to be a blend. I come back to the point that we were in Collie last week at the conference—the future of Collie conversation—and it was amazing to talk to so many people down there and they were going, “We know it’s happening; we just want to be in the conversation and it has to be transitioned properly.” I go back to your point, Terry, that it is evolutionary more so than revolutionary. I think everybody is on board that it is happening —

Mr D.T. REDMAN: There is recognition.

Mr COSTELLO: It is recognition that it is actually going to happen, which was refreshing. They are not saying that renewables are the be-all and end-all, because there are not many jobs in it, but there is an acceptance that it is happening.

The CHAIR: In that context, then, what do you see as being the role of the regulatory framework? If there were some core things that it is not doing right now that it should be doing to facilitate this blend emerging, what would you like to see in that space?

Mr COSTELLO: Can I come back to you on that as well?

The CHAIR: Yes, you can.

Mr COSTELLO: The only reason I say that is that we have to represent our large-scale members as well, who possibly will have a different viewpoint to what my personal view is, but also what some of our smaller members' views are. It is the crux of what we want to help the inquiry with. I was in a conference call this morning, just trying to really position ourselves as to what is the benefit for the sector, more so than what is the benefit for the three big members in WA or the mums and dads. I am more than happy to come back with a bit more meat around what the CC's role is and what type —

The CHAIR: I understand completely. You referred in your previous evidence to WA as being a bit of a sandbox and you talk about WA's leadership role when Western Power submitted a rule change proposal to the AEMC and our independents here. Could you perhaps expand a little more on that aspect at least of this topic?

Mr COSTELLO: I know we touched on that. Western Power, I think in fairness, has pushed the boundaries to see what they can do and what they cannot do, the same as Horizon. Until they are told they should not do something, they are dead right to plough on and try things. I suppose we do not have that heavy name presence hanging over us, just look at the NEG; we are kind of an afterthought here, which is frustrating but at the same time is an opportunity—not just because of the nature of the grid from a technical perspective; I just think we have that bit of flexibility to try things and the fact that we are in the unique position that the three big companies are state-owned. It is going to be driven by government as to what we actually do or do not do.

The CHAIR: What is industry's and your members' appetite to come along with government on that journey?

Mr COSTELLO: Again, if we are not looking at the large-scale stuff but just the small-scale stuff, I think it is a pretty big appetite. They know that government has a considerable role to play in Western Australia and that is why they are looking west at that scale. They are not looking west on the large scale anymore; it is too hard, as Greg was saying. The appetite is there. If there were clearly defined parameters of what Horizon, Western Power and Synergy were going to be doing, the private sector would go, "Okay, we're either competing with them or working with them, or they're going to be our client or they're going to be our partner." That is the kind of certainty that the sector would like to see.

The CHAIR: We have had a couple of academic institutions come in today and they talked about the need for collaboration and a conversation between the engineering community, the BD sector, academia and government. What could government do to more effectively promote that conversation or that collaboration around this particular topic?

Mr COSTELLO: I probably would not agree that there is a disconnect at the moment. I actually think that the sector is small enough and we have done enough talking about it from the different parts of the sector that if you are involved in the energy space in WA, you pretty much know what is happening. I think the time for having more sit-down collaboration talks and talkfests—I do not

really know what it is going to achieve. That is no slight on the academics; I think they have a massive role to play, but it is industry that is driving this, and the uptake in technology. The academics want to be relevant, but I think the time for talking has really passed because with the uptake of this technology, it is happening. I do not think a big collaboration is needed between government, industry, academics and technology people; it is happening.

The CHAIR: We just have to get on with it?

Mr COSTELLO: It is going to get on with it anyway; the proof is that it is happening. Fair play to Synergy and Horizon for trying to be relevant, but if we need to sit down and start doing a huge amount of consultation and additional talks, I think we have probably passed that stage, but that is probably going to go against a lot of what we have said today.

The CHAIR: No, that is all good.

Mr COSTELLO: That is the feedback from our members: just let government get out of the way and let people start talking and just let industry move on with this. That is probably the message we are hearing a lot of, and that has been indicated by the Teslas and the others, saying, "Somebody wants a big battery? We're going to do it. We're not going to wait for permission."

The CHAIR: Do not ask for permission; seek forgiveness, right?

Thank you very much. I will proceed to close today's hearing. Thank you for your evidence before the committee. A transcript of this hearing will be emailed to you for correction of minor errors. Any such corrections must be made and the transcript returned within seven days of the date of the letter attached to the transcript. If the transcript is not returned within this period, it will be deemed to be correct. New material cannot be added via these corrections, and the sense of your evidence cannot be altered. Should you wish to provide additional information or elaborate on particular points, please include a supplementary submission for the committee's consideration when you return your corrected transcript of evidence. Thank you so much. That was great.

Hearing concluded at 4.18 pm
