

**Horizon Power —**

Ms A.E. Kent, Chair.

Mr W.J. Johnston, Minister for Energy.

Ms S. Unwin, Chief Executive Officer.

Mr N. Wijayadasa, Manager, Finance.

Ms T. Sanderson, General Manager, Operations.

Mr J. Thomas, Acting Coordinator of Energy, Energy Policy WA.

Mr R. Sao, Chief of Staff, Minister for Energy.

Mrs A. Keogh, Principal Policy Adviser.

Ms Y. Lucas, Senior Policy Adviser.

[Witnesses introduced.]

**The CHAIR:** This estimates committee will be reported by Hansard. The daily proof *Hansard* will be available online as soon as possible within two business days. Questions must relate to the operations and budget of the off-budget authority. The chair will allow as many questions as possible. Questions and answers should be short and to the point.

A minister may agree to provide supplementary information to the committee. I will ask the minister to clearly indicate what information they agree to provide and will then allocate a reference number. Supplementary information should be provided to the principal clerk by close of business Friday, 3 June 2022. If a minister suggests that a matter be put on notice, members should use the online questions on notice system.

Are there any questions? The member for Moore.

**Mr R.S. LOVE:** Thank you. I refer to page 813 of budget paper No 2, volume 2, and the significant issues impacting the government trading enterprise. Under the heading “Renewable Energy”, it states that Horizon Power’s zero refusal plan will allow all customers to connect rooftop solar by 2025. How will that be achieved with the centralised battery energy storage systems? How will Horizon Power go about actually achieving that outcome? It seems quite ambitious.

**Mr W.J. JOHNSTON:** It is absolutely ambitious. It will require world-leading achievement. Obviously, Horizon Power is the world-leading manager of market grids. At the moment, we cannot get to the point at which we have zero refusal, but that is our ambition. That is what is stated here. I will invite Ms Unwin to explain how the business is attempting to achieve this.

**Ms S. Unwin:** Thank you. In relation to zero refusals, we are speaking about rooftop solar of both our commercial and residential customers and how we can make sure that the issues created by intermittency in our much smaller systems, where the generation is much more limited, are able to be dealt with so that we get system security and reliability. The way we have demonstrated the ability to do that is through the distributed energy resources—or DER—project in Onslow, which is a distributed energy management program. In effect, it is a technological solution that enables us to see all the demand in the system, look at the supply that is available through both distributed rooftop solar and our centralised system, and then coordinate a dispatch of that through a dispatch engine. By doing that, we are actually able to connect every rooftop without needing to be, as we call it, limited by hosting capacity. That distributed energy resources management system—or DERMS—has been demonstrated in Onslow as successfully able to enable those connections. What we would now like to do is roll that out through our systems. We have a plan to look to do that over the next couple of years. However, it is very dependent on a secure gateway device that enables us to speak to the household and for our signal—“do this” or “do that”, based on the weather—to be listened to. It is a bold plan. It is a strategic plan to do it, because our view is that every rooftop should be able to connect, and we need to overcome our system challenges to do so.

**Mr R.S. LOVE:** Further to that, it will take a significant amount of investment to actually achieve those outcomes, will it not? How will that be funded? Will it be funded by tariff or by further injection of funds from the state?

**Mr W.J. JOHNSTON:** One of the interesting things about Horizon Power is it almost always sells its electricity at a loss. It costs the government less if it sells less electricity. The economic drivers for investment into Horizon Power are very different from the economic drivers in Synergy or Western Power. Just as an example, there is a particular town—I will not name it—in which we pay \$2.70 per kilowatt of power, which we then sell for 30¢. If we reduce the amount of electricity we sell, we will make more money, or we will lose less money, if you want to put it that way. The gap—it is a large gap; it is in the papers—between Horizon Power’s income and expenditure is paid for by the tech. We talked about the tech when Synergy were here. That is paid for by transmission customers of Western Power. Western Power collects it from transmission customers. About 90 per cent of transmission customers

are Synergy customers, but there is a small number that are not, and that is then passed to Horizon. That tech is set by the Treasurer and is collected in that way. So, yes, we will need to invest, but the pay-off is that we will lose less money, and that is good for the taxpayers.

I will give the member the example of Esperance. The new arrangement in Esperance will save \$10 million a year. That does not mean that the people of Esperance will get a \$10 million saving; it means that there will be a \$10 million smaller subsidy to the people of Esperance. Of course, there is a contractual arrangement with the supplier, but the benefit for the taxpayer is that the tech goes down. The tech is the key there. Just as an example, when the member's party was in government, every Horizon Power customer got a smart advanced meter. That is not true for Synergy customers or Western Power customers. Where was that paid from? Where did that capital come from? It came from the tech.

**Mr R.S. LOVE:** The minister mentioned Esperance. In the significant issues affecting the organisation, there is a section dealing with the Esperance electrification program. I would like to know how long it will take to transition those customers, and how much is it costing the taxpayer to pay the company to continue to supply these customers with reticulated gas for the duration of that program?

**Mr W.J. JOHNSTON:** The Esperance electrification program is the response to the decision of the privately owned business to cease to supply customers in Esperance. Obviously, we are very disappointed with the decision of the private company to walk away from its customers. We have worked with it to come up with a solution. I issued a media release on 26 April that announced \$10.5 million as the amount being spent on the transition away from reticulated gas for customers, so that is already public. That was made public at that time. Basically, we have a year to do it. We have to get it done by March next year. In fact, we were talking literally yesterday about the performance on this project, and I am happy for Ms Unwin to explain some of the challenges they are finding and the response of Horizon Power, but it is still on track.

[2.10 pm]

**Ms S. Unwin:** In relation to Esperance and the reticulation program, we have a year, so we have until March next year. It is a logistical issue. There are, I think, 388 residential customers and about 40 business customers, which range from smaller businesses to quite substantial gas-dependent businesses, such as the grain dryer and the laundromat. They all have unique challenges. Every household and every business has a different connection issue that we need to work through, so it is very individual. In Esperance, we have done a very considered community engagement plan that has seen us be in the community frequently but also have very clear lines of process for how customers can identify whether they are an affected customer, how we will assess the needs of that household—a household audit—and how we will move through a program of ensuring that we have a trade available to cut off the meter for the gas supply, cut off the gas and then install electrical appliances. Our challenges will be in the supply chain. We understand that it is about a six-week lead time for the vast majority of those appliances. Our challenge will also be trades. We have I think eight trades already registered with us. We have gone through the prequalification checks on safety and the like. They are all local Esperance trades, but they have a number of installations to do their work on from a gas and electricity perspective. We have that period of time to do it under the arrangement with the gas supply company. We think those challenges will be mitigated and that we can deal with them in the time frame, however, based on the information we have to date.

**Mr W.J. JOHNSTON:** Basically, we are giving up one year of the savings, but it is a 25 or 26-year contract. That is why we are prepared to do it. We acknowledged in the decision to move to the new energy supplier in Esperance that the existing supplier might walk away from the business, but we could not control that because we had never had a relationship of selling gas to anybody in Esperance. Horizon had never done it; it was never involved in it. It was a decision that that supplier made after it got the original energy supply contract from Horizon many, many years ago. Having got that contract, it then went and did other things. We never asked it to do that and we were never involved in it, so it was very difficult for us to have transparency. We are very confident that the project will be completed on time. It is fair to say that most residential customers are not a challenge. It will be some of the businesses that will be a bit more complex than the residential customers.

**Mr R.S. LOVE:** The minister said that some of the businesses are more complex. Is that because they have a very high thermal load in terms of whatever process they are using?

**Mr W.J. JOHNSTON:** The example is the laundromat. We could electrify the laundromat, but it is a not a high-margin business—let me put it that way—so there are challenges around working with it. For the grain dryer, again, I think there is an electrification option, but it might be that there is another option that will suit it. We are trying to work with each of those, I think, four large-volume customers, and we are sure we that we can come up with a solution for them. Generally speaking, there is no real challenge with the residential customers.

**Mr R.S. LOVE:** I have a different question but on the same section more or less. I am looking at the Denham hydrogen demonstration budget. Is the project behind schedule; and, if so, how far is it behind schedule?

**Mr W.J. JOHNSTON:** I will get Ms Unwin to talk about one of her favourite topics.

**Ms S. Unwin:** The Denham project is world leading. We are really proud of the support of the state for this project because it will enable us to test what we call deep storage in an energy system. The problem of intermittency and how we firm up renewables will be demonstrated in Denham. It is probably four to six months late. It is late for two reasons. The first reason is COVID and the second reason is the complexity of integrating not new technology but a new application of the technology into an existing distribution system. Because of COVID, we experienced very substantial delays both in Melbourne and also in having equipment arrive into Australia, as pretty much every business has experienced, which put us back a number of months. But the challenge of actually taking a fuel cell, for example, and using the stored energy in there that comes from electrolysis through a distribution centre has a number of challenges, including as a hazard and operability study. Hydrogen in this state has not been through the rigours of a HAZOP assessment in the past because we have not used it for this purpose. There is a lot of work to do to establish what currently is a fledgling industry but is likely to be a very formidable industry for Western Australia. The delays are probably quite explainable given those challenges of COVID, the supply chain and the complexity of doing something that is a world first like this.

**Mr R.S. LOVE:** According to the *Budget statements*, it is a \$9.3 million project. Is it going to power the whole town or will it power a percentage of the town? How many homes or businesses will it actually power?

**Mr W.J. JOHNSTON:** I will invite Ms Unwin to talk about this project, which, just like in Onslow, is a globally significant trial. It will not power the whole town. It is a trial. It is a very expensive trial, but the thing about these new technologies is that they are not currently cost competitive; otherwise, everybody would do them. The good thing is that we are learning out of this so that we can then apply it. Again, when I talked before about the high-cost towns, the member can see that if this works, it might give us a solution that will work in those high-cost towns that is 100 per cent renewable, because that is what we all want. I invite Ms Unwin to speak.

**Ms S. Unwin:** One hundred homes in Denham will be powered through this solution. We have dedicated half of the solar farm—it is about 700 kilowatts—solely to producing the green energy for the purposes of electrolysis. It goes through that process and is then compressed and stored. It will go into a fuel cell and then out to approximately 100 homes in Denham. It is very much a demonstration of the technology. As I said, it is the first time its use in this way has been done in the world—that is, a fuel cell through the electrolysis process into the distribution network for firm renewables 24/7.

**Mr W.J. JOHNSTON:** I make the point that a range of safety questions arise with hydrogen because there is a range of different outcomes for risk with hydrogen that do not exist for methane.

**Mr R.S. LOVE:** There are a number of projects of that type—green energy projects—for Horizon in the *Budget statements*. What funding has Horizon secured or is it expecting to secure for further projects along these lines? They are demonstration projects mainly from the look of it.

**Mr W.J. JOHNSTON:** Not all the projects are demonstrations. For example, the regularisation of the power supply in remote communities is not a demonstration project. They wash their face. We are deeply committed to them and we are very pleased to see the state government put \$350 million into the remote communities fund, because obviously Horizon will ask for some of that money. Some are funded out of cash flow, some are funded out of equity injections, a small component for this hydrogen project came from the Australian Renewable Energy Agency, and some are tech funded. There are a range of funding sources. Different projects have different funding profiles.

**Mr R.S. LOVE:** I am looking at a number of the lines that refer to investing in a safe network. This could come under paragraph 1 of the asset investment program, which talks about providing a safe and reliable electricity supply to regional customers. In Horizon's distribution network—that is, areas in which Horizon has a network, such as Esperance—does it use different transmission poles from Western Power's wooden poles?

[2.20 pm]

**Mr W.J. JOHNSTON:** I will ask Ms Unwin to reply, but clearly it depends where they are. We need relevant technology because we do not want everything to be eaten. I invite Ms Unwin to speak.

**Ms S. Unwin:** I invite Ms Sanderson to answer this one.

**Ms T. Sanderson:** We have \$1.9 billion worth of assets across that 2.4 million square kilometres. We have a lot of assets, differing in age. We have upgraded our poles in a number of regions to be steel poles because they are more resilient against being eaten. In the past we have also trialled different methods to have wooden poles less susceptible, but largely now it is steel poles. We get our supply of poles through Western Power.

**Mr W.J. JOHNSTON:** On that topic of Western Power poles, one of the things that has happened recently is that the requirement for the disposal of poles has changed. The part that is extra-treated that goes in the ground now has to be disposed of as hazardous waste. We now have to send those parts off to whatever the name of the company is in the goldfields. They used to be disposed of, but now they have to be disposed of as hazardous waste, which has increased the cost of the disposal of wooden poles.

**Mr R.S. LOVE:** Does Horizon Power feel that the use of steel poles provides a more resilient network than using wooden poles does?

**Mr W.J. JOHNSTON:** Again, it depends where the poles are. The other thing is that Horizon Power is not a regulated business, unlike Western Power. Western Power is required by law to comply with the funding envelope provided by the Economic Regulation Authority and has to do the lowest cost option for whatever the solution is, whereas Horizon, leaving aside the north west interconnected system, is not a regulated business, so it has different pressures on it and can make bespoke decisions based on the specific location. Western Power has a range of challenges that come to it because of the ERA regulation, in the same way that the Australian Energy Regulator puts very similar obligations on the east coast. South Australia uses the famous Stobie poles because all the wooden poles get eaten there and they cannot be used. It is not that South Australia chooses to use Stobie poles, but if it does not, the system does not work. The problem with Stobie poles is that when cars crash into them people are killed. One of the challenges for the Electricity Trust of South Australia is managing the traffic risk, which we do not have because our poles do not have the same relationship to motor vehicles.

**Mr R.S. LOVE:** So the poles that Horizon uses are not the same as the South Australian poles?

**Mr W.J. JOHNSTON:** No. Does the member know what a Stobie pole is?

**Mr R.S. LOVE:** Vaguely, yes.

**Mr W.J. JOHNSTON:** They are two pieces of steel with concrete in the middle. It is very different from our poles. The first time I went to South Australia everybody was talking about Stobie poles and I had no idea what they were talking about. That is just what is done there. We do different things here because we have a different environment.

**Mr R.S. LOVE:** Western Power has a lot of trouble with pole-top fires. Does Horizon have that same issue?

**Mr W.J. JOHNSTON:** No, because pole-top fires are not caused by the pole but the build-up of pollution. Just park your car outside for two days and see what happens, particularly if there is light rain; there is build-up. People in an office building have their windows cleaned and a week later they are dirty again. The south west corner of Western Australia is different from all other places in Australia or other parts of the world. This is a Western Power question, not a Horizon question, but it is because of the environment the poles are in. Unfortunately, member, that little bit of the coast north and south of Geraldton is the worst spot for this problem.

**Mr R.S. LOVE:** It is an excellent place to trial some of those things.

**Mr W.J. JOHNSTON:** It is a wonderful place to live and people choose to live there, but there are other challenges that come up. It is harder for us to manage the network in that location because of its particular environment. The management of poles in Esperance is completely different from the management of poles in Kununurra. There are 37 microgrids and each one has its own challenges and Horizon needs to come up with a solution that works in each location.

**Mr R.S. LOVE:** I might defer to Dr Honey to see whether he has anything else he would like to ask.

**Dr D.J. HONEY:** That is putting me on the line, member.

**Mr W.J. JOHNSTON:** We can give the member a comfort break if he likes while we change, if he does not have a question.

**Dr D.J. HONEY:** To be honest, I am happy for the member for Moore to continue if he wants. The member asked a question about the Denham hydrogen plant, which I was especially interested in, and that has been answered well by the minister.

**The CHAIR:** That completes the examination of Horizon Power.

[2.30 pm]