

**STANDING COMMITTEE ON
ENVIRONMENT AND PUBLIC AFFAIRS**

**TRANSCRIPT OF EVIDENCE TAKEN
AT PERTH
WEDNESDAY, 26 SEPTEMBER 2007**

SESSION TWO

Members

**Hon Louise Pratt (Chair)
Hon Bruce Donaldson (Deputy Chairman)
Hon Kate Doust
Hon Paul Llewellyn
Hon Robyn McSweeney**

Hearing commenced at 11.10 am

BUCHANAN, MR IAN
Major Projects Coordinator, Western Power.

MATTNER, MR PETER
Manager Regulation and Pricing, Western Power.

CURRO, Mr Laurie
Manager Network Planning and Development, Western Power,
363 Wellington Street,
Perth 6000, examined:

HUNTER, Mr Jeff
Approvals and Development Coordinator, Western Power.

CHAIR: On behalf of the committee, I welcome you to this meeting. I begin by asking you to state your full name, contact address and the capacity in which you appear before the committee today.

Mr Buchanan: Ian John Buchanan, and I am the major projects coordinator for Western Power.

Mr Mattner: Peter Mattner, and I am here in the capacity as the manager of regulation and pricing for Western Power.

Mr Curro: Laurie Curro, and I am here in the capacity of manager planning and development.

Mr Hunter: Jeff Hunter, and I am the approvals and development coordinator for Western Power.

CHAIR: You would have signed a document entitled “Information for Witnesses”. Have you read and understood that document?

The Witnesses: Yes.

CHAIR: These proceedings are being reported by Hansard. A transcript of your evidence will be provided to you. To assist the committee and Hansard, please quote the full title of any document you refer to during the course of this hearing for the record. Be aware of the microphones and try to speak into them. Please do not cover them with papers or make noise near them. Please also try to speak in turn. I remind you that your transcript will become a matter for the public record. If for some reason you wish to make a confidential statement during today’s proceedings, you should request that the evidence be taken in closed session. If the committee grants your request, any public and media in attendance will be excluded from the hearing. Please note that until such time as the transcript of your evidence is finalised, it should not be made public. I advise you that premature publication or disclosure of your evidence may constitute a contempt of Parliament and may mean that the material published or disclosed is not subject to parliamentary privilege.

Would any of you like to make an opening statement or offer some background information that you think might be helpful to the committee?

Mr Curro: Yes. Western Power was engaged by Grange Resources Limited to look at solutions for the transport of energy to its mine. With a large site such as this, we started investigating the issues and the options around that. As part of our normal expansion, growth and forward planning of the network we also have other augmentations planned not only in the south west but also everywhere else. That has been part of our discussions of the options that we have looked at.

Hon PAUL LLEWELLYN: Would you clarify what that means?

Mr Curro: Yes. I have to apologise because my throat is a bit sore. In considering the options available to Grange, we have looked at what other works we were going to do in the area. One of the critical issues that need to be borne in mind is the time factors that we were looking at in trying to supply the mine, which have changed over time. Therefore, as the time limitations have changed, the options have sort of changed. In the first instance, when we were asked to look at an option for supplying power to the mine, the quickest solution was to have that original line, which is the one that goes around Gnowangerup, constructed from Muja all the way to the mine. The time issues had to also be considered. As perhaps the timing of the mine has changed slightly, for whatever reason, we have looked -

CHAIR: As in forward or out?

Mr Curro: Out. That has only been a matter of months. We were engaged to look at the full 80 megawatt or 70 megawatt load at Southdown as a starting point. As other discussions have progressed with Grange, and we have been working very closely with them on this, other solutions or options have come up for consideration.

CHAIR: There seems to be a perception at the moment that in terms of the alignment through the Stirling Ranges, whether it be the more northern or more southern one, a lot of the momentum is that it is almost a fait accompli. Are you saying that there are now some other proposals that are in the mix because the time lines have changed?

Mr Curro: Yes, technical proposals we do. We are looking at that. We cannot confuse the technical proposals with the forward planning and investigation of corridors. I cannot answer a lot of the corridor questions. My colleague on my right will do that. We have explored all the technical options that are feasible to supply such a load so far away from the generating source. The feasibility studies that are required before we do costing include, for instance, the line route. For example, does it have to be an extra 50 kilometres because it has to go around this, or whatever? That also has an impact on the technical viability of the solution.

CHAIR: Would anybody else like to offer comment on that?

Mr Buchanan: Yes, I would like to make comment. Whilst Western Power was looking for a solution for Grange Resources, it was also mindful of the need to augment the system, as Laurie mentioned. It has been suggested that we should have considered a route between Kojonup and Albany and Albany and Wellstead for Grange Resources. Given we knew as part of our normal planning that we would be constructing a new line between Kojonup and Albany to take care of natural load growth in the Great Southern, we felt that that was a significant and unreasonable impost on that community. That is one of the reasons that we chose an option between Kojonup and Wellstead to the north of the Stirling Range.

CHAIR: Are you saying that you chose that option so that the community would not experience a double impact because there are proposed increases?

Mr Buchanan: Between Kojonup and Albany we already have two 132-kilovolt transmission lines. The intent, which we knew when we started speaking to Grange, was to construct another line between Kojonup and Albany. Those communities would in fact have three lines. If we built a fourth line for Grange, that would have been a significant additional impost on the community.

CHAIR: Is there a capacity to replace one of those lines? I understand one of them has some ageing infrastructure, but would that still offer substantial community impact because of the increased size of the line?

Mr Curro: There is always a capacity to replace the line, but it would not provide anywhere near the supply that certainly Grange would want. It does not provide the security that Albany would want.

Hon ROBYN McSWEENEY: The existing corridors are there. Could you not put the upgrade through and make Grange pay for that?

Mr Curro: There is a perception that the line that we are going to build from Kojonup to Albany could supply Grange. It cannot. The augmentation we had planned from Kojonup to Albany was a 132-kilovolt single line. That would see Albany into what we call “into the horizon” - 30 to 40 years growth in Albany. One of the other lines is a little bit old. Naturally we would upgrade that but we would still need three lines into Albany. If we want to supply Grange down that corridor, the new line, if we take that into account, would have to be built at 220 kilovolts and it would have to be doubled to come down to Albany and over to Wellstead. We would not get away with one line; we would still need that extra wire to be connected between the generator and the load. It has to be 220 kilovolts because of the size of the load that we are talking about. I do not know whether that is clear.

Hon PAUL LLEWELLYN: You were expecting to do the Albany to Kojonup upgrade by about 2011-12. At the same time you had Grange Resources asking you to put a line out to Wellstead by 2009. There was a slight “out-of-phasesness” with what you were doing. Is there a transmission solution that could come between Muja to Kojonup, Kojonup to Albany and Albany to Wellstead? Is it technically feasible to do that?

Mr Curro: Yes, technically, it is.

Hon PAUL LLEWELLYN: In that case you would be building one line right across.

Mr Curro: It has to be a double circuit 220.

Hon PAUL LLEWELLYN: Yes, it could be a double circuit 220. It could be.

Mr Curro: It has to be.

Hon PAUL LLEWELLYN: If you co-locate it, substantial regional generation - and in this case I am thinking that if there were a baseload biomass power station located in Albany - how would that impact on the size of your transmission lines and so on?

Mr Curro: It probably would not affect it.

Hon PAUL LLEWELLYN: Would you still need the full capacity connection into your main generator at Muja?

Mr Curro: Yes.

Hon PAUL LLEWELLYN: Why?

Mr Curro: There are issues to do with the technical stability of the system. There are also issues around backup supply when the biomass is not there.

Hon PAUL LLEWELLYN: Why would the biomass not be there?

Mr Curro: These plants usually have to shut down for maintenance at least once a year. Because of that and the fact that Grange would probably want standby supply from somebody else, we would need that supply.

[11.20 am]

Mr Curro: Not in a lot of detail.

Hon ROBYN McSWEENEY: How did you come up with the core route? What do you look at with regard to private property when you are looking at these proposed routes? Does that feature at all in what you are doing?

Mr Hunter: Yes. For the first line across the top, Western Power traditionally would pick its own transmission line route. That would be started by a desktop study on the maps and plans to work out what we consider to be important issues for the community from our viewpoint, such as the

Stirling Range and that sort of thing. We try to stay away from town sites unless we have to go into the town site with the supply. Wherever possible, we try to follow fence lines. We also try not to cross properties diagonally, which is not always possible. This state is not lined up with a grid for us, unfortunately, so there are occasions when that has to happen. We also aim to be about 500 metres away from houses in country areas, wherever possible, purely for aesthetics. There are no safety issues that we are aware of. Certainly with this sort of voltage lines in the Perth metropolitan area, there can be houses within 30 metres of them, and it is quite safe; however, we understand that in the country, people would rather not see them, so we aim for 500 metres, but we cannot always achieve that. That is pretty much it. We go through all our desktop studies. We would get someone to drive around the countryside and have a bit of a look-see from the roads wherever they possibly can. We cannot always drive into paddocks in winter, and we do not want to unnecessarily scare people until we have actually figured out what we are doing. That northern alignment was picked in that fashion. We then had a line on a map, and we thought that looked feasible. We then waited for Grange Resources to give us the go-ahead to go public with it, which was some 12 months later. In about June 2006, Grange said, "Yes, we are serious; here is some money; please start talking to the landowners", so we started that process at that stage. Half way through the project there was a section in the Borden-Gnowangerup area where a lot of people were saying, "Why don't you go up on a particular road?" It was not just one person; a whole group of people gave us a clearly defined second option that we had not considered. It is a fair way further out -

Hon PAUL LLEWELLYN: Further north?

Mr Hunter: It is further north along the Tie Line Road, I think it is called. It is about 11 kilometres longer, which would add substantial cost to the project, but Grange was supportive of our considering that option. We then engaged a company called GHD to do a sustainability assessment of those two lines to compare which one overall would have the least impact on the community. GHD went through that process with the locals in that section, and it came up that the Tie Line Road option was the least preferred marginally, so we adopted the first line route, which has received environmental approval from the EPA and is pending Grange's decision on how it wants its power supply. That one is ready for us to go to tender and start construction.

On the second project, which is the Albany to Kojonup and Kojonup to Wellstead, based on the community backlash and concern about why Western Power was picking the powerline, and why it was not involving the community sooner, we did it a different way. We actually went to the community; and we put ads in the paper as best we could, so we thought we had reasonably good coverage. We have since been criticised for not giving it the right coverage, but we did our best at the time. We invited people to come into some workshops, where we said, "Here are two dots on a map - Kojonup and Albany. We need to get power between them. Where do you think we should put the powerline?" About 130 people turned up to the 11 or so workshops. We invited volunteers to come along and pick the corridors for us. Twenty-two volunteers between Kojonup and Albany attended a full-day workshop in Cranbrook. We gave them all the maps and plans, and we gave them the constraints that we would normally look at, such as the Stirling Range, 500 metres from houses, environmental issues, and stay away from towns wherever possible, and we asked them to draw three corridors for us, which they did, and they have now been made public. We are now at the stage of assessing each of those corridors to work out which would have the least impact based on some standard criteria.

Hon ROBYN McSWEENEY: Will you go back to consultation with the landowners once you have done that?

Mr Hunter: Certainly. Once we have chosen a corridor out of the three preferred based on the criteria we have set, we will then negotiate with the landowners within that corridor. It is two kilometres wide, so we have lots of room to move the transmission line within that two-kilometre wide strip to maximise the clearance between houses, avoid airstrips, and avoid environmentally

significant areas wherever possible. If we come across one item that makes it impossible to get through, then there is a risk that we may have to go outside that corridor and then get back into it as soon as possible after that. It is a totally different process for us. We have invited the community from the start. At this stage, I think there was a question you asked Grange, which they could not answer. I think it is based on the cost. The reason we do not have firm figures on the cost is because the three corridors are marginally different in length. The length of the corridor and the ultimate line that goes in there will affect the cost. Until such time as we have a preferred corridor and a line in it, the cost can vary considerably.

Hon PAUL LLEWELLYN: You are saying that Grange has made an application for connection, and you have looked at connecting Grange. You are in the business of building transmission lines. That is approximately \$200 million. Can you restate that?

Mr Curro: For the northern route?

Hon PAUL LLEWELLYN: Yes, approximately.

Mr Curro: It is about \$200 million.

Hon PAUL LLEWELLYN: You also have an obligation to come south at some stage. What will be the value of that route?

Mr Curro: Anywhere from \$100 million to \$120 million.

Hon PAUL LLEWELLYN: All right. So we have an all-up business case of about \$320 million. It may be \$350 million by the time everything is washed down.

Mr Curro: The option to come down via Albany and over to Wellstead to supply Grange will be more than that. We do not have exact figures, but it could be at least 20 per cent more than that because of the longer line route.

CHAIR: While it might be more expensive, surely in terms of other opportunities to connect other power suppliers, whether it be biomass or wind power, how do you factor in the possible other public benefits that might arise? There might be a 20 per cent higher cost, but surely Grange Resources would not have to fully meet that cost. There might be other benefits to the system. Do you ask yourself those strategic questions? What is the process for deciding whether you keep Grange's requirements separate, or whether you can augment them into part of your overall strategic decision making? What is the process by which you pursue that?

Mr Curro: We work under a regulatory process. We are obliged to look at options, and to go with the lowest net present cost option. It is an economic business case. If we were to propose an option that was more expensive than the cheaper option, we would obviously have to either get capital contributions to make up the difference, or the ERA must see some other benefits or opportunities. Each project is looked at on its merits in supplying the load, with a 15-year payback on each project that we fund through Treasury.

Hon PAUL LLEWELLYN: So it is how you are going to integrate those two objectives. When you are looking at lowest net present cost, are you also obliged to look at alternative power generation? Is that part of that consideration? For example, you are not just looking at transmission solutions; you are also looking at generation and transmission solutions in determining the lowest net present cost.

Mr Curro: We do as a matter of comparison, and we also seek the help of experts to do that, but from a comparison point of view, to prove that our project is the lowest, we do. However, of course then the ERA can do that as well.

Hon PAUL LLEWELLYN: So you would investigate collocation of regional or subregional power generation as part of your economic impact study?

Mr Curro: We normally do, and we will do.

Hon PAUL LLEWELLYN: You have not done it yet?

Mr Curro: We have looked at costs, as we normally do for these things, but there is no business case yet approved for this project. We are still in the technical evaluation stage.

Hon PAUL LLEWELLYN: So the landscape has changed. We now have a new regulatory environment that we are working in. We have had your business separated out from generation and retail. You have to apply the public interest test and the new facilities test. When do you envisage engaging the economic regulator? Since you have the environmental approvals and all the other approvals for Grange for the northern line, when do you start off that process?

[11.30 am]

Mr Mattner: Maybe I could comment there. The processes that we have to go through and the decision making that the Economic Regulation Authority makes are under the Electricity Networks Access Code, and the code requires that for major investments above a threshold, and the Southdown line is certainly above the threshold -

Hon PAUL LLEWELLYN: What is the threshold?

Mr Mattner: It is currently \$15 million.

Hon PAUL LLEWELLYN: So this is well above.

Mr Mattner: Yes. The investments have to satisfy a regulatory test, which demonstrates that we have considered alternatives, or we can ask in certain circumstances for the regulator to waive that test. One of the circumstances that the code anticipated we would actually ask to waive this test was when someone has come to us and asked for a proposal for a network service. In the case of Grange, they have assessed their power options, I believe.

Hon PAUL LLEWELLYN: Have they? You do not know?

Mr Mattner: I am 99 per cent certain.

Hon PAUL LLEWELLYN: Ninety-nine per cent certain?

Mr Mattner: Yes.

Hon PAUL LLEWELLYN: There is a one per cent doubt in your mind obviously, but they have done a thorough testing of all the options.

Mr Mattner: Correct, and they have come to us and said, "Give us a networks proposal." In that circumstance, we would be giving them the network proposal and, I presume, if it was economically attractive to them, they would accept that network proposal. But we are not obliged to go to them and say, "Have you considered alternatives?" or "We're going to propose to put generation on your doorstep instead of giving you a network connection" or something like that, because they are looking for a service at a particular point. In the other circumstances, say, where we are looking to meet load growth in the Albany area, that is when we would have to assess a proposal against the regulatory test and demonstrate that we have considered alternatives.

CHAIR: I would like Ian, if possible, to reflect on the earlier question that I asked about how you manage those decisions; but in relation to your statement, you have got one that does not have to meet the regulatory test because it is independent and the other that does. What if in actual fact there are still strategic crossover issues as to what is in the ultimate public benefit in terms of the role of the regulator? Who is responsible then for asking that question in terms of saying, "Look, you can supply Grange and we can do that independently, but in actual fact we could value add to their investment by looking at some of those other strategic questions." How do you integrate that into your own deliberations, or do you just follow the framework that the regulator sets?

Mr Mattner: Ultimately the regulator has to approve all those investments in some form, and we need to be able to convince the regulator that we have looked at all the options and looked at the

various network development scenarios over a reasonable period of time where there is reasonable certainty about various proposals, including generation proposals on the south coast, and come up with something which we think is a reasonable proposal to proceed with. Unfortunately you have to make a call at a point in time and decide on an investment strategy.

CHAIR: Have you made that call already or is it premature at this point to make that call?

Mr Mattner: No, we have not made that call.

Mr Buchanan: With regard to the transmission network, we have not only an obligation to connect new customers, such as Grange, but also the responsibility to make sure that the network is augmented to meet what we would term natural low growth. We also have a social responsibility and as part of the new processes that we are adopting to engage with the community for projects such as this, we are looking at not only considering the economic and technical issues, but also engaging with the social and environmental factors that come out of a project as large as the one we are talking about here. So it is a fine dividing line, if you like, between being economically driven, which is the responsibility of the organisation on one hand; whereas on the other hand we have also to meet our social responsibilities and our environmental responsibilities as well. Wherever we put a project such as this, transmission lines such as this, we know we are going to impact on people. We need to minimise that impact as much as we possibly can. There is a balance, a fine balance sometimes, and it is always difficult.

Hon BRUCE DONALDSON: If it was not for Grange Resources, you would not have been building the Muja to Wellstead line; is that correct?

Mr Hunter: That is correct.

Hon BRUCE DONALDSON: The second part is that a place like Gnowangerup has always been actually deficient in its power requirements. You said also that part of the strategy you were looking at in forward planning is to augment some of that power requirement into that southern agricultural region. What sort of line were you thinking about or contemplating and how far out would it be?

Mr Curro: For the Gnowangerup area?

Hon BRUCE DONALDSON: Yes.

Mr Curro: The whole issue with that area is the load is not huge relatively speaking; therefore, we try to minimise the amount of capital cost that we spend, because we are obliged to. The extensions that we have done in the area so far, for instance, have been small. We are going to get to a point where we cannot meet the load with just those small enhancements and we will have to go to a transmission line. We estimated that was somewhere around 20 years away if we were to build it ourselves to supply that Gnowangerup area and perhaps onwards towards Jerramungup or Ravensthorpe. So it is a very expensive solution for the amount of load that is out there, and we simply would not have got it past the regulatory test-type of situation, which we would have had to go through; but it would not have been that big.

Hon BRUCE DONALDSON: Pardon?

Mr Curro: The line would not have been that big.

Hon BRUCE DONALDSON: The line would not have been that big? So if this line goes through, the substations that would be required would be, I guess, at the cost of Western Power.

Mr Curro: Yes.

Hon BRUCE DONALDSON: Not Grange Resources.

Mr Curro: No; definitely. The line offers a lot of opportunities to do that, which were not there before basically. In fact, for instance, we are planning to build something at Wellstead as a starting point, and we have discussed that with the Grange team. So that would be perhaps something that

we would build sooner rather than later; but then as demands grow in the area of Gnowangerup, for instance, there is a prime possibility that we could build something there straight off the line, because the line would be going past it.

Hon BRUCE DONALDSON: The other part with the new facilities investment test that you spoke about is that the new revenue generated from the network augmentation recovers the cost of the investment. It is an interesting scenario, because when you are talking about the cost of the investment, in actual fact Grange Resources would be paying for most of it. So how does it fit into the investment test, if you are not supplying the actual physical capital?

Mr Mattner: We are supplying the physical capital.

Hon BRUCE DONALDSON: But to be repaid.

Mr Mattner: Well, kind of, not quite. We actually fund the investment and then we earn a return on that investment over time, return and depreciation; and we get that through the future earning capacity of the line. If there is a shortfall in the future between the future earning capacity of the line and the capital cost, that balance is the value of the capital contribution, which we ask the beneficiary to supply us with. So we are actually recouping a full amount on our investment through a combination of ongoing network charges and capital contributions from the beneficiaries.

Hon BRUCE DONALDSON: Okay.

CHAIR: In relation to new generators wanting to access the network and selling to the distribution grid, what is your framework for managing their application, how do you test it, and how do they fit into your plans for augmenting the grid?

[11.40 am]

Mr Curro: As users apply to connect to the grid, we look at the technical feasibility and make a proposal to them. If that means upgrading infrastructure, that is part of the cost of the proposal to them. It is only when we receive an application from these proponents that we go down that path.

CHAIR: Right; so you do not have any of those before you at the moment from that region. You have some significant investments proposed. Are they being made prematurely on the basis that you have not looked at the potential growth of generators adequately within the region? How are you weighing up those issues currently?

Mr Curro: I think we have one application for one of the biomass plants.

Hon PAUL LLEWELLYN: You think?

Mr Curro: We have one. That has already had a feasibility study and technical evaluation done.

CHAIR: Have you been able to meet its requirements?

Mr Curro: For that one application? Yes, but we have no applications for the others as yet.

Hon BRUCE DONALDSON: It is quite likely that Grange Resources will want to connect to the SWIS for its energy requirements. If it chooses that under the new access code, it can seek another retailer of generation to use that line. Western Power would then charge a line fee for accessing its transmission line.

Mr Curro: Yes, we charge the customer.

Hon BRUCE DONALDSON: You charge the customer?

Mr Curro: Before transporting, when the customers -

Hon BRUCE DONALDSON: Yes, okay.

Mr Curro: - pay the retailer that is their independent -

Hon BRUCE DONALDSON: If, for argument's sake, a wind farm were to go in, they could do a deal with the wind farm to provide some of that power. Would that be correct?

Mr Curro: It could. It does not change the technical nature of the line, but, yes, they could.

Hon PAUL LLEWELLYN: If there was a substantial wind farm co-located with the Grange Resources mine, could they net meter? In other words, could they feed the wind generation straight into the mine and net meter off, because that would be economically beneficial to Grange Resources to form a partnership, a joint venture, with a large-scale wind generator because it would have base demand the whole time. Grange would provide base demand. The wind farm could fluctuate as much as it liked with a robust connection to Grange Resources and it could net meter. Is that right?

Mr Curro: That would be up to Grange.

Hon PAUL LLEWELLYN: It would pay only for the amount of energy it imported and exported. How does that impact on the economics of your transmission line?

Mr Mattner: Possibly not a lot in that if we have to provide a certain level of capacity to supply the mine, presumably it would require that as a firm capacity, irrespective of the wind farm's presence. In terms of the cost to us and our charges to Grange, they probably would not change at all.

Hon PAUL LLEWELLYN: It seems that the volume of transmission will change significantly.

Mr Mattner: The energy will, but the actual capacity that we have to provide it in terms of the size of the line and the size of the wires will not change.

CHAIR: It is paying for the capacity and not for the consumption.

Hon PAUL LLEWELLYN: The capital capacity is there, but what about recouping costs as a result of ongoing transmission use?

Mr Mattner: We would simply adjust the price capital contributions balance in order to recover our investment.

Hon PAUL LLEWELLYN: And what if the wind farm came after you had set up all these arrangements?

Mr Mattner: If it came along, it would not change its capacity requirements; it would obviously change its energy requirements. Depending on the basis of our charging, if we charged on the basis of energy, we might have to put our price up. If we charged on the basis of capacity, nothing would change.

Hon PAUL LLEWELLYN: It would change the business case for everybody.

Mr Mattner: I do not think so, because one way or the other we would be looking to recoup the cost of that investment from Grange.

Hon PAUL LLEWELLYN: It would change its business case.

Mr Mattner: Yes.

Hon ROBYN McSWEENEY: I just want to change the subject for a minute. When you put these corridors in for the 240 kilovolts, how wide are the corridors and what sort of compensation do you look at? What sort of scale do you work to when it is on private property?

Mr Buchanan: In determining the corridors, we have to take into account a range of issues, some of which Jeff has already spoken about. At the end of the day, the width of the final line easement depends on the type of line we are constructing and the voltage of that line. For instance, if it is a 132 kilovolt transmission line such as we would build to Albany if Grange were not a factor, we would be looking at about a 40 metre wide easement. Compensation is not assessed by Western Power; it is assessed by independent valuers - usually the Valuer General's office. A valuer would take a range of issues into account in determining the compensation. For instance, 100 per cent of land value is paid for a four metre wide track along the entire line route length and also for the base of the towers or the poles. That is factored 100 per cent in the land value. Then the valuer will

apply a percentage to the balance of the easement, depending on the impact and the restrictions that are imposed. Western Power does not play a role in that process; it is done independently.

Hon ROBYN McSWEENEY: That is for 132 kilovolts for 40 metres. What is a 240?

Mr Buchanan: A 220 kilovolts may also be 40 metres or it could be up to 60 metres. It depends on the type of construction we use and the span length between the structures. Typically, 132 in country areas would be between 20 and 30 metres. A 220-kilovolt transmission line, such as the one to Kalgoorlie, would typically be 40 metres. A 330, which is the largest that we build in Western Australia, would typically be 60 metres.

CHAIR: If it is closer to someone's house or has other impacts on the amenity, does that change in any way?

Mr Buchanan: No. The legislation that governs the way Western Power works prohibits the payment of compensation for any loss of enjoyment or amenity or for any blight on the landscape. We are precluded from compensating a landowner for those issues as part of the compensation package.

Hon PAUL LLEWELLYN: Can you just clarify something? You are saying that you can put a 132-kilovolt line on a single steel pole. Is there any technical reason that you could not put a 220-kilovolt line on a single steel pole, and what are the cost differentials?

Mr Curro: The technical difference is that once you go up in voltage, you usually need a bigger conductor, and sometimes you need more than one. Our 330 typically has four conductors; it is running in quad. It is mainly for corona -

Hon PAUL LLEWELLYN: That is for a 330?

Mr Curro: Sorry?

Hon PAUL LLEWELLYN: Your 330 is running -

Mr Curro: Yes, as a quad with four wires. Going from 132 to 220, it is likely that we will need a bigger conductor that will be heavier; therefore, we will probably need stronger foundations. Most of the cost of the structures will be in the foundations.

Hon PAUL LLEWELLYN: You could conceivably use a pole structure rather than a lattice tower structure.

Mr Curro: Typically, a pole structure is somewhere between 20 and 30 per cent more expensive than a lattice structure because it is a concentrated foundation rather than a spread out base foundation.

Hon PAUL LLEWELLYN: While we are doing cross-comparisons, for the public record there are some community proposals or suggestions that the powerline between Wellstead and Albany could be co-located with the underground slurry pipe. Could you just clarify some technicals and cost for that?

Mr Curro: There are two technical issues that we guard against. They are primarily safety issues. One is what we call earth potential rise; that is, if a conductor came down, the pipeline would become live and would essentially become a conductor.

Hon PAUL LLEWELLYN: This is if it was overhead.

Mr Curro: An aerial. Is that what you meant?

Hon PAUL LLEWELLYN: Okay; we can do that both ways. That is an uninsulated wire running overhead.

Mr Curro: If it comes down, there are earth potential rise problems, which we have technical standards to meet, and we have to be a certain distance away from the pipeline. There is also what is called line frequency induction. It actually induces a voltage in the pipeline and it also then

becomes an issue in that if someone touches the pipeline, that person could get an electric shock from it.

[11.50 am]

Hon PAUL LLEWELLYN: Is an induced voltage technically manageable?

Mr Curro: It is very hard to manage. The best solution is to move it away, as we do with other infrastructure, like Telstra and other metallic-type of infrastructure. The third problem is that it can enhance corrosion of the steel pipeline because of all the electrons flying everywhere.

Hon PAUL LLEWELLYN: Can you talk about the community's view, or the view expressed that the line could be buried underground in the same easement?

Mr Curro: Burying it underground does not have quite the same safety issues. The line frequency induction issue is still there, because essentially there is still a wire next to the pipeline, and all of a sudden it has been brought closer, because it is magnified like a square-type of ratio, so it has been brought closer. There are also still the issues of the corrosion. They do not go away.

Hon PAUL LLEWELLYN: Even if it was, say, 10 metres away? What are we talking about?

Mr Curro: I could not comment exactly on that, but it would have to be a significant amount away. I do not think 10 metres would be enough for that size of line.

Hon PAUL LLEWELLYN: What about cost? Can you just comment on the comparative costs?

Mr Curro: Underground cable of that magnitude is somewhere between five and seven times the cost.

Hon PAUL LLEWELLYN: Compared with the cost of a simple overhead line. Okay. We have done some cost comparisons. It looks as though underground power at very high voltage is extremely expensive. Some community members have said that the eastern alignment of the Kojonup to Albany line is in need of upgrading, and it is possible that you could co-locate your new transmission line on the same easement. Can you talk about that and the costs, please?

Mr Curro: The line that is referred to is rated at around 40 to 45 megawatts, and it is in need of maintenance. We have a maintenance regime to keep it at that level. We have the option a few years down the track of upgrading that line to a higher rating. That will be based on the load growth at Albany and surrounding districts.

Hon PAUL LLEWELLYN: What does "upgraded" mean? Does it mean pull the poles out?

Mr Curro: It would probably need to be rebuilt. I am talking 10 to 15 years away, minimum. Because of the age of the line, it most likely would need to be rebuilt on the same alignment.

Hon PAUL LLEWELLYN: Does it have a formal easement?

Mr Buchanan: No, it does not.

Hon PAUL LLEWELLYN: Given that the transmission line is already there and it was built prior to the formalisation of easements and so on, presumably it will not be difficult to formalise the easement and to use that easement for augmentation. If you are going to upgrade it in the future, presumably you would have to do that.

Mr Buchanan: There are two issues here, Paul. The first is the security. I will get Laurie to speak about the line security supply to Albany. The second issue comes back to the social implications of putting more than one line on people's property. There is a perception that if someone already has a transmission line, they could wear a second one with little or no fuss. That is not the case. There is also a body of thought out there that if someone has a transmission line already on their property, we should in fact go somewhere else with the other line. The social implications are evident and significant. We are mindful of that. There is also a line security issue, which I think is best answered by Laurie.

Mr Curro: The line security is what is driving the third line to Albany. Basically, we have to plan according to the technical code requirements. For that size load and the ratings of the line, we have to have three lines going down to Albany. That will allow for one line to be out of service at any time for whatever reason and still supply Albany.

Hon PAUL LLEWELLYN: That is presuming there is a certain load growth in the Albany area.

Mr Curro: Yes.

Hon PAUL LLEWELLYN: If one load goes down now, you can supply it with a single line. You are saying that with load growth, that could not happen in the future.

Mr Curro: By 2011.

Hon PAUL LLEWELLYN: What kind of ordinary load growth are you expecting in the Albany area? It is currently 45 megawatts peak.

Mr Curro: Yes. We are forecasting between three and five per cent growth. We usually take a bit of an envelope around the forecast. That is why we are saying that by 2011 the security will be breached, and that is why we are planning the third line by that date.

Hon PAUL LLEWELLYN: So you need an upgrade in that area?

Mr Curro: We need a third line.

Hon PAUL LLEWELLYN: Regardless of whatever happens - even if Grange was not there?

Mr Curro: We will need a third line into Albany by that date.

CHAIR: What consideration have you given in that context to providing the connection via the Southdown line? What would be the economic implications of trying to do that?

Mr Curro: It will essentially mean that the Southdown line, assuming we go around the top again, would have to be a double circuit - 220 - to get around the distance to get back down to Albany. It is a technically feasible solution.

CHAIR: Yes.

Mr Curro: It would have to be a double-circuit line all the way from Muja to Southdown, and into Albany at 220 kV.

CHAIR: Which would make it a lot more expensive, yes.

Mr Curro: Again, it is about a 30 per cent increase in the total costs of the infrastructure that is proposed to be built.

CHAIR: You mean that sort of infrastructure, or the overall picture of infrastructure in terms of both?

Mr Curro: Overall.

Hon PAUL LLEWELLYN: What about if you had to go down from Kojonup to Albany and across to Southdown? Can you deal with the cost implications of going from Muja to Kojonup and to Albany across to Southdown, compared with this whole work?

Mr Curro: It is about the same, give or take, on preliminary indications based on costings of projects that we have recently done.

Hon PAUL LLEWELLYN: This would have to be a better option for Grange and for you.

Mr Curro: It is just that it is 30 per cent more expensive.

CHAIR: It is 30 per cent more expensive, but only a single line as opposed to two lines? Is that what you are saying?

Mr Curro: A single double-circuit line.

CHAIR: Are there any advantages in doing it that way, aside from the cost?

Mr Curro: Not really, assuming we have already got the line going past Gnowangerup, so those options are already there.

Hon PAUL LLEWELLYN: If you put the line from Kojonup straight to Wellstead at some stage, would there not be a lot of pressure to then inevitably connect Wellstead to Albany so that there is a nice regional circuit?

Mr Curro: The pressure would have to come because of other factors. The single line to Wellstead will probably just do Wellstead and surrounding districts. It would not really be of much use to Albany.

Hon PAUL LLEWELLYN: In the past Western Power has developed powerlines that have become stranded assets. I am thinking now of the Beenyup powerline, which went down to the BHP mineral sands mine. Did you do any risk analysis of the possibility of Grange going belly-up and having another stranded asset; and if so, who would pay?

Mr Curro: We do as part of the business case. It is usually reflected in the costing structure that we put to the customer.

Hon PAUL LLEWELLYN: That is part of the business case. Okay.

CHAIR: Any further questions, members?

Hon ROBYN McSWEENEY: Some of the people who came to see me said that the maps that were used by Western Power were out of date, so that many dwellings and farm buildings and improvements were not shown. Just for the record, I know you said that you could shift two kilometres either side. Can you put on the record your view of that? Were the maps out of date, and would it really matter if they were?

Mr Hunter: We obtained maps from the databases of other government departments, such as Landgate, DEC for environmental issues, and the Water Corporation for water catchments, but we have to start with the maps that are available at the time. When we went to the community, we said that we had Kojonup and Albany, and we did not know where we were planning to go, because we left that to the community. Now that we have three corridors, we are able to say, "Okay; we can get some new updated aerial photography on those three corridors." We are talking substantial amounts of money to capture the aerial photography. I think it is about a \$100 000 ballpark figure for just the three corridors, so if we ask to get a 50 kilometre wide strip between Kojonup, we are talking megabucks, and so it was not considered suitable. I guess the other issue we have is that the risk we take with getting the three corridors is equal on all three corridors, so no-one is discriminated against in that context. Once we have the corridors, we will go to the fine detail of talking to people on site. We are at the stage of starting to do on-site investigations for flora and fauna - anything that does not appear and that we did not know about. We are also planning some new information sessions in late October, early November, asking people to provide us with additional information of anything else that we have missed. It certainly was part of the process when we had the first sessions to ask people where the airstrips were, where the local points of interest were, and were there any heritage areas that were not listed on the national database. It is dependent on people's local knowledge and who actually comes to the sessions. Obviously we cannot capture everything on such a broad corridor. Now we have the three corridors two kilometres wide, it is easier for us to gather data. Unfortunately for some people I think it is a bit too late, but our hands were pretty much tied to work with what we had at the time.

[12.00 noon]

Hon ROBYN McSWEENEY: That just needed to be put on the record.

Hon BRUCE DONALDSON: You said that it costs about \$100 000 to fly over the area and take aerial photographs. Is that correct?

Mr Hunter: I said we were quoted around \$100 000 to get aerial photographs of the three corridors between Kojonup and Albany and another three corridors from Albany to Wellstead.

Hon BRUCE DONALDSON: Is that rate not cheap when looking at an investment that will cost a couple of hundred million dollars?

Mr Hunter: Sure. That is based on a six-kilometre-wide strip between Kojonup and Albany. If that is multiplied by a 50-kilometre wide strip - we did not know how far out people would go -

Hon BRUCE DONALDSON: An aerial flyover could be done now though because you know where the corridors are.

Mr Hunter: We are doing that.

Hon BRUCE DONALDSON: You are doing it?

Mr Hunter: Of the three corridors, yes, but we could not do it for the whole -

Hon BRUCE DONALDSON: I understand that. I am sorry; I misunderstood you.

Hon PAUL LLEWELLYN: How many landowners are likely to be impacted upon between the Kojonup to Albany line and the Kojonup to Wellstead line? Roughly how many people will be affected?

Mr Hunter: Between Kojonup and Wellstead there are about 60 landowners and probably 100 properties, because some people own multiple properties. From Kojonup to Albany and out to Wellstead - we do not have a firm corridor yet - we are talking to approximately 800 people in the total of six corridors. Once we have picked a corridor for each of those lines, it will be in the ballpark of 250 people.

Hon PAUL LLEWELLYN: You will have budgeted for a compensation package that is to be put in place, assuming that you know roughly how many people will be impacted upon and roughly what the footprints will be and so on.

Mr Hunter: It is not based on the number of people but on the land values, which will be broken up into distinct bands. We will ask the Valuer-General to break down the typical land values of the land through which we will build a powerline from Kojonup to Albany. It is an estimate.

Hon PAUL LLEWELLYN: Is that part of your budget?

Mr Hunter: Yes.

CHAIR: Thank you very much for your attendance today.

Hearing concluded at 12.03 pm.
