

**STANDING COMMITTEE ON
ENVIRONMENT AND PUBLIC AFFAIRS**

**PETITION No 125: RESTORATION OF THE
ELECTRICITY NET FEED-IN TARIFF**

**TRANSCRIPT OF EVIDENCE
TAKEN AT PERTH
WEDNESDAY, 21 MARCH 2012**

Members

**Hon Brian Ellis (Chairman)
Hon Kate Doust (Deputy Chairman)
Hon Phil Edman
Hon Colin Holt
Hon Lynn MacLaren**

Hearing commenced at 10.36 am

BIGGS, DR PAUL

Acting Director, Governance, Office of Energy, sworn and examined:

KERR, MR MICHAEL

Acting Coordinator of Energy, Office of Energy, sworn and examined:

STEWART, MR ANTHONY

Senior Manager, Energy Utilisation and Management, Office of Energy, sworn and examined:

MARTIN, MR MATTHEW

Senior Manager, Energy Supply and Security, Office of Energy, sworn and examined:

The CHAIRMAN: Welcome, gentlemen. On behalf of the committee I would like to welcome you to the hearing. There is a process, as you are probably aware, that we have to go through before we start the inquiry. I must ask you to take either the oath or the affirmation.

[Witnesses took the oath or affirmation.]

The CHAIRMAN: You will have signed a document entitled "Information for Witnesses". Have you read and understood that document?

The Witnesses: Yes.

The CHAIRMAN: These proceedings are being recorded 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. Please be aware of the microphones and try to speak into them. Ensure that you do not cover them with papers or make noises near them. As there is more than one person, can you speak in turn for the benefit of Hansard rather than all speaking at once? I remind you that your transcript will become a matter of 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 public evidence is finalised, it should not be made public. I advise you that publication or disclosure of the uncorrected transcript of evidence may constitute a contempt of Parliament and may mean that the material published or disclosed is not subject to parliamentary privilege.

I understand you have a copy of the questions that we are interested in. Members may want to ask additional questions, so we will see how we go with them. Is there an opening statement that you would wish to make before we start?

Mr Kerr: No particular opening statement other than we have prepared and have available for you answers to the indicative questions that were raised, and I am happy to provide those to you if you need.

The CHAIRMAN: Good. I think we will go through those questions, because they do lead to other questions. I will start off with the question about whether you can provide us with a breakdown, by technology, of the different sources of electricity generated in Western Australia.

Mr Kerr: Can we provide you with this document?

The CHAIRMAN: Can you state the document that you are handing around, so it can be tabled.

Mr Kerr: It is a response to the letter received by the Office of Energy advising the Office of Energy about the briefing today and listing a set of indicative questions the committee wishes to see responses to, which we have prepared and will table today.

The CHAIRMAN: Thanks. Can you just give us, for the record, a breakdown of the different sources of electricity?

Mr Kerr: We have split it up in a couple of ways. The question was: please provide a breakdown of the different sources of electricity generated in Western Australia? For the year 2009–10 that is in terms of energy sources: coal, 27.8 per cent; gas, 64.8 per cent; liquid fuels, 4.3 per cent—that is fossil fuels. Renewable energy: wind is 2 per cent; solar, including household photovoltaic systems, is 0.1 per cent; hydroelectricity, 0.6 per cent; and landfill gas, biofuels, is 0.4 per cent. The total for fossil fuel is 96.9 per cent, and renewable energy is 3.1 per cent.

The CHAIRMAN: Which probably leads to the second question: how many of those are state-owned?

Mr Kerr: We have provided a breakdown of the 25 electricity generation facilities with 100 kilowatts or more of renewable energy generation. Your question was a general question. Obviously we have not actually answered that. So you are interested in the renewable energy breakdown or the whole breakdown, because I do not think that was a question—the breakdown of what renewable energy sources are actually.

The CHAIRMAN: The renewable ones, the question was.

Mr Kerr: Just renewables?

The CHAIRMAN: Yes.

Mr Kerr: We have listed those. Of those, as you can see in the table we have provided, nine are actually state-owned. They include Albany, including the Grasmere expansion of wind energy by Verve Energy; the Esperance Ten Mile Lagoon wind farm—Verve Energy again; Sewage gas at Woodman Point for Water Corporation; Kalbarri wind farm, Verve Energy; the Hopetoun wind farm, Verve Energy and Horizon Power; the Denham wind farm—it is probably not a farm; a single system there—is Verve Energy again; and solar PV and distillate for Marble Bar and Nullagine, both Horizon Power.

Hon COL HOLT: Can I just go back to the previous page? Liquids 4.3 per cent—I assume that is mainly diesel generation. Would they be mostly remote communities? What are the bigger sectors in that? Can you answer that?

Mr Stewart: Some of the regional towns are run on diesel, and some of the facilities in the SWIS can also run on diesel if need be. The peaking plants are dual gas/diesel a lot of those, but predominantly the diesel use is in the regional towns and remote communities.

Hon COL HOLT: So, like Halls Creek, for example.

[10.45 am]

Mr Stewart: Marble Bar. Halls Creek is natural gas actually—that is, LNG. The West Kimberley was done back in early 2000, so Broome, Halls Creek, Fitzroy Crossing and Derby, I think, are all on that LNG.

Hon COL HOLT: That there is 0.1 per cent solar, including household PV, seems remarkably low to me, seeing as when you drive around the suburbs, you see solar panels all over the roofs. I do not know if you have got any comment about the efficiency of those systems on a household system and the overall contribution to energy generation in the state.

Mr Kerr: Could I just clarify your first point over the efficiency of those systems?

Hon COL HOLT: Yes. It just seems like we have put a lot of energy into solar power, especially at a household PV level, and yet it contributes a remarkably small amount of the energy generation. Is there any comment about the efficiency of all that and economies of scale maybe or whatever?

Mr Kerr: I will make a general comment and Paul Biggs will answer that more specifically. I think it is fair to say—I guess it demonstrates, too—that the vast proportion of energy generated in Western Australia comes from other sources. Those sources are very significant power generation in Western Australia, so the PV contribution by its nature is relatively small. But as to the actual efficiency, Paul.

Dr Biggs: The point I was going to make is that if we look at the south west interconnected system, the peak load there and the amount of generation that we need to be able to supply to meet all of our demand, this year just exceeded 4 000 megawatts of actual demand, so there needs to be over 5 500 megawatts of generation. All of those solar panels on people's house roofs add up to 150 megawatts roughly, and they only produce for about six hours of the day. That is why that percentage of actual energy in the gigawatt hours over the course of a year is so small and highlights, I guess, the limitations of photovoltaic as a source of energy in the overall energy mix.

Hon KATE DOUST: The petition that we are actually looking at arose as a result of the government shutting down the feed-in tariff in August 2011, 12 months after it had been set up, which came as a substantial shock to both consumers and retailers. What I want to know is: what type of modelling was done prior to the introduction of the feed-in tariff in August 2010 in relation to the potential take-up by consumers of installation of panels? What sort of modelling was done by the Office of Energy about what was the appropriate price to be paid for the energy generated? So, what was the—the common term being used these days is—fair price for energy? I just want to know what sort of modelling was done because there was a good two years from when the government made the commitment to introduce it until when the switch was flicked, if you like.

Mr Stewart: What we looked at was historical uptake rates. We looked at what uptake rates were in other states. The difficulty was, of course, the value of the commonwealth up-front rebate in terms of assessing how that was going to impact consumer purchasing decisions. The modelling looked at, in terms of what price, what subsidy would be needed for the feed-in tariff. We looked at what sort of payback period did we want to give people to encourage them to buy systems. Prior to the feed-in tariff and at the cost of systems at those times, payback rates were in excess of 20 years, so we looked at using the feed-in tariff to get a simple payback period of a system down under 10 years. We thought that would give the right balance between a person making a decision to buy a PV system or go on holiday or buy a new car; that was the balance we were trying to strike with that payback period.

[10.50 am]

Hon KATE DOUST: Based on that modelling, did the Office of Energy give advice to the government leading up to the budget of 2011 that there should be a cap installed on the PVs?

Mr Kerr: There were a range of options we gave to the government, including the option of a cap.

Hon KATE DOUST: And what were the other options?

Mr Kerr: I assume that is cabinet-in-confidence; I cannot tell you that.

Hon KATE DOUST: Okay. Leading up to August 2011 when that announcement was made, was that announcement made on that date? I think it was actually made on 1 July with a shutdown in August. Did the Office of Energy advise the minister to shut the system down on that date?

Mr Kerr: We did not advise the minister on that date; we did advise the minister of the need to shut down the—sorry, we advised the minister that we believe the cap had been reached.

Hon KATE DOUST: That was leading up to that date, was it?

Mr Kerr: Yes.

Hon KATE DOUST: I imagine you would meet with the minister on a fairly regular basis to discuss these types of matters, would you not—once a month or once every few weeks?

Mr Kerr: My regular meetings with the minister are once a month.

Hon KATE DOUST: And I imagine that the feed-in tariff would have been a fairly regular subject of discussion?

Mr Kerr: It was discussed, certainly, through that time, yes.

Hon KATE DOUST: Post the shutdown of the program, we have discovered that there have been some difficulties with people who had their applications accepted after that date and we now discover there has been some sort of blow-out in the estimated costs associated, was the government fully aware that potential was there for that blow-out or for those excessive numbers?

Mr Kerr: Sorry, could you just repeat that—aware of the potential blow-out based on?

Hon KATE DOUST: Figures I understand that Treasury has; that there is a higher cost associated over a longer time period for the feed-in tariff than what was originally calculated.

Mr Kerr: I am still trying to get to grips with what you are specifically asking.

Hon KATE DOUST: What I suppose I am asking is: was the government aware that there could be a problem with additional people having their applications approved after the program was closed?

Mr Kerr: I see. I think Tony could provide some detail in answer to that. But we had calculated based on the figures and provided advice to Treasury and others—I assume the minister—around our expectations of the take-up, which would have incorporated a lot of those that would have come during that period.

Mr Stewart: And the government agreed that people—the minister made a statement in Parliament—who had made a commitment to buy a system that those commitments would be honoured.

Hon KATE DOUST: I think the New South Wales Parliament or the New South Wales government is conducting an inquiry into the REBS rate. I am not too sure where that is at, at the moment. Now that people who put panels on their roof really just get the REBS rate back, has the Office of Energy or the government given consideration to having a review of that rate here in Western Australia?

Mr Kerr: The REBS rate?

Hon KATE DOUST: Yes.

Mr Kerr: Yes, we are looking at the fair and reasonable rate. We are looking at that at the moment and developing advice for government on that. Obviously, as part of that exercise we will be looking at a whole range of aspects to that, including what is occurring in other jurisdictions, but applying particular principles as well. Principles are originally also added in COAG, I think it is, around fair and reasonable price for payback to electricity generators.

Mr Stewart: It might just be worth clarifying that there is no requirement in New South Wales for the retailers to purchase energy off householders or small-scale systems, unlike what we have in WA where we have got a legislative requirement under the Electricity Industry (Licence Conditions) Regulations 2005. We were the first state to put that in place. South Australia has just moved to require their retailers to buy at a fair and reasonable rate. So, the New South Wales investigation was kind of twofold: one, looking at whether there needed to be something in place where the retailer should be compensating and whether they should be sharing the costs of the feed-in tariff in New South Wales; and the second one was what that rate should be. My understanding is

that that report by IPART has been tabled and that it does not recommend mandating a buyback requirement.

[10:55 am]

Hon KATE DOUST: Does New South Wales extend the REBS rate to small business as well—or is it just for households?

Mr Stewart: There is no REBS rate—there is no REBS in New South Wales.

Hon KATE DOUST: Okay—sorry.

Hon LYNN MacLAREN: Gentlemen, I wanted to bring us into the realm of planning rules. We submitted a question—number 14—asking whether the government has considered any changes to planning schemes or legislation to encourage renewable energy generation plants in appropriate locations; and, if so, could you provide the details of these changes? If not, could you address why not?

Mr Kerr: I think the general answer to that one is that the whole policy framework to encourage development of renewable energy generation facilities is something that we will certainly be looking at through the strategic energy initiative process. It was very evident from the submissions that we received on the documents that were published, including the original issues paper related to the strategic energy initiative and the directions paper, that there was a strong interest out there around renewable energy and energy efficiency. Obviously that reinforces the view that the strategic energy initiative needs to address that issue. As to specific planning schemes and legislation, I think the short answer is that is not something that we directly deal with. I am not sure whether Matthew has something to say.

Mr Martin: They are handled through the planning act by the Department of Planning. We will look at those issues in the context of the SEI process.

Hon LYNN MacLAREN: So are there barriers to zoning restrictions or are there planning rules that will facilitate more renewable energy take-up?

Mr Kerr: I am not sure whether there are many specific barriers or opportunities.

Mr Martin: I think that it comes down to looking at the actual processes rather than rules and barriers: looking at what we can do to help to encourage both activities to happen rather than there necessarily being any actual barriers stopping it. In terms of the actual local councils and households wanting to put in place wind turbines on roof tops there may be some issues due to local bylaws and planning requirements. I guess the question that you are putting forward is looking more at the large-scale facilities, rather than at the —

Hon LYNN MacLAREN: Yes; the next question was to do with local laws. The first question was to do with whether there were any current barriers in the whole planning system or any ways that we could encourage renewable take-up by initiating special zones or by changing rules in current zones—for instance rural—that would enable power generation.

Dr Biggs: Perhaps I could go back to the sorts of debate during the development of the discussion paper for the strategic energy initiative. There were proposals that came forward, and that were explored in that paper, around the concept of defining a generation park—a similar concept to an industrial park. So, if you can set aside land that is suitable for a particular purpose, you can design the transmission network to be able to reduce a barrier for a generator to feed in to the network. There are some limitations with that concept because the characteristics for a site for wind power might be very different and not as favourable for another type of renewable technology—geothermal or solar thermal. So it is a difficult planning exercise to define exactly where those suitable sites might be without having made a decision about which particular technologies. That is still something that I think that we need to work through. The other issue I think that we need to keep in context is that the site and the local planning might be a second or third-order issue. At the

moment, we have an energy market in the south west with a small amount of excess capacity, so there is not a strong demand for large-scale renewables to come into the network other than to meet particular renewable energy targets. For example, a wind farm generator, or any other renewable generator, to have a successful business model, needs to make sure that they have the off-take agreements for the power that they produce as well as renewable energy certificates—or however that evolves in the national scheme—and the connection capacity into the network and the capacity credits from the market. There is a series of things that all have to line up as well as the local planning laws. I suggest that perhaps it is the market and the balance between supply and demand at the moment that might be —

Hon LYNN MacLAREN: Could I just follow up: in relation to the local laws that we were talking about, the Sustainable Energy Association has actually alleged that local government rules and local laws are effectively preventing the uptake of small-scale wind generation of electricity in many areas. That is the nature of the second question, which is to do more with small-scale planning rules that may be a barrier to the take-up of renewables. Could you just confirm that this is correct; and, if so, are there any local governments that are particularly obstructive? I am a Fremantle resident and know that they are not obstructive to this kind of take up.

Hon KATE DOUST: Unless you are Ben Elton and you have a heritage house.

Hon LYNN MacLAREN: Heritage is another—it was not the council—and I think he was in North Fremantle. Some councils are passing rules that encourage small-scale generation and yet the sustainable energy association has identified that local rules can be a barrier. I am wondering whether you are aware of that.

Mr Kerr: The association has not given you any examples of local laws that are impeding it because —

Mr Stewart: They have not raised this issue with us.

Hon KATE DOUST: I think that from time to time—I know I do—members occasionally have issues raised by constituents who have had difficulties going through a range of councils when they may want to put in a particular type of renewable on their property and there may be some archaic local laws that people had not addressed. I suppose that it is an interesting question as to whether or not there has been some sort of review across councils as to any types of local bylaws that may prevent the opportunity to install renewables. I know that there was an incident—not an incident, an example—about a year ago in which a company had been looking to establish what may very well have been a wind farm in the lower part of the state and the community was divided over the issue and was able to utilise a very little known council planning bylaw to prevent that project from going ahead. I think that project may have been connected to some other type of work. I suppose the question is: has there been any work done assessing those types of matters?

Mr Kerr: Not that I am aware of: certainly, we have not.

Mr Stewart: There are specific issues with wind as opposed to solar photo voltaic; that is, you need to get a certain level of height to extract that resource and there are noise issues as well. I imagine that there are height restrictions and noise restrictions that will apply for wind that do not necessarily apply for photovoltaic.

[11.05 am]

Hon KATE DOUST: I think we understand those issues. I think it is a case of whether or not there has been any work done to assess if any of the local governments have any type of potential restriction—it does not matter whether it is wind or geothermal or whatever—even if it is some sort of academic piece of work. I do not know whether, as part of the SEI, there was any consultation through WALGA as the peak body to seek that information. I would imagine they would be the best place to go to gather that information from their members, in terms of whether or not there are

potential restrictions for small-scale renewables or whether there are potential restrictions for medium or large projects in more rural settings, if you like, or regional settings.

Mr Stewart: At the small-scale level there definitely were restrictions. Council, local governments and even developers were placing restrictive caveats on the placement of things like solar water heaters, solar panels and evaporative air conditioners. Some of them, they would not allow them to have them facing the street; they had to be on the—so they were purely for aesthetic reasons. The new residential design codes—the R codes—prevent councils from putting restrictions on the optimal placement of solar collectors. That was put in place I think around two years ago. There is a review of the solar access protection underway at the moment, which is being led by the Department of Planning as well.

Mr Kerr: By that, you mean —

Mr Stewart: At the moment the requirement is that a neighbouring property cannot shade more than—I would have to go back and check—either 25 or 50 per cent of the property at the winter equinox. That protects some of a person's solar access, but now they are looking at whether there needs to be greater protection—specific protection—of the solar collectors on people's properties.

Hon COL HOLT: I know that the strategic energy initiative has not been finalised yet, but you talk about a small excess in the SWIS generation. Obviously, we are going to grow as a state; every prediction says we are going to get more people and probably more initiatives and more demand. I am really interested, on the policy side of things, in what sort of mix do you guys see going into the future to meet that extra demand on power, especially in remote or regional Western Australia where the challenges on the edge of the grid are really prevalent? So, any sort of mix about how you see things progressing to meet that extra demand?

Dr Biggs: The planning we are doing is to try to make sure that there is a diversity of fuel sources that will be able to respond to future needs. As was outlined in the answer to the first question, there was a mix that is largely between coal and gas in this state. Natural gas provides some very important properties for the electricity generation sector in being able to respond to peak demand and other ancillary services—the voltage control and the balancing. By itself, that also assists with the uptake of the intermittent renewable fuels. Solar and wind are particularly variable during the course of the day, or even from minute to minute, so those gas facilities are very important to be able to balance that out and to maintain the quality of power. We have some challenges in predicting the mix in the future—the impact of national climate change policy and the carbon pricing. Our predictions are still that coal will be an important fuel source during that time because it is still one of the lower cost sources of electricity, and when we are talking about keeping a lid on the cost of electricity, then coal will continue to be important. Gas is important for the reasons that I have outlined, but it is in fact under its own cost pressures. There are increasing costs of production with the new gas reserves, and also strong competition with the export gas industry. And then the renewable energy technologies are all coming through a reducing cost curve. They are in various stages of development from early technologies to commercial early stages and then maturing, and so the cost of those renewable sources will come down, but the rate at which they come into our system, I guess, depends a lot on those commercial factors. We would also like to encourage more development of technologies like geothermal and solar thermal that are less subject to those intermittency issues that wind and solar have, but they are much earlier in the development curve and it may be decades before they really become a larger part of our system.

The CHAIRMAN: As you know, we have had a communication with the Sustainable Energy Association, and I was just interested when you were talking about costs. I would like your views on their allegation that electricity prices in Western Australia are subsidised and not cost effective. Is that correct, or what is your view on that allegation?

Mr Kerr: I think it is probably well known that they are not cost reflective, certainly for the residential tariff, and that the government does subsidise that. I assume that is on the public record,

so it should not be a surprise. It depends on whether they are asking an even more specific question other than the more general question than that.

The CHAIRMAN: I would be interested in what subsidies are in place for them to allege that.

Mr Kerr: Essentially, the government provides a subsidy—what is called a community service obligation—to subsidise that. It is not between the cost of supply and the actual tariff, so there is a clear cost subsidy there. I do not have the figures on what that actually is.

Mr Stewart: I think it is \$367 million over the next budget cycle.

Dr Biggs: Mr Chair, under question 8 we have referred to page 37 of volume 3 of last year's *Budget Statements* but we have not attempted to re-create that forecast. But the budget outlook was \$350 million-odd this year, and then reducing as the increase in tariff was modelled to take place over the out years, and that is a substantial subsidy to the A1 and A2 customers, which are the residential and the small commercial customers.

Hon COL HOLT: Just to follow up that last question—thanks for the answer—what I really wanted to think about was an investment in those new technologies like solar thermal and geothermal. Is there any sort of government investment being made into looking at those technologies, and is it at an adequate level or should we be thinking about investing in those types of technologies to bring them on stream earlier, rather than allowing for the natural curve of efficiency to come down?

Mr Kerr: The government is not directly investing in those technologies, but it is doing its best to encourage those. But there is, for example, the low emissions energy development fund that funds those sorts of technologies in development—certainly, the government has supported some of the technologies through that. That has probably been its primary vehicle for providing direct support for the development of those initiatives. There is a fairly detailed assessment process around each of those that are finally given approval for funding.

Hon COL HOLT: So, really, the people who are developing those technologies make the investment decision based on what they can receive at the end of their development—payback periods and all that sort of stuff—and investment from government, or the incentive from government, is pretty low?

[11.15 am]

Mr Kerr: I think it varies depending on the type of technology and the circumstances of that individual project developer. We are aware of some, for example, solar thermal projects that are in the development phase. Whether they actually take off is really up to the commercial viability of those projects. The government is not directly investing in those.

Hon COL HOLT: So the commercial viability of those based on what they can get back and feeding into the SWIS or —

Mr Kerr: Picking up the point Paul Biggs made earlier, there is a whole sequence of requirements for any of the individual projects to not only receive financial support but also then to get going and the connection to the network and the off-take and a whole range of processes that need to be fulfilled for those projects to actually commence.

Mr Stewart: There are measures in place as well. There is the mandatory renewable energy target, which allows generators to earn an additional income stream to the energy they put into the grid and the commonwealth also has a number of other projects that provide direct funding. We have been working with proponents that are interested in putting in bids for that commonwealth money to support those bids.

Hon LYNN MacLAREN: I wanted to ask a question as a follow-up to your answer to us about what the government is doing to improve energy efficiency across the state. You have given us a list

of policy initiatives and implementations that are underway and I just wanted to ask you some questions about when. The two things I wanted to highlight was you have given us the policy point that you want to increase the minimum energy efficiency standards for all new houses to six-star level, which is great—thanks very much for identifying that—and the implementation of a house energy rating scheme. When would that be in place? When are you talking about?

Mr Kerr: That energy rating system is in place and that will be something that, I guess, reinforces that requirement, the six-star standard. In fact, just to make a point about the six-star standard, the star rating system for residential properties is, in effect, a continuum that starts fairly low and in some places goes well past six. There are certainly some builders in Western Australia and other places that are already building houses well past six-star standard. So, in a sense that is part of the journey to be even more efficient in the way houses are designed.

Hon LYNN MacLAREN: But the number of new houses each year is quite small compared with the number of existing houses and I wondered whether that scheme was going to be extended to increasing energy efficiency of existing —

Mr Kerr: As far as I am aware, it is not. It applies to —

Mr Stewart: The six-star standard, which I think comes into effect from 1 May this year, so all new houses will have to be built at that standard. How we are dealing with the existing homes is through the requirement for them to mandatorily disclose the energy efficiency performance of that building at the time of sale or lease.

Hon LYNN MacLAREN: When is that going to be?

Mr Stewart: I would have to get back to you on that one.

Mr Kerr: It is still really in development, so it is a bit of a way off, yes. But it already applies to commercial properties.

Hon LYNN MacLAREN: That is only at point of sale. So that is only if you are selling a house —

Mr Kerr: Or leasing.

Hon LYNN MacLAREN: Not all houses are sold or leased. Some people actually live for a long time in them.

Mr Kerr: It is at sale or lease. Obviously, yes, it is not —

Hon LYNN MacLAREN: Existing home owners, they are staying there forever—any opportunity to increase energy efficiency in those homes? They are not selling them. They are not leasing them out.

Mr Stewart: There is nothing specific at the moment. We are participating on an advisory group. The commonwealth government is looking at a national energy savings initiative, which would operate, as I understand it, on a similar basis to the mandatory renewable energy target requiring retailers to do something. So that could be an opportunity.

Mr Kerr: There is also—although it is not particularly significant, it certainly does contribute—the efficiency standards for equipment as well—the equipment people use in their houses —

Hon LYNN MacLAREN: Yes, appliances.

Mr Kerr: Appliances. That is improving substantially and again through the national strategy on energy efficiency that we are a signatory to and that we are intimately involved with.

Hon LYNN MacLAREN: I guess the related question is commercial buildings. When will we require commercial buildings to meet energy efficiency standards?

Mr Kerr: There is an obligation already for them to comply with that same arrangement that is in development for residential properties; that is, they are required to disclose the energy efficiency of the building at sale or lease now.

Mr Stewart: And there is the sort of thermal shell. The same requirements that apply to residential buildings are in place for commercial buildings as well. It is looking at extending it to the major energy-using equipment in commercial buildings as well.

Hon LYNN MacLAREN: That is already in place, the mandatory disclosure at point of sale and lease?

Mr Stewart: Yes.

Hon KATE DOUST: Just picking up on the comments made by Hon Col Holt about looking at other types of alternatives in the future and having a look at the parts of the state where there are already a diversity of renewable activities happening, I know that there was some disappointment expressed in the initial draft of the SEI because renewables did not feature as prominently as people had hoped. I suppose what I am thinking about is: has there been any sort of forward planning mapping exercise of the state done about what types of renewables would work best in different parts of the state? In terms of planning about if we had this opportunity, this is what you would put in this place, rather than waiting for perhaps the private sector to come up and say, "We have this project, we want to put it here." But you may have done research to say this is not necessarily the type of project that would work better. There might be a different type of renewable that would work better there. Have you done that type of research?

Mr Kerr: I think there are two aspects to that answer. I am not sure, Matthew, whether you are able to talk about the extent to which we have started to explore that capability across the state for renewable energy?

Mr Martin: I was just going to add that at this stage we are working on an information access project, which is looking to put in place a system whereby through the shared land information platform, which is run through the department of land information, we are looking to put in place some information concerning the different types of resources such as solar and wind data. Currently, on that shared land information platform now is information with regard to Western Power's network infrastructure. We are trying to work to overlay that information with extra data to highlight areas of high prospectivity for each of the resources so that people will be able to look at that information and pick out areas where they wish to focus their efforts on.

Mr Kerr: Another aspect of that, when we talk to potential proponents for renewable energy, larger scale ones, while this is important information for potential proponents, at the same time, they have said as well that is useful but they also they do their own work about where it is most feasible to put in the facilities. To a large degree that is based on a whole—as you would guess—range of parameters or factors that go beyond the sort of work that we do in providing that sort of background information. For example, it would have been interesting to predict whether you would have put a wind farm where the Collgar one is, right out in that sort of location. There is a whole range of reasons why you would put particular developments in particular locations. This will be useful but it will only be part of the story about where it goes.

Hon KATE DOUST: We are a growing state and we have new suburbs coming up all the time. There has been some thought about a brand-new development—before it commences, is there capacity to say to that developer, "Well, you might want to think about having a type of renewable energy in this area that can satisfy that community"? I understand it has been done in other parts of the world. They might have a mini solar farm somewhere in that suburb or that development or they might have, for example, down the track a geothermal plant. Is that something being considered or has advice been offered by the Office of Energy?

Mr Kerr: The short answer to that is: no, we have not provided that advice. Theoretically, that is possible but I am not sure in terms of the practical detail and technicalities of doing that.

Dr Biggs: I think the comment relevant here—it has had some discussion, but it is early days—is that the traditional electricity networks around the world have been based on large power stations in

some location remote from the city and then transmission, which is a one-way sort of transmission network out to a series of homes. It is likely that future grids in Western Australia and elsewhere will be much more dynamic than that and have the capability for what they call embedded generation, so lots of smaller generation happening within the network itself. The concept of that is understood. There would have to be some major investment in the way that the network is designed, the controls within the network to be able to manage the quality of power with that type of a network and I would suggest that we are in early days of that thinking, but it is certainly something which we need to plan for.

Mr Kerr: Picking up from what Paul has said, there are a wide range of issues to address in making that sort of thing possible. It is not just simply a matter of it being a good idea, which it could well be. But certainly things such as the solar cities program are trying to look at how you would deal with a large geographical area and how you would address some of those issues as well. A great deal of learning will come out of that. Obviously, the potential for the type of things you propose could grow over time. Just reinforcing Paul's point, certainly in Western Australia the electricity system was not inherently designed to do the sort of things you described at all. In fact, there would be quite significant impediments to the way the system operates to introduce something like that quickly.

Mr Stewart: Notwithstanding that, there are developers out there. Landgate, as I understand it, is looking at a project along the lines of what you described up in the northern corridor.

Hon KATE DOUST: I raise it because I see in my electorate, substantial new parts of suburbs being developed. You look to the south west and you see new areas being developed there and you see the potential for these types of projects to get up and going. I visited a kibbutz in Israel a couple of years ago which housed quite a large number of people and ran business and farming activity, industry, off it and they had a mini solar thermal farm smack in the middle of that kibbutz that generated energy for that community and fed back into the grid. I thought it was a very interesting idea and I was not too sure whether that was something we would look to in the future with new developments, perhaps.

Mr Stewart: Fundamentally it will come down to economics as to whether it is cost effective or not.

Mr Kerr: And planning requirements, because that is a new game to get into planning-wise, which I am sure local councils would probably struggle with initially.

Hon LYNN MacLAREN: I have a question for Paul. You were giving that beautiful description of how our grid could potentially change to enable us to feed in renewable sources from several small-scale sources. Everybody has been dreaming about that and I am wondering if anybody is planning about that. You mentioned that it would take some time and there may be barriers to implementing it, but surely someone is looking at how to get to there from here and what is required even to put an economic number on it and a time frame. When can we start using the renewables that the state is blessed with—is wealthy with—on our grid? Has that planning begun and when are we intending to complete that planning so we know how much it is going to require to implement?

Dr Biggs: We are aware Western Power has been doing some serious analysis of this and has incorporated some of the early phases in their proposal for the third access arrangement period, which is currently before the Economic Regulation Authority. There is a cost involved in changing the capital equipment in the network and that is one of the issues that we have to work through collectively—the cost and the benefit of those investments.

Hon LYNN MacLAREN: So have you got scenarios? If we go down this path, this is how much it will cost and if we go down this path, this is how much it will cost. Where is that detail?

Dr Biggs: The detail is in Western Power's large submission on access arrangement No. 3. That describes a single proposal. That is the way that the regulatory framework is set up. Western Power may have assessed scenarios behind the scenes, but they put one scenario forward to the ERA.

The CHAIRMAN: Just on that, you are saying there are costs and you probably have not done the forecasts, but we were talking about subsidies earlier. Is it cost beneficial? What is the extra cost to subsidise feeding in these sustainable energy projects? At the moment it is probably felt that sustainable energy projects are very expensive to feed into the system and I am just trying to get some idea what extra subsidy would be involved once you did bring them in.

[11.30 am]

Mr Kerr: I can provide a general answer to that—unless anyone else wants to add some specifics. It would depend on the nature of the subsidy, I guess. It certainly would not fit into our scheme that was around a certain rate for a certain period. At the same time, the costs of systems have been coming down, so the benefit of that rate changes over time because, as people wish to install those systems, obviously the cost is reducing and therefore the benefit changes. More generally, I think it would probably be a fairly big exercise to look at how you might want to, if at all, subsidise over the longer term that sort of system installation in Western Australia. We have not really explored that sort of thing.

Mr Stewart: The Western Australian south west interconnected system is a user-pays system, so for any generator—I will talk about the large scale—that wants to connect to that system, there is a set of criteria that works out how much they have to pay, what their capital contribution is and how much the other users of the system—the customers, us, for instance—pay for that generator to connect to the network. I would not call that a subsidy. If you are talking about the renewable energy target in terms of a subsidy, it is probably quite significant.

The CHAIRMAN: If we are going to achieve this 20 per cent by 2020, there has to be a cost come in. I know it is varying; you are right. The cost of solar energy has come down quite a bit, so there are varying figures. It comes back to what people are prepared to pay and I suppose that is what we have to aim at: what will that cost be?

Mr Stewart: The way the scheme is set up is to introduce competition into the delivery of renewable energy projects. There is no actual requirement for WA to meet its requirement from a project located in WA, albeit that is what is happening at the moment. The potential cost for a renewable energy certificate is \$95 after tax. That is how high it could be. I am not sure what the price of a renewable energy certificate is at the moment, but my understanding is that it is more around the \$30 to \$45 mark.

Mr Martin: In terms of recent times, they have been falling due to an oversupply in the market. Obviously, coming up this year, we have the impact of the carbon price that will further impact. That will also act to form a future incentive for these types of clean energy investments also.

Hon LYNN MacLAREN: When you are looking at the cost of the fuel source—of an energy source, what are you factoring into that cost? Are you factoring in the cost of lung cancer, for instance, when you look at coal versus sun? I think whenever we look at these costs it is important to define what is included in that cost when you are comparing a coal-fired power station to a wind turbine; it is not just the metal and the energy that is required to build it, it is also the product and the cost of transportation and of digging it out of the ground and taking it to the station in the first place. I have never been convinced that you are factoring in all the costs of different fuel sources when we hear things like wind and solar have to be subsidised.

The CHAIRMAN: I do not know if there is a question there.

Hon LYNN MacLAREN: I am just saying that it is hard, when you give us figures, to know what you are including in the cost of coal.

Hon KATE DOUST: I want to come back to the feed-in tariff and its suspension. I note that since that time there have still been quite decent numbers in the take-up for panels, which is good. Has there been any consideration given to the reinstatement of a feed-in tariff at some point; and if so what sort of modelling has been done on what would be deemed to be an appropriate dollar figure to be applied to that tariff?

Mr Kerr: For which tariff?

Hon KATE DOUST: The feed-in tariff.

Mr Kerr: For?

Hon KATE DOUST: For domestic use, I suppose; and the second point would be for non-residential. I know that non-residential is still in the mix for discussion.

Mr Kerr: We have done some work on that. We have not completed that.

Mr Stewart: I would suggest that is a question for the government. Our modelling, though, shows that with the current price of systems, you do not need a feed-in tariff to meet the payback periods that we have been talking about at the residential level and even at the business level. That is why, I believe, that the uptake rate has increased again, so we are getting back up to the uptake levels that we forecast with the feed-in tariffs. It is difficult to justify why you would have one on that basis.

Mr Kerr: Certainly, suppliers are active in the market still.

Hon KATE DOUST: At the point when that occurred, there was a fair bit of comment from the industry that there had not been enough consultation, or there had not been any consultation with the industry about what was happening in terms of reaching that cap. Since that point in time has there been any sort of ongoing discussion with the industry or the peak bodies about what is happening with installation of panels or what could happen in the future if government was to look to reintroduce a feed-in tariff?

Mr Kerr: We have lots of interactions with suppliers, probably on a daily basis, just about. We are continually having those sorts of interactions. We are not doing that in any organised way. That is really through incidental communications about issues that arise along the way. So we are not specifically having conversations with them about the future of the scheme. I mean, that is obviously in the hands of the government.

Hon KATE DOUST: People have been very keen, obviously, to try to tap into renewable energy to try to reduce their power bills. We all understand that and we have seen the power bills go up. I know that your office did extensive research into pricing of electricity some time ago. There is a lot of talk about how we need to have cost-reflective prices. What is that actual cost? When will we actually reach that cost-reflective price?

Mr Kerr: I think generally that depends on the rate at which you want to increase it and sort of close the gap. That is obviously a decision for government around the rate at which it wants to close the gap between the current level and the cost-reflective level, and that is not really a matter for us to advise you of, I am sure.

Hon KATE DOUST: That is okay; we will ask the minister.

The CHAIRMAN: If there are no further questions —

Hon LYNN MacLAREN: Did you have anything further to add? That is always a good question; journos always use that with me. Did you have anything that you would like to add?

Mr Kerr: Just a small point on a comment you raised about support for renewables in regional areas and what we are doing about that sort of thing in a more general question. We are also having discussions with Western Power around how you deal with issues on the fringe of the grid. As you are aware, there are a lot of towns that have difficulties with outages and being, again, that the transmission system was set up along single lines heading out to the boondocks. There are a lot of

towns that have quite significant difficulties, and there are also towns, for example, Morawa, that are putting forward innovative proposals for renewable energy to support dealing with fringe-grid issues that they face. At the same time we are trying to balance the desire to encourage renewable energy and economic development through renewable energy and addressing the sorts of the issues on the fringe of the grid that Western Power is already looking at and how you might deal with that. There are going to be completely different circumstances in every situation. We have certainly been having discussions with both Western Power and Regional Development and Lands about how we can actually get good outcomes, including looking at renewable energy options in those locations. That is not to say that they will necessarily occur, but that is certainly something that we have been investigating.

Hon KATE DOUST: Have you had similar discussions with Horizon? Obviously their situation is similar in places that are far flung or isolated, and they seem to have been quite progressive with some of their projects.

Mr Kerr: They have, but if you look, for example, at Nullagine and Marble Bar, they are funded through the commonwealth's remote renewable power generation program, so they have significant support through that program.

Mr Stewart: At the residential level—there are limits to how much intermittent generation you can get into those systems, particularly the smaller ones—it has been very proactive in terms of looking at how it can allow more people to connect renewable energy systems. For instance, it is looking at a system and even when the system cap has been reached, they will let you connect another renewable energy system as long as you let them remotely control the generation of that system. I think they have done pretty good work.

Mr Kerr: Carnarvon is maybe where they have been pretty active. There has been a lot of active involvement, not so much in the community but a lot of renewable energy involvement there; and I think Horizon Power has been working with them directly to deal with those sorts of issues.

The CHAIRMAN: I would like to thank you, gentlemen, for coming along. It was very informative. Thank you for your answers to all of the questions. I know we did not get through them all, but at least we have got the answers here that we can work on.

Hearing concluded at 11.43 am
