



**Australian Government**  
**Productivity Commission**

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**PRODUCTIVITY COMMISSION**

**INQUIRY INTO ELECTRICITY NETWORK REGULATORY  
FRAMEWORKS**

**MR P. WEICKHARDT, Presiding Commissioner**  
**DR W. CRAIK, Commissioner**

**TRANSCRIPT OF PROCEEDINGS**

**AT SYDNEY ON MONDAY, 3 DECEMBER 2012, AT 8.32 AM**

**Continued from 27/11/12 in Melbourne**

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**MR WEICKHARDT:** Good morning, ladies and gentlemen. Welcome to the public hearings of the Productivity Commission inquiry into electricity network regulatory frameworks following the release of the draft report in October 2012. My name is Philip Weickhardt. I'm the presiding commissioner on this inquiry and my fellow commissioner is Dr Wendy Craik.

The purpose of this round of hearings is to facilitate public scrutiny of the commission's work and to get comment and feedback on the draft report. We've already held hearings in Melbourne. Following this hearing in Sydney, hearings will also be held in Canberra, but then working towards completing a final report to government in April 2013, having considered all the evidence presented at the hearings and in submissions, as well as other informal discussions.

Participants in the inquiry will automatically receive a copy of the final report once released by government, which may be up to 25 parliamentary sitting days after completion. We like to conduct all hearings in a reasonably informal manner but I remind participants that a full transcript is being taken. For this reason, comments from the floor cannot be taken but at the end of the proceedings for the day I will provide an opportunity for any persons wishing to do so to make a brief presentation. Participants are not required to take an oath but should be truthful in their remarks. Participants are welcome to comment on the issues raised in other submissions. A transcript will be made available to participants and will be available from the commission's web site following the hearings. Submissions are also available on the web site.

To comply with the requirements of the Commonwealth occupational health and safety legislation you are advised that in the unlikely event of an emergency requiring the evacuation of this building, you should leave this room via the exit provided, there's an exit there and there's another one out to the street directly here, and assemble on the corner of Crown and Foveaux Streets at the Shannon Reserve. Lifts are not to be used. Please follow the instructions of fire wardens at all times.

I would now like to welcome our first participant, the Australian Energy Regulator. If each of you could introduce yourselves and give your name and the capacity in which you are appearing for the transcript and then maybe assume we have read your submission - and thank you very much for that - but if you want to make some brief introductory remarks and then we've got lots of questions.

**MR REEVES (AER):** Thank you. Thank you, Philip. Good morning. Thank you for the opportunity to appear. I am Andrew Reeves, chairman of the AER, and Ed Willett - - -

**MR WEICKHARDT:** Just let them introduce - - -

**MR REEVES (AER):** Themselves?

**MR WEICKHARDT:** Then the people transcribing will be able to make sense of the voices.

**MR WILLETT (AER):** Ed Willett, member, Australian Energy Regulator.

**MS GROVES (AER):** Michelle Groves, chief executive officer, Australian Energy Regulator.

**MR WEICKHARDT:** Thank you.

**MR REEVES (AER):** Thank you. I shall start again. Good morning and thanks for the opportunity to appear at the commission's public hearing today. The AER is Australia's national energy market regulator and independent statutory authority. Among our roles we are responsible for establishing the revenues or prices for electricity networks in the national electricity market. We also monitor the wholesale electricity market to ensure generators comply with the market rules and take enforcement action where necessary. From 1 July this year we have also taken on responsibility for regulating retail energy markets in some jurisdictions under the National Energy Retail Law.

The AER is cognisant of the significant work that the Productivity Commission has undertaken in preparing a draft report. Merits-based review by the Productivity Commission are also currently being considered by policy-makers, followed by the rule-making body, the AEMC. As highlighted in our submission we agree with much of the analysis and support many of the draft conclusions reached by the Productivity Commission in the areas of benchmarking, interconnector investment and demand side participation in the NEM.

Further, there are a range of matters that we don't explicitly address in our submission where we support the direction of the Productivity Commission's work. For example, the commission argues for the establishment of a well-resourced body to represent the interests of consumers in the regulatory process. This is a position that the AER has been advocating for some time. We believe there is a compelling case for greater involvement of consumers in the regulatory process including through establishing a well-resourced national independent consumer advocacy body. This body would ensure that customers' views can be represented effectively in the new regulatory environment and consider the impacts upon them and reflect it in the decision-making.

There is, however, some comment in the draft report that we do not agree with,

which I will now address, and I'll focus on two areas of concern. First, we consider that the report doesn't appropriately acknowledge the shortcomings in the rules that the AER needed to apply when setting allowances for energy network businesses. The draft report argues that the constraints created by the rules on AER decision-making may not be substantial. But our experience applying the rules highlighted the following problems. First, the electricity rules restricted us from making an overall assessment of how much expenditure proposed by network businesses is efficient or necessary. Further, the electricity rules do not impose a discipline on network businesses to control capital expenditure. They are allowed to receive a return on investment regardless of whether that investment was efficient or necessary. Third, the approach for setting rates of return for network businesses led to allowances that are likely to significantly exceed the actual costs of financing for the businesses. Finally, the electricity rules hindered effective consumer engagement.

Our concerns with the rules was such that in September last year we submitted proposals to the AEMC to amend the regulatory framework. In its final decision released last week the AEMC has outlined significant improvements to the rules for setting prices for energy network businesses. Indeed, the AEMC has put forward new amendments to address each of the four areas that the AER highlighted. In particular, changes to the approach for setting expenditure allowances provide the AER with greater ability to form its own view on the allowances that a business requires to deliver efficient and necessary network services. Changes to incentive arrangements would allow the AER to prevent businesses from receiving a return on inefficient over-investment. Changes to the approach for setting rates of return will allow the AER to set overall rates that better reflect actual financing practices. Finally, changes to consultation arrangements will provide more effective consumer engagement, particularly by requiring network businesses to consult with electricity users in the development of spending proposals. The AER considers that these changes to the regulatory framework will promote the interests of electricity consumers. While network businesses will be rewarded for undertaking efficient and necessary investment, consumers will not be required to foot the bill for inefficient over-investment in the network.

Our secondary concern is with the commission's discussion of governance arrangements where we wish to raise a number of issues. First, we would like to respond to the comments made by the Productivity Commission on the performance and capability of the AER. We appreciate that as a developing organisation there are areas in which we need to improve; building up our in-house technical capability is one, improving our engagement with stakeholders is another. While we have already done much in these areas, a fact that has recently been acknowledged by stakeholders, we intend to do more.

However, the AER believes that some of the concerns raised by the Productivity Commission in the draft report are overstated or are incorrect. For example, the draft report makes comment about the AER on the basis of outcomes from stakeholder surveys. Now, stakeholder surveys provide insights into stakeholder views at a point in time but do not provide a complete report card on the performance of the AER. Most of the commentary in the report is based on the survey. The survey should be interpreted in the context in which the AER operates, with many of our stakeholders being industry which we regulate. That said, the surveys have raised matters which we are addressing.

Further, the Productivity Commission expresses concerns about the AER on the basis of claims made in submissions without testing those claims. For example, it stated that the AER faces rapid staff turnover which leads to overreliance on external consultants. Our turnover for the past two years has been about 9 per cent, which is not high. Similarly, as highlighted in our submission, the merits review relied upon to illustrate alleged errors in AER decision-making is misleading. For example, the Productivity Commission highlights cases on non-WACC issues where the tribunal has found error. Now, merits review has added some \$3.2 billion to the revenues of network businesses, but WACC issues account for the vast majority of this amounts. Indeed, tribunal cases on the averaging period for the risk-free rate, adding the value of gamma, account for 85 per cent of the total increase in revenues. The remaining amount represents much less than 1 per cent of the total revenues approved by the AER for the forthcoming and current regulatory periods.

Second, I would like to respond to concerns raised by the Productivity Commission on the independence of the AER given its institutional links with the ACCC. This discussion overlooks that the AER has been established as an independent energy regulatory authority. The appointment aspect of independence, as recognised by Hilmer and by Parer, is independence from the industry that it regulates and the AER strongly rejects any suggestion that it is not an independent regulator. We believe that our independence is a key strength of the AER, an observation that is supported by stakeholders, indeed, through the 2011 survey. The Productivity Commission's discussion is more accurately characterised as a discussion of the appropriateness of current institutional arrangements rather than one of independence.

It is important that our energy market has appropriate institutional and governance arrangements. The appropriate institutional arrangements for the energy regulator is an issue that has been considered previously, such as in the Hilmer review and in the Parer review. It's highlighted in our submission. We consider that the current arrangements remain fit for purpose. Having the AER as an independent decision-making body picks up on the benefits of a single national energy regulator as proposed by Parer. As the Parer review paper noted, the key

elements of their proposal were for a single national energy regulator with a charter extending to distribution and retail functions.

We believe that having institutional links with the ACCC captures the benefits of multi-utility regulation which were promoted by Hilmer, notably the current institutional arrangements promote consistency of decision-making across sectors and deliver significant administrative savings. The current institutional arrangements also recognise the significant complementarity in the work undertaken by the respective organisations with the AER and the ACCC having both regulatory and enforcement responsibilities.

So to sum up, we support the observations of the Productivity Commission in a range of areas, particularly as covered by the terms of reference. In other areas however, particularly in relation to these governance issues, we would suggest that the PC critically examine the material before it and consider such matters as governance from first principles. Thank you.

**MR WEICKHARDT:** Okay, well, thank you very, very much indeed for your submission and for your submission before the draft report and for the considerable help you have given us during this inquiry. It has been much appreciated. I've got a whole range of questions and no doubt Wendy has too, so I won't necessarily work in exactly the order in which you presented this but can I start with the issue of the consumer representative body. We sort of thought about a number of particular options here and I notice that a number of people who have made submissions post the draft report have suggested to us a non-remarkable fact that not all consumers are alike, and they have disputed the wisdom of having an overall consumer representative body and they would prefer to have individual consumer interests advocated to the regulator and for the regulator, I guess, to therefore make some sort of trade-off between the competing voices.

Have you got any comment about the merits of having a reasonably well funded and resourced consumer body that can listen to other consumer representative groups and then try and distil some overall view that they can take to the regulator and maybe participate in an overall negotiated settlement with network companies, as opposed to the regulator listening to all those voices and trying to filter them into some overall consensus?

**MR REEVES (AER):** Sure. The consumer engagement should take place in at least three areas. First of all, and this was recognised by the AEMC in the rule changes, the network businesses themselves should be engaging with the consumers that they serve in putting together their proposals. We think it's pretty important that the businesses be accountable to the communities that they serve, and particularly the customers who are paying the bill. There are a number of matters there such as the

local reliability, addressing issues of security and various other factors, local factors, where consumers really ought to be properly engaged with the proposals before they come to the regulator. The rules now require that the regulator have regard to the extent of consultation of the businesses with the communities they serve. To add some flesh around these bones, we are intending to put out a guideline during next year in consultation with a number of agencies and with the businesses to try to develop best practice in consumer engagement for those businesses themselves.

The next area of engagement should be with the AER through a body of experts well equipped to be able to challenge the proposals from the businesses as well as to challenge the thinking of the regulator. We don't have a monopoly on good ideas and every decision-maker would benefit from being able to canvass a number of inputs, a number of perspectives. However, these decisions are very technical, both in regard to the financing issues as well as in regard to the engineering issues as well as having regard to the value consumers place, for an example, on reliability. So consider there that a body of experts able to properly challenge the work of the regulator is important.

Thirdly, there are related matters which are of particular concern to the full body of consumers, in consumer protection, for example, where it is important that there be a standing - we would consider that there be a standing well-resourced body of consumer interests. We, as the regulator, would continue to engage with a range of stakeholders, but because of the complexity of these matters a standing body building up a body of knowledge to be able to properly participate in the debate, to be able to properly engage back with consumer groups and to act also as a synthesis of views would be of value to our work. But that should not take the place of any other engagement of consumers that we would have. Ed may like to add to that.

**MR WILLETT (AER):** Well, I think the point that I was going to make was simply the one that Andrew just made at the end there that there's nothing in this proposal that confers a monopoly on the new arrangements. It's in addition to any existing consultation. As you say, consumers and users represent a diverse group and we would expect that many user groups would continue to engage directly, many users would continue to engage directly. But there are a number of consumers and consumer interest groups who really don't have the technical expertise to engage as constructively as they might otherwise and would benefit from this sort of arrangement.

**MR WEICKHARDT:** Okay, good.

**DR CRAIK:** Can I just follow up, Andrew, and ask you what you see the difference between the body that advises the AER and challenges the businesses and the regulators and the standing body. I mean what do you see the fundamental



differences - potentially their roles could overlap quite substantially.

**MR REEVES (AER):** Yes, there is the potential for overlap and potential for duplication. If such arrangements were established there would clearly need to be a high degree of coordination. One of the important things though is that the network determinations themselves - you know, there are particular jurisdictional matters that come up. We'd see that a body of experts, such as the consumer challenge body, being able to engage with those proposals on their merits. Separate to that there are a range of other matters which are sort of generic to the whole issue of network determination and indeed, the other aspects of consumer protection.

The AER covers an enormous range from the regulation of the conduct of generators in the wholesale market, their behaviour in the wholesale market, through to things like cost benefit of network development proposals, through network regulation, right through to issues of dealing with how the retailers deal with consumers in hardship, and also publication through the web site, Energy Made Easy, of information for consumers. Across that whole range it is important we take account of views of consumers and particularly in regard to the consumer protection matters. The material that we are providing is really relevant to what consumers require.

So we would see that things like the challenge panel may have particular expertise relevant to that topic. A panel may well change its function and formation over time according to the issues that we're addressing. The current round of reviews is really reaching sort of a very critical point. With the rules now made, the new national electricity rules for network determination having now been made, our role will now shift to development of guidelines to give effect to that work. There's really an opportunity for a wholesale review of how network regulation is conducted in Australia. For example, the setting of the cost of capital has been laid out in some detail within the rules. That has changed with the new rules, with greater discretion being given to the regulator.

We recognise, however, that the investors, that is, the owners of the business, need certainty of how that public cost of capital is going to be assessed in order to ensure that they continue to invest with confidence of getting a reasonable return on efficient investment. That has been recognised and the AEMC has a requirement in the rules for us to develop a guideline by November 2013. That work has started and we will be putting out papers on this in the very near future. That's a very important area for consumers to engage with because the cost of capital drives half or more of the revenues required by the network businesses. That's a highly technical area and really, the consumer bodies should be equipped and ready to come to terms with that development of the guidelines.

In a similar way we're also preparing guidelines around how we will exercise our discretion in reviewing the capital and operating proposals coming forward from the businesses. Again, they're areas where we're looking for consumer engagement very early in the process to work with us in how we exercise this new discretion to go about the assessment of proposals from the businesses.

**DR CRAIK:** Okay, thanks.

**MR WEICKHARDT:** Can I then raise an issue you alluded to a moment ago about the cost of capital and the guidelines you're developing. You mentioned in your submission that the appeals on the cost of capital issue amounted to over \$2 billion. You, I think, pushed back at the suggestion we had made about, for example, the cost of debt being determined on a historic five-year trailing cost of debt and suggested that you want to retain some flexibility given, you know, there's change of circumstances.

Can you just talk briefly - because I don't want this whole session to be ground in a discussion of the arcane topic of the cost of debt or weighted average cost of capital. But during the inquiry a few things, I guess, became significant to me. One was that the appeal, as I understood it, was really around choosing one period of time to look at cost of debt versus other period of time. So if you retain some discretion and move this around are you going to open the AER to further appeals about, "Well, you made a decision using your discretion to choose a period of time. We, the network companies prefer another period of time." So against clarity and certainty, maybe some imperfection of choosing a fixed five-year historic period, are the risks of choosing sort of discretionary periods going forward worth the uncertainty that that may raise? That's question (1).

Question (2) relates to the fact that we were told some of the network businesses had actually, bizarrely enough, re-hedged their entire debt book to try to match the profile that the regulator had chosen. That sounds to me the most inefficient possible way of managing cost of debt for any corporation. No-one else in the commercial world would ever choose to do such a thing. So again, if you move your periods around are you risking getting that sort of event occurring in the future?

**MR REEVES (AER):** Philip, the first thing I should say is we didn't really push back on the PC's proposal for trailing average. However, we are about to embark on development of guideline and we think it's really important that this be developed in consultation with the investors, in particular, and with consumers about how we may approach it in future.

Your observations about the risks of taking a snapshot - this is risks for consumers and for the businesses in taking a snapshot of financial circumstances

across a very narrow averaging period we'd recognised. Indeed, the proposal for trailing average is a way of managing some of that risk for the estimation of cost of debt. That's something that seems to be getting quite an avenue of support, but again, that's something that we would like to test - one, in the concept, and second, in the mechanics - with the businesses and with consumers. There would be, and some have put to us, that there is much more appeal to the owners and to consumers in having transitioned or a more rolling movement of prices rather than the sorts of step-change increases that we have seen through the current period. Some of that step change has come from that selection of the narrow averaging period and what's going on in financial markets just at particular points in time.

The reference to the merits review I think really illustrates that. For example, the biggest single decision made by the ACT, by the competition tribunal, was in regard to the averaging period for New South Wales distribution businesses, the transmission business and the Tasmanian transmission business. In aggregate that decision added about \$2.1 billion or nearly \$2 billion to the bills of New South Wales consumers based on where the averaging period was taken. We took the conventional approach of looking to a period that was close to the time at which the determination was made. The tribunal supported the proposal from the business to take an averaging period that as it happened was pretty much at the peak of the GFC at a time that interest costs were exceptionally high. Simply that movement across a number of months in the averaging period added about 7 per cent to the revenues of the network businesses or additional charges for New South Wales customers.

Having rather longer averaging period or indeed having a sample across a more continuous basis would be a way of smoothing out those sorts of errors and you would end up with a much smoother result. The merits of that we intend to explore through our discussion through the development of the guideline. The guideline setting out - and we will also be discussing how much detail goes into the guideline, whether on the one hand it would set things out such that each review then almost becomes a mechanism process, which would provide a certainty of process, or whether the guideline may go a step further than is there at the moment but still leave some opportunity to reflect the current conditions. They're the sorts of discussions that we want to have with consumers and with investors.

**DR CRAIK:** Andrew, can I move to demand management? I guess generally you're broadly supportive of our approach but the AER did have a slightly different view. I mean we proposed that it be a distributor-led rollout on a regional basis based on a cost-benefit analysis for each of the regions whereas you seem to provide more support for a retailer-led rollout on a contestable basis. I guess there are concerns and I guess the reason we went for a distributor-led rollout were really - region by region, because you don't really want to have smart meters where you don't really need them.

**MR REEVES (AER):** Yes.

**DR CRAIK:** Kind of a waste of money. The fact that if you do have retailers leading it you may have one consumer here, one consumer here, one consumer there, and distributors have to do all this background IT to support this whole process and yet there's only isolated consumers here and there picking up smart meters and autonomous pricing. It's a problem and so you don't actually get any aggregation of demand and why would peaky retail customers actually opt in? What's the incentive for a peaky retail customer to opt in? You just end up just paying more. So I guess we'd be interested in your response to that, because it does seem to us if it's not done on a cost-benefit basis that a lot of the value might be actually lost in the system.

**MR REEVES (AER):** Yes. Look, there are a lot of topics in there.

**DR CRAIK:** Yes, I know.

**MR REEVES (AER):** I guess we'd probably come first from a principle that rather than - giving the inside running on development of the newer technology to a particular sector might not be a good idea. That is, by giving a mandate to distributors, for example, for the rollout of smart meters we think may be an impediment to innovation in metering and load control and other technology. Some of this thinking depends on where you draw the line on the innovation. Is it just the meter itself or is it the whole facility that the meter enables; which includes potentially through the communications technology for load control, or alternatives may be for consumers themselves to implement their own measure of load control in response to time variable pricing.

We would be concerned that a particular sector such as distributors were given a mandate on smart meters and the associated technology and the opportunity, as some in the industry have put it, to extend the network through to the appliance. Leaving it to the market to develop these things we think would be a better proposal. That said, your point about there being need for smart meters in some areas and less need in others is absolutely right, and we certainly agree with that. In regard to the distribution networks, most of the network capacity issues tend to be regional. That is, there's a particular substation which is getting close to capacity. There then it makes a lot of sense to defer augmentation, to defer expansion of capacity by better ways of managing peak demand. Those ways of managing peak demand would through smart meters involve some sort of price signals that may also involve, on behalf of the distributors, negotiation with customers for direct load control. There's a second branch of benefits. So they tend to be local issues of concern to the distributor.

There are further issues though in that everybody pays for the peakiness in generation that is in the energy market. So there are benefits there for the consumer in management of their load, particularly in peak periods, to reduce the demand for generation at those particular points in times. So the cost-benefit may well be higher where there are a combination of both energy market and network developments - will deliver different outcomes to a cost-benefit where there are energy market only benefits. One of the changes that is being considered through the AEMC's power of choice review is for the regulator to be taking account of these combination of benefits in looking at the cost-benefit of load management. That's something that we certainly endorse.

**MR WEICKHARDT:** I guess I'm not sure whether this analogy is relevant but I have a fear about this sort of market-led rollout. It's a bit like a large corporation, dare I say the ACCC, having their IT systems on a market-led rollout, so branch A chooses Apple Macs and branch B PCs. Then the IT manager says, "Well, they won't talk to each other," and, you know, sort of, "Yes, you said that the specifications would talk to each other but they won't," and you end up with a huge muddle. So I don't know whether that's going to happen here but that's a fear I've got.

**MR REEVES (AER):** Look, I think there is risk. Certainly what you would do then is look to - I mean we will be advocates for minimum regulation and minimum intervention but there does need to be some standardisation of standards and protocols, for example, such that all of these things can talk to each other. Bearing in mind too the most likely parties here would be distributors and retailers. We do have retailers operating nationally, so they are interested in their systems. We would be concerned though that retailers had a mandate or whatever on rollout of meters because then ownership of the meter may well be an impediment to customers exercising their choice of retailers.

So we would see that there would be a lot of merit into looking into consumers having much more sort of ownership of the retailers or structures such that that ownership of meter did not become an impediment to being able to switch retailers. The incentive then is for the retailer to provide services to consumers that they want to stay with that retailer on the virtue of the services they provide rather than on the technology that they own.

**MR WILLETT (AER):** The point I'd add here is that we're coming to this issue with a bit of history. It's not that we haven't had some experience with this. The experience goes back to the authorisation of arrangements in Victoria by the ACCC some six or seven years ago, I think it is, and of course we've had some experience with the Victorian arrangements that were then put in legislation. We've had the job of looking at the costs of that mandated rollout. I think it's fair to say that all that

experience has given us something of a jaundiced view about monopoly arrangements.

**MR WEICKHARDT:** Can you elaborate on the principal sort of problems that occurred?

**MR WILLETT (AER):** Well, the problems that occurred are not untypical of the sort of issues you face with monopoly networks and the need for effective regulation. I think it's fair to say that we've had some concerns about the way - - -

**DR CRAIK:** Can you give examples, Ed?

**MR WILLETT (AER):** Rather than give that off the cuff now, I think we might prepare something for you because I think you'd find it useful.

**DR CRAIK:** SP AusNet was very positive when we spoke to them the other day, and said what they'd spent would ended up being exactly - - -

**MR WEICKHARDT:** I think it was Powercorp.

**DR CRAIK:** - - - exactly what they'd projected.

**MR WILLETT (AER):** Okay. Well, I think we do need to carefully consider what we're going to put to you on that.

**DR CRAIK:** That there hadn't been all that many retailer-led rollouts around the world and that - I mean, obviously they have a view of course but - - -

**MR WEICKHARDT:** They claim that the figures of vast overspending were comparing an initial estimate that had been carried out by - - -

**DR CRAIK:** EFC.

**MR WEICKHARDT:** EFC - that's right, and then eventually DPI took over.

**DR CRAIK:** The first one was just the smart meters, not all the ancillary stuff that's required. There was a DPI cost estimate included there.

**MR WEICKHARDT:** So they said, "We were on time, on our budget, didn't overspend anything. There was no overshoot." So if you can help us translate some of that - - -

**MR WILLETT (AER):** We will provide you something to help you with that. The

point I was going to was - just to, I think, echo the points that Andrew was making - we recognise that there are efficiency issues in the roll out of metering, they're well recognised, but there are solutions to those issues that fall short of conferring a monopoly on a distributor: standardisation, regulation, mandating meters rather than mandating a monopoly, they're things that are worth considering as well as the possibility of leaving it to the distributor on a monopoly arrangement. We're just encouraging you to think about those as well - but we will give you some material.

**DR CRAIK:** Yes, if you can send us something, that will be really good, thanks.

**MR WEICKHARDT:** You referred, Andrew, in your introductory comments about the AEMC's final call on the rule changes that you had requested. Is there anything left in your most-wished alterations that the AEMC didn't agree to?

**MR REEVES (AER):** Look, I have to say no. We raised those four areas of concern. What we put forward was a proposal for AEMC to consider - you know, as to how some of those concerns may be addressed. AEMC went through a very solid process here and used workshops and a number of other ways of getting other ideas and working those things through. I think really what they have come up with was an improvement on what we put forward, which again I guess just reflects having a diversity of view and a diversity of input to the process. They have moved away from the degree of detail in the rules, particularly around costs of capital, allowing the AER to develop that through a guideline in consultation. I mean, they recognised that changes needed to be made but a rule change process was not the place to explore the nuances of how you set the cost of capital.

Similarly, we saw the potential for greater use of benchmarking, as the PC has, through its work, and we felt that we also needed an unambiguous authority to incorporate benchmarking within the array of tools that we would use for setting of network expenditure. That has come through. I think, too, the proposal through the AEMC that we come up with an expenditure assessment methodology is very good. That does then allow an early engagement, one, with interest groups in how we do our work but also with the businesses in allowing the regulator to set the stage for the proposal rather than for the business. That setting the stage is important work for us to be able to establish more a standard approach to be able in the longer term to help with greater use of benchmarking; that is, it is very hard to be a benchmarking business if you're getting proposals on all sorts of different arrangements. That approach that's now coming forward will set us up well for the longer term.

The other area I mentioned was in consumer engagement. That wasn't something that we specifically raised with the businesses engaging with consumers; they've raised that and we think it can go further, and we'll build on that.

**MR WEICKHARDT:** Okay, good.

**DR CRAIK:** How do you see that playing out if the limited - do you think there will be a need to modify the review process, the appeals process, then to - - -

**MR REEVES (AER):** Well, that's still - - -

**DR CRAIK:** That's still unresolved, isn't it.

**MR REEVES (AER):** It is.

**DR CRAIK:** It remains as it is.

**MR REEVES (AER):** It is. The body that's SCER, the energy ministers, are commissioned to conduct a review of the limited merits review. It has now provided its report to SCER, so that will be under consideration. Another observation we'd make is that the tribunal has been operating under the same set of rules that we operate under. We were obliged to bury down into the detail. The ACT buried down into the detail. Now that the rules are much more open and have a broader discretion for the regulator, the types of matters that the ACT would consider on appeal would also change. So that in itself will bring a change to the outcome and the scope of matters being considered by the review body.

We put in a submission to that panel and we suggested that some of the important things is that the tribunal look to the overall materiality of the decision. I think there has been a perspective, and the Productivity Commission has observed this as well, that the Australian system has tended to get caught up in the fine detail with this view that there's a right answer to a regulatory determination. But I think what is now recognised is that what's required is much more a balance of regulatory judgment - that is, informed, but not necessarily dealing in the detail of looking at whether the final answer gives that reasonableness. That is, one, that it meets the national electricity objective, promotion of efficient investment, efficient operation in long-term interests of consumers, as well as observing revenue and pricing principles requiring that the businesses be given the opportunity to recover at least their efficient costs. So that sort of higher level principal is much more important, I think, as a foundation for the future.

**MR WEICKHARDT:** Ed?

**MR WILLETT (AER):** It might be just reiterating what Andrew has said, but I think the review panel themselves recognised that you couldn't look at the review arrangements without also taking into account weaknesses in the rules and, as I think Andrew suggested, we think the problem that has occurred with review processes to



date is the same problem that we've had in application of the rules and it's not with the institutional arrangements. Having said that, it is worth noting that the tribunal is an administrative body, even though it conducts itself very much like a court, and there is scope for the tribunal within its existing legislation to take a more administrative approach to the conduct issues and that's something worth considering.

**MR WEICKHARDT:** Can I turn to the topic of the RIT-T. You have confirmed, I think, that there is a concern about the RIT-T, that even though it may be an improvement on the previous regulatory test it still leaves you with a complicated and maybe not very useful sanction if you're dissatisfied with the outcome of a RIT-T. What do you suggest should be done about this, because it seems an unsatisfactory position that a so-called reassuring sounding RIT-T, regulatory impact test, ends up not being what its name implies.

**MR REEVES (AER):** Again, there are a range of issues: one, even in the design of the test and, secondly, in the conduct of the test. In the design of the test it's important that the businesses be required to demonstrate that they have considered all the relevant options and that the work is done on a proper basis. I mean, that said, there are a whole range of matters to be considered for each of the network investment proposals, depending on the local circumstances. The other thing is in the conduct of the test. Some of the areas we are concerned about is that if a test is done and then some years lapse before the work is undertaken there could well have been a change of circumstances in the meantime - for example, a reduction in forecast demand growth in a particular region such that the timing or even the solution may change. So there are those sorts of drawbacks, that having conducted the RIT-T once should not be sufficient forever, that that's always going to be the right answer.

The other thing we've observed is the necessity for the businesses to be up-front about their needs rather than about second-guessing a solution. So this is around just how they actually do the test themselves. For example, we think that they should be putting out quite early in the piece, "This is the problem we are trying to address. This is the forecast demand. This is the shortfall. We are open to whatever solutions may come up," and to put out there as to what those solutions may be in terms of demand management or in terms of local generation or in terms of siting of generation. The test is conducted by a network business whose natural expertise is in building of networks but it is important that that mindset also change, and be seen to be changed, and the test itself should give guidance to their behaviour to properly consider all alternatives and, importantly, to give opportunities for all alternatives to a network investment.

**MR WEICKHARDT:** But if you remain dissatisfied, what power would you wish

to be able to give this test some teeth?

**MR REEVES (AER):** One of the proposals now from the AEMC is the opportunity for the regulator to do an ex post review on investment. That's now quite explicit for us to re-examine that, and really that work would take us back through the conduct of the test. I think, importantly, the issue that I addressed, for example, of change of circumstances, you would look back to whether the business had in front of it material about reduction in demand, for example, at a time that it made decisions at critical points in the process and either stopped or re-examined what was going on. If it didn't do that you would really wonder whether it was conducting itself as a prudent business would or was it simply, "We've made up our mind. We'll push on regardless. It will roll into the asset base. We'll get our money back."

It's that sort of discipline that something like an ex post review would give the regulator and then the threat of that review should assist in imposing a capital discipline on the businesses. So it's not just the test itself, it's seeing the test in the context of all of the other regulatory tools.

**MS GROVES (AER):** I guess just further to that, some of the other suggestions we have made more recently, we're just really about ensuring the test, I think, is undertaken better, ex ante, rather than thinking about what you might be able to do ex post to remediate it. So, for example, in the transmission frameworks review we have put to the AEMC that AEMO should have a greater role in either interrogating the work of the network businesses in their conducting the RIT-T or perhaps, for the more significant ones, for AEMO to conduct them themselves; so to bring that sort of independent perspective, which we think sits very consistently with their expanded remit for a national transmission planner.

I think also a lot of the additional information about market needs that will come through the national transmission plan will also provide other stakeholders with the information such that they can start informing themselves about what alternatives they can offer in RIT-Ts because some of the issues that we hear about in the conducting of the test is that there might be other options out there but people don't hear about the need from the network business till too late, because sometimes these options can be complex and can take quite some time in the planning. I think that some of the other things that we have suggested in respect of both the RIT-D, so the similar test for distribution and thinking about expanding them into transmission, is to make more explicit that a RIT-T could have a use-by date such to pick up those issues if there are material changes in circumstances. We think that the test would be - because at the moment it doesn't explicitly address that, so it's always a question of are you still looking at the same project, et cetera. I think the test could be improved.

Ultimately, the question about whether there should be some sort of

compliance sanction around a RIT-T - I mean, there could be some merit in that but that's not something we have explored too strongly, mostly thinking the better path is to try and get the framework stronger up-front because that will really deliver the outcomes.

**MR WEICKHARDT:** Thank you. That has helped me.

**DR CRAIK:** In relation to ex post reviews one of the things we suggested was the possibility of avoiding ex post reviews by getting businesses to seek approval for overspends prior to the overspend. You seemed not too enthusiastic about that because you suggest it might create incentives for overspends.

**MR REEVES (AER):** Yes.

**DR CRAIK:** I guess ex post reviews, you would prefer to avoid them if you could, so I guess we were trying to find a way just to avoid them.

**MR REEVES (AER):** Look, they're not our first preference either. That said, we're also very cautious about opening opportunities for gaming by other businesses and we must say we are no strangers to this. We see proposals come in for a particular block of expenditure and we're very much in favour of ex ante reviews - that is, setting the allowance up-front, because of the discipline that it imposes on the businesses. But the more there is the opportunity for pass-through of costs or recognition of change of circumstances such that, "Things have changed, we actually need more money," the more the prospect then that the business can simply label part of the ex ante allowance as being needed for this activity and the demand is now growing in that area. That then frees up capital in other areas for underspends in other areas. There's all sorts of costs shuffling that can go on.

Having said that, it is also important that the business not be unfairly penalised if there are quite genuine changes of circumstances. The proposal from the commission in that regard I think does also address that. Our other concern though is around symmetry; that is, we will certainly hear from the businesses if there are change of circumstances that impose additional cost. They are less forthcoming in the circumstances that may reduce demand on expenditure.

**DR CRAIK:** That's a surprise. We made a recommendation in the draft report that we couldn't see a good reason why you've still got this separation between chapter 6 and chapter 6A, between distribution and transmission, and that whilst each have their own unique circumstances they could be sort of catered for within a more homogenised set of rules that dealt with the common features of both. Where do you stand on that issue?

**MR REEVES (AER):** It does go beyond a simple drafting issue and structure. I mean, some of the history here is probably that transmission was conducted under a national basis, distribution was conducted under state regimes. The important common elements are in regard to costs of capital, I think, and one of the things that we have certainly welcomed through the rule change - in fact we proposed that - was to look at a common approach for setting of costs of capital for transmission and distribution. Similarly, there are things like ex post reviews which, again, the approach should be common, and now what started at the RIT-T has now been extended conceptually into a RIT-D. So the two are coming much closer together over time. There are probably other issues around pricing methodologies, for example, where they may well be a good case for separate approaches. That said, there are so many common elements, perhaps a different structure would be a better reflection of what is going on.

**MR WEICKHARDT:** Okay, thank you.

**DR CRAIK:** Can I come to the vexed issue of governance of institutional arrangements. Given the time we've got, and we've noted your comments, do you agree with our proposal about a review in relation to things like budget and staff and other resources?

**MR REEVES (AER):** Not necessarily in regard to the review. We have said consistently that the AER would always welcome additional resources, as would any investigative agency. I think that is an important factor; so additional resourcing is an important factor. There are areas where we consider we can skill up, and we're addressing those. One is in regard to the technical capability within the AER. A further area, as we've mentioned in regard to benchmarking, are the additional resources, one, to establish robust benchmarking techniques, and the second is bringing together and maintaining consistent data sets over time. That takes additional resources. The third area is around consumer engagement. We have noted that some jurisdictions have had some concerns about the visibility of the resources available to the AER and my view is that that is a factor that can be addressed so that people are aware of the costs of regulation of the energy sector.

We have a very comprehensive report on the state of the industry each year, a publication that is highly regarded by all stakeholders in the sector. In like manner, I think we could do more on reporting of the activities of the AER itself so that the AER is better understood as a body than it is at the moment, because there a lot of misconceptions around stakeholders about how the AER does operate with resources provided by the ACCC, the degree - - -

**DR CRAIK:** So would it be possible to have a kind of separate report in the ACCC's report setting out the AER's resources and all the things - - -

**MR REEVES (AER):** They're the sorts of things that I think would help. I mean, it is unfortunate, I think, that there's a misconception about the relationship of the AER and the ACCC, and separate reporting may be one of those sorts of factors. I think the visibility around the costs of the AER, the visibility around reporting, are some of the things that could address some of those misconceptions.

**MR WEICKHARDT:** I think that genuinely would help.

**DR CRAIK:** Yes, so do I.

**MR WEICKHARDT:** I mean, you bristled at our use of the word "independent". I think there was a miscommunication on our behalf there perhaps, because we were repeating comments that had been made to us about whether or not the AER was independent of the ACCC. You refer to an independent board. An independent board in an ASIC-related company would definitely have an independent set of accounts, it would have an independent annual report. It would be thoroughly visible and transparent - and that's not apparent at the moment. Even when we tried to get some information about numbers of staff in the AER there was nothing we could find on the public record that gave us that sort of information.

**MR WILLETT (AER):** Yes. I think it's important to note that the word "independent" is a loaded word in the context of regulation as it is in the context of the Productivity Commission. It's a very important word, it comes with a lot of meaning. I wouldn't describe the AER board as independent of the ACCC, I'd describe it as separate. That goes back to Andrew's earlier or opening comments, I think, about the use of language in certain contexts is significant in itself.

**MR WEICKHARDT:** Well, an independent board, if we're into sort of misleading and deceptive words, if you went to the ASIC definition of an independent board "separate" wouldn't be good enough. I put to you - - -

**MR WILLETT (AER):** It's certainly independent but it's independent in the ways that count in regulation, and that's not independence from the ACCC because - - -

**DR CRAIK:** Yes, I do note your first chairman made the point that the AER would be independent from the ACCC. In fact, we have a quote in our report quoting him saying that. I think the word is used in many ways and we were reflecting the feedback we got. We have noted your point, but could we get some information on resourcing so that we can correct our apparently misstatements about your budget and things like that - expertise, those sorts of things, across the areas, and the turnover and the movement between the AER and ACCC so we can correct anything that we've got wrong? That would be very helpful, I think.

**MR REEVES (AER):** Yes, we can address some of those things. There were suggestions there, for example, from one of the industry associations about our star people - I'm paraphrasing - moving off into the more exciting areas such as mergers - - -

**DR CRAIK:** Mergers and acquisitions.

**MR REEVES (AER):** - - - and it is simply not true.

**DR CRAIK:** Anything that you can provide to us that would help would be good, and I guess anything else that you can add about the benefits of being in the ACCC would be useful as well.

**MR REEVES (AER):** Thank you. Yes, we addressed some of that in our submission.

**DR CRAIK:** Yes, you did.

**MR WEICKHARDT:** Can I raise an issue about the reasonableness of the overall decision. You suggested that you didn't like our suggestion about the fact that the regulator should err on the side - I think Prof Yarrow talked about the regulator should aim off, should never try to get the answer exactly right because the risks are asymmetric - the regulator undershooting versus overshooting.

**MR REEVES (AER):** Yes.

**MR WEICKHARDT:** You, however, seemed to acknowledge that when you talked about the benchmarking and saying you shouldn't choose a frontier firm. But, on the other hand, you didn't like our suggestion that the overall decision should be reduced simply to the level that it was reasonable. Can you talk about that and how wide you see that band of reasonableness, and the risks of following the suggestion you had of actually getting into that area of undercooking the result and the network business then under-investing and prejudicing the long-term interests of consumers.

**MR REEVES (AER):** Sure. Look, certainly we recognise the risk of under-investment and prejudicing the long-term interests of consumers from that under-investment. The revenue and pricing principles within the rules themselves require us to provide the opportunity for recovery of at least efficient costs in recognition of that risk. Perhaps our concern with the suggestion from the PC though which, again to paraphrase, was almost starting with the proposal, trimming it back until it comes within that sort of overall reasonable estimate, would then deliver an outcome that had a bias towards the higher end of the reasonable range; whereas we

consider that the spirit of the objective and of the revenue and pricing principles was the reasonable opportunity to recover at least the efficient costs, which suggests that it's not at the top of the range, it's somewhere else.

I certainly wouldn't like to put a number on those ranges but I guess we'd all have a bit of a sense of where that might lie. We have said in our proposal for the rule change we are cautious about an approach which would start with the business proposal and then sort of makes these little changes around the margins of those bits here and there that may be above the reasonable estimate for the particular category, since then you end up with an outcome that is towards the end of what might be considered to be a reasonable range and therefore includes a bias in favour of the revenues for the business.

**MR WILLETT (AER):** I think it's important to recognise that the margin should be assessed on the bottom line, not on the components, because of the risk of compounding margins and I think that's well understood.

**MR WEICKHARDT:** I think we're in heated agreement on that issue.

**MR WILLETT (AER):** Okay.

**DR CRAIK:** Optional firm access, we indicated some support and I think you have too. But you do note, I think, that to deal with disorderly bidding - and you're in the process of putting a report out on that, as I understand - that there are ways of fixing it that could be dealt with a bit more quickly than optional firm access because, as we understand, it would be some time before it comes into play. So if you could address that. The other issue is - and I think it was Hydro Tasmania the other day suggested that optional firm access only addresses a very small part of the problem that currently exists in relation to disorderly bidding, I think, if I'm understanding it correctly. They said there were three particular problems and this only addressed a very small part of the issue, and gave the impression that it wasn't a very effective mechanism.

**MR REEVES (AER):** First of all, observational optional firm access, it will take a long time to go through the process - I mean, really almost as much as the process that was gone through in the original design. This would be over many years, and then considering a transition for implementation. Our concern that the perfect may be the enemy of the good - that is, that there are issues which we consider do need to be addressed now and there's a risk of those issues simply being parked while they are being considered through OFA. I haven't considered Hydro's comments as to whether OFA may in fact only be a partial solution to disorderly bidding. We are putting a paper out very shortly on what we see are some of the issues around disorderly bidding and encouragement that the issue be addressed sooner rather than

later. We're not putting forward a particular answer to the problem because it is very complex, but certainly consider that it should be addressed outside any other consideration of OFA because of the timeliness of the matter.

**DR CRAIK:** Your submission suggests a mechanism could be introduced via relatively straightforward changes to AEMO's settlement systems. So do you have a mechanism in mind?

**MR REEVES (AER):** We probably do, but again it's not something that I would really want to be delving into on the detail. Perhaps we could provide more on that if the Productivity Commission was specifically looking for something there.

**MR WEICKHARDT:** That would be helpful.

**DR CRAIK:** That would be helpful, that would be great. Thanks very much.

**MR WEICKHARDT:** One further one we probably don't have time to talk about in detail, but we were intrigued by - you pushed back at our suggestion about weighted average price caps for distributors as opposed to revenue caps. We can see the disadvantages of both. On the other hand, we could not see how you could implement critical peak pricing with a revenue cap in place. So if you can send us some more information about the pros and cons of this and how to overcome these dilemmas, because neither has perfection has associated with it but revenue caps really did seem to - whilst they take the problem away of the network business being indifferent to demand reduction they nonetheless do give rise to other potential problem.

**MR REEVES (AER):** They do. Look, they have some other advantages. They leave the consumers and the businesses much less exposed to errors in forecasting of energy consumption, as price caps do at the moment. What we saw last time was the businesses did terrifically well out of the strength of the economy and sales in well in excess of forecast. Conversely, with energy sales now declining, some of those businesses on price caps would probably not be earning their forecast revenue, depending on what we saw as being the forecasts. The other thing under a price cap regime, it does become complicated developing new tariffs - and in fact we are going through this at the moment in trying to make assessment with the Victorian businesses about customer transfer onto the new tariffs, what that actually means in terms of a weighted average price cap; and under a revenue cap you may actually have more flexibility and more opportunities for innovation of different forms of tariff structures than you do under a weighted average price cap.

The weighted average price cap does have some theoretical appeal in terms of the businesses adjusting the weights within tariffs to get an economically efficient



outcome. Frankly, we haven't seen the evidence that the businesses are as sophisticated with their pricing as to take advantage of those theoretical benefits. Consequently our inclination is towards a revenue cap to deal with those things such as the forecasting errors and the opportunity for innovation in tariff design because we're really not seeing the theoretical advantages being exploited.

**MR WEICKHARDT:** Okay. Well, I'm afraid we are out of time. Thank you very much indeed for appearing, thank you for your submissions and for your input to this inquiry. It has been most appreciated and most valuable.

**MR REEVES (AER):** Thank you.

**MS GROVES (AER):** Thank you.

**DR CRAIK:** We look forward to the extra things you're going to send us. Thank you.

**MR WEICKHARDT:** Okay. Our next participant are Landis and Gyr and if you could please give your name individually and the capacity in which you're appearing before this hearing.

**MR VRKIC (LG):** My name is Milan Vrkic, as mentioned from Landis and Gyr, and I'm appearing in the capacity of representing the submission we are putting in on behalf Landis and Gyr who a meter manufacturer and designer of smart meters in Australia and globally.

**MS SELVARAJOO (LG):** I'm Mani Selvarajoo and I'm here for the same reasons that Milan has just indicated.

**MR WEICKHARDT:** Okay. Thank you very much indeed and thanks for coming along. Now, we have received a sort of summary presentation which you should assume we've looked at, but if you want to make some introductory comments that would be helpful.

**MR VRKIC (LG):** Thank you for that. In terms of our presentation I think we will just state obviously who Landis and Gyr are. Excuse me, I'll put my glasses on.

**MS SELVARAJOO (LG):** Thank you for your time and allowing us to be here. Landis and Gyr is an international smart metering technology organisation. We have a lot of experience both internationally as well as in Australia. We are a key supplier to the AMI programs that are running in Victoria, in Ausgrid's Smart Grid, Smart City program as well as in Western Power. We have been in the Australian market for a very long time as manufacturers and distributors of electricity meters, since 1921. We have got both a manufacturing and R and D presence in Australia which enables us obviously to address the specific industry challenges that are present here in this market.

**MR VRKIC (LG):** Now, I'm not sure whether you want us to go through - we have summarised obviously our presentation, or - - -

**MR WEICKHARDT:** Assume we've read this, but if there are some particular things you want to elaborate on, then please do. We have then got a number of questions.

**MR VRKIC (LG):** I suppose a couple of points we would like to just highlight, is, one, that in terms of the specification for the meters - when people talk about the meters they are really talking about a basic meter that measures energy. We really want to highlight that we think that actually a smart meter can do much more right now. I think we've made a point here that really we believe that if you install a meter that's not just a meter that measures but actually includes the smart grid functions, we

believe that currently the experience we have, certainly in Victoria, that the increment in providing that smart meter compared to the normal interval meter is very small. So there are a number of benefits in actually making sure the national specification that has been developed, it is encouraged to mandate it.

**MS SELVARAJOO (LG):** So to that extent, what Milan has just said is that we are proposing as our first recommendation here that the minimum functionality specification for a smart meter aligns or is based on the NSMP specification.

**MR WEICKHARDT:** Based on the?

**MS SELVARAJOO (LG):** NSMP, the national smart metering program, or the SMI, smart metering infrastructure, program's specification. That's to ensure that all the beneficiaries of the smart meter in the smart meter deployment gain from this implementation. It is no longer basic meter functionality that we are rolling out but it is a smart meter and by definition of that what we are referring to is that it doesn't just have comms and some remote reading and remote functionality but in addition it needs to support the smart grid and the home area network functionalities as well. At a bare minimum, in terms of smart grid functionalities we are talking about things like reliability, safety consideration, even the existing control management functionality like the existing audio control frequency load or what we call ripple which should be offered as a basic component in a smart meter which - - -

**MR WEICKHARDT:** Sorry, can you clarify for me is the specification that exists at the moment in your view an appropriate one, is it sufficiently far-sighted in your view that in five years' time when you roll out sort of the next version of those smart meters that may meet that specification it will still communicate adequately with the older generation? I'm just conscious of the fact that you go to one computer that's got one version of Windows on it and the next version doesn't talk to that version. I can see all sorts of compatibility issues unless we're particularly far-sighted about this.

**MR VRKIC (LG):** We think the national spec was defined with a number of stakeholders. So while we would see that technology and innovation will be happening, there's a particular lifetime for the smart meter - certainly not two years. Like, when people use cellular as an example, and we throw away our cellular phone after two or three years, certainly a meter will last longer. We think the current spec, as defined by the NSMP, or smart meter - SMI group - I think that captures most of the requirements we think are appropriate right now.

**DR CRAIK:** Sorry, it's not clear to me. So are you saying the current spec is okay or it's not - because from your presentation you seem to almost suggest it's not.

**MS SELVARAJOO (LG):** There are three different specifications running around in Australia really. One is the Victorian specification which I think is probably one of the highest specifications in smart metering in the world today, especially in terms of the stringent performance standards being imposed. The other is the NSMP one, which is what the national body came together under the MCE directive to deliver; and the third one is what AEMC is proposing and that's probably the one that's creating a bit of confusion because their proposal is so-called type 4 or basic meter proposal which has some remote functionality but it doesn't really provide the grunt of what's required to support - - -

**MR WEICKHARDT:** That's called a type 4 meter?

**MR VRKIC (LG):** 1 to 4. So the industrial and commercial markets have certain meters which have two-way communications and that's what we refer to as type 4.

**MS SELVARAJOO (LG):** Type 4, yes. What they propose is to take the interval meter, which is a type 5 meter, and move across to a type 4 to allow easy - I understand the merits of doing it, or we understand the merits of what they are doing is for quick implementation, but the functionality is limited because it only offers interval data and remote comms.

**MR VRKIC (LG):** So they're trying to make sure that they align residential market and the commercial-industrial market - you know, having a basic interval meter, all the homes having interval meters with two-way communications. So we see merit in that. What our concern is - and I apologise for the confusion - that you can go just that little bit further and we believe that, based on years of manufacturing, to provide additional features as required for the smart grid and home manager management, to enable those ones, if that is actually planned and coordinated and there are volumes, we believe that the increment is very small.

**MR WEICKHARDT:** Because I read in the press this morning that, I think it was the Queensland industry minister who was saying that they thought that a second-generation meter - I'd not heard that word before - should be introduced, which would cost \$100 rather than a smart meter which would cost \$500. Does that make any sense to you, and what's a second-generation meter?

**MR VRKIC (LG):** I haven't seen it in that sense of first and second generation. First of all, can we make a point that when it comes to actual cost of enabling a home - like, in Victoria when people talk about a \$500 smart meter I think they're components of enabling - making our grid more intelligent. We make a point that in Victoria the actual meter and communications module and the installation was only about 24 per cent of the cost.

**DR CRAIK:** 24 per cent of \$500?

**MR VRKIC (LG):** Of the 2.4 billion cost of rolling out smart meters the actual enabling each home with a meter and communications module was about \$240 estimate. However, the way the specification in Victoria worked is that we had a fairly sophisticated specification, as Mani mentioned, and enabling those functions in the back end obviously was a considerable piece of work. We think that Victoria's specification and national spec is very similar. That we see as, what do you call it, Gen 2, but that is certainly a current state-of-the-art meter that has all the required functions to meet the metering to what the retailers need, what the distributors need and what the homeowners need.

**MR WEICKHARDT:** Can I clarify, was that Victorian specification you say is one of the most rigorous in the world - did that require absolutely sort of purpose-built Koala factor smart meters for Australia?

**MS SELVARAJOO (LG):** They were the first to get off the ground so therefore when I say purpose-built, in a sense that the Americans were doing smart metering already so it was an augmentation to what was there. However, in terms of the infrastructure, the comms infrastructure, et cetera, because Victoria's specification, for example, had load control shedding - 99 per cent of the meters had to be down within a minute, okay. So for that, the degree of infrastructure required to ensure that happened within the minute probably changed that. But going back to your question, was it purpose built, I guess it was purpose built for the design of what was required but not purpose built specific for them if you follow what I mean.

**MR VRKIC (LG):** Those meters are being used in - remember Smart Grid, Smart City, we're using the same meters again. We're using similar meters in New Zealand.

**MR WEICKHARDT:** But it wasn't an existing meter in the Landers and Gyr range that you simply plucked off the shelf and said, "That's number 124," or something?

**MS SELVARAJOO (LG):** The firmware could be.

**MR VRKIC (LG):** So up to that stage we had interval meters. But we did design this meter specifically to meet all the requirements of the smart meter.

**DR CRAIK:** Is this the highest standard then, the standard you would currently propose that Australia have? Is the Victorian one a higher standard than what you say would be the desirable - - -

**MS SELVARAJOO (LG):** The NSMP, yes, that's right. The NSMP has relaxed

some of the performance standards; like, instead of load shedding 99 per cent within a minute it's 90 per cent within five minutes. Okay, yes, they have relaxed that. So that means in terms of the cost of deploying extra infrastructure it's lower. The main reason I think we're proposing NSMP because it had extensive consultation with industry - retailers were involved, DBs were involved, consumer bodies were involved - and we think it's well thought through, and given all the learnings that we had in Victoria it's a pretty comprehensive one that could probably benefit a lot of the stakeholder parties involved.

**DR CRAIK:** Why did the AEMC, do you know, choose a different standard?

**MS SELVARAJOO (LG):** Our take on it - and we did discuss this with the AEMC themselves - is that changing the metering type that's involved is quite a significant change in the real market itself, so to move existing customers - because type 5 and type 6 meters are slightly - sorry, I'm looking at your faces and thinking that you probably don't want to go into there's types here, but I'm struggling trying to explain this without getting into that. They're trying to do it in the least - - -

**MR VRKIC (LG):** Can I help you. Maybe at the top level is - I think AEMC believe, from what we can see - they believe that we would finish with the same type of meter that has all key functions including things that retailers need, with the smart reader everyone needs. I think they see it as a basic functionality and then they're seeing the stakeholders would negotiate to get additional features included. But I think their view would be we would finish with the same type of smart meter that has all of the functions in order for us to obviously manage the whole energy infrastructure. We would guess it's difference in approach and where you start.

**MS SELVARAJOO (LG):** They have got a current concept right now where small and medium businesses - a type which is a retail contestable market, so they have a basic installation of a meter and the businesses will go out to the retailer of the DB to buy extra functionality. So they wanted a similar model to exist in the residential market space. So you have a meter that you buy from a retailer in the retail contestable market and you build the extra functionality and you negotiate that and each consumer has the opportunity to negotiate that.

**DR CRAIK:** So the distributor might not get the value of the smart grid functionality unless all the consumers say, "Yes, I'm happy to pay for that extra - - -"

**MS SELVARAJOO (LG):** That's right. The consumer, on the other hand, won't get all that he wants because they wouldn't understand what home area networking is or what they could do with micro generation or what electric vehicles they are going to get in the future, because they are limited by whatever meter they have installed. That probably explains it better than the typed word.

**MR WEICKHARDT:** It sounds like a sort of a nightmare, quite frankly. If all these different versions of specifications and market-led rollouts occur, I can see distributors being left with a multiplicity of meters in their region and I assume they will be forced to the lowest common denominator in terms of the features they offer customers in that region.

**MR VRKIC (LG):** We would agree with that. The unfortunate part is people mention the smart meter - and again we're going to make a point - I think we've estimated that rolling in smart meters with poor functionality is not that much more than basic interval meters, especially if you get certainty. If the government provides certainty and a clear specification to the industry, the industry will respond. The issue became in Victoria is that because of all the benefits across a number of stakeholders, they took the decision to implement all of the functions at the same time and therefore some of the information that the meter collects which is readily available to a distributor to allow them to run the network better, that was implemented as well.

Unfortunately people started saying the meter cost \$500, \$800. What we're saying is currently we're wasting money as an industry, as a country, in that we're still installing legacy meters which will have to be replaced. What we're really saying is virtually for similar prices, if you had volumes and we started saying everyone will buy those type of meters, the industry meter suppliers like us could actually meet the challenge and actually you could end up with no wastage and a smart meter that has all the functions. Then distributors could then negotiate the business cases for additional functions. So we totally agree, we have a concern that if there's no coordination, we will actually end up with a bit of a hotch-potch system. We don't have standards. We don't have interpretability even sorted out.

Our view is that Victoria, even though from consumer engagement, it's been acknowledged was a problem, we would agree with SP AusNet's view that actually the programs have been well run and programs are starting to deliver some real benefits and the meters - - -

**MR WEICKHARDT:** Can you just clarify; you said the meter itself and its installation costs - - -

**MR VRKIC (LG):** 24 per cent.

**MR WEICKHARDT:** - - - 24 per cent of the total cost. Can you just let me know, roughly speaking, what the other 76 per cent was?

**MR VRKIC (LG):** Certainly project management, system integration. Again, this

was the great thing about the meter: the meter specification thought about futureproofing the meter; with downloads, for things like outage, direct response, so in order to actually take advantage of all of those functions that the meter was not collecting, there was a fixed element or an element of a number of these features which we had to update a number of systems in the back end and that was the biggest part of the rollout, but that's of course the part that starts delivering some real benefits in the way they manage networks.

**DR CRAIK:** Is there sufficient value in the smart meters that there would be value to the distributors in just rolling them out anyway because they could manage the whole network better?

**MR VRKIC (LG):** Look, that would be a proper discussion between them and AER. Certainly the presentations that they are making to the public now for conferences certainly indicates they know the value. They see the value. If I can sort of indulge and say there was a conference last year where some different utilities in non-Victorian states said, "How do you manage distributor generation?" and Victorians said, "Thank God we've got AMI, we know what's going on." So that's one of the key elements; if you're going to have a distributor grid, not having the ability to know what's going in the grid I think is a serious issue. Again, the smart meters are already collecting power. They can already measure voltages. So the increments of doing all these additional bits - whether you do the intelligence in the meantime or the back end - is not that big.

We've done a bit of an estimate and of course there's commercial confidences here, but we've done a conservative estimate; let's say the meter costs I think \$105. We've even gone conservative and said suppose two-way communication costs 95 and your installation is 40; for about \$240, we could involve the rest of the markets, not including WA and Northern Territory, but about less than 1.6 billion. So every home - and if you think that meter will have to be replaced over a period and the fact that that meter, if you don't do it in a structured way, even the installation, the increase we've estimated is not \$40 like in Victoria when you have a mass rollout, it's \$80 if you do it ad hoc. That \$40 penalty alone would go a long way in paying for the premium to the interval meter.

**DR CRAIK:** So if it's 1.6 billion to roll out - - -

**MR VRKIC (LG):** In every home.

**DR CRAIK:** - - - smart meters, then you've still got the back-end costs, haven't you?

**MR VRKIC (LG):** Yes.



**DR CRAIK:** That's the 76 per cent, and the 1.6 billion is a quarter of the costs, and you've still got three-quarters of the cost, so you've got another five billion-odd.

**MR VRKIC (LG):** In our view, if you start installing them anyway and you can use them as an interval meter to start off with, then as you develop other functionalities, you start building that on a - and I will have to say we have - you know, you would probably have to talk to some of the project managers in this case but there could be a potential to implement some of these additional features maybe in a staggered way, but these have large fixed costs, so we shouldn't get away from - that these are large fixed costs. We made a comment that the current proposal to go regional ad hoc - which I think your point showed this - the meter might be the small part; you still need to take the full value, you still need to do all the back-end system. You do them once whether you have one meter or you have a million meters. You still have that investment. I will also say, we're the meter manufacturer - we have some knowledge from previous lives - but we're not representing ourselves as being experts in that area.

**MR WEICKHARDT:** Of the 76 per cent of the cost, how much of that having been spent in Victoria is useable in a rollout to the rest of the NEM?

**MR VRKIC (LG):** Okay. Look, in Victoria, also we make a point that you have there different projects, so we're not quite sure how the rollout would happen in other states. Certainly they would have different back-end systems, so there would be an investment. Every time you do have an integration from a smart meter that's actually feeding into different systems, there would be work there, but I wouldn't dare estimate because it is not our area of expertise. It would really be dependent on a case-by-case basis, I would think.

**MR WEICKHARDT:** But the back-end systems, again, is Australia trying to do something unique in the world here or is this the same back-end system that's used in Texas or Germany or Holland?

**MR VRKIC (LG):** Having working for a telecommunications company - so I'm now using my telecommunications - for example, Optus and Telstra would still have, if they're introducing a function to manage their customers, they would have two different projects, two different integration challenges. What determines that is what type of system you have in the back end. Now, I would say no single organisation will ever be exactly the same. Where the savings come, I think NEMMCO have made the good decision by having a consumer portal, so that made sure that organisations interfaced at a particular one point rather than multiple points.

**MR WEICKHARDT:** Who did this?

**MR VRKIC (LG):** Texas.

**MS SELVARAJOO (LG):** The Texas government did that.

**MR VRKIC (LG):** British or UK government is certainly trying to move along a more coordinated approach, so they can minimise those integration costs, so they are models - - -

**MS SELVARAJOO (LG):** A single body that takes the vested interest of the integrations and then supplying the data back either to the consumer or back to the utility or the retailer, depending who the stakeholders are.

**MR VRKIC (LG):** So we still think there is work to be done to integrate. If you can integrate once per country or per state that would be the ideal. I'm not sure that you can go to that extreme but certainly - but we'd also make a point that you can start by installing more intelligent meters because the increment is small and obviously we work for a smart meter company and it could be construed as we've got vested interests. But in a way we are appealing and saying, "Give us certainty, give us standards," and then together with our competitors we can actually develop product. Your point about well, we have the same meter as Victoria, we put our picture of Victorian meter there. We'll do exactly the same because we would redevelop it and take advantage of the latest cost reductions, maybe larger - you can buy better - you know, microprocessor evolution happens, you have to get it either cheaper or more powerful. So all of those opportunities are available to us.

So why start spending - buying a \$20 accumulation meter, that's the one that spins around, spend \$80 on installing it when you can actually put in a smart meter, roll it out in a major way, have a \$40 installation card and single-phase, single element you could get for - and I'll - let's put them on the record; but - should I say. You get pretty close to the interval meter, maybe \$10 increment, and you're saving \$40. The major hardware difference in smart meters is the disconnect relay, and that's great, because that provides you a lot of value to the retailers and to distributors. So that's a hardware thing that you need to implement. But a lot of functions are actually software and then your innovation and competition starts working and depending on the size.

We've made the point here that there are price breaks for us as a manufacturer. If you got large volumes we can - and market is competitive. Actually, market is - our customers do have ability to negotiate.

**DR CRAIK:** Are there many other companies like yours in Australia?

**MR VRKIC (LG):** There are a number of companies. In Victoria there were two companies developing smart meters, company called Secure and us. There's a company called DTMI, GE, Itron.

**MR WEICKHARDT:** Because I understand that there were some controversy with the regulator about the decision of one of the distributors in Victoria using a different technology or a different approach?

**MR VRKIC (LG):** Yes.

**MR WEICKHARDT:** What was that about?

**MR VRKIC (LG):** Look, we obviously have - just the fact is that the two - there are three programs in Victoria, five utilities, CitiPower and Powercor, we call them CHED, they chose RF mesh. Jemena and UED had one program, and that was also RF mesh. SPAusNet chose WiMax, a 4G technology, because they saw that as more forward looking technology for them. It had much more bandwidth.

**MS SELVARAJOO (LG):** Also they wanted to use - it's an enabler for the whole smart grid, you know, the sensors and all that information they want together.

**MR WEICKHARDT:** So sorry, does WiMax mean they chose a different smart meter?

**MR VRKIC (LG):** No, the meter is the same. So CHED - and you almost have to refer to the picture.

**MS SELVARAJOO (LG):** There is a picture there on - - -

**MR VRKIC (LG):** Of our meter.

**MS SELVARAJOO (LG):** Yes.

**MR VRKIC (LG):** Our meter - the basic meter is the same but the communication technology that you plug in at the top is different.

**DR CRAIK:** I see.

**MS SELVARAJOO (LG):** Slide number 6.

**MR WEICKHARDT:** Okay.

**MR VRKIC (LG):** So apologies, we were uncertain whether to put that picture, we

didn't want to promote our product, but we thought it might be good to illustrate.

**MS SELVARAJOO (LG):** So the meter is agnostic of that comms. That hand that's lifting the comms module or holding the comms module, is the comms module.

**MR WEICKHARDT:** So the left-hand one with the hand on it you're saying is the WiMax one, is it?

**MR VRKIC (LG):** No, they're all the same. This is just a process of actually - illustrating how the module goes in and what the meter looks like at the end when you close the cover.

**MS SELVARAJOO (LG):** No, they have an older - so different version than this.

**MR VRKIC (LG):** Apologies.

**MS SELVARAJOO (LG):** Yes.

**MR WEICKHARDT:** Well, I'm confused now. What was the difference between the meter that SP AusNet chose as opposed to the meter that the two other distributors chose?

**MR VRKIC (LG):** The picture on the left you can see on the top of the meter there is the hand putting a module in there. That module is different for SP AusNet and - - -

**DR CRAIK:** I see what you're saying.

**MR WEICKHARDT:** Just a different module?

**DR CRAIK:** You can put in whatever kind of communications module, you just plug it into the standard meter.

**MR WEICKHARDT:** Okay, I see.

**DR CRAIK:** I see, okay.

**MS SELVARAJOO (LG):** So the meter is agnostic.

**DR CRAIK:** Okay.

**MS SELVARAJOO (LG):** And that's the point we're making.

**MR WEICKHARDT:** How much does the communication module cost?

**MR VRKIC (LG):** It varies, and this is where I think there were debates about - certainly RF mesh was more mature technology at the time. There was a premium to be paid for WiMax at the time. I think there was a bit of a debate, and I wouldn't want to go further, but as Mani said that - certainly the 4G technology is being seen as a more future-ready technology.

**MS SELVARAJOO (LG):** It's a smart grid enabler, which smart meter is only an element of the smart grid. So yes, it's more future proofing.

**MR VRKIC (LG):** It has bandwidth. But we make a point too, with AEMC proposal of a more deregulated market putting mesh - mesh relies on a particular density in the street. So if you don't have the density then you really need point to point technology, like a cellular or a WiMax.

**DR CRAIK:** So if you're out in the sticks somewhere then it wouldn't be much use. Is that what you're saying?

**MR VRKIC (LG):** No, even in suburbs if you don't have almost every second house - - -

**DR CRAIK:** Yes.

**MR VRKIC (LG):** Again without going into technology the way the mesh works is that each module talks to another module next door, next door, and eventually they get back to the network.

**DR CRAIK:** Okay.

**MR VRKIC (LG):** Whereas the point to point technology is a cellular one, a bit like your cellular phone, just talks to the base station.

**DR CRAIK:** Yes.

**MR VRKIC (LG):** So the RF mesh is very effective, very good technology - - -

**DR CRAIK:** In a suburb, in a concentrated suburb.

**MR VRKIC (LG):** - - - in a suburb with a mandated rollout.

**DR CRAIK:** Yes, okay, all right.

**MR WEICKHARDT:** The 4G WiMax one just goes directly back to base, is it?

**MR VRKIC (LG):** Back to a base station.

**MR WEICKHARDT:** All right.

**MR VRKIC (LG):** A bit like cellular base station, which then communicates back to the network operations centre.

**MR WEICKHARDT:** Okay, all right.

**DR CRAIK:** This is an irrelevant question for this inquiry but I'm just curious, do you manufacture these in Australia?

**MR VRKIC (LG):** The communication modules?

**DR CRAIK:** The meter.

**MS SELVARAJOO (LG):** The meter.

**MR VRKIC (LG):** The meter? Yes. We're actually proud to say we actually have an R and D team here in Sydney. So we have designed them and we manufacture them. As a result of the Victorian deployment our engineers are now being asked to go to rest of Asia and globally. It's giving us a - of course we've built some expertise now and knowledge.

**MS SELVARAJOO (LG):** So we have got an employment - good employment for a workforce in Sydney that does this, yes.

**DR CRAIK:** Thanks.

**MR WEICKHARDT:** Okay.

**DR CRAIK:** I don't have any other questions. Unless you've got something to say about - have you been involved in any retailer-led rollouts?

**MR VRKIC (LG):** Well, we supply meters to - type 1 to 4.

**MS SELVARAJOO (LG):** Yes, we do.

**MR VRKIC (LG):** Yes, in Australia.

**MS SELVARAJOO (LG):** Type 1 to 4 is the contestable market for businesses

and yes, we do supply meters there. I think Landis and Gyr's position is that we are not taking a retailer-led or a distributor - we are not preferencing either or. We'd like to support both depending on - - -

**DR CRAIK:** I'm sure you would. I'm not arguing that. I guess I'm talking about the effectiveness of the rollout.

**MS SELVARAJOO (LG):** Yes.

**MR VRKIC (LG):** Yes. But in terms of experience it's certainly agreed - we talk to our colleagues in UK, because that's retailer led. In New Zealand that is retailer-led, so we've got some experience there as well.

**MR WEICKHARDT:** What is the experience from the retailer-led rollouts?

**MR VRKIC (LG):** I think in UK we do like what we see in UK where government is really taking a leadership position. They're providing direction, they are working it to avoid some of these - to make sure it's a most cost-effective rollout.

**DR CRAIK:** So it's mandated, is it?

**MR VRKIC (LG):** It's going to be mandated.

**DR CRAIK:** Okay.

**MR VRKIC (LG):** There's a time set. They will set the specifications, they're working industry to ensure that the specification provides an outcome that all the stakeholders' needs are met, and it's actually the most cost-effective solution. So we see that they - New Zealand is a more hands-off approach. It is also retailer led.

**MS SELVARAJOO (LG):** Yes, and I guess the different - the preference with that, that there to be regulation. One of the lessons that we learnt from New Zealand market is that if there is no regulation and no mandate specifically then it's whoever comes first, whoever offers whatever, and that's how the market - then that dictates how the industry takes shape, and then some beneficiaries gain and others don't. Whereas in the UK market we can see there's a lot of coordinated - and there is a regulatory framework they're working towards, or under, I should say. The principle is often said, "This is what we want to achieve. This is how telecommunications will be rolled out. These are the things that the consumer could benefit," you know, what will be in the home area network and so on and so forth. We could say - and the specifications - you know, the standards has been done, and what standards they have to apply et cetera. It appears a lot more rigour has been applied there than say a market like New Zealand.

**MR WEICKHARDT:** So I'm still not clear exactly in my mind what's happened in New Zealand. You've just got a whole lot of different uncoordinated meters being installed?

**MR VRKIC (LG):** Yes. You've got problems as well because there's no specification that considers all of the stakeholders.

**DR CRAIK:** It's not mandated.

**MR VRKIC (LG):** It's not mandated, yes. They did have a mandate to replace some of the meters because they need to.

**DR CRAIK:** Sure.

**MR VRKIC (LG):** It is a discretion of a retailer what functions they include. So then they are relying on the distributors to negotiate, so there's a possibility where you could end up with two meters because the retailers do what they need and a distributor then says, "That doesn't meet my needs," so you could actually end up with multiple technology which should really be met by one.

**MR WEICKHARDT:** That's happened in New Zealand?

**MS SELVARAJOO (LG):** Yes. In the region of Waikato, for example, right now one of the retailers has already rolled it through about 80 per cent of households with the interval meter and some limited smart metering functionality which doesn't accommodate what the distributor would like, the DB. So therefore they have decided to - and we know this - - -

**MR VRKIC (LG):** We shouldn't say that they have rolled it out.

**MS SELVARAJOO (LG):** They haven't rolled out yet but they have now decided they will go ahead and buy those meters and put it onto the same meter board on each home so they can have some DB benefits, you know, understanding the reliability of the supply et cetera. So potentially there is going to be two different meters providing two different needs on one - - -

**MR VRKIC (LG):** But we should make it clear also: it hasn't been rolled out. Certainly we're privy to discussions that people are saying, "My needs are not being met and I do need these functions," but we can't really point at it that there's 10,000 homes that have two meters.

**MR WEICKHARDT:** This is a potential risk, you're saying?



**MR VRKIC (LG):** This has potential, yes.

**MS SELVARAJOO (LG):** The retail part is rolled out but the potential part, is the DB part going to be augmented to support their needs.

**DR CRAIK:** So what you're saying, it seems to me, is that for a successful rollout, it needs to be mandated at least by region; secondly, that there needs to be a regulatory framework that involves how all the parties in the supply chain - - -

**MR VRKIC (LG):** And the underlying specification needs to be mandated.

**DR CRAIK:** There needs to be a minimum specification for the meters that picks up both benefits for the consumer and the distributor.

**MS SELVARAJOO (LG):** And the retailers, yes.

**MR VRKIC (LG):** That last point is probably the strongest one because you can probably overcome a lot of other stuff but if you don't have a common specification - so regardless of who rolls it out, because this incremental cost of the feature is small, they should be told, "No, you need to implement it," and then everyone can then start accessing the information that the meter provides for various reasons.

**MR WEICKHARDT:** I got confused. Could we just go over that again. I'm clear that you're suggesting and recommending that there be a mandatory minimum specification that meets the needs of all parties but are you then saying once you've got that specification that you're indifferent as to whether or not the rollout is led by the retailer, the distributor or by a third party? Does it in your mind matter?

**MR VRKIC (LG):** We see it in three parts. The first is minimum specification should be mandatory; then we say there's efficiencies if you mandate a rollout by a certain date, so there's certainty to the industry to provide a cost-efficient meter, and then the third point, who rolls it out, we are not suggesting - we are saying they are examples of where both can work, notwithstanding the process.

**MR WEICKHARDT:** But the efficiencies in terms of some sort of mandated mass rollout, that's \$40 per installation versus the \$80. That's right?

**MR VRKIC (LG):** Yes, and the fact that we have an estimate - we're making two points there; one is the installation cost. There's also minimum breaks for product pricing. So if we have certainty of volume, there's additional savings. Without that, if it is ad hoc and you start buying 10,000 at a time rather than a large volume like in Victoria, then you do go to these higher prices.

**MR WEICKHARDT:** Okay.

**MR VRKIC (LG):** Now, we can't estimate that because we don't know what that could entail.

**DR CRAIK:** Yes. But what you're saying is that it may not matter so much who rolls it out; as long as it's mandated for a certain region, then the "who" is less important. Is that right?

**MR VRKIC (LG):** From our perspective, yes.

**DR CRAIK:** Yes, okay, from your perspective. But you also need a regulatory framework around that.

**MS SELVARAJOO (LG):** Yes.

**MR WEICKHARDT:** So the three points: minimum specification, efficiencies from the mass rollout, and what was the third?

**MR VRKIC (LG):** The third point is who rolls it out.

**DR CRAIK:** Who rolls it out. Then the fourth one I guess is the regulatory framework that picks up all the parties in the system; interesting.

**MR WEICKHARDT:** You mentioned, in terms of the AEMC proposed functionality, a measurement element for active energy is mandatory; a measurement element for reactive energy is discretionary. Can you just help me understand - forgive my ignorance - the difference between active and reactive energy.

**MR VRKIC (LG):** Okay. I will need to go to my electrical engineering now. Active energy, if you've got a purely resistive load - sorry, can I ask a question? Do you understand what reactive energy is?

**MR WEICKHARDT:** No. Just tell me and that might help.

**MR VRKIC (LG):** Capacitive loads or inductive loads have a reactive energy, and it's a combination of the two. They're both important because they can lead to wastage. So your fluorescent lights - there's a thing called power factors. We would, in an ideal world, work in one power factor, but right now with other loads, it's not a true power factor one. That is very useful for utilities in the way they manage the network, is to know what the factors are because then they can actually do compensation, capacitive banks - and again I'm not a practising networks engineer,

but there are needs for them to know that so they can actually manage and reduce wastage and the quality of our service that comes from them is better.

**MR WEICKHARDT:** When people talk about an interval meter, is there universal agreement about what an interval meter is or would one person say, measuring the power used sort of once every 24 hours, that's an interval, or measuring it every five seconds, that's an interval? What do I infer by the term "interval meter"?

**MS SELVARAJOO (LG):** Both are valid. It's the specification by what you like - in Texas, for example, it's a 15-minute interval.

**MR WEICKHARDT:** Right.

**MS SELVARAJOO (LG):** In our scenario, it is 30 minutes. It's how we store all data basically in that meter, load profile, we call it, that you use. So arguably there are talks about going to five-minute interval data to provide more information to look at what consumption every five minutes look like, you know, on demand, what every five minutes will look like in terms of forecasting. But yes, both scenarios are valid. You could have an interval for 24 hours or you could have an interval for six hours or you could have an interval for five minutes.

**MR VRKIC (LG):** Where the specification really comes in is some companies read optically the meter reading, and that interface, different companies will have a different protocol.

**MS SELVARAJOO (LG):** But of course the cost of - - -

**MR WEICKHARDT:** They read optically?

**MR VRKIC (LG):** Yes, optically. So in front of each meter you will see a bit of an LED - and companies actually have a little optical read - - -

**MR WEICKHARDT:** But if somebody locally comes along - - -

**MR VRKIC (LG):** The meter reader. Some companies will actually read manually the readings and write it down. Some of them will actually go and automatically download data. With interval meters, if you've got too many of these registers that you want to record, then the optical read is obviously more - - -

**MS SELVARAJOO (LG):** A bit slower.

**MR WEICKHARDT:** So you can have interval meters that can be remotely read?

**MR VRKIC (LG):** No, physically a person has to be there.

**MR WEICKHARDT:** Okay.

**DR CRAIK:** You can't read - - -

**MS SELVARAJOO (LG):** You could have - - -

**MR WEICKHARDT:** A smart meter can be remotely read but an interval meter can't?

**MR VRKIC (LG):** Sorry, I will clarify that.

**MS SELVARAJOO (LG):** There are interval meters out there that have been installed by utilities that do have a remote read. They put in a GPS modem, just to pick readings out, maybe because there is a dog in the property and they could never get there or it's just too far away and they just want to do that for billing purposes, but that's a small proportion of them. But most interval meters out there are read by an optical reader, so the meter reader goes out but there's two downloads.

**DR CRAIK:** I thought the benefit was you didn't actually have to have people running around reading these meters.

**MS SELVARAJOO (LG):** There is also a lot where they just write down the readings - - -

**MR WEICKHARDT:** Yes, but again - I'm sorry to be slow about this - but are you saying a smart meter means that it can be completely remotely read?

**MS SELVARAJOO (LG):** Yes.

**MR WEICKHARDT:** But in industry parlance, an interval meter can, apart from on rare occasions, not be remotely read?

**MR VRKIC (LG):** No, it can be both. I wouldn't say rarely; there's both.

**MS SELVARAJOO (LG):** They have the capability, but what they choose to do depends on the - - -

**MR VRKIC (LG):** Consumer-industrial markets, almost 100 per cent remotely read. Residential markets that have interval meters, you can read it but read it from the premises.

**MR WEICKHARDT:** Okay.

**MS SELVARAJOO (LG):** So the qualification I make is that it was the residential market that I was talking about.

**DR CRAIK:** Does the AEMC specification mean that you could read it remotely?

**MS SELVARAJOO (LG):** Yes, it can read it remotely. That's all they provide for: a load profile - depending what the intervals are; I think it's 30 minutes, generally, here - and then a comms, so that you read it. That's basically it, I think. Yes, and a display that, in the event that the comms is down, they can send a meter reader to read it.

**MR WEICKHARDT:** So in the current parlance and debate that is going on about rollout, people talk about a market-led rollout and the innovation and competitiveness that comes from that. When people use terms like a "market-led rollout", are they suggesting that - you know, would a contractor A might sort of bid to rollout meters down one particular street? So it might not be a retailer and it might not be a distributor; it could be a third-party.

**MS SELVARAJOO (LG):** We only heard it through the AEMC proposal, that there may be a body called the metering coordinator, okay. But it is quite unclear as to who's responsibility - will it be a retailer-owned metering coordinator as they do have right now in the commercial business rollouts, or will it be an independent body but both the retailer and the distributor could go and negotiate outcomes for the consumer. I'm not quite sure what that looks like.

**MR WEICKHARDT:** Have you seen examples elsewhere in the world where, basically sort of anyone - you know, Joe the electrician can bid on - you know, "I service this suburb. I'll go around and offer these meters"? Where it's completely independent of both the retailer and the distributor.

**MR VRKIC (LG):** New Zealand have service providers who are appointed by retailers. Again, the key part here is the responsible party. Here the responsible party for type 5 and 6, for residential, is the distributor. The proposal is the retailer becomes a responsible party, which is fine, and then they're going to appoint a meter coordinator. We don't see a problem with that model per se, as long as the underpinning minimum specs are to say, "You can install a meter, but don't install an old one. Install the one that actually then can be used by others in our market." I think that's our key point. But there are currently organisations which are either independent or part of distribution businesses that actually do that function already, and that seems to be - - -

**MR WEICKHARDT:** Okay. But they're working, effectively, for the distributor or the retailer?

**MS SELVARAJOO (LG):** Or a retailer, yes.

**MR WEICKHARDT:** In terms of the sort of "innovations" that will arise and the benefits from contestability when you let this happen but with a minimum specification, what sort of innovations and contestable benefits do you see arising that would perhaps overcome some of the downsides of a nonmandated rollout?

**MR VRKIC (LG):** I think we've got some really clever engineers, thank you for the question before. So I think innovation happens when there's someone actually buying that innovation. So we've got a lot of ideas on metering, some all over the place in terms of really clever, futuristic - the issue becomes really one of, can the market afford them. So they have to be fit for purpose. We go back to the previous point: without volumes, you really can't have that much innovation. The good thing with Victoria - and I will say that I think the government did a really good spec in Victoria where they have enabled some core hardware with a ZigBee interface. That ZigBee interface now is allowing a lot of innovation at the home.

**DR CRAIK:** What is a ZigBee interface?

**MR VRKIC (LG):** ZigBee is a technology, a bit like wi-fi. It was chosen because it had particular power consumption; it was better than wi-fi for gas meters. But that's the way for meters to communicate with a number of devices within the home. So you can remotely turn your oven off, if you're at the airport and you suddenly remember it. I think that's where the innovation is going to happen. It is that interoperability, those standards that allow multiple stakeholders who have specific knowledge, where the innovation, we believe, will happen. I think this is why it is good that the AEMC is sort of saying sooner rather than later. It's good. But in terms of the smart meter, it really is volume, how much can you afford, and I think the innovation is really to get it to that lower pricepoint so that every home has one.

**MR WEICKHARDT:** But you see the innovation being mainly around the meter and the comms device, not in terms of the package that is offered to the householder or the way the installer installs the meter?

**MS SELVARAJOO (LG):** I think we think it is it the whole thing; there's a whole gamut. You know, it's not just the meter itself. And we have got industry in this vertical space of the market. We have got products that say, "Do energy efficiency at home. Consumers, you can do this. You can control this. You can have this ability. You no longer need a quarterly bill to turn up. You know where your cost is going, what you can do". So yes, we do have - and that innovation is happening right now

in that space, and it's mainly led in Victoria because of ZigBee and the home area network with smart metering and capability. Most of the products that you see have being innovated is for that market, because they have - - -

**MR VRKIC (LG):** But in terms of meter innovation, just to give you examples of types of innovations that we are trialing and working on, is: the meter, by being close to the home and being embedded in low voltage areas, we start - it's a measuring device that can measure not just voltage but power, currents. We can do leakage currents. So there was a particular trial that we did where we could actually see that one of the wires overhead was getting heated. So that type of innovation, we are building intelligence. Our R and D guys really go to town. By measuring differences in soil, different properties, they can actually work out what's going within the wider network.

So that's the innovation that you would get in a meter, then you've got the whole home area network, and then you've got the whole innovation in the retail. So I think they're all exciting and they're all possible, but I think, Victoria, the fact that they had actually started, the fact that they have the tools now, then that's becoming an opportunity for people to start innovating.

**MR WEICKHARDT:** But to a degree you're suggesting, I think, that you need critical mass of the meters with a certain specification to stimulate that?

**MR VRKIC (LG):** Yes.

**MR WEICKHARDT:** It's a bit like writing apps for an Apple iPad. If Phil Weickhardt developed a tablet computer, probably nobody would write an app for that.

**MR VRKIC (LG):** That's right. And you would probably have to sell your iPad for such an expensive amount, it just wouldn't be - if I can indulge: I was in the cellular industry in the 80s when we used to make \$3000 cellular phones, which got to \$99. That was part of the volume gain; once you started getting the volume gain and innovation. It happens and it does have that cycle. So we will see over the next 30, 40 years - I think the debate that is now happening with smart meters was happening with ATM machines and cellular 30 years ago.

**DR CRAIK:** So in 30 years a smart meter will be about \$5 and do everything: cook your dinner for you.

**MR VRKIC (LG):** But I think when we look back to whatever year it is now, we will look back and say, the debate, how could you actually run a network if you don't know what's going on. Power is going two ways and people are guessing; people are

guessing what is going on.

**MR WEICKHARDT:** So Victoria, you suggest, was sort of reasonably close to the technology frontier when it specified what it wanted in its smart meters. Where does the NSP specification sit in terms of the world and what technology is being rolled out in other countries around the world now in smart meters?

**MR VRKIC (LG):** I think, as Mani mentioned, SLAs, service levels that they wanted, were a little bit too rigid in Victoria, too harsh. I think they've relaxed that, because I think that was the feedback from the industry.

**MR WEICKHARDT:** But are we close to the frontier of innovation around the world or are we sort of two generations behind?

**MS SELVARAJOO (LG):** If you look at - so there's places like, now, in Italy, the first country to rollout, really, smart meters, okay, we're ahead by default, because Italy isn't - - -

**MR WEICKHARDT:** Okay. But Texas, Germany, Holland?

**MR VRKIC (LG):** We'd be ahead.

**MS SELVARAJOO (LG):** Yes, we are ahead.

**MR VRKIC (LG):** But can I just - I think we are ahead of most countries.

**MR WEICKHARDT:** Okay.

**MR VRKIC (LG):** And I think most market participants are looking at us. The fact that we have actually taken a more holistic view in Victoria about all of the stakeholders, recognising that a number of parties benefit. So I think we have got a fairly good specification. The national spec took into account some of the learnings; like, I think people have said, "Do you really need SLAs?" I think we've also made a comment: you really need to go to 100 per cent of the homes; what of the last 7000 who don't have a load problem. So there wasn't an elegance in that 100 per cent; robust. National spec took that into account, put some extras like power quality. We are sort of seeing - about power effectors and power quality. And they built a little bit more into the meter, but Victorians are getting that through the back-end anyway. So I think we're leading.

**MR WEICKHARDT:** All right. Look, thank you very much indeed.

**DR CRAIK:** Yes, it's been really helpful.



**MR WEICKHARDT:** It has been helpful. Sorry for the painful process of educating us, but it has been very useful. We are going to adjourn now and we will resume again at 10.50. Thank you.

**MR VRKIC (LG):** Thank you.

**MS SELVARAJOO (LG):** Thank you.

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**MR WEICKHARDT:** The hearing will resume. Our next participant is the Energy Supply Association of Australia. If you could give your name and the capacity in which you're appearing, please.

**MR DONOGHUE (ESAA):** My name is Kieran Donoghue and I'm the general manager of policy for the Energy Supply Association.

**MR WEICKHARDT:** Thank you for your submissions, both pre the draft report and post and if you'd like to introduce what you'd like to talk about, that would be helpful.

**MR DONOGHUE (ESAA):** The Energy Supply Association of Australia is the peak body for the energy supply industry and represents the views of the COs of 36 electricity and downstream natural gas businesses. These businesses hold over \$120 billion worth of assets and employ over 51,000 people and contribute 16 and a half billion dollars to the nation's GDP annually. We would like to commend the Productivity Commission for such a wide-ranging review. This is a very complex area with deep interrelationships between the issues and it's understandable that, therefore, the commission chose to stray from its original quite narrow remit.

I would add that it's perhaps unfortunate that the senate committee which recently released its reports did not appear to have time to assimilate to your draft report before reaching its own conclusions but your timetable was set before theirs, so you're not to blame for that. There has been a significant focus on network regulation due to recent price increases and the increases can largely be attributed to peak demand, replacing ageing infrastructure and reliability standards and we think, therefore, it is very positive that these issues are front and centre of the draft report.

We note that since your draft report was released the rule change process that the AEMC was carrying out has now been finalised. Very broadly the effect of these is to give greater discretion to the AER and to some extent there's a bit of devil in the detail as to how they will apply the new rules, although they're going to be working through that with stakeholders shortly. I think, therefore, whatever perceived concerns there might have been with the previous version of the rules it should be expected that the AER now has the tools to apply robust incentives onto network service providers and I would suggest, therefore, your final recommendation should be predicated on incentive based regulation working as intended, but I understand you may wish to offer second-best solutions in case there continues to be some concerns with the effectiveness of the rules.

In terms of particular areas for discussion, we're happy to talk about any of the areas of your report but we've highlighted some particular issues including

time-of-use pricing and the associated rollout of smart meters, demand management, reliability and planning, governance and the rule change mechanisms. So I am happy to either continue to talk about each of those in turn or to take questions from yourselves.

**MR WEICKHARDT:** Given the fact we've just had a long discussion about smart meter and rollout which I think you probably overheard a good bit of, can you talk to us about your views of the merits or the different approaches that are being advocated at the moment and what you see is the risks and rewards associated with the different strategies.

**MR DONOGHUE (ESAA):** I think that it is appropriate to take a balanced and open view to this and this perhaps reflects the fact that my members include businesses at all levels of the supply chain and there is probably, it's fair to say, some differences of opinion between them as to the best way to achieve this.

**MR WEICKHARDT:** I'm staggered to hear that.

**MR DONOGHUE (ESAA):** I think that in terms of the options at one end you have a mandated rollout such as happened in Victoria. I think that if you have a very wide scale rollout you typically will get advantages in terms of there should be economies of scale in terms of carrying out the replacement process and the fact that you could move through a street replacing every house rather than going all across a given network if it's driven by other things. Naturally, of course, the efficiency will be to some extent dependent on how accelerated the rollout is, so a very accelerated rollout may be slightly more costly to achieve and is going to result in, I guess, greater stranding of the old assets than a longer-term rollout.

There are also advantages for distributors in terms of they can migrate their systems from one that is based on accumulation meters and manual reading to one that's based on receiving the much greater volume of data and receiving it automatically via advanced communication systems the data from smart meters. That in turn does, however, present a cost of retailers who then have to adapt their systems and I think that has been something of an issue in the Victorian case. But if there is a long period of a mix of different meters and therefore the different ways of reading and collecting the data and different granularity of data, then one might expect some duplication of costs.

On the other hand the experience of the Victorian rollout has been something of a consumer backlash against the meters. There has perhaps not been sufficient communication of the impacts and the benefits and there has been perhaps a delay in beginning to realise some of the benefits, although with the moratorium on time-of-use pricing being lifted on 1 July 2013 we would expect to see those benefits

start to accumulate further. It may be that some of these issues can be solved by better communication and education in any further rollouts but that does point to why a voluntary take up may be more palatable to consumers and may lead to greater acceptance for the new technology given that many of the benefits of smart meters and the associated pricing changes and the greater availability of data about their energy usage to customers depend on customers engaging with the technology, albeit perhaps indirectly, and consumer acceptance is clearly key to realising the full potential benefits of any rollout.

Between those two extremes there are other potential ways of increasing smart meters. One would be for, say, networks to identify particular parts of their network rather than necessarily the whole network and to seek to roll them out there. How well this would work or whether there would be barriers to that happening I think will depend to a large extent on whether the AER is able, in the way it applies the rules, to recognise the benefits that might come right across the supply chain from the rollout because it may be that if the NSP has to rely purely on the benefits to its own business, as it were, that that may on its own not be sufficient to cover the incremental costs. If that's the case, then it couldn't make a business case outside of getting the expenditure more or less pre-approved by the AER so then it would fall back to the AER as to whether it could fully take all those benefits into account.

Another way that is potentially worth considering would be to have a replacement base strategy and this will work differently in different states. I believe that some networks have effectively been carrying out a strategy like this and so it's much more softly-softly and sometimes there are particular opportunities that arise to do it that way. So, for example, in Western Australia approximately a third of the meter base is noncompliant and, therefore, Western Power was obliged to have a plan for replacing over its coming five-year access arrangement period, so that's a great opportunity - because the incremental costs of going to a slightly higher meter specification and making it smart meters are, therefore, that much lower given that these are meters that would have to be replaced anyway, plus you still get a fairly significant rollout, a third of the meter base, in five years.

I think the net benefits of smart meters and the various innovations that they can bring will probably vary somewhat from state to state and even with networks. I think that was indicated by the results of the original 2008 MCE review of smart meters and so I think it's important to allow some flexibility for different jurisdictions and different players in the energy supply chain to be able to look at different options for rollout rather than to seek to prescribe a one-size-fits-all approach.

**DR CRAIK:** What sort of regulation do you think would be necessary to have in place before you actually have a rollout?

**MR DONOGHUE (ESAA):** I think particularly if there was to be a voluntary rollout that was driven by customers via their retailers, then obviously there would be the potential for a greater diversity of actual meters, possibly from different manufacturers and maybe with slightly different specifications, so there would clearly need to be minimum standards and there would need to be protocols in place so that there would be some consistency of the type of data received. I think in this instance there are some lessons to be learned from the New Zealand rollout where there have been some issues in particular with some retailers when they took over a customer replacing what was already a fairly new and apparently defective meter, so there was probably some inefficiencies in terms of assets there.

**MR WEICKHARDT:** Sorry, can I clarify, is that a problem with the minimum specification in New Zealand not being an appropriate one?

**MR DONOGHUE (ESAA):** That's not necessarily the source of the problem. I think that even if you had a robust minimum specification there is always a chance that a retailer might seek to rollout its own meters even on top of some fairly new meters that already met the minimum specification but it seems to me it would be a lot less likely that they would find it cost effective to do so, particularly give that it's probably unlikely to be a particular valuable customer proposition to pay for a new meter every two or three years just when you change retailers, so I think it would be difficult to recover the value that way.

**DR CRAIK:** Can I go on to time-of-use pricing because it's quite an important one and you suggest that it shouldn't be prescribed but you don't seem very enthusiastic about our notion of critical peak pricing and we say we think there should be a move to critical peak pricing even if you go through the time-of-use simply because that's where you are going to make the big gain because it's only about 40 hours a year or 100 hours a year where there is maximum demand and ESAA suggests that time-of-use and have the peak shoulder - off-peak and this should be set by the industry. We would agree with the set by the industry and we would agree with a transition through the time-of-use pricing.

But all of the evidence suggests that time-of-use pricing doesn't actually make much difference to demand because the differentials aren't sufficient to actually influence anyone's behaviour very much.

**MR DONOGHUE (ESAA):** For clarification I wouldn't say they were necessarily unenthusiastic about the possibility of critical peak pricing. I guess our interpretation of your report was to focus very much on that and I think our response was intended to suggest that time-of-use and critical peak pricing were complementary and that they might be expected, particularly over the longer term, to drive different types of

responses, both of which could have value in reducing peak demand and, from recollection, I would amongst the material either that has been presented to you or that you reviewed anyway but I believe that Dr Faruqui of the Brattle Group who has conducted a lot of research analysis of various flexible pricing and direct load control schemes, particularly across the states and internationally, certainly his analysis seems to suggest that actually it's the combination of time-of-use and critical peak pricing and indeed often what they call technology which I think largely refers to the capacity for appliance direct load control that that is where the largest benefits come, as compared to applying one solution singly.

In terms of time-of-use pricing I know what you say about the differentials being lower and, therefore, there perhaps being less reason to change behaviour but I think that because it applies day in, day out, whether for the summer or for the whole year, it would be more likely to drive habitual responses and, if you like, an embedded response. For example - I think these are probably not available at least not cost effectively at residential scale but at commercial scale there are cooling systems that work by chilling water or potentially other chemicals with particular phase change properties overnight, ie, at off-peak times and then using that to provide cooling services during peak times.

I think the business case, if you like, for those would be more likely under time-of-use pricing than for critical peak pricing which may only apply a few days a year and maybe even in some years not eventuate whereas critical peak pricing is more likely to drive a flexible response in as much as household consumers might decide to do something different once they have had notification of a critical peak pricing day just for that day and businesses perhaps more likely to invest a flexible approach either suspend operations or perhaps more likely to invest in their own embedded generation if it's cost effective so they can effectively reduce demand by self-generation on the critical peak day.

So our view is that you would expect different responses and, therefore, there would be value in having them both but we're certainly in no way opposed to critical peak pricing as a tool.

**DR CRAIK:** Thank you.

**MR WEICKHARDT:** Can I move to demand response mechanisms. You have suggested some real concerns in this area.

**MR DONOGHUE (ESAA):** Yes.

**MR WEICKHARDT:** You raise a number of issues. One of them you raise in terms of the potential for -

a business with a backup generator could elect to use that in order to generate electricity rather than purchase it from the grid. This would then appear as if the business' consumption had fallen below the baseline, while in fact consumption remained the same. This has been the source of much of the demand response in some similar demand response schemes in the US.

Why should a network company care? If by doing some local generation that company had taken a load off the network which it avoided some further investment and augmentation of the network, why should the network company care whether they turn off the lights or generated power?

**MR DONOGHUE (ESAA):** I don't think it's likely that a network company would care and indeed, I believe that, for example, demand pricing by SP AusNet has delivered a good deal of peak savings and much of that has come from embedded generation. So I think from a network perspective that is not a problem but our concern is that it's specifically with the AEMC's proposed demand response mechanism which is not designed specifically to respond to network signals but instead to respond to price signals in the wholesale market and while it's again entirely legitimate that a consumer of electricity should chose to self-generate and wish to gain some benefit beyond potentially avoided average tariffs we think that that would be more appropriately addressed through a rule change process that is occurring at the moment based around facilitating the aggregation of small generators.

The difference being that it treats them as generators, so you don't have the issues that you do with the demand response mechanism of determining appropriate baselines and I don't think that you would necessarily either have the issues that we identified with the one-way bet that the demand response mechanism represents which we believe will likely leave either generators or retailers out of the money in terms of their hedging and therefore will not actually lead to a genuine efficiency benefit but merely represent a wealth transfer.

**MR WEICKHARDT:** I understand how individual businesses might say, "Well, that came out of my pocket," but from a national point of view if embedded generation takes load off the network and saves network investment or if it takes - effectively if it's an embedded generator responding to a price peak in the wholesale market and, therefore, avoids another generator having to invest surely that's a good thing from a national perspective.

**MR DONOGHUE (ESAA):** As I say, we have no qualms with the response which, as I say, we expected based on other schemes of this type operating to be provided by

embedded generation but that it would be more appropriate and deliver more efficient outcomes if it is treated as generation rather than as a reduction in demand principally because if it's treated as generation there is no issue with the baseline. The baseline of no generation is zero and that's pretty straightforward whereas there's clearly some ambiguity and therefore scope for gaming in terms of determining a baseline of demand that then is notionally reduced via embedded generation.

**MR WEICKHARDT:** I'm still not convinced that this so-called gaming is actually gaming that's against the national interest.

**MR DONOGHUE (ESAA):** Well, our view is that it's not been demonstrated that this particular mechanism, as opposed to the idea of distributor generation or demand response generically, would actually be in the national interest. We're not clear where the efficiency gains genuinely come from.

**MR WEICKHARDT:** Surely they come by deferring network investment and by deferring generation investment.

**MR DONOGHUE (ESAA):** That presumes that the mechanism is designed in such a way as to reward the demand response or embedded generation appropriately. If it's not designed appropriately, if it over-rewards them, then it may incentivise embedded generation solutions that are in fact more expensive than the centralised generational network.

**DR CRAIK:** That is true of everything, isn't it? If the rewards are wrong, but the principle surely - - -

**MR DONOGHUE (ESAA):** Yes, as I say, we're not objecting in principle to either demand response or embedded generation and we think that for networks in particular it's likely to be valuable but then that would suggest a scheme that is driven by signals from networks as to where the constraints are on their networks and this particular scheme manifestly fails to do that because it has no reference to networks, it is purely based on wholesale price signals.

**MR WEICKHARDT:** I understand that's less than perfect but in the circumstance if there isn't some special feed-in tariff subsidy and there isn't some special network peak pricing, then surely a private company that decides to invest themselves in embedded generation and the only reward they get is equivalent to the reward they get by turning off the lights and conserving energy themselves, what problem is that from a national perspective?

**MR DONOGHUE (ESAA):** It's not clear to us that they are currently prevented from obtaining a greater reward. What it would mean is they would have to do what



other participants in the market do which is to accept that the wholesale market is volatile and that if you wish to expose yourselves to the high rewards of high prices or the obverse if you're a purchaser of electricity, then you have to accept that there are also low price events and there's volatility to manage. That can, of course, be managed through various hedging products, but to have a one-way bet such as a cap product, you have to pay for the privilege.

It seems to us that this scheme is creating a built-in hedge for the demand response that they don't have to pay for. Ordinarily they could choose to expose themselves to some extent to spot prices and then when there are signals that high spot prices were going to eventuate, they could activate their demand response by whatever mechanism and they effectively gain that gap and then the rest of the time they would benefit from a lower price than a company that contracted, whether directly or via a retailer, to have an average price for the whole year because, of course, that average price would include the expectation of having to pay the large peak prices which would be smeared across.

So it seems to us that there are opportunities, not necessarily easy opportunities, but this is a complex and sophisticated market, for those participants to engage and in particular if it's via embedded generation there is a rule change process that's expressly designed to facilitate their aggregation to make it easier for them to access the benefits of the wholesale market. So, as I say, it is specifically the design of this scheme as put forward by the AEMC which with we have concerns.

**MR WEICKHARDT:** So you're saying that they can get the benefit of the retailers hedging smooth on the purchase power but either their demand response when they switch off the lights or if they generate themselves they get rewarded at the wholesale price prevailing at the time.

**MR DONOGHUE (ESAA):** Yes, broadly speaking.

**MR WEICKHARDT:** I understand there's an asymmetry there but I can't see that you should be unduly fussed whether that occurs by them switching off their lights or whether they generate themselves.

**MR DONOGHUE (ESAA):** It's not precisely how they do it that is the concern, it is the asymmetry because we believe that asymmetry will rebound to the rest of the market and result in higher risk premiums elsewhere.

**MR WEICKHARDT:** Thank you. I think I now understand.

**DR CRAIK:** Do you see any role for demand response to be delivered from blocks of consumers? Do you see that as a possibility? I mean residential rather than - - -

**MR DONOGHUE (ESAA):** Certainly I think it's important not to rule out the possibility. I mean, it's really going to be dependent on whether there is a party that can make it cost effective to deliver that on an aggregated basis.

**DR CRAIK:** Do you think it can be done with certainty?

**MR DONOGHUE (ESAA):** I guess it's a question of certain for whom? I think that in the short term some form of direct load control provides more certainty but obviously there's a question as to who has the control and visibility of that direct load control because networks and retailers would each have different aims for what they would achieve by the use of it. I think it's probably crucial that both parties have visibility even if it's the other one that is directing the load control. I think in terms of using pricing mechanisms as a response it will clearly take a little bit of time for the impacts to become well understood and therefore to be fully embedded in future planning decisions.

**DR CRAIK:** Okay, thanks.

**MR WEICKHARDT:** Can I talk about the issue of the recent rule changes and you commented on our suggestion that revenue determination should be on the overall reasonableness of the AER's decision and suggested that you don't accept that argument. Isn't this all over bar the shouting now given the recent rule change and given the very strong endorsement by Prof Yarrow and his panel on this argument too? Who's not suggesting - apart from yourself and maybe some of the network companies - that is not the way things should be done?

**MR DONOGHUE (ESAA):** I think there is distinction between the philosophical idea as to what the rules represent and how the appeal process in particular is set up to work in practice and to the best of my knowledge the Standing Council on Energy and Resources which is the body that would determine any changes, particularly material changes, to the appeals process has yet to make a decision. So we still believe that a proportionate response would not entail taking on board all the suggestions of Prof Yarrow and his colleagues.

**MR WEICKHARDT:** But doesn't the AEMC's agreement to the AER's request for the rule change mean that the AER now do have the discretion to simply look at the overall revenue determination and determine a reasonable overall determination?

**MR DONOGHUE (ESAA):** My understanding, without having been through all the rule changes in detail, is that they relate more to giving the regulator greater discretion on the individual building blocks that go to make up the overall determination but that that does not mean that the AER does not still have a

responsibility to exercise its judgment on each of those building blocks to determine the best result it can for each of those rather than simply say, "I don't mind if I'm a bit out on the WACC and a bit out on the capex as long as the overall million dollar figure at the end of it is fine." But I would caveat that by saying I haven't read through the rules in enough detail to confirm that.

**MR WEICKHARDT:** I guess we will both have to stand by and wait until the AER have issued their guidelines as to what they think they mean.

**DR CRAIK:** If we could go onto privatisation, Kieran. You don't actually explicitly come out and say you're in favour of privatising network businesses and I suppose that's because you have some members who aren't, I suppose, but you do agree that network managers often have conflicting objectives from the government shareholder. Do the organisation have a view about privatisation, even though you didn't put it in your submission, and do you have any views on the experiences of, say, Victoria and South Australia where they have been privatised and lease arrangements in South Australia and whether they're showing distinctive differences from the states where there government-owned networks?

**MR DONOGHUE (ESAA):** I think that the commission's contribution to the debate and your analysis has been very cogent and we typically - as you noted it is, in a sense, a slightly sensitive area for us given that some of the subjects of this debate are members of ours. But we've typically said that where an independent report, such as your own, has recommended privatisation, then we would support governments going ahead with that. I think that's pretty typically been more in the context of individual jurisdictions commissioning report for themselves, as it were, to decide on their policy direction.

But I think you've identified a number of potential governance issues that may lead to conflicting and, therefore, slightly unclear objectives for state-owned networks and I think that these typically go to the other areas that may be drivers of costs. I think you rightly identified the way reliability standards have been set in some jurisdictions which I think is not unconnected with the state ownership in a sense, that by being owners the government has taken on direct responsibility for determining reliability standards and chosen to impose those on the networks whereas I think that in Victorian in particular and, to some extent, in South Australia the privatisation process drove, if you like, a different approach from government in terms of setting up clear standards and independent agency such as an economic regulator and a safety regulator and giving them clear terms of reference because it brings out both the importance of being able demonstrate to consumers that their interests are at the heart of the regulatory framework.

I think that you can see that also in Victoria's previous customer framework,

although they still haven't quite signed onto the national framework and also its concessions approach, both of which I think were perhaps more fully developed and rounded than any other jurisdictions where it was assumed that the state as shareholder and owner of the assets could therefore internalise customers' concerns. I think it is also played out in the approach to a liability. But the flip side of it is that in privatising assets it then brings a discipline to bear on governments - or at least hopefully it does - that they realise that to continue to attract investment and for investment and for funds to be made available at efficient rates it's important to have that clarity of regulatory framework and to avoid sudden changes or lurches one way or another in it.

I think by and large Victoria took that on board and that would something we would want to see in all the national frameworks that are emerging and any that subsequent emerge, such as a national reliability framework.

**DR CRAIK:** Are there any lessons to be learnt from the actual privatisation processes for future privatisation, hoping that some others will be privatised?

**MR DONOGHUE (ESAA):** In terms of the details of the process that happened somewhat before my involvement with the Australian energy industry.

**DR CRAIK:** Okay, thanks.

**MR WEICKHARDT:** We had a submission pre the draft report, and I think they have raised it again, from the major energy users where they refer to an issue of concern where related parties within network businesses provide services to the network companies and I think in gas actually the AER have knocked back a few propositions or required a look-through set of accounts to try to unravel what the real costs of the related parties are, as opposed to simply, "These are the charges," because it is potentially a way of, in a fairly non-transparent way, making costs look either larger or smaller than they should be. Is this an issue of concern to network companies? Is it quite common, is it increasingly common or is it of increasing concern?

**MR DONOGHUE (ESAA):** I might have to take some of the detail of that on notice. I would say broadly speaking that in order to get the best outcomes for customers then it's important for network businesses to be able to be flexible and innovative in the way that they procure the various inputs to maintaining and augmenting the network and that use of related parties is an entirely legitimate way of doing that and I think there are various ways that they can use related parties to get lower costs than they would otherwise have done and I think what's key is that in terms of confidence in the regulatory framework is that there is some way for customers to appropriately share in any cost savings that occur from that and that use

of related parties may still involve, for example, competitive tendering, sometimes the related parties are set up to provide services to other networks and so there is obviously an arm's length benchmark as to their cost that can be used.

I don't think use of related parties should be considered a problem per se and I think it comes down again to being clear that the rules can be used by the AER in such a way as to ensure that it's only allowing efficient costs for the network.

**MR WEICKHARDT:** Thank you.

**DR CRAIK:** Talking about benchmarking, we suggested that it might be possible at some point for consumers and businesses to actually negotiate revenue allowance or price cap if the initial proposal is within the ballpark. What's your view about that?

**MR DONOGHUE (ESAA):** I think that taking a flexible approach to the different ways consumers can have the costs of network services appropriately controlled are worth considering and certainly negotiated services could well be one of those. I think it is obviously highly dependent on the ability of the consumer representatives to be able to engage robustly and feel that they're in a position to negotiate a reasonable outcome.

**DR CRAIK:** How much weight do you think should be given to benchmarking regulatory decisions?

**MR DONOGHUE (ESAA):** I think that realistically benchmarking can be a valuable input but that it is an input rather than a determining mechanism. I think that it would be quite remarkable if a form of benchmarking could be designed, that any party could have real confidence that it took into account all the relevant differences between networks that would drive costs and I think particularly at the moment when we have a lot of varying jurisdictional requirements that that is obviously a factor. But there are legacy issues in terms of the different types of assets and the different age, there are differences in terms of customer density, there are differences in terms of the climates in which networks operate and no doubt many more and some of these may be more material than others.

But I think benchmarking realistically will probably be an iterative process where the AER and other stakeholders will work with the industry data to try to understand the differences and commonalities better, so it's a perfectly legitimate tool but I would be surprised if it was ever complete enough to be used as a determinant without running the risk in particular that you might effectively under-award some companies and leave them unable, even if they're efficient, to safely and securely operate their networks.

**DR CRAIK:** Do you support publication of regular benchmarking information comparing the companies?

**MR DONOGHUE (ESAA):** I think that it's probably important to develop the processes first and to have some confidence that they are moderately robust because otherwise there is a risk of misinterpretation which I think would just be unhelpful, particularly in the current climate of the debate and I think that depending on the level of benchmarking there are sometimes commercial confidence issues to take into account. If you reveal too much of a cost structure in detail you can weaken their own bargaining power with their own suppliers, so there are issues like that to be taken into account as to what level.

**DR CRAIK:** Given they're regulator monopolies, where does the limit of commercial confidentiality lie?

**MR DONOGHUE (ESAA):** I think if it inhibits their ability to procure inputs efficiently, then that is certainly one part of the limit.

**MR WEICKHARDT:** How would that happen?

**MR DONOGHUE (ESAA):** I think that, for example, if you revealed the price that particular network had paid for a particular transformer, then that sends a signal to the various suppliers of that equipment that would ordinarily not have been known and that may affect the network's negotiating power with those suppliers in future.

**MR WEICKHARDT:** I would have thought it would increase their negotiating power, if anything. The suppliers might not be happy with it but from my days in business I'd love to know what my competitors were buying equipment, it would give me more information to negotiate with my supplier.

**MR DONOGHUE (ESAA):** Perhaps but - - -

**DR CRAIK:** Isn't the public entitled to know if in one state someone is paying three times as much as in another state for the same piece of equipment?

**MR DONOGHUE (ESAA):** I think that if you have the appropriate incentives on regulation then it seems to me very unlikely that that would happen or, if it did happen, it would effectively be at the cost of the shareholders of that company that was overpaying rather than of customers, I would think.

**DR CRAIK:** Wouldn't you suggest customers might end up paying the bill?

**MR DONOGHUE (ESAA):** It all comes down to confidence in how well the regulatory framework is set. It seems to me extremely unlikely that network companies would be unable to more accurately than that determine a reasonable price to pay for individual pieces of equipment.

**MR WEICKHARDT:** If that's the case, then there would be no reason to be concerned about any confidentiality, would there?

**MR DONOGHUE (ESAA):** I wasn't suggesting that everyone pays the same price but I would also question whether revealing data at that level of detail is actually beneficial. I'm not sure how many stakeholders would be in a position to fully evaluate data at that level.

**DR CRAIK:** I imagine a consumer group might be in a position to evaluate that sort of thing. We have consumer groups who are looking at these sorts of issues.

**MR DONOGHUE (ESAA):** Certainly it's clear that it's reasonable for regulated industries to have some of the information pertaining to their revenue determination public, I think it is simply a question of at what level it's practical to do so.

**MR WEICKHARDT:** I can understand that there might be so much information provided that nobody worried about it in which case why should we be concerned about it, and even if they did I'm still not convinced that anybody, apart from perhaps the suppliers, would be concerned about it. Anyway, we've made our point there. Can I move on to the rule change mechanism. You expressed a bit of a concern about our suggestion for a potential fast track for rule changes but you have accepted it's desirable to expedite a process where a significant amount of work has been done and, as such, you support extending current provisions for expediting rule changes but through the AEMC.

However, we had suggested that there be a check in the balance that the SCER would have to agree that based on an adequate review where there had been enough consultation and opportunity for feedback and for - - -

**MR DONOGHUE (ESAA):** Such as this one, for example?

**MR WEICKHARDT:** Perhaps such as this one. Plus the fact that the whole SCER had to agree on it, my question to you is really if the SCER agrees, would you accept that the SCER themselves effectively direct the AEMC to a fast-track rule change process. If they can't and therefore it's up to the AEMC to say, "Well, okay, the SCER's agreed, there's been a review, but we think we should have another review," how are you going to get any expedition of the rule change process? So I guess that's a contorted way of saying how do you envisage this fast-track or expedited process

working in your world?

**MR DONOGHUE (ESAA):** Well, I think that seems to me to be a question of the accountability of the AEMC, because I guess I would struggle to understand why the AEMC would seek to initiate a full-blown review in instances where substantially the work had been carried out through another body. But we think that it's valuable for the industry and for stakeholders in general that there is one body that manages the rule change process and that that body is the AEMC. It's an expert body and, in general, the way it has conducted itself has given confidence to stakeholders. Obviously no-one will agree with every decision that they make, it would be odd if they did, but we think that the AEMC is the appropriate body through to which to process rule changes.

**MR WEICKHARDT:** But if I can just try and clarify that. In your thinking about this are you saying it would be up to the AEMC to form a judgment independent of what the SCER had recommended, but the AEMC would form their own judgment, "Well yes, there's been a review," I guess they'd say, "Well, yes, the SCER have agreed, but we the AEMC are the final arbiter of whether or not we'll expedite this or not." Is that what you're effectively saying?

**MR DONOGHUE (ESAA):** Yes, we think that would be appropriate, partly because we think it's unlikely that where a very substantive and well-run process had been carried out that the AEMC would add to its own workload by running a - and indeed, you know, to some extent bring its own reputation into question by completely disregarding that.

**DR CRAIK:** So why would you leave the option open for it to happen?

**MR DONOGHUE (ESAA):** Sorry, the - give me the option to - - -

**DR CRAIK:** For the AEMC to do another review if you're saying you don't think they would do another review because under those circumstances - - -

**MR WEICKHARDT:** Yes, it's sort of interesting because how your members - - -

**MR DONOGHUE (ESAA):** Well, I think we would say they would be a better party to judge whether the other review had adequately explored the issues such that an expedited rule change - - -

**DR CRAIK:** Even if the SCER, the policy body responsible for the whole NEM, had said, "Tick, tick, tick"?

**MR DONOGHUE (ESAA):** Well, ultimately the AEMC is accountable to the



SCER, so I would imagine that the SCER's views would carry some weight, but it offers at least a bulwark against purely political pressure to put something forward. I mean as an example there has been a very thorough rule change process that - not quite concluded but the AEMC has issued its draft decision in respect of generation market power in the NEM. All parties have had adequate opportunity to present their arguments and their evidence and yet we have a state government saying that they're going to try to push through a rule change that really goes over the top of that process in terms of levying high fines on what they perceive to be gaming. This is an issue that has been fully evaluated by the AEMC, so we would be concerned if, for example, that that kind of change sort of came out of the sort of political process and an expedited approach was enforced upon the AEMC.

**DR CRAIK:** That's a different scenario from what we're recommending.

**MR WEICKHARDT:** I mean it's sort of ironic in one sense. I think you're probably right that the AEMC wouldn't choose to replicate or reproduce work if they thought the work had been done. But some of your members sent us a submission to the draft report, or to the issues paper before the draft report, quoting some Nobel laureate saying that not-for-profit organisations such as the AEMC just expand to do work because they're motivated to expand to do work. So if you follow that line of thought you'd say, "Well, of course the AEMC will do the work, because they can and that expands their empire."

**MR DONOGHUE (ESAA):** That criticism could equally be levelled at the SCER, which is the - you know, so.

**MR WEICKHARDT:** Or even the ESAA.

**MR DONOGHUE (ESAA):** Or even the ESAA. We are indeed a not-for-profit organisation. However, as I'm sure it applies to the AEMC we operate under a limited budget and therefore there are clear, if you like, opportunity costs trade-offs. I mean we can't simply expand our empire by announcing that we will choose to do more work on an issue than we might otherwise have done. We have to find something else to not do, at least for that period, and the same applies to the AEMC, but I suspect we are slightly splitting hairs at this point.

**DR CRAIK:** Yes, okay. Could we move on to the AER?

**MR DONOGHUE (ESAA):** Yes.

**DR CRAIK:** And ask what the experience of your members is in dealing with the AER, how your members find the AER?

**MR DONOGHUE (ESAA):** Well, I think there is generally a concern that the AER's processes, which may simply be reflective of the rules or largely be reflective of the rules under which they operate, have been quite cumbersome, and that NSPs feel that in order to satisfy the AER, despite the AER's claim that it has had limited powers under the rules - to satisfy the AER of the efficiency of their business plans they have had to submit extremely large volumes of information, and that therefore the cost of the regulatory determination processes is quite high, potentially therefore higher than it need be. Quite how that changes is, of course, open to question.

**DR CRAIK:** What areas of resourcing of the AER do you think are most required? I mean you do suggest support - - -

**MR DONOGHUE (ESAA):** Well, I think given the changes in the rules - I mean clearly they would have to devote significant amounts of resources to developing the guidelines.

**DR CRAIK:** What sort of skills, I guess, is what I'm getting at, really?

**MR DONOGHUE (ESAA):** Well, I think it's important to have a range of skills, and I guess I would draw from my personal experiences, having worked for the British energy regulator, Ofgem, and that that organisation had a real mix of skills and experiences. So there were, of course, a good number of regulatory economists but there were also a number of engineers; there were people with an account and finance background such as myself; and there people actually from the banking sector, clearly at some senior levels. In many cases, particularly some of these sort of people with the engineering technical skills, but not exclusively, they had worked previously for some of the regulated businesses. Whilst that from the outside sometimes is perceived to be a bit cosy, in my experience the - - -

**DR CRAIK:** Poacher turned gamekeeper, you mean?

**MR DONOGHUE (ESAA):** Yes, some of the ex-employees - I wouldn't say they held a grudge but they were certainly amongst the most enthusiastic in terms of the way that they would challenge the network businesses. So I think that that diversity was very useful. Certainly from my experience having been involved in financial issues, including recommending an appropriate cost of capital, having people with financial markets experience, and therefore with ongoing financial market commitments, was extremely useful.

I think particularly in a situation where the AER is being given more discretion in its approach to setting the cost of capital, and that in fact some financial markets analysts have already expressed some concern about that, I think there's sort of real value in the AER ensuring that it has very strong links into the financial markets so

that it can have a good understanding of what in practice an appropriate cost of capital might be; because in my experience working through the purely theoretical approaches, whether capital asset pricing model or Fama-French or various other ones, will give you a very wide range of outcomes. It's unlikely that those at the far ends of the range would represent efficient outcomes; one would be too low and one would be too high. So I think sort of having some practical expertise and contacts there would be very valuable safeguards.

**DR CRAIK:** Some people have said to us that more business experience would be useful in the AER, you know, commercial business experience. Do your members have any - - -

**MR DONOGHUE (ESAA):** Well, I'm sure that would not be - it certainly wouldn't be unhelpful. How much difference it would make it's hard to tell but I think again if you're sort of testing explanations given by NSPs, which are commercial businesses - and to all intents and purposes even where they're state owned they have been corporatised and therefore are intended to be run commercially - then I think having people who sort of understand those business drivers and the kinds of solutions that businesses find to run efficiently, that certainly could be very useful too.

**DR CRAIK:** Thanks.

**MR WEICKHARDT:** I think I'm just about done.

**DR CRAIK:** Yes, I think I'm done. Thank you very much.

**MR WEICKHARDT:** Thank you very much indeed for coming along.

**DR CRAIK:** Thanks, Kieran.

**MR WEICKHARDT:** Thank you for your submissions. We will now adjourn until 1.20.

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**MR WEICKHARDT:** Okay, the hearing is resuming and our next participant, the Major Energy Users Group. If you could each individually give your names and the capacity in which you're appearing, please?

**MR LIM (MEU):** Yes. Well, thanks, commissioner and the commission. Nice to have an audience. My name is Bob Lim. I'm an adviser to the Major Energy Users. To my left is?

**MR HEADBERRY (MEU):** I'm David Headberry and I'm the public officer of the Major Energy Users.

**MR WEICKHARDT:** Good.

**MR LIM (MEU):** Just very briefly, if I may, a little bit about the Major Energy Users. The Major Energy Users comprises large energy using member companies from the following industries: iron and steel, autos, cement, pulp and paper, mining explosives, minerals processing, tourism and accommodation. Our members operate, of course, in all states and territories except the ACT, I believe, in Australia. The major locations are the major capital cities and the regional centres such as Western Sydney, Newcastle, Gladstone, Albury, Wollongong, Mount Gambier, Port Pirie, Whyalla and Darwin.

We believe that the loss of Australia's competitive pricing in electricity since 2007 vis-a-vis our major competitors had been due essentially to failures of institutions in recent years, the institutions that have been created to supervise the national electricity, national energy market. Failures by the rule-makers, the AEMC; by the merits appeals processes involving both the Australian Competition Tribunal and the AER; by policy-makers both federally and by the states - we will obviously cover all of these aspects during our discussions as we go along, and the key issues we have raised in our submissions.

We would like to raise a number of issues: the issues on interconnectors, which we have mentioned before; the review of the AEMC; the consumer advocacy body; and intervention in energy markets by governments. Of course we would be pleased to answer any questions if we could, if you were interested in raising them. Of course we'll talk about benchmarking too, which is probably the key issue you might be interested to - - -

**MR WEICKHARDT:** Well, possibly not, in terms of the questions we've got, but you've chosen a pretty modest agenda, I say with some irony, Bob. But assume we have read your input and we do have questions around it, but if you briefly want to talk to it, that's fine.

**MR LIM (MEU):** Okay. You're happy if we were to start on interconnectors?

**MR WEICKHARDT:** You start where you'd like to.

**MR LIM (MEU):** Okay. David?

**MR HEADBERRY (MEU):** Yes. Now again, as we made out in our response we're concerned that the market benefit - we're talking about the market benefit to consumers of interconnectors - and the benefits that flow particularly from the market pricing don't flow into the assessment of interconnectors. As a direct result of that we haven't seen much investment in interconnectors.

Secondly, we have also seen the congestion on interconnectors has allowed regional generators to exercise market power to the detriment of consumers. We've had this long-running discussion about whether the regulatory investment test for interconnectors should be purely a public benefit, which includes a benefit to both generators and consumers, or whether it should be based on the benefit to consumers, which is the focus of the objective of the electricity law. The current way it's addressed there doesn't recognise that the best outcome for consumers: the way the regulatory investment test is operated. So we want to see the market benefits included into the regulatory investment test and then we believe that we will actually see the best outcome on investment in interconnectors, as they are needed.

What's the purpose of having a price signal unless you use it? That's really the thrust of our argument, which is not something that has come out in your draft report that you see that that's a legitimate approach. I guess one of the questions we've got is why is the public benefit test used in that case rather than a market benefit test?

**MR WEICKHARDT:** Do you want to talk through your issues in one go or do you want to stop and pause?

**MR LIM (MEU):** As you wish.

**MR HEADBERRY (MEU):** We're quite happy to do it either way.

**MR WEICKHARDT:** All right.

**MR HEADBERRY (MEU):** Maybe get one issue out of the way at a time.

**MR WEICKHARDT:** Well, on interconnectors, as you will have seen from our report, our judgment was, despite the fact that there are some times when the interconnector is congested, that the most egregious times of congestion the

interconnectors were actually quite lightly loaded. When the price separation was at its peak, particularly between Victoria and South Australia, the interconnector itself was not heavily loaded. It was the congestion on either side of the interconnector that was allowing the, I guess, opportunistic out of a normal merit order, bidding by generators which was giving rise to a significant level of price separation.

So from that point of view we ended up recommending the direction that the AEMC were going in - of optional firm access, because we thought that would definitely help address the issue of the intra-regional congestion. That was critical in terms of getting the interconnectors used efficiently at those times of congestion on either side of it.

**MR HEADBERRY (MEU):** Yes, the optional pricing approach is probably better than what we've got now but it only addresses, as you pointed out, intra-regional congestion and it only addresses intra-regional congestion with generators within that region. It doesn't address across the regional boundaries and that's why we actually focused on the difference.

**MR WEICKHARDT:** That's an issue that we will look more at. I have to say there is a difference in opinion from various people as to whether the OFA model that the AEMC talked about - and we understand it's still only a model - but some people have contended that the generators would be allowed to buy firm access rights across interconnectors in which case that would help address the issue directly and indirectly.

**MR HEADBERRY (MEU):** It also might increase the generator market power. For instance, if AGL in Victoria bought firm access on Heywood interconnector using its ownership of Loy Yang A power station, that would then give AGL owner of Torrens Island power station a benefit over everybody else and so you start to build up or strength the market power of the generators, particularly one which is a gentailer - a retailer and generator - where they can actually offset within their own portfolio a lot of the risks that they face. So because the market already has pricing signals between the regions, we still can't understand why we can't use the market price signals as the basis, not only for investment of new generation in a region which has higher prices, such as South Australia, but also to look at interconnection and strengthening that interconnection because that is one way of reducing the market power of the regional generators.

**MR WEICKHARDT:** There has been robust debate by various economists over time as to why the RIT-T is based on a cost benefit analysis using net costs and economic efficiency as a driver and in the long run I'm persuaded by my much smarter colleagues that this will give an outcome that is in the long term interests of consumers and apparently early attempts to use a customer benefit analysis - and

there was apparently a long paper that NEMMCO had written about that - produced results that weren't very practical. I think they were called very volatile. We will look at the issue again but it's not, if you like - because it hasn't been considered or thought about but I'm not sure that the solution you're proposing is actually going to be the best solution.

**MR HEADBERRY (MEU):** In South Australia, for instance, we saw prices about twice the price in Victoria and we saw it run for about four consecutive years. That would have been more than enough time to indicate that there was a need for more competition in South Australia driven by investment in the Heywood interconnector particularly because the Murraylink interconnector really doesn't ever achieve much at all except maybe to Victoria which is intriguing. But by using a customer benefit or a market benefit as a whole, bearing in mind the fact that consumers are the ones that pay for those interconnectors, they're not paid for by generators. The generators only pay entry fees into the market.

**MR WEICKHARDT:** At the moment they do. Under an OFA arrangement they might pay for much more than that.

**MR HEADBERRY (MEU):** Only if they want to. I was involved in the actual discussions in the transmission frameworks review process and the only interest that generators had in the OFA was that where there were two or more generators being held back, constrained, that there was any interest in buying that firm capacity that comes out of the OFA and the main driver was that it was dispatchable generators were seeing themselves being disadvantaged by particularly wind farms and that was causing the trouble. So the OFA seems all right in concept; but as we've seen with a number of the other concepts that have come out of the AEMC, getting between concept and something that's really workable is going to be a real challenge. We can talk about some of those other experiences we've had with, "What a lovely idea, but it really doesn't work," you know.

I might as well go on now. The inter-regional transmission charging, the IRTUOS, where an importing region pays an exporting region a share of its cost of transmission networks. That was proposed out of the 2009 AEMC review of the impacts of market - - -

**MR LIM (MEU):** And climate change.

**MR HEADBERRY (MEU):** - - - climate change and renewables. We're still trying to make that work, and every time the AEMC has come up with an approach trying to make it work, when you look down at the actual numbers it actually comes up with some quite strange outcomes; you know, quite bizarre. One of the efforts they came up with was that Victoria, which is a net exporter of electricity, was

actually paying everybody else for the use of their transmission networks so that they could actually export power. From a concept of IRTUOS, it's great idea, but converting it into something that works has been proven to be quite an intractable problem.

Again, it's one of the things we talk about: the processes that the AEMC is actually going through, they just go on and on and on and on, trying to make something work that patently in modelling is showing that they're going to get bizarre outcomes. So I think that the OFA might fall into that same category. Trying to make it work - no, the principle is good; trying to make it work is going to be much more challenging than I think anybody imagines. And we have seen that happen in a number of other times in some of these more esoteric ideas that have come out of the AEMC.

**DR CRAIK:** Could I then lead you perhaps into the issue of the AEMC that you raise. You suggest that it would be a good idea - we raised the possibility of a review into the AER, but you suggested a review into the AEMC would be also a good idea?

**MR LIM (MEU):** Yes. Can I take that?

**MR HEADBERRY (MEU):** Sure.

**MR LIM (MEU):** We actually strongly supported the commission's suggestion for an independent review of the AER, because we've been through about - over five years of the AER's work, in pricing reviews and in a number of other related issues. We certainly have many experiences of the AER's work, in terms of its performance, its processes, its resourcing, and so we clearly support the commission looking at that and coming up with a recommendation. In the same way as the commission has recommended a look at the AER, we think it is also timely for another important NEM institution to have the same sort of look by an independent group.

We've had very recently a review by an expert panel on the merits review regime and, in particular, focusing on the Australian Competition Tribunal and also, to a lesser extent, the AER's performance before the tribunal. The conclusions and the recommendations are very important ones in terms of looking at some of the shortcomings of that regime and in particular those two organisations. So we believe that against the background that the AEMC was primarily responsible for the 2007 transmission revenue and pricing rule changes - which in a sense have created the sort of problems that we have - and, more importantly, reversing some of the key provisions in the national electricity code - you have an optimisation of the regulatory asset base, experts review of actual capex. The AEMC overturned all of that and came up with their own proposals and, in addition, came up with provisions that actually proscribed the AER from actually doing a lot of things, other than



confining its role to a very narrow area.

So we think it's an important time to look at the AEMC against that background, but also against the background of our experiences in terms of participation with the AEMC in quite a number of their major reviews. David mentioned the inter-regional fuels charging. It has been a two or three-year exercise and we have been through many, many, many draft reports and consultation reports and we have put in many submissions and have had many discussions with the AEMC. We are no closer to that issue. So time delays and transactions costs are huge from our viewpoint on some of the work that's coming out. Another example, the scale - - -

**MR HEADBERRY (MEU):** Scale-efficient network extensions.

**MR LIM (MEU):** That was another two or three-year exercise where initially the onus was put on consumers to bear all the risks of having extensions and networks to link up to all the wind farms. Eventually we were able to persuade, after the two or three-year period, that consumers shouldn't be bearing the risk; but it took us a long time to convince the AEMC about that situation. Then we have had experiences with the AEMC on two major rule change proposals that the MEU actually put in to the AEMC for review. Perhaps David might like to mention what those two rule changes are.

**MR HEADBERRY (MEU):** The first one, and it has been an ongoing one, is the issue of generator market power. In South Australia particularly, during the years of 2008, 9, 10 and 11 we actually saw significant exercises of generator market power and that resulted in a massive transfer of wealth from consumers to generators. To a degree that was tied in with the congestion on the Heywood interconnector because we weren't getting as much competition as we could have had. The issue of market power, we could debate the issue itself, but the process that we've gone through with the AEMC trying to get them to even look overseas and see what happens overseas, to address market power - because the issue is not unique to the NEM, it's common to all electricity markets.

Talk to Wolak, Joskow, Newberry and Tirole; all of them say the same thing, is that exercise of market power is particularly a major problem in electricity because of its instantaneous approach. But none of that work was ever used by the AEMC, that came out of those renowned economists. The AEMC came up with its own unique approach to addressing the issue and their approach was, "If you look at the long enough period, time frame, we'll average this problem away and we won't actually see it." Even with their unique approach to addressing the problem, of trying to average it away, they still came up with a conclusion that in South Australia, for instance, in 2008, 9, 10 and 11 the price of electricity was about

20 per cent higher than what a new-entrant market price would have been and they came to the initial conclusion, "Well, that's not a problem. There is no problem."

Then they came out with a draft decision saying that, that this was acceptable - that a 20 per cent premium for four years is an acceptable outcome - and it wasn't until after we and the AER actually got stuck into them and pointed out the error of their ways that they've actually decided to change. But the processes of trying to not use what is available in the rest of the world to try and solve problems, which the rest of the world has been seeing and finding a number of different solutions to - - -

**MR LIM (MEU):** I might add, too, that the MEU put in rule change proposal two years ago and the draft decision only came out - when was that?

**MR HEADBERRY (MEU):** In June of this year.

**MR LIM (MEU):** June of this year. The draft decision has been put aside because of deep concerns by stakeholders about the quality of its work and a consultation paper is to be issued this month with the view to a final decision being made early next year. It is a concern that it has taken two years. It is a concern about the methodologies used by the AEMC. A draft decision that applies a single black line test on whether there is market power or not, without looking at strategic behaviour of generators or their bidding strategies, is an inadequate analysis. Worse than that, there was no reality check that a 20 per cent premium above what might be a long-run marginal cost was acceptable and that it would be used as a test going forward over the next three to four years before the AEMC would look at whether there was market power or not, was having a pretty chilling effect on downstream investors. See, the reality check wasn't even done.

So there are some concerns about processes, some concerns about the time delays and some concerns perhaps about resourcing, budgetary implications and all of that sort of thing, or perhaps even adequate expertise within that organisation. So in the same way as it is timely to have a look at the AER we believe that it is also timely to have a look at the other very important NEM institution which after all sets the rules.

**DR CRAIK:** What about AEMO while you're doing institutions?

**MR LIM (MEU):** You'd be surprised that in one of major energy user's rule change proposal one was on optimisation of the regulatory asset base and the other one was on the use of used and useful assets. When assets are fully depreciated they can still have a useful life. We suggested that the AEMC should have a rule that actually look at that. The AEMC said that we didn't provide the evidence to enable them to proceed with assessing those issues, and surprisingly AEMO, because you mentioned

it, when we, a couple of weeks ago actually, put that proposal forward to the AER as something worth looking at. So in a sense consumers have some frustration vis-a-vis the earlier question about the AEMC's work.

AEMO appears to be doing its work. It's newly created so it's a little bit early to tell. It has been, what, running for about two, three years. So we would like to see a little bit more time, for AEMO to operate perhaps over the next two or three years before we make a judgment. But certainly in the case of AEMC, because its establishment coincided with the AER's establishment and subsequently the merits review regime, I think it's time to (indistinct) that organisation to a review.

**DR CRAIK:** Thank you.

**MR HEADBERRY (MEU):** It's interesting in that in the recent decision that has been made on network regulation, on p.(i) there's a footnote number 1. The AEMC says, "In general in this document the term 'AEMC' is used in respect of administrative actions or former decisions of the Australian Energy Market Commission whereas the term 'commission' is used when referring to considerations and decisions leading up to this final position paper." So even the AEMC are starting to dissociate themselves from - - -

**MR LIM (MEU):** Earlier parts.

**MR HEADBERRY (MEU):** - - - earlier decisions and activities of themselves. They're even querying - and again that goes back to a number of the recommendations and decisions that are made back in 2006, when it generated chapter 6A, and you now look at what the AEMC of today on network regulation - it has resiled significantly from the incentives that were embedded in the chapter 6A rules. We all know that the chapter 6A rules then rolled in to the changed chapter 6 and also then into the gas rules and that set the benchmark and approach. So it just seems bizarre that they're even questioning themselves. It just indicates that maybe there is a need for a much - just as we say the AER needs something, that the AEMC should be looked at as well. I think your question to Bob was, should AEMO be - we haven't seen the same sort of issues like that. They've got a different structure, too, with a board which includes a lot of experienced industry people, mainly from the supply side, not too much from the consumer side.

**MR LIM (MEU):** Private sector.

**MR HEADBERRY (MEU):** They do impose some of those controls, private-sector controls, that we've actually seen, that we don't see so much on the government bodies and the government-appointed bodies. So again, their structure is slightly difference, so you need to take that into consideration. And as Bob said,

they've only been running for about three years, but a lot of the work they've done has been quite sound and they have, you know, also gone and caucused widely and got a wide church of views, rather than - no, probably more that they try harder than do perhaps the other two organisations. You know, they've got a number of working groups that they keep on running and they get input, both from consumer views and supply side, from within those working groups.

**DR CRAIK:** Okay, thanks.

**MR WEICKHARDT:** Can you just, going back to AEMC, opine on why you think you're a sole voice raising these issues about AEMC? Wendy might contradict me, but I don't think anyone else has raised concerns about the AEMC. I mean I guess any institution, including the Productivity Commission, could always be improved. But whereas in regard to the AER lots of people said to us in our initial consultation they were concerned about the AER and its performance - the AER were here this morning and of course they say that a lot of that is based on misapprehension and misunderstandings and they're determined to do something about it.

**MR LIM (MEU):** We believe that's the case.

**MR WEICKHARDT:** But we haven't heard a lot of criticism about AEMC and I'm just interested in why you think there are these issues and other people haven't raised them to date?

**MR LIM (MEU):** That's a fair question, Philip. We agree with what the AER told you. A lot of people basically believe that the consequences of all the pricing reviews in the last five years have been due to AER incompetence, or actions, or lack of actions thereof, but they're basically reciting the rules. The rules set what the AER can or cannot do and we believe that many organisations don't understand that little, fine line there. As regard to the second part of your question about the absence of other people making all those comments about the AEMC, we believe that we are the only major consumer group that has participated in most of the AEMC rule change proposals.

**DR CRAIK:** Who has, what, sorry?

**MR LIM (MEU):** We are, the major energy users, the only group that has consistently participated in many of the major rule changes that the AEMC has conducted.

**MR HEADBERRY (MEU):** I think one of the things to bear in mind is that the AEMC actually produced a set of rules which was very favourable to the supply side,

particularly the networks. It would be rather churlish of them, after being given such a nice set of rules, for them to be critical of the AEMC. The point that Bob made about the AER, the AER has taken all the flak with regard to the unbalanced rules that they've had to apply.

Just last Tuesday I was in a meeting with the AER talking about that issue and I asked them the question specifically, "Under the rules, which applies first - or when you're doing the regulation, which applies first: do you apply the rules as they're written or do you apply the national electricity objective?" Their reply was, "We apply the rules. Even if we believe that the rules do not meet the objective, we are required to apply the rules. "What we did is, when we got to the stage where we were convinced we were not meeting the objective, we then actually initiated a rule change," which is what they did and that was the right thing to have done. Our criticism of the AER was they could have done it a number of years earlier. Their response to that was, "Well, we really needed to get enough evidence to be able to support our view that the rules were not in accordance with the objective."

So I think when you look at it that way, the AER has done the right thing, except they didn't apply the objective in preference to the rules. Their view was that the rules were meant to meet the objective and, therefore, until they had sufficient evidence to be convinced that that wasn't the case, then that is what they had to apply, was the rules. So I think we've got to look at it that way as well.

**MR LIM (MEU):** And perhaps, Philip, I can make myself a bit clearer in terms of the question you asked. There are basically two major energy users groups in this country: the EUAA and the MEU. The MEU has played in most of the rule changes; the EUAA in some of the major rule changes. The other residential consumer groups have never been largely involved in upstream issues, whereas we understood that if you get the rules right, you're more likely to get better outcomes, rather than trying to play at the retail-sector end or at the pricing-review end after the rules have been set by another organisation. So we have been strategic in our participation and therefore a bit more strategic in how we view the problems.

**MR WEICKHARDT:** Okay, thank you for that.

**DR CRAIK:** Can you move on now to the issue of a representative consumer body. I mean you acknowledge that our recommendation looks appealing; however, having said on the one hand, then you have much more on the other hand.

**MR LIM (MEU):** Wendy, I guess all of us have been overtaken by events over the weekend, so I don't know how much more we can add, other than to say - - -

**DR CRAIK:** We don't know how all that's going to turn out, so in the absence of

that we are pursuing our - - -

**MR LIM (MEU):** We have been happy with how the consumer advocacy panel has been performing in terms of providing funding to organisations such as ourselves.

**MR WEICKHARDT:** You guys get funding from them, do you?

**MR LIM (MEU):** Yes.

**MR WEICKHARDT:** How much funding would you get?

**MR LIM (MEU):** We would get - - -

**MR HEADBERRY (MEU):** This year, for 12-13 we get \$220,000 from them.

**DR CRAIK:** Can one ask why the actual energy users don't fund you themselves, if it's so important?

**MR HEADBERRY (MEU):** Well, they do.

**MR LIM (MEU):** They do through membership fees. The advocacy panel provides, what, 80 per cent?

**MR HEADBERRY (MEU):** No. No, of our total revenue, the advocacy panel probably provides us with between 50 and 60 per cent of our total revenue. The rest of it comes from member contributions. I don't know what is the case of the EUAA. Look, question - and I'll throw it back at you, Wendy - why should large consumers pay not only for their own advocacy, but bearing in mind that the bulk of the advocacy they do benefits everybody, that if the large users just went up there and said to the AER, "Well, just for our small group of companies - you know, 20 or 30 companies - we want to have something better than everybody else gets because we have actually put the effort into doing advocacy," we'd be given very short shrift. So the bulk of the work we do benefits everybody and that is why the advocacy panel provides funds for us.

Also bearing in mind that the advocacy panel is funded out of a levy on electricity usage and large users provide something of the order of - or residential consumers provide about 30 per cent of the total cost of the market, so the rest of the market is funded by business and large energy users, and large energy users are about the same size as residential consumers in volume terms and the bit in the middle is everybody else. We all pay a percentage of the amount of money we spend on the cost of energy. Not on network charges or anything like that; on the cost of energy. We all contribute into the AEMO funds and the advocacy panel funds comes out of the

funds that are collected by AEMO.

But let's put that into perspective. The amount of money the advocacy panel gets for 13-14, we've put in a budget of \$3.2 million of which 2.4 is going to be allocated to consumers. A single network will spend upwards of \$2 million on its application.

**MR LIM (MEU):** For a price review.

**MR WEICKHARDT:** I'm surprised it's that low.

**MR HEADBERRY (MEU):** I'm just talking about one of them. Then you multiply it by how many there are all the way around the system - you know, it really puts things into perspective.

**DR CRAIK:** If I can just follow on your argument that your work benefits everybody, has benefits to everybody, one of the arguments you've used in your discussion of what we've proposed as a consumer body - which was an expertise based body with an expertise based board and having an advisory panel - was that everybody would have different views and would want different outcomes. So if they were all pushed together in a group where they had to kind of sort them ourselves before - - -

**MR LIM (MEU):** I think David should have qualified it with my marginally common end result in the sense of pricing perhaps if probably the most element that - - -

**DR CRAIK:** Which is probably a really important aspect of why you want a consumer body, I would have thought.

**MR LIM (MEU):** That's right. But on the other hand, if you try to look at the range of consumer views you have large energy users on the one hand and then across the range you have the top environment centre, which would have a very strong environmental - - -

**DR CRAIK:** Yes.

**MR LIM (MEU):** Then a very nebulous, large group of residential users which will be mainly focused on low income.

**DR CRAIK:** Well, certainly the user groups that represent them are, yes.

**MR LIM (MEU):** So the priorities can be quite different in quite a number of

critical issues. So trying to reach a commonality of view might be challenging.

**DR CRAIK:** I guess our suggestion was the body would be expertise based, not a representative based body, but then you would have an advisory group who would advise them.

**MR LIM (MEU):** Our concern would be the cost of funding such an organisation. If it's going to be based on AEMO fees then large users would be very concerned about paying.

**DR CRAIK:** We would have seen it funded by an industry levy in the same way the consumer advocacy panel is.

**MR HEADBERRY (MEU):** That comes out of the AEMO levy anyway - - -

**DR CRAIK:** That's correct, yes.

**MR HEADBERRY (MEU):** - - - which is done on how many gigawatt hours or megawatt hours are sold.

**MR WEICKHARDT:** Why should the major energy users be concerned by that if - and this is the big if - this consumer advocacy group ended up with better results? The issue you seem to be suggesting is that everyone sort of does their bit in front of the regulator and the regulator then listens to these different voices and distils out of that a common, homogenised view. I think what we were advocating was that those different voices advise a consumer panel that has expertise and consistency and lifetime and the resources to be able to sit in the same room as the network businesses and the regulator and try to arrive at better outcomes that are in the long-term interests of consumers.

It of course depends upon whether you think the regulator is in a better position to distil the different voices it hears or whether a standing committee based on relevant experts is better able to distil that view. The point you made at the very start of this, which Wendy referred to, was that there are a lot of areas where consumers do have very common interests, there are some areas where of course they don't, and you can plot those extremes. But an appropriately tasked expert panel which was selected on merit, not on representational grounds, would be in quite a good position to be able to filter out those views just as much as the regulator would be.

**MR LIM (MEU):** So perhaps we might expect such a panel to push for cost-reflective pricing, for example - - -

**DR CRAIK:** We might well.



**MR LIM (MEU):** - - - rather than average tariffs that are smeared across. I mean, we're in the business of speculation, you see.

**MR WEICKHARDT:** We had made that recommendation looking at some international practice, and certainly in the United States and the UK such bodies appear to exist and appear to have produced reasonable results. Is your view reflective of having looked at those international bodies and decided they don't work?

**MR HEADBERRY (MEU):** I think maybe to give you an example, again going back to last Tuesday, we were sitting around with the AER. The MEU was specifically invited to this consumer group because the AER recognised that we have some expertise and knowledge of network regulation. Around the table were the tenant's union - I'm just trying to go through; the tenant's union; there were a number of legal centres, consumer legal centres; there were representatives from a couple of the churches, the church group Anglicare; VCOSS was there; and there was also the Total Environment Centre there and the Alternative Technology Association. The AER was trying to get that sort of, "This is the sort of stuff we need. We don't need to have letters saying 'We can't afford it any more.' We need to have hard data, and that's the sort of stuff we're getting from the major energy users."

Why they asked us there is because we are the only large group that has actually tried actively to work with the small group, with the advocates of the small consumers. For instance, in the WACC review that was done by the AER back in 2008-2009 the small groups, or the advocates for the small users, actually said to the MEU, "Will you represent our views as well at that hearing because you understand these things. These things are stuff that we don't understand. We know what it's like to go and help small consumers" - financial counsellors were also there, sorry, at that meeting. So we really had a wide church of representatives from the looking after the at-risk consumers; no-one there from ordinary common or garden residential consumers - you know, from Toorak or anywhere like that, or Brighton. It was just those that - - -

**DR CRAIK:** That's exactly why we've proposed what we've proposed, because you have the low socio-economic groups represented, you have the industry represented and energy users represented. You don't have the majority represented, but if you had an expertise based body who could actually do some of this analytical work and pick up those easier issues as well - - -

**MR HEADBERRY (MEU):** Again, it's a bit like the AEMC and some of their decisions: a great idea in concept but the application is less than - - -

**DR CRAIK:** Well - - -

**MR HEADBERRY (MEU):** Can I just finish.

**DR CRAIK:** Sure, sorry.

**MR HEADBERRY (MEU):** At that meeting with the AER the AER asked them the question, "Why don't you get involved in this?" "Well, we're concentrating more on the retail end of it because that's where our constituents see it. So we're spending more time on NECF and those because that's where we believe our efforts have to go." The AER said, "Yes, but hang on, what you finally end up paying is a mix of all of these other things."

**DR CRAIK:** The other things that go before.

**MR HEADBERRY (MEU):** It's all very complex but being lawyers, particularly, we do know the other part of this, and financial counsellors, we do know this retail end of it. So what we started to see is there is this difference in focus of where the effort has to go, and I think that's where we start to see this differentiation that, from a large-end consumer, "We don't need to worry about the way we deal with our retailers because we'll change our retailers like we change our socks," whereas that isn't the way that it works with the small-end residential consumers. The retailers are much more important to them and how they work with them. So I think it's not so much that we've got a different view, it's where we want to focus our efforts to get the best reward. I guess the concern we've got is that by trying to have a common focus across everything we're going to miss out on the important bits; and by having this slightly different view we actually cover all of the bases.

**MR LIM (MEU):** As I mentioned before, we have taken a strategic view, the MEU, to focus on the upstream issues because that's really where the rules of the game are set. Philip, we haven't looked at the UK, but - - -

**DR CRAIK:** Well, the USA I gather their consumer groups have actually reached settlements with - - -

**MR LIM (MEU):** Yes. There are more - and we have some understanding of the US reviews, because they are very legalistic and therefore there needs to be heavy lawyer presence and heavy funding. So it is a bit different from our kind of review.

**DR CRAIK:** I agree, but I guess it's the principle of a consumer group actually reaching agreement with electricity companies on the tariffs.

**MR WEICKHARDT:** The point I suppose we're trying to get is: somebody ultimately has to do that.

**DR CRAIK:** Yes, make the decision.

**MR WEICKHARDT:** The question is, is the regulator best able to do that or are a group of consumers and experts representing consumers able to do that themselves and therefore present a more united view that's more powerful with the regulator and also the network companies?

**MR LIM (MEU):** Philip, and I guess our answer is, consumers who are concerned about outcomes sufficiently should participate in reviews or on prices or on routes. But to say that every consumer should participate via an appointed panel, it doesn't jell with us. It was the same with the limited merits review processes, where there were many people said that, "We couldn't participate before the tribunal; it was difficult," et cetera. But the key, which we told the expert panel on that issue, was that it is not the case of whether people can or cannot participate in the tribunal, but whether they put in submissions in the first instance that should really qualify them to participate or not. They shouldn't just be making a general thing that, "We would like to have liked to participate in this, but it was made difficult," when they didn't participate by way of submissions in the first instance.

**MR WEICKHARDT:** Yes. Well, I have to say I'm as yet unconvinced. I mean if I carried your argument to its extreme, every major user would go in front of the AER and put their position and your jobs would be redundant. I mean the fact that groups of people get together is done because a common voice carries often more power and you get better resourcing and better capabilities.

**MR LIM (MEU):** Yes, and ultimately it falls on cost-benefit analysis: are the costs justified versus the potential benefits.

**MR WEICKHARDT:** Yes, no argument from me on that score, Bob. None at all. To a degree I guess we'll have to - - -

**MR LIM (MEU):** Agree to disagree.

**MR WEICKHARDT:** - - - see what happens.

**DR CRAIK:** See what happens on Friday.

**MR LIM (MEU):** Yes.

**MR HEADBERRY (MEU):** I guess the New South Wales government already

funds the Public Interest Advocacy Centre, the Victorian government funds the Consumer Utilities Advocacy - whatever.

**MR LIM (MEU):** Centre.

**MR HEADBERRY (MEU):** - - - Centre. Why do they think that that's better. You know, why do they think it's necessary to have, say, the CUAC in Victoria, knowing there's VCOS, the Tenants Union, and a whole raft of other companies. Financial councils are also interested in the same outcome. They've already made that decision. CUAC has been around the middle 2000s, so it has been around for a long time, but they see that there is this need to be more - no, because they have never accepted that CUAC is going to represent everybody's view. And the advocacy panel funds CUAC as well, actually, as well as the COSs and the community legal centres, because they see that there is this need, partly to address the diversity of views that do come out of those advocates and, to a lesser extent, there has also been a recognition - again we come back to the AEMC processes.

The number of times we have read in an AEMC decision, not so much an AER decision, where the bulk of submissions said - you know, so if we had all of the supply side all putting their own little thruppence in there and one voice from consumers, using what the AEMC does, saying, "Well, the bulk of submissions, all are in favour of one direction," because it's the supply side putting in a multiplicity of submissions, to one voice of consumers.

**MR LIM (MEU):** And I kid you not, commissioners, on many occasions you would read the following words: "The majority of submissions said this." And the majority of submissions happen to be from the energy supply companies with perhaps one, single consumer voice.

**MR WEICKHARDT:** I hear what you say. I have to say, having been on the end of multiple submissions, to me quality counts much more than quantity counts.

**DR CRAIK:** It's not a vote.

**MR LIM (MEU):** Yes, quite.

**MR HEADBERRY (MEU):** There is no disagreement on that.

**MR LIM (MEU):** No, no disagreement with that.

**MR WEICKHARDT:** Okay, let's move on.

**MR LIM (MEU):** It's just that we are confident that our submissions will contain

quality rather than the other way around. And I kid you not, that is a serious point. We are keen to maintain a sharp edge of our advocacy work. We don't want our advocacy work to be dumbed down or smeared across or averaged across the spectrum of consumer voice. I think that is an important thing.

**DR CRAIK:** Okay. Can we move on to demand management. You had a few comments on that. We talked about time-of-use pricing and critical peak pricing and, moving down that direction, particularly critical peak pricing because it was so important in terms of the percentage of the costs that are represented. I think you weren't so keen about time-of-use pricing or time based pricing, but you talked about demand based pricing. I guess we're a little bit uncertain as to what you meant, because we would have seen time based pricing reflecting the cost to the system or demand at any one time. I'm not quite sure how that differs from demand based pricing, because they seem to essentially reflect the same thing. But maybe we're not understanding.

**MR HEADBERRY (MEU):** Okay. The size of the network and the amount of generation that is needed is tied to the demand; you know, how many gigawatts are needed at any point in time. The network is sized to take so many gigawatts, and that is based on what consumers have asked for. We also know that the peak amount of electricity transfer happens, you know, for about .2 per cent of the time or something like that. Even on a very hot day.

Well, let's go back: last week we had close to a peak demand in Victoria on Thursday, but that peak demand only lasted from a period of about 2 o'clock on the afternoon through to about 6 o'clock in the early evening. If you go to time based pricing - the day after was a cooler day, so the demand was much lower the next day. But that said, not as many people were using the network at that time. From an industry viewpoint, the industry was still chugging along and was still dragging the same number of megawatts or gigawatts that it normally drags in, that it had dragged the day before on a hot day and also dragged in on a cold day. What the real problem was, was that everybody was turning on their airconditioners, and on all the commercial buildings the airconditioner was screaming away on the top there, because they were really chugging along hard, because it was a hot day. The network is sized to meet those four hours that happened on Thursday afternoon. Pricing should be based on the demand that people made on the network on Thursday afternoon, not based on the hours of 12.00 till 6.00.

**DR CRAIK:** So that would be our critical peak pricing, effectively?

**MR HEADBERRY (MEU):** Well, actually we have heard a lot of these issues of critical peak pricing and all the rest of it. The most successful demand management schemes, that have been trialed and run in the United States and in the UK and in

Europe, have all been based on the networks having direct liaison with consumers.

**DR CRAIK:** Yes.

**MR HEADBERRY (MEU):** Not through, you know, if you use electricity between the hours of midday through to say 7 o'clock during the summer period, then you're going to be hammered for it, because that's the time we know that most of these problems occur, you're still carrying out an averaging because the usage that I make on that really hot day - if I'm a residential consumer, for instance - will be less on the next day which is a cool day because we've just had the change come through and I don't need my airconditioner on any more. So what you actually see by time based pricing is still an averaging. You're not really addressing the - - -

**MR WEICKHARDT:** No, I think we're talking at cross-purposes here. I think you're talking about general time-of-use pricing which we've suggested isn't very effective.

**DR CRAIK:** That's right.

**MR WEICKHARDT:** We're suggesting the sort of thing that SP AusNet had been running with major customers in Victoria, where they say, "We can declare" - I think it's up four days a year, with a day's notice, as critical peak days and they will specify a time period in that day when they predict, because of the weather forecast, the peak will occur. They say, "In those four days, our critical peak price will apply, no other days in the year." It's that sort of thing which is very targeted at the particular peak. We're not talking about the day after or the day before, we're talking about the day that a peak will occur. So that forecast in Victoria of those temperatures was well known 24 hours in advance. The networks would have known absolutely that that was going to be a critical peak day and they could have warned everyone, "In that period of time, you will either have the opportunity of load shedding, if you want that option, or you will have the opportunity of enjoying your airconditioner but you'll pay for it."

**DR CRAIK:** In fact we've said people might want to move to time-of-use pricing before they move to critical peak pricing, just to get people used to differential pricing. The effect on behaviour won't be very significant at all.

**MR HEADBERRY (MEU):** Targeted pricing like that we'd agree with. We're supportive of what AEMO does at the moment in Victoria. They're again unique because they nominate 10 days in the year and your usage on those 10 days is what sets what your annual demand is for that time. Even that is a form of averaging because it's still done over a whole day. There is now a thrust to try and even get rid of that because it doesn't suit some of the other things. We come back to the

IRTUOS that we were talking about that's still going through the system. The AEMC is trying to force the Victorian model from transmission pricing to get back to the averaging that's used across all of the other networks.

Everybody has got their own view, and I happen to live in SP AusNet's distribution network and they're talking about the sort of pricing I was talking about, peak pricing will apply all summer for the period between 6.00 and 8.00 in the afternoon, which I think is probably getting a little bit better than what it was, but it's still nowhere near addressing the core problem.

**MR WEICKHARDT:** Sure.

**MR HEADBERRY (MEU):** So I think maybe the nomenclature needs to be refined because what you're talking about, we'd agree with, but what a lot of other people consider is critical peak pricing or whatever is something different, and there are thrusts to try and change that.

**MR WEICKHARDT:** We attempted, wherever we talked about time-of-use pricing to say untargeted versus targeted critical peak pricing because - - -

**DR CRAIK:** For that very reason.

**MR WEICKHARDT:** - - - we see these as being very different processes.

**MR LIM (MEU):** We were talking at cross-purposes.

**MR WEICKHARDT:** Okay, all right.

**DR CRAIK:** Good.

**MR WEICKHARDT:** Can I raise the issue about the RIT-T. You've raised a number of issues around that. You suggested that the RIT-T should apply to replacement of assets as well as to augmentation. I can understand that so far as consumers are concerned, this is a relevant issue. I guess however at the moment the regulator doesn't sign off on individual projects at all and indeed the regulator, as they pointed out to us this morning again, apart from being cross and irritated by a RIT-T that doesn't in their view consider all the issues or satisfy them that it's impartially considered all the options, they really don't have many sort of levers to pull. Indeed, the regulators told us that there are, certainly in the precursor to the RIT-T, the reg test, there were quite a few occasions when they saw reg tests giving quite inadequate sort of outcomes.

So there are two processes; one is if you extend the RIT-T to augmentation and

replacement, if all that happens is the regulator stamps their foot up and down and the transmission company continues to ignore them, you haven't achieved much. Do you have a view as to what power the regulator should have if they don't like the outcome of the RIT-T?

**MR HEADBERRY (MEU):** The first thing is that the regulator will have, under the new rules, is the responsibility to do an ex post review of all investment.

**MR WEICKHARDT:** It will have the option of being able to do that.

**MR HEADBERRY (MEU):** Okay, option; they should do an ex post review to identify whether it was really efficient or not, because they are required under the new rules that if there has been an overrun in the capex, that they are to make sure that only the efficient element of the capex up to the ex ante allowance should be allowed. That means that they have got to go through the whole process and find out what was efficient and what wasn't efficient, but they only have to make an adjustment if there's been an exceedance of the ex ante allowance.

**MR WEICKHARDT:** Correct. So if a transmission company ignores their input to the RIT-T and they don't overspend their overall capital - - -

**MR HEADBERRY (MEU):** They won't be adjusted. But there is no reason why they shouldn't have still identified that the investment should be efficient. Just because they have been given \$800 million to spend over the next five years - they could spend it on buying Rolls-Royce cars.

**MR WEICKHARDT:** I'm not disagreeing with you. I'm asking what, in your all-wise sense, you think would be an appropriate sanction if the transmission company hadn't spent its overall capital allowance, what sanction the regulator should have.

**MR HEADBERRY (MEU):** One of the real changes we put up that the AEMC decided not to go ahead with was an ex post review of all capex and to exclude any inefficient capex, regardless of whether they exceeded the ex ante allowance or not.

**DR CRAIK:** So all capex to be ex post reviewed?

**MR HEADBERRY (MEU):** All capex, including replacement capex, and again that comes back to our concept, that if an asset is fully depreciated but is still used and useful, there is an incentive to pull it out because the owner is not getting a return on it any more. So if I pull it out and put in a new one, I get my 10 per cent WACC on it, but if it's just sitting there and still doing the job that it's been doing for the last few years and will continue to do for the next few years, I'm not getting any



return on it at all, other than maybe a little amount of money for opex, just to keep it in running condition. So our view was that used and useful assets should be required to stay in the fleet, even if they have been fully depreciated, and there should be an optimisation of assets.

**MR WEICKHARDT:** You don't actually have to replace it, you've just got to say you're going to replace it.

**MR HEADBERRY (MEU):** No, you actually have to spend the money to get a return.

**MR WEICKHARDT:** You'll get a capital allowance ex ante if you convince the regulator that you want to replace it and next time when you haven't done it, you say - - -

**MR HEADBERRY (MEU):** "I need to do it again."

**DR CRAIK:** "I'll need it again."

**MR WEICKHARDT:** - - - "I need it this time."

**MR HEADBERRY (MEU):** And again and again.

**MR LIM (MEU):** It's commonly done.

**MR WEICKHARDT:** But I cannot see an ex post review of all expenditure being a particularly acceptable solution. With the benefit of hindsight, if the companies that you represent did ex post reviews of all the capital they invested, they would certainly, from my previous experience in life, consider that some of the investment they'd made wasn't a very sensible investment. The retrospectoscope is a wonderful instrument. So if the regulator has agreed with a company in advance that a certain sort of investment program is required and then something happens - you know, a major user shuts down and you sort of say, "Oh, well, now we look at this, it doesn't look a very efficient investment" - I can see network companies saying, "That's just totally unfair and unreasonable," which could have the impact of upping the equity risk premium that they demand and therefore impacting upon users. So you've got to find a solution that's going to give the right impact in the long-term benefit of consumers. An ex post review of all capital and adjustments of everything, I think regulators around the world have played in that field and decided that it's not worth it.

**MR LIM (MEU):** But they have the ability to play in that field and they can make the judgment.

**MR WEICKHARDT:** Yes. I mean, what we had suggested in the draft report was that above a certain threshold, and we didn't specify what that threshold will be and interested in your views here - above a certain threshold rather than for transmission investment there being an ex ante capital allowance, that transmission companies would have to go through a RIT-T process together with AEMO. If they had agreed on that and on the investment required and the timing of that, they would then go to the AER and the transmission company would get a capital allowance at that stage for that investment. It would seem to us a better solution than an ex ante allowance. Now, of course there are some people who will say, "Well, that's not incentive regulation," and that's true. Incentive regulation doesn't really work on transmission. So I don't know whether you see that as being a potential solution through this problem, but it is a conundrum.

**MR HEADBERRY (MEU):** We agree it's a conundrum. I guess the issue that we have is that the threat of it being there and the potential that a significant project can be cut back provides a discipline. An example of that is in 2003-4 - was it Energy Australia or TransGrid?

**MR LIM (MEU):** TransGrid.

**MR HEADBERRY (MEU):** TransGrid did a major network expansion into the Haymarket, and the ACCC actually looked at that and said, "You could have come up with a much lower costs solution if you'd gone through and used the proposal for building a gas turbine plant based at Amcor or Orica's site," which was a viable option that was being put up by ITOCHU, and they ended up cutting back some of the money that had been allowed that had actually been incurred. That discipline on TransGrid is still there. They do look much more closely at non-network solutions. In fact when they were looking at doing the loop between Newcastle via Sydney to Wollongong, the 500 kV loop, they actually looked and talked to a very a very large user down in Wollongong about whether they would put in a gas turbine plant.

**MR WEICKHARDT:** I'm sorry, I haven't been watching the time closely. We are out of time. Thank you very much indeed for coming along.

**DR CRAIK:** Thanks very much.

**MR WEICKHARDT:** Thank you for your submissions, I appreciate that. If you've got any other further thoughts after this, please send us a brief note.

**MR LIM (MEU):** Can I say one quick thing before we depart. We didn't cover the issue of our request that the commission puts a spotlight on the various climate change energy-saving schemes and all the various government interventions onto the

energy market. We are anxiously concerned that there is a very emerging problem looming in this country where, notwithstanding all the good things that ministers and others might be doing on trying to reduce the escalation in energy or electricity prices, those other interventions are going to negate those benefits. So we are really hoping that the commission might throw a spotlight on that.

It was something that the AEMC did not do when they were reviewing the impact of climate change on energy markets. For two years we put in submissions saying, "Please emphasise some of those distortions" - not only in investment upstream but also investments downstream, but we didn't get much - - -

**MR WEICKHARDT:** Your position is noted, Bob. Thank you.

**DR CRAIK:** Thanks, Bob.

**MR WEICKHARDT:** Our next participant is the City of Sydney. If you could please give your name and the capacity in which you're appearing.

**MR JONES (CS):** My name is Allan Jones. I'm the chief development officer, energy and climate change at the City of Sydney.

**MR WEICKHARDT:** Thank you for your submissions, both pre the draft report and your further submission post the draft report. If you'd like to briefly talk about the things you want to raise with us today.

**MR JONES (CS):** Yes, if I could just briefly run through the topics and then lay it over to you for any questions. I provided a background of what the city is doing for the Sustainable Sydney 2030. This is to deliver the city's reduction of greenhouse gas emissions target of 70 per cent by 2030. Eighty per cent of the city's greenhouse gas emissions comes from centralised power generation so a key part of what we're trying to do here is decentralise energy or distribute generation - a combination of trigeneration and renewable energy. Now, interrelated to that is obviously the increase in the electricity prices and peak power, and so the submission in further detail of your draft report relates to those items.

If I could first of all start with - and taking this in order, how it appears in your draft report - peak demand and demand management, and airconditioning peak demand. The network businesses have pretty much implied that most of the problem is residential airconditioning and it is agreed that that is a problem and an increasing problem. However, I think it ignores the fact of the huge airconditioning and refrigeration loads in cities. In the case of the Sydney CBD we know that our trigeneration proposals in the master plan would displace in the region of 542 megawatts of electric airconditioning which, together with the actual generation from local energy, would displace something like more than 1000 megawatts of centralised electricity and more than half of that peak demand. So just really the point here is that coming up with policies that appear to just target residential airconditioning will not produce anything like the benefits that they anticipated. We must also address the huge airconditioning loads in cities.

Moving on to my next item, which is street and public lighting, because the perception is that lighting is on at night-time it somehow is not to do with peak demand, but of course it kicks in early evening, right at the very time where we've got peak airconditioning loads. This is a substantial part, particularly in a city, of peak load in CBDs. The solution of this in part is in the network operators' own hands because in the case of Sydney we have something like 20,000 or so street lights of which the council owns about 8000 and AusGrid owns about 12,000. We pay for all of those street lights, so we pay for the energy consumption, the operation

and maintenance, the capital replacement and so on.

We have decided to reduce our own energy consumption on our own street lights with LED street lighting and that will deliver more than a 50 per cent reduction in electricity but also a 50 per cent reduction in peak demand relating to street and public lighting. So I think just on this one issue alone - and there are more than 2.2 million street lights in eastern Australia - that AusGrid themselves, either directly or indirectly if they wish to pass over those street lights to local government, can reduce peak power quite significantly for a measure of street lighting, as well as reducing consumption and emissions at the same time.

Moving on to smart metering and smart grids. There may be more detail with this, but I was just looking at what was actually written in the draft report itself, and it does appear to be principally around time based charging and penalising peak consumption; whereas really smart metering or smart grids go much further than that, particularly how they're being implemented in Europe, where we see a combination of electricity, gas, and thermal energy; we see a balancing of surplus renewable electricity. For example, what they're doing in Germany, surplus wind power is converted into renewable gasses using an electrolysis process. Denmark use the surplus electricity from their wind farms into electric boilers and they then are able to manage and avoid the peak periods in doing that. There are a whole raft of other things that go with smart metering and smart grid systems. Probably the world leader in this is Barcelona, where they have electric vehicle charging and all sorts of things joined up.

I think if we just use smart metering and smart grids, bearing in mind the cost of what this is going to cost, and that all it ends up is a time-of-day charging, then all we're simply doing is moving gold-plated poles and wires to gold-plated metering and increased costs for consumers. So I think we need to be cautious about what we're doing here and we need to try to extract the full benefits from smart metering and smart grids. Similarly as storage, which I see inter-related with smart metering and smart grids.

Moving to time based pricing for the distribution network, the point I'm making here is that if you just have a penalty, without any help or assistance of what you could do - in other words, moving from electric cooling to thermal cooling, or using ice storage overnight, those sorts of things - we really need to advise business and the community how they can avoid these peak charges. Just having a penalty - because if you're running a hospital, or you're running an office business or school, these are times of the day that you cannot avoid using that consumption. So just simply having a mechanism that just simply penalises people for using peak power without assisting them, even by education and knowledge about what they could do about it, does not seem to be wholly productive.

Moving on to distributed generation, and I set out previously in some detail to the nth degree about the removal of the regulatory and institutional barriers. There has been some movement in that area and we certainly have worked with AEMO on the registration of generators and aggregation of that. AEMO, to be quite honest, approached us and said, "What can we do for you," and we went through the whole raft of things and that was the only thing that fell within their bailiwick that they could actually deal with. The principal area which would really incentivise distributed generation and bring about the benefits that you quite rightly set out in your draft report would be to remove the regulatory barriers to distributed generation. And by that I mean what they have done in Europe, in particular in the UK, where they developed the virtual private wire principle over public wires, with cost-reflective charging so the actual true benefits of distributed generation are extracted and that benefits both the networks and consumers as a whole.

Moving on to cost-reflective charging. As I said before, this is already in place in Europe. At the moment you could be generating electricity from one side of the street and exporting the surplus power to a building on the other side of the street, but the DUOS charges as if it was Newcastle to Wollongong. It just doesn't make any practical sense and it's not a way to incentivise distributed generation.

I've also made another issue here, which might appear at the outset not to do with electricity regulation, but there are other things that go on, that happen, that will impact on electricity generation and the desire to move towards a distributed generation and demand reduction. One of those is NABERS rates in the commercial building disclosure. This previously incentivised precinct-scale decentralised energy or distributed generation in a ruling that was published only two years ago, but more recently they have withdrawn that ruling so therefore making it more difficult to incentivise distributed generation on a precinct basis, which can be four or five times more efficient than stand-alone systems in individual buildings. I'm sure the network operators will not want to see a myriad of small-scale systems connected at the end of their network.

We know from the work we did with Ausgrid on the trigeneration master plan, where they really want you to connect is at their node points in the 11kV and the 33kV network. So there needs to be some joined-up government thinking here. We're talking about the same departments here: part of the department that published a document recommending that these things be integrated and that precinct-scale systems be incentivised, and another part of the department doing the exact opposite and renegeing on an earlier ruling that had only come out two years ago just doesn't seem to make a lot of sense and warrants some sort of investigation.

There are likely to be other barriers, particularly in gas, that will appear,

because once - the thing with regulatory barriers, people see the barrier that is immediately in front of them, which is usually a small barrier. They don't see the big barrier until they've got through the small barrier. So there is another couple of years trying to get a rule change and all the rest of it. This has been well versed in Europe, so there's lots of examples of what the regulatory barriers are; they equally apply to Australia and some of the more advanced in the US, like California. Rather than go through this on a piecemeal basis, that could take maybe eight or 10 years, let's look at all of the regulatory issues up-front: what's fair and reasonable to enable a distributed generation market to take place, to reduce the capital expenditure and network charges going forward, and to reduce the cost to consumers overall. That's a brief summary of the submission I put to you and I'm happy to answer questions.

**MR WEICKHARDT:** Well, thank you very much indeed. It would be of interest to me - and you may have quantified this in your first submission; if so, forgive me. But this grand plan you have got for the city of Sydney, roughly what sort of total capital expenditure do you foresee, to go from where you are now to the end of your vision?

**MR JONES (COS):** The capital expenditure in today's prices is \$440 million and in 2030 prices is about \$960 million. We actually looked at the 2030 cost and discounted that back to 2010. So the actual cost, depending on the speed of rollout, will be somewhere in between.

**MR WEICKHARDT:** I'm amazed it's that low. You know, given all the ducting you're going to require to move energy around between buildings and things of that sort, it's a huge amount of infrastructure in the centre of the city, which is never cheap.

**MR JONES (COS):** That's right, but it has all been costed. We made comparisons with the cost of implementing such installations in other world cities and, as you may or may know, I was CEO of the London Climate Change Agency and the costs that are set out in this master plan, if anything, are slightly more than what we had in London.

**MR WEICKHARDT:** In your plan, do you envisage that Sydney will still be connected to the national grid and still be part of the national grid and still be able to draw on its full demand requirement from the national grid?

**MR JONES (COS):** It will be connected indirectly but will not be drawing on the full demand. The way that we differentiate here the difference between decentralised energy and distributed generation, that with the concept of decentralised energy you don't generate more than you actually consume. So the city itself is designed in such a way - so unlike traditional transmission grid-connected systems, which want to

generate as much as they can and get an income from that, basically with a decentralised energy system you are displacing the electrons that are coming from the remote power stations with local electrons.

Now, that isn't just like one remote power station compared to a local power station; that is actually broken down into distributed elements. For us the modules we use are four megawatts, that's what we've agreed with Ausgrid, but a typical precinct would be between 20 and 60 megawatts. And so what you've done here is built in a significant amount of resilience, because not all of that 400-odd megawatts would be off at the same time. There may be failures, there may be a plant down for maintenance, but not all at the same time. The idea is that any sort of inputs and exports at the grid supply point will be relatively minor.

Fully-fledged systems, say in New York state where they have 6000 megawatts of distributed generation systems - New York for example is about 600 megawatts, and that trades electricity across the distribution network with the Bronx and eventually routes through into New Jersey and so on. So in a fully fledged system it can actually work in quite a different - sort of active way. You effectively change the local distribution network from a passive network into an active network.

**MR WEICKHARDT:** So 600 megawatts in New York didn't stop New York being blacked out recently.

**MR JONES (COS):** The hospitals and the key areas continued on. That was one of the major successes of distributed generation in New York. All the key public areas continued in operation, particularly the hospitals and the universities and schools.

**DR CRAIK:** They were all on this distributed generation.

**MR JONES (COS):** Yes. Basically, because of the way it's broken down, they were able to go into - they'd disconnect from the grid, which is dead, and they were able to operate in either generation mode.

**DR CRAIK:** Will you be able to do that?

**MR JONES (COS):** Yes, the system can be designed to do that. That is the type of system that was designed in London and in Woking.

**DR CRAIK:** You said Sydney would still be connected indirectly to the grid. What is that - - -

**MR JONES (COS):** Essentially these are connections, typically at the 11kV or



33kV connection. So that is where they will be physically connected. Those voltages would back up to the 132kV connection. But the energy would be consumed before it got to that point; that is the point, that you're not actually generating more than you're consuming. Because the load is in the city, laws of physics dictate that the electricity will be consumed however near the are to the generation. Any impact, either positive or negative, by the time it gets to the 132kV connection is relatively minor.

**DR CRAIK:** So my question is, why doesn't Sydney disconnect totally from the grid. What is - - -

**MR JONES (COS):** It's an interesting question, because that was actually asked by Ausgrid. In a fully fledged system that would be possible. But the way that Ausgrid represented it was that - we talk about peak power, but they have also other issues. One of those is what they call input impedence, which, coming from the Hunter Valley is quite significant, they have to manage that. From their point of view, with what they call smarts - you know, a smart grid arrangement, as opposed to smart metering, they would in a fully fledged system operate disconnected from the centralised system, but able to switch over to it in a fraction of a second if necessary.

But essentially a distribution network wouldn't be a single connection, it would be a number of connections dotted around. So you would only be exposed to any one of those at any one time. We think that in the region of 15 connections, and we haven't determined those connections or where they are, that has actually been determined by Ausgrid. One of the first things we did was to invite Ausgrid and Jemena on to the project team. So unlike systems I have seen elsewhere around the world, where people get it wrong where they design the thermal network first and then go looking for an electricity connection, which could actually be in a totally wrong place and be very expensive.

I just simply reverse that coin; we started off with the electricity connection. The best place is to connect distributor generation in the city to Ausgrid's network, and the best people to tell you that is Ausgrid itself. They provided 15-minute transformer data, we looked at the peak loads, we looked at how that would change by shifting electric airconditioning to thermal airconditioning; so there's significant benefits obviously there for Ausgrid. So what you see in the master plan and how that's laid out, that is actually quite detailed. It's not a feasibility study, it's actually a detailed master plan with information based on input from Ausgrid and Jemena.

**MR WEICKHARDT:** Effectively, you will be taking over a pretty significant chunk of the poles and wires in the region you're talking about. Does your \$440 million, in today's prices, assume paying something for that grid?

**MR JONES (COS):** Yes.

**MR WEICKHARDT:** Really?

**MR JONES:** Well, this is where we get back to the cost-reflective charging. So we see the early years based on full DUOS charging, because that's where we are at the moment. Between now and 2030, being an optimist, I do see the regulatory barriers being removed by then. I think Australia is beginning to see that, if it just carries on in a business-as-usual approach, that's very expensive. The national electricity market has really failed consumers. There's only a small fraction of an electricity bill that's actually competitive, and that might be based simply on where your call centre is based. You can't change a power station, you can't change a transmission operator and you can't change a distribution network operator. They account for the vast majority of costs on an electricity bill.

So we have to begin to look at this in a different way, whereby we can have a more resilient network but electricity flows, both locally - and there will still be a need for centralised generation; particularly to incentivise buyers, large-scale renewables, for example. But it's really about a combination of the both. How cities work. How the rest of the country works. How industry works. Where are the really big nodes of energy consumption? What electricity can be reduced by switching to alternative forms of energy. How we can address peak power, which is partly about the switching. But also how we manage the electron flows within the distribution network itself and how that interacts with the grid supply point.

**MR WEICKHARDT:** I am a bit confused. Are you assuming that you actually physically acquire the network, or are you simply assuming you will continue to pay DUOS and TUOS charges?

**MR JONES (COS):** Yes, the latter.

**MR WEICKHARDT:** All right.

**MR JONES (COS):** You're probably aware, I did install more than 80 private wire networks in Woking, because we had regulatory barriers in place at the time. By the time I moved to London, they didn't really want a Woking in London, not at that scale. So regulatory barriers were addressed within a relatively short period of time with the prime minister of the day, Tony Blair, who basically told the energy minister to sort it out; and we had a working group and within six months the regulatory barriers had been removed and the regulations were put in place. It didn't require primary legislation; this is a statutory instrument that was issued. That really incentivised both renewable energy and well as cogeneration and trigeneration in the UK, and that's why they're moving towards such big carbon reduction targets. But it

has also significantly reduced their exposure to capital investment on networks, which is a big issue in the UK.

**MR WEICKHARDT:** In terms of the outcome from your scheme, if you tried to sort of think about the reliability performance to the community that you service - I mean, at the moment at least the poles and wires are designed within Sydney I think to an N minus 2 standard, much more robust than I think any other capital city in Australia. Do you believe that the reliability standards will be wound back or will be maintained under your regime?

**MR JONES (COS):** You're quite right. There is a triplex network there, in the central CBD. It doesn't cover the whole of the CBD, but it certainly covers the central part, and at this moment in time connections that we negotiate with Ausgrid are on that basis. But Ausgrid themselves have advised, if not recommended, that you don't necessarily need to connect to the whole of the triplex, you could connect to just one of those feeders. That is a decision to be taken in terms of economy, cost of actually connecting to the full triplex system, and would you lose if you just connect to one of the feeders of the triplex system.

As you may or may not know, we have had power cuts in the triplex system in the CBD. So it hasn't guaranteed reliability. We had a major power cut two or three years ago; and that's not unlike some of the power cuts that have occurred in London and in New York, where something as simple as a relay in a transformer station control system can trip out, and you get this cascade effect with central systems and very quickly you can have a major power cut. I am just wondering just exactly what goldplating gets you; and I don't think it actually gets you that much, to be honest with you.

**DR CRAIK:** So whose decision will it be about - - -

**MR JONES (COS):** As you know, we have appointed Cogent Energy as our operator, which is owned by Origin Energy, the largest energy company in Australia. So this will be a commercial decision between Cogent and the customers that are to be connected; and it's possible that we may have horses for courses, where some customers are prepared to contribute a higher amount to retain the triplex connection if they believe that gives them additional security. But most that we talk to don't believe that's the case.

**DR CRAIK:** So it really is how much customers value reliability.

**MR JONES (COS):** Yes, that's right. An office building or a university may have a different view to, say, a hospital.

**MR WEICKHARDT:** Just one other question, if I may, quickly. In terms of the sites on which you would be installing these cogen or trigen systems, do you have any planning approval yet for those facilities and do you envisage any difficulties?

**MR JONES (COS):** We have some in train, in particular for Green Square, which is the largest urban development in Australia. That's based on the South Sydney Hospital site. Essentially the council has much of the land - big decentralised energy systems have been developed in world cities around the world through municipalities because they invariably have got the land, they've got the streets, they can make this happen, whereas state and federal government are not in that situation.

So essentially most of these sites are able - the ones that we've identified in the precinct so far are able to be located on council land. Some sites are on private land, but the negotiation that we are involved in on private land is that that will be a lease to the council that would then sublease to Cogent. That's really to provide the long-term security. So the contract that we may have with Cogent, depending on what site we're talking about, might be for 25 or 30 years but customers will want to know that the long-term continuity goes way beyond that. That's the arrangement that you see any of these major sort of citywide systems around the world, that exactly what they do, so we do nothing different than that. The largest system in Asia is Seoul, capital of South Korea, and that supplies two and a half million people and something like 1600 commercial and public sector buildings. It's the third largest in the world and it's exactly the same network design as what we're planning for Sydney.

**MR WEICKHARDT:** Yes. Having been burnt in a previous occupation of trying to get approvals to do various things in the greater City of Sydney good luck with the NIMBY effect in Sydney.

**DR CRAIK:** Can I raise with you this seemingly somewhat curious issue of this NABERS issue where the ruling of one of the department has been effectively overturned by another arm of the department.

**MR JONES (COS):** Yes.

**DR CRAIK:** Surely that has been pointed out, the incongruity issue?

**MR JONES (COS):** It has, and we are trying to address this with both federal and state government. It's an unusual situation. NABERS is managed by New South Wales on the rest of Australia or eastern Australia, but the Commercial Building Disclosure Scheme is managed by the federal government. So when we talk about the different parts of government, we're talking about federal government here, it's a bit strange. They put it out to consultation. There was about 25 respondents, 20

were opposed to the change, there were four neutrals and only one in support of the change, a change that the government itself only introduced two years ago. So it begs the question why are they doing it and what are they doing it for, because it doesn't seem to be any rhyme or reason. We can obviously reduce greenhouse gas emissions and reduce energy consumption significantly more with precinct systems than we can with stand-alone systems. But more importantly, we can significantly reduce peak costs and peak charges and avoided network charges.

**DR CRAIK:** So has a reason been given for the reason for the change?

**MR JONES (COS):** No, not really. But that's not unusual, not strange.

**DR CRAIK:** Yes, odd.

**MR WEICKHARDT:** You raised the issue of storage, which is the eternal dream in electricity, and examples in Germany of injecting hydrogen back into the gas grid. Hydrogen is the most fugitive gas known to man and gas networks, unless they've improved markedly, lose a remarkable amount of gas between that that's put into the main and that that arrives at the household. You actually see much of this arriving at the household?

**MR JONES (COS):** Not so in countries that implement it. Both the national grid in the US and in the UK have published reports and now are implementing that. Only two weeks ago Prince Charles launched a renewable gas grid injection in one of his own developments in the Duchy of Cornwall. But probably the world leader is Germany. They have already implemented 380 million cubic metres of renewable gas grid injection. From 2006 their policies, because as you know they've abandoned nuclear energy so they needed something - they needed renewable energy but solar and wind on its own is too intermittent, they need to actually make that non-intermittent - and their target is to get to six billion cubic metres of gas by 2020 and 10 billion cubic metres of gas by 2030. Now, that would run Australia several times over, even on the extended sort of gas consumption that we're looking at.

The conversion of surplus wind power - because what do you do with surplus wind power? Part of the problem is that it's not generating but you also get the problem at the end of the scale where it generates too much electricity at that particular point. So that's why they're using that particular technology. But much of what they're doing in Germany is converting waste into biogases and syngases either by anaerobic digestion or advanced gasification. That's the technology that's been taken up in the UK. That's been incentivised by the renewable heat initiative. They've already developed something like 30 sites, and this is literally within the last 18 months, so that's really taken off. Because the UK government sees the balancing out of a high renewable energy system you just can't do it on solar and wind alone,

it's just far too intermittent. Being able to convert waste - which is another issue, so you're turning a product that's a cost to a community into something where they can make an income from it.

Australia, to be honest with you, is not that far behind. CSIRO have developed their solar thermal system up at Newcastle and they are converting that into a product they call SolarGas which could actually be used in the gas network.

**MR WEICKHARDT:** SolarGas being hydrogen?

**MR JONES (COS):** No, it's not. It's actually a different form of electrochemical conversion which they haven't disclosed the details of, but I suspect it is that.

**MR WEICKHARDT:** Aren't too many options.

**MR JONES (COS):** No.

**MR WEICKHARDT:** They haven't invented a new atom.

**MR JONES (COS):** And that's your background. But there are actually markets in that around the world. So that is a technology that I guess is not dissimilar to what they're doing in Germany.

**DR CRAIK:** Interesting.

**MR WEICKHARDT:** Well, if you're interested in Prince Charles launching things - - -

**DR CRAIK:** Yes, same here.

**MR WEICKHARDT:** - - - actually in the 70s in the UK I did a study of how much gas is lost in the UK and I think at that stage it was about 20 per cent more gas was put in, and in some cases it was about 40 per cent more gas was put into the grid than arrived at the customer.

**MR JONES (COS):** Well, according to the EEO at National Grid they only get 2 per cent losses.

**MR WEICKHARDT:** They've probably fixed things up.

**MR JONES (COS):** Yes.

**DR CRAIK:** Fixed the leak.

**MR WEICKHARDT:** Yes.

**DR CRAIK:** Can we talk about the barriers to distributed generation? You said, Allan, that while some of the barriers are being removed the principal barriers now are regulatory barriers. Then you cite an example of having a virtual private wire instead of a public wire. Could you explain that and what you actually mean?

**MR JONES (COS):** Yes, the regulation there that I mentioned earlier about the prime minister, Tony Blair at the time - and so the regulation there it was really a compromise because obviously private wire networks were allowed up to 50 megawatts per site, but only one megawatt for residential customers. So in the UK that's about 1000 households. That's one of the reasons I had 80-odd private wire networks in Woking to get around that regulatory barrier, but it just didn't make sense.

So the solution that came out of the working party was what if we just treated the local public wires distribution network as if they were private wires, but just pay the distribution network operator UOS charges, avoiding the transmission network charges and avoiding - the key barrier in the regulatory sense is not so much the UOS charges, although that can be significant at the distribution end, it's the participation in the national electricity market. You really need large-scale generation because it can cost you millions of dollars to set up and operate a year before you sold a single kilowatt hour of energy. So distributor generation, by its nature, is never going to be that big. So really, the removal of the regulatory barriers was the avoidance of that, but the distribution network operator was paid for the use of their network.

About a year after that the cost-reflected charging was brought in, so there was a standardised calculation method, which is on the Ofgem web site and the Electricity Network Association web site, which sets out what the charge should be for distance travelled, the amount of energy being exported et cetera et cetera. So there's a very detailed formula that you could literally take off the peg and apply that to Australia.

**DR CRAIK:** Is that being done anywhere in Australia?

**MR JONES (COS):** Not as far as I'm aware. There are individual situations, one or two that I'm aware of, where there's been a local agreement with the network operator but it's not a requirement or an obligation.

**MR WEICKHARDT:** If over the time of this project, and it's been now and 2030, I think you were saying, you get installed your 400-megawatt hour of locals that have

embedded cogen and trigen, do you see that that sort of capacity will be taken out of the generation market elsewhere around New South Wales or do you think that extra capacity will be absorbed by growth in the market elsewhere?

**MR JONES (COS):** We looked at growth as well, so the reason we came up with our target that we've assumed a 30 per cent growth by 2030. It's more than 400 megawatts. If I could go back to what I said at the beginning, we're actually taking out about 550 megawatts of electric airconditioning, so it's over 1000 megawatts. We haven't assumed the whole city will take up this. We've assumed 65 per cent commercial, 50 per cent retail and 30 per cent residential floor space, so the potential is greater than what we have set out. That's just the basis of our master plan in order to deliver the required emissions reduction.

Evidence shows elsewhere around the world where these systems have been implemented in major cities that you beyond the tipping point and virtually everybody connects. Copenhagen, for example, 98 per cent of buildings are connected to their distributor generation network. Barcelona has just started out. They've implemented two precincts so far and they expect to get the rest of the city by 2030.

**MR WEICKHARDT:** The pricing that will be charged to customers, will that be based on the NEM wholesale market price?

**MR JONES (COS):** No, it will be a retail price. So it's essentially what customers want to know is what are they paying and what will they be paying, so it needs to be competitive in the market. Customers that host an energy centre, for example, will make a significant financial saving because they will avoid the network charges; it's connected behind the meter. To just give you one example of that, an energy centre at Town Hall House will save in the region of half a million dollars a year and avoid network charges and availability charges.

**MR WEICKHARDT:** Who puts up the capital, your 440 million in today's terms? Who's going to stump that up?

**MR JONES (COS):** Primarily it's the private sector. So whether that is subordinated debt from Cogent or a combination of that and loan finance depends on the scale of the project. In the early phases it's nearly always subordinated debt. As regards the thermal reticulation network which the council will own, we will forward fund thermal networks. The problem we have and the reason why municipality needs to be involved, if you're developing a 20-megawatt precinct, for example, but your first phase is four megawatts, it's not much point putting in a four-megawatt thermal network because it won't then be able to do the rest of the precinct.



So the arrangement of the contract that we have which is called a development agreement with Cogent forward funds that thermal network and then as additional load is connected we get a return back on that. So if eight megawatt is connected we get a return on it until our investment in that network for that precinct has been paid off. It's not there to make a profit, it's non-profit. We just essentially want to get our capital investment back over a period of time.

**MR WEICKHARDT:** Going back to my question about pricing, you're going to continue to pay DUOS charges - - -

**MR JONES (COS):** For exported electricity.

**MR WEICKHARDT:** - - - which I guess the Australian Energy Regulator will continue to regulate for the poles and you're using. You say your customers will face a retail price but the retail price is made up of a wholesale price which may be hedged in some way. Is that going to still be referenced to the New South Wales wholesale regional price or not?

**MR JONES (COS):** Bearing in mind it's actually been generated from gas and not as part of the NEM, so essentially if you look at electricity bills today in New South Wales you get a very detailed, itemised electricity bill, so you see what your energy charges are, transmission, distribution, it's all detailed. So essentially if someone is paying X for a unit of energy, which includes all those items - they can all be split out. Essentially what Cogent will be doing will be competing with the commodity price of that. So if the commodity price was, I don't know, 10 cents a kilowatt hour, then they would be competing with that 10 cents a kilowatt hour. The distribution network charges, availability charges, these are all non-competitive items. These all come from the networks and so on and so depending of who you are and where you are, whether you're hosting an energy centre, then you will avoid those network charges. So the customers are fully - certainly the customers that we're working with - to work out what their financial savings are to them.

Switching from electric airconditioning to thermal airconditioning is typically delivering a 30 per cent saving on the airconditioning load, so that's something again that they can calculate for themselves. So it's a bit more detailed and more intuitive and intelligence that you need to look at the offer because the customer works out what they're paying Cogent which might be 40 per cent of their electricity bill, the other 60 per cent is what indirectly ends up being Ausgrid and TransGrid and metering and all the rest of it.

So they're the bits that can be taken into account for the full picture of what it's going to cost the customer, so really taking what we refer to in Europe as the energy services approach rather than just pure energy as to, "What does it cost me over the

year as a whole as a package? What was I previously paying in gas and electricity? What am I now paying in electricity and thermal energy?"

**DR CRAIK:** What are the savings likely to be?

**MR JONES (COS):** It varies, as I said. If you've got an intensive airconditioning system, switching from electric to thermal could save you 30 per cent of that part of your electricity bill. The commodity price, just a straightforward unit rate of electricity is similar but you then also have the advantage of avoiding network charges that you no longer have to pay if you're hosting an energy centre or you're not using electricity for airconditioning or refrigeration.

**MR WEICKHARDT:** Thank you very much for coming along. It's very ambitious and we will be watching with great interest. Thank you.

**MR JONES (COS):** Thank you.

**DR CRAIK:** Good luck.

**MR WEICKHARDT:** We're going to adjourn now and the next participant will join us at 3.25.

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**MR WEICKHARDT:** We will resume the hearings now. Our next participant are AGL Energy. If you could give your name and the capacity in which you are appearing, please.

**MR OAKLEY (AGL):** My name is Roger Oakley. I'm the manager, wholesale markets regulation, at AGL.

**MR WEICKHARDT:** Thank you very much indeed for coming along and thank you for your submission pre the draft and also your notes at this point. We are interested in talking to you about a number of interesting issues.

**MR OAKLEY (AGL):** Thank you for the opportunity to present. AGL is not going to present on the benchmarking issue. We think benchmarking is a good idea and we support the plan that the Productivity Commission has outlined in moving towards benchmarking. The comments I wanted to make related to some of the more peripheral issues in the report essentially in relation to competitive issues where there is an interface between the competitive market and the regulated market, and where AGL thinks that we could probably either protect competition where it is occurring or introduce competition.

So the first one is in relation to the application of the Victorian transmission planning model nationally. I forwarded a couple of slides which I think you referred to, so what I was just going to point out is that there are two paradigms when transmission planning is carried out. One is planning for reliability, which I think is essentially what the commission was addressing in their report. The second one is planning for generator access. The planning for generator access is driven by request from the competitive market participants when they want to connect to the network. So transmission may need to be expanded as a result of that. They were the points that are made on the first slide. On the second slide - - -

**MR WEICKHARDT:** Do you want to pause and talk about each of these issues as you go through them or you'd prefer to - - -

**MR OAKLEY (AGL):** Really the point that I wanted to make there is there is two planning regimes.

**MR WEICKHARDT:** Yes, sure.

**MR OAKLEY (AGL):** One for reliability and one for access. What your focus, I understand, in your report is that you're looking at the way reliability investment occurs. So reliability investment is for customers driven by reliability standards. So in addition to that, generators negotiate with the TNSP and contract to have the

network expanded to cover new generation. There are two separate processes, so I was just covering that off on the first slide.

**MR WEICKHARDT:** Can we talk then a bit about that issue?

**MR OAKLEY (AGL):** Yes, sure.

**MR WEICKHARDT:** I think you're right that our focus in the draft report of our transmission planning was largely around planning for reliability for consumers. But you did mention to me when we talked informally a couple of months ago that you felt in Victoria there was a fairly messy situation where AEMO tend to get between the party concerned in terms of new connections and that really AEMO should get out of the way and that the generators or prospective generators, who are big enough and ugly enough to deal directly with the transmission company and sort something out, should just get out of the way.

Now, I put that point of view to a meeting where we were talking about transmission planning. As I recall it the AEMO said, "We used to have that point of view ourselves and we put that point of view in a formal paper and we got a flood of people saying, 'No, no, the transmission companies screw us,' and said it was terrible and the regulator has got to get involved and it's not as simple as you think." So I'm left confused.

**MR OAKLEY (AGL):** There is that difficulty in negotiating with a monopoly provider, so that is a difficult process. But I think AGL has sort of become reconciled to the fact that they are a monopoly. It is inefficient to duplicate the transmission system, so we're going to have to learn to deal with a monopoly. We think that in the transmission framework review, the report that the AEMC has just put out, they are proposing to take some measures to try and assist in dealing with the monopoly. That is really to do with information asymmetry or forcing the TNSP to provide more information to the connection applicant. That means the connection applicant can go away and get a contractor who does work for the TNSP to provide a price for the work that needs to be done so that generator can connect to the network.

So that is an issue which we think will be addressed through the transmission framework process. It is an issue dealing with monopoly, but we see it is something that the participants are just going to have to learn to live with. AGL has an approach which they think is reasonably effective in that regard in that if you have the information that you need or sufficient information to understand the network and the work that the TNSP would do, you can take that to one of the private contractors who does construction work for the TNSP. You work out a scope of work and the contractor will provide you with a price and a program for doing that work which you can then take to the TNSP and say, "Here is what I want to do. Here

is the scope of work. Here is the cost, here is the program. Would you please place an order and proceed." They probably won't do that, but at least you have there a competitive offer to compare with whatever they come up with.

**MR WEICKHARDT:** But is that their approved contractor that gives you this so-called competitive offer?

**MR OAKLEY (AGL):** It can be their approved contractor or in one case it was a contractor from another region who they subsequently approved.

**MR WEICKHARDT:** One of the issues as I seem to recall it - Wendy might remind me if I got this wrong, but there was some debate around the room when this issue was being debated as to whether or not a new generator that was looking for a connection, who wanted to build a line themselves, used their contractor, had to have a transmission licence in the territory or not.

**MR OAKLEY (AGL):** Yes. You can be licensed as a TNSP and then you can build your own transmission - - -

**MR WEICKHARDT:** Are AGL licensed?

**MR OAKLEY (AGL):** No.

**DR CRAIK:** Is any generator licensed to do it that you're aware of?

**MR OAKLEY (AGL):** Yes. With a generator licence you can build transmission assets, but you would build the transmission assets from the connection point to your generator. So generally when a generator connects, whoever he contracts with to build the power station has generally got a transmission licence, so that person can give AGL for example a price for the power station and the transmission assets to the connection point on the transmission system. If any expansion is needed to the shared network, then the TNSP will do that. He will design and build that, but he will get a private contractor to do the work. They don't all have the workforce there standing by to do this work.

**DR CRAIK:** But is it common for a non-TNSP - like the incumbent TNSP, is it common for someone who's an entity who's not that or not contracted to them to actually build the connection between the shared network and the new generator?

**MR OAKLEY (AGL):** Yes.

**DR CRAIK:** Is that common that another entity will do it totally?

**MR OAKLEY (AGL):** It's quite common and there's a number of contractors who do that.

**MR WEICKHARDT:** They all have transmission licences that - - -

**MR OAKLEY (AGL):** I think they're the same contractors that the TNSP has used to build their shared network but they're working for a generator, who under the generation licence can also build transmission so I have to check on that, but I think that because the generator has a generation licence, he can contract with one of these contractors to build those assets. It's just like building an extension at the power station.

**MR WEICKHARDT:** Issues that were raised were, if you don't have a transmission licence you don't have the ability to compulsorily acquire land over which you're sort of building and things of that sort.

**MR OAKLEY (AGL):** The AEMC provided a table in their transmission framework review, the last report. I think in all states bar one the generator can acquire land. There are difficulties with the land acquisition. They're not consistent across all states. That can be a problem but generally the generator can acquire land and build transmission on it.

**DR CRAIK:** But could a generator then bring in another contracting company other than the ones that the TNSP uses to build the transmission connection?

**MR OAKLEY (AGL):** Generally, the generator signs a contract with the TNSP that he wants to connect to and that TNSP calls in a contractor, who expands the shared network. So that's done under contract. The bit where the difficulty occurs is establishing the scope of work, agreeing as to what has to be done because that's where the TNSP holds the cards because it's his network, he says what standard you have to build to and what the scope of work has got to be. So I think whichever way you do it, because he owns that asset, you're going to have to deal with him to do that. But if you can get the information that he has, that he's giving to whoever he's going to contract with to do the work, you can get a competitive price for it. The negotiation about the scope of work still has to go on between the connection applicant and the transmission planning function. That's the difficult part but - - -

**MR WEICKHARDT:** The transmission company effectively sets the sort of engineering specifications for what lies between the generator and the generator's, you know, sort of fence.

**MR OAKLEY (AGL):** No. What lies between the connection point and the TNSP's asset, so the shared network, so you might have to put in a switch yard and

switch gear and isolators and all those sorts of things, so he specifies what the standards are.

**MR WEICKHARDT:** But from that connection point back towards the generator - - -

**MR OAKLEY (AGL):** That's generally done by the connection applicant via a contractor, who probably works for the TNSP anyway.

**MR WEICKHARDT:** But does it have to meet the TNSP's specification?

**MR OAKLEY (AGL):** The TNSP doesn't really have any say over what happens upstream in this case of the connection point.

**MR WEICKHARDT:** So it just has to meet Australian Standards or - - -

**MR OAKLEY (AGL):** Yes, Australian Standards, and the generator itself would have to satisfy itself that - it's just like a bit of the power station, that it's going to work and it's going to transfer the energy and it's going to be reliable. So, yes, it would meet Australian Standards and it has to meet the technical requirements specified in the rules before connecting to the network. So there is that technical standard.

**MR WEICKHARDT:** So if I could hypothetically project you to Roger Oakley Pty Ltd, as opposed to AGL, and you rock up and say, "I've got this great idea. I want to build a new generator here," do you envisage that you would have significant difficulty not having the sort of experience, knowledge and resource base that AGL have got as a new aspirant generator.

**MR OAKLEY (AGL):** It would probably be more difficult for someone who's new and a smaller organisation. They wouldn't have, I suppose, the financial clout of - just the presence, I suppose, to deal with the TNSP. A lot of the problems in the past I think have been cultural issues in TNSPs because of the bulk of their work is in developing the networks for reliability standards and that is a much slower process because you could look ahead five years and say, "In five years I'm going to have to go and expand the network in a certain area or that transmission line." So there's time to plan all that and organise it and go ahead and do it. That sort of culture has sort of appeared in the connection area as well, but I think it's a learning curve.

**MR WEICKHARDT:** So that causes delays.

**MR OAKLEY (AGL):** That causes delays, that sort of thing.

**MR WEICKHARDT:** "We'll get around to it in about five years' time," sort of thing.

**MR OAKLEY (AGL):** Yes. You sometimes treated it as a bit of a nuisance. You've got all this important movement to do over here to keep the customers happy and, "When we get around to it we'll sort you out." It varies from TNSP to TNSP. Some are very good and some are woeful.

**DR CRAIK:** Does it depend on whether they're private or public?

**MR OAKLEY (AGL):** Yes, but there's not many privately-owned ones. The one in South Australia is part privately owned, and Electronet, they're probably the best, so they seem to be more responsive.

**MR WEICKHARDT:** So are you comfortable with the AEMC sort of outcome now and the suggested sort of assistance. As I understand it, I think from memory they were saying if the transmission company and the generator get to loggerheads they can go to the AER to sort of sort it out. Is that right?

**MR OAKLEY (AGL):** It is, yes. There is a dispute resolution process but no-one has ever taken it to the dispute resolution process.

**MR WEICKHARDT:** That's the best dispute resolution process there is.

**MR OAKLEY (AGL):** Yes. There's a strong incentive on the connection applicant to avoid that because it's only going to delay the connection process and AGL takes the view that delay is access denied and so there's an incentive to work with the TNSP to get the work sorted out. I think if the information asymmetry is addressed, a lot of the TNSPs will cooperate and you can work in parallel, so I think in the example that I gave before, AGL went to the TNSP and said, "Look, here is the cost of the scope of work in the program. Would you please place an order," and after a short period of negotiation the TNSP found that the offer was acceptable and went ahead with the work. So there are ways around it but I think because it's relatively new it's taken both parties a while to get used to it.

On the second slide here I've just compared the Victorian transmission planning arrangements to those in other states. The Productivity Commissioner has said that they think the Victorian model should be applied nationally and what I'm saying here is, from the point of view of planning reliability standards, that's a great idea. We don't disagree with that. The problem comes when you want to make a connection in Victoria in that you've got two monopolies to deal with. So Murphy's law says that the square of the number of the monopolies involved has an impact on the price.



**MR WEICKHARDT:** It goes up by the square or - - -

**MR OAKLEY (AGL):** Yes, maybe the cube.

**MR WEICKHARDT:** Do you think your other fellow generators would also agree with your desire to basically get AEMO out of that part of the - - -

**MR OAKLEY (AGL):** Yes. I can't speak now - there's two industry bodies representing generators, the National Generators Forum which all the privately owned generators have withdrawn from because essentially we don't see eye to eye on transmission access arrangements, but that's another story. That's essentially because they're state-owned entities. The transmission companies are state-owned entities. They both have the same owner. Because of how the reliability standards are set in New South Wales and Queensland, it means that tends to be - they would deny this and I suppose this is an oversimplification - easier to build transmission assets in those states compared to the arrangements in Victoria. I think that's why you're recommending that the Victorian model should be applied nationally to separate the planner from the asset owner, and the planner can then represent the customer and they have probabilistic reliability standards.

I think it's the way it's set up in Victoria, where AEMO is, if you like, inserted between the connection applicant and the asset owner, and so you have this tripartite negotiation which just delays things because you've got to deal with two monopolies and wait while they communicate with one another and the process is a lot slower. It isn't really necessary. I think what the Productivity Commission has said in your recommendation is you've said that there's no point in the planner - you haven't recommended the planner call for tenders, you've got the asset owner calling for tenders, so what we're saying is we think it would be a good idea if the planner was off to one side, he had some sort of overview, but as far as connections go, it would be best if the connection applicant could negotiate directly with the asset owner.

**MR WEICKHARDT:** Okay. I understand that. Coming back to your point about the generator forum, you're saying that there's a sort of split between the state-owned generators and the privately ones, about access?

**MR OAKLEY (AGL):** Yes, the optional firm access. The privately owned generators have been pressing for having a defined level of access for generators for quite a while, maybe 10 years or more, and the bulk of the privately owned generators are in Victoria and the bulk of them are the major investors in the market, so we're looking at it from an investment point of view. One of the problems under the current transmission access arrangement is that generator access is deemed to be non-firm; it's described as an open access arrangement and generators have non-firm access. Well, neither of those terms are in the rules. That's not what the rules say.

So to begin with, there's a dispute about what the rules say. We say the rules on one interpretation provide generators with firm access and the rules obliged TNSPs to, if they've contracted to connect the generator, keep that access available for whatever the life of the connection agreement is at least, where the commonly held view, sort of folklore, is that anyone can come and connect to the network at any time and constrain somebody else off. Now, that's just not an economically efficient approach.

**MR WEICKHARDT:** No, I can imagine it wouldn't make a generator exactly happy to be immediately constrained off.

**MR OAKLEY (AGL):** No, that's right. If you're a private owner and you've got to go to the banks and fund these assets, one thing the banks ask for is a signed connection agreement showing that you have got access to the transmission system. So if you end up with non-firm access, it's just going to increase the costs and make things more difficult. So the private generators are arguing for generators to be able to contract for a defined level of access. State-owned generators don't care so much.

**MR WEICKHARDT:** Because they get it anyway.

**MR OAKLEY (AGL):** Yes. You would think that if you're a state-owned generator and you suddenly find you're constrained off because somebody has joined on there, your shareholders are going to get a bit indignant about that or upset and someone will tell the TNSP to do something.

**MR WEICKHARDT:** A cynic would say that generators actually like some congestion so that somebody else can be constrained off, but not you. Is that a fair comment?

**MR OAKLEY (AGL):** No, I think generators in general don't like congestion at all because generally you don't - well, you do know where it's going to happen but you don't always know when. But the firm access arrangement doesn't actually - it only addresses congestion that occurs if a new generator connects to the network. So it just prevents - and that's a major source of connection.

There's a second step, and that is the congestion which results from poor performance of the transmission system. The optional firm access model - the one that the AEMC is proposing - does go on to address that second form of congestion and try and apply incentives to TNSPs to perform in that area which to a certain extent starts to overlap with the AER's transmission performance incentive scheme.

**MR WEICKHARDT:** So you're a supporter of OFA?

**MR OAKLEY (AGL):** Yes.

**MR WEICKHARDT:** We had Hydro Tasmania come along to the hearings in Melbourne and they were not supporters of OFA. They said that they thought that it was - they didn't use these words - a steam hammer to crack an egg; that the costs of constraints weren't all that high and that this was incredibly complicated and was going to cost a lot of people a lot of money.

**DR CRAIK:** And they would only do it with a very small percentage of constraints - - -

**MR WEICKHARDT:** Yes, they only dealt with what I think they call thermal constraints and there were other constraints that were at least 50 per cent of the sort of constraints that a generator faced. Can you comment on any of that?

**MR OAKLEY (AGL):** That seems to be the general view that the state-owned generators are taking. Both sides are arguing from a commercial position. We're arguing to make sure we can make investments of the least possible cost; they're arguing because they see that perhaps - I think they're being short-sighted, but they see the planning arrangements of the ownership arrangements in the states they're in will protect them from congestion which is caused by new connections. There may be wealth transfers that occur. If the optional firm access model is implemented, there may be wealth transfers between generators that are influencing the way people behave too.

**MR WEICKHARDT:** Okay.

**MR OAKLEY (AGL):** Really the main point I wanted to say was if we have the Victorian model, can we please not have AEMO - - -

**MR WEICKHARDT:** AEMO, okay.

**DR CRAIK:** In the connections for - - -

**MR WEICKHARDT:** I think we got that message.

**DR CRAIK:** Do you agree, while we're on the first part of the transmission planning, and that's really about reliability standards - well, not do you agree with, what's your view about AEMO's role in contestability in the Victorian system for transmission planning?

**MR OAKLEY (AGL):** The Victorian system, I don't think it matters who calls for the competitive tenders, providing that the connection applicant is involved in the

process or has at least had an input into the scope of work. I think probably it's best for the asset owner to call for those tenders because they have the technical information about the plant, the transmission system, so it's better for them to deal directly with the contractor and streamline the interface there. I mean, AEMO's role as the transmission planner, when you come to connect all AEMO needs to know is the nature of the generator that's connecting so they can plug that into their transmission planning models and make sure that it's going to work and there is going to be access.

**DR CRAIK:** Yes, augmentation of the network for a separable project, and AEMO calls for tenders and they have on about 14 projects and only about two have been awarded to anyone other than SP AusNet. SP AusNet says - well, it doesn't make a lot of sense because they won most of the tenders, but I guess one doesn't know what the costs would have been if it hadn't been a competitive process.

**MR OAKLEY (AGL):** Yes, I suppose that depends on - SP AusNet maybe has a workforce, I'm not sure on that.

**MR WEICKHARDT:** SP AusNet would say almost all those projects have been done by contractors anyway.

**MR OAKLEY (AGL):** Yes, okay.

**MR WEICKHARDT:** I think they've got a pretty low internal working.

**MR OAKLEY (AGL):** Yes, that's right. So on the reliability planning side, so long as AEMO is involved in scoping the work and establishing just what work SP AusNet is going to tender for there's no reason why SP AusNet can't call for tenders in the same way as the other TNSPs call for tenders.

**DR CRAIK:** But I guess it misses out on the option of a third party looking at what the costs that other people put in are and seeing if they're competitive.

**MR OAKLEY (AGL):** AEMO would still be involved in the establishment of the work scope. They would still need to be involved in that process. Once you've decided what the work is going to be it's just a matter of issuing that for tenders and choosing the best offer.

**MR WEICKHARDT:** Can we talk a little bit about your company's name was taken in vain by a previous participant talking about disorderly bidding and generator market power.

**MR OAKLEY (AGL):** Mr Headberry.

**MR WEICKHARDT:** Yes, you guessed that. I guess the issue of disorderly bidding and congestion and price separation between Victoria and South Australia is one that seems to come up pretty regularly. I'm sure you have a different view from your end of the telescope, but would you like to give us the AGL view of the world from that point of view?

**MR OAKLEY (AGL):** I guess he's talking about generator market power, and we have put some comments in our submission on that. Generators may have market power but it's generally transient market power. Market power can arise because of the structure of the market - you know, if one generator is too large or has too much generation capacity in one region - but that's the sort of thing that can be addressed by the ACCC. I mean, someone may be verging on being a monopoly generator; that sort of thing can be addressed by the ACCC. There may be barriers to entry which cause market power - and I mean the AEMC has looked at that and they haven't seen any barriers to entry.

There can be constraints in the network which can give rise to transient market power. That's not so much a generator exercising market power, it's just that if you do have constraints in the network - maybe there's insufficient transmission being built - it's inefficient but it's transient in nature. The other aspect is that the market is designed so that on occasions generators will have market power because that's what encourages new entrants. I was involved in writing the responses to the AEMC in relation to their market power exercise, and generally the high prices I think, in 2007 and 2008, were related more to the drought. That was the time there was quite a severe drought in Queensland and it just meant that higher-cost generators needed to be scheduled and I guess South Australia - it is only connected on one side, if you like - the cost of electricity in South Australia tends to be higher than in other regions anyway because it's not near the low-cost brown coal generators or the black coal generators.

**MR WEICKHARDT:** Except if the wind is blowing.

**MR OAKLEY (AGL):** Except if the wind is blowing now, yes. Those events can also depend on who's contracting in the market and who isn't. At the time I think, as I understand it, some of the major energy users in South Australia weren't contracted. So if they're not contracted it means the generator's contract level is lower, so that in the event that demand goes high generators then have the opportunity to bid in at higher prices.

**MR WEICKHARDT:** Do you see that optional firm access can or will work across the interconnectors?

**MR OAKLEY (AGL):** Yes, we think that optional firm access will assist in firming up the access arrangements on the interconnectors, enable people to contract more reliably across interconnectors inter-regional.

**MR WEICKHARDT:** So as a gentailer you will be able to effectively take the inter-regional risk out of the issue if you're not in full balance in one region or another?

**MR OAKLEY (AGL):** You won't be able to take the inter-regional risk out entirely. I mean, there's still the cost there. You'll have to buy the inter-regional hedge. It will be firmer. One of the risks with the current arrangement is that you've got a price risk and a volume risk because the volume of the interconnector can change depending on circumstances on either side of it; that makes it riskier. But I understand with the optional firm access model that volume risk will be ameliorated and so you'll have a much firmer hedge you'll be able to use to hedge across the regions.

**DR CRAIK:** Can I go back to a difference between state and private entities, and you've talked a bit about that. You actually share ActewAGL with a government entity.

**MR WEICKHARDT:** You're a hybrid.

**MR OAKLEY (AGL):** Yes.

**DR CRAIK:** So I'm just curious. I mean, we have recommended privatisation of all networks. We'd be interested in, with part private ownership with ActewAGL, how does that affect the cost minimisation and how they operate and things like that?

**MR OAKLEY (AGL):** I don't know much about that, I'm afraid. I work in the wholesale market area, and the retail area where ActewAGL work is a whole different ball game. So I can't help on that one.

**DR CRAIK:** So you're not going to play ball on that one.

**MR WEICKHARDT:** As a retailer do you have any comments - I'm talking about AGL as a retailer now. Do you have any comments about the rollout of smart meters and demand management in general and whether or not that should be distributor led or retailer led or - - -

**MR OAKLEY (AGL):** We're firmly of the view that they should be retail led. So those were the main issues I wanted to identify here. We think that the provision of metering services should be made contestable; it shouldn't reside in the monopoly

distribution business. Metering is one of the important interfaces between a retailer and customers, and it's one of the means of establishing a relationship with your customers. So we think that the meter rollout should be led by retailers, based on product offers to customers. So AGL would like to make offers with time-of-use pricing and have the meter rollout tied to that.

**DR CRAIK:** So how do you get economies of scale if it's a retailer-led rollout? And are you talking about, do you want a mandated rollout, or kind of an opt-in rollout, or what are your preferences?

**MR OAKLEY (AGL):** Well, I guess we'd like to see - well, I think we would like to have mandated time-of-use pricing for the distribution businesses, so we'd like to have - I guess what we'd like to do is have a market-led rollout of meters, that would be backed up by time-of-use prices from distributors.

**MR WEICKHARDT:** Can you just define to me what, to you, market-led rollout means? Does that mean that Phil Weickhardt can say, "Oh, I've just registered myself as an electrician. I can rollout meters"?

**MR OAKLEY (AGL):** No, what that means is that AGL would go around, as it goes about its business trying to attract customers from other retailers - I mean just recently we had a big campaign in New South Wales where we targeted New South Wales as an area where we wanted to expand our customer base. So as I understand it, we would do the same thing in different areas - or it might be nationally, but we would go to customers and say, "Hey, look, we've got this great new product for you," and it may be a targeted range of a type of customer and attached to that would be a time-of-use pricing with the ability to offer those in-home displays so people can manage their electricity offers better, and at the same time include an interval meter. So that if you would sign up for that product you would get an interval meter installed at your house.

**MR WEICKHARDT:** Which you the retailer pay for?

**MR OAKLEY (AGL):** Well, that's right, that could be paid for by the retailer, that would be part of the deal.

**MR WEICKHARDT:** And does that mean that the customer has got to commit to stay with you for a period of time? Or you would then sting them an exit fee, saying, "Oh, you only paid for half the meter. Now - - -"

**MR OAKLEY (AGL):** We're not in favour of exit fees.

**DR CRAIK:** So you build it into the price.

**MR OAKLEY (AGL):** Yes. It would be built into the price, but hopefully you would make the offer so it was attractive for the customer to change from the tariff that he's on to this new tariff, because he would be saving on his energy bills.

**DR CRAIK:** But if you don't get enough customers in, then the prices are going to be quite high. For any effective demand management you are going to need economies of scale in terms of the numbers and to make it worthwhile for distributors to - - -

**MR OAKLEY (AGL):** Well, I suppose what we're saying is that in some way you have got to get the customers to accept time-of-use pricing. And we're saying rather than have it regulated or forced on them, it would be better to do it through a market based process.

**DR CRAIK:** But why should they opt-in if they're going to end up paying more for using power? You know, if they're a peaky customer, why would they choose to opt-in and say, "I want to pay more."

**MR OAKLEY (AGL):** They probably wouldn't. So you're going to have to set out your offer so that they do change, under the market-led arrangement.

**DR CRAIK:** Yes.

**MR WEICKHARDT:** But won't the most peaky guys, if they're smart, figure out, "Time-of-use pricing isn't a good deal for me"?

**MR OAKLEY (AGL):** Well, that's true.

**DR CRAIK:** That's the point, so how does an opt-in system work?

**MR OAKLEY (AGL):** Well, perhaps it does have to have a time-limit on it, and eventually everyone will have to end up on a time-of-use tariff. But maybe you set the timescale and customers have to choose a retailer within that time period, so all retailers would be doing the same thing.

**MR WEICKHARDT:** I mean the only way we could see it working was that for the flat tariff to get increasingly more expensive, until the peakiest of the customers decided that they'd better change.

**DR CRAIK:** Change their behaviour, yes.

**MR OAKLEY (AGL):** Well, yes, I'm not exactly an expert in that area, but



possibly it's right. But you would have to be careful about customers suffering hardship, because generally I think they're probably on the flat tariff.

**MR WEICKHARDT:** Sure. No, we're not thinking of the vulnerable customer. We're thinking of the customer with sort of eight airconditioners hanging off their wall.

**DR CRAIK:** Four swimming pools, you know, that sort of thing.

**MR OAKLEY (AGL):** Yes.

**DR CRAIK:** I was just going to say, essentially then what you appear to be saying, correct me if I'm wrong, is that it needs to be mandated within a period of time - - -

**MR OAKLEY (AGL):** A period of time, yes.

**DR CRAIK:** - - - to occur within a defined area so that you actually get the benefits?

**MR OAKLEY (AGL):** Well, I'm not so sure about the defined area.

**DR CRAIK:** Well, I guess what we were concerned about is there will probably be some areas where there's no real benefits to the customer for having smart meters.

**MR WEICKHARDT:** Well, no benefit of deferring network investment anyway. This comes back to the whole issue of, what other benefits are there of a smart meter. There are, we're told, other benefits to the distributor and to the retailer, of greater information, and to the customer. But the whole issue we were looking at, about critical peak pricing, was about deferring augmentation of the network in constrained areas. When the retailer with this market-led approach follows, you would just get random dots on the map.

**MR OAKLEY (AGL):** Yes, you do. But over time, if there is a time-limit where people have got to choose a retailer within a certain time, eventually you will get all the customers signed up.

**MR WEICKHARDT:** So market-led to you means retailer-led.

**MR OAKLEY (AGL):** Retailer-led, yes. Well, I suppose we're saying we're operating in the competitive market. We should be leading this because we're the ones that have the relationship with the customer, not the distribution business. That allows us to have more control over the functionality in the meter and what it does, rather than having to deal through an intermediary who has no real interest in, well,

the information that you can get out of the meter and is not going to - apart from helping him with demand management, but he'll be able to get that information anyway. AGL think that if we've got better control over the meters and the data, we can offer customers a better service and minimise costs.

I mean there are a lot of costs and delays in the interface between retailers and distribution businesses, in connecting customers, and disconnecting them, and customers going missing. So there is a lot of inefficiency in that process because the distributor is involved and has - it's peripheral to his business; it's just something that he has to do because the rules say he has to do it. AGL thinks it would be better if retailers had control of that, because you could then remotely turn customers on and remotely turn them off.

**MR WEICKHARDT:** You operate in New Zealand too, don't you?

**MR OAKLEY (AGL):** I don't think we do any more, no.

**MR WEICKHARDT:** No, okay. We were being told this morning that in New Zealand they have had a retailer-led, market-led system and it has resulted in meters of different specifications being installed and the bizarre situation of distributors wanting to come along and clamp their meter on a wall which the retailer has already got a meter on because the retailer meter doesn't provide enough information to the distributor.

**DR CRAIK:** It's not sufficiently functional.

**MR OAKLEY (AGL):** I think there would have to be some standards set, so that you had certain types of meter, the appropriate types of meter; you couldn't connect any old meter. So there would have to be a minimum standard.

**MR WEICKHARDT:** Because there would be outrageous waste if somebody then moved to another retailer and they said, "No, we've got meter B," or C or D.

**MR OAKLEY (AGL):** Yes, that's true. That's one of the reasons why retailers would rather be involved in that process. Because they don't want the meter standard or functionality specified by the distributor. They would rather have input into that.

**MR WEICKHARDT:** It would be a good idea if everyone was involved, wouldn't it?

**MR OAKLEY (AGL):** It probably would, yes.

**DR CRAIK:** We understand there are already several standards. The AEMC is

proposing one which is different from the national smart meter - I forget what the P stands for, but there is another standard proposed. Victoria has even more sophisticated specifications than any of those too, we understand.

**MR OAKLEY (AGL):** Right.

**DR CRAIK:** So there does seem to need to be some - - -

**MR OAKLEY (AGL):** Yes, there needs to be some minimum standard for this.

**DR CRAIK:** Yes, which meets both the consumer, the retailer and the distributor requirements. The other issue that came up this morning was the regulatory framework and the importance of having the regulatory framework in place before you start that deals with all the - - -

**MR OAKLEY (AGL):** Yes, all the issues.

**DR CRAIK:** - - - elements of the supply chain - - -

**MR OAKLEY (AGL):** Yes, that's true.

**DR CRAIK:** - - - along the way before you start.

**MR OAKLEY (AGL):** Yes.

**DR CRAIK:** Have you guys had much experience rolling out the smart meters?

**MR OAKLEY (AGL):** No, not that I'm aware of. I think probably we think that the rolling out of smart meters should be contestable. We think there should be people who are experts in meters, managing the data, collecting it and distributing it. So we may not do it ourselves. We would maybe contract with someone where we had some sort of sensible contractual arrangement to ensure that they perform. If they don't perform, we can go somewhere else.

**MR WEICKHARDT:** Because when you say they should have experience of it, retailers sure as hell don't have any experience of installing meters at all at the moment, do they?

**MR OAKLEY (AGL):** No, they don't.

**DR CRAIK:** What about direct load control?

**MR OAKLEY (AGL):** But it could be done by the distributors, but they'd have to

be ring-fenced because we think there are sort of cross-subsidies that can go on between the metering part and the distribution part. I mean customers are going to be a little confused, because I know I'm going to get a smart meter soon and I'm told I'll be able to log onto the Internet and see what electricity I use. If I'm with AGL, well, AGL is going to give me the same thing.

**MR WEICKHARDT:** You should be very happy. I've got a smart meter that doesn't do anything at the moment.

**MR OAKLEY (AGL):** Yes.

**MR WEICKHARDT:** We're out of time.

**MR OAKLEY (AGL):** Okay.

**MR WEICKHARDT:** Thank you very much indeed for coming along.

**MR OAKLEY (AGL):** That's all right.

**MR WEICKHARDT:** Appreciate it.

**DR CRAIK:** That's very interesting. Thanks, Roger.

**MR WEICKHARDT:** Can we call our final participant, the Public Interest Advocacy Centre, please. Thank you for coming along and thank you for your submissions. Both of them are quite weighty documents.

**MS HODGE (PIAC):** Yes.

**MR WEICKHARDT:** If you could just for the record please give your name and the capacity in which you're appearing today.

**MS HODGE (PIAC):** Yes. My name is Carolyn Hodge and I'm the senior policy officer with the Energy and Water Consumers Advocacy Program at the Public Interest Advocacy Centre.

**MR WEICKHARDT:** We've received your submission. Assume we've read that, but if you would like to briefly outline the issues you want to particularly talk about his afternoon - - -

**MS HODGE (PIAC):** Yes.

**MR WEICKHARDT:** We have to finish at 5.00 sharp.

**MS HODGE (PIAC):** All right. Well, I've got three issues that I would like to speak to today. So they are the current reform or review processes that are having a bearing on the electricity market; the resourcing of the Australian Energy Regulator; and the role of consumers in electricity network regulation. I have got a short statement that I can read for each and I would be happy to take questions in between or, if you would like, we can have questions at the end.

**MR WEICKHARDT:** Why don't you go through the whole lot and then we'll come back to the questions at the end.

**MS HODGE (PIAC):** All right. So the reform processes that are either current or have been recently completed include the production of the energy white paper, the network regulation rule changes, the Power of Choice review of demand-side participation, the Senate select committee inquiry into electricity prices and the review of the Limited Merits Review regime, the national work-streams of the review of distribution reliability outcomes and standards and the current review being undertaken by the Productivity Commission.

While reviews can happen in a siloed manner, regulations, law and policy interrelate to produce a range of outcomes for consumer and industry. Given there are many concurrent processes, PIAC has concerns that if implemented without coordination

the recommendations of recent reviews may produce unintended negative consequences. PIAC therefore believes there is a need for an overarching strategic framework to be delivered to guide the implementation of the various reviews and processes that are currently under foot or recently completed. This framework should be guided by the long-term interests of consumers.

So I suppose I was thinking as I was writing this section that if we don't have more coordination in these processes we may be making recommendations for new things, not just for unintended consequences that could be negative but also we're not making the most of opportunities. A lot of processes recently have encouraged more consumer input but there hasn't been a lot discussion about how that could be resourced. Given that most consumer energy consumer advocates are severely under under-resourced and really punching above their weight, what we think is there needs to be some overarching framework to look at all of these things to map out the risks and the opportunities for a better system.

I'll just move on to the resourcing of the Australian energy regulator and you may have some questions. It's just a short statement. In New South Wales network prices make up over 50 per cent of the price paid by consumers for electricity. As such PIAC acknowledges the importance of a strong regulatory framework and a regulator that is resourced to undertake its role effectively. In PIAC's view the AER must have the ability to undertake a thorough analysis of network price proposals before making any determination. Similarly it is important that where the AER is expected to exercise its discretion, and it has increased discretion under new rule changes, it has the capacity to test any area for potential challenge prior to exercising that discretion.

PIAC supports the commission's recommendation for an independent review of the AER's resourcing in capacity; however, PIAC has some concerns that taking immediate measures suggested in the issues paper such as producing a separate annual report or increased stakeholder interactions, without additional resources to do so, may divert resources away from other areas of work that are important to the AER's role in the short-term. This diversion may not be in consumers' interests. It is PIAC's view that the findings of the independent review should guide any changes to the AER's role, including its place within the Australian Competition and Consumer Commission.

Finally I'd just like to speak to the role of consumers in electricity network regulation. PIAC welcomes the commission's assessment that there is a need for a publicly funded consumer body to participate in policy, regulatory, rule-making and merits-review processes. As you may be aware, PIAC is one of the five organisations leading a project to pursue the goal of the formation of a national body under the working title Energy Consumers Australia. The project's business plan

positions ECA to represent energy consumers in national and high-level jurisdiction processes such as rule changes and network price determinations. It is PIAC's view that ECA could add enormous value to the current landscape of energy consumer advocacy; however, PIAC does not agree with the commission that a national consumer body should represent all energy users including major industry users.

Unlike major commercial and industrial users, residential and small business consumers have limited resources to meaningfully participate in high-level processes such as network price determinations. Proposals to form a national energy consumer body are seeking to redress this gap and give some primacy to the interests of residential and small business consumers in high-level processes. Further, the interests of residential consumers do not always align with those of larger energy users and the capacity of large users to invest in energy-saving systems, back-up generation and the ability to pass energy costs on to their customers also signifies that these users have vastly different experiences of energy price rises. This is not to say that the interests of large and smaller users will never converge, however any shared interest should be worked on through collaboration, rather than through the development of a national body that counts a single aged pensioner and BHP as its constituents.

A body of this nature is likely to face such difficulties arriving at an agreed position, that its effectiveness and efficiency will be compromised. The ECA business plan has been developed with the aim of adding value to the existing landscape of energy consumer advocacy, namely by addressing the gap in systemic advocacy due to a lack of resources and access to high level regulatory, legal and economic skills. Rather than seeking to replace jurisdictional advocacy, ECA recognises the value of this advocacy, as an invaluable foundation for high-level advocacy and a conduit to consumers, their networks and intelligence on state-based energy policy and programs.

PIAC does not support any rationalisation of energy consumer advocacy at a time when much effort is focused on increasing its effectiveness and efficiency. Instead, PIAC supports the ECA proposal that an independent review of National Consumer Advocacy arrangements be undertaken in the third year of ECA's operation. This model is proposed to allow at least two full years of collaborative work between the new national centre and existing and state territory bodies.

A two-year period of operation will allow for proper consideration of how future arrangements might best be structured. Such a review would look at the coexistence of ECA and the consumer advocacy panel and plot an appropriate course for the future. PIAC believes that any changes to the role of the cap without the benefit of this review would be premature and may risk eroding consumer advocacy at both state and national levels. Thank you.

**DR CRAIK:** Thanks very much. Thanks for those comments and, again, as Phil says, thanks for the submissions. Starting with the consumer, I note that the ECA grouping generally represents low socioeconomic and environmental, I suppose, or technological organisations. As far as I could tell, there was no small business rep on it and no kind of general consumer, so I guess the proposal at the ECA that PIAC supports, if that comes into existence, then still the general consumer doesn't actually have a group and small business doesn't actually have a group representing them in electricity, whereas there's yet another group in the general area that you propose.

So I guess that's why we suggested having an expertise based body and you did too, I notice, with the board, but having an advisory group that represents a whole range of interests and trying to reconcile those within the expertise-based board over a period of time. So I guess I would be interested in the degree to which you see the ECA as representing consumers as a whole, even though not the major businesses, because there's still a gap, it seems, in consumer representation. That would be my first question for you.

**MS HODGE (PIAC):** In my work, I don't see myself as an advocate for low-income and vulnerable consumers solely. PIAC's remit is really an advocate for residential consumers, although what we try to do is take on work that gets the settings right, say the safety net measures right, so that if people during the course of their life fall into any difficulty, that given it's an essential service, they have access to electricity, gas and water. So I would say that we do play a generalist role and I think that some of the other organisations that are involved in the project more broadly do also. We have received some feedback that there's a need for more consultation with the small business groups and we've taken that on board.

I just have real difficulty understanding how a consumer body can effectively advocate for such a wide range of consumers, but I also think that what this proposal is trying to address is the recognised gap in advocacy. Where large businesses or groups of businesses can employ a consultant at very large sums of money to do very good work in their interests, I don't have difficulty with that, but I don't see that being the case for residential consumers at present.

So what we are trying to do is not duplicate aspects that are already in the market or engaging in regulatory processes, but actually build it up so the interests of a whole range of consumers are being put forward in these decisions, because consumers are paying for their service and they don't have the ability to pass on those costs, so the only thing that they can do is absorb them and, where their incomes are limited, then work out what other things they won't have.

**DR CRAIK:** I guess at the end of the day, all the issues have to be reconciled and



all the different views have to be reconciled and certainly experience in other areas would suggest if you can get everybody in a room talking together, it's remarkable how often they agree. As a public interest advocacy centre, the public interest, if you take "public" as a broad term, that would include all of society, I would have thought, from major users down to - - -

**MS HODGE (PIAC):** I think it's about the use of power, and I'm not talking about electricity and gas. We have people who have the capacity to advocate for themselves or to contribute to peak bodies that are very effective in advocating for themselves. So really for me it's about identifying where the gaps are at present and working out how those consumers can be better represented. I think that residential consumers are that group in the consumer body - - -

**DR CRAIK:** Poorly represented.

**MS HODGE (PIAC):** - - - that aren't adequately represented. Just going back to an earlier point, I think you're right that there are many issues where a lot of different consumer groups' interests converge and I don't see there being any difficulty in them working together and engaging and negotiating. I do think that if a consumer body was expected to do all of those things, I think it would be very difficult. Even setting the reliability standards in New South Wales uncovered there was a vastly different value of reliability between residential consumers, smaller commercial consumers and large industrial consumers and those figures range from about \$20,000 to \$413,000. So I would really not like - - -

**DR CRAIK:** Is that a problem though in terms of coming up with a resolution? Is that a problem with - - -

**MS HODGE (PIAC):** If you were looking at a networks proposal for building new infrastructure in certain areas and you value reliability very highly, you would perhaps support that, even if it had a fairly large impact on the price you were paying. So I think the price elasticity between different consumer groups is likely to be different.

**DR CRAIK:** But that's good, isn't it?

**MR WEICKHARDT:** But ultimately somebody has to form a judgment about that, don't they? In your model - and you're not alone in this - you appear to be saying, "We would prefer to have a direct voice to the regulator and allow the regulator to translate what trade-offs they made between the point of view PIAC or the ECA put and the major energy users put." I guess, to us, that meant that inevitably, the regulator would invite these disparate consumer bodies to put their point of view, would listen to it all and then go away, try and translate that into a

final point of view, which they would try and represent to the network companies. But you can't imagine the network companies and the regulator being prepared to sit in a room with let me say 10 different people representing the consumer, all of whom have different point of view, saying, "Listen to me. I've got a granny in Surrey Hills who has got a problem here," and a major energy user saying, "I've got a problem in my smelter over here."

So we, I guess, based on the sort of feedback we read about in the US and the UK where a overall representative body of consumers was actually invited into the final sort of negotiation with the network companies, with the regulator, three of them trying to agree on an outcome. We thought that that had some merit. The sort of model that you're suggesting seems to prefer individual voices, but I think you almost, by definition then, preclude the opportunity of getting into a final negotiated outcome with the network business. It's just unmanageable, you can't sort of see that working, I don't think.

**MS HODGE (PIAC):** I don't know that I agree that we're looking at a proposal for individual voices to be acknowledged. I would say that the ECA business plan talks about investing in some very high level skills to translate the views of a range of consumer groups, and in that that would be one - in some of those process that would be a conglomeration of that voice, but that isn't to say that they would take 20 people into that process with them. What it would do is draw from the foundation that jurisdictional advocacy creates in understanding the views of consumers generally and translate that - - -

**MR WEICKHARDT:** But that is a subset, isn't it, of all consumers, as Wendy was pointing out?

**MS HODGE (PIAC):** Well, under the ECA proposal of the consumers, the residential and small business consumers, yes.

**MR WEICKHARDT:** Well, it doesn't even represent small business, does it?

**DR CRAIK:** Doesn't represent small business at the moment, yes.

**MS HODGE (PIAC):** It needs some looking at. But how do you see the interests of people who have very low abilities to afford an essential service who are really disadvantaged by rising network prices? How do you see them being advocated for in these processes?

**DR CRAIK:** I guess our view of dealing with hardship is one where you deal with that separately from dealing with the actual pricing.

**MS HODGE (PIAC):** Everybody wants to do that.

**DR CRAIK:** But we propose that COAG ought to actually undertake a review of hardship provisions and dealing with the issues of consumers who have difficulty paying. Ken Henry also recommended a review be done of that too in utilities; find the best way for consumers, you know, vulnerable consumers, to actually meet the utility bills and look at the range across the board for the country as a whole and come up with some standard ways of doing it. So we would see that's a real critical issue that needs to be dealt with - to do it properly with these, because there's a real hodgepodge of ways those sorts of concerns are dealt with at the moment through water and electricity utilities, but don't let that influence the actual initial consideration of the pricing. But that's not to say that it wouldn't be considered such a group as we propose.

I guess the other thing that concerned us a bit about your proposal is that the actual objectives of the ECA aren't the same as the National Electricity objective. It would seem to us given the National Electricity objective is the long-term interests of consumers that your objective for the ECA doesn't actually reflect that either.

**MS HODGE (PIAC):** Well, there's a fair bit of debate about the National Electricity objective at present. There is a lack of transparency about how anybody that's governed by that objective actually enlivens that. I mean how do you reach the long-term objectives of consumers? In terms of security of supply PIAC would argue that if it's priced out of the reach of people, many people - if the prices continue to rise as they are then that isn't perhaps meeting the long-term interests of consumers.

**DR CRAIK:** I think there would be others who would agree with you.

**MS HODGE (PIAC):** It may be secure but if it's not accessible what is the value in that security? So I have to say it's not PIAC's proposal, it's a proposal that has been developed by not only the lead agencies but a working group made up of a range of advocates. I feel greatly concerned that people are expected to pay these prices but there doesn't seem to be an adequate level of representation in the decisions being made. While I take your point that we can look at structures outside the market to address this, if those initiatives aren't taken, if there's no coupling between the regulatory framework and the safety net then we have this price rising inordinately and any kind of measure to keep essential services within the reach of people not rising in a similar rate. Network prices, because they make up such a large part of the cost stack, effective advocacy is one of the ways that we can really challenge the need for these prices to rise.

**DR CRAIK:** Okay, thanks.

**MR WEICKHARDT:** I mean we're in heated agreement about the fact that consumers have not had an adequate enough voice in this whole process, but I'm assuming you don't - this is a question, not a statement. Do you have a problem with an objective that talks about the long-term interests of consumers? I mean we can have a debate about what that actually means and how you translate it, but I assume that it would be in everyone's interests that you think about consumers' interests today and tomorrow and for the next 50 years.

**MS HODGE (PIAC):** Absolutely, and in the senate inquiry we were asked whether we thought that we could remove the words "long term" and just say a system needs to work in the interests of consumers. It was our view that that wouldn't be appropriate because you could save consumers a lot of money by not building infrastructure, but that you would need to then possibly spend a lot more money in 10 years, so that small gain could realise a lot of negative outcomes down the track. So I'm not arguing that we shouldn't take the long-term view. I think though in taking the long-term view we need to be transparent about how we make those decisions, but also that we need to consider that we're talking about an essential service.

We're not talking about producing a commodity that people can choose to use or not. It has a really large impact on people's ability to be productive, to engage in work, to look for work, to educate themselves, not least of which the impacts on their health. So I think that what we're arguing for is perhaps more recognition that people need access to this service and that we need to consider that in our investment decisions as well.

**MR WEICKHARDT:** Just going back to this issue about, you know, a body that could speak for or represent consumers, in forming the ECA did the representative groups think - well, this scope of consumers ranging from small business through to, you know, sort of all other residential consumers, including vulnerable consumers, did you think, well, that group has a sufficiently range of interests that we could get a degree of consensus and understanding and agreement about sort of what's important, or was it more a driver of well, the big guys sort of can look after themselves and this other group isn't represented at all? What led to the scoping, if you like, of ECA and why did you feel that that was going to be effective whereas a body that spoke for all consumers wouldn't be?

**MS HODGE (PIAC):** I think the major driver was the sense that the consumers that we are aiming to represent through ECA have not been adequately represented in this process, in the process of network determinations, even in having the capacity to engage in other high-level processes such as a limited merits review. But I do want to make the point that it's not the view of the bodies engaged in the proposal that

ECA will be all things to all people. There will need to be a strategic direction set by negotiation and there is still a place for jurisdictional advocacy to occur. So there will need to be a process by which that will need to be negotiated but I don't think the ECA is setting out to be all things to all people because I don't think that would work. But what it is trying to do is add value to the current environment.

In terms of a network price determination, say, an organisation like PIAC, we are one of the few bodies in New South Wales who are funded to do advocacy for energy consumers and I think we are actually one of the few that has full-time employees. We have some bodies who do this work but don't engage people on a full-time basis. So when we go into the network determination process, we have to learn about the structure because we've had a complete staff turnover since the last process which was five years ago. We are learning from scratch. We're not bringing into it the learnings of the previous determination and we also don't have access to the sort of budgets that allow us to employ the consultants that can really dig into the nitty-gritty of the proposals.

So we have to make a somewhat informed view about where we think we can best use the information that we have to advocate for consumers and we think given the impact that these prices have on people day to day that there is a need for a more effective way for consumers to engage in that. Through ECA what we could do is build a repository of knowledge, we could get efficiency gains from engaging in these processes repeatedly and knowing that, "Oh, in the Victorian process we did this and it worked really well and this is something that we want to do again. We engaged this consultant, they provided very good value for money and we think that we could use them for this." But we don't have the capacity to employ people to do that. ECA may not either, it depends what budget is approved.

**DR CRAIK:** I think the drivers you're articulating are exactly the drivers that led us to a slightly different conclusion.

**MR WEICKHARDT:** We just enlarged the scope.

**DR CRAIK:** That's right.

**MR WEICKHARDT:** I'm trying to understand whether you feel that you'd just be totally incompatible if a large business was sitting within ECA or you just feel a sense of, "Well, they can pay it themselves, they don't need any help."

**DR CRAIK:** They're big enough and ugly enough to look after themselves.

**MS HODGE (PIAC):** The key difference for me is the fact that they do have the resources to engage in these processes and to make sure that their interests are well

known. So that's a difference between a residential consumer and, say, a BHP or an other company of that nature. But I also think residential consumers haven't had their voices heard in these processes. They're equally paying for these services and for them it's a high percentage of their income and rising.

**MR WEICKHARDT:** For some it is. The person that owns a 500-square metre house in Vaucluse is probably equally incompatible in your analogy to BHP sitting at the table with a small business.

**MS HODGE (PIAC):** I'm not sure about that. I think there's a role that ECA could play in helping to educate consumers and I think that that role would go across the gamut. I mean, I don't think anyone in Vaucluse wants to pay any more than a vulnerable consumer that lives anywhere.

**DR CRAIK:** I don't think BHP does either, I don't think.

**MS HODGE (PIAC):** No, but as I said, they can pass that on. But they also have the capacity to - - -

**MR WEICKHARDT:** Sorry, you say BHP can pass it on. BHP's prices are determined by world prices, they're not determined by how much they pay for electricity.

**MS HODGE (PIAC):** But they use that electricity to produce a product which they sell in the market. So if they weren't making any profit - if they couldn't factor the cost of that electricity into the cost of that product, then that product wouldn't be viable and they wouldn't be producing it.

**MR WEICKHARDT:** It affects their profit margin, that's for sure.

**MS HODGE (PIAC):** I'm very, very sorry to hear if their profit margin could be affected but if you - - -

**DR CRAIK:** Doesn't everybody have the same interest to pay the minimum amount they have to for electricity.

**MS HODGE (PIAC):** I guess I could argue that if you are worried about whether you can charge your electric wheelchair, I think that's vastly different to whether you can sell your product at a particular profit level. I do think there are differences, whether we agree about what those differences are, I don't know if I can help you.

**DR CRAIK:** Say, you're trying to come to a position - assume you had a body like we proposed, where you had the BHPs and you had disadvantaged consumers, what

sort of different views would you think - where would you be unaligned with the big companies or any other grouping? Where would you have a different view about where things should go, do you think?

**MS HODGE (PIAC):** I think if a network put forward a proposal for a set of infrastructure in a particular area there might be different views about whether - I guess what I'm thinking is that residential consumers have less capacity to invest in their own generation. So if, say, Ausgrid wanted to place a large substation in an area and that would be quite helpful for commercial businesses but that those businesses were large enough to be able to invest in distributed generation, they might have a different view about that than the residential consumers on the periphery.

It's about the resources that you have at your disposal. If you feel that you can't influence the decision of the regulator but that you can take your own measures to avoid those costs, you may have a different view about what kind of investment is needed.

**DR CRAIK:** Thanks.

**MR WEICKHARDT:** I don't think there are many electricity consumers in Australia, including big people, who feel that they can completely cut themselves off from the poles and wires. I think most of them would say they're just as concerned about poles and wires as a vulnerable consumer. They have different financial drivers and resources for sure but I think there is a unanimity of interest the fact that consumers need to feel that there is efficient investment and efficient operation of these assets and I think most consumers at the moment in Australia feel very concerned about that.

**MS HODGE (PIAC):** I don't disagree and as we've said in our submission there are many issues with which the interests of a range of consumers would converge.

**MR WEICKHARDT:** Okay.

**DR CRAIK:** You said at the beginning in the reform process there are lots of reviews going on and we encountered the same thing and wondered where we fitted in in that suite of reviews. You talked about the need for an overarching framework so that opportunities weren't lost and you ended up with unintended consequences. Who do you think should actually be putting this overarching framework together and how would you see it actually being structured?

**MS HODGE (PIAC):** I would say that it would need to be a national body and we were debating this. It could be some kind of working party that's formed through a

COAG process, bringing together, say, the AEMC and representatives from industry. I think you need an organisation that has a very clear understanding of the rules so operating within the framework that exists. But I think that perhaps you need to have the resources federally to really look at the range of issues that would come up from this, so perhaps a steering group or a working party.

**DR CRAIK:** You don't see the group that advises COAG - COAG has a bunch of officials that do advise it from each of the states, you don't see they would pick up these issues or the group that advises SCER, officials that advise SCER? Would they do it?

**MS HODGE (PIAC):** They certainly would be well positioned. I think that they may want to draw in additional resources to really plot all of this.

**DR CRAIK:** Okay, thanks.

**MR WEICKHARDT:** You made a comment about the fact that - I'm talking about the issue of state-owned corporations having non-commercial objectives in their business charter and you say, "PIAC believe state-owned companies should not be precluded from similar objectives where these objectives are transparent and kept separate from the regulatory cost base." Can you explain what you mean by that. I mean, if a state-owned corporation is told to have equal priority to running their operation efficiently and to, say, regional employment, how can you separate that issue from their regulatory cost base?

**MS HODGE (PIAC):** I guess we were thinking about a commercial entity that has particular social goals and whether they decide to pursue those social goals through their business plan is a matter for them. So we were just opening the door to a similar framework for the state-owned corporations to do so also, because there are non-commercial activities that businesses undertake.

**MR WEICKHARDT:** They do, but they mostly will sit back and say, "We have to have a community licence to operate. We have to operate in the long-term interests of the community, otherwise we'll lose that community licence to operate, but ultimately it's the long-term interests of our shareholders that drives us." That doesn't mean to say that they try to screw every last dollar out of every person they deal with because that doesn't actually achieve the long-term interests of their shareholders. But when you add in addition to that, which is something the board of the normal corporation would bear in mind, that the board must in addition to that have, say, a local procurement obligation or a local employment obligation, then you complicate the decision-making of that board with that additional obligation and I don't see how you can keep that separate from the regulatory cost base you've talked about here.



**MS HODGE (PIAC):** I think the principle that we were aiming for in this was to have maximum transparency for any non-commercial goals that may occur.

**MR WEICKHARDT:** So you say you're a vulnerable consumer. Well, in your power bill that you're struggling to pay you're paying X per cent for purchasing from a small consumer in the bush or employing an extra person in the bush or sponsoring the Opera House or something like that.

**MS HODGE (PIAC):** I think that if those decisions are taken, which we don't have any ability to influence, then there needs to be some transparency around whether that occurs.

**DR CRAIK:** The rule changes that have been agreed, or that the AEMC has brought in, are you happy with all of the rule changes that have occurred in the regulatory process? Do you feel there are still any gaps in relation to the rules?

**MS HODGE (PIAC):** I don't feel I can really answer that adequately given the raft of processes that have been back to back of late. It has been a difficult process to keep up with.

**DR CRAIK:** We know.

**MS HODGE (PIAC):** I apologise.

**DR CRAIK:** No, that's all right.

**MS HODGE (PIAC):** I mean, I was working even yesterday because there's so many announcements that come with regard to electricity that it's very difficult to keep up.

**DR CRAIK:** Yes, we agree totally.

**MR WEICKHARDT:** We have difficulty reading. People are writing faster than we can read.

**DR CRAIK:** The volume, yes.

**MR WEICKHARDT:** So we totally sympathise. Thank you very much indeed.

**DR CRAIK:** No, thanks very much, Carolyn.

**MS HODGE (PIAC):** Thank you.

**MR WEICKHARDT:** Your input is welcomed and we appreciate you taking the trouble to appear here. Thank you very much indeed.

**MS HODGE (PIAC):** Thank you.

**MR WEICKHARDT:** Now, that concludes the hearings for today. For the record, is there anyone else who wishes to appear before the commission? No. In that case I adjourn these proceedings and the commission will resume in Canberra on Thursday, 6 December. Thank you very much indeed.

AT 5.00 PM THE INQUIRY WAS ADJOURNED UNTIL  
THURSDAY, 6 DECEMBER 2012