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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 MELBOURNE ON TUESDAY, 27 NOVEMBER 2012, AT 9.20 AM

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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. Following this hearing in Melbourne, hearings will also be held in Sydney and Canberra. We will then be 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.

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I'd now like to welcome our first participants, CitiPower and Powercor. If you could for the transcript please give your name, your positions and the capacity in which you're appearing at the hearings.

MR BREHENY (CP): My name is Shane Breheny and I'm the chief executive of both Powercor and CitiPower.

MR GROSS (CP): I'm Richard Gross. I'm the general manager regulation and business development, for both Powercor and CitiPower.

MR CLEEVE (CP): I'm Brent Cleeve, manager regulation for CitiPower and Powercor.

MR WEICKHARDT: Thank you. Now, we have received, albeit fairly late yesterday, your summary of the points you want to make. We've looked at that. We also received - and thank you for it - a submission before the draft was published. But if you would like to give some introductory remarks - we're scheduled until 10.00 - and we have a number of questions we would like to ask, so if you can keep your remarks reasonably brief, that would be helpful.

MR BREHENY (CP): Thanks, Philip. Once again, apologies for my tardiness; my comrades were on time but I was stuck on the freeway behind the V/Line bus that had been put in place to replace the trains that had been knocked out because of the lightning, so they're my excuses.

MR WEICKHARDT: At least it wasn't a power failure.

MR BREHENY (CP): No, the power worked; my gate opened this morning. I just propose to go through the dot points in the summary and then leave plenty of time for questioning. In summary, we say that the Victorian networks have performed extremely well since major reforms in the mid-90s. CitiPower and Powercor DUOS charges were reduced between 32 and 40 per cent in real terms respectively without any compromise to network reliability or safety. DUOS charges for CitiPower and Powercor comprise less than 16 and 19 per cent of the average residential bill. With AMI included - which was a government policy, advanced metering infrastructure - the proportion of the bill attributed to networks is 24 and 25 per cent. The current network regulatory regime has worked very well for Victoria and Victorians.

The issues being identified by the Productivity Commission are in many cases structural or unrelated to networks. Regulatory reform will never be a proxy for structural reform. We recognise there's been a loss of consumer confidence in the regulatory framework and hence, business supports and initiatives that promote greater community involvement. Ultimately it will be innovation that must drive the next wave of efficiency improvements and this is best facilitated through high-powered, outwards based regulatory frameworks.

I'll just go on to the pricing in a little bit more detail. Since 99, DUOS charges

have decreased 32 and 40 per cent, as I said before, and CitiPower and Powercor's DUOS charges, as a share of what the customer sees, are between 16 and 19 per cent respectively, not the 50 per cent quoted in the draft report. That may well be true for other states but it's not true for us. The safety and reliability of the business's networks has been maintained. Allowing for weather-related variations, reliability has improved across the network since 1995.

Looking to the future, the increase in revenues provided to the businesses as part of the last round of regulatory regimes was modest, 4 per cent for CitiPower and 12 per cent for Powercor. The major driver for those was external considerations, namely the Bushfire Royal Commission, vegetation management code changes, the global financial crisis and the impact on funding and the advancing metering infrastructure.

A little bit on regulatory and structural reform and then I'll hand over to you, Philip. Given the performance of the Victorian networks, it can only be concluded that the current network regulatory framework has worked well for Victorians, lower charges, better performance, better service. The Productivity Commission cited failings in the current regulatory framework appear evidenced in other jurisdictions, not Victoria. If the regulatory framework is operated successfully in Victoria and not in other jurisdictions, it can be concluded that there are structural issues in those jurisdictions that prohibit the regulatory framework working appropriately. Regulatory reform is not a substitute for structural reform.

The Productivity Commission should not be tempted by the relative ease of regulatory reform in comparison to structural reform. Further regulatory reform, particularly involving further discretion and dilution of accountability in the Victorian context is likely to be unhelpful and may destabilise investor confidence. I won't go through and read the rest of it out.

I will say though, just on smart meters, since the smart meter policy change, people with a view of history will remember it was initiated by the ESC in Victoria, not the government. The government took that policy change and wanted some other things included and then took it away from the regulator and came up with their own policy position on it, hence AMI was born. The smart meter policy change has involved a significant effort by the businesses and I think that the industry, whilst being sceptical at the start of the benefits of smart meters, now that the smart meter roll-out is virtually completed in our businesses, we're starting to see the value of the policy, the value of the utility and the value of the infrastructure. We view that the cost-benefit ratio going forward will be enhanced over the business model. Of course that won't be achieved until time-of-use pricing comes in and other initiatives but we certainly do see that the policy position is sound.

With that, I'll ask my colleagues if they want to add anything and if not, pass over to you.

MR GROSS (CP): We see the two graphs on the pricing, the two stacks, the build-up to the prices as pretty illustrative of our key points in the Victorian context and I think if you go to the Powercor one you can see that the price increases, as Shane was saying, are not directly attributable to the network components, there are other factors, feeding tariffs being one, growth in retail costs which is our retail and this picks up all generation costs as well. I think that's a key point and I suppose the other key point is the importance of accountability. We're very keen to focus on ensuring that the regulatory framework has the correct accountability, the best accountability possible. We believe as a first principle that it's best to get the regulatory decisions right the first time.

The best way to encourage that, in our view, is that regulators are known that they do have an accountable appeal process that they will be held to and in doing so we believe that encourages the best outcomes first up. So we think it is very important that a workable appeal mechanism, merits appeal mechanism is in place and a strong plank in the overall regulatory framework.

MR WEICKHARDT: Thank you. Perhaps I can clarify one issue in your charts and, by the way, our comment about the 50 per cent figure was across the NEM was directly attributable to Victoria.

MR GROSS (CP): Our problem is that that figure makes it way into bills and it has made its way into the general mainstream press and it's not the case for Victoria.

MR WEICKHARDT: No. But on the other hand the charts that you show, I think, are a bit misleading in that I suspect the retail component which, as you say, seems to be buried together with the wholesale power component, which again is a bit misleading, but the retail component, I assume, is a reference to a default tariff rather than an actual market average.

MR GROSS (CP): We have tried to take a weighted-type average between a market and the benchmark price.

MR WEICKHARDT: If retailers are genuinely earning that sort of margin on their business, I would have thought they would be the best horse in town to put money on.

MR GROSS (CP): That picks up the wholesale price as well so it's not all retail margin.

MR WEICKHARDT: Even deducting the wholesale price from that would suggest the retailer is making a huge margin.

MR BREHENY (CP): It does, doesn't it?

MR GROSS (CP): I suppose we would ask, if you're uncomfortable with our figures I think this sort of analysis is probably a worthwhile way of doing it. You guys can go through and do the analysis as well. We think you will come up with a similar charge.

MR WEICKHARDT: What sort of margin do you think retailers in Victoria are making on average?

MR GROSS (CP): I don't know.

MR BREHENY (CP): This is a disag stack so we know what the published tariffs are, we know what customers pay, so we disaggregate it.

MR WEICKHARDT: You know what customers pay?

MR BREHENY (CP): Yes, well, given our assumptions, 4400 kilowatt hours and the default tariffs.

MR WEICKHARDT: But you're using a default tariff?

MR BREHENY (CP): No, Richard said we're using a weighted average. But I'd ask you the question, how many people are on the default tariff, what percentage?

MR WEICKHARDT: You say you know. Tell us.

MR BREHENY (CP): I say about half.

MR WEICKHARDT: You think half?

MR BREHENY (CP): Yes.

MR GROSS (CP): We've made assumptions.

MR BREHENY (CP): So I will be forgiven for picking up only half the population.

MR WEICKHARDT: That's interesting. You do make another comment about the fact that you feel that regulation and the structure in Victoria is working well.

Another submission we received for discussion today actually shows complaints to the electricity ombudsman in each state and it shows Victoria is way, way out ahead in terms of number of complaints to the ombudsman compared to other states. Now, some of this I suspect you will say is attributable to retailers but - - -

MR BREHENY (CP): No, the ombudsman publishes separate reports on distributors and retailers, so it depends which report you've read.

MR WEICKHARDT: What do the stats look like in terms of complaints for distributors?

MR BREHENY (CP): There are two ways of looking at it. We received the latest ombudsman report last week and CitiPower and Powercor maintain their position as the lowest number of absolute complaints and the lowest number of relative complaints per 1000 customers.

MR GROSS (CP): Which is significantly less than retail complaints.

DR CRAIK: The is out of the Victorian electricity industry?

MR GROSS (CP): This is the Victorian ombudsman's annual report as of last week.

DR CRAIK: Comparing electricity businesses in Victoria?

MR BREHENY (CP): That's right and they go through and they do electricity, gas, they do distribution, they do retail and water.

MR WEICKHARDT: Do you know how those statistics compare with distributor complaints in other states?

MR BREHENY (CP): No, I don't.

MR GROSS (CP): One of the key factors in the annual report as of last week was that the two major classifications of complaints were, one, AMI, which is advanced metering infrastructure which is, as you know, specific to Victoria at this point in time and the second one was feed-in tariffs and arguably the feed-in tariff regime has undergone significant political change over the years and within year and you could probably conclude that some of that political change has driven some of the confusion and complaints.

DR CRAIK: Okay. You've talked about smart meters and you say you're beginning to see the value of them might be greater than you initially thought. Can

you highlight the major lessons that you think have been learnt from the rollover to smart meters here in Victoria.

MR BREHENY (CP): There are two ways of looking at it. We look at it from our perspective but we're not blind to others. Our perspective is our licences were changed to mandate the roll out of smart meters to all customers over a defined period with a minimum functionality. We were giving a certain amount of money to do that and a certain amount of time to do that and the level of consultation with the government, whilst it was good, we didn't get everything we wanted and we believe that the government's role - and I don't mean the current government, the former government took the responsibility for consumer education and educating the broader community on the merits of the policy.

The policy was part of a stack of greenhouse initiatives. It was meant to be accompanied by time-of-use pricing to provide incentives for customers to reduce energy and it was meant to reduce energy use by rewarding efficiency and to reduce peak demands by providing incentives for people to shift their load. Without the consumer education, without the incentive regime, time-of-use pricing - a large stack of the benefits could not be achieved.

What was our role? Our role was to select a technology that worked, met the minimum functionality, to roll out the meters, replace the meters, install systems, build interfaces to retailers and to the national market so that we can deliver half-hour data, to do that within a regulatory regime that did not have incentives, it was a pass-through regime. It was a pass-through regime not at our request, at the request of the government because they were concerned, rightly so, that with the new technology and the massive scale of the project that giving uninformed estimates was not like a price review for a distribution business. We agreed with that process and there were governance arrangements put in place.

I look now four years down the track. Have we changed our original estimates and have they changed in any way, shape or form? No, they haven't. Are we on time? Yes, we are. Are we on budget? Yes, we are. Did we select the correct technology, ie, did we meet the minimum functional specs laid out in the order? Yes, we do. Does the smart meter system, that is, the smart meters systems, the smart meters themselves and the communications network installed to monitor them, is that working properly? Yes, it is. Are we supplying meter data to the market? Yes, we are every day and 99 per cent, 800,000 meters read half hourly.

Are there other benefits accruing? Yes, there are. Where are they? They're in the areas of customer service and a simple example is that SCADA systems - do you know what a SCADA system is?

MS CRAIK: Yes.

MR BREHENY (CP): A SCADA system does not link to the customer's premises; an AMI meter does. So the AMI meter is able to tell the SCADA whether it's on or off, when the SCADA tells us whether it's on or off, so that way we can differentiate a fault from a distribution fault to a single premises fault. What can we do with that information? A distribution fault requires a different level of technical support to rectify that a single premises fault does. When someone rings a call centre with a fault, "What can we do now?" we have to spend 30 to 40 seconds asking the customer are they sure it's not their side of the meter, otherwise we have to charge them. We know longer have to do that. We can say to the customer immediately, "Sorry, customer, that fault is your side. We suggest you call an electrician," or, "That fault is our side. Yes, we can see where it is. We'll be there in a minute," or, "We'll be there." So those things enable us to better serve our customers.

In the event of widespread faults, we can differentiate between, as I said, which customers are on, which customers are off. What do we do with that? We use that communicate with customers, just the service that we offer, which is to send them a text message to say, "We know you're off. We'll be there soon."

In terms of monitoring the performance of our network, we use models to monitor distribution loadings at the low levels in the network, down to distribution transformers. Those models will be better informed by the most recent AMI data. So we'll be able to tell the day before a heatwave which transformers are near capacity and we'll be able to do something about their fusing, about their loading, so we should have less asset failures for heat and less asset failures for load. We call them AMI leverage projects. There are a myriad of other projects in the pipeline that we're working on.

We have two other things; one is a safety thing. We can tell the temperature of the meter remotely and we can disconnect if it's too hot.

MR GROSS (CP): We've got the remote re-energisation and de-energisation.

MR BREHENY (CP): Yes, which was part of the minimum functionality. We can tell low volts, high volts. We can right all those things directly. All those things are used to better manage your network, better plan your network, better plan your capex and better inform the customer and the customer experience. Remember, you only hear from customers twice, probably three times: if you cut their tree, if you cut the power off or if you move them into their new house, their new flat or the new apartment. They're the times you interface with customers. AMI makes all those experiences much better, except for the tree.

MS CRAIK: Could you tell me, you had a comment on the nature of the rollout and we had suggested a regionally staggered rollout rather than mandating a statewide rollout.

MR BREHENY (CP): Which is what we suggested.

MS CRAIK: What's your view? So you agree with that?

MR BREHENY (CP): We suggested you should do the high-density areas first. The nature of the technology we've picked to communicate, which is a low-cost technology, it's called a mesh, and it means that, a mesh. It requires you to roll out meters to a suburb or a substation area, because the comms system in the meter is both a receiver and a transmitter. So if you're in a black spot or something like that or a gully without intrusive antennas and things like that, you can actually read the meter from one to the other. We call that a mesh; it's mesh technology. It's low cost, it's highly functional. It's got a 99 per cent reach. But our view was that the 4 per cent of the customers that operate on 30 per cent of our networks, especially in the rural areas, that you should probably do that at a slower pace than you did the 96 per cent of customers on 70 per cent of the network.

MS CRAIK: Do you think a distributor-led rollout is better than a retail-led one or do you have a view?

MR BREHENY (CP): We're conflicted on that.

MS CRAIK: Yes, of course you are.

MR BREHENY (CP): But we believe there are efficiencies and demonstrated efficiencies, so we believe that the regulator has made the right decision by doing that.

MR GROSS (CP): There's certainly scale and scope economy in managing the rollout, and in effect a mandated rollout for us was we actually did that by region. You would actually identify a region, go in and roll it out. So whoever is doing the rollout, it has to be in such a manner that you can pick up on those scale and scope efficiencies with the appropriate access regimes put in place. I think that's very important. You certainly need that scale and scope to get the comms-type networks to actually be working. So you need some sort of control over that because you can't have a piecemeal approach. As Shane says, we are conflicted, but it does go to competition-type issues as to the meter rollout, how does that feed into competition at a retail end.

MS CRAIK: Sure.

MR WEICKHARDT: There is speculation on what is going to be recommended by the SCER or COAG process, but at the moment, I see there being a rumour suggesting that a market-led rollout would occur. Indeed some people have suggested to us that some of the benefits that you suggested are so significant that distributors, on their own volition, without charging customers, would roll out smart meters if left alone because there's a payback for them. What do you generally think about that level of I guess incentive on a distributor or a retailer and what do you think about the idea of simply letting the market decide where these go and how, and having competition in terms of that sort of rollout?

MR BREHENY (CP): That's a good question. Our view is that a distributor-led rollout delivers benefits earlier and the scale efficiencies are compelling. We would say that when the derogation matures and it becomes a market-led process that the minimum standards that the networks require to operate their businesses should be enshrined, unlike what happened in the above 160-megawatt hour market where metering was deregulated and the quality of the metering solutions put in place by the market left a lot to be desired. So there is some history there, and I haven't studied it in detail, but there were many, many meter data agents and meter providers back in the early days. There aren't very many now, and I think the major ones are owned by a distributor.

MR GROSS (CP): If I can just add to that, certainly if you look around the world, there are very few market-led processes in an AMI rollout. The experience in the US et cetera, they're all fully integrated businesses from retail all the way through to generation where the big rollouts have occurred. You look at history: why haven't meters been rolled out? If the drivers and incentives were so compelling, why don't we see it would be my assertion, and we don't. If you look at all the cost-benefit studies that were done prior to the rollouts, one of the key points being made is the benefits were distributed across the full vertical chain, including customers, as to the whole energy cycle and therefore it was arguably in economic terms a market failure as to who is actually going to fund the rollout or do it.

Having said that, I still think there are competition-type issues as well that should be addressed at a policy front and also it's not devoid of the transaction costs. It is quite a complex market, and the more players you have in it, multiple players having multiple access to systems and free access to systems requires huge spends in your IT systems and your access capability to allow that third party access. Those transaction costs shouldn't be underestimated in your deliberations.

MR WEICKHARDT: Can we just talk about the IT costs because I'm conscious of the fact that despite the fact you say you were on time and on budget, all the comments about the Victorian rollout are that it's cost a hell of a lot more than had

been predicted. I've got a bit of a concern that as yet - and I speak as a customer in Victoria - the customers are seeing none of the information you have just talked about. I've seen in the US the level of real-time information you can get from a distributor there in terms of IT systems live on the Web and other data like that. Do you have all that IT system ready to go if time-of-use pricing comes in place, so customers can see real time what they're using, how much they're being charged?

MR BREHENY (CP): Yes, we do. There are a few questions in there Philip. The first one is the cost blow-out identified by the auditor-general in that report; that's the source of that comment. That compared the EFC business case to the DPI business case. The EFC business case was a net business case, ie, it was the replacement of meters whereas the DPI business case was a gross business. It was the total metering business moved out of the distribution price process. So that included meter reading costs, system costs, meter costs, meter replacement costs, new system costs and the original EFC business case did not include remote meter reading, didn't have the same functionality, so it is really a chalk and cheese analysis. It became political and the politicians couldn't resist themselves and to compare one to the other - they are not comparable.

MR GROSS (CP): To be clear, we have been on budget right through this whole program. So that the initial cost estimates we have gone through that process from, what, five, six years ago?

MR BREHENY (CP): Yes.

MR GROSS (CP): So been on budget, delivered and 850,000 meters rolled out so far and we're consistent with budget. So the assertions that it's a blow-out is just wrong.

MR BREHENY (CP): There was considerable cost added to the program by the lack of a bipartisan approach in terms of the refusals, the review, the delay in time-of-use pricing, all those things added to the cost stack. Notwithstanding that, we have maintained within our original forecast from six years ago. Turning to customer benefit and our preparedness for time-of-use pricing, we were ready for time-of-use pricing to be implemented a year ago. In terms of retailers being able to provide online real-time information to customers, a retailer can't do that. A retailer can only provide the information that they have to customers which is at best a day old.

The process of getting online real-time information is through what's called an in-home display and the in-home display devices have to be licensed, that's with the government. So we have in-home displays available. We have in-home displays rolled out in trial. We have in-home displays installed and working properly in many

houses and in the solar cities project from the Bendigo, Ballarat area we have in-home displays in all those houses. You can read their annual report and have a look at where they demonstrate those. Our role in providing the online real-time data to customers is a pairing role. We have a role to pair the device - it's like a bluetooth pairing, only not as simple - to the meter.

So the meter is capable of being read remotely, being looked at remotely, being downloaded in real time to a device that is equipped with software to enable customers who want to determine what appliances cost them the most money, at what time of day and then to use that information to verify their bill or to determine what tariff.

MR WEICKHARDT: As well as an in-home display, will you also be able to access that online?

MR BREHENY (CP): Yes.

DR CRAIK: What about direct load control? Do you guys get involved in direct load control at business or residential level?

MR BREHENY (CP): With an AMI installed meter you have direct load control but it's a reasonably blunt instrument. Not as blunt as, say, the transmission operators direct load control is but you can control the house. We don't have load control in Victoria. Some distribution businesses do. I think United Energy has some but Powercor and CitiPower don't.

MR WEICKHARDT: Your meters wouldn't allow that?

MR BREHENY (CP): Yes, they will.

MR WEICKHARDT: They will allow it?

MR BREHENY (CP): Yes.

MR WEICKHARDT: So that could be retrofitted, could it, to control individual appliances?

MR BREHENY (CP): You will have to define direct load control. But what I mean by it - it's not as sophisticated as being able to cycle an airconditioner like we can in South Australia. We had trials of that and it was not deemed to be successful. The technology worked. Customers didn't like it. The business case wasn't compelling.

DR CRAIK: Why didn't they like it?

MR BREHENY (CP): I haven't got the reasons at my fingertips - I suppose because the incentives weren't good enough for them.

DR CRAIK: It wasn't because they felt it was too hot or anything?

MR GROSS (CP): I think it was a fundamental concern, wasn't it, that when it's really hot they did want their airconditioner and they didn't want to lose that control and, therefore, it goes to Shane's point that the incentives for them to give up that right wasn't good enough.

MR BREHENY (CP): What we can do with AMI now is instead of having to take - if you recall January 2009, the last week, and then the next week the Black Saturday week, January 2009 we had significant problems in the transmission system because of fires. The Melbourne Southbank, Docklands, Altona chemical area and Geelong were all cut off at peak time on a Friday night. I don't know what the cost of that was. I know the cost of one of our customers shutting down a plant was $80 million alone. That was so we could stop a system black. With the AMI the ability to control load at the meter, ie, disconnect, remotely connect and disconnect, we could be much more selective, much more sophisticated and we could cycle much more quickly. On of the things we're working on with our SCADA systems and the AMI data is the ability to do that.

When AusNet invariably calls for reduced load by 100 megawatts and do it within the next 15 minutes and you say, "Where's a hundred?" and you say, "Geelong, Ballarat, Bendigo, it's very easy to do," we will never have to do that again. So we can say, "Let's do domestics and let's do them on a 30-minute cycle. Let's tell them all first." So send them an SMS, tell them what we're going to do, cycle them so we don't have to take out Southbank, everyone gets sent home, the Arts Centre, docklands everyone goes home, all the millions of dollars lost, the Altona chemical area, the city of Geelong, all those things did happen and they caused significant damage. With an AMI the ability to remotely control load at the household, we'll be able to do it much much better.

DR CRAIK: Thanks.

MR GROSS (CP): The other aspect of load control is that it's degrees of, the devices are out there such that you can reduce or control the temperature on your fridge or reduce the fridge temperature one or two degrees, those sorts of things, alter your cycles on freezers and things and alter your cycles on airconditioners. So it's not just on/off, it's just graduations and that sort of technology is there. AMI itself is one of those facilitating platforms that allows that sort of stuff to evolve and

innovate.

MR WEICKHARDT: We're almost out of time.

MR BREHENY (CP): We also have 220,000 meters that we can directly control without disconnecting customers' power and they're for controlled loads. That's for hot water and slab heating.

MR WEICKHARDT: Can I just very briefly turn to the point you make that innovation must drive the next wave of efficiency improvements and that's best facilitated through high powered outputs based regulatory frameworks, according to your notes. You, on the one hand, say that you don't like the regulator having discretion, that this causes uncertainty and investors don't like that; on the other hand, high-powered incentives create uncertainty. There are lots of problems with high-powered incentives, CEO remuneration is a classic example. Sometimes you get what you incentivise but you don't like the result.

How do you reconcile this issue and if innovation is going to drive the next wave of efficiency improvements, why is it that network businesses spend so little on innovation?

MR BREHENY (CP): I'd question the second part of the comment. The first part of the comment, I don't think regulators should be worried about what CEOs get paid I think that's a job for the board and the market.

MR WEICKHARDT: No, I'm not talking about that. I'm just saying if incentives in general - if you're incentivised to achieve certain reliability performance, you had better be sure that that's exactly what the customer wants and you measure it in a way that's consistent with customer needs because otherwise people drive to mechanistically achieve a particular target which may get a result afterwards which says, "We weren't very happy with the end result.

MR BREHENY (CP): Incentives drive behaviour - I'll let Richard speak in a minute - and the incentive scheme has worked. We undertook customer duties many years ago at the system level, "What's the value of lost load?" That's why we have N minus 1, that's why we have system reserve, isn't it, because in the industry, society values reliability. The more you disag that down to the customer level - a rural customer, would they pay a dollar extra for one less outage a year if they're only getting three and they're an average of one hour? I'd say no. As a rural customer, I'd say no. A city customer who gets one outage every three years for an average duration of half an hour, would they pay a dollar extra for extra reliability? I'd say definitely no.

Unfortunately that deals with the best-served customers. What's been our reliability effort? It's been on recovering quickly, having an alternate path, reducing the impact of outages. By and large, regulators haven't given any money to distributors in Victoria to improve reliability over the last 10, 15 years. There's a capital classification called Reliability Maintained; what they have done is provided incentives for you to invest to improve reliability, ie - and it's two way, it's a debit-credit process - you can earn or be fined up to 5 per cent of your revenue by meeting certain regulatory targets. That is a good thing because it keeps the regulators focused and the businesses focused on what they're there to do, connecting customers, keep everybody safe and make sure that the amenity that electricity provides is there for 99.95 or 96. But if you look at those numbers, Powercor's 99.95 per cent relied on - you know, that's minutes off over 8760 hours a year - and CitiPower is 99.99. Is that good enough? Yes, well and truly.

MR GROSS (CP): To just add a couple of comments there, we firmly believe in an incentive framework, like a competitive model competition provides all the incentives in the competitive model. In a regulatory environment, we believe an incentive framework empowers the business and empowers management to ensure that it delivers and takes the appropriate risk allocation decisions in delivering the outcomes, to your point of, well, you've got to make sure the incentives, the level of the power, is important, yes, and that should be done through willingness to pay - studies and all those sorts of things - so you get those rights, so you do get the customer benefit equation correct or as good as you can get it.

Arguably the customer involvement in the regulatory process to date hasn't been as effective as it should be. We tend to agree with that but we're not sure of the answers. It's a very diverse group out there, so it's important to somehow assess that. I think the discussion we're having this last year or so have been very positive in that way, that we might get to somewhere to get better customer involvement. To your point on regulatory discretion being the same as incentives, I don't see that the same. I would see regulatory discretion as being effectively a centrally planned type model as opposed to a competitive model, so it's actually disempowering the business, not empowering the business to the response, so it's effectively going the wrong way, in that all you're doing is allowing regulators to second guess what should be the best for the customer as opposed to having a structured incentive framework and then businesses set out and targeted to deliver against that incentive framework. So I see that as sort of fundamentally different models.

To your question on innovation, virtually the models we have so far to date, since 1995 and the privatisation, have really been efficiency driven, so they all sort of drive to get efficiencies out of the business, as evidenced by the real price reductions that have occurred in CitiPower and Powercor since that period, 32 and 40 per cent. So how does that model sit with a desire to take the next step and take

longer-term investments, higher risk profile investments that don't have the return within a reg period or that doesn't work? So that's where the regulatory model in our view needs some tweaking and needs some changes, such that the appropriate incentive structures for within-period investment will drive innovation which will return benefits over multiple periods.

I think the most illustrative parts around the world, if you look at the UK, the RIIO model there on how they have set up innovation funds where the businesses can bid in a competitive process for access to those funds for specific projects; there's other considerations of different treatments of capex associated with innovation such that they maybe get a different return or certainly consideration greater than one reg period. So go to your question of why isn't innovation happening to the same extent as it should, I would argue most of the innovation sits around efficiency drives - so there's a lot of innovation in that space - but the longer-term structural change innovation, the platform change innovation, the transformation innovation, needs a regulatory tweak to fix.

MS CRAIK: What do you think about the cap on the revenue at risk in the incentive scheme at the moment? Do you think that's appropriate?

MR GROSS (CP): At the moment we would argue that it is reasonable, whatever the rate is, so you've still got to make the business financially viable, and financeability is a big issue, to the extent that reliability, for example, is outside your control with virtually everything rolled into out and adding greenhouse and those sorts of things. There is a significant shift on risk profile on your reliability which is out of your control, therefore a cap is appropriate.

MR BREHENY (CP): It might only be a small percentage of your revenue but it's a fair percentage of your profit, 5 per cent of revenue. Just on customer consultation I think we've had a customer consultative committee for over 10 years. It's a broad based consultative committee. Membership rotates periodically.

MS CRAIK: How do you choose them?

MR BREHENY (CP): Advertisements, expression of interest. We have a member from the Australian Industry Group, we have a member from St Vincent de Paul; we have a member from the local council; we have a member that represents the farmers, dairy farmers and the BFF and then we have a farmer as members. We've had those people for a number of years. When the ESC used to run regional consultation processes as part of price review processes, we were active participants. The AER did a price review before last - but not in the last price review and didn't go regionally.

MS CRAIK: Thanks.

MR WEICKHARDT: Okay. I think we are nearly out of time but let me ask one question: you note that you oppose the recommendations that the limited merit review panel put forward, and of course we don't know what government are going to do with those. But you've suggested these recommendations create incentives for the regulator to game the regulatory process. Can you explain what you mean by that?

MR GROSS (CP): At the moment we have a merits review process that is very clear. It's a legal-type process. You've got precedent that sits there. You've got Rules of Evidence that apply and it's run through a judicial-type process. If you move away from the judicial to a more administrative process, the Rules of Evidence then drop off or are certainly not as robust, and the other recommendation is a virtual de novo type appeal process. So you go to the appeal process and therefore everything is up for appeal and you don't quite know what the outcome could be. It's not just correction of error, it's everything. So what could actually happen - and this is just an assertion - is that regulators may restrict the amount of evidence or amount of disclosure of their various discussions of their deliberations in their final decision, so the decisions will drop away from 500 pages down to 50 maybe - arguably that's a good thing - but one other side of that is that the amount of trade-offs that have been done a regulator won't be known, won't be transparent, certainly to a business. A business then could elect to go to an appeal on what they believe is a correction of an error and the regulators could then come back into that appeal process and say, "Yes, we did that but we did all these other things over here, here and here, and they weren't disclosed." So it's that sort of issue of information; disclosure and non-disclosure is what we were asserting in those crude terms.

MR WEICKHARDT: Okay. Thank you very much indeed. Thanks for your input. We appreciate that. We'll adjourn briefly now and resume at 10.30. Thank you.

MR WEICKHARDT: We will resume the hearings now and our next participants are SP AusNet. If you could for the transcript please give your name and the capacity in which you're appearing.

MR POPPLE (SPA): Thank you. My name is Charles Popple, I'm group general manager for network strategy and development at SP AusNet. I'm joined by - - -

MR WEICKHARDT: Let them introduce themselves and then the people doing the transcript can associate the voice with the name.

MR PARKER (SPA): Good morning, I'm Alistair Parker, director of regulation and network strategy.

MR GEBERT (SPA): Kelvin Gebert, manager regulatory frameworks.

MR WEICKHARDT: Thank you. We did receive your letter with some further thoughts which we will treat as a submission, we appreciate that. Assume we have read that and we have a number of questions about it. But if you want to make some introductory remarks, that would be great.

MR POPPLE (SPA): I will just briefly highlight the key issues that I think are in the attached letter. We do cover quite a few other issues in the more fulsome submission and we're very happy to take questions on that or anything else as part of this. I guess there was three things particularly I wanted just to highlight by of introduction today and that's not to say they are the only three things with the report and I would certainly like to commend the Productivity Commission on the report. We do think it is a very thoughtful and considered piece of work covering a wide and diverse range of issues that impact the energy markets in Australia.

Secondly, on that point I probably also want to say that while it's tempting for us to deal with individual issues, we do need to understand that this is a market as a whole and everything interacts and I will talk quite a little bit about transmission today. While there's many individual items and issues really it's the collection of a whole range of initiative that will make the transmission frameworks more effective going forward, I think. Just on the transmission arrangements, that's the first of the three things that I would like to discuss in a bit more detail, there is debate about the ongoing transmission framework and regulatory regime in Australia and that has probably been going since the inception of - well, even VicPool in 1994 there was a lot of work done on the transmission regulatory framework, planning arrangements, pricing and peripheral issues like firm access and service standards. So that has been an ongoing debate and I think there is more work to be done on that.

In relation to the planning arrangements in particular, SP AusNet, of course, in

Victoria is subject to different arrangements than the other states. I just really wanted to clarify, with debate still alive as to what the best arrangements might be - whatever best means in this context - I just want to clarify our position. We have operated in arrangements in Victoria with a separated planner. We're not advocating for any change to that position. We have been a willing participant in those transmission arrangements but having said that, we also recognise there are alternative arrangements which could have certain advantages and disadvantages.

But the key point I do want to make today in addressing that is that while the arrangements have operated reasonably well and we have be satisfied in working within that framework, before those arrangements could be considered nationally, our view is that there are a number of modifications or thoughts required in specific improvements and things that could certainly be improved to make those arrangements more effective, we think. I am happy to talk in more detail about those a little bit later. But certainly the complexity of contractual arrangements is one that we are concerned about.

That also arises because in Victoria connection assets, being the interface between the transmission network, the lines and the distribution network, which is mainly the terminal stations, is subject to planning by the distribution businesses. So there are many occasions when there would be four or five parties at the table planning for an augmentation of an overall transmission capacity issue to supply multiple DBs. We have seen that a number of times and inevitably it results in complexities, not only in the contractual arrangements ultimately, just the number of contracts that are required to support that, but also in getting agreement to the basic work that needs to be done and in turn, I think that leads to potential for delays in critical projects.

The second concern similar to this is that - I was a transmission planner in the SECV days, that was my background really. So in saying this it's a bit of an indictment on my own profession, but planning can take as much time as you want it to take and so with the best will in the world I think there is a possibility that planning lead times erode a lot of the construction lead times that are required. So even if those planning decisions are made in an appropriate with appropriate mechanisms, they can erode into the time that is really required for complex construction, planning approvals et cetera et cetera and I think that can happen unconsciously if we're not careful. I think there has been a record of systematic delays in projects in Victoria which has resulted in additional risks over and above what the planning reliability standards might have dictated.

I think the third concern is really around the risks and difficulties in separating what is an integrated function. Transmission is an integrated function from end to end and much of the equipment within stations and interfacing with lines is

integrated. That does lead to some complexities when we turn to contestability and contestability arrangements in separating those integrated functions out. We have done that and I'm not saying it doesn't work but it does lead to engineering complexity and additional costs in managing the interface.

We certainly believe that incentives are important. We spoke a week or so ago and I think there is a question to the extent to which incentives can be useful and valuable for a transmission business in driving right behaviour because ultimately it is a balance between over-investment - there is a lot of criticism of over-investment at the moment - and under-investment and both have costs which needed to be avoided and it is important to get that balance right. I am happy to talk a bit more about that. We do believe there is appropriate checks and balances in the strength of regulatory framework that we have in Australia but we do also place quite a bit of reliance on the incentives that are in place to make that realistic outcome.

The second point I would like to make which is separate to transmission arrangements but related, we became quite aware and with some surprise, when we met last week, the effect that liability on a business has in driving outcomes. While the view has been put that it is ultimately borne by the customer, I certainly can't overstate enough how the liability to large scale losses of supply or inadequate performance of our networks drives our behaviour at board level and certainly at officer level as well. It impacts, for example, on the value of the business through our share price and I think there is clear record of that. But certainly a lot of our focus when making decisions in on the risk of poor asset performance.

On the distribution network we have a specific incentive through the S-factor scheme which has driven much improved performance in SP AusNet's network. We have actually had programs of work in place to drive that outcome and achieve very significant reliability improvements which is an incentive provided by the regulatory framework. It is less clear in transmission but again I can only stress that we do see that as a risk that drives some of those decisions. It's actually one of the concerns we have with the separated planning arrangements that it is unclear who bears that risk of an outage in the transmission network. In other words, separating the planning risk from an operational risk because if planning can be shown to have been later than desired, generally it's an outage of the plant equipment that results in an outage.

So it is a failure of our asset and that is the earliest and simplest place to look for what's gone wrong and often it's not a single asset failure either, it's interaction between complex secondary systems and often it's a relationship between two outages. So these things are complex, it's difficult to cover contractually and be very, very clear as to how you separate that accountability, and that's certainly something that I think would need a bit extra focus if we move to a centralised TNSP planning model.

The last thing - I won't cover this in any great detail at this point in time but you may want to ask more questions about this - we certainly do have a concern around the level of the WACC average cost of capital that's emerging now. Again it's critical to ensure that there's appropriate sustainability and investment in networks and there's differences between organisations et cetera, but some of the analysis shows at the moment that the current WACC returns aren't realistic, may not be above the company's cost of capital, and if that's sustained, it will certainly lead to a risk of under-investment. I think, as I said before, sometimes those costs are hidden but they very carefully need to be assessed against the cost of over-investment to ensure that balance is right.

There are many other areas we could cover but it's probably best to hand over to questions at this point in time, unless you want to add anything to that.

MS CRAIK: Thanks. The first point you made, Charles, was about having a separate planner and the situation you had in Victoria and the possibility of moving to that sort of system nationally. You do acknowledge that it seems to have worked reasonably well here in Victoria and if you compare the Victorian performance with some of the other states, you'd have to say that it does appear from an external point of view to have worked pretty well here in Victoria compared with the other states.

Where you say it would need some modification if it was going to go to a national system - and one of the issues is this issue of contractual arrangements, particularly where, as I understand it, the transmission network and the distribution networks interface - do you think those things are resolvable through contracts?

MR POPPLE (SPA): I might just take the first statement. It depends what measure you use to say things work better externally. Clearly, cost is lower. The question is a hidden one though: what's the cost of lower reliability, because reliability is lower as a result of that as well.

MS CRAIK: Do you think there have been things that should have been invested in that haven't been invested in Victoria?

MR POPPLE (SPA): Yes, and I think we've been lucky; you're only one event away from an outage on the network. The reality is, that has rarely occurred, although there has been a couple of occasions where there has been a significant outage. You're right, the records show we haven't had the outages, but we haven't had hot summers for a period of time. Speaking as an operator of a network, I can tell you that there's not a lot of sleep before hot summer days with the potential for outages. So I think things have been later than ideally would be desired and we've been lucky.

MS CRAIK: But are there specific things that haven't happened, that if you had an outage, you could ascribe those specific things?

MR POPPLE (SPA): There's terminal station development which fortunately we now have added the transformer to. So it's not that they don't happen, it's just that they tend to get delayed. A number of our station augmentations in Victoria are probably running behind, even where our planning standards would have determined they should have been. Brunswick is another example. They're both important because they supply CVD load. So, yes, I think we can point to a number of those.

MS CRAIK: Is that a function of having a separate planner, having AMI in the mix or is it other things as well?

MR POPPLE (SPA): I think it's a function, only to the extent that we don't think they've got as much skin in the game. Planners are strategic and thinkers rather than doers, so I think there tends to be some delays in those processes. They're not necessarily even intentional, but by the time you go through a planning permit, and Brunswick, for example - in fact it's a supercharged environment for investment now - getting planning approvals from council, community involvement - - -

MS CRAIK: I think we read something in the paper about that.

MR POPPLE (SPA): Yes, it's been a very hot issue in Victoria. We haven't built a transmission line in Victoria since - well, there was the Basslink connection - but as SP AusNet or its predecessors, 1990 was the last transmission line built in Victoria, so we haven't really engaged with some of those more difficult landowner issues as well. I think those projects can take time to develop.

In terms of the contractual arrangements though, I think you can get it to a point where there's more clarity. We do have a network agreement at the moment between AEMO and SP AusNet. I mean, originally it was VPX and PowerNet. I was on the VPX side in the early stages of that development, so I have seen it from both sides. The concern we have with that is it isn't clear, that planning risk I talked about before, at the moment. We've had a couple of attempts to try and improve that and there's various options as to how that might be dealt with but it's very, very hard to get it entirely clear. There's no doubt it could be improved and maybe it could be improved with less parties involved as well.

MS CRAIK: Just going back to planning issue when things you think fall behind, is there any way you can express some concern about that to kind of speed it up or is there an - - -

MR POPPLE (SPA): Yes, not so much recently but certainly in the mid-2000s period, I guess we called it shadow planning, where we did our own internal planning and tried to identify from our perspective where there were shortcomings on the network. We have worked collaboratively AEMO and the DBs on those sort of projects. So it's not as if we go away in our own shadowy back room and do things behind closed doors and come out. We do collaborate and we do propose alternative projects. Very early in 2000 we were proposing the Malvern-Heatherton line, wasn't it, which is still an issue on our network, for example, in terms of security. So we do have reasonable debates. It's not an adversarial framework at all. In fact the reason it's worked is because of that; I think we have cooperated. Certainly for a fair period of time, people on both sides of the fence came out of the old SEC and knew each other pretty well, so I think those arrangements have worked quite well because people have known each other and worked cooperatively together. That's still the case; senior people in both organisations had worked together going back quite a number of years. The concern I have though will be translating it into a commercial framework when people like myself are well retired and there's a whole new regime. It's not quite as clear how well it works commercially if push came to shove.

MR WEICKHARDT: Can I just continue on that theme. You say in your notes and you said just before that you're not advocating for a change. People in this industry don't seem to be backward in coming forward. If you don't like the current regime, why aren't you advocating for a change?

MR POPPLE (SPA): I think that's the key point; it's not that we don't like it, we think fundamentally and conceptually it can be made to work and there's some things that could be improved to make it work better, but I don't think that means necessarily that we're pushing to change the whole arrangement to a completely different arrangement. There are pluses and minuses in us for that; certainly our board do see the benefits of having risk clarified, because with a single planner/operator only, it's certainly clear where the risk lies. At the moment I still think we have the view that we hold the risk, even though we don't have the controls, so I do think that is a concern. But it's a question as to whether you can achieve improvements or a partly modified framework that can resolve those issues without necessarily going the full way.

I guess what we're trying to say is we've operated within that framework, we'd be happy either way. It's not that we're out there trying to propose dramatic changes because we think it's completely broken.

MS CRAIK: If you had your druthers, which way would you go, or is that putting you on the spot?

MR POPPLE (SPA): Above all, I think we should have a consistent national framework. I think there's pluses and minuses in both. I'd probably, sitting where we are, go for an integrated owner, planner, operator, because I do think - - -

MS CRAIK: The AEMC model?

MR POPPLE (SPA): Yes.

MS CRAIK: We don't know what it says yet, but is the Grid Australia model better than the AEMC model?

MR POPPLE (SPA): I think they're similar in terms of concept. I don't know if you want to add to that but I think it just comes back to clarity and avoiding a lot of the debate that happens. It doesn't add a huge amount of value I think. One of the areas that could be considered, I think, is the smaller projects. Under the Victorian arrangements SP AusNet is not permitted to augment the network and augment can be as minimal as replacing line instrument because it needs a bigger range, a tens of thousands of dollars project and yet we can't make that investment without reference and agreement by email and sometimes - - -

MR WEICKHARDT: There's no de minimis level?

MR POPPLE (SPA): Correct. That's the point I'm making. We have proposed over the years that there should be some level of investment which is well above by that, by the way. I mean, that's quite a ridiculous example. But there may well be a threshold level of project which is augmentation which we might be permitted to invest in in the normal regulatory framework, so we would have to propose that as part of our regulatory submission.

MR WEICKHARDT: If you had all power and wisdom, what figure would you nominate?

MR POPPLE (SPA): I think it's in the couples of millions personally.

MR WEICKHARDT: Five or 10 or something?

MR POPPLE (SPA): I think that's getting up there because five - I'm out of date, of course, with costs which have escalated a lot. By the time you get to augmenting a transformer and a station I don't think it needs a cover but maybe switchgear upgrades or something like which is - actually from my older experience there's quite a threshold between small and big projects so it's not actually that difficult to define a level. I'm not exactly sure what the number would be in today's terms but it's probably of that order.

MR PARKER (SPA): I suppose the more general point is the incentive to chase after those things. If you indulge me for a second, in my past work for National Grid in the UK who were an integrated planner and operator and they had an incentive scheme related to market outcomes, an incentive scheme that they negotiated with the distributors who took responsibility for market outcomes at that time, prices to consumers and in the three or four years after that came in it really changed the business in terms of going out and looking for these small investment. So, for example, re-rating lines, taking an overall view of the impact on its life and what sort of market outcomes you could get and so on. Tiny jobs, almost operational in nature, but the whole business chasing after them with an eye to that incentive scheme and that's something that we would struggle to do currently, I think.

MR WEICKHARDT: What was the incentive scheme around? Reliability performance, was it?

MR PARKER (SPA): No, it was essentially designed to minimise the cost of constraints, so when generators were constrained off and constrained on, so it was an overall scheme to ensure - much like the MIP scheme that AR's established but designed to ensure that Grid in particular minimised outages but also planned in a way that gave better outcomes to the market.

MR WEICKHARDT: Charles, can I just go back to an issue that the current environment has its downsides in your view and the board worries about risks; that's what boards are paid to do. But compared to an environment where the state government suddenly say, "Look, we're going to make everything N minus 3," we've been told that you have shareholders that don't like splashing capital around willy-nilly and indeed, that's one of the reasons why people have put to us that the privatised model actually has some advantages. In a situation where you were left without any regulation - and one can question whether that would be appropriate - would your board be anxious to spend huge additional amounts of capital that you haven't spent so far?

MR POPPLE (SPA): I think I can answer that with a practical example and "huge" is a very subjective term. But certainly in a distribution network we've spent over a regulatory allowance without huge returns before anyone says we incentivise to do that. You're right, I mean, we had capital constraints on our network that we do carefully allocate capital but we have spent above regulatory allowances on distribution network to ensure that it's reliable and safe and that was probably in response to a period of under-investment as well.

MR WEICKHARDT: Was that post the bushfire?

MR POPPLE (SPA): Yes, and preceding. SP AusNet purchased the business in 2005 and, as I said, there was a period where more investment in that network was necessary to improve reliability. Look, our board is very focused on ensuring that we meet reliability standards so if a framework changed such that the licence obligations was such that we had to meet defined reliability standards, that would drive our behaviour.

MR WEICKHARDT: I guess I'm trying to understand in a situation where you had planning responsibility but also shareholders who were careful with capital, how different the investment in the transmission network would be than it has actually been over the last sort of 18 years that you had a central planner there.

MR POPPLE (SPA): I think it would increase if the reliability standards hadn't changed, only by virtue of the fact that decisions might be made more expeditiously. The RIT-T defines really the process by which you determine whether transmission investment is required and to the extent that that is carried out by us or by someone else, the outcome should be same. I'll come back to the reason why it may not be in a minute but if you assume that that's the turn-handle approach - which it isn't quite and I know we've all shared views about how easy it is to get different outcomes from those processes. But it is a pretty transparent and open process so I think we would run that the same way that AEMO would and get the same outcomes and in that circumstance we're basically obliged to make that investment.

The other thing I would say is that we have had some concerns and have expressed these publicly over the last more than 10 years actually around some of the inadequacies of that test because we don't think it appropriately values low probability, high cost events or maybe it's not even a question of value, it might be a question of how they're treated. So, again, because we see a very substantial risk with those outages and are concerned about avoiding them, we would be convinced and encouraged to make those investments in a timely way.

MR WEICKHARDT: If you had to guess, would you have spent 50 per cent more of the capital or a hundred per cent more capital?

MR POPPLE (SPA): No, I don't think it's nearly that much. I'm talking about probably the same projects a little bit earlier, a year or two earlier, probably more so than anything else. Alistair, I think you wanted to add something.

MR PARKER (SPA): I just wanted to add in a sense we don't have to speculate. We're also ready do the asset replacement planning, so we worry about assets reaching the end of their life. But what we do in our processes is actually take into account the value of customer reliability as well in that. Earlier this year our board approved three CBD projects, two of which were being done under our own auspices

as ASIC replaced the one that was being done by City Park in essence that was over $600 million of investment, something that we have told our investors about and it was taken against a backdrop of those obligations around reliability and taking it.

So we have actually, on the asset replacement side, used very similar processes and I would say probably arrived, as Charles says, and maybe done them a year or so earlier than might otherwise have been the case.

MR WEICKHARDT: One question from me just to follow-up. You again note the board's worry about assignment of liability with a central planner in place. Two questions about that: first of all, in the 18 years that that arrangement has been in place and different names of parties, but has there been an issue where there has been a serious question of some problem and who was liable and lawyers getting involved?

MR POPPLE (SPA): Yes. It was before my time at AusNet - I think it was VPX at the time - the Yallourn - there were a couple of outages, wasn't there, that wasn't AEMO related. I don't think there's anything with AEMO that we can point to.

MR WEICKHARDT: Okay. If AEMO carried insurance that insured against any liability that they might have for a deficiency as a planner, would that make your board any more comfortable?

MR POPPLE (SPA): If the contracts were robust in terms of allocating that liability, it probably would.

MR WEICKHARDT: Do you think the contracts could be made robust?

MR POPPLE (SPA): I think they could be made better, yes.

MS CRAIK: Do you think you can envisage a situation where AEMO might be found liable for planning? Is that possible?

MR POPPLE (SPA): One of the challenges - well, the answer to that is yes. Even in the current circumstances where it's clear that without an asset failure, for example, there was load loss or not supplied - and we are that close in some areas at the moment - that would be a pretty clear indication of a planning failure. I still don't necessarily think the contract is that clear though in terms of how that would be picked up currently.

You would think it's almost as simple as saying if it was N minus 1, which of course it isn't, then you could prove that the system on the particular day was above N minus 1; even that doesn't necessarily constitute a planning failure per se because

there may be other circumstances, how is the network operated at the time, what the customer is doing. There's all sorts of uncertainties I think that mean it's not black and white. It's a lawyers' delight I think personally but maybe that's what it comes down to for the odd occasions where you have to adjudicate on that because as you've observed, it's been so infrequent at the moment, it's not on the register.

MS CRAIK: Contestability, and we've talked a bit about this with you before and your submission suggests that there's actually very little contestability solutions in Victoria, how does the process actually work in Victoria?

MR POPPLE (SPA): The practice has been that - well, there's a guideline in place that determines whether or not a specific project is contestable or not and that was developed initially through the ESC when the ESC were the regulator. So the intent at least is that AEMO will do the planning and determine the need for a new asset. Now, I use the word "asset" fairly carefully at the moment because I think originally it could have been a service, but the reality is, it's always been an asset. So on determining that need and the timing, AEMO will specify both the assets and the interface arrangements. The way they do that is through us, of course. We work to identify what the connection points are, what requirements need to be met at the interface and generally, in fact always, there will be some works that we have to do, as an incumbent network owner, to allow that connection to be made. In other words, it's heavily integrated with our own networks.

The guidelines state that projects above a certain value as a guide, but certainly separable from the rest of the network, should be made contestable on a build, own and operate basis and therefore AEMO would tender that project out. They would specify in some detail, often using our information that we're obligated to provide them under the network agreement, to specify the asset, and they would then seek contestable tenders on a build, own and operate basis. So it's not only the construction of the asset because we would always tender that out anyway ourselves, it's the 30-year - roughly, or whatever period they define - ownership as well.

Then the tenders would come back and it would be typically as an annual revenue stream. So it's not a capital cost, it's an annual revenue stream, which covers financing of the new equipment, plus the operating costs and maintenance costs and any risks associated with asset replacement that might be required to maintain that ongoing service over that period of time. So it's just a normal response and AEMO would judge those bids and made their determination on generally lowest cost.

MS CRAIK: So our perception before - or at least some of us had the perception, I think - that AEMO sought a solution rather than - - -

MR POPPLE (SPA): The original intention of the regime when it was developed

in 1994 was that, yes, you could specify service. In other words, you needed X megawatts of capability between these two points, or expressed in some other way. I was in VPX at the time and did the first tender and it does prove to be quite difficult, particularly when, as a TNSP, you need to have some control over what service you're offering as well, and AEMO have always been - they would have to speak for themselves on this - but my feeling is that they have always been a bit nervous about being that open because it's a bit unclear as to what they were actually then going to get and able to operate it effectively or not. It's just harder as well.

MS CRAIK: Yes. Do you think it's possible to increase the level of contestability in the system? Do you think having a national system would - - -

MR POPPLE (SPA): The weakness I guess has been the depth of the market, particularly for ownership. I guess the bigger the market, the deeper it might be, so it shouldn't hurt. Again I think care would have to be taken though about the lower level of contestability because you do get to the point where, even though they're separable, the reality is they're not totally separable. Even a transmission line which clearly goes from point A to point B has got to be switched in the terminal station. It's getting technical, but we typically use a breaker and a half arrangement where we use three circuit-breakers to switch two lines and the unit protection schemes which operate across the three breakers, so all those things are in place typically before the line is built. So the interfaces have to be carefully designed.

For a 200-kilometre line, costing millions and millions of dollars, that's justified, but for probably some small additions to a station like a capacitor bank which is a small piece of equipment in the station itself, it may not be justified.

MS CRAIK: Not really.

MR POPPLE (SPA): They have been contestable; in fact we lost one of those. There are other parties, for example, that own a capacitor bank inside our terminal stations at the moment on that basis.

MR WEICKHARDT: Can I just clarify a point on that issue. In a situation where you win one of these contestable tenders as SP AusNet, you've gone out, you've tendered the capital cost, you know what the capital cost is. How does the revenue stream that AEMO allow you compare with what you would have been allowed had you gone to the AER with that project on an open-book basis saying, "Here's the capital for the project. Here are our operating costs. What would we get for that?"

MR POPPLE (SPA): It's basically a contestable tender, it's a contestable bid, so it's completely outside the regulatory process.

MR WEICKHARDT: I understand that, but from your point of view, would you prefer - - -

MR POPPLE (SPA): I think you're asking questions which are commercially in confidence.

MR WEICKHARDT: Okay.

MR POPPLE (SPA): I don't know that we - - -

MR WEICKHARDT: Let me put it this way: we suggested that AEMO shouldn't be determining the revenue stream in the modified Victorian process for larger projects; that the transmission companies should go to the AER with a project with an agreed specification and agreed timing with AEMO, but go to the AER with an open book, "Here are the tenders, here are the capital costs, here are our costs of operating it," and then get a revenue stream from the AER. From your point of view, would that be a preferable arrangement compared to the one you've got?

MR POPPLE (SPA): That means effectively that you don't have a third party planner.

MR WEICKHARDT: No, you've got a - - -

MR POPPLE (SPA): It depends what you call "planner"; certainly an investment decision-maker - - -

MR WEICKHARDT: Yes, you've got an investment decision-maker but not a procurer, and we hadn't suggested contestability but we had suggested an open-book approach to the regulator.

MR POPPLE (SPA): The contestability argument is two-sided for us. That certainly would, I think, remove some of the engineering concerns but I think it's basically a regulated project to do that, so it's basically a third party making a decision around need but it's very similar to - who makes that decision relevant, it just becomes a regulated project for us subject to returns and hopefully separated into costs as well because there is a lot of costs in - - -

MR WEICKHARDT: How do you get the costs?

MR POPPLE (SPA): Leaving aside the contested portion of the projects which I can't comment more on, there's certainly additional costs because of the need to develop separate interface projects and separate specifications. These are basically one project but they're divided into two which is fairly artificial. We do a bit of it

and it's not always a small bit either and that's regulated so it would still be subject to regulated pricing. So what I failed to mention before, a project that doesn't meet the hurdle for contestability AEMO still contracts with us or separately outside the regulatory framework but it's subject to re-regulated pricing. So that already is in place for projects that AEMO determine are not sufficiently big to justify contestability.

MR WEICKHARDT: So that comes out of your five-year capital?

MR POPPLE (SPA): No, its additional. We would write a contract with AEMO for - say, it was year 2, they determine the need, we build the project. For three years we'd have a separate contract and then it would be rolling into the asset base at that cost, the agreed cost, for the next period, so then for ever more it becomes part of the regulated asset base. The need to do it for the three years is simply because it's not foreshadowed in our regulatory submission. But if it had have been, it would be exactly the same, so it's identical in every respect.

DR CRAIK: Do you think the system of having - if you went to a more AEMC model, having the AER determine a revenue stream and a RIT-T when you actually do the project which can be some years down the track from when the AER actually determine the revenue stream and the project may have changed substantially anyway seven years later given what can change.

MR POPPLE (SPA): Yes.

DR CRAIK: Are you better off doing major project by major project or - - -

MR POPPLE (SPA): Which is basically what we have in Victoria.

DR CRAIK: Yes, which is what you have in Victoria.

MR WEICKHARDT: Except they're not just major projects, they're every project.

DR CRAIK: They may even be minor.

MR POPPLE (SPA): The reality is there has only been 10 or - how many contestable projects over the years?

MR GEBERT (SPA): Eight.

MR POPPLE (SPA): Only eight, so that's eight in 18 years and there has not been many in the last five or six years actually. So when I say it's at a small level, the reality is we're not even doing very, very small ones at the moment.

DR CRAIK: Do you think when you have additional owner-operators into the system that actually increases the risk of - - -

MR POPPLE (SPA): Absolutely. I mean's that our biggest - you could get this balkanised grid where you have five or six different operators of a transmission network which I think everywhere else in the world is much more integrated in that.

DR CRAIK: Does that mean we should have a national transmission company in Australia.

MR POPPLE (SPA): That's utopia probably from my personal perspective. It's consistent arrangements, I think as I said before, and it's not only consistency around some of the planning issues we've talked about, it's incentives for pricing. The current pricing has been in place since 94 really as well. It hasn't changed dramatically. It has imperfections. I was personally pretty heavily involved in developing it and have had another go at trying to fix it but it has failings. It doesn't provide the correct signals for new generation connection, for example.

MR WEICKHARDT: This is TUOS pricing?

MR POPPLE (SPA): Yes, that's right or necessarily the right signals for constraints and planning, so it is a compromise but, again, it was developed at a time when the national market was only forming and there were some state boundary issues that got in the way of that as well. I think the key thing is consistency personally and how best to achieve that because it's a very big network. The asset value alone would be substantial across all the networks. There's different ownership structures, different planning arrangements, different reliability standards at the moment, so certainly the first step to me would seem to be getting some more consistency in those arrangements.

MR WEICKHARDT: So on that score you suggested that there are aspects of our draft report recommendation to modify the Victorian arrangements to try and improve the current situation. We have seen throughout the national grid some extremes which people would suggest range from gold-plating at one end to your suggesting perhaps flying a bit too close to the sun on the other and the risk of under-investment. If you were set the exam task to modify our proposal to make it more acceptable and better in your eyes, what would you change?

MR POPPLE (SPA): Personally, if pushed, I would say despite the arrangement currently I think the investment decision-making should be made by the party that ultimately holds the risk. I do think having an integrated planner operator is probably the best way of dealing with that provided then there's national focus on

planning. So however you want to describe this arrangement, I think you can have a national planner but fall short of that planner actually making investment decisions but certainly providing the framework for the decision and also being in a position of having their plans well understood by the regulator, whoever that is, AER presumably such that it still gives the network owner the option of making a different decision because they have a different view of the risk and from our experience that can certainly occur. We all have a different view of the risk from AEMO in certain circumstances.

So it would still allow the network owner-operator to make what they thought was the best investment decision still based on their own assessment of risks using the cost benefit analysis that's used for the RIT-T but then obviously needing to justify even more strongly with the regulators as to why they should allow revenue for a decision that's different to that national plan.

MR WEICKHARDT: Given the fact that you wouldn't want to make the investment if the regulator wasn't going to allow you any revenue, associated with it, effectively in that situation you're, I think, implying that you trust the regulator to make a better call as to whether or not a planning debate between you and AEMO, whether the right was on the transmission company side rather than on the central planner's side.

MR POPPLE (SPA): I think the central planner has enormous power because the regulator will see them as independent and they won't see us as independent but it doesn't stop us putting a strong case because ultimately they will be using different assumptions in the RIT-T than we would be and we would have to convince the regulator our view was right. Imposed on this as well I would still prefer to see some service based standards as well, firm access if that's what you want to call it or optional firm access. I don't like the word "firm access".

We started thinking about firm access at the inception of the market and it's that term that concerns people. But however we express it, some sort of performance standard or measure which provides a business with incentives which we would have to take into account in making those planning decisions but which I've said the planner wouldn't, so they will change as well the incentives. Sure, you'd get a regulated return if that is appropriate for the investment that's made but there will be other incentives and benefits as well that would accrue to a network operator making that decision.

MR WEICKHARDT: We did support optional firm access and the idea behind that and we also said that we felt that if there was a different view between the planner and the transmission company about whether an investment should be made, that the regulator should be the person that ruled on that. I guess what we were

concerned about in simply saying, "Well, you have a national planner but you allow transmission companies just to invest as they see fit and that gets rolled into regulatory asset bases," we were concerned that there's a behaviour and a practice and observed outcomes elsewhere in the grid where very significant investment appears to have occurred with - the only way you can reconcile that is to assume customers value reliability standards well below those that have been measured by most of the sampling processes that have been carried out.

MR POPPLE (SPA): You've reminded me of a pretty important point in all of this, that there's much strength in customer involvement in these processes. Now, that's been foreshadowed in other reviews. I guess we've almost taken that as a given in some way because I think this whole debate about customer value and reliability is one that has to be had. It's hard, again, and it's also particularly difficult for a transmission network which is providing a similar level of service across a wide area. But we certainly did a lot of work in valuing customer reliability from a utility perspective - well, it was from a customer perspective. It was done through surveys but it still only scratches the surface.

I certainly agree there has to be good checks and balances but there is a big difference between planning and investment decision-making and it also comes back to the question of firm access. I think one of the concerns we would have under firm access arrangements is if it was an independent planner who's offering firm access because if it's a party that can't take that liability, they will struggle to provide the financial backup to cover that part of the service.

MR WEICKHARDT: Sorry, who is - - -

MR POPPLE (SPA): I guess what I'm saying is you really need an integrated planner, owner-operator, or investment decision-maker to offer firm access seamlessly. One of our biggest struggles in all our contracts with AEMO - and this is not a criticism - is that they have to back to back any risk, so they will have a contract with the new connecting generator for shared network access because they're the TNSP. They have to back to back that with us in terms of risk because they can't take residual risk.

MR WEICKHARDT: Are you saying that technically speaking, you regard AEMO as the transmission company effectively in Victoria?

MR POPPLE (SPA): In Victoria, AEMO is the transmission network service provider, that's correct. They are the party that levies transmission charges on customers. We get paid our regulated revenue as a bulk or a monthly amount, if you like. It's a fixed annual charge. But AEMO is the party that translates those charges into variable prices which they apply to customers. They are also providing a service

and all the terms and conditions associated with that. So, yes, I guess that's the point I was trying to make earlier, that they're not just a planner or an investment decision-maker, they are actually the provider of transmission network services in Victoria for the shared network.

MS CRAIK: You talk about the operators of companies, the businesses making decisions about investment, and you would prefer them to make the decision about the investment because they wear the risk at the end of the day. But the model that you propose relies a fair bit on the AER making the right call, being persuaded by your case as opposed to by AEMO's case, I guess. We've made a few suggestions on changes to the AER based on the comments and feedback that we had during the process. Do you think the suggestions that we've made are appropriate? Are they sufficient? Are they enough or should there be more? Are they not necessarily - - -

MR POPPLE (SPA): I do think they need a greater level of resourcing of people who understand the business operations; I think that is important. I think there's a limited extent to which you can use consultants to assist in their processes. Anything I say will be interpreted as trying to achieve a better outcome for the businesses; what I'm really trying to say is that I think regulation has probably got too adversarial in Australia and I think more understanding - and you can't call it collaborative - that's not the term at all, but just more understanding of the businesses' needs from both sides I think would be better than the processes we have at the moment, where there's too much emphasis on the legal side, I think, as a personal view.

So, yes, I think they need more strength of resourcing, independence, including engineering capability. Turnover of staff is quite high, I think, so anything that can make sure they have strong corporate knowledge and perhaps a more detailed knowledge of the industry, which goes both ways because they will understand things businesses can do to be more efficient, I think would certainly be a big step in the right direction. I don't think you can ever put a regulator though in the role of the planner. They can never ultimately be held accountable for the fact there's outages because they haven't allowed certain outcomes, but they're certainly obviously at the end of the day making a final call on the regs, as distinct from - - -

MS CRAIK: So if AEMO makes a call and doesn't allow you to build something, then you think perhaps they ought to have an element of liability, but if the regular makes a call and doesn't allow the same thing, then they don't - - -

MR POPPLE (SPA): I think they're making different decisions. I would see the AEMOs making more the judgment about a specific investment decision. AER is taking the view about the whole of the revenue that a business needs to operate according to its licence effectively.

MR PARKER (SPA): Can I just make the point: I think the important point with AER is they're trying to provide an overall incentive to do things better and more efficient and they're recognised within that it's not about necessarily each individual project or program but that the investment decision-maker who is closest to the decision at the time it's actually made is balancing their overall revenues, the overall risk profile and the projects that they actually have to do at that point in time. I think earlier you made the point about you can't foresee these things precisely seven years ahead; that's exactly right. You're trying to estimate an overall level of revenue that will support the needs of the business, but much more importantly provide an incentive to have good cost control.

MR WEICKHARDT: Just on that score, we've debated this frequently in this whole issue, if you've got a profit-maximising private owner in a distribution network - and you've talked about your own experience in a distribution network where you start to see reliability falling - we felt that it was entirely appropriate that a distribution owner be incentivised on performance and invest in a manner that they saw fit. In a transmission entity, having an incentive scheme based only on reliability with reliability problems occurring so seldom and when they do, being pretty catastrophic, do you think it would be appropriate to simply have a transmission company with no regulation around reliability at all?

MR POPPLE (SPA): With no regulation around reliability?

MR WEICKHARDT: Only on an outcome.

MR POPPLE (SPA): So this is an environment where there's firm access or not firm access?

MR WEICKHARDT: Assume no firm access at this stage.

MR POPPLE (SPA): Because firm access should provide that - - -

MR WEICKHARDT: Yes, sure.

MR POPPLE (SPA): So without firm access and no other - do you want to - - -

MR PARKER (SPA): I think your point is you can do other things. I think you can have, rather than reliability incentive schemes, availability incentive schemes, so there's no customer access. So you can sort of step it back from that direct outcome to something that's indicative. At the distribution level, we tend to talk about reliability; in transmission, we tend to talk about security and availability. So within the measures that you can use in your incentive scheme, you can have something that's more targeted to that long-term view.

MR WEICKHARDT: Can the regulator observe availability?

MR PARKER (SPA): Yes. We report it now to AEMO, for example.

MR POPPLE (SPA): We've had availability incentive schemes between AEMO and ourselves but that's not I think what you're calling reliability measures. It's certainly provided us incentive to operate our networks and take outages at the best time, at the least adverse times, but because we don't have that planning capability, it's not a reliability measure in a sense. So the question is whether it's desirable to have - I would have thought you always need some regulatory backstop. I mean, personally I think firm access can do that in a more unregulated environment and certainly our view - - -

MR WEICKHARDT: If you moved to firm access on both load and generation?

MR POPPLE (SPA): It's probably called something different but, yes. Having some service standard for load. I think firm access as a concept is more related to generation but you need some measure for customer performance as well.

MR PARKER (SPA): I think as well this ultimate liability question does influence the decision-making of the private company and I've seen a number of occasions over the years where in fact it's been the private company that is worried about the very strategic event because they take a more commercial view of the risk to themselves.

MR WEICKHARDT: Yes, but you take to a degree pot luck on the good conscience and the capability of a transmission owner in that situation. Some may be very careful and prudent and conscious of risks and some may not be.

MR POPPLE (SPA): I do think the financial implications are more direct than that, so I agree. That's because there is both, and certainly transmission businesses by their nature - operators understand the implications it has on customers and widespread implications; PR implications for a listed business are significant as well. But at the end of the day, as I said at the outset, there are real financial costs that could come back through legal processes to a business because there are a number of risks which are not totally catastrophic, in fact most of them aren't.

But outages for two or three or four hours in a CBD load are very, very high cost events and we would expect that would be sheeted back to the network business not doing the right thing and we would certainly be wanting to make investment decisions, otherwise we wouldn't be making them now and we wouldn't be concerned about CBD load out of Richmond and West Melbourne et cetera. But it is

fundamental to our planning and making sure the timing is appropriate, pre-summer is a key time for investments to be put in place and we fall over backwards to make sure that happens.

MR WEICKHARDT: We're out of time, unfortunately. I suspect we could spend another hour talking about this. If I could be bold, if you could supplement your first letter with suggestions that you started to elaborate on in this discussion, but on suggestions of how an environment with a central planner, a national planner, could be improved building on your experience of working with a national planner and taking account of your concerns about risks.

DR CRAIK: And incentives.

MR POPPLE (SPA): Yes, I would be very happy to do that.

MR WEICKHARDT: And incentives but noting risks of under-investment as well as over-investment.

MR POPPLE (SPA): Yes.

MR WEICKHARDT: You're now sort of the all-wise emperor of Australia - - -

DR CRAIK: You have a free hand.

MR POPPLE (SPA): We would be very happy to do that. We have given it some thought and I would reiterate it's probably not something central to our business because we have operated in a framework where AEMO, as the TNSP, not only carry out the TNSP role, they're probably more the thought leaders in terms of planning arrangements. But we certainly have our ideas and we have all had a pretty deep background in these areas so we would be only too delighted to have a crack at it.

MR WEICKHARDT: Thank you.

DR CRAIK: We would appreciate that.

MR WEICKHARDT: Thank you.

MR WEICKHARDT: Our next participant are Hydro Tasmania. If you could give your name and the capacity in which you're appearing, please.

MR BOWKER (HT): David Bowker, manager regulatory affairs at Hydro Tasmania.

MR WEICKHARDT: We have seen some material from you but if you'd like to briefly introduce what you'd like and we'll move to questions then.

MR BOWKER (HT): I was expecting to make a presentation but what I could do is summarise for you the key points from that. Really Hydro Tasmania is very concerned that the Productivity Commission should be endorsing optional firm access, so I wanted to talk a bit about that and then I also wanted to talk very briefly about transmission planning. In terms of optional firm access, it's really a very misnamed concept. It's not optional in the sense that generators need to effectively take it up as an option and it's certainly not firm because it only addresses thermal constraints, it doesn't address any system stability or ancillary services constraints. So I think a number of the submissions that have been made - - -

MR WEICKHARDT: Can you just clarify that point, it only covers thermal constraints?

MR BOWKER (HT): Yes. So if a line is constrained because of a thermal constraint, then that will be accommodated by the firm access that you have. If you were constrained off as a generator because of a system stability constraint or an ancillary service constraint, then your firm access effectively won't count, so it's not firm under those conditions.

DR CRAIK: Would you get paid for not being able to - - -

MR BOWKER (HT): No, you wouldn't.

DR CRAIK: So you wouldn't get compensation.

MR BOWKER (HT): That's right.

MR WEICKHARDT: That is absolutely clear, is it?

DR CRAIK: How come nobody has said that?

MR BOWKER (HT): I don't know.

MR WEICKHARDT: So it is only if a line is thermally constrained or a

transformer is thermally constrained?

MR BOWKER (HT): Yes.

MR WEICKHARDT: If the line was chopped in two by a bulldozer, you're saying that - - -

MR BOWKER (HT): That is not one of those issues, that is not a system normal and there is a separate set of arrangements for non-system normal arrangements where the TNSP will effectively downgrade your firmness. So you might have bought 100 megawatts of firm and that is 100 megawatts of firm when the system is normal, when everything is operating. If the bulldozer comes and knocks down a line, then the TNSP will allocate you something less than 100 megawatts because the line is not firm. So it is not firm very much at all in fact which, as I say, it is a misnomer to call it firm and it is what Charles Popple was referring to, his concern at the use of the word "firm"; it's a bit firmer really, it's not firm. So that's one of our concerns in relation to it.

If you go back a step, the first question we would ask is, what's the problem you're trying to solve. The problem that's been identified by AEMC - well, first of all what they wanted to do is come up with an alternative to the status quo, to develop it, understand what it meant and then make a choice and say, "This is really a much better way to go, let's go that way," or to say, "We've designed the best thing we can and it's not better than what we're doing, so we'll stay with what we're doing." So that is really where the AEMC is at and that's what the draft report is saying, they haven't committed yet to whether or not they will recommend to the SCER to go with or to recommend further work or to recommend adoption of optional firm access.

Our concern really is what's the problem that's trying to be solved? So you have this - and I think most people acknowledge it's an enormous change, why are you doing it? There seemed to be three issues that people talk about. One is the disorderly bidding, one is congestion management and the other one is locational signals for generators. So in terms of disorderly bidding, there is a lot of discussions in the paper about what it is, how it happens and that sort of thing and, sure, it does happen. The question that's really important is, how big is it? How much does it matter? Disorderly bidding was last looked at in 2008 and at that stage it was quantified worth $8 million a year. Because there was some disorderly bidding the cost to the market was $8 million a year. That's .014 per cent of the revenue of the market, so it's hardly a big problem.

MR WEICKHARDT: When you say it was last looked at in 2008, the AEMC have recently prepared a paper looking at the South Australian disorderly bidding

and the AER recently have written a paper about disorderly bidding showing much much larger numbers than that.

MR BOWKER (HT): This is the last time that there was a national look at it and in fact the work that was done then in 2008 for congestion management is actually being redone by the National Generator Forum, as input into the AEMC process and would come forward to you as well.

MR WEICKHARDT: Have you seen the AER's work on this?

MR BOWKER (HT): No, I haven't seen it.

MR WEICKHARDT: That suggests a much, much larger issue, a very much larger issue.

MR BOWKER (HT): I'm aware that they hold that view but I haven't seen that work.

MR WEICKHARDT: Okay.

MR BOWKER (HT): So in terms of congestion management, AEMO publish - and one of the slides that you've got there shows the trend in congestion management where under System Normal, which is the part that's managed by the optional firm access, is down to about $5 million per annum from congestion management and all together it's about $35 million. That's in 2011. Our expectation is that it would have declined since then. So if optional firm access were to fix all the congestion problems in the market, then what it would be doing is removing maybe $35 million of cost, something less than $35 million of cost. This is an AEMO number. So it's not a material number in terms of the market as a whole.

MR WEICKHARDT: Are you taking into account all the times when interconnectors are clamped or very lightly loaded when there's significant price separation between regions?

MR BOWKER (HT): This is the AEMO number for congestion, so I'm not sure what they've included in that, but that's their representation of congestion. I certainly take that on notice. As you're probably aware, we haven't put in our submission yet, so I can address that in the submission.

MR WEICKHARDT: There seemed to be occasions where particularly the interconnector between Victoria and South Australia has been clamped. At the time there has been significant price separation between those two regions. You don't need those events to occur for very long for there to be very, very significant dollars.

Now, you might write those off as transfers but the person on the wrong end of the transfer isn't very happy about that. Ultimately that can give some significant problems. Indeed, I seem to remember reading early on in this submission there was this debate about whether or not Basslink should be allowed to bid down to - - -

MR BOWKER (HT): There's a rule change at the moment to stop it bidding.

MR WEICKHARDT: Yes. As I understand it, Hydro Tasmania were saying that they were concerned that because of congestion around the Latrobe Valley there were occasions, if Basslink weren't allowed to bid down, that you wouldn't be allowed to export or you would not be dispatched ahead of some of the Latrobe Valley generators because of that congestion.

MR BOWKER (HT): Yes, in fact what would happen because of the constraints in Victoria, we would actually be forced to import potentially a market price cap. So that could be a very large amount but in the order of two or three million dollars is the most it's been and it hasn't happened now for two years because the constraint in Victoria has been removed. That's a very big issue for us, as you say, but it's still two or three million dollars out of potentially the 35 and I don't think we'd be captured in this one.

So the first question for us is: what problem are we trying to solve? The second one is that we don't see that OFA will solve these problems. In terms of the disorderly bidding, there's a Frontier report that was done for the National Generator Forum which actually leads you to expect that there would still be forms of disorderly bidding, even if you had optional firm access. The congestion it may solve, but it's not a very big problem.

The implementation is fairly complex and I think one of my concerns is that there's been a lot of talk in theory about what might happen, where people haven't actually looked at what would have to happen if you were to implement optional firm access. One of the examples on one of the slides in here is that the Snowy just took an example of trying to get firm access between Upper Tumut and the New South Wales node and in that case, there would be 648 constraints that they would need to effectively purchase because a constraint is a flow gate. So they would go to TransGrid and ask for firm access over 648 constraints and be given a price. That's only one power station to the regional reference node. There's about 300 generation units in the market, so it's quite a large number.

MR WEICKHARDT: Can I just clarify that. It would be surely up to TransGrid to decide what they needed to do to provide that generator with firm access. That generator itself wouldn't have to identify 648 constraints. It would be surely up to TransGrid to decide what they did about the firm access and how much they offered

it for.

MR BOWKER (HT): Yes, you're right. The work is with TransGrid.

MR WEICKHARDT: Thank you.

MR BOWKER (HT): In terms of pricing the work with TransGrid, Snowy Hydro, who own Upper Tumut, would need to monitor 648 constraints to make sure that none of them bound, because if one of them binds, then their income is changed. So some of their income will be firm and will be priced at the regional reference node and another part of their generation will be priced at the localised price for Upper Tumut.

So in terms of the submissions that have been made to the AEMC - and remember optional firm access generators for a long time have been talking about the desire to have firm access, but real firm access is very expensive - and also in this paradigm, it's optional, so you would expect that generators would be really keen to see something that was optional and something that was firm. But when you look at it, only three generators have actually supported the optional firm access. So the vast majority of generators don't want optional firm access to be implemented. Superficially, I think that's something that the commission should be looking at and understanding why such a superficially attractive option is not attractive to generators.

MR WEICKHARDT: Could it have anything to do with the fact that they actually earn significant premiums from congestion at the moment?

MR BOWKER (HT): I saw that in your report about AER. AER made the assertion that Kogan Creek was located where it was to take advantage of the constraints. I can tell you that if I went to my board with a proposal to build something and one of the revenue streams was from constraints, it wouldn't get up. I was involved in the Basslink business case; in that business case, there were no dollars at all for, if you like, taking advantage of constraints. So this concept that AER have that people locate generators "because here is a really good constrained place, we can make lots of money if we put our generator here" is not commercially accurate at all. It's a theoretical paradigm that they have.

MR WEICKHARDT: It's an observed outcome that generators do make a lot of money out of constraints though, or some do.

MR BOWKER (HT): Some do, sometimes, yes, but they were talking about locational signals, and in terms of a locational signal, a constraint is not something you go and look for, it's something you go and avoid as an investor.

MR WEICKHARDT: Even with a peaking plant?

MR BOWKER (HT): Yes. Kogan Creek is owned by CS Energy so they will be commenting on that in the National Generator Forum submission to the commission. That's another issue. The other point I was going to raise was about the new entrants. "New entrants" of course today primarily means wind because of the renewable energy target. The Clean Energy Council see optional firm access as a significant barrier to entry, and particularly at this stage for the national market where we're trying to change our portfolio from carbon intensive to renewables, there's a need for a lot of new entrants, and something that deters new entrants is a significant issue, and the complexity of optional firm access is a significant deterrent.

The next point I wanted to raise about the regulatory investment test for transmission, the RIT-T, the issue with this is that the test is designed to build the efficient level of transmission. One of the findings for the commission which we support is the fact that the transmission is at about the right level for the current load. So another way of interpreting that is that RIT-T is doing what it was designed to do. It's a fairly complex test and our perception is certainly that the things needed building have been built and equally some things that shouldn't haven't been built.

One of the interesting questions then is one of the things that comes out of optional firm access is that some more transmission will be built because a generator determines that it wants some firm access, so the transmission business will go and potentially build some additional transmission. So if the RIT-T is building efficient transmission presumably this new transmission that is being built is actually in excess of the efficient level of transmission. That is something I really haven't reconciled my mind to and I'm not quite sure how to reconcile it. I just raise that for you.

MR WEICKHARDT: Can I just clarify, I had been led to believe - and I think that confirmed by the AER - that there have been several reg tests done on transmission but the RIT-T itself has not been used yet.

MR BOWKER (HT): Yes, it's very new, that's correct.

MR WEICKHARDT: The AER would say in terms of the reg test that have been put up in transmission that they've had lots of concerns about whether or not they actually do deliver any efficient investment but the current RIT-T we described in our report is like an exam that is set by the examinee, answered by the examinee and marked by the examinee and the AER just look on and are powerless even when they're discomforted by it.

MR BOWKER (HT): Yes.

MR WEICKHARDT: The AER actually at a roundtable on transmission confirmed that there were several examples of reg tests that they'd seen but they think the RIT-T is somewhat better, but several examples of reg tests that they were significantly discomforted by but couldn't do anything about it.

MR BOWKER (HT): The RIT-T is in principle the same test the regulatory test was, so I'm not familiar with the cases they referring to. But I think the issue really is that the outcome over several years has been the transmission system that broadly reflects, in our view, what is the right level of transmission.

DR CRAIK: Even though the customer in some cases appears to be paying, according to AEMO, what would be extreme rates for that reliability.

MR BOWKER (HT): So you're talking about gold-plating the line transmission which is really not so much to do with the regulatory test but the contestability you were talking about earlier. Identifying what is to be built is one thing which is really what RIT-T is about and then how much you pay for it is more to do with the contestability and the way in which the next level down works.

MR WEICKHARDT: Well, deterministic reliability standards have driven investment, particularly in New South Wales and Queensland, which suggests - as Wendy noted - that customers value reliability way, way above any of the sort of individual samplings of customers which suggest they value it at.

MR BOWKER (HT): Yes. It's another concern that we have, it's a very hard thing - I think value and reliability for customers - customers have a great deal of problem with price, particularly at a domestic level. Trying to get them across the concept of reliability - and it came up earlier today, "Would you pay an extra dollar to have one less outage every two years or whatever?" Customers can understand reliability in terms of what they've experienced today but making significant changes to reliability either up or down, I suspect would be very hard for customers and I'm personally very sceptical of the values that are being attributed to customer reliability by the sort of work that AEMO is doing.

DR CRAIK: But they're not that dissimilar from what's being found in the rest of the world for customer reliability values.

MR BOWKER (HT): Yes, I appreciate that.

DR CRAIK: What did you think of our suggestion of getting the ABS to undertake extensive work on this issue?

MR BOWKER (HT): The question then is because of the nature of the network you have to aggregate things so that if I as an individual value it highly but my neighbour doesn't, we're going to end up with the same reliability, assuming we don't do anything for local generation or whatever. I'm not sure that it's going to add a lot of value because the level of discrimination just isn't there.

MR WEICKHARDT: What would you do instead?

MR BOWKER (HT): My personal view is that the reliability standards, particularly in distribution are set - sorry, people are complaining about price but a lot of the price drivers are the reliability standards the states have imposed. So my view would be that the reliability standards should be decreased because it is essentially an equilibrium between what people are willing to pay and the reliability.

MR WEICKHARDT: How would you decide how far you would reduce them?

MR BOWKER (HT): By incrementally changing it.

MR WEICKHARDT: What, until the volume level of protests increased or what?

MR BOWKER (HT): It's a difficult area and I'm actually from a generator and not from a distribution business luckily. Our reliability is very good.

DR CRAIK: Do you see any evidence of excessive investments in Tasmania?

MR BOWKER (HT): We do, yes. But it's the sort of generic problem that has happened with transmission businesses, a very - I don't know what you call it - relaxed regulatory regime was put in place and people played by the rules and so that's the outcome that you get.

MR WEICKHARDT: Can you give examples of over-investment, gold plating?

MR BOWKER (HT): I can't give specific ones but I have seen it in Tasmania.

DR CRAIK: You can't give us any clues?

MR BOWKER (HT): I can send you something and I can include it in our submission.

DR CRAIK: That would be helpful. Thank you.

MR WEICKHARDT: Lots of people talk about gold plating and nobody has yet

seen it.

MR BOWKER (HT): Is that right.

DR CRAIK: Is there any scope for any further merchant interconnectors in Australia?

MR BOWKER (HT): No, I don't. Basslink has been very successful and it was a good solution for us but I think, as you've identified, it only works where there is a single beneficiary or one or two beneficiaries and in the Tasmanian case - in fact in the early days of Basslink before it was built it was thought that Hydro Tasmania would take the export capability, which is wanted, and Aurora, the retailer, would take the import. But it was just too complex a deal to have two parties negotiating with Basslink. The interregional revenues are actually complementary, when the import revenues are big, the export revenues are small and vice versa. So the sum of the two is quite stable but if you're going to end up with just one side of the equation you get very variable incomes.

MR WEICKHARDT: If you were convinced that disorderly bidding had an economic cost that was significantly higher than the $8 million per annum you quoted, what would you do to try and overcome the problem?

MR BOWKER (HT): Well, because disorderly bidding is coming from constraints, so you can either build out the constraints - it's been an issue that people have played around with for a long time and there was the CSC arrangements in Snowy were a way of trying to address that issue and I think it's one of those problems that's very intractable and whilst it would be nice to find a solution, I think any solution is going to end up causing more problems than the problem. It's one of those situations.

Also you've got the decreased demand that's been happening in the NEM now for about four years and that's clearly going to reduce congestion which is going to reduce the need for disorderly bidding or the cost of disorderly bidding. So I don't have a solution to disorderly bidding, I'm afraid.

DR CRAIK: Can I go to transmission planning. I know you're a generator but transmission planning in your submission that you've given you said Hydro Tasmania doesn't support a national planner and the accountability decisions should remain with the TNSP. Do you think the TNSPs really take into account the national perspective adequately in doing so?

MR BOWKER (HT): I think they do more particularly in the recent past. You've certainly got the SA, Vic, Queensland and New South Wales assessments going on

at the moment. I think what people fail to recognise is that Australia is sort of clumps of civilisation joined by long thin lines so that the nature is well suited to state based TNSPs. We talked earlier about having a national transmission body, sure, if one business owned everything you wouldn't have to be choosing how it would be done.

I was intrigued actually with your comment earlier that Victoria was very successful, because if you're a generator wanting to connect in Victoria, it's the worst place to try and get a connection from the point of view of the process you need to go through because there are two TNSPs. So it depends, as I think we said earlier, on the criteria. Our view is that particularly accountability is very important, and I think having clear accountability - which Charles Popple also referred to the risk issue for their board - is really important. You see it in the big issues but it also comes out in all the small issues, planning outages and all sorts of operational issues. Having a single body accountable is much preferable to us.

MR WEICKHARDT: In terms of your analysis of OFA, you've got a list, Support, Opposed, and Further Work Required.

MR BOWKER (HT): Yes.

MR WEICKHARDT: You've listed network businesses under Further Work Required but most of the network businesses we've spoken to have given views a bit similar to the one that SP AusNet gave a moment ago, that they in general support the idea of OFA.

MR BOWKER (HT): Yes.

MR WEICKHARDT: Why do you think that is?

MR BOWKER (HT): I think the issue for them is they don't want to be seen to oppose it. I think they want to see it develop further. One of the issues for us as generators of business is that because we don't see it as a problem to solve, spending more time refining a solution is not a good use of time. So that's where we come from. Transmission businesses I think are much more focused on the planning side, and this is of less interest to them, the optional firm access. So I think that's the way they prioritise their views of things.

MR WEICKHARDT: Don't you think it actually in some ways helps address this problem that we've been wrestling with of planning and getting investment in transmission right because it provides a market signal of how much transmission capacity to actually build?

MR BOWKER (HT): It doesn't really because there's a significant time difference between a transmission line being built and a generator being built. Transmission lines typically take five years; generation typically takes two or three years. So you're really getting generation moving to where there is transmission built for it. This is what's been happening with wind. If you go back a few years, wind was sort of tending to build where the good wind sources were; what's happening now is they're tending to move more next to the transmission line. The important thing really is to have a stable environment so people know where to build. Wind is no longer a key requirement or the primary requirement for a wind farm; you're looking at particularly environmental and particularly transmission. So I think there's quite a difference emerging about that.

Frontier did a report for NGF which talked about the fact that you're actually not getting a market based thing, you're giving much more to TNSPs to decide on the future which is not market led, it's TNSP led. There's a report there in the AEMC's submissions that expands on that, on why that is so.

MR WEICKHARDT: Given the fact that it's optional, if a generator says, "That's too expensive, I'm not prepared to pay," the TNSP is getting a pretty clear signal, aren't they, that the degree of augmentation required in that part of the network isn't worth it to the generator?

MR BOWKER (HT): It's optional in that sense, but the issue really is that if your competitors in the same area choose to go with firm access, then you really don't have any choice, and also it's not optional for a generator because you still need to pay compensation if you're not firm and other people have become firm. In fact, one of the things that we've become aware of recently is that even if you're firm, you might end up - because you're less firm than somebody else - having to pay out some money, even though you were firm.

MR WEICKHARDT: How can you be less firm that somebody else?

MR BOWKER (HT): Because they might have a bigger volume than you.

MR WEICKHARDT: In terms of capacity?

MR BOWKER (HT): Yes.

MR WEICKHARDT: Yes, okay, but that was your choice of how much you bought firm.

MR BOWKER (HT): That's right.

MR WEICKHARDT: I'm sorry, I didn't write it down at the time, but to find again the things that are not, if you like, firm, you say if it's constrained by thermal overload - - -

MR BOWKER (HT): Thermal constraint. Those are included.

MR WEICKHARDT: Right. What's not?

MR BOWKER (HT): The ones that aren't are system stability, so you may have a line that you can't use for more than 500 megawatts because then the system becomes unstable in terms of the way in which the system is running, so there are constraints in the dispatch engine which are related to system stability. Then there are also constraints related to ancillary services.

MR WEICKHARDT: In practice, are either of those two issues common reasons why there's a binding constraint?

MR BOWKER (HT): Yes. AEMO published a graph of what proportion make up the thermal and the other constraints, so this is an independent source of that.

MR WEICKHARDT: Can you give me a feel? Is it sort of 80:20 or - - -

MR BOWKER (HT): No, thermal is maybe around 50 per cent.

MS CRAIK: Given Hydro Tasmania is the main generator in Tasmania, how would OFA affect you if you actually came here?

MR BOWKER (HT): There wouldn't be much point in us being firm compared to somebody else in Tasmania; that's the first point. Basslink is the issue.

MS CRAIK: So why do you care?

MR BOWKER (HT): Because of Basslink and in particular, the transition arrangements you've got - sorry, that AEMC have, are calling for the newer investments to lose their transitional access first, so Basslink is the last thing to go into Latrobe Valley, so we would be losing transitional arrangements first. But our primary concern is that we don't believe it's a good solution for the market because we don't believe the problem is big enough. We think the solution is much more costly than the benefits that it's going to accrue in the market.

MR WEICKHARDT: You don't have a counterproposal though?

MR BOWKER (HT): The counterproposal is AEMC's option 1, which is the

status quo with some minor changes.

MS CRAIK: Presumably you have conveyed all this to them?

MR BOWKER (HT): Yes, many times.

MS CRAIK: What's their response?

MR BOWKER (HT): Different people in AEMC have different responses. The last time we spoke to John Pierce in relation to this, he was still saying that they wanted what I said earlier that they wanted to have, two proposals and make an assessment as to, "We've done the best in terms of an alternative. How good is that alternative?" compared to the status quo. That's the decision they will be reaching in March-April when they recommend something to SCER.

MR WEICKHARDT: We have suggested in the long run - and this is a long way down the track - that a move to full nodal pricing might make sense or should be at least considered.

MR BOWKER (HT): Yes.

MR WEICKHARDT: Where do you sit in terms of that issue?

MR BOWKER (HT): Nodal price is quite popular, in the sense that it gives you the most efficient dispatch. One of the problems that the regulators in the NEM are just coming to grips with is really, the market is made up of both the physical dispatch and the contracts. The market only works well if you've got good contractual arrangements and good dispatch, and that calls for a balance really. From a contract point of view, you would like to have one node in the whole of the network and you would all write contracts against that node and everybody would be happy. There would be no basis risk for anybody.

Unfortunately what happens if you do that is that the dispatch is really wretched, so you end up with a compromise between having nodal pricing all over the place and a single node which is ideal for contracting. So what's happened is - I don't know if you remember but we have about six regions in the NEM - there was a plan a while ago to go to 13 regions because there was sort of - people gave more weighting to dispatch, and Queensland is a very big state and could potentially be three regions from a dispatch point of view. But more recently there has been talk of actually combining regions, so the Tasmanian reforms, there was talk of a Vic/Tas region; South Australia has potentially liquidity problems so an SA-Vic region has been discussed a bit. So really people are beginning to understand that the market is contracts and spot and you need to balance those two.

I think somewhere around where we are now is an optimal in that sense and you talk about interconnectors, wanting to strengthen those, which I think is good, the issue is that the optional firm access I don't believe does strengthen interconnectors and AGL and others have pointed out that if you allocate existing transmission rights to generators, you're going to end up with almost nothing left for interconnectors so they won't become more firm because - they might become for two or three megawatts but not for 1000 megawatts or whatever size they are. Does that make sense?

MR WEICKHARDT: No, it doesn't entirely because I thought that as part of the OFA proposal people could actually buy access over the interconnector.

MR BOWKER (HT): I don't think that part of their proposal is very clear. It's not very clear who would be buying access and how that access would work. In terms of the transition arrangements, the intention was to give firm access to generators and then whatever was left over would be given to interconnectors and AGL, for example, were proposing one megawatt go to the interconnectors which just sort of kept them in the game, as it were. But I'm not quite sure how you'd actually purchase interconnector rights, if you like.

MR WEICKHARDT: I will need to get my mind around that. I had in a simple way assumed that that was one of the benefits of OFA and solved this problem of the settlement auction and the fact that you've got real hedging problems between regions at the moment.

MR BOWKER (HT): I think that's one of the undefined areas in terms of AEMC's proposal. The other issues - the settlement's residue auction which is the current mechanism, at the moment all the units are auctioned as equally unfirm, if you like, so it all gets scaled back. There was an option a few years ago to take maybe 25 per cent to make it firm and then 75 per cent will become much less firm which at the time wasn't done. I guess what I'm highlighting is there are other ways to make interconnectors firmer for some volume but clearly it's going to be less than the current non-firm volume.

DR CRAIK: Just on a different issue, distributed generation, do you have any views about that?

MR BOWKER (HT): I think it will grow a lot. I'm doing some work with CSIRO looking out to 2030 and 2050 and the only way that the demand for, if you like, the central system stays above where it is today is because of electric vehicles, so I distributed generation coming in significantly. You're getting to the point where solar PV almost doesn't need a subsidy, at least according to the solar PV people. So

I certainly see that as a significant challenge for networks because there may not be a lot more networks being built. If you take out wind, you know forget wind for a moment, and you're just going to build gas-fired generation in the NEM to meet increasing load, assuming there was some load, one would expect you to build the generation where the load is and pipe the gas in and the implication for electricity networks is that you don't need any more interconnection.

We talk a lot about planning and those sorts of issues but at a macro scale. There may not be an awful lot of electricity transmission coming in for different reasons, you know, distributor generation and the global financial crisis and maybe pricing. People are aware of pricing now and so they're more energy efficient.

MR WEICKHARDT: Do Hydro Tasmania - and I suspect the answer is no - have any wind investments?

MR BOWKER (HT): Yes. We have had wind in India and China and obviously in Tasmania and also in South Australia. But currently our only wind is in Tasmania and we're building Musselroe which is a 187-megawatt wind farm in the north-east of Tasmania. We have potential sites in other states.

MR WEICKHARDT: One of the issues about wind that's clearly been wrestled with a lot, particularly so far as the system operator is concerned is its variability.

MR BOWKER (HT): Yes.

MR WEICKHARDT: I understand nationally sometimes wind has been combined with hydro so that sometimes you actually effectively store that wind power by pumping water back. Is that something Hydro Tasmania have ever contemplated or do?

MR BOWKER (HT): Pumped storage doesn't make sense for us because we always have load to supply our water to. Pumped storage certainly makes sense. One of the things AEMO is looking at is 100 per cent renewable scenario at the request of the federal government and one of the key issues there is actually having decent storage arrangements and pumped storage is one of the possible ways of storing energy because the problem is when you're 100 per cent renewable is actually not the summer peak, the problem is the cold winter days when there is no wind. So you need to have potentially a couple of weeks of storage to keep the NEM if you were 100 per cent renewable, so that's quite a lot of storage.

MR WEICKHARDT: That's an incredible amount. Do you have that much storage?

MR BOWKER (HT): We don't. Our storage in Tasmania is actually enough to run Tasmania for 18 months if there was no rain. We've got 18 months without any rain but, of course, it never doesn't rain at all.

DR CRAIK: You had a period where it didn't rain, didn't you?

MR BOWKER (HT): Well, when you say it didn't rain, the west coast still got two and a half metres.

DR CRAIK: But you had to import power, didn't you, because hydro didn't have enough?

MR BOWKER (HT): Yes, we imported for a while. We're now back into export.

DR CRAIK: Is it true that wind turbines have to be turned off when it gets above that 35 degrees?

MR BOWKER (HT): Yes. They don't like the turbulence and you were talking about the variability of wind, in fact the problem time is these cold fronts going through when the wind comes up too high and you get lots of sites tripping off at one time. But that is in contrast to a gas fire generator where you can lose 200 megawatts or they lost 350 the other day from a single event, so people have taken that view of wind. But when you actually do the sums it's actually not as bad as you might think. If you had said five years ago to people, "We're going to have 1000 or 1200 megawatts of wind in South Australia essentially without changing the rules," they'd say, "You're mad," and yet here we are sitting with 1200 megawatts.

The price goes negative sometimes because there's too much wind but in terms of system security there's no issue and the way the rules have been set up we don't have problem in the sense that AEMO can do whatever is needed to make sure system security isn't a problem. It may not be a very good commercial solution for those people who have chosen an area which is constrained but I think the rules that we have in the NEM are actually very attractive for wind compared with other markets. I have just been to a conference overseas where we were talking about wind and I think probably by chance rather than design 10 years, 12 years ago when we designed the market we actually ended up with a design that was very wind friendly.

MR WEICKHARDT: Just because of the ability to bid negative?

MR BOWKER (HT): No, primarily it's because we have a gross pool so if you're a wind farm you actually don't need to contract, you can just take the price in the market whereas a lot of other markets don't allow you to do that, they really want you

to forecast fairly precisely what you're going to produce and that discriminates against wind.

DR CRAIK: So if wind turbines have to shut down at 35 degrees, they're a bit useless when it's very hot.

MR BOWKER (HT): Did you say 35 knots or 35 degrees?

DR CRAIK: Degrees.

MR BOWKER (HT): Sorry, I thought you were talking about wind speed.

DR CRAIK: No. Well, maybe it is knots, I don't know.

MR WEICKHARDT: AEMO claim in South Australia the wind generators, when the temperature goes above 35 and the actual peak arrives, have to be shut because - - -

MR BOWKER (HT): Sorry, I heard you as 35 knots, not 35 degrees. So my comments were about wind speed when it gets too high they do need to shut down. In terms of design, it costs you more money to design a turbine that will work in very high temperatures, so you make a commercial choice. It's not an intrinsic issue in the sense that you could build one to work at 50 degrees but would you want to? In fact Basslink was the same. You probably remember Basslink was shut down in a very high temperature time because the temperature in George Town was two or three degrees higher than it had ever been and it was designed with some leeway, but not that much leeway and so Basslink had to be shut down on what was a very hot day in Victoria and Tasmania. It's a design issue.

MR WEICKHARDT: Completely shut down, not just scaled back?

MR BOWKER (HT): No, it had to be completely shut down because the inverter station was not designed to run in an ambient temperature as high as that because it had never happened before in Tasmania. But, as I say, you can design them for any temperature and people make commercial choices about - in fact in this case they didn't expect it to ever go to the temperature it went to.

MR WEICKHARDT: I think that's us done. Thank you very much indeed for your input.

DR CRAIK: Thank you.

MR BOWKER (HT): Thanks for the opportunity.

MR WEICKHARDT: We will adjourn now until 1.30.

(Luncheon adjournment)

MR WEICKHARDT: We will resume the hearings now. Our next participant Sustainable Regional Australia. If you could give your name and the capacity in which you're appearing for the transcript, please.

MR WOODGROVE (SRA): My name is David Woodgrove and I'm the operations manager at Sustainable Regional Australia.

MR WEICKHARDT: Thank you. Why don't you give us a bit of background about your organisation and then what you specifically want to tell us and then we can have some questions.

MR WOODGROVE (SRA): Thanks for the opportunity to put forward the case for virtual net metering or VNM for community owned small to medium scale renewable energy generation in regional Australia. If it's okay I'll do this in three short parts. The first is a quick background on our organisation, Sustainable Regional Australia. The second part is to explain in simple terms virtual net metering and how that could accelerate the rollout of community green energy projects across regional Australia.

Then, thirdly, because virtual net metering is essentially a free ride on the distribution poles and wires, I would like to propose some checks and balances to show that with virtual net metering it could be implemented with benefits to all players. Also in our discussion paper I've noted that I am asking if we can have the panel's input on how best virtual net metering could be made to work to suit all parties.

In our written submission we build on the case for virtual net metering and how it addresses a number of points in the Productivity Commission's report being peak demand, time based pricing and distributed generation. Firstly, Sustainable Regional Australia was established by the central Victorian Greenhouse Alliance who are made up of 14 local shires across the central Victoria area. In 2009 we started the Central Victorian Solar City Project, one of the seven solar city projects across Australia funded by the Department of Energy, Efficiency and Climate Change. During the four-year project we worked closely with 2500 householders on farms, in small towns of 50 to 100 people and with people in large regional centres such as Bendigo and Ballarat and Swan Hill.

The main part of the project was to monitor people's energy use before and after implementing a range of changes to their home such as solar hot water; solar photovoltaics; retrofitting or spending around $2000 on upgrading their homes with insulation and shading, for instance; using in-home displays to monitor their energy usage plus all of those 2500 people got a free home energy assessment. We also built two quite small solar parks of 300-kilowatt capacity to test the uptake of

community ownership with small scale renewables.

However, one of the most interesting projects that we worked on through this project was with communities in our 100 per cent renewable communities project. We worked intensively with three small towns in our region: Newstead of about 600 people, Murchison with about 800 and Kyabram with around 8000 people. The representatives from these town communicated a very clear vision, an appetite for local ownership of renewable energy generation to a scale to match the energy consumption of their town. The community representatives from these towns talked about the employment opportunities that distributed generation would create, local investment opportunities and local control of energy security.

Another critical driver they see is the opportunity to control the price increases in energy in these towns. A number of residents in these towns are on low incomes and they are in the group of people known as the heat or eat people who in winter may only have enough money to do one or other of those things. These towns are seeking a roadmap for the fast rollout of community-owned projects which SRA believes will need a significant step change from where we are today to make this rollout happen.

So the towns definitely understand the risk around climate change in Australia, particularly in the regional areas where primary production is affected by normal seasonal variations, let alone significant variations of around two degrees or even more. So that's a quick summary of where we are with our project and who we are. Any questions?

MR WEICKHARDT: No. Just keep going thanks.

MR WOODGROVE (SRA): So the second point is around how virtual net metering can accelerate the rollout of community owned renewable energy assets. I'll start by speaking quickly about the Hepburn Wind Project near Daylesford, about one hour's drive west of Melbourne. Is the panel familiar with the Hepburn Wind Project?

MR WEICKHARDT: No.

MR WOODGROVE (SRA): Just to clarify, this is a project that did not employ virtual net metering but still managed to get up. So a short summary of the Hepburn Wind Project is it's been around for six to eight years. A small group of very passionate people have done their feasibility studies, worked in fundraising, governance models and have work with the distributors. The project benefited from an enormous amount of pro bono work done by professionals to kick the project off. They now have a project with over 2000 shareholders. They have built two

two-megawatt wind turbines on the outskirts of the town that generates an equivalent amount of energy or electricity to the town's annual electricity requirements.

This is without mistake a landmark project for community-owned renewables but I'd argue that it potentially may be a one of a kind project as most other towns won't have the benefits that this project had such as the leadership from Simon Holmes a Court who was on the board. They had a group of very good business connections to get the project going, they have an excellent wind resource right next to the town and many other advantages that this town had over many other towns. They sell their electricity to a retailer called Red Energy through a power-purchase agreement and probably with a fairly typical dollar per megawatt value that other wind projects obtain.

So that's a project they've got up and running without virtual net metering and our argument is we think that would be one of only a few projects that would get up. With virtual net metering in our terms the simplest way we look at it is, in a financial sense virtual net metering allows you to put a community-built asset and effectively have it operating within your boundary on your title. So the energy that that asset generates within your distribution area, so it might co-located next to the town, will actually give you a value per kilowatt hour as if you installed solar panels, for instance, on your own roof. So it would give you effectively 25 to 30 cents a kilowatt hour in value.

Virtual net metering is a concept where at the generation point the energy can be netted off against one or many consumption points at another site. So if we take the example of Hepburn Wind and moved it into a virtual net metering scenario, the generation could be spread around the shareholders in the project, homes or businesses and the value of each kilowatt hour, instead of being probably 10 cents a kilowatt hour or $100 a megawatt hour, for example, would be up around 25 to 30 cents a kilowatt hour.

Virtual net metering has been allowed in special community solar projects in the United States, we understand in the Washington state and there is a bill in California, a bill called SP843, that is proposed to allow virtual net metering for renewable energy projects with community ownership. So in closing this section, virtual net metering has been used also in the UK in the City of London Project and in the Woking Project and is now being proposed, not so much around community energy but in the City of Sydney Project for their energy precinct cleantech projects.

MR WEICKHARDT: Do you want to pause there or do you want keep going and finish your third topic?

MR WOODGROVE (SRA): Yes, I'm happy to move on to the third topic. So this

last part really talks about the pros and cons of virtual net metering for regional communities. I will quickly run through and list the benefits, then the potential problems that we see and we'll try and list some solutions as well. In our discussion paper we've requested input from the panel or other stakeholders to see how we could make virtual net metering attractive to all parties.

The main benefits we see are this would allow us to have the rapid rollout or move to renewable energy to help in the avoidance of climate change for our regional communities with a key push to limit climate change to the two degree Celsius limit and not accelerate past that. We also have all the advantages of distributed generation, reduced transmission losses reducing the need for upgrading transmission lines and a key part of this is to diversify the renewable energy resources. Another key point is we believe with community ownership comes engagement at a grassroots level. Of all the advantages of things like time based pricing, perhaps moving to a three-level time of use tariff, managing peak demand, issues like social equity, return of profits to the community and we believe also that the community may be the best conduit for educating people on things such as tariffs and critical peak pricing demand management incentives and things such as smart meter rollouts. We have found that they are much easier to do at a community level.

So with all of those advantages we see there would be many people arguing downsides of virtual net metering so we'd like to propose some ways of setting some limits. We see there is an opportunity possibly to address some of the real issues with the energy market, we could look at linking projects where virtual net metering is made possible, moving people to time-of-use based tariffs, either two or three-level tariffs, capping the proportion of daily use that can be netted off, for example, setting this to a 50 per cent limit. We definitely understand there is a revenue stream from network fees and charges and those players do need that revenue stream so we definitely realistically understand that money has to come from somewhere.

We believe we could use a virtual net metering set of levers to attract the correct mix of renewable generation to match peak demand in and around specific towns, so to bring forward the right levels of dispatchable and non-dispatchable or variable generation. So things like biofuels which should be quite dispatchable, solar which you could argue is partially dispatchable between 9.00 and 5 o'clock that almost matches the daily peak load and things that are not dispatchable such as wind. Depending on where the site is, of course, wind does vary in its intermittency in certain regions.

So we could look at things like capping the netting off of solar projects, if a town looked at the solar project possibly capping the netting off to 9.00 to 5.00 for daytime consumption and providing those benefits possibly across wind, solar and

biofuels. Also we could look at capping individual projects of five to 10 megawatts per town. Also issues such as setting power factor correction limits for industries in those town to incentivise the local industry to clean up their act with power factor correction. That is where my notes conclude.

MR WEICKHARDT: Thank you.

DR CRAIK: David, thanks for that. An initial question, who is going to pick up the difference between the generation and usage, the receiving of power? Clearly, while you have a feed-in tariff on the power that the generator gets or there is some subsidy of the non-use of the wires, so who pays for that because somebody has to.

MR WOODGROVE (SRA): Yes, and if there's too significant a proportion of access to this exemption, then we understand that, yes, someone will end up paying more.

DR CRAIK: Depending on who is connected to the grid, I suppose.

MR WOODGROVE (SRA): I guess there are a few different ways to answer that question. One is we'd see this as a - it would start from a very small base so we would expect if there was an exemption for this type of project it would start off in an almost minuscule amount of small projects across Victoria or Australia. Capping would be one way of ensuring we don't eat into those revenue streams. We would be interested to see what the savings would be across network and transmission costs to see if we could offset those, so in fact we would hope not to eat into those revenues but if we could create savings for the power distribution companies. For instance, if they could say, "We know we have three towns in a regional area where we have to do some work on either transmission or network upgrades," if they could be a part of the stakeholder group that says, "Let's roll out this incentive in these towns first where we would have to come in and do so upgrades," so we could really cherry pick locations, especially if those locations do have a natural resource that either matches peak demand or is a biofuel that is a renewable fuel that can provide dispatchable loads.

But we definitely don't think this would - it doesn't play a part where it would be the only solution on the block. We see this as one of many small solutions.

MS CRAIK: If a system like this is going to contribute to peak demand, clearly solar and wind are unreliable or insufficiently reliable and you need some kind of backup power. Biofuels is one way but that's also a very expensive way of - - -

MR WOODGROVE (SRA): Yes, if a community hasn't - - -

MS CRAIK: Unless it's a waste product.

MR WOODGROVE (SRA): Unless it's a crop waste, a waste stream that is, as you say, bagasse or some sort of crop waste particular to that area, then we believe it would be small steps. We're not proposing that this will completely solve a town's energy resource requirements in one step. However, if we look at the example of Hepburn Wind with two two-megawatt wind turbines, they effectively supply the town's energy needs, but the disadvantage is it doesn't supply it in a dispatchable mode.

MS CRAIK: I suppose the town still has to be fully connected to the grid so that when the wind stops blowing, people can still get the electricity. Has your group spoken to any distribution companies or transmission companies about trying to do any of these sorts of deals to see if you can replace additional network upgrades or infrastructure by this sort of approach? Have you done the economics on this or has anyone does the economics on this?

MR WOODGROVE (SRA): One of the other Solar City projects was based in Townsville. Magnetic Island was the location of that Solar City. They had two submarine cables that connected them to the mainland and they were looking at the requirement to upgrade to a third cable which was a several million-dollar infrastructure upgrade. With the implementation of energy efficiency programs, peak demand management programs and the use of mainly solar photovoltaics on the island, they have offset or they have avoided the requirement to upgrade to a third cable, so that is an interesting case study.

MS CRAIK: So the company that was going to have to put in the cable paid for the solar subsidy, the PV subsidy and things like that?

MR WOODGROVE (SRA): I believe it was Ergon Energy and I believe they were involved with the project, as all of the seven Solar City projects across Australia had to have one energy retailer and one distribution company involved in the consortium. So we had Powercor and Origin Energy in our project, and definitely the work we did with Powercor, in rolling out things like smart meters and collecting the data for our analysis, we worked with Powercor on a lot of items, this wasn't one of the main ones, but we have had a number of discussions about what it would look like if small regional towns could match their electricity requirements with locally generated renewable energy. As everyone knows, it's always got to be a mix of two or there, such as wind, solar and biofuels to try and match the peak loads.

MS CRAIK: Of all these trials that have been done, I guess I'm asking are there any that have been done on a strictly - "commercial" is not quite the right word - well, I suppose "commercial" is the right word if you're trying to get the power

companies in. Have any been done on that sort of a basis or are they all trials so far?

MR WOODGROVE (SRA): I guess the strict answer to that question is no, we haven't done anything on a city or a town-wide basis. We're at the feasibility study stage of each of these. Virtual net metering isn't something that's been tabled widely because we know it's something that may or may not come to fruition. There would have to be a fair bit of lobbying to get this moving.

MS CRAIK: I guess if a distribution company or a transmission company could see the value in - if all this turned out to be less expensive than an augmentation to the network, then it might be worth their while to do.

MR WOODGROVE (SRA): Yes.

MR WEICKHARDT: I think that's where I come out - I mean, virtual net metering, if I'm crude, is a soft-sounding name for a subsidy if there isn't an economic case for the distribution company to say, "Well, yes, I'm not going to receive, if you like, the full quota for payment for distribution and transmission charges but I do get a benefit of avoiding some augmentation," and of course there's a benefit of not having additional generation, and you avoid some transmission losses and distribution losses, so there's some benefits there.

I don't know whether you read the VCEC report on the solar feed-in tariffs; this is the Victorian Competition and Efficiency Commission. They looked at all sorts of arguments about different feed-in tariffs and came to the conclusion that really, there should be a compensation for effectively the sort of gross pool price, the wholesale price of the power, plus some allowance for the network benefit, and they didn't quantify that. Of course the network benefit will depend upon the region where you're operating. If an augmentation was sort of due immediately, then the network benefit of deferring that augmentation might be quite significant. Where there was huge over-capacity, the network benefit might not be.

So I guess there are two extremes, as I see it, three probably; one is you say that this has got some legs associated with it, but recognise that, "We'll do some trials and we'll accept there's a subsidy associated with it," the other is saying, "Well, we'll call it as it is and there will be no subsidy," and see how many of those projects get up where the network business and local community work, reasonably to see exactly what the benefits would be and what the real costs would be; the third is where the local community just go cold turkey and cut the connection to the grid and say, "We'll put in enough varieties of local generation and maybe some local storage so that we can survive without being on the grid." But it seems to me that whilst you're connected to the grid and you take the advantage of being able to, if you like, draw from or export into when there's a mismatch of demand and supply, then as you've

quite honestly pointed out, somebody has got to pay the piper and it doesn't seem fair that every other consumer gets a smeared-out share of that subsidy because some local community thought it was a nice idea and it was cute to have this sort of local generation facility. I mean, it is cute and it's nice and it might make some people very happy but there's a cost associated with it at the moment. Does that make sense?

MR WOODGROVE (SRA): Yes, it does, and I think you've spotted all of the downsides of our proposal which we're looking at, and possibly you're right, the next stage is to take it to the distribution companies and take the discussion up with them. It would be useful for us with that when we do to have some downward pressure from above or some directives or some comment from a regulatory group to say, "This is of interest. Please engage with these people." It's difficult sometimes to get the attention of the power distribution companies when approaching them on these sort of things. It's quite easy - as everybody knows, depending on who you talk to in these organisations and what day of the week it is, you might get a very cold response. It might assist our endeavours if there was something from above where - - -

MS CRAIK: I would have thought that the Department of Climate Change and Energy Efficiency - presumably they funded all the Solar City things, didn't they?

MR WOODGROVE (SRA): Yes.

MS CRAIK: They might be the appropriate people to express some enthusiasm for this, given the sorts of work that they funded.

MR WEICKHARDT: Also I think you will find if you VCEC report they did get a lot of submissions from people who encountered the sort of resistance you're talking about, indifference from the distribution companies about, "This is just painful and not core business," and they made a number of recommendations to try and facilitate people who wanted to connect.

MR WOODGROVE (SRA): Yes.

MR WEICKHARDT: I'm not pretending that I fully understand that but depending upon the level to which this distributed generation grows, because most of it's at the non-dispatchable level, in other words, it's just automatically goes, AEMO don't control whether you suddenly dump your four megawatts into the grid or whether you turn it off again because everyone locally turned their airconditioners on and off. At four megawatts that probably isn't even a blip. But if you've got 50 small communities in Victoria, all of whom had 10 megawatts and all of whom suddenly went on/off, that may give some system control issues for AEMO and they would

need to understand as the system operator how to control that.

They have learned how to control commercial wind and years ago they probably thought that was pretty hard to control, so it may be that can be overcome. So that would certainly be an issue that's, I think, worth looking at.

MR WOODGROVE (SRA): We definitely understand and your report covers very well that distributed generation will require increases in spending for the distributor as you've just mentioned. So, yes, we're very aware that this would have to be well planned, well thought through. We definitely don't have all the answers or it's very early days for this sort of a proposal and it would need some compelling advantages to move it forward.

DR CRAIK: I would have thought we could study the economics of some of the proposals might be a useful adjunct to going and approaching some of the businesses in the area. One of the other areas of interest in there, in one of your projects you said you had worked with communities on peak demand and got people to reduce their peak demand, I think that's what you said.

MR WOODGROVE (SRA): Yes.

DR CRAIK: I guess I would be interested in - presumably this is by a change in their behaviour in some way or another - whether those sorts of changes in behaviour are sustainable or whether they're fine while people are watching and then you go back a year or two later and they're recidivists and they're back in their old behaviour.

MR WOODGROVE (SRA): Some of the behavioural change aspects to the project we believe are time dependent and may wear off with time when it's purely voluntary in their actions. If there's cost-reflective pricing and definitely if we can get a time-of-use tariff that's more related to our peak demand instead of 7.00 in the morning to 11.00 at night, possibly another band of 9.00 in the morning until 6.30 or 7 o'clock in the evening and if that was a voluntary tariff, I'm sure there would be uptake and people would start trimming their usage in that central peak time. Also some of the solar city projects - not ours - but they operated a load control trial where the retailer or the distributor actually controlled the airconditioning cycles of their airconditioners.

DR CRAIK: Did they do it through the smart meters or did they have to install something or other?

MR WOODGROVE (SRA): Yes, they installed a device to turn the compressor part of their airconditioner on and off. It still operated the fan but they were able to

reduce peak loads. People then started cooling their houses down a bit earlier in the day and used the home as thermal mass and really just migrated the time they were using that energy to earlier in the day.

DR CRAIK: Were they paid an incentive to do this?

MR WOODGROVE (SRA): Yes, they were.

DR CRAIK: What sort of amount?

MR WOODGROVE (SRA): I don't think it was outside of 10 cents per kilowatt hour but there was an advantage in them shifting that load. But, yes, that's something that solar city project is good at documenting all of those incentives and how they move those levers.

MR WEICKHARDT: In terms of your own thinking about this, you referred to the Hepburn experience, but if you were to mix wind with some solar, would you envisage all members of the community filling their roof space with individual solar that was connected back through street connection or are you anticipating the local football oval or some spare land is taken over by a giant solar park?

MR WOODGROVE (SRA): Locating the energy device on the site of use is the easiest way to get full value of the device. The main example is household solar PV panels where people actually get the full value of the asset on the roof of their house, they offset their 25 or 30 cents per kilowatt hour. So if they buy their own panels, have them installed on their roof, yes, they definitely get full value. Virtual net metering in America was set up for people who couldn't install a system on their roof, whether they had the wrong facing orientation for their home or shading or if they were renting because some of these systems and feed-in tariffs favour people who own their home rather than rent. So that's where one of the main trials was kicked off in America and established so people could equally have equity in those programs.

But, yes, solar is probably the only one that you can implement at the residence or on the business. All of the others seem to have an advantage in the magnitude or the size of the assets when it's established or built off the residence or the business. If it's built on the outskirts of the town, like a wind turbine, the scaling effect - your dollars are better spent putting a wind turbine that is on the hill on the outskirts of the town that has the best resource and combining people's money that they put into this, you get a better result. However, the downside is you can only sell your energy on the spot price market or through a power purchase agreement. It's an interesting mix, wind and biofuels seem to make more sense off or away from the householder site, whereas solar at the moment works best if it's on the person's roof.

MR WEICKHARDT: So in your concept of virtual net metering, if I understand correctly, each individual household with have a net energy usage of that amount they export versus the amount they import, but then the community will also have some sort of overall mass balance of electrons going in or out and they take a share of the costs or the benefits from some shareholding arrangement in that community facility, do they?

MR WOODGROVE (SRA): In our proposal we're putting forward we see there's a solution there at the moment for people who can install solar on their own roofs so we're staying out of that equation. We're looking at community-owned assets.

MR WEICKHARDT: Sorry, can I just clarify. You say there's a solution there - at the moment the Victorian government have said that they're moving to grandfather all the existing schemes but that from 1 January, I think, there will be no special feed-in tariff, people will simply get the wholesale price or eights cents a kilowatt hour they will get in Victoria.

MR WOODGROVE (SRA): Yes, and I see the advantage there is people will correctly size their systems for their own household's use and I see that as much more equitable process where people won't put in huge systems on their roof or shed and essentially get a benefit that somebody else is paying for through whatever that household doesn't use. I think moving to a system where there is no feed-in tariff even though it's not popular with some environmental groups - my personal opinion is it's a better solution, that people just correctly size their system for what their daytime use is.

MR WEICKHARDT: But as I understand it in the Victorian system, it's not that people will be charged, if you like, the net of what they use, for the gross amount they export, they will get eight cents a kilowatt hour and then they will be charged on the gross amount that they import.

MR WOODGROVE (SRA): Yes.

MS CRAIK: So the payback period for solar would be - - -

MR WEICKHARDT: Very lengthy.

MS CRAIK: - - - extraordinarily long, I would think, at eight cents a kilowatt hour.

MR WOODGROVE (SRA): If you were paying 25 to 30 cents - and in South Australia I believe people are paying even a bit more - it's only around six to seven years. If you correctly size your system and use all of that energy yourself and

minimise the amount you export, given you're only getting eight or so cents for it, the payback period, we've worked out, is around six to seven years.

MR WEICKHARDT: But that's where there's a payment only for the net import.

MR WOODGROVE (SRA): Yes.

MR WEICKHARDT: I think the Victorian scheme says you pay for everything you import at 25 cents and you only get eight cents for the gross amount you export, so there's no netting off of - - -

MR WOODGROVE (SRA): Correct, and we've costed systems like that for our commercial customers to say, forgetting your Saturdays and Sundays where a lot of businesses don't run, our calculations show that at around $2.30 a watt or $2300 per kilowatt that they put on their roof, the system will pay itself back in six to seven years if they're paying around 25 cents a kilowatt hour if the increase per year is about 5 to 6 per cent on the cost of electricity.

MS CRAIK: I'm really surprised, I have to say.

MR WOODGROVE (SRA): Yes. The levelised cost of solar at the moment is around - I believe if your system lasts for 20 to 25 years, the levelised cost of the electricity it produces for you over that time is around 15 cents a kilowatt hour.

MS CRAIK: Okay.

MR WOODGROVE (SRA): But our project that we're presenting today is really for renewable energy projects that are built off the residential site or off the building site and where we can get economies of scale to build medium-scale projects. They seem large as far as the town goes, but in our terminology I guess they're small to medium-scale renewable energy assets, up to five to 10 megawatts.

MS CRAIK: Are you running into any problems with communities who don't want wind turbines near them?

MR WOODGROVE (SRA): Yes. In Mount Alexander, there's a sustainability group called Mount Alexander Sustainability Group and in some parts of the shire - they're in the area where our state government has put a ban on wind turbines within two kilometres of households. There are some other sites in the shire where that group is looking at that doesn't have that issue, but there is a very strong support from the farming community to host those wind turbines and that community group is looking at installing four to six wind turbines to cover the electricity.

MS CRAIK: Is that because they get a rental, the farmers?

MR WOODGROVE (SRA): Yes. Typically it's around five to 10 thousand dollars a year per turbine. Definitely through Hepburn and through other areas such as the Waubra Wind Farm where there's around 180 wind turbines - that's not a community project - but those communities are seeing local jobs being created. They're able to leverage off those projects in their own area. Where there's community involvement, it really makes those projects easier to get up and running.

MR WEICKHARDT: What sort of money per individual or per household do people have to stump up for their share of something like a 20-megawatt or 30-megawatt distributor generation community asset?

MR WOODGROVE (SRA): We're keen that if we can set some levers with this sort of initiative that people would be contributing the appropriate amount to provide the energy to their home. If it's in solar, and if they're a household that uses a reasonable amount of power during the day, they would buy shares to the appropriate level to provide the power for their household. So solar PV is around two to three dollars a watt or 2000 to 3000 dollars a kilowatt.

MR WEICKHARDT: Capital cost you're talking about now?

MR WOODGROVE (SRA): Capital cost, yes. It's a little bit more if you install your solar in a paddock or what we call a park in a paddock compared to on the roof of a house. Most houses, their daytime use, might require one to two to three kilowatts. So if somebody can afford to stump up the money for one kilowatt, it might be two to three thousand dollars, and then our proposal is that amount of their daytime use would be netted off, so this wouldn't reduce their whole bill, it would just take out a proportion of their bill. So we try and avoid people who are well cashed-up people buying 10 or 15 kilowatts and expecting to see their whole bill reduced to zero. That's where we see an inequity, but if we set the right levers, we could see each home - whether it's a unit or a flat or a renter - buying an appropriate level of solar. Wind turbines are around three to four dollars a watt or three to four thousand dollars a kilowatt, so there may be some levers set where no matter how many shares you buy in a wind asset, you can only net off a certain proportion, maybe 20 per cent of your household use because it's a variable generation source.

We see there's a good argument to be quite strict or quite firm with setting some of these parameters. If you were to buy shares in a biofuel source that's completely dispatchable, possibly then you may have a larger cap on your household energy use. You might say you could go to 80 per cent of your daily energy use being netted off, but that's a generation that requires ongoing fuel inputs and a higher cost to establish.

MR WEICKHARDT: I guess one of the issues that's very complicated and we haven't spent time looking at that here, but there's been lots of articles, with people vigorously taking opposing sides - which is not uncommon in the electricity industry, I've found - of saying, "Wind sounds great but given the fact that it is very, very variable, depending upon whether the wind is blowing, effectively you've got to have stand-by generation ready to take up that load at any time." I suppose if you get wind around the place, hopefully the level of interruption on each individual unit starts to drop. Have you looked at that? I mean, you've got "sustainable" in your name and I guess the idea of investing lots of money in wind generators, only to have some other - probably in green language - non-clean generator standing by, ready to take up the load if the wind stops blowing doesn't sound very sustainable to me at all.

MR WOODGROVE (SRA): What you've just mentioned there is exactly the discussion that most people in a renewable area are having: how do you get a balance of renewables to transition away from heavily intensive carbon fuels from coal to gas out of those assets? Wind is probably the cheapest. If you've got the right location, you get the best bang for your buck. There's lots of wind farms being built across the southern parts of Victoria and South Australia with good return on investment for those large companies.

As you move further north or inland where your wind resource reduces, people typically move to solar, but what you say is absolutely correct, you need a mix. Biofuel is the right third party to wind and solar. The profile for solar just matches your normal daytime solar radiation but it doesn't go out into the evening when peak demand increases. So you do either need energy storage like they're doing on King Island with the large ultra-capacity batteries from the University of New South Wales; they're putting a large battery energy storage system on King Island and it will store I believe two or three days of energy use for the island and wind is their main energy source. I think they will also have some biofuels, a biofuel resource.

DR CRAIK: Are there lots of inexpensive waste products for biofuel around? I'm not really aware of any other than sugar cane.

MR WEICKHARDT: Even there - I'm sorry, I don't know the answer to this, but I thought that the co-generation units really only operated during harvest season.

MR WOODGROVE (SRA): If it's crop waste, definitely, there's a seasonal aspect to that and unless you store the crop waste and use it in your high demand times, whether it's in the middle of winter or the middle of summer, yes, you've got to restore that resource. There's all sorts of discussion about using crop waste or indeed crops for your biofuel source, like in America where they're looking at using maize or corn for vehicle ethanol.

DR CRAIK: It pushes the price of maize or corn up quite a bit though.

MR WOODGROVE (SRA): That's right and you then have the argument about whether your food crops are more important but given many years ago a third of America's crops went to feeding horses and their transport system, then they moved away from - - -

MR WEICKHARDT: It was quite a few years ago.

MR WOODGROVE (SRA): So a lot of crops traditionally - - -

MR WEICKHARDT: I think it has been said in recent years that biofuels have pushed the price of grain commodities up.

MR WOODGROVE (SRA): That's right. So waste stream is typically either from waste water treatment plants, timber crops or timber waste crops. In Europe there's a lot of biofuel plants around using their timber crop wastes in their plantation timbers burning off the tops and waste products from those, especially if you can link them with neighbourhood heating requirements where they have neighbourhood energy projects and district heating. In Australia it's probably going to be from animal waste whether you have either piggeries or standing animals in feedlots. So you do have to start looking around and finding those opportunities but each town has its own opportunity, whether it's abattoirs or water treatment plants or food processing plants.

MR WEICKHARDT: Or even the local tip.

MR WOODGROVE (SRA): That's right, capping and burning the methane from landfill wastes.

MR WEICKHARDT: Do you have anything else?

DR CRAIK: I'm fine, no. It's been very interesting.

MR WEICKHARDT: Thank you very much indeed for taking the trouble to come along.

DR CRAIK: Thanks very much, David. It's been fascinating.

MR WEICKHARDT: Good luck in your quest here. I think getting out and talking to a range of the distributors I think is well worthwhile because I think they are now much more conscious of the fact that an ecosystem, if I can use that analogy,

that contains different methods of feeding the whole, that variety has got some benefit; it's got some complexities but it's got some benefits too.

MR WOODGROVE (SRA): Thank you very much.

MR WEICKHARDT: We will adjourn briefly and the next participant is coming at 2.30.

MR WEICKHARDT: Our next participant is the Consumer Action Law Centre. If you could both individually give your name and the capacity in which you're appearing.

MR BRODY (CALC): Gerry Brody. I'm the director of policy and campaigns.

MS RAYNER (CALC): Janine Rayner. I'm a senior policy officer focusing on energy.

MR WEICKHARDT: Thank you. We've received a submission from you and quite a lengthy attached report which I have to say I have only just scanned because I think it arrived on my desk at about 5 o'clock last night. But if you would like to sort of briefly outline the message you want to leave with us; assume we've read certainly the shorter accompany note and we'll then have a conversation.

MR BRODY (CALC): Sure. We'd just like to start by thanking you for inviting us to speak to you today. We really appreciate the opportunity. Consumer Action has had concerns about the energy markets and particularly network regulation for some time and whether the design and operation is in the interests of consumers. It's partly for that reason that we commissioned this report. I've got printed copies that I can leave with you today as well, A Policy Trilemma: Creating an Affordable, Secure and Sustainable Market, which was authored by the Foundation for Effective Markets and Governance.

The report provides a consumer perspective on many of the current issues of debate in the energy markets today and the key argument is that consumer welfare has been given insufficient attention by Australian policymakers and regulators, but rather it's been assumed to flow from the implementation of market based solutions. We're going to reflect on some of those comments and recommendations in that report.

So before responding to some of the areas where the commission has sought further input in its draft report, we'd like to voice our support for the commission's recommendations relating to benchmarking; that is, for it to be used as a diagnostic tool in responding to business cost forecasts and especially for all data sets relating to benchmarking be made publicly available. We think that over time, benchmarking might be used as an explicit regulatory instrument but that improving benchmarking practice can ensure the regulator has good information before it.

We also have brief comments on the recommendation for network pricing to involve a three-way negotiation settlement between industry, the consumer groups and a regulator. There's obviously diverse consumer interests and we think, given that, there are significant challenges with that sort of process or approach. There

may not be one consumer position. It's also our experience with customer activities of particular businesses that partake in business decision-making is that sometimes they can become I guess captured by the industry interests and there will need to be significant resources applied to consumer groups to ensure independence to make that work.

The commission has also sought input on technology to support demand management and time-of-use pricing. The first point we'd like to make is that obviously here in Victoria, we've seen decisions to invest in smart meters resulting in substantial cost increases for Victorians, and whilst smart meters are designed to ensure better management of energy systems and assist consumers to better manage their energy use, much of these potential benefits are yet to play out. This sort of technology, and their associated policies such as more flexible pricing, are obviously attempting to address the well-documented and costly challenge of peak demand. We agree that significant efforts should be made to avoid costly expansions of power stations and powerlines to deal with peak demand. However, we're concerned that there's a tendency to push the cost of policy responses back on to residential consumers, particularly with assumptions about the effectiveness of market solutions that have found many of the present problems.

More flexible pricing, for example, will mean greater price risk will sit with residential consumers compared with the supply side of the market. As the Australian Energy Market Commission has recently noted, some households will find increased financial difficulties under new pricing structures. All households will find understanding complex new energy offers and contracts a significant challenge.

We think it should be remembered that residential consumers use only about 25 per cent of all electricity consumption and they contribute to around 50 per cent of the peak problem. Given this, we think there are better policy options than flexible pricing for residential households. It is our view that flexible pricing is actually a blunt tool when it comes to households. Much household energy use is not discretionary and will not respond to price. Moreover, it fails to take account of behavioural influences.

Consider for a moment the range of tricks and devices humans engage in to ensure that setting the alarm will result in getting up and going to the gym versus hitting the snooze button. This takes place in less than 24 hours. Consider this analogy in the context of a boiling hot day, the airconditioner remote handy and the bill weeks, if not months away. Many households will seek immediate comfort from the service energy provides rather than thinking about the cost which will come later with the bill.

It should be remembered that pricing reform will inevitably create winners and

losers, so if governments are willing to take this path, they must commit to enhance concession arrangements for some of the consumers most hardest hit by price increases and be prepared for some community backlash from non-concession households facing cost-of-living pressures, such as families with stay-at-home parents.

In our view, there are significant opportunities to be found in other non-price solutions that are less dependent on or work with consumer behaviour. For example, we strongly believe demand load control must be considered for appliances such as airconditioning and pool pumps. Demand load control involves arrangements between a supplier and a residential consumer where equipment is installed that allows the client to manage an electrical appliance owned by the consumer for a specified amount of time in return for a payment to that consumer; for example, airconditioners might be cycled off during hot periods. This is the policy equivalent of putting the alarm clock on the other side of the room.

For smaller loads relating to appliances such as dishwashers, washing machines and dryers, we do believe educational campaigns can provide an effective and efficient alternative. Educational campaigns, calling on consumers to do the right thing, are a safe and inexpensive way to reduce consumption or shift load. There are simple messages to be conveyed. It's basically why households should aim to use dishwashers and washing machines after 10 pm at night and how we would all benefit if doing so. The recent Save Water Target 155 here in Victoria was regarded as a success by the three metropolitan water retailers who have stated that the campaign saved 60 billion litres of water.

In response to the commission's comments on industry governance matters, we have added our support for the proposal to establish a new national consumer body. We would be happy to take questions about that proposal and particularly the Energy Consumers Australia business proposal that's been submitted to you and governments. Finally, in relation to the independence and resourcing for the Australian Energy Regulator, we are supportive of the AER having greater control over its resources. However, we strongly oppose suggestions that AER be separate from the ACCC. We think there are real benefits in having an industry-specific regulator work closely with one that has a broad focus. It can ensure that the regulator is kept independent and focused on interests it exists to serve, that is, consumers. There are also clear operational efficiencies and parallels across the organisations that can contribute to better outcomes for consumers.

We think the AER should be given the opportunity to undertake network pricing determinations based on the new rules recently made by the AEMC, as well as after the reform to the merits review processes which have been found to favour industry once they're implemented before any further review of its operations is

necessary. We are happy to answer any questions you have.

MS CRAIK: Thank you. I notice from what you said, you generally support the notion that we put forward about a consumer group and then you have the proposal that the ECA - - -

MR BRODY (CALC): Energy Consumers Australia.

MS CRAIK: - - - yes, Energy Consumers Australia, put forward which reads a bit more like a federation at least for the early couple of years with group members. But also it seems that the groups that put this proposal forward largely represent disadvantaged members of the community, groups that represent more disadvantaged groups and alternative energy providers, green energy providers, whereas the proposal that we put forward was really to be all inclusive for all consumers, so those low socioeconomic groups, disadvantaged groups, for small business, for people who could adequately pay their electricity bills and big business, so to represent everybody through an expertise based body. I guess I'd be interested in your views about it, I suppose.

MR BRODY (CALC): Yes, sure. The proposal for Energy Consumers Australia was a development involving a range of consumer organisations. I think the business plan states very clearly that it's not intended to be a federation or representative of those organisations. Its constitutional structure will be an independent body with its own skills based board who are appointed through a nominations committee not from those members. Even all the organisations involved in the proposal aren't proposed to be members of the organisation. So it is proposed that it's to be its own independent consumer organisation. It is proposed to operate for all consumers, all residential and small business consumers, I should be clear. There is that limitation, that we don't think it should be extended to large users. Our views are that large users have their own resources to engage in advocacy in energy markets and they do that already effectively. This body is particularly aimed to represent I guess the diversity of many of those groups that don't have representation at the moment - as you suggest, residential consumers who can pay for electricity, small businesses and so forth - but of course it will seek to work and locate itself within the range of energy consumer advocates that exist currently, many of them who do represent specific interests such as low-income consumers or green interests, for example.

MS CRAIK: I guess I'm a bit surprised that if you're seeking to represent small business that, for instance, there wasn't a small business group represented on the range of groups or people who can afford to pay their bills, so I guess they might have some doubt that their representation by such a group would be as enthusiastic as representation for low socioeconomic groups in the community.

MR BRODY (CALC): At least one of the organisations heavily involved is the Consumer Utilities Advocacy Centre and expressly represents small business users.

MS CRAIK: But CUAC does largely represent - - -

MR BRODY (CALC): True, but it also represents small business users, engages directly with them. Since (indistinct) proposal, the organisations involved have engaged with representatives of small business users and my understanding is that they have voiced their support for the proposal.

MS CRAIK: The other thing that interested me was - I did have a quick look at the constitution - I was surprised that the focus of the group or one of the objectives wasn't actually to ensure that the national electricity market actually met the national electricity objective to work towards meeting the national electricity objective, ie the long-term interests of consumers. It had some other words, citing it was "safe, reliable and secure" which might be interpreted by some to mean what the NEO actually says, but I just thought it was a bit surprising that the constitution wasn't aiming to actually meet the NEO as an objective.

MR BRODY (CALC): I think all the organisations involved would agree that the organisation is there to further the long-term interests of consumers and be a representative of all Australians. I guess there are some organisations involved in energy advocacy that have varying views about the appropriateness of that objective, in that it may be interpreted to have a greater focus on economic outcomes rather than distributional outcomes, for example, and for that reason, the objectives that are in that proposal were developed.

MS CRAIK: A lot of our report is actually about trying to get the players in the national electricity market to focus on meeting the national electricity objective to restore the national electricity objective to its primacy, in terms of driving how the regulatory system works, how the whole system works. I guess our view was that it was important that the consumer end of it also be focused on the same thing, not something different, if it's going to represent all consumers. If a particular group wants to go for something different, fine, but if it's meant to represent all consumers, it seems a little odd.

MR WEICKHARDT: I think we've said explicitly, and you might disagree, but we've said explicitly that the focus of the national electricity objective is correctly on efficiency and if there are distributional issues, they should be tackled quite separately. They should not be tackled within the national electricity objective because then you've got a very, very confusing mix of objectives that the regulator has to try to deal with. You may wish to voice disagreement with that but that's our explicit position.

MR BRODY (CALC): Yes, I understand that's your position. I think in our first submission to your issues paper, we referred back to the commission's 2005 review of national competition policy and the comments in that, where it felt that there should be explicit consideration of adjustment and distributional implications from the outset, and that perhaps hadn't occurred effectively with the implementation of aspects of that policy. That is one concern we have with the implementation of regulatory frameworks aligned with the NEO. There are obviously many interpretations of what that NEO means or how to get there and we would like to see that NEO to be the primary goal for the electricity industry if it has the interpretation of being for the long-term interests of consumers. Our concern is that's not always how it's interpreted.

MS CRAIK: You probably noticed in our report, we also recommended that COAG actually institute a review of the concessional policies in relation to utilities, and we made the same recommendation in water, that there's a whole hotchpotch of ways of dealing with hardship and equity issues and it's about time they actually - well (1) are they being dealt with in the best possible way and can they be rationalised? Ken Henry's review also made the same recommendation, which would deal with them. You would have the electricity policy and then you would deal with the equity and distribution issues over here more effectively because you're dealing with them more directly rather than giving all sorts of misleading prices.

MR BRODY (CALC): We would be supportive of that sort of review of concession frameworks. I think that my opening comments reflected this somewhat: that even for other consumers that fall outside that system, we don't think that having a narrow efficiency economic focus will always meet their needs. For example, the example of pricing, having a market basis that is based strongly on price signals, may not actually result in the types of consumer behaviour that's being presupposed by that and so therefore we think that a wider lens needs to be put at some of those questions.

MR WEICKHARDT: But in the same manner, are you questioning whether - put disadvantaged or vulnerable consumers to one side and those people who have difficulty understanding what all this means. If you just hypothetically imagined consumers, made up entirely of people who were capable of understanding and were capable of paying their bills, are you suggesting that the sort of pricing tools to influence demand management you don't think will work?

MR BRODY (CALC): As currently structured, no. I know this is more about the retail end, but we published a press release in a letter to our energy regulator here in Victoria just yesterday, talking about some of the practices of energy companies in promoting deals and contracts. I'll give you an example: they are commonly

promoting fixed-term contracts for two or three years. At the moment most of those policies have a term that allows the energy retailer to unilaterally change the price of that contract at any moment. If I signed up for that contract today on a discount, it's likely not to be transferred to the new retailer until February, the price rise will probably come in in January, they have no obligation to tell me about it until my first bill arrives which is in March. So the price that I have marketed today, I'll have no knowledge that that is the price that I will get until March. We think some of these rules - and that's just one example - means all consumers face challenges in interpreting prices and contracts that are offered through this industry.

MR WEICKHARDT: I can see that it certainly takes time to read all these things and they're deliberately in some cases, one feels, made impenetrable or difficult to compare. But those sort of effects, if you take the time, are there. I mean, they're probably carefully not in large print but they are there. Some consumers and consumer groups like Choice will take the time to be able to educate people to look at this. I find it hard to understand why people say this is any more difficult than renting a car or buying a discount air ticket or shopping around for a different mobile phone plan. We've got lots of these examples everywhere.

MR BRODY (CALC): With respect we'd say there are similar consumer issues in all of those areas that you have mentioned. I think the Australian Communications and Media Authority recently announced that because of the way that those mobile phones are planned consumers are paying $1.5 billion more than they should if they were able to assess the market and choose the plan that suited them. So there are, I guess, power imbalances between industry and consumers when coming to these bargains about which product you purchase and we think that while improved information can work and should be a strategy that's taken, we're not there at the moment.

We'd like to see much more resources and tools being available that are simple for consumers to use to navigate the energy market but we also think that the way in which marketing is at the moment and primarily in energy it is door-to-door marketing, that is, people are sold energy products. In that marketing channel we don't think that competition can work. You're given one option, you're not given options to shop around, there's significant pressure to sign up on the spot. If you ask to have information left with you, they invariably will not do that and you've either got that choice or no choice.

MR WEICKHARDT: You have got a choice. You tell them to go away and you spend some time, if you've got an Internet connection, doing some research without the person standing over you trying to pressurise you. So there is choice but I accept the fact that many consumers may not be able to take the time or have the ability to really understand it all.

MR BRODY (CALC): That's right.

DR CRAIK: Your comments about the importance of education and using education and information and informing consumers, I think there is no doubt we would agree and I think we made a big point of it in our report, you know, if there's going to be roll out of smart meters and time-of-use pricing that's sharper than it is now and particularly critical peak pricing, you really do need a very thorough education program. But, I guess, I would take some issue, having written another report on the urban water sector on Target 155 being a cost effective way of saving water, if you look at people who couldn't water their gardens and all the other - without actually evaluating their costs for the direct education campaign and the costs of not actually using that water to individuals where people had no choice. I guess what we're trying to talk about with the power pricing issue is where people actually have a choice of taking either a flat tariff or critical peak pricing or time-of-use pricing, so people actually have choices how they behave. But we would suggest that with things like Target 155 that perhaps that choice wasn't there and so people were coerced into - - -

MR WEICKHARDT: They were coerced by their partners to buy a totally economically unjustifiable water tank.

MR BRODY (CALC): Target 155 was an education campaign. It was just a call to householders to keep their consumption below 155 litres a day. It wasn't mandated on them. There were other policies that did that. But our point is that - - -

DR CRAIK: You were made to feel like an unAustralian citizen if you didn't.

MR BRODY (CALC): We actually think that social marketing campaigns that are carefully designed to encourage behaviour that's in the public interest are a good thing and we think that could be applied to the energy market where simple messages - I think people don't understand today at all about using electricity at different times of day costs more. As a general rule that is not a well understood concept.

DR CRAIK: But pricing would do that, wouldn't it? I mean, look, how people run off to the petrol station to save two cents a litre with the Woolworths shop-a-docket. If you put 50 litres in and you've saved a dollar. But the queues you see outside Woolworths' petrol stations always stagger me. So people do respond to prices. So if you had critical peak pricing - - -

MR BRODY (CALC): I guess one difference there in that example again compared to energy is that the price is clearly displayed on a board when you're purchasing it and you're reminded of it. I think with energy contracts it is very

different and what we were making in our opening comments is that people will discount the cost of - you know, down the track when they get the bill they will discount that cost and prefer their current benefit to be able to put on the airconditioning, for example.

DR CRAIK: But if you had critical peak pricing and people were notified in advance with a text message that next week the cost of using the power between X and Y will be triple whatever it is during normal time, do you think people would respond to that? Or would you stay in bed or go to the gym when the alarm rang in the morning if you got $200 back to go to the gym?

MR BRODY (CALC): That's a good question. I think that many consumers would respond and we're not denying that at all. Our major concern is at those sort of policies being applied across the marketplace without an individual choice and I think if we are going to go down the flexible pricing route, our centre has been supportive of the approach taken by the Victorian government which is to have an opt-in arrangement. So people are making an active decision up-front and at least turning their minds to, "What will the implications of this be for me?" and, of course, there has to be all the tools and assistance for them to be able to make that decision.

Our concern is that when products are sold or marketed to consumers and there isn't that obvious ability or instance of thinking through the purchase or if it's just mandated on consumers that, "This is the price you're going to get," particularly where people can't shift load and there will be people who can't shift their usage and we don't think it's fair that they be penalised.

DR CRAIK: Our understanding is that with time-of-use and critical peak pricing that often people of low socioeconomic means will actually be better off under those sorts of time-of-use or critical-peak pricing tariffs because they tend not to have a lot of electrical appliances that do use lots of power.

MR BRODY (CALC): I think the research that has been done on that and particularly the research that has been done here in Victoria by Deloittes on the impacts on particular households clearly showed to us it depends on the nature of the tariff. You change that tariff slightly, the impact of who's winners and who loses changes significantly. I guess the point is there will be winners and losers if those sort of reforms are introduced in a mandatory fashion and obviously we support it if they're going to design a tariff that was going to benefit some of the less well-off people but that's not a given, I guess.

MR WEICKHARDT: The theory that people, where they can afford to, pay should ultimately bear the cost of their consumption and shouldn't be cross-subsidised by other people in an invisible way we felt was a pretty important

principle and at the moment because it causes few political problems because that cross-subsidy is invisible, it seems the safe approach is just to let the status quo continue. Elsewhere in the world that's not necessarily done. Other people have moved to this and have now sort of accepted it's almost a way of life. Indeed, in France, which is hardly the most extraordinary example of a right wing, totalitarian environment, they have had for years, I understand, what they call Red Days, Blue Days and White Days for electricity and it's announced in the television news, "Tomorrow will be a red day," and everyone accepts that's the way it is because it's going to be very hot or very cold or whatever the reason is. I assume red is high cost. I don't know, but - - -

MS RAYNER (CALC): I think that would also seek to achieve from a non-price perspective the policy outcome of reducing peak demand, so that would fall into I guess our thinking that public messages on these days that, "If you redistribute your load, you're going to impact or reduce the amount of peak load," would be more effective and probably resonate more directly with more consumers than price would, based on a message that was received previously or tariffs that were a little bit removed from their normal way of experiencing their energy use. So I think public messages would be great and they would be probably better suited to the policy outcomes that we would be seeking which would be reducing peak demand and therefore the ultimate costs for consumers, rather than conflating it through potentially quite complex tariff arrangements.

MR WEICKHARDT: I understand the public messages are accompanied by a price message but it may not be all that complicated. There are only three versions of it and they're uniform throughout a day. I don't know the details of it but it's interesting that certainly in parts of the US, what we would now see as quite complicated time-of-use tariffs are just accepted because they have been in place for 10 years and people have been educated to understand what they mean. I guess the most egregious examples of sticker shock and uninformed consumers getting a terrible fright when they get their bill, those sort of things have disappeared.

MS CRAIK: We still get the mobile phones when we go overseas, don't we.

MR WEICKHARDT: Yes. In terms of the initiatives that you've looked at for this consumer group, clearly from the dates of the report and the letters of support in those from people like the Australian Energy Regulator, the initiative for this grew out of a feeling that consumers weren't getting enough hearing in this whole area?

MR BRODY (CALC): Yes, it's been something that the consumer groups have been talking about for a long time. In fact there were four organisations, ours included, that in 2010 commissioned a report which was called Making the Energy Market Work, by Gordon Renouf, and that report took significant consultation with

all sorts of consumer and energy groups, including regulators and government, about their views around a national capacity for energy consumer advocacy. That report found that there was a need for increased resourcing and capacity directed to national energy consumer advocacy and from that, our groups then took steps through a range of meetings which then culminated in a meeting in Canberra earlier this year that involved all the groups involved in this proposal to decide that, yes, today is the right time to create this body, and that had the work put into it to develop that business plan. So it has been I guess a long time in gestation and had a lot of work in gaining trust and commitment amongst all sectors of the consumer movement and we think it is a very strong proposal.

MS CRAIK: What sort of people would it seek to employ? Would they be economists or - - -

MR BRODY (CALC): Yes, indeed. I think it's worthwhile if you have a chance to look quickly at the budget and the structure. I think the budget is proposed to be about two and a half million dollars per annum. I think 800,000 of that is to employ consultants in areas such as economics or regulatory economics and engineering and so forth to respond or help respond to price determinations and so forth.

In terms of the staff it would employ, it would be primarily economists and lawyers who are experienced and skilled in these areas and also I guess a public face in terms of communications and a campaign perspective and a policy advocacy perspective as well, so they're the kind of types of skills. But given that we see the gaps in the national energy consumer advocacy are largely around the more technical, further upstream areas of the market, that's where we see the work that the organisation, at least in the first instance, its priority is being placed there and of course you would need the relevant expertise and technical knowledge to have an impact via advocacy in those areas.

MS CRAIK: We've suggested ultimately it might be possible for the businesses to negotiate directly with the consumers, with maybe a regulator in the loop or not, but actually do a direct negotiation as sometimes they do in the United States for price outcomes. Would you see such an organisation one you would propose - - -

MR BRODY (CALC): It could do. We think that a lot more research has to be done about those sort of mechanisms. As I mentioned at the beginning, we do have concerns that there are diverse consumer interests and having one group being the sole kind of arbiter of the consumer interests will create some difficulties. There will also be other consumer interests or other groups that have their own interests wanting to participate in processes that affect the public and I think that's got to be respected.

We think that the current system with the Australian Energy Regulator making

the final determination is one that can work if appropriate rules are in place and reform occurs to the merits review and appeal processes. We're not saying that we outright think it's a bad idea, but we just think a lot more research and consideration would have to go into that model before moving to it.

MR WEICKHARDT: You make comment in your note about the Australian Energy Regulator or you make several comments about it but you say:

> In our experience, stand-alone energy regulators also have a poor record on enforcement.

Can you just talk about what that experience is?

MR BRODY (CALC): Our major experience is with our regulator here in Victoria, the Essential Services Commission. We are often writing examples of complaints to that regulator, raising instances of poor conduct by energy retailers. We're yet to see any particular action taken by those energy regulators. The energy regulator here sets an energy retail code which defines I guess the terms and conditions of energy contracts. But beyond that, there doesn't seem to be any sort of ensuring there is compliance with that code to the extent that we would like to see.

MR WEICKHARDT: That's hardly an energy regulator though, is it, in the sense that the AER is an energy regulator, and the ESC used to be an energy regulator before that duty went to the AER but now, the task you're talking about is really a task of I guess the conduct of retailers. It's not to do with regulating the poles and wires business.

MR BRODY (CALC): That's correct.

MR WEICKHARDT: You talk about the limited merits review process which obviously is important, together with the regulator itself. Are you supportive of the recommendations the limited merits review panel made?

MR BRODY (CALC): Look, we are. We think that taken together as a package, they could have I guess the effect of changing the risk reward calculation undertaken by distribution businesses or network businesses when seeking to appeal the regulator's decision. We think at the moment that calculation sways in the favour of businesses where they see a lot of upside to appealing and not much downside. So a review that is more holistic of the determination and whether that whole determination was in the long-term interests of consumers would appear to us to be more beneficial than previous experience.

MR WEICKHARDT: That can work two ways because I guess the LMR panel

was keen to say that consumers also ought be able to appeal, just as their recommendation suggested that the merits review process should look at the whole decision, and the answer could either be bigger or smaller than it was before. If consumers appeal under that regime, the answer could be a win or a loss as well.

MR BRODY (CALC): Indeed. I guess to date, under the current regime, it's been almost impossible for consumers to participate in the process. Our organisation, together with CUAC, did seek to intervene in the Victorian distribution pricing appeal. I wasn't actually working in the organisation then, maybe Janine can talk more about it, but we went a long way down the process of doing that only having to pull out our application to intervene on advice of senior counsel. There was significant cost risks for our organisation and also there was advice that we needed to have new evidence wielded by a world leading expert in order to have any influence. Of course we weren't able to do that and so consumers' voices weren't heard at those tribunal hearings.

We think that if the panel's recommendation for a more investigatory-type process will be one which is much more familiar and easy to access for energy consumer organisations like ours.

MR WEICKHARDT: You suggest - these are your words - "We think the commission analysis for proposing" - a separation of AER of the ACCC - "lacks rigour." Respectfully, there's not a lot of rigour in that comment because we didn't propose that, we posed the question and asked for input and I think your position is clear. But we weren't pushing a particular barrow.

MR BRODY (CALC): Okay.

MR WEICKHARDT: Indeed, we noted there were some significant potential advantages of the AER being housed alongside the ACCC but we were very conscious of some of the feedback we got, not just from energy companies who might have an axe to grind but from other people and stakeholders about the AER and concerns about their resourcing, their level of expertise. I mean, from your interaction with AER and the process, are you entirely comfortable the way the AER is performing?

MR BRODY (CALC): We wouldn't have concerns if the AER was given further resources to undertake its work. I know there was one particular proposal about it at least being in a position to control its own resources and account for them and we would have no disagreement with that. Overall, I think our experience of working with the AER is generally a positive one. We feel that we have ability to engage with them quite easily. They have its own customer consultative group, of which we're a member. They engage in numerous forums and opportunities for input

during price examination processes. In fact Janine was just at one all day today around the Victorian gas determination review that's going on at the moment and they had this particular forum particularly to try and engage consumer groups that hadn't participated in the process to date.

DR CRAIK: Do they ask you for your views on the proposal of the business?

MS RAYNER (CALC): Yes, similarly to the electricity distribution price reviews, bringing any consumer issues to their attention and I guess areas where some of the decisions may impact upon consumers more than others and invariably it would come down to the WACC potentially as a large issue but there are other issues around capital expenditure, so that's what they're looking for.

MR WEICKHARDT: These are quite complex and technical issues, to what degree do you find the AER try to unpack these issues and help consumers get their heads around what they really mean and taken an informed, if you like, view.

MS RAYNER (CALC): That's an ongoing discussion with the AER and I think as we go through different reviews since they've had control over different jurisdictions, then that's evolving and certainly today's discussion did include how to continue to engage more consumer groups around gas because gas is much different to the electricity to the market and there are more complexities around the market design that are a bit different to the electricity design, so it's bringing consumers along, at what stage do they engage consumer groups and how much education is involved and then it's about upskilling and maintaining and for our organisation it's about retaining that knowledge and building that knowledge within our own organisation so that discussion can continue.

MR WEICKHARDT: Have you been actively involved in some of the trials that have been carried out throughout Australia of things like direct load control or time-of-use pricing, critical peak pricing because some of our conclusions have been informed by some of those trials. I'm interested to know whether you have seen some of them. I don't know whether you have views as to whether they accurately represent how consumers will react or whether there are a set of volunteers that are not representative of the broader community.

MS RAYNER (CALC): There has been a number of studies done by different retailers. Not a lot of them have been made public over the years and what we have seen is that consumers, I guess, are a mixed bunch with different behaviours and so that's probably been the most consistent message. But in terms of what's happening in Victoria at the moment with the development of portals, online portals and the slow introduction of in-home displays, that's still to come to light in terms of how that will flow through for consumer behaviour and whether they respond. We are

seeking to do some of our own analysis over the next six months which will look at consumers' behaviour and how they will start to respond to smarter technologies and information.

MR BRODY (CALC): By finalising this report we tried to get a lot more information about the direct load controls pilot when it happened in South Australia through their regulatory system. It was difficult to get any information about them. I don't think a final report has been released on the impacts of them but we would be really interested in getting hold of that information because, as we say, we think there are potentials with that sort of technology.

DR CRAIK: So would we. Can I ask a totally different question. Who funds you people?

MR BRODY (CALC): Our organisation is funded through a variety of mechanisms, primarily the state government. We also have a case work service, both legal advice and financial counselling advice. Our case work advice is mainly funded through Legal Aid. We're also funded through Consumer Affairs Victoria to undertake advocacy work in the consumer interests. Our energy work - we have a specific project and we have had for some years from the Consumer Advocacy Panel.

DR CRAIK: How many staff do you employ?

MR BRODY (CALC): The total organisation is about 25 staff, I think.

DR CRAIK: Thanks.

MR BRODY (CALC): Just to give you a sense of how many people we talk to, we probably give legal advice to around 3000 consumers, financial counselling advice to probably about nine or 10 thousand consumers a year. We take on litigation and dispute files on behalf of consumers of about 300 files a year.

DR CRAIK: Thank you.

MR WEICKHARDT: I think that's me done.

DR CRAIK: I'm fine, thank you very much.

MR WEICKHARDT: Thank you very much for coming along. We appreciate your input.

MR BRODY (CALC): Thank you. We'll leave you copies of these reports.

MR WEICKHARDT: Our next participant is Energy Users Association of Australia. Bruce, if you would give your name and the capacity in which you're appearing.

MR MOUNTAIN (EUAA): My name is Bruce Mountain. I'm here on behalf of the EUAA and I'm also here on my own accord if you'd like to ask any questions with respect to my submission, otherwise I don't intend to add any further details on my submission.

MR WEICKHARDT: Thank you for that. Now, if you want to start with any introductory comments with your EUAA hat on and then we can ask questions.

MR MOUNTAIN (EUAA): Yes. Perhaps I'll just start off by saying the EUAA is very pleased with the draft decision and believes all credit is due to the commission for the quality of its analysis and the depth of its analysis. Of all the different reviews under way, the EUAA is quite disappointed in several of them and believes all credit is due to the Productivity Commission for its, and is very hopeful that ministers and policymakers will heed your recommendations.

I can take you through each of the points of my submission, if you like, I'm happy to do that, just summarise them, try and give you the gist verbally of what I'm trying to say; if not, I'm happy to take questions as you see fit.

MR WEICKHARDT: I think maybe we will just move straight to questions.

MS CRAIK: Yes, I think that's fine.

MR WEICKHARDT: Your point about whether we have unintentionally sort of put a higher burden of proof on benchmarking than we have on bottom-up assessments is an interesting one. Certainly we would agree with you that both are imperfect and neither will end up with an absolute answer. Earlier input we had today from SP AusNet was questioning - and we didn't debate this with them because there were other, I thought, higher priority issues - but they were questioning at what point in time could the regulator move from a bottom-up process to a benchmarking process and almost suggesting that there would need to be some sort of rule-change process before that should occur.

I think in our mind we had suggested that there could almost be a gradual move in this direction with energy companies agreeing to a fast-track process where the regulator had decided that the benchmarking answer they had got gave them enough assurance without going through the detailed building-block process that the answer was sort of close enough to the ballpark to start an informed negotiation about the final outcome. How do you see all that working out in a sensible way?

MR MOUNTAIN (EUAA): Yes. This is an area that I've had reason to deal with at numerous points in my career. Maybe we'll just talk a little bit about my personal experience on these things which is really at the coalface of quite a lot of this benchmarking. I was involved in 1996 for OFFER, as it was then, the predecessor body to Ofgem, in the price control review for the National Grid Co, and subsequently in the 1999 distribution review of the 14 low-voltage distribution network service providers in Britain, which was really the first time or the second time really but the first time en masse that benchmarking was used by Ofgem to compare the distribution network service providers and set an opex allowance as part of their opex total budget, and their opex means more than it does here. Here, opex is a relatively small proportion of the total spending; there, it's a much larger proportion. Stephen Littlechild did that, and he was roundly criticised for the simplicity of his benchmarking and how it was completely inadequate that he had only used a composite scale variable of three parameters and the factors that he had used in those were all arbitrary and so it went around.

It's easy to make those criticisms and often they are made simply by people saying, "Well, it ought to be more complex than that," and, "Underground is different to overhead," and, "Siemens is different to Reyrolle," and so it goes on. These are usually statements that people make that one is different than the other and not rigorous benchmarking which has led to it. But underlying that complaint is a philosophy that if you didn't do it this way, by doing bottom-up assessments, going in and getting engineers to assess the expenditure allowances, adding it all up, you will know better what the right number is. I don't think that's possible, even if you had perfect skills for all of those engineers doing the assessment. It's simply because the right number is not knowable. Things change over time. So if your counterfactual is, "Well, we need to get benchmarking to the point at which we are satisfied that it now meets the adequacy test," I think you're putting in front of yourselves an unrealistic goal.

Benchmarking can always be criticised and shot down for some reason or the other. It's intrinsic, it's the very nature of it. Likewise, an engineering assessment can be - it's much harder to shoot down an engineering assessment because then you need to delve into all of the assumptions on the number of poles and transformers and types of poles and distance between the poles and what have you and then people get lost very quickly.

So I think by putting in place a process where there's some heavy rule change and some regulatory process and people are going to sit around and have a debate as to whether benchmarking is adequate or not and a certain level I think is going to stall progress. I think those who stand to lose from benchmarking comparisons will be able to mount a convincing argument that it's never quite good enough, it's always

not quite satisfactory. I think that that completely misses the point. Users and consumers in all number of industries benchmark all the time. They do it crudely and it's part of the business process. People select and they choose and they make decisions. I think the objective should be cutting through all that and starting to use the information and I think the key to that has been cognisant but the counterfactual itself is very weak.

I thought this was very well brought out in your draft report and you say rightfully, "The regulators should stop looking at all the detail and it should rise above and use a bigger assessment," and then the question arises: how is it going to do the more aggregate assessment? That always will translate into some sort of benchmarking exercise. You can't get a sense of a big number as being right or wrong unless you actually compare it to others. So I think there is something to be resolved there and I think that means grappling with this reality that it's never acceptable and stating more clearly what the counterfactual is. That was a thing that I thought might be delved into a little bit more.

I would also add, just going back to this 1999 distribution reset in Britain where Stephen Littlechild was castigated for having done such a simple benchmarking exercise. Ofgem has since then spent a great deal of money on benchmarking. They've had experts from Cambridge on benchmarking techniques to help them to put far more rigour around the processes and now they've split their spending profile into asset replacement and they benchmark this and benchmark that and so it goes. They've put lots of effort to cost allocations, work which I was across when I was advising the ACCC on this back in 2005. In the most recent price reset they compared the results they got using these more advanced technologies against what Stephen said back in 1999 and they found the answer was in fact jolly similar.

DR CRAIK: That's a lovely story.

MR MOUNTAIN (EUAA): There is a huge amount in that and there are bigger gains to be had and I think this is about ensuring the regulator has the courage and the governance arrangements to encourage it to rise above and start doing these things, being a bit tougher about it, taking the flak that goes with it. The sort of thing I have done and people criticise this way and the next, but I will be the first to criticise it, but as far as I can see, none of them have raised a strong objection or a reasonable objection to say it's totally wrong or has given any worse any worse than might be done by employing lots of engineers to run over the number. Anyhow, that's that the main point I wanted to make.

I know it's all very difficult and one can write these things down and I think that it's - I am very keen to see this translated into real action that then results in things being implemented quickly rather than yet more regulatory reviews and rule

changes to test whether something has got over the line or not.

MR WEICKHARDT: Have you seen a submission that has only recently arrived - I only saw it yesterday - from AMP Capital to our inquiry?

MR MOUNTAIN (EUAA): No, I haven't.

MR WEICKHARDT: You, I suspect, would be interested in it because it makes a number of points that you have made but they conclude using a fairly simple benchmarking approach with a limited number of variables in it that you can fairly accurately predict from these input measures the regulatory asset base of each of the private network businesses but all the publicly owned ones are complete outliers against that sort of model. Fairly similar to your own conclusion.

MR MOUNTAIN (EUAA): The gap is simply so large it doesn't matter how you cut it, you end up more or less at the same place. Even if you do the PPP on the asset base and the capex and what have you, as you have done, the gap is simply so large that - to me this is a perfect opportunity to apply benchmarking. It's not like we're in a 10 or 20 per cent difference, we're in a hundred per cent difference and in that range the error you're going to make on benchmarking technique which is not finally developed is fairly small.

MR WEICKHARDT: I guess the $64,000 question is whether or not the regulator can expect an adjustment in the outcome for those state-owned entities while they're still having to comply with licence conditions, with reliability standards, for example, written into their licence condition that may force them to invest at a completely different sort of level to the Victorian distribution companies, for example.

MR MOUNTAIN (EUAA): I'm quite sanguine about planning standards. Again, thinking back to an earlier bit of my career when I was involved in trying to determine network investments, whether they met standards or not. There are many degrees of freedom in your demand forecasts, in the probability you attach to different network configurations, in your short-term line ratings, in your assumptions on parts availability and spares to determine whether you meet N minus 1 or N minus 2 standards. These things are relatively easily written down but the practical application, I think, has degrees of freedom and N minus 1, N minus 2 can be achieved in different ways by contracting with customers who might have a preference for being dropped off in certain circumstances and so on and so forth.

So the detailed implementation and network operation, there is lots that can be done inside of this. Again, I think it's about piercing those claims realistically and testing them. I don't have strong conviction that blanket statements of different

network planning standards between the states would discredit or undermine benchmarking comparisons. To me, frankly I would put all of that to one side and focus on the actual outcomes in terms of the duration of outages and the other parameters of the service outcomes.

Bar there being a clear case where in a metropolitan area - in inner Sydney N minus 2 was the new standard that's been adopted and previously it was N minus 1 and clearly there is a case of having operated and all your lines and your short-term line ratings and so on and so forth, you simply have to build another line or put in another substation or another transformer in a substation. Bar those circumstances sort of judged and around I'm pretty unconvinced that there's terribly much there. It is an easy thing to claim but I haven't seen anything that's really grappled with it.

DR CRAIK: On the subject of state owned companies, the comment in the submission that it would be useful if we considered the issue of the state government and they get the income tax and also the debt guarantee fee income and the way that that impacts on the actual SOC and the way they behave and spend more capital than the private companies do, you suggest, "It would be help for the commission to advise on changes to the regulatory regime that might deal with this in the absence of the preferred solution of privatisation. Have you got any thoughts about that?

MR MOUNTAIN (EUAA): This area is one I really strongly believe in. Well, when I say believe in, it's one that I'm very concerned that the reviews have ducked. I will just be clear. I'm not saying that the allowance for the rate of return on debt for the government owned businesses should be the actual cost of Treasury borrowing and the imputed equity cost should be something other than what might come about from CAPM for a normative model. I'm not saying that. What I'm saying is in setting the allowed returns, do not assume that the government owned or privately owned and just blithely ignore the fact that the states get the income tax and the fact that they get debt guarantee fees. To just ignore those and imagine that they're privately owned is, I think, not to pierce the issue.

I think what needs to be done is there needs to be a proper examination of the actual numbers, what are the receipts from income tax? What are the debt guarantee fees, these numbers are knowable. What is the effect of rate of return on equity if we counted all of those as equity returns? How might we think of this differently? What is likely to be the effect of the receipt of these on the inclination of the network services firms owned by the governments to invest capital? That's what I'm calling for is a proper examination of the underlying data and then a consideration of the impact of that on their unwillingness to invest. I'm absolutely aware of the counter arguments that income tax is different, it doesn't affect the investment decisions and debt fees are perfectly reasonable because it's a stand-alone firm rating. I think those are words. There is undoubtedly a case that if there was no fee on top of the debt

that the taxpayers would be bearing the default risk of the firm. But what is the effect of default risk of the firm? What is the true risk of this? We can't just imagine they stand alone when they aren't. When the government can influence the regulatory process and can influence the risks that the firms are facing, the sovereign risk that they face and the other risks they face, what is their true effective cost of capital and how does that vary from government to private? So that's my first point.

In terms of solving it, to the extent that the commission considers there is an issue here - for what it's worth, I consider there's an issue there - then I think, "How to solve it?" and the solution can take many forms but I think it's bound to mean something like in the regulatory form that's supplied to government-owned network businesses, we will take account of the fact that governments are getting super returns, if you want to call them that, through their receipt of these other sources of income. That being the case, we will put to the governments that they should adjust the regulatory form to take account of those receipts. So effectively that might mean lower allowed rate of return on debt and/or a lower equity return to account for the super returns that the jurisdictional governments are getting through these other parameters. I think that would help to diminish the incentive on governments to expand the regulated assets, if not to actively expand them, then to turn a blind eye to their expansion.

I think this issue has not been dealt with by the rule change reviews; these arguments have been put to AEMC. The AEMC has insisted that, firstly, they don't have the mandate; secondly, even if they did, they think that it's right that they get these fees because public and private ought be treated the same according to the principles that were agreed at COAG in the mid-1990s, to which the counter-argument is, "Don't dispute that for businesses in which there's competition. You wouldn't want the government crowding out private sector firms but there is no competition for networks." The fact that they're corporatised entities, the fact that they have a board and a legal form and a logo means nothing to the effect of economics. Governments don't do this for their education and health departments where there is a genuine issue of actually crowding out; on what basis is it reasonable to do it for electricity network utilities where there is absolutely no crowding-out issue.

So I think these issues have a strong economic basis. I appreciate absolutely that the politics of them are dreadfully sensitive and I can understand therefore why some of the regulators haven't dealt with them as they might, but I think it would be good if the Productivity Commission dealt with it more explicitly. I'm not saying it hasn't been dealt with. I think chapter 5, from memory, talks about it, but I think it would be good to see these issues really put on the table, worked through and hear what the Productivity Commission thinks about it.

MR WEICKHARDT: If you accept George Yarrow's thesis that ultimately incentive regulation doesn't work well with government-owned entities and that therefore the ultimate preferred outcome is that these entities are privately owned. If you followed your suggestion, you would have consumers enjoy lower prices in the state-owned corporations for a period of time with a lower-allowed WACC, for example, and then the politics of privatising them would become absolutely impossible. I mean, there are enough people who have a belief that selling a government asset to a greedy capitalist is going to cause ultimate pain to consumers, despite the fact that the evidence in practice is to the contrary. But if you allowed the government entities a reduced WACC because of the effects of cost of debt and the tax equivalent payment and then said, "We've sold these entities but now your prices are going to go up as a result," I would have thought you're never going to get them privatised.

MR MOUNTAIN (EUAA): Yes, okay. I have three aspects to my views in answer to that. Firstly, I don't believe that regulatory policy should be driven by agendas of privatisation or not. I think issues of ownership is ultimately a decision for government. I think people can advise, but to the extent that government have no intention of privatising, that's their issue. I think the task is to make the best of whatever ownership arrangements the governments choose. So I think in principle, regulatory choices shouldn't be conditioned by changes in ownership.

My second comment is any comparison of the prices charged by the government-owned networks compared to the private, whether on a per unit of energy delivered or per customer served shows the governments are pretty consistently dearer on distribution than the private. On transmission, the South Australian transmission is higher but I think that's largely a scale economy effect with the transmission network, with much lower throughput than is the case in any of the larger states. So for the vast bulk of the network, changing the allowed returns to account for these factors I think will be completely swamped by the existing asset base, the size of the relative asset base per unit of energy delivered or customers served, and the size of the expenditures going forward which I believe the evidence, at least my evidence, seems to indicate there's substantial scope to cut those, so there are offsetting factors.

My third comment is that at time of privatisation, investors will pay whatever they think is the present value of the future regulatory decisions for the business. They will be casting forward as to what those revenues are. They will also be considering existing asset valuations as one metric to value it. They will be thinking of costs that they can take out in the business. They will be thinking of relatively short-term price controls which might exist and their scope to get, at least in present value terms, in the near term, pretty substantial higher net income as a consequence of cutting costs. I believe that those factors are likely to be at least as significant, if

not more, than any adjustment that might be made for the rate of return on equity of debt as a consequence of taking account of ownership.

Certainly the numbers that I did for the rule change committee indicated that if you ratcheted down the allowed returns for the government-owned networks from the circa 9 per cent that they're allowed to the 5 and a half which was my estimate of rolling average cost of government borrowing for five or 10-year debt, it would increase the aggregate revenues by, for the government - I think the figure was a little under a billion dollars a year rising because the regulatory asset base rises, and that translated into decreases in allowed revenue of around 12 to 13 per cent. Those are large numbers but they are not nearly as large as the surpluses or the greater revenues because of the higher asset bases and the higher spending, so they are offsetting. Even if you didn't buy my first argument, my last argument is the true outcome of it in practice once you've thought about all the regulatory variables is there's unlikely to be a factor which is going to stop government from privatising.

My fourth comment - I know I had three - but the fourth one came to mind and that was the Finn Review article on the same day that the energy minister launched his white paper - I don't know where this has got to - which was covering some discussions between the federal treasurer and the states about the states continuing to collect the income tax on businesses which they were going to privatise. That being the case, at least a large part of my issue goes away.

MR WEICKHARDT: I think from memory the next day, somebody in the federal treasury said words to the effect, "You've got to be dreaming."

MS CRAIK: Perhaps we'll move on to your third point, Bruce. You mentioned during that that you had actually done some calculations in your report to the AEMC on the rule change committee, had you?

MR MOUNTAIN (EUAA): Yes.

MS CRAIK: This was about five-yearly price controls and locking in errors and demand forecasts and estimates and things like that and the consumers end up paying the price obviously. So what would your suggestion be in terms of how to deal with that? Are you talking about more frequent price resets or - - -

MR MOUNTAIN (EUAA): I've come to a similar conclusion to the one George Yarrow did in his case based on I presume his years of experience and the study he did with Chris Decker on the Isle of Man, I think it was or Jersey, of network utilities owned by the government versus private and he said, "Gosh, it's not quite stacking up," and certainly the numbers I have done here lead to that conclusion. I'm just not at all convinced that this blind acceptance that we had - I don't think it was even

questioned, I wasn't here, I wouldn't know - but it didn't seem to be questioned as to whether government owned businesses would respond to these incentives in the same way that privately owned firms would.

I think the data is now quite clear that that is just not the case. So I think the incentive arguments on price control regulation, set and forget, they've got the top line revenue, they have an incentive to decrease their spending and that's the discipline. I just don't think that stacks up. So I think the five-yearly model I think is on the nose for government owned businesses.

DR CRAIK: For government and private or just government?

MR MOUNTAIN (EUAA): No, I'm far more comfortable within the case of the privately owned firms, both based on the British experience and here where I think you would be hard pressed - no-one really knows what the official cost ultimate is and we don't know the counterfactual, had they done it differently would it have ended up like this anyway. But I think there are genuine capital market constraints. I think private shareholders generally are loath to put in more money than they need to and that capital market constraint, leaving aside the regulatory incentives just is a genuine constraint. I think while the allowed returns to the government is high and the opportunity for costs capital, they haven't had that incentive. Maybe that will change if the rates of return are scaled back even still. I'm a little bit doubtful that governments and the managers that operate the business would be willing to be exposed to the managerial incentives that you'd associate with privately owned shareholders. I think the model itself is questionable.

What would you do? I think (a) the losses in moving from a set and forget arrangement are lower than is the hypothesis that everyone has that it's a great loss if we move away from this. The first comment you get is, "Oh, well, that's a cost plus regulation." Yes, and I certainly and lots of other people have an ingrained dislike of the idea of cost plus and the lack of incentive but I'm not sure that in the case of government it's terribly different now anyway. (a) and (b) if you can't apply the incentives effectively at five years, then cost plus is not necessarily such a bad counterfactual. So I think it's probably about undoing the five-yearly control, moving to shorter controls explicitly.

Quite a few of the network service providers have said, "Oh, well, we have something like this with a five-yearly control anyway because we can exclude major capital projects from the allowed revenues and come back to the regulator during the period." That is quite messy because the regulator is setting the allowed returns, it has an opex budget and there is some substitutability between the two and there's substitutability between these excluded projects and then the capital budget, so I think it gets quite messy. I think it would be cleaner to just put on the table that there

is a major problem here and we think about regulatory form that is more appropriate to deal with that and I think it would be two or three-year controls. I don't know that we need to do all this building block algebra and all the fiddling and faffing we do. I think we could do it more simply and stick with that arrangement and get a tighter control on the costs and in that period maybe governments will come to different views on ownership.

But I would be very reticent about setting all down now, we're all going to merrily go ahead after the end of these reviews with another five years of process and hope at the end of that that things turn out better. I don't think that would be the right thing to do.

DR CRAIK: Do you think the process where the AER sets the revenue for the next five years and the business identifies the likely projects it's going to have and identifies the revenue but doesn't actually do the RIT-T until three, five, seven years down the track for a project that might be substantially different. Do you think that's a sensible process?

MR MOUNTAIN (EUAA): Yes, I have to put my hand up to some ownership, in a sense, of this when I was working for the ACCC as an external body but I was helping them on what was called the statement of regulatory principles or SRP back in 2004 which was their writing down of the regulatory framework and it was a regulatory framework to apply to the higher voltage transmission networks and we were grappling with exactly this problem, we don't know enough. Major investments are contingent on demand and generation sighting and closures and we simply don't have enough certainty on that to know whether the project will go ahead.

The idea then was to scope out some projects which should be excluded from that, they were given that name in the beginning and there was a hurdle or a test as an absolute number, a dollar number, or as a proportion of the revenue that you would use for that and then there were grand intentions to identify properly what the scope was of these other projects compared to the other expenditure. I think everyone was cognisant that it was high hopes that all of this could be achieved effectively in the heat of the moment, in a regulatory review trying to codify things and it's carried on and it lives on through the statement of regulatory principles subsequently taken up by the rule changes back in 2006 and then now again.

I had misgivings on it at the time and I've got even more. You can drive a coach and horses through this lot. You can reclassify expenditure under different headings. Very seldomly is one project a discrete, single, individual project. Certainly on large augmentations there will be a physical change to the network, a new conductor, a new insulator, new parts to change switchgear and different parts for there but then there will be other changes in the network, static VAR

compensators or voltage change regulators or switchgear at another substation to make it all work. It is very seldomly possible to identify and properly describe at the start of a regulatory process what all these projects are and hence the opportunity to move expenditure around and frustrate the regulatory purpose which is to set and forget and to have an expenditure allowance I think is large.

I think everyone just goes along with it because we're going through a regulatory reset but I think in the case of transmission it's very problematic and given that we don't - well, I don't believe and you might have different views on the power of the incentive with these things anyway, how much are gaining by keeping that in place for the government-owned businesses at all? Would you not be better to just do it year by year, maybe set an opex allowance for a couple of years, start putting in place processes you can properly define what is opex and capex and then maybe give them some certainty of an ongoing maintenance budget so they don't need to come back for every pen and pencil and then scope out proper assessments project by project. I think that would be cleaner and easier and stops you maintaining this charade of five-yearly controls and the incentives that actually arise under that.

DR CRAIK: Do you have a view about the role of AEMO in all this?

MR MOUNTAIN (EUAA): Yes, so I think the EUAA's view and my view is AEMO is unconstrained by the rates of return on the asset base is not as mindful of that or is not mindful of that, has no reason to be mindful of that and so on balance doesn't have that complication and leaving other things aside that's a positive and forces to think more arduously about the costs of benefits of investment. In the recent transmission paper which I produced which we've discussed - I have yet to see the counterarguments, they may well be there, I haven't seen them yet - but the data seems to indicate there is a very sizeable difference in the performance of AEMO as a planner compared to the others and I think that is something to be mindful of.

I think getting AEMO in as a planner and executor across the NEM would be a positive development with or without privatisation. Look, I think it bears a good deal of thinking and more scrutiny and I think it would be good to see a good assessment of the Victorian experience, one by a body which has access to all the VENCorp and AEMO data on the contracts they have let and the asset values of those contracts and the payments under those contracts and then a good assessment of the quality of competition and the procurement process and planning to properly understand what has really accounted for that difference. But in the absence of that my gut reaction would be it would be a positive element, government and private, to have AEMO in as a separate planner. I think we're a long way from that and AEMC's transmission frameworks really I don't think take us terribly much closer. It's one thing getting someone to produce a macro demand forecast; it's quite another getting them to sign off on the augmentation contract, and it's the signing off on the

augmentation contract that I think most of the value lies. There's some value in it but it can be scattered around.

MR WEICKHARDT: In that version of the world and the comments you were making previously, if you were designing this, what threshold for transmission companies would you carve out as major capex that warranted going back to the regulator after agreeing with AEMO what the scope and the timing for an augmentation was.

MR MOUNTAIN (EUAA): Yes, I'd probably think it would be a $30 million capital sum. There may also be scope to think about the nature of the investment. Is it an asset replacement? Is it an augmentation? That bears some thinking about. I'm not crazy about all of these differences and classification of expenditure because again, what is an augmentation and what is asset replacement? You augment when you replace in many cases, it's very seldom like for like. What's the true driver? You can enter into all sorts of regulatory processes and guidelines and what have you that make life complex by doing that, so I think 20 to 30 is a big-enough hit of a one-off project. Some regulation to ensure you don't cut a 100-million project up into a series of $29 million augmentations which get under the radar, but I don't think there's too much in that. I think that's doable. So I'd fancy something a bit similar and then having a detailed look at each of them. This is pretty much where a lot of transmission regulation in the US has got to, and I'm not so sure that it's terribly bad. Certainly the advantages of our system was it was meant to be all terribly light handed and it's turned out exactly the opposite, and we don't have at least the detailed transparency of major investments that they do under the US arrangement.

MR WEICKHARDT: There's been a lot of discussion and we had some more this morning with SP AusNet about the complications in their view and the liability issues of who ultimately makes a decision about investment. We had in our draft report suggested that for major augmentations that AEMO, working closely with the transmission company, would propose an augmentation that was required but if the transmission company didn't agree with that, might have thought it was too late or not the right augmentation, that the two of them would go to the regulator and put their case, but the regulator would start, if you like, with the burden of proof being on the transmission company to convince them that AEMO's proposal was not the right one.

Now, although we've challenged SP AusNet to come back to us with a description of what they think might make our proposal workable. I think it was this morning suggested that in an environment where you slightly shifted that line and said AEMO would work closely with the transmission company but the transmission company themselves would make the final decision and that if there was a disagreement, they would both go to the regulator, but the onus of proof would be on

AEMO to show that the transmission company was wrong - I'm putting words in their mouth but I think that's the sort of direction in which they were heading - do you have a strong view on those sort of issues?

MR MOUNTAIN (EUAA): Yes, I think I probably do. I think the onus of proof should be on the transmission company against the independent planner. I don't think there's the evidence to switch the onus of proof around. I mean, that's essentially where it is now. There's not a formal mechanism to go to the regulator, but if something was serious enough, there would be an opportunity to raise it at other fora.

MR WEICKHARDT: What, as a consequence of the RIT-T, you mean?

MR MOUNTAIN (EUAA): Yes, or internal squabbles between maybe stuff that hasn't even reached the RIT-T but squabbles between SP AusNet and AEMO, so Charles Popple will say, "We're going to have to do load shedding in the summer," or, "We're going to have to get customers on notice," and AEMO says, "Well, we just don't agree. We don't think it's looking that bad. I've noticed this level of dissent between the two escalating in more recent years. I don't know whether that's through genuine differences of opinion on the risks involved or whether it represents different investment attitudes of SP AusNet over time and their Singaporean owners. I don't know what it is. I've noticed that, but it strikes me de facto there is that sort of mechanism for pushing against each other for getting - not through a formalised mechanism of arbitration, if you like, by the AER making a decision but there is that sort of process.

I think in the absence of evidence that there is under-investment, that there are service-standard problems, that there's over-investment, I would say the onus of proof would be on the existing arrangements with perhaps bolstering up the opportunity for SP AusNet to go through a formal process of, if you like, appeal or third party opinion on whether its views are appropriate or not. I'm also mindful of the fact that what I've heard a number of these participants say in public and what they say in private differs somewhat and I think, if I may, their arguments are not entirely disinterested. I think investment incentives affect their attitudes to these things. My view is SP AusNet's owner rather likes the returns they're getting and that affects their attitudes to assets and expenditure. I think from SP AusNet's point of view, control is a wonderful thing. I think they look with a slight envy at the government-owned brethren - you know, complete control over the expenditures, not having to have this tussle with AEMO all the time on the investments and go through tenders to compete. I think life would be easier if it was different.

MR WEICKHARDT: Based on that - I suspect I know the answer to this question but just for the record - were we to move to the AEMC's hybrid approach with

AEMO as the national planner making recommendations about reliability standards, do you think that the state-owned entities would on occasions choose to disregard that sort of advice about what sort of augmentations were required and simply go ahead and carry on investing on a sort of "if in doubt make it stout" approach?

MR MOUNTAIN (EUAA): Yes, I think it's a step in the right direction. It's progress, very slow progress. These issues were chewed over in the AER review. The idea then was AEMO would do the national transmission flow paths and this would be of great informational value, and it turns out it isn't of great informational value. Now it's more of a, "Get AEMO to do more national planning." I think it's a step in the right direction but I don't think it's a terribly significant one.

So what does a demand forecast and, if you like, a more granular national plan actually mean? Asset augmentation, asset replacement decisions at a detailed network level are about distribution/transmission interactions, asset condition, localised demand forecasts, regional demand forecasts, views on asset operation, views on spares availability and operational constraints, short-term line ratings and so it goes on. So the practical application of relatively high-level AEMC demand forecasts and even national plans I think in the hands of a capable TNSP, they can do not exactly what they would like but they still have substantial discretion and if they chose to frustrate it, they could. So it's a step in the right direction. I think there's going to be a lot of process that goes with that but I don't think it's a terribly significant one. I'm far more in favour of the PJM models or other models in the US where the execution of those procurements are substantially under the independent plan and are far closer to the existing VENCorp AEMO model and maybe some localised decisions on the acquisition of easements and the contract for the purchase of the transformer and the switchgear and all of those detailed issues are handled by the local transmission network service provider, but the substantial commercial decision are made by an independent body.

Hopefully we will get there sooner rather than later and not have another five years before discovering that actually this information is not of all that much value as we thought it was. Anyway, a little bit more candour in all of this would be useful and we will get to the answer a little bit quicker.

DR CRAIK: On the issue of contestability, right now AEMO does call for tenders for separable augmentation projects over a certain value. The comments made by SP AusNet and various others are - and we didn't recommend it because we didn't have the evidence - that the market is very thin, understandably in a country like Australia, and so are there likely to be benefits? Do the benefits outweigh the costs if such a system were put in place right throughout the MEM. I mean, as a matter of principle we at the PC would think contestability is a good thing but there's not much point in doing if you're really fiddling at the margins and just really adding a cost to

the process and the benefits are pretty small at the end of the day.

MR WEICKHARDT: Let me just clarify that. They were making the point this morning that for contestability construction of assets already exists. So it's contestability of the operation and ownership of the assets that really they're saying the market in Australia is thin, there are very few people who get involved in that and, of course, they were also saying they thought it had consequence complexity and costs and risks associated for the operation of the network eventually.

MR MOUNTAIN (EUAA): Yes.

DR CRAIK: And they had to do an awful lot of work and all these things could provide information to AEMO and do a whole lot of work for the - - -

MR MOUNTAIN (EUAA): I think it's probably fair to say there are higher transaction costs involved in that arrangement and probably higher operating maybe commercial risks for the asset provider, the firm that wins the contract and for SP AusNet and interacting with that firm and agreeing operational protocols. I know TransGrid won one or two tenders in the beginning and since then there has been very little. I think it's worthwhile understanding a little bit better why the market is not as rivalrous as it might be and what might be done about that. But to write it off for that reason is, I think, only to see part of the picture.

I think the bigger picture is the specification of the needs, the disciplines that come in are a contracting process where you have to be clear in writing down your requirements where there are elements of due process that force upon you disciplines of being rigorous in the investments you need. There is some degree of market testing, even if the rivalry doesn't exist and I believe that specificity, clarity forces much greater discipline on understanding the need, the nature of the investment to meet that need and I think there are benefits in that which the winning party doesn't see. SP AusNet doesn't gain that benefit, it's a hassle for them. I think the consumer gains that benefit taken in the round.

So I would argue that those are the things that really ought to be taken into account in that and I think it would be worthwhile again, just in the nature of understanding why the Victorian arrangement has apparently worked better than two of the others is understanding why that contestability is not more active. Are there transaction costs, structural issues of asset operation and ownership which mitigate against it? Is it the nature of the contract in process? Is it a lack of adequate market operation by AEMO? Are they not savvy enough in how they operate the tenders, so on and so forth and I think that would be the stuff to focus on, not chuck out the whole arrangement.

MR WEICKHARDT: Can we talk about connection. We have heard a couple of views around that area, one being that you don't need a central planner for connections, a generator can deal directly with a transmission company and that process puts the two of them together, they're separable projects, provided there is a regulator that can intervene if he feels that either side isn't playing fairly that the two of them ought to be able to work it out. Do you have a view on that?

MR MOUNTAIN (EUAA): Yes, I do. I think I would have ideological preference. I think the EUAA would call it a consumer preference for competition wherever possible as a principle. If you can do it contestably instead a form of regulation prefer that in principle. I think there are complexities. For example, in the detail of a connection where you draw the boundary, what is shared network, what is not. When a transformer or a particular bit of line is built as a connection and subsequently there is third party access how you specify the arrangements and the sharing of the costs and I think there are transaction costs and complexity in that which is harder than pulling the shared network definition further along.

I think there are also genuine issues of concerns about asset operation, the efficiency of asset operation, spares, their availability and operation. If a generator installs a transformer and switchgear in a substation in substantial parts of it and does it itself and it's of a different specification and type to the one installed by the TNSP and they'd have the spares for it but for the fact they chose such-and-such a technology. The central planning thing would have the optimiser looking at it all and I think there may well be gains in coordination of that. But I fail to see why those gains can't be achieved through discussion. The generator that connects has every incentive to look for an arrangement which would decrease the connection costs and if they're able to discuss these things with a TNSP who say, "Let's split the difference on the higher cost of X because we've got transformer Y and we'll be better off."

So I think a lot of those disbenefits can be dealt away through a process which allows that sort of discussion. I think it may well be useful to have a residual obligation on the TNSP to connect or to undertake a connection or to offer terms for connection where parties choose not to do it themselves. But I think to the extent that you can vigorously achieve as much of the network augmentation in a contestable way, that's where the preferences might be. I think the onus of proof should be to demonstrate that these counterarguments of transaction costs and parts availability are genuine barriers.

DR CRAIK: I'm going to have to depart.

MR WEICKHARDT: You have to go.

DR CRAIK: Sorry, I have to run out, I have a plane to catch.

MR WEICKHARDT: If you could record on the transcript that Dr Craik left at this point.

DR CRAIK: Thank you. Apologies, Bruce.

MR MOUNTAIN (EUAA): No, that's fine.

MR WEICKHARDT: I would just like to move to your fourth point or at least transition into your forth point and that's the issue of optional firm access. As you know in our draft report we said from we understood of it we supported a move in that direction. We had Hydro Tasmania in this morning saying that they didn't like it, it was complicated, what was the problem, that most generators didn't support it anyway. What view do you have of OFA?

MR MOUNTAIN (EUAA): I will start by saying I do not understand properly what the AEMC has been proposing. I've tried to understand where the risks lie and who pays whom, under what circumstances, whether it's the generators who don't opt to be firm who pay the lost profit or whether it's the TNSP's consumers that pay it if there's a shortfall. I've raised these issues at the Transmission Frameworks Review on Tuesday last week and it was as evident to me, as it was to everyone else, that no-one really knows quite how it's going to work. So I think the ideas of property rights on access to the transmission system and exit from the transmission system, tradeable property rights, firmness, ownership of those rights are all fantastic aspirations to have. However, I would really like to see what the proposal is and how it's going to be executed.

I worked on these issues in 1998 for National Grid company in Britain when Eileen Marshall, then at Ofgem, through Stephen's pushing, wanted to create a system of tradeable property rights which is similar to the optional firm access arrangement, at least in principle, of entry and exit rights which generators and load could use to access the system and he wanted to have these tradeable rights to decrease the scope for the regulation of the network rather than regulators specifying the allowed revenues, have these tradeable rights and the regulator would set the difference.

I worked on an exercise for National Grid company in Britain, the operator and the owner of the high voltage networks to work out what would be the likely income from these tradeable transmission rights and the answer was it was roughly 10 per cent of their regulated revenue because the value of these tradeable rights is the expectation is lost profit payments or losses, the difference in those between points in the network. That's what creates the nodal price differences and hence the property right which is the insulation against those price difference. So the answer is

in a reasonably planned transmission system, transmission congestion and losses will never account for terribly much of the revenue. This being the case, who is paying what for these firm access rights? Where are the risks actually lying? AEMC hasn't - and I don't mean this as a criticism to them, I think what they've set out is a first sketch of what it is. In the Transmission Framework Review John Pierce said, "Well, this is a process. This is going to be another five years before it's at implement and what have you and that's pretty much the way I see it.

So in principle here, good idea. In practice I'd love to see who's carrying the can. What EUAA ask the AEMC to look at in the transmission frameworks review is the benefits of generators paying for use of the transmission system. Right now they only pay losses, they only pay for marginal losses; actually marginal scaled average losses which are half the marginal AC networks. So they're paying a small proportion of the transmission cost. My experience in Britain is when the generators pay for the use of the network they understand that network well and in the price resetting processes, they get actively involved and they crawl all over the expenditure claims because they're facing those. Isn't that a wonderful thing? So rather than just have users, an aggregate, very few of whom understand the transmission network at all, making generalised interventions or trying their best to get to grips with a transmission revenue resets, why not bring the generators into the game? They have the incentive to understand where money is being wisely spent or not.

That idea hasn't got any traction yet but I think that would be where a lot gain lies and that's what we would look at and the optional firm access is one of the big benefits. So I think there's ways of getting there quicker. You can simply mandate a sharing of the use of system charge between generators and users and then come up with a method of charging for the generators, maybe some grandfathering or something like that because there will be winners and losers. But that's where we see quite a lot of the gain of the optional firm access so we're wondering why you'd wait five years to figure out how the optional firm access will work before you get to the real value of this which is getting generators in on the use of system of the transmission networks.

MR WEICKHARDT: Thank you for that. Your fourth point was really the issue of consumer engagement and negotiated settlements. What do you want to tell us about your views on that issue?

MR MOUNTAIN (EUAA): I don't have terribly much to say. I've got an advocacy panel funded research piece on that and so I have been walking around chatting to network providers and users and what have you to try and understand what might be the barriers to the implementation of this and how it will work and how do you organise users so that they can effectively undertake this arrangement and what are the concerns and what have you.

It will be a big step from our current arrangements where consumers are generally unable to meaningfully participate in much of the regulatory process because they do not have the resources and the skills and they do not have enough of the incentive as an aggregate because it's dispersed amongst all users to get involved. So it will be a big change and consumers need to be organised and capable of being organised. The regulators need to embrace it because it's a substantial change for them, it takes them from the decision-maker of first resort to the decision-maker of maybe not last resort but close to last resort and it changes their role for a lot of the process from there to opine on what they're hearing and there to assist and to assist parties to agree and so they need to see a life for themselves and benefit in that and policymakers need to be confident enough that this arrangement can be made to work. So I don't have any misgivings that we can get there overnight.

I think it would be a fantastic thing to head in that direction and starting carving up bits of the regulatory decision to see what we can do. In the context of the (indistinct) change made on the debt change, there was a request from the federal minister to get some thoughts on how users might be involved in the process of price setting and I perused Stephen Littlechild's research on the US arrangements mainly on how this had worked and it was very encouraging to see what had been achieved and how it had practically worked, these major reservations that many have that consumers could never get organised has evaporated and the regimes have been enduring and they have enjoyed wide support. So I think it's one of these things that given the opportunity they would rise to the challenge. So I would really like to see those ideas being given some airing and some process for genuine engagement.

I don't believe that what the AEMC has proposed is meaningful at all, getting the regulator to benchmark every year or to take account of the extent to which TNSPs have had discussions with consumers or getting all the network service providers to write a precis that users can understand is patronising and absolutely in the wrong direction. This is not what it's about. It shouldn't be what it's about. It should be trying to mimic a commercial process where parties are able to actually negotiate with each other in a proper commercial environment, both realistic, looking for ways to meet each other's needs and I don't think what's on the table now gets there vaguely. So my hope is that these things can get a better airing.

MR WEICKHARDT: You mentioned the advocacy panel had funded some of the research for you, does EUAA get quite a lot of support from the advocacy panel?

MR MOUNTAIN (EUAA): This is not through the EUAA, this is a research proposal which I put in my private capacity to them first two years ago and subsequently they asked me to resubmit about a year ago and I got the funding quite some time back but I just haven't had a moment to do it. I'm now trying to do it and

trying to put quite some time in. So this is not through the EUAA. The EUAA's funding through the panel is all on the advocacy web site. They're one of two, MEU and the EUAA I think have got comparable amounts of the order recently of around $200,000 of a budget, I think, of around three million or a little bit over three million, so that's their funding. It is all on the panel's web site for further information. I'm afraid I haven't monitored it all and I'm not across it in enough detail to tell you exactly what the amounts are but that's my understanding.

MR WEICKHARDT: We're close to out of time. Can I just go back to the discussion we were having on benchmarking. A few people have put it to us, and you yourself mentioned, that if you move to maybe three-yearly determinations for state-owned corporations and major projects having to go up to the regulator separately that you're moving close to a cost plus type of regulation.

MR MOUNTAIN (EUAA): Yes.

MR WEICKHARDT: A few people have put it to us that the building blocks regime we've got at the moment is pretty close to that and the way of breaking out of this is an overall revenue determination based on a total factor productivity and a CPI or RPI minus X type of approach. Do you have a view as to whether that's the direction in which you'd like to see things move eventually?

MR MOUNTAIN (EUAA): Look, I'm not terribly taken with TFP mostly because I've just seen it degenerate into the most arcane arguments of definitions and inputs and outputs and a firm called (indistinct) did a piece of work in 2002 for Australian government - I can't recall what the incarnation was then and there are all sorts of off ramps and what have you and it turned into this arcane debate. Stephen Littlechild and Michael Beesley's RPI minus X started out in a world in which there was a very strong understanding by the regulator of information asymmetry, not just by the regulator but by the regulated firm and incentive - it was less concerned, I think, with issues of allocation so it said, "Well, if we've go it wrong by a bit, that's okay because consumers get passed on over time."

I think we have become quite obsessed with allocation and lost a lot of the elegance of CPI minus X. I would love to think we could return to that but I think given where we've got to there will be a lot of opposition from governments and I think there are also now white elephant issues, starting point issues. You've got huge asset valuations. Is it just CPI minus X on these asset valuations or do you now start looking at these white elephants and who might be bearing those - you know, the outcome and the consequences of those decisions. Just hearing this similar issue in other regulatory circles the view is, "Well, we can't turn back to that. Wouldn't it be fantastic if we could, but we can't." I think practically we can't.

The people with the insight and the leadership and the backing of government that Littlechild had was extraordinary and he could reform. But I don't think that's (a) the Australian way, (b) with the constitutional rights at the jurisdictional government level and the committees of regulation that we have all around I just can't see it happening, you know, someone very charismatic and powerful being empowered to do this. So I think practically it's hard to see. I think it has a lot of beauty and a lot going for it but, of course, more going for it if someone is able to set a tough CPI minus whatever the X is without all of the great desire for detail as to what the right X might be.

MR WEICKHARDT: Based on your previous comments, X would probably be a different value for the state-owned organisations versus the privately owned ones.

MR MOUNTAIN (EUAA): It must be, there has to be something done. It's quite a difficult situation now because there is such a big asset base and the rate of return and the write-down in that asset base with so much of the revenue going forward, decreasing capital expenditure is not going to change prices quickly.

MR WEICKHARDT: Thank you very much indeed for your input. We are really out of time. We note your black and blue personal submission, thank you for that.

MR MOUNTAIN (EUAA): Okay.

MR WEICKHARDT: Thank you for your overall contribution to this inquiry and the EUAA, it is much appreciated.

MR MOUNTAIN (EUAA): It's a pleasure and certainly thanks to you for the opportunity.

MR WEICKHARDT: Ladies and gentlemen, that concludes today's scheduled proceedings. For the record, is there anyone else who wants to appear before the commission? No. I therefore adjourn these proceedings and the commission will resume in Sydney on Monday, 3 December. Thank you.

AT 4.54 PM THE INQUIRY WAS ADJOURNED UNTIL
MONDAY, 3 DECEMBER 2012